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TWIN PEAKS ALLOTMENT
MONITORING EVALUATION REPORT
December 20, 1994

DRAFT

EAGLE LAKE RESOURCE AREA
SUSANVILLE DISTRICT
BUREAU OF LAND MANAGEMENT

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I. BACKGROUND PLANNING INFORMATION

The Record of Decision (ROD) for the Cal-Neva Management Framework Plan (MFP) was issued in August, 1982. This decision, established management levels, goals and objectives for livestock and wild horses and burros. The ROD and a subsequent grazing decision issued in June, 1983, established the Twin Peaks Allotment and provided guidance for the allotment management plan which was developed in March, 1985. After the Twin Peaks Allotment Management Plan (AMP) was issued, it become apparent to BLM that the management actions in the AMP did not fully address wildlife habitat. In March, 1992, an addendum to AMP was implemented to provide additional short-term livestock specific management practices and objectives that were in sufficient detail to allow for improvement in certain wildlife habitats within the Twin Peaks Allotment.

The Cal-Neva ROD states in pertinent part:

> "When an AMP is implemented BLM will commence monitoring studies which will include actual use, utilization, precipitation and range trend. The studies will provide data for evaluating progress toward meeting objectives for the allotment and determining modification of grazing use. Such as, amount of use, season of use, areas of use... . If monitoring studies justify changing the livestock use, your authorized use will be modified...".

The purpose of this evaluation summary is to evaluate livestock, wild horses and burros, and wildlife grazing that has occurred on the Twin Peaks Allotment and to assess current management practices effectiveness in meeting specific management objectives identified in the ROD, subsequent grazing decisions, and the AMP. Included will be recommended management actions where these LUP and activity plan objectives are not being met.

II. ALLOTMENT EVALUATION BACKGROUND

A. Evaluation Period was 1983 to December 1994
B. Selective Management Category: I (Improve)
   Priority: High

III. INITIAL STOCKING LEVELS

A. Livestock Use

1. Land Use Plan Objective (AUM's)

a. Total Preference - 20,531
b. Suspended - 7,468
c. Active - 13,063

2. Season of Use - March 1, through December 31.

3. Livestock Kind/Class - Cow/calf, Sheep (ewe/lamb).

4. There are 2 permittees in the allotment. Specific grazing permitted for each permittee is as follows:

ESPIL SHEEP COMPANY:

Number	Kind	Period of Use	% PL*	Active AUMs
971	Cattle	03/01 to 12/31	100	9,769
4000	Sheep	04/01 to 05/30	100	1,578
2000	Sheep	06/01 to 06/30	100	395
2000	Sheep	09/16 to 09/30	100	197
4000	Sheep	10/01 to 10/15	100	658

LAVER RANCHES:

Number	Kind	Period of Use	% PL*	Active AUMs
102	Cattle	04/15 to 10/31	100	667

*The allotment is permitted as 100% public land. There are many isolated parcels of unfenced private land within the allotment.

Terms and Conditions:

Terms and conditions of grazing use are found in the AMP as modified by the District Manager's decision of March 1, 1992, which is maintained at the Eagle Lake Resource Area BLM office.

B. Wild Horse and Burro Use

The current Appropriate Management Level (AML) within the Twin Peaks Allotment is 5,136 AUMs.

The Twin Peaks Herd Management Area Plan (HMAP) of 1989, guides the management of wild horses and burros within the allotment. The HMAP includes all of the Cal-Neva Planning Unit. The Twin Peaks Allotment comprises approximately 60% of the planning unit. In 1988, the Buffalo Hills Technical Review Team recommended that HMAP be divided into five individual subherds or Home Ranges. The Twin Peaks allotment encompasses all or part of three of the five Home Ranges within the HMAP (North Twin Peaks, Dry Valley Rim, and

Skedaddle). The division of home ranges are based on geographic areas, or allotment and pasture fences that may be limiting the exchange of horses between herds.

AMLs for the Dry Valley Rim and Skedaddle home ranges have not been adjusted since their establishment in the LUP pursuant to the forage allocation described on page 23 of the Initial RPS. Twin Peaks North Home Range AML was redetermined via a formal monitoring information analysis in 1992. Refer to Appendix #1 for planned population levels and existing populations.

Refer to Map 1 (Attached), for wild horse HMAP boundaries.

C. Wildlife Use

1. Mule Deer

The Nevada Department of Wildlife and the California Department of Fish and Game established "objective" numbers for mule deer for the Cal-Neva Summer Allotment at 12,500 wintering, 10,100 for non-winter, and for the Cal-Neva Winter Allotment at 350 (Cal-Neva MFP, 1983).

2. Pronghorn Antelope

The Nevada Department of Wildlife and the California Department of Fish and Game established "objective" numbers for pronghorn antelope for the Cal-Neva Summer Range at 1,300 wintering, 1,250 resident non-winter, and in the Cal-Neva Winter Range Allotment at 400 (Cal-Neva MFP, 1983).

3. Sage Grouse

Within the Twin Peaks Allotment there are 36 known sage grouse leks. There are currently 24 active lek sites in the south pasture and 6 active lek sites in the north pasture. Exact sage grouse numbers have not been provided by the California Department of Fish and Game or the Nevada Department of Wildlife. No reference to reasonable or objective numbers for sage grouse were provided in the Cal-Neva MFP or subsequent documents.

4. Threatened and Endangered Species

There are no known threatened or endangered plant or animal species within the Twin Peaks Allotment.

5. Other Wildlife

There are hundreds of species of wildlife in the Twin Peaks Allotment. A listing current to 02/24/92 is found in EA-CA-026-92-07 (BLM, 1992). A more up-to-date listing is being generated for

the East Lassen EIS due to be published in 1995.

III ALLOTMENT PROFILE

A. Description

The Twin Peaks Allotment is located approximately 30 miles east of Susanville, California. The allotment straddles the California/Nevada border. The major geographic boundaries of the allotment are the Smoke Creek Desert to the east, Honey Lake Valley to the south, the Buckhorn Road and the Surprise Resource Area along the north, and the Deep Cut and Observation Allotments on the west. The allotment was established by Notice of Final Decision dated June 24, 1983 and was formally part of the Cal-Neva Common Summer Range and Winter Range Allotments.

The allotment topography is generally broken with numerous drainages, steep side slopes and narrow ridges. Undulating plateaus and small basins also occur. Soils are typically of volcanic origin. Rock outcrops, talus flows and volcanic rims combine with the stony soils to make the terrain extremely rough. The dominant mountains are Skedaddle Mountain (7,600') in the southern end of the allotment and Rowland Mountain (7,200') in the northern end. The majority of the area is in the 4,500 to 6,000 foot range. Smoke Creek, Buffalo Creek and their tributaries bisect the allotment and are the main perennial waters.

B. Acreage

1. Allotment Totals

Allotment Acreage	Land Status
379,628	Public land
6,440	Private land - John Espil Sheep Company
480	Private land - Laver Ranches
160	Public Water Reserves
18,148	Other Private
405,096 (1993 info)	TOTAL

Acres	Percent	Area
36,909	9.03%	North Pasture - California
186,158	45.53%	North Pasture - Nevada
92,462	22.61%	South Pasture - California
93,362	22.83%	South Pasture - Nevada
408,894 (1994 info)		TOTAL

223,067	54.55%	North Pasture
185,825	45.45%	South Pasture (includes Lower Smoke Creek)
408,992 (1994 info)		TOTAL

C. AMP, Livestock Management Practices

1. Basic Cattle Operation

The grazing system employed for cattle is a two-pasture deferred-rotation. The system allows the entire allotment to be grazed every year with the late pasture being deferred until the approximate phenology stage of early seed dissemination for key grass species on or about July 1. The pastures, north and south, are estimated to have similar grazing capacities. The two permittees graze in common.

Espil's full permitted livestock numbers are not turned out on March 1. They are staggered out in bunches ranging from 40 to 200 or more, with the Espil's usually reaching full numbers sometime in April or May. To remove all cattle by December 31, (grazing end period), gathering starts in October, and the cattle are gathered in a similar fashion as they were turned out.

Laver Ranches normally delays their cattle turnout, sometimes as late as July 1. This delay is due in part to Laver's desire to graze in the south pasture near their private lands.

For purposes of current and future communication concerning management, the allotment was divided into 13 subdivisions based upon resources present and other factors. These subdivisions are as follows and are identified on Map 1.

North Pasture Subdivisions	South Pasture Subdivisions
Rowland	Lower Smoke Creek
Stone Corral	Dry Valley
Buffalo*	Five Springs**
Painter	Dry Valley Rim
Chimney	Skedaddle Mountains**
Black Mtn.	
Buffalo Hills	
Salt Marsh	

*Contains AMP-identified Parsnip management area.

**Contains portions of the AMP-identified Bull Flat/Skedaddle management area.

2. North Pasture Cattle Management Practices

a. Prior to April 1, all cattle both Espil and Laver are to be turned out in the area east of Buffalo Creek and northeast of Burro Mountain.

b. After April 1, cattle can be turned out in any location of the north pasture except the Parsnip Management Area.

c. After July 1, cattle can be moved to the south pasture.

d. In even numbered years, up to 225 Espil cattle will be authorized to graze in the north pasture from April 15 to December 31 provided that the total number of Espil cattle grazing the allotment does not exceed the numbers provided for in the basic operation and flexibility sections of the AMP.

e. In even-number years, any cattle using Rowland Mountain subunit will be placed east of Rowland Mountain, including the Hole-In-The-Ground with minimal use of the Norton Place. Cattle movement and drift to the west largely will be restricted by rimrocks on the east side of Rowland Mountain.

f. In odd-numbered years, any cattle using Rowland Mountain subunit will be placed on the west side of Rowland Mountain, thus avoiding east Rowland Mountain and the Hole-In-The-Ground area with some use of the Norton Place.

g. Up to 200 cattle will be authorized to use Lower Smoke Creek area from March 1, to April 30, annually, subject to the terms and conditions of the permit.

3. South Pasture Cattle Grazing Operation

a. Prior to April 1, all cattle both Espil and Laver are to be turned out in the area east of Dry Valley Rim and south of Burro Mountain.

b. Prior to June 1 and after April 1, Laver's recommended turnout areas are either East Fork of Skedaddle Creek and/or Spencer Basin.

c. Prior to June 1, no cattle can be turned out in the Bull Flat/Skedaddle Basin Management Area.

d. After July 1, cattle can be moved to the north pasture.

4. Sheep Grazing Operation

Sheep use is primarily for spring lambing and secondary for fall trailing. Sheep use the entire allotment except for the following special conditions:

a. When cattle turn out in the south pasture and a lamb band stays through the full season (7/1 to 9/15), one band will not be able to use the management areas (Parsnip, Bull Flat/Skedaddle) before June 1.

b. The 500 head dry band will be able to use Skedaddle Mountains every other year between June 15, and August 1. Alternate areas of use are Dry Valley Rim, Five Springs Mountain, and the north pasture of Twin Peaks Allotment.

c. Sheep are be herded away from aspen stands.

d. Sheep camps and bedding grounds shall not be located on known active strutting areas.

IV. MANAGEMENT EVALUATION

A. Summary of Studies Data

1. Actual Use

a. Livestock

Use was taken from actual use reports and compliance records. Actual use is presented in Appendix #2 for the years 1985 to 1994.

b. Wild Horses

Actual use was estimated from census data conducted on the allotment from 1985 to present. Only animals counted during census flights on the Home Ranges were considered to be using the allotment. If census information was not available for a particular year, actual use was estimated by adding a 17 percent increase to the previous year's actual counts. Actual use is prepared by pasture for the years 1985 to 1994 and presented in Appendix #2. By using only animals counted during census flights, it is assumed that some animals are not counted.

c. Wildlife

1. Pronghorn Antelope
2. Mule Deer
3. Sage Grouse
4. Additional Wildlife Species

(need State Wildlife Agency's input.)

3. Precipitation

Precipitation data was collected from Susanville Airport. Since 1983, 8 of 11 years have been below normal (not including 1994). (Weather Info Appendix #3). The crop yield, the effective precipitation for plant growth occurring between September and June of each year is summarized in Appendix #4.

4. Utilization

a. Key Area

Utilization was determined using the Key Forage Plant Method at many of the key areas over several years. Utilization was collected at key areas located on both upland and riparian areas using the Key Forage Plant Method. In some instances on riparian areas, the stubble height method was used in addition to or in lieu of the Key Forage Plant Method. Upland browse use information was also collected on bitterbrush using the Cole Browse Method. Refer to Appendix #5 and #6 for average utilization at each key area site.

b. Use Pattern Mapping

In conjunction with key area utilization data, a percentage of the allotment was use pattern mapped annually using as many 8 classes of use, no use (0-5%), slight use (6-20%), light use (21-40%), moderate use (41-60%), heavy use (61-80%), severe use (81-100%),low production (annual production), and area not mapped. Use pattern mapping was conducted for the years 1987 through 1994. The use pattern data for 1992, 1993, and 1994, is displayed on an overlay registered to a base map at a scale of one inch to the mile and is available at the Eagle Lake Resource Area Office.

For 1992, the following patterns were quantified:

ACRES	PERCENT	TYPE UTILIZATION
5,829	1.43%	Heavy
5,873	1.44%	Moderate
278,659	68.14%	Light
118,574	29.00%	Annual Growth

For 1993, the following patterns were quantified:

ACRES	PERCENT	TYPE UTILIZATION
31	0.01%	Severe
1,693	0.41%	Heavy
3,317	0.81%	Moderate
8,294	2.03%	Light
43,549	10.65%	Slight
9,721	2.38%	No Use
14,818	3.62%	Low Production
327,511	80.09%	Area Not Mapped

For 1994, as of November 1, 1994, the following patterns were quantified:

ACRES	PERCENT	TYPE UTILIZATION
62	.02%	Severe
2,515	.61%	Heavy
4,247	1.04%	Moderate
7,840	1.92%	Light
206,498	50.44%	Slight
7,960	1.94%	No Use
4,618	1.13%	Annual Plants
289	.07%	No Forage
175,331	42.83%	Area Not Mapped
	100.00%	Total

Appendix #6 provides information as to average utilization on each individual upland site between 1987 and 1994. The conclusions drawn from this information is that spring turnout pastures receive higher use in the uplands than do rotated to pastures. There was no correlation as to average utilization on upland sites in the north versus. south pastures.

5. Trend

a. Upland

Trend data are being collected using the Modified Pace Frequency method as outlined in the Twin Peaks AMP. This includes collecting frequency data of all vegetative species present on a study site as well as vegetation cover, litter cover, and canopy height. Photos were taken of each site during each reading.

Currently, there are 20 upland study sites in the Twin Peaks Allotment. Nineteen of these sites were established in 1983 and the last was established in 1985. Initial data (frequency, etc.) were collected on 19 sites in 1983. In

1985, the same data were collected on all 20 sites. All sites were repeated in 1991 and again in 1994.

Key species were identified when the sites were established in 1983 or 1985. The AMP reaffirmed the use of key species on these sites. On May 24, 1990, the AMP Review Committee listed additional key species and reinforced many of the original species selected. The March 6, 1992, "Decision Record for Livestock Grazing in the Twin Peaks Allotment" again attempted to re-identify key species on a planning compartment basis. This decision was based upon large geographic areas and did not include transect specific species. The 1994 evaluation takes into consideration all of the selection criteria history for key species at each transect while looking for consistencies in the data.

The information gathered and analyzed for the 1983 to 1994 period gives us the following indication of frequency/trend on key perennial species (displayed as numbers of transects):

TREND	FORBS	GRASSES	SHRUBS
Static (not apparent)	14	19	11
Moderate Upward	5	-	-
Strong Upward	1	-	-
Moderate Downward	-	1	9
Strong Downward	-	-	-
Total Transects	20	20	20

To show a larger picture, these sites can be lumped into percentages:

TREND	FORBS	GRASSES	SHRUBS
Static	70%	95%	55%
Upward	30%	-	-
Downward	-	5%	45%
Total	100%	100%	100%

Data indicate that for a majority of all key species, trend is static or not apparent. Forbs are improving on 30% of the sites while grasses and shrubs are declining on 5% and 45% of the sites respectively.

Cover and canopy data are still being analyzed, interpreted, and evaluated.

When evaluating the above frequency information, it should be remembered that this is only a single grouping of data and must be compared and correlated with precipitation, utilization, actual use information, ESI, and site potential before making management conclusions.

Appendix #7 is a summary of trend/frequency information for the Twin Peaks Allotment from 1983 to 1994.

Conclusions:

On no site did all three species groupings move on an upward trend. Conversely, on no site did all three species groupings move on a downward trend .

There was no discernable correlation between precipitation zones and changes in shrub frequency.

All sites where forb frequency is on an upward trend were moderate to high precipitation zones and moderate to high elevations.

No correlation was found between potential site productivity and changes in plant frequency.

Low productivity and low precipitation zones go together.

Low elevation + low precipitation zones = low productivity.
Higher elevation = higher precipitation zones.
Lower elevation = lower precipitation zones.
Higher productivity soils are associated with higher precipitation except on the shrink swell clay soils.

On approximately 5 sites, preliminary information suggests a moderate competition with annual invader species.

It is possible that livestock grazing in spring and/or summer months is causing the decline in salt desert shrubs seen on transect #0729.

There was no apparent correlation between pasture use and plant frequency.

The spacing of sites where shrubs are down and forbs are up follows no discernable pattern.

The slight to light utilization on sites #0707, #0716, and 0721, may be due in part to the amount of annuals on the sites.

See Appendix #11 for the site characteristics for the Twin Peaks upland trend sites.

b. Riparian Trend

The *Greenline Inventory Method* was implemented during the summer of 1992 and completed during fall, 1993, following methods and procedures outlined in Technical Reference 1737-8 1993. The method is used as baseline inventory and provides a general impression of quality and condition of riparian habitat for a particular reach of stream. The Greenline transects were established in the following streams: Chimney Creek, Painter Creek, Parsnip Wash, Lower Smoke Creek, Middle Fork Buffalo Creek, North Fork Buffalo Creek and West Fork Buffalo Creek. The baseline information generally indicates a low percentage of desirable species in the understory. The transects will be reread in 1-3 years to determine what changes have occurred.

6. Range Survey Data

The 1979 Soil and Vegetation Inventory Method (SVIM) indicated that there are 20,243 AUMs available for livestock and wild horse and burro, and wildlife grazing on the allotment (Cal-Neva EIS).

7. Ecological Status

Range vegetation inventory using the Soil Vegetation Inventory Method (SVIM) was conducted from November, 1978 to September, 1979,

on the Cal-Neva Planning Unit, which includes the Twin Peaks Allotment. The method used is summarized in Appendix A of the Environmental Impact Statement (EIS): "Proposed Livestock Grazing Management for the Cal-Neva Planning Unit" (1982).

In 1983 and 1985, 20 upland (non-riparian) key areas were established in the Twin Peaks Allotment. In 1994, vegetation at these key areas was sampled and current range condition (aka ecological status) was determined.

It was found that of the 20 sites sampled, two sites had changed from POOR (early seral stage) to GOOD (late seral stage)(a two condition class/seral stage advance), three had changed from POOR (early seral stage) to FAIR (mid seral stage), and six had changed from FAIR (mid seral stage) to GOOD (late seral stage) condition. The remaining nine sites had no change in condition class. Zero sites had condition class decline. See Appendix #8 for a complete breakdown by year and site.

This information will be evaluated and interpreted in the context of the vegetation management that has occurred during the comparison period and considered with the other monitoring information gathered on the Twin Peaks Allotment.

Conclusions:

In analyzing the ESI data, there is no discernable correlation between elevation and changes in ESI (or no changes), precipitation zones and changes in ESI, or site productivity and ESI.

There is no strong correlation between utilization at key areas and changes (or no changes) in ESI.

On approximately 5 sites, preliminary information suggests a moderate impact by annual invader plant species. Six other sites indicate a possible influence by annuals. Further review of this information is required.

There is no discernable correlation between an increase in ESI and a change in frequency of grasses, forbs, or shrubs.

Many of the correlations, or lack thereof, also appear in the Upland Trend section of this report.

V. CONCLUSIONS

A. Cal-Neva ROD/Activity Plan Objectives; Attainment Determination and Rationale

1. Livestock

a. The short term objective is to have utilization levels of key forage species not exceed 40-60% (LUP Decision # 10). This is further defined in the Grazing EIS (1982) for two-pasture deferred rotation grazing systems such as is implemented on the Twin Peaks allotment as having objective utilization levels not to exceed 60% in the early use pasture and 40% in the late use (deferred) pasture.

Objective Attainment Determination and Rationale.

In 1994, utilization levels as determined from 26 upland transect areas were not exceeded as of October (cattle are still on the allotment). Use Pattern Map information indicates that this objective was exceeded on less than 1% of the allotment in the uplands, and majority of the allotment was in the slight use class. Similar use patterns occurred in the uplands in 1992 and 1993 (Appendix #9).

b. The long term objective is to improve 28% of the 176,155 acres in poor to fair range condition, and 36% of the 158,180 acres in fair to good, and maintain 25,165 acres in good and excellent range condition. Allow winter livestock grazing at levels to minimize conflicts with wintering wildlife. (ROD/AMP)

Objective Attainment Determination and Rationale.

Comparison of 1979 SVIM data to 1994 ESI data to determine changes in upland condition is difficult. Initial correlation indicates that approximately 7,500 acres (4%) have improved from poor to fair condition (from early seral to mid seral stage), approximately 34,877 acres (22%) have improved from fair to good condition (mid seral to late seral stage), and approximately 5,000 acres (3%) have improved from poor to good (early seral to late seral stage). The 25,165 acres in good and excellent condition were maintained. Approximately 10,000 acres remained in fair condition and 54,155 remained in poor condition. This accounts for only about 35% of the entire allotment. The condition (seral stage) of the remaining 65% of the allotment must still be correlated.

2. Wild Horses and burros

a. The short term objective is to have utilization levels of key forage species not to exceed 40-60% (LUP Decision # 10). This is further defined in the LUP as having utilization levels not to exceed 60% in the early use pasture and 40% in the late use (deferred) pasture.

Objective Attainment Determination and Rationale

See livestock attainment, above.

b. The long term objective is to manage the wild horses and burros in the Twin Peaks HMAP as a viable population of healthy animals (Twin Peaks HMAP).

Objective Attainment Determination and Rationale:

Wild horses and burros appear to be in good condition with minimum death losses and high reproduction rates. In 1994 there was an average foal crop of 18% for the allotment.

3. *"Provide forage and habitat for "objective" deer and antelope numbers as follows"* (LUP Decision #23).

a. "Mule Deer (approximate numbers)

1). Cal-Neva Summer Allotment
10,100 from 05/01 to 11/30
12,500 from 12/01 to 04/30

2). Cal-Neva Winter Allotment
350 from 12/01 to 04/30

b. Antelope (approximate numbers)

1. Cal-Neva Summer Allotment
1,300 from 10/16 to 04/15
1,250 from 04/16 to 10/15

2. Cal-Neva Winter Allotment
400 from 10/16 to 04/15"

a. Objective Attainment Determination: Not met for mule deer, partially met for pronghorn antelope.

b. Rationale

An updated habitat rating has not been conducted in the Twin Peaks Allotment since 1979, but it is assumed (based on only numbers) that the transition and winter habitat may be in less than optimum condition. Part of the reason mule deer habitat may be in less than optimum condition is due to low site potential in some winter areas, fire maintaining low seral stages, a subsequent decrease in preferred forage species ie. primarily antelope bitterbrush, and corresponding increases in species not preferred by mule deer.

Deer numbers for the East Lassen Area from 1978 to 1993 are shown in Appendix #10. Please note that the East Lassen Area encompasses the Twin Peaks Allotment, but does not follow the exact same boundaries. From the numbers displayed, it is apparent that

numbers are not meeting the Land Use Plan "objective" numbers. It may also be inferred that there was a downward trend in overall mule deer numbers between 1978 and 1989 and a leveling out of numbers beginning in 1990. It could also infer 1979 numbers were inordinately high and numbers are returning to a more normal level.

CDF&G estimated pronghorn antelope numbers to be between 400 and 600 in the Lassen County portion of the Cal-Neva Planning Unit in the spring of 1994. By mid summer, numbers were estimated between 600 and 800 animals. CDF&G is to begin their herd counts in January of 1995. NDOW was unable to supply Eagle Lake BLM with any current pronghorn antelope numbers. Review of public documents showed that in North Washoe County management areas 011-015, the herd was modeled to be at approximately 5,107 animals in 1993. Overall, pronghorn antelope numbers appear to be up over the corresponding 10 years, but without current accurate counts, a determination as to whether population numbers are being met or not met is unknown. A better method than watching population numbers go up and down is needed to determine condition and carrying capacity of rangeland.

The greatest difficulty in determining whether or not "objective" numbers are being met is the fact that the Bureau of Land Management and the state game agencies do not use the same boundaries to make management decisions and assessments. The boundaries established in the LUP are very gross compared to the allotment specific boundaries established after the implementation of the LUP. No reevaluation of allotment specific numbers has been attempted. The BLM is responsible for managing habitat and the state agencies are responsible for managing "objective" wildlife numbers, but quantifying the actual available habitat based upon wildlife use is next to impossible.

Frequency data collected and analyzed suggests that on 45% of the trend sites, shrubs are on a downward trend. Combined with the Cole Browse Studies, it appears that upland habitat is changing seral stages and is reverting to a stage which may not benefit mule deer, but may favor pronghorn antelope. There appears to be a strong correlation between the decline in shrubs and the decline in mule deer. The Bureau of Land Management's new direction is to manage rangelands for what the rangelands can/may produce.

In many areas, riparian habitat is not meeting deer fawning and cover needs. Mule deer require more woody vegetation in riparian areas.

No habitat condition rating has been completed on the antelope kidding ground; however, it appears to be in improving condition given increases in overall numbers over the past 10 years.

See Appendix #12 for mule deer use by acres by subdivision. See

Appendix #13 for pronghorn antelope by acres by subdivision.

4. *Prohibit toxicant control of jackrabbits (LUP Decision #14).*

a. Objective Attainment Determination: Met.

b. Rationale

No jackrabbit control projects have been proposed or implemented in the Twin Peaks Allotment since the inception of the LUP. All potential activities will be coordinated with NDOW and CDF&G and analyzed under the NEPA process.

5. *Provide ground level water for wildlife at all new water developments. Coordinate with the CDF&G and NDOW to provide ground level water in areas with water deficiencies (LUP Decision #17).*

a. Objective Attainment Determination: Partially met.

b. Rationale

Eagle Lake BLM has Rangeland Improvement Project System (RIPS) database files for 32 guzzlers having been constructed on public lands in the Cal-Neva Planning unit between 1966 and 1993. These include both large and small game guzzlers. Of the 32 guzzlers constructed, 19 exist in the old Cal-Neva Summer Range area and 13 exist in the old Cal-Neva Winter Range Allotment. A majority of these guzzlers were constructed in cooperation with NDOW and CDF&G. Several guzzlers have been built on public lands which are not currently accounted for in BLM's data base.

Between 1966 and 1993, hundreds of water sources have been developed as alternative watering areas and to improve livestock and wild horse and burro distribution. These water developments consist of troughs, tanks, pit reservoirs, and dam reservoirs. With the exception of troughs and tanks, all of these developments are at ground level and are accessible to all wildlife species. Troughs and tanks generally have 12-20 inches of vertical material above ground and are difficult for ground dwelling mammals and some bird species to use. Large animals such as mule deer, pronghorn antelope, coyotes, bobcats, badgers etc. have easy access to these water sources. With respect to smaller animals, all new tank or trough projects are equipped with a wildlife escape ramp in the chance that a smaller animal falls into the tank and are unable to get out. In the case of older developments, the Resource Area is attempting to retrofit those developments with wildlife ramps. The hundreds of pit/dam reservoirs constructed throughout the planning unit are valuable as wildlife water sources and provide much needed

habitat for shore birds and waterfowl.

One consideration of these man developed water sources is that they are a congregation area for all animals and therefore receive heavy use annually. At pits, dams, troughs, or tanks, heavy use should be and is expected.

6. *Enhance and maintain aspen groves in good condition (LUP Decision #19).*

a. Objective Attainment Determination: Partially met.

b. Rationale

In 1992, the Eagle Lake Resource Area initiated an inventory of the quaking aspen (*Populous tremuloides*) communities within the Cal-Neva Planning Unit. This inventory was designed to determine: 1) understory composition, 2) understory cover, 3) stand area, 4) stem density, and 5) size of trees and the condition of those trees. Nine aspen stands were studied in the planning unit (Atchley 1993). See Atchley's report for complete findings and assessment.

Sheep are currently being herded out of aspen stands and livestock use has been discouraged.

7. *Protect Golden Eagle and Prairie Falcon hunting areas by either prohibiting vegetative manipulation projects near nesting sites or, at a minimum, leaving islands or strips of native vegetation within treatment areas (LUP Decision #20).*

a. Objective Attainment Determination: Met.

b. Rationale

During the period of existence of the LUP, no prescribed fire or spraying of rangelands has been used to manipulate vegetation on public lands within the Twin Peaks Allotment. Post-wildfire seedings have been initiated on several burns over 20 acres with soil stabilization or resource enhancement objectives in mind. Special consideration is given to raptors in planning efforts and no project is implemented without a NEPA analysis.

8. *Ensure that scattered junipers are left in any juniper reduction areas. Encourage firewood and post collection prior to control projects (LUP Decision #21).*

a. Objective Attainment Determination: Met.

b. Rationale

The Twin Peaks Allotment is closed to juniper cutting for firewood or posts. No juniper reduction program has been proposed and implemented since the inception of the LUP. Future planning efforts will be analyzed through the NEPA process.

9. *Prohibit sagebrush eradication projects within sage grouse breeding complexes and within 100 yards of any stream or meadow, unless the eradication project is specifically designed to restore the original boundaries of the meadow (LUP Decision #22).*

a. Objective Attainment Determination: Met.

b. Rationale

No sagebrush eradication projects have been implemented in the Twin Peaks Allotment since the inception of the LUP. Several areas in the Cal-Neva PU have experienced sagebrush die-offs in large patches. Prior to any sagebrush manipulation projects, a NEPA document will be generated and all affected resources will be analyzed.

The decline in frequency of sagebrush may have a direct negative impact on sage grouse populations. Conversely, the increase in forbs may have a direct positive impact on sage grouse populations. Canopy cover may have a higher impact than frequency on sage grouse populations.

10. *Initiate a program to eliminate beaver within the planning unit (LUP Decision #15).*

a. Objective Attainment Determination. Not Met.

b. Rationale

This decision may not have been made with a complete knowledge of the importance of beavers to a functioning riparian system. A more thorough literature search should be initiated to see if this is a sound resource decision or not. (Given post 1982 research into the benefits of beavers in riparian systems -- implementation of this decision may not be a sound resource action and should be reviewed thoroughly in consultation with NDOW and CDF&G through the NEPA process.)

11. *Study the feasibility of reintroducing bighorn into the Skedaddle escarpment and Buffalo Hills area. Do not irreversibly commit this area for continued livestock grazing (LUP Decision #1-3).*

a. Objective Attainment Determination: Partially met.

b. Rationale

Two studies have been conducted on the feasibility of reintroducing bighorn sheep into the Skedaddle escarpment and Buffalo Hills area. These studies are still in draft form and are being reviewed. When the study is completed, objective attainment may be met.

12. *Stream Habitat*

a. Objective Attainment Determination: Not Met.

b. Rationale

Based on use pattern mapping, utilization levels were exceeded on stream bank vegetation.

Sediment loading by reach over the entire system may be a better measure of condition of a riparian area.

13. *Utilization of selected plant species in wetland riparian habitats.*

Although there is no short-term objective defined for wetland riparian habitats, the following summarizes the utilization observed on these areas to date: From 1992 to 1994 X% of selected wetland riparian habitats were grazed heavily. This determination was based on use pattern mapping and utilization information collected at wetlands areas (springs, seeps and streams). Based on actual use data, livestock contributed approximately % of this use in the north pasture and % in the south pasture. Wild horses and Burros contributed approximately % of this use in the north pasture and % of use in the south pasture. It is estimated that by area, less than 1 percent of the allotment is occupied by riparian/wetland vegetation.

14. *Spray and seed 15,000 acres in Dry Valley if a benefit/cost analysis and site-specific precipitation study determine that the project is feasible.*

a. Objective Attainment Determination: Partially met.

b. Rationale

Between 65 and 75 percent of the proposed seeding area now lies within the Nevada Winter Range Allotment #00702, while only about 25 to 35 percent are within the Twin Peaks Allotment (approximately 4,000 acres in Twin Peaks and 12,000 acres in the NV. Winter Range). After wildfires in 1983, 1984, and 1985, over 7,000 acres of perennial grasses and shrubs were seeded in the NV. Winter Range

portion of Dry Valley. This represents almost half of the proposed 15,000 acres to be seeded. Since the proposal in the LUP, several areas have been determined as unsuitable for seeding.

15. *Utilization of key mountain browse and grass species in the upland habitats shall not exceed 60%.*

Utilization on key browse species (bitterbrush) was exceeded on 3 of 18 Cole Browse Transects in 1994. For 1993, utilization objectives for bitterbrush were not exceeded on the transects measured (see Appendix #5). Objective not attained in 1992. Utilization objectives for bitterbrush were exceeded on nearly all transects. Spring grass and forb production was extremely low in 1992 due to drought, causing overuse of browse. In 1994, mule deer use on bitterbrush was 33% in the Pilgrim Lake area (Rowland subdivision).

16. *Utilization of key streambank riparian plant species shall not exceed 40% on Buffalo, Parsnip and Smoke Creek.*

In 1994 the utilization level was exceeded on 3 of 5 transect sites measures for the three priority streams. Utilization information indicates the objective was exceeded in 1992 and 1993.

VII. IDENTIFIED ISSUES, RECOMMENDATIONS AND RATIONALE

This section lists identified issues, and recommendations for managing the allotment. Some solutions are specific to subdivisions or pastures.

A. Identified Issues

1. Utilization information indicates that there is uneven distribution of grazing resulting in heavy to severe use on most riparian areas within the allotment. Actual use information indicates the following *average* use for livestock and wild horses and burros in the allotment for the period 1992 to 1994:

	Sheep	Cattle	Wild Horses & Burros
North Pasture	16%	36%	48%
South Pasture	17%	45%	38%

2. Use pattern mapping data from 1992 to 1994 indicates slight to light use by livestock and wild horses on upland grasses and

forbs. The utilization objective was exceeded on less than one percent of allotment in the uplands and indicates that current activity plan stocking levels are adequate for livestock and wild horses and burros.

3. Short term monitoring information suggests that this large allotment, which has few structures such as fencing, and few natural barriers, provides little area-specific livestock control. This allotment's existing infrastructure is a causative factor that contributes to overuse of most its riparian areas. Existing livestock and wild horse and burro management has failed to prevent overuse of most riparian areas during the evaluation period.

4. Portions of the Twin Peaks AMP are not consistent with the Cal-Neva LUP and current bureau riparian policy.

B. Short Term Solutions

- Revise existing AMP season of use for consistency with LUP.
- Provide additional waters to improve distribution.
- Implement management changes help reduce of over use in riparian areas.

(1) Option 1 - Revise season of use.

To accomplish the directives in the LUP revise the season of use from 03/01 - 12/31 to 04/1 - 1/31 for cattle. Reestablish a season of use 11/01 to 01/31 for the Winter Range Allotment as listed in the LUP.

Rationale: The season of use listed in LUP would remove cattle during the critical early growing season and would reduce likelihood of trampling damage to soils. The majority of the cattle grazing would then occur when soils are firm enough to withstand grazing.

The majority of the grazing in the winter range would occur during plant dormancy having relatively little impact on the vegetation, particularly for grasses.

(2) Option 2 - Implement a two-pasture rest rotation grazing system to maintain or improve riparian habitats.

Modify the existing 2-pasture deferred grazing system to a 2-pasture rest-rotation, and deferred winter range use until 11/1. This system would provide for longer rest periods for the deferred pastures and would provide for season long rest on riparian areas from cattle in the rested pasture. Use pattern information indicates that stocking levels may be adequate for each pasture.

This system would result in higher levels in the uplands in the grazed pasture. In the rested pasture some riparian areas would continue to receive heavy from wild horses and burros, however utilization levels would be lower overall in the rested pasture. Refer to Table 1.

Table I. Twin Peaks Rest Rotation Grazing System

Year	North	South	Winter*	Numbers
1.	4/1-10/31	Rest	11/1-1/31	1060 Cattle
2.	Rest	4/1-10/31	11/1-1/31	660 Cattle
3.	Repeat year 1.			
4.	Repeat year 2.			

*Winter use area would correlate with the Dry Valley and Salt Marsh subdivisions.

(3) Option 3 - Eliminate the flexibility in the existing 2-pasture deferred grazing system.

Retain the existing the grazing system but eliminate flexibility in the AMP that allows cattle use in the deferred pasture before the deferment date of 7/1. This flexibility is not consistent with LUP decision that requires one season of growing season rest, for each grazing season.

(4) Option 4 - To improve livestock distribution haul water to those areas where water is lacking. Areas to be determined in consultation with the permittees.

(5) Option 5 - Implement management changes specific to priority streams to maintain or improve riparian habitats. Attached in Appendix 14.

C. Long Term Solutions

- Create an infrastructure within the allotment that allows for livestock rotation through smaller pastures.
- Develop water to improve livestock distribution.
- Develop springs in less than good conditions and fence riparian areas to the largest extent practical.

1 Option 1 - Parsnip/Wilcox Drift Fence

To control livestock drift on to riparian areas in the Chimney subdivision construct 4 miles of drift fence from T. 34 N., R. 17 E., Section 13; to T 32 N., R. 18 E., Sections 23, 27, and 33. This fence would be "open-ended" to allow for the natural migration of wildlife and wild horses.

2 Option 2 - Bull Flat Drift Fence

To control livestock drift in the Bull Flat CMA, construct 6 miles of fence from the Deep Cut/Twin Peaks division fence (T. 30 N., R. 16 E., Section 11, NE 1/4) east along the south side of Bull Flat through T. 31 N., R. 17 E., Sections 3-6, to the NW corner of T. 31 N., R. 17 E., Section 23. This fence could be used as a boundary for planning compartments. Although the fence would occur in an area of few wild horses and burros and limited movement. The gates would be left open when cattle are not authorized in the pastures to maintain natural movement of wild horses.

3 Option 3 - Painter Pipeline.

To improve livestock distribution in the Painter Flat area of the north pasture. Construct a pipeline from Painter Windmill in T. 34 N., R. 17 E., Section 25 to T. 34 N., R. 17 E., Sections 25.

4 Option 4 - Wetland and Stream Riparian Improvements

Develop the following springs by fencing the source and piping water out to a trough, fence riparian areas to the largest extent possible.

South Fork of Parsnip	Chimney Creek
Morgan Spring	Painter Creek
Horn Spring	

D. Additional Monitoring Data Desired.

1. Assess existing upland key areas in terms of the adequacy of information gathered for determining resource impacts of management.

2. Determine ecological status of key springs/wet meadows. Collect utilization data at key springs/wet meadows.

3. Determine the amount of mule deer and livestock use being made by subdivision, and the location of any key/crucial areas.

4. Determine functionality of riparian areas.

VII. CONSULTATION

Conclusions of this allotment evaluation were based upon monitoring data collected and consultation, cooperation, and coordination from the livestock permittees, wild horse and burros interests, state wildlife agencies and other interested parties.

VIII. APPENDIX

Appendix #1

APPENDIX 1

HOME RANGE AML WITHIN THE TWIN PEAKS ALLOTMENT

HOMES RANGES	APPROPRIATE MANAGEMENT LEVELS		CURRENT LEVELS October 11,12 1994	
	HORSE NUMBERS RANGE	BURRO NUMBERS RANGE	HORSE NUMBERS	BURRO and (MULES) NUMBERS
TWIN PEAKS NORTH	82-169	22-42	321*	51
SKEDADDLE	75-108	10-15	156	11 (13)
DRY VALLEY RIM	50-72	15-22	98	37 (5)

* A wild horse and burro gather was completed in late October of 1994 in the North Twin Peaks Home Range. The total number of animals gathered was 273. Of these animals, 120 were returned to range based on a five year or older age requirement. An additional 55 animals were not gathered. Currently it is estimated that 175 wild horses and 21 burros are within the home range.

APPENDIX # 2

TWIN PEAKS ALLOTMENT ACTUAL USE
LIVESTOCK and WILD HORSES

A:\AUM3-11/29/94

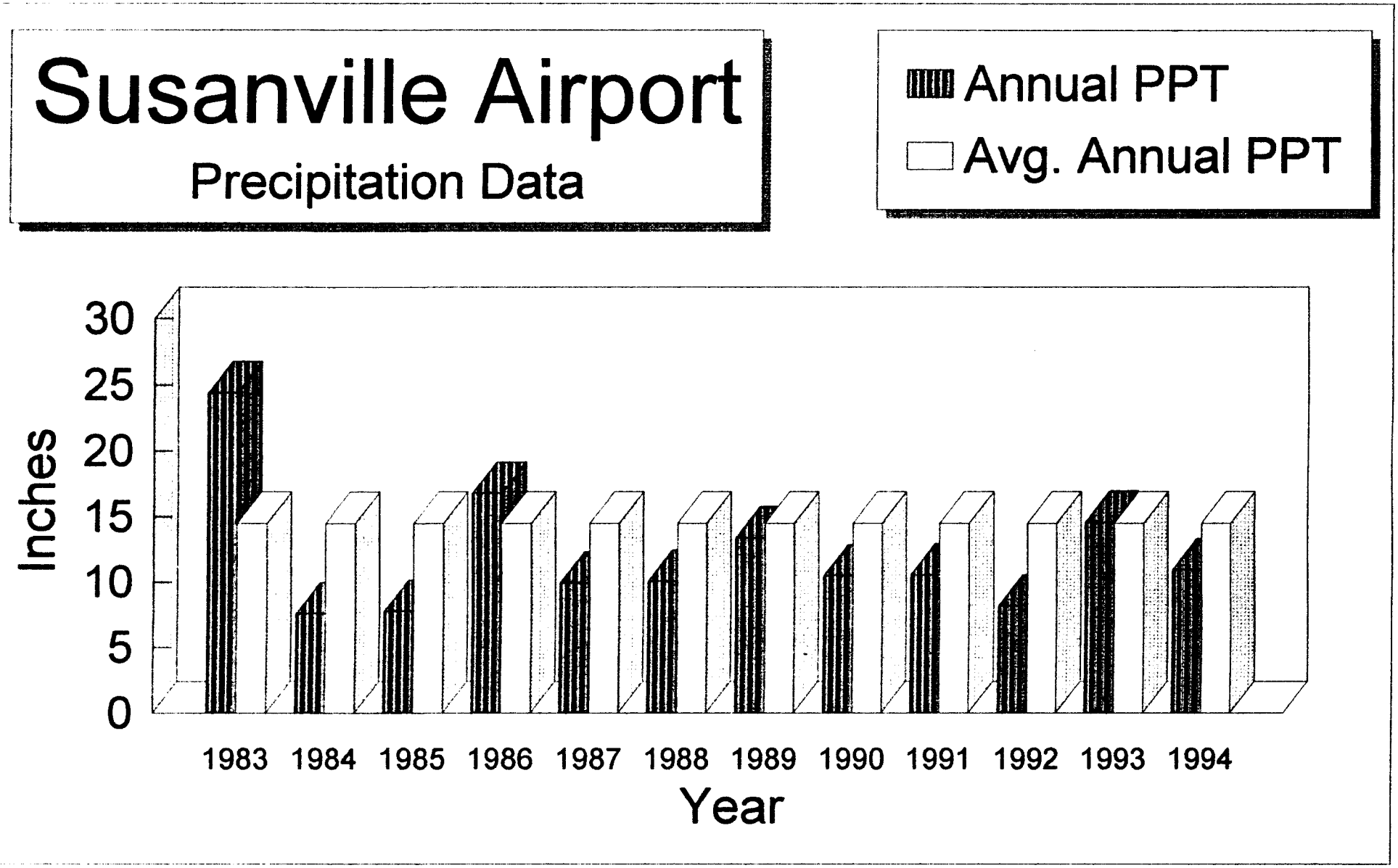
YEAR	PASTURE ALLOTMENT	ESTIMATED LIVESTOCK AUMS				ESTIMATED WILD HORSE BURRO AUMS	TOTAL ALLOTMENT USE (AUMS)	REMARKS
		ESPIL SHEEP	ESPIL CATTLE	LAVER CATTLE	PASTURE TOTAL			
1985	NORTH	1900	*	-	*	1956	*	South pasture turnout for cattle; wild horse and burro use based on July, 1985 census.
	SOUTH	1500	*	825 84 EOU	*	1776	*	
	ALLOTMENT TOTAL	3400	9506	909	13815	3732	17547	
1986	NORTH	1273	*	-	*	3600	*	Interim grazing system called for use in the south pasture due to the Big Springs & Twin fire areas; wild horse and burro use based on November, 1986 census.
	SOUTH	1410	*	731 84 EOU	*	1500	*	
	ALLOTMENT TOTAL	2683	10541	815	14039	5100	19139	
1987	NORTH	1256	8524 266 EOU	499 84 EOU	10629	4248	14877	North pasture turnout for cattle; wild horse and burro use was estimated.
	SOUTH	1253	-	-	1253	1770	3023	
	ALLOTMENT TOTAL	2509	8790	583	11882	6018	17900	
1988	NORTH	1585	*	-	*	4536	*	South pasture turnout for cattle; wild horse and burro use based on August, 1988 census.
	SOUTH	1073	*	597 37 EOU	*	2664	*	
	ALLOTMENT TOTAL	2658	8344	634	11636	7200	18836	
1989	NORTH	1395	8253 265 EOU	571 41 EOU	10525	4794	15319	North pasture turnout for cattle; wild horse and burro use based on August, 1989 census.
	SOUTH	983	-	-	983	2952	3935	
	ALLOTMENT TOTAL	2378	8518	612	11508	7746	19254	

9,910 licensed in 92

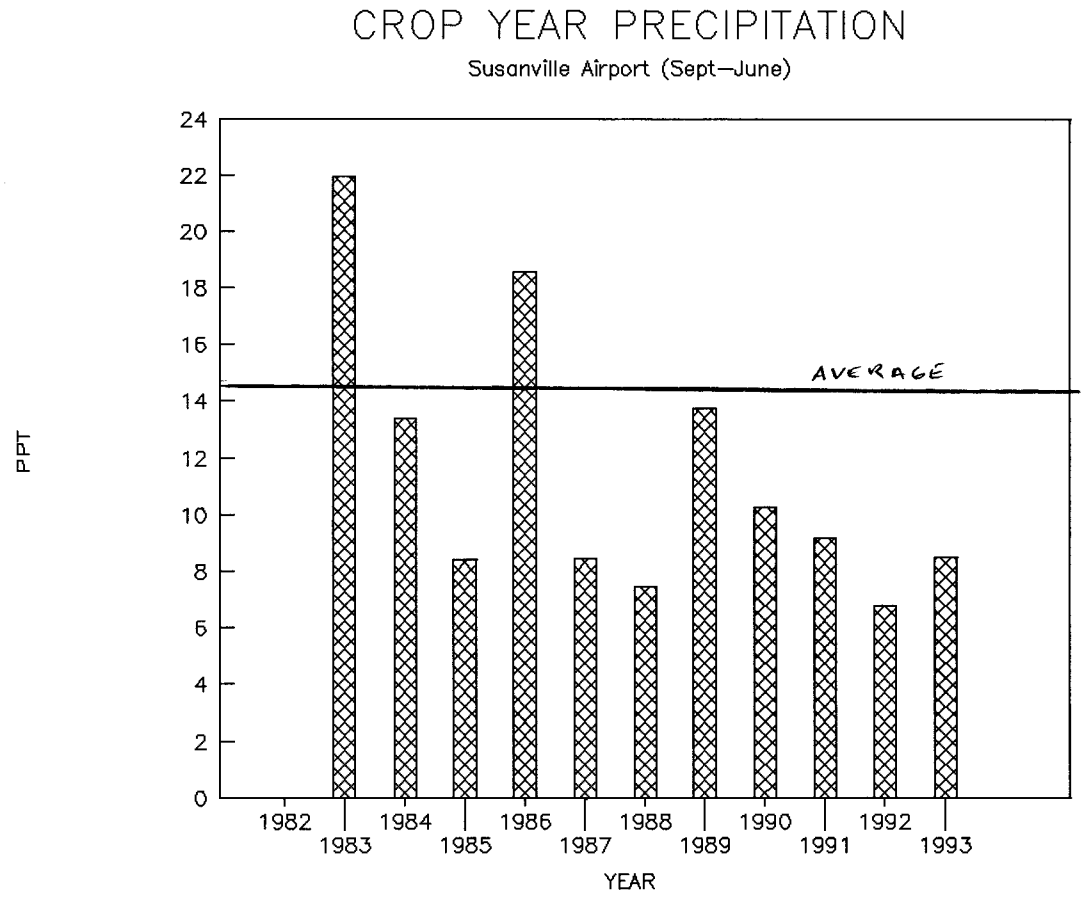
YEAR	PASTURE	ESTIMATED LIVESTOCK AUMS				ESTIMATED WILD HORSE BURRO AUMS	TOTAL USE (AUMS)	REMARKS
		ESPIL SHEEP	ESPIL CATTLE	LAVER CATTLE	PASTURE TOTAL			
1990	NORTH	1614	*	-	*	3492	*	South pasture turnout for cattle; wild horse and burro use estimated.
	SOUTH	889	*	665 19 EOU	*	3456	*	
	ALLOTMENT TOTAL	2503	8331	684	11518	6948	18466	
1991	NORTH	1452	7282 262 EOU	545 32 EOU	9573	5040	14613	North pasture turnout for cattle; wild horse and burro use estimated.
	SOUTH	1415	-	-	1415	4043	5458	
	ALLOTMENT TOTAL	2867	7544	577	10988	9083	20071	
1992	NORTH	1846	1252	-	3098	6528	9626	South pasture turnout for cattle; wild horse and burro use estimated.
	SOUTH	1008	4212	499 84 EOU	5803	2702	8505	
	ALLOTMENT TOTAL	2854	5464	583	8901	9230	18131	
1993	NORTH	1427	4817	-	6244	4226	10470	North pasture turnout for cattle; wild horse and burro use was based on a April, 1993 census.
	SOUTH	1567	1792	444 38 EOU	3841	3256	7097	
	ALLOTMENT TOTAL	2994	6609	482	10085	7482	17567	
1994	NORTH	1273	4185	-	5458	3290	8748	South pasture turnout for cattle; Espil cattle use estimated; wild horse and burro use was based on October 1994 census.
	SOUTH	1410	3299	264	4973	3204	8177	
	ALLOTMENT TOTAL	2683	7484	264	10431	6494	16925	

*Incomplete information to determine actual use by pasture .

ADULT/FOAL
COW/CALF DISCREPANCY


Susanville Airport
Precipitation Data
Annual PPT
Avg. Annual PPT
Inches
30
25
20
15
10
5
0
1983
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
Year

APPENDIX 4


CROP YEAR PRECIPITATION
Susanville Airport (Sept–June)
PPT
24
22
20
18
16
14
12
10
8
6
4
2
0
AVERAGE
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
YEAR

Appendix # 5

TWIN PEAKS ALLOTMENT
1994 COLE BROWSE BITTERBRUSH TRANSECT SUMMARY

A:\94PUTRSU.TWI-12/16/94

Transect Number and Name and Planning Compartment	Average Leader Use (Percent) by Date	Age Classes Percent				Hedging Forms Classes - Percent							
						All Available			Partly Available			Not Avail.	
		Seedling	Young	Mature	Decadent	1 None	2 Light	3 Heavy	4 None	5 Light	6 Heavy	7 Unavail	8 Dead
103, Pilgrim # 1, Rowland	31, 9/22/94	0	0	9	91	13	16	9	9	0	0	0	53
105, Buckhorn, Rowland	35, 9/22/94	0	16	26	58	26	14	16	8	2	0	0	32
106, Rowland Mountain, Rowland	76, 9/22/94	0	15	45	40	0	8	60	4	0	4	0	24
110, Horn Springs, Painter	12, 10/19/94	8	0	4	88	68	28	0	4	0	0	0	8
111, South Painter, Painter	28, 10/21/94	0	0	16	84	60	28	8	4	0	0	0	0
115, Piute Springs, Painter	45, 10/7/94	0	4	52	44	16	40	40	4	0	0	0	0
116, Willows Springs, Painter	20, 10/29/94	0	4	80	16	36	4	0	52	4	4	0	0
117, East Painter, Painter	62, 10/29/94	0	0	33	67	10	28	50	2	10	0	0	0
118, Indian Springs, Painter	22, 9/21/94	0	0	8	92	28	20	12	0	4	0	0	36
119, Telephone Springs, Skedaddle	2, 8/21/94	4	22	50	24	66	2	0	32	0	0	0	0
120, Lower Red Rock, Dry Valley	6, 8/8/94	0	0	80	20	52	0	0	48	0	0	0	0
121, Little Twin Spring, Stone Corral	62, 10/28/94	0	0	0	100	8	36	36	0	0	12	8	4
122, Red Rock Canyon, Dry Valley Rim	52, 10/24/94	0	0	71	29	0	52	36	0	8	0	0	4
123, Sheep Camp Draw, Dry Valley Rim	37, 8/15/94	0	0	80	20	0	56	0	20	4	20	0	0
130, Rag House, Skedaddle	29, 10/20/94	4	0	12	84	24	64	8	4	0	0	0	0
132, Al Shinn # 1, Black Mountain	35, 9/21/94	0	4	20	76	4	12	16	12	32	12	0	12
133, Al Shinn # 2, Black Mountain	7, 9/21/94	0	0	0	100	60	8	0	12	4	0	0	16
757, Nye Canyon, Skedaddle	4, 8/30/94	0	0	80	20	0	0	0	80	12	0	0	8

Appendix #6

Utilization at or adjacent to upland key area trend transect sites for the years 1987 through and including 1994. (as of December 7. 1994)

N = NO USE
S = SLIGHT USE
L = LIGHT USE
M = MODERATE USE
H = HEAVY USE

no = north pasture turnout
so = south pasture turnout
g = grass
s = shrubs

Site #	94 so	93 no	92 so	91 no	90 so	89	88	87
0707	S	N/S	S	-	N/S	-	-	-
0708	L	S	S	S/L	M/H	-	L	-
0709	M	S	L	-	M	M	H	-
0710	L	S	S	-	S	-	H	-
0711	S	S	L	-	S	M	M	L
0712	L	S	M	-	M/H	-	M	-
0713	S	S	L	-	L	-	L	-
0714	L	S	L	S	M	-	H	-
0715	N/S	S	L	-	S	-	M	-
0716	S	N/S	-	M	-	M	L/M	-
0717	M	-	L	-	-	M	H	-
0718	S	N	M	L	-	L	L	-
0719	S/L	S	H	M	-	M/H	-	M
0720	L	M	M	-	-	L/M	L	H
0721	L	-	S	-	-	-	M	L
0722	L	M	L	H	-	L/M	M/H	-
0723	N	-	L	-	-	M	-	-
0729	g=S	g=S	g=L	g=M	M	-	H	-
	s=N/S		s=S	s=L	M	-	H	-
0730	g=M	g=S	g=L	g=M	H	-	H	-
	s=S	s=S	s=S	H	-	H	-	
0753	S	S	S	L/M	-	M	L	M

Appendix #7

Summary of trend/frequency information for the Twin Peaks Allotment #00701 from 1983 to 1994.

TRANSECT	FORB	GRASS	SHRUB
0707	static	static	downward (mod)
0708	upward (mod)	static	static
0709	static	static	static
0710	upward (mod)	downward (mod)	static
0711	static	static	downward (mod)
0712	upward (mod)	static	static
0713	static	static	downward (mod)
0714	upward (mod)	static	static
0715	static	static	static
0716	static	static	downward (mod)
0717	upward (strong)	static	downward (mod)
0718	static	static	downward (mod)
0719	static	static	downward (mod)
0720	static	static	downward (mod)
0721	static	static	static
0722	upward (mod)	static	static
0723	static	static	static
0729	static	static	downward (mod)
0730	static	static	static
0753	static	static	static

A "static" rating equates to "not apparent" as it appears in the BLM Technical Reference TR 4400-4.

Appendix #8

Range Condition Comparison between 1979 and 1994
Twin Peaks Allotment, Upland Key Areas

Range Condition Rating - Numerical and Term

KA No.	Range Site Name	1979	1994
0707	Clay Upland 9-16" p.z.*	Fair	51 = Good
0708	Loamy 8-10" p.z.	Poor	59 = Good
0709	Stony Loam 9-12" p.z.	Poor	35 = Fair
0710	Clay Slope 8-12" p.z.	Fair	36 = Fair
0711	Stony Loam 9-12" p.z.	Poor	21 = Poor
0712	Cobbly Claypan 8-12"	Fair	58 = Good
0713	Sandy 8-12" p.z.	Poor	38 = Poor**
0714	Stony Loam 9-12" p.z.	Poor	29 = Poor**
0715	Course Silty 408" p.z.	Fair	51 = Good
0716	Loamy 8-12" p.z.	Poor	16 = Poor
0717	Cobbly Claypan 8-12"	Poor	46 = Fair
0718	Loamy 8-10" p.z.	Fair	50 = Fair
0719	Loamy 8-12" p.z.	Fair^	47 = Fair
0720	Loamy 12-14" p.z	Fair	58 = Good
0721	Churning Clay 10-14"	Fair	37 = Fair
0722	Very Cobbly Claypan 10-12"	Poor	2 = Poor
0723	Clayey 10-14" p.z.	Poor	53 = Good
0729	Loamy 4-8" p.z.	Fair	51 = Good
0730	Course Silty 4-8" p.z.	Poor	47 = Fair
0753	Stony Loam 12-16" p.z.	Fair^^	56 = Good

* "p.z." is "precipitation zone".

** Although having a numerical rating of >25, these sites were lowered one condition class due to low production. See section 305.5(a) of the National Range Handbook.

^ This site was burned by wildfire in 1984.

^^ This site was burned by wildfire in 1985.

APPENDIX 9 (4 Pages)

A:\94TPKEY3.SUM-11/29/94

TWIN PEAKS ALLOTMENT
1994 SUMMARY OF UPLAND KEY AREA UTILIZATION DATA

The Key Forage Plant Method (KFPM) was used to determine utilization levels on upland key areas. On riparian areas, stubble height method was in addition to or in place of the Key Forage Plant Method. Users are identified as follows: Livestock (L/S); Cattle (C); Sheep (S); Wild Horses (W/H); Burros (B); Wildlife (W/L).

TRANSECT NUMBER-NAME/SUBDIVISION	(DATE) RESULTS; USER
NORTH PASTURE UPLAND	
0715-Salt Works Well/Salt Marsh	(8/2/94): EULA5 2%; ARSP5 10%; ATCA 2%; TESP 2%.
0716-Smoke Creek Ranch/Dry Valley	(8/10/94): SIHY 17%.
0717-Tule Canyon/Buffalo Hills	(8/3/94): SIHY 29%; POSA12 55%.
0718-Parsnip Wash/Buffalo	(8/4/94): SIHY 17%; POSA12 21%; STTH2 2; AGSP 8%; C, S, W/H.
0719-Burn Spring/Painter	(7/6/94): STTH2 2; ELCI2 70%; C. (10/25/94): STTH2 28; SIHY 7%; AGSP 21%, C.
0720-Rowland Mountain/Rowland	(8/3/94): SIHY 8%; STTH2 35; ELCI2 37%; W/H
0721-Norton Place/Stone Corral	(8/10/94): SIHY 24%; S, C, W/H. (10/28/94): SIHY 27%; S, C, W/H.
0722-Buffalo Spring/Buffalo	(8/4/94): SIHY 31%; C.
0723-Antelope Basin/Painter	(7/14/94): SIHY 2%; AGSM 2%. (10/22/94): SIHY 2%.
0753-Big Springs Burn/Painter	(6/28/94): SIHY 2%; ELCI2 2%; (10/21/94): SIHY 6%; ELCI2 12%; STTH2 6%; C, W/H.
0754-Painter Flat/Painter	(9/21/94)- HOBR2 9%; Carex 8%; C, W/H
0756-Mixie Flat/Buffalo	(9/21/94) SIHY 25%; C, W/H
0757-Chimney Rock/Buffalo	(11/22/94) SIHY 11%; POSA12 24% C, W/H

3-Way Exclosures Utilization Transects

no Control (unfenced) FEID 2%, PUTR2 42%
4 foot, 4 wire fence (restricts cattle and wild horses) FEID 2%, PUTR2 33%

SOUTH PASTURE UPLAND

0707-Telephone Spring/Skedaddle	(7/28/94), SIHY 13%; POSA12 14%; STTH2 2%; W/L, W/H.
0708-Parker Canyon/Dry Valley (DV) Rim	(8-9-94), SIHY 38%; STTH2 29%; POSA12 16%; W/H, S.
0709-Wild Horse Reservoir/Skedaddle	(7/18/94), SIHY 51%; AGSP 48%; POSA12 42; C, S, W/H.
0710-East Fork Skedaddle Creek/DV Rim	(7/20/94), SIHY 23%; POSA12 27%; C, S
0711-Antelope Spring/Skedaddle	(7/18/94), SIHY 13%; C
0712-Willow Reservoir/Skedaddle	(7/27/94), SIHY 24%; STTH2 42%; POSA12 38%; C, S, W/H
0713-Lower Smoke Creek Well/Dry Valley	(8/5/94), STTH2 14%;
0714-Rush Creek Reservoir/Five Springs	(7/21/94), SIHY 20%; C (10/17/94), SIHY 26%; C, W/H, B.
0729-Dry Valley # 1/Dry Valley	(8/9/94), EULA5 7%; GRSP 3%; ATCA 3%; ORHY 15%; ARSP 4%;
0730-Dry Valley # 2/Dry Valley	(8/9/94), SIHY 43%; EULA5 9%; ARSP5 4%
0757-Nye Canyon/Skedaddle	(8/10/94), ELCI 17%; AGSP 5% C, W/H
0758-Rag House Transect/Skedaddle	(10/20/94), POSA12 49%; PUTR 57% C, W/H

TWIN PEAKS ALLOTMENT
1994 SUMMARY OF RIPARIAN KEY AREA UTILIZATION DATA
PUBLIC LAND PORTION

NORTH PASTURE STREAM RIPARIAN TRANSECTS

0718A-Upper Parsnip Wash/Buffalo	(7/12/94) JUBA 3"; willows 18%; ungrazed 14"; C, W/H, S
0718B-Lower Parsnip Wash/Buffalo	(7/12/94) JUBA 8"; C, S (8/10/94) JUBA 4"; ungrazed 10"; C, S
0771A-Upper North Fk Buffalo Cr/Buffalo	(10/26/94) site average 7.7"; C, S, W/H.
0771B-Lower North Fk Buffalo Cr/Buffalo	(8-10-94) JUBA 4"; willows 16%; ungrazed 12"; C, W/H. (10-26-94) JUBA 4"; C, W/H.
0772-Middle Fork Buffalo Cr/Buffalo	(10-26-94) site average 1.9"; ungrazed 10"; C.
0773-Chimney Creek/Chimney	
0774-West Fork Buffalo Creek/Buffalo	(10/26/94) site average 1.4"
0774A-West Fork Buffalo Creek/Buffalo	(10/22/94) site average 4.1"
0775-Painter Creek/Rowland	(8-4-94) AGEX 16"; ungrazed 16"; C, W/H. (10-29-94) 2"; C, W/H.

NORTH PASTURE SELECTED RIPARIAN SITES

Horn Spring	(10/21/94) site average 1.7"; C, W/H.
Rocky Table Spring	(10/12/94) JUBA-2.3", POSA12-1.5"; site aver.=1.9; C, W/H.
Buffalo Creek (below Buffalo Meadows)	(10/28/94) site average was heavy by C.
Indian Spring	(10/28/94) site average was heavy to severe by C, S, W/H.
Parsnip Springs	(10/28/94) site average was heavy to severe by C, S, W/H.
Sage Hen Springs	(10/28/94) site average was heavy to severe by C, W/H.

SOUTH PASTURE STREAM RIPARIAN TRANSECTS

0770-Lower Smoke Creek	(5/5/94) site average 9"; Willows 0%.
	(8/8/94) site average 15.2"; Willows 0%; ungrazed 24".
	(10/14/94) JURA 6.5"; SCPU 18.8".
	(11/22/94) site average 3.3" used by C, B.

SOUTH PASTURE SELECTED RIPARIAN SITES

Antelope Spring	(10/17/94) site average 1"; C, W/H.
Jenkins Troughs Spring	(10/24/94) JUBA-1", Willows-heavy use; C, W/H.
Morgan Spring	(10/18/94) site average was 1.3" (ungrazed 9") by C, S, W/H.
Phone Springs	(10/14/94) site average was 1.4" by C, S, W/H.
Red Rock I Springs	(10/24/94) site average was severe by C, W/H.
Red Rock II Springs	(10/24/94) site average was heavy by C, W/H.
Rush Canyon Springs	(10/21/94) site average was heavy by C, S, W/H.

PLANT SYMBOL KEY

EULA5: winterfat
ARSP5: bud sage
ATCA: shadscale
TESP: spiny horsebrush
SIHY: squirreltail
POSA12: bluegrass
STTH2: Thurber's needlegrass
AGSP: bluebunch wheatgrass
AGSM: western wheatgrass
ELCI2: great basin wild rye
HOBR2: meadow barley
GRSP: spiny hop sage
ORHY: Indian ricegrass
PUTR: antelope bitterbrush
JUBA: baltic rush
AGEX: spike redtop
SCPU: threesquare bulrush

Appendix #10

Population estimates California X-5B and Nevada 015 combined East Lassen Deer Herd 1978-1994.

East Lassen Deer Herd Population
(Estimates made in April for following fall.)

YEAR	POPULATION ESTIMATE
1994	no information provided
1993	4,500
1992	4,900
1991	5,205
1990	5,125
1989	6,552
1988	4,008
1987	6,967
1986	6,901
1985	6,780
1984	5,150
1983	6,944
1982	4,742
1981	6,195
1980	7,662
1979	9,129
1978	7,697

Appendix #11

Site Characteristics for Upland Trend Sites

SITE	PROD.	PRECIP.	ELEV.	ESI 79 - 94	FREQ.
0707	mod	high	high	fair - good	s = down
0708	mod	mod	mod	poor - good	f = up
0709	high	high	high	poor - fair	static
0710	mod	mod	high	fair - fair	g=down, f=up
0711	high	high	mod	poor - poor	s = sown
0712	low	mod	high	fair - good	f = up
0713	mod	mod	mod	poor - poor	s = down
0714	high	high	mod	poor - poor	f = up
0715	low	low	low	fair - good	static
0716	mod	mod	mod	poor - poor	s = down
0717	low	mod	high	poor - fair	f=up, s=down
0718	mod	mod	mod	fair - fair	s = down
0719	high	high	high	fair - fair	s = down
0720	high	high	high	fair - good	s = down
0721	low	high	high	fair - fair	static
0722	low	high	high	poor - poor	f = up
0723	mod	high	high	poor - good	static
0729	low	low	low	fair - good	s = down
0730	low	low	low	poor - fair	static
0753	high	high	high	fair - good	static

g = grass, f = forbs, s = shrubs

Appendix #12

Mule Deer Seasonal Use in Acres by Subdivision

Subdivisions	Acres	Percent	Use
Black Mountain	6,589	31%	Winter
	635	3%	Yearlong/Fawning
	13,910	66%	Summer/Transition
Buffalo	38,347	85%	Winter
	1,350	3%	Yearlong/Fawning
	1,701	4%	Summer/Transition
	3,111	7%	Winter/Transition
	691	1%	Little or No Use
Buffalo Hills	7,616	44%	Winter
	9,342	54%	Winter/Transition
	203	2%	Little or No Use
Chimney	20,053	86%	Winter
	2,598	11%	Yearlong/Fawning
	604	3%	Summer/Transition
Dry Valley	20,475	52%	Winter
	7,336	18%	Yearlong/Fawning
	11,665	30%	Little or No Use
Five Springs	3,007	13%	Transition
	120	.5%	Winter
	1,235	5%	Yearlong/Fawning
	9,048	40%	Winter/Transition
	9,251	41%	Little or No Use
Lower Smoke Creek	14,013	94%	Winter
	970	6%	Winter/Transition
Painter	5,033	15%	Winter
	4,136	13%	Yearlong/Fawning
	23,514	70%	Summer/Transition
	768	2%	Winter/Transition
Rim	22,253	36%	Transition
	32,575	53%	Winter
	962	2%	Yearlong/Fawning
	2,594	4%	Winter/Transition
	3,166	5%	Little or No Use

Rowland	12,875	99%	Summer/Transition
	151	1%	Winter/Transition
Salt Marsh	17,053	40%	Winter
	25,427	60%	Little or No Use
Skedaddle	20,760	45%	Transition
	18	.4%	Winter
	7,042	15%	Yearlong/Fawning
	15,164	33%	Summer/Transition
	3,042	7%	Little or No Use
Stone Corral	4,145	17%	Winter
	6,367	26%	Summer/Transition
	14,217	57%	Winter/Transition

Appendix #13

Pronghorn Antelope Use in Acres by Subdivisions.

Subdivisions	Acres	Percent	Use
Black Mountain	15,851	75%	Yearlong/General Kidding
	5,283	25%	Kidding/Yearlong
Buffalo	1,364	3%	Winter
	40,735	90%	Yearlong/General Kidding
	3,102	7%	Winter Concentration
Buffalo Hills	16,345	95%	Yearlong/General Kidding
	817	5%	Winter Concentration
Chimney	3,580	15%	Winter
	17,796	77%	Yearlong/General Kidding
	1,880	8%	Winter Concentration
Dry Valley	21,674	55%	Winter
	6,750	17%	Yearlong/General Kidding
	11,052	28%	Little or No Use
Five Springs	3,798	17%	Spring, Summer, Fall, & General Kidding
	11,845	52%	Yearlong/General Kidding
	5,114	23%	Kidding/Yearlong
	1,905	8%	Winter Concentration & Yearlong
Lower Smoke Creek	80	.53%	Spring, Summer, Fall & General Kidding
	8,015	54%	Winter
	1,995	13%	Yearlong/General Kidding
	4,892	33%	Winter Concentration
Painter	22,471	67%	Yearlong/General Kidding
	104	.31%	Kidding Spring/Summer/Fall

	10,877	33%	Kidding/Yearlong
Rim	3,514	6%	Winter
	57,253	93%	Yearlong/General Kidding
	783	1%	Kidding/Yearlong
Rowland	8,065	62%	Yearlong/General Kidding
	4,640	36%	Kidding Spring/Summer/Fall
	319	2%	Kidding/Yearlong
Salt Marsh	15,645	37%	Winter
	1,411	3%	Yearlong/General Kidding
	11,965	28%	Winter Concentration
	13,458	32%	Little or No Use
Skedaddle	23,637	51%	Spring/Summer/Fall/ & General Kidding
	1,690	4%	Winter
	18,987	41%	Yearlong/General Kidding
	1,711	4%	Kidding/Yearlong
Stone Corral	24,689	100%	Yearlong/General Kidding

APPENDIX 14 (2 pages)

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TWIN PEAKS ALLOTMENT
1995 RIPARIAN MANAGEMENT GRAZING STRATEGY SUMMARY
PUBLIC LAND PORTION

PASTURE STREAM RIPARIAN TRANSECTS

RIPARIAN	IMPROVEMENT STATUS	1995 STRATEGY*	1996 STRATEGY*
Upper Parsnip Wash	No structures	40% use objective in AMP	same
Lower Parsnip Wash/Buffalo Creek	Drift fences scheduled for completion in Spring of '95.	40% use objective in AMP	after fences are in place graze from 4/15 to 6/30;
North Fork Buffalo Creek	partly fenced	40% use objective in AMP	same
Middle Fork Buffalo Creek Pasture	drift fences scheduled for completion in Spring of '95.	implement 40-60% use limit	after fences are in place graze from 10/1 to 10/31;
Chimney Creek	no fencing	implement 40-60% use limit	same
Upper West Fork Buffalo Creek	no fencing	implement 40-60% use limit	same
Lower West Fork Buffalo Creek	drift fences scheduled for completion in Spring of '95.	implement 40-60% use limit	after fences are in place graze from 10/1 to 10/31
Painter Creek	partly fenced, creek is located in the Rowland subdivision, graze in accordance with AMP.	Graze from 4/15 to 6/30	Rest
Lower Smoke Creek	Drift fences completed in 1994.	Graze from 4/1 to 4/30	same
Upper Smoke Creek	partly fenced	implement 40-60% use limit	same

*Utilization to be determined as a drainage long average for each stream.

SELECTED UPLAND RIPARIAN AREAS

NORTH PASTURE

Horn Spring	undeveloped, management public land portion for 40-60% use.
Rocky Table Spring	spring developed, riparian exclosure scheduled for expansion for 1995.
Indian Spring	reservoir developed, small riparian area undeveloped
Parsnip Springs	Spring developed, riparian area scheduled for fence protection during Spring of 1995.
Sage Hen Springs	Spring developed and riparian area fenced, needs redevelopment.
South Twin # 1	spring developed, riparian area 90% protected by fencing.
South Twin #2	spring developed, riparian area 90% protected by fencing.

SOUTH PASTURE

Antelope Spring	spring developed, riparian area partly protected by fence exclosure, considered for expansion in 1995/96.
Jenkins Troughs Spring	spring developed, riparian area unprotected.
Morgan Spring	spring undeveloped, a reservoir on unfenced private, proposed for riparian fencing in 1995/96.
Phone Springs	spring developed and riparian area 100% protected in 1994.
Red Rock I Springs	spring developed, riparian source >50% protected by fence exclosure.
Red Rock II Springs	spring developed, riparian source $\pm$20% protected by fence exclosure.
Rush Canyon Springs	spring developed, riparian area 70% protected by fence exclosure.
Jenkins Springs	spring developed, riparian area 90% protected by fencing.
Coyote Springs	spring developed, riparian area >70% protected by fencing.

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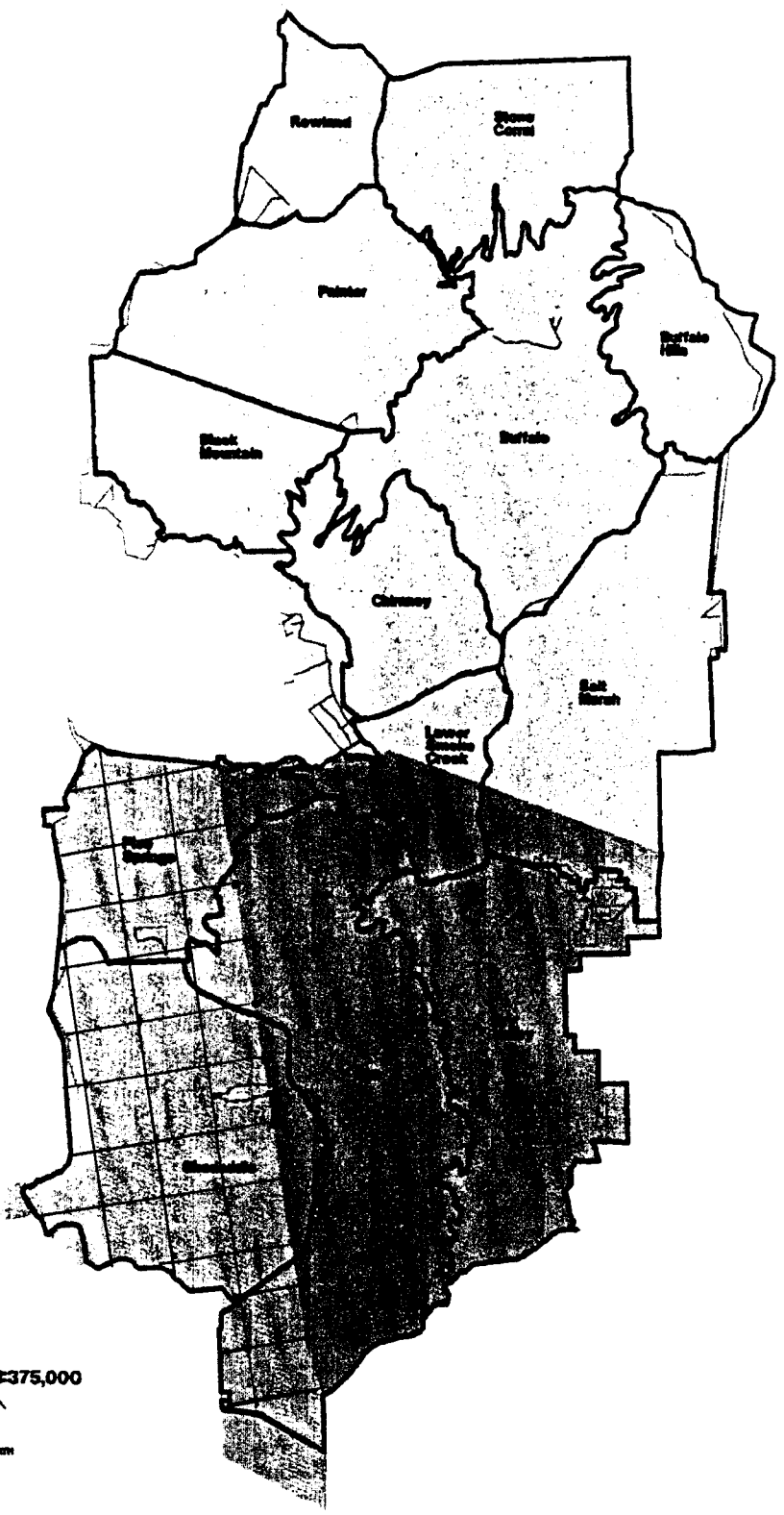
Twin Peaks Allotment



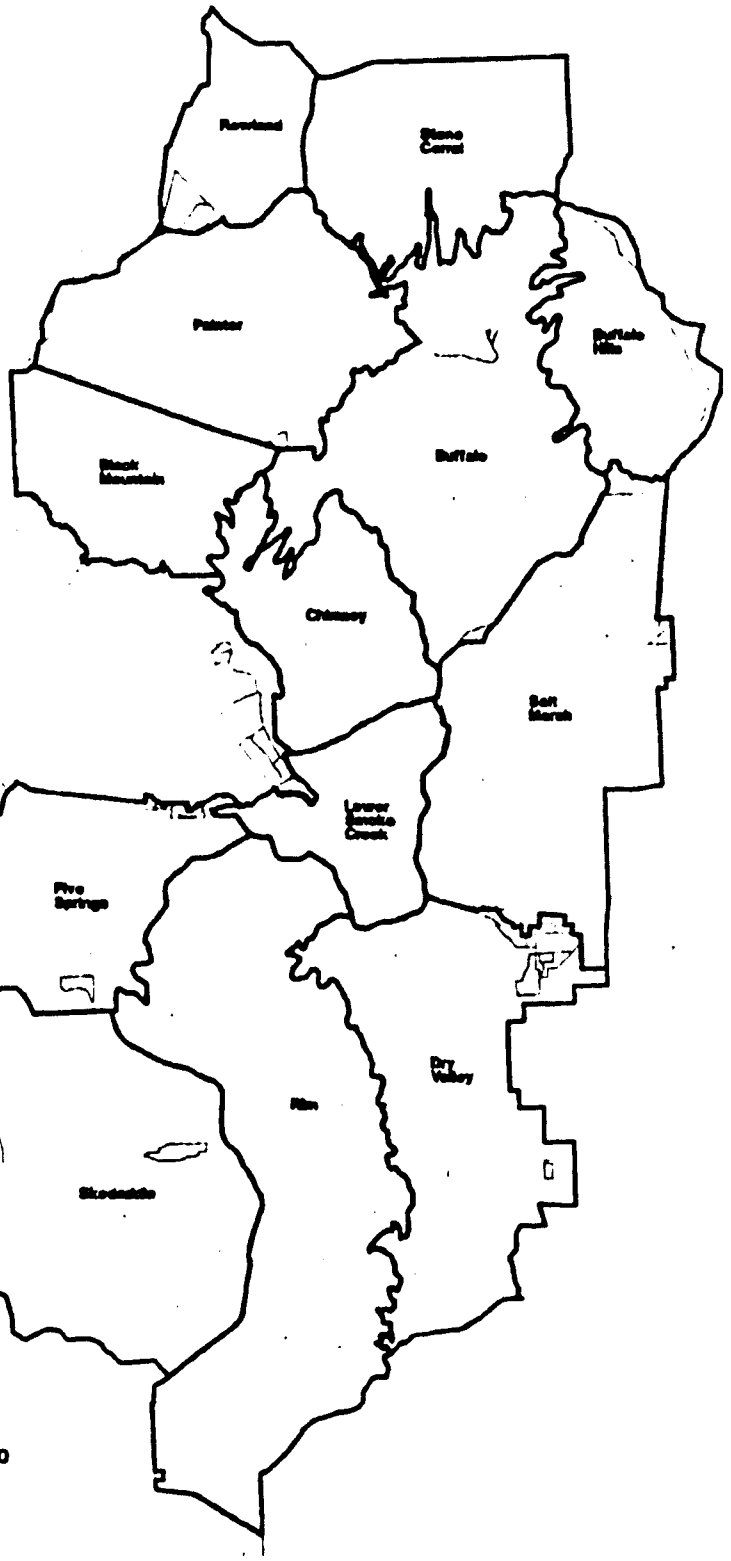
Twin Peaks Herd Management Area

- Twin Peaks North Home Range
- Dry Valley Rim Home Range
- Skedaddle Home Range
- Observation South Home Range
- Fences
- Allotment Subdivisions

Scale 1:375,000

MAP 1

Twin Peaks Allotment



Allotment Subdivisions

Fences

— Allotment Subdivisions

Scale 1:375,000

TWIN PEAKS ALLOTMENT MONITORING EVALUATION REPORT DEC.20TH, 1994

This draft report was received at a BLM meeting in Susanville on December 20th by Rich Heap. At that time the BLM was to issue a decision by December 23. The meeting did not review the contents of this report or discuss the proposed management actions. As a result of this meeting, BLM decided to have NDOW, CF&G, NWHC and the permittee meet on January 5 to decide interim measures prior to the new land use amendment EIS.

Specific Comments

Page 1, Background

Land use planning issued decisions for the Twin Peaks Allotment in 1982 that require verification of stocking levels to be at carrying capacity within five years.

Page 7, Actual Use

Wild horse actual use should be calculated by census data and the assumption that an animal unit month is one adult horse per months on the allotment. Previous computations put 100% of the herd on only 30% the herd area within the Twin Peaks Allotment. These errors have been identified to the BLM in previous appeals.

Yield indexing actual utilization data during drought years will not compute carrying capacities to protect natural resources. For example, during 1992 the BLM observed 80% utilization on riparian habitat. If precipitation data finds only 50% of normal rainfall, then the observed utilization is yield indexed to 40% in the computation.

Use pattern mapping data is presented in a table for weight averaging. As shown on page 8, carrying capacity computations will weight average the 278,659 acres of slight (10%) against the 5,829 acres of heavy (70%). The result will be less than 50%, thus carrying capacities will not meet allotment objectives. Carrying capacity computations will not address the problem of heavy use of riparian habitats.

Page 12, Riparian Trend

BLM has policy [illegible]cting it to test "functional" riparian areas. Eagle Lake att[illegible]d the procedure and failed the directive. This document was g[illegible]n to the permittee for the lawsuit and was impeached by the BLM lawyer. If BLM adhered to its policy and procedure, riparian areas would be determined as "non functional" or "functional at risk". Range reform would require immediate action for remedy. A recent example in Carson District, proposes to close the entire watershed from grazing.

Page 13

In the 1994 EA ROD, the BLM determined livestock suitability and ephemeral r status of this allotment. These data are not presented in this valuation. This gross oversight of data creates a significant basis in the evaluation.

Page 16

BLM recognizes the loss of shrubs as being detrimental to mule deer. Big sage brush potential was evaluated by Bill Phillips. BLM resigns from the LUP commitment to sustain mountain brush and mule deer habitat on this allotment. The broad statement of "BLM's new direction is to manage rangelands for what the rangelands can/may produce.", cannot be supported by present land use plans or policy.

Page 17

Water developments are to increase the livestock suitability of the Twin Peaks Allotment. In some cases new waters allow livestock to consume winter forage previously available to wildlife. What once was standing forage for mule deer during winter months has been consumed by summering livestock.

Where springs have the water diverted from meadow systems, riparian habitat are direct losses. Where water piped to troughs in meadows, the associated riparian habitat is lost.

Page 20, Wetland Riparian Objective

The objective presented is a broad objective from the land use plan record of decision. Wetland Riparian Objectives are in the 1992 and 1994 grazing decisions for Twin Peaks. Key management species and areas are found in the allotment monitoring action plan. Failure to disclose the these objectives escapes BLM's duties. ~~The~~ 1992 wild horse decision was based upon meeting the 40% utilization limit on wetland meadow habitats. This wild horse decision established a livestock grazing capacity for the north pasture at approximately 2,000 AUMs. The District authorizes approximately 8,000 AUMs of livestock use in the north pasture.

Page 22, Options

Option 1 does not establish a carrying capacity. The option does not relieve "hot season" grazing by livestock.

Option 2 does not establish a carrying capacity. The option assumes one year rest on a pasture and doubling the stocking rate on the other pasture will improve upland species. The option does not meet riparian objectives during years of use.

1-12-95

Option 3 - Option 5 are theories without specific actions.

Other Options include range improvement projects that cannot provide immediate relief to riparian areas.

Various Appendices

Springs and seeps to be protected. Utilization is now expressed in stubble height. Various data for mule deer and antelope.

NDOW Overview and Opinion

This document is to support a 1995 Grazing Decision. This decision would replace the 1994 Grazing Decision and eliminate our 1994 Appeal. To avoid hearing, BLM will continue this practice to avoided accountability and possible 1BLA Decision.

A list of springs and seeps to be fenced is provided. These projects are specifically those areas visited and mentioned by the wildlife agencies. They are a fraction of the key areas identified in the planning. Projects are subject to years of planning and available fundings.

Management options for livestock are not directed to provide relief to riparian habitat.

As a proposal for interim measures to long term planning, the document provides no immediate relief for riparian habitats of the [redacted]t. The fundamental approach is to accept damage on most riparian areas, pray for future funding for limited mitigation, accept removals of wild horses as progress and tolerate active preference stocking levels for 10 months on this allotment.

Issues, procedures and expectations are found in the Stipulated Agreement for immediate relief to riparian habitats on Twin Peaks. Inclusion of suitability and ephemeral management guidelines would be welcomed to induce necessary adjustments to livestock to meet allotment specific objectives.

BLM faces a hard decision to protect the resources.