9-28-95

United States Department of the Interior

TAKE PRIDE IN AMERICA

BUREAU OF LAND MANAGEMENT
SURPRISE RESOURCE AREA
P.O. BOX 460
CEDARVILLE, CALIFORNIA 96104-0460

IN REPLY REFER TO:

4130 (CA-028)

September 28, 1995

Commission for the Preservation of Wild Horses
c/o Ms. Cathy Barcomb
255 West Moana, Suite 207A
Reno, NV 89509

Dear Ms. Barcomb:

Enclosed is a copy of the Draft Wild Horse Gathering and Removal Environmental Assessment (EA) for the Buckhorn and Coppersmith Herd Management Areas. The comment period for this Draft EA will be through November 1, 1995.

If you have any questions or comments, please don't hesitate to call (916) 279-6101. Thank you for your interest.

Sincerely,

Susan T. Stokke
Surprise Resource Area Manager

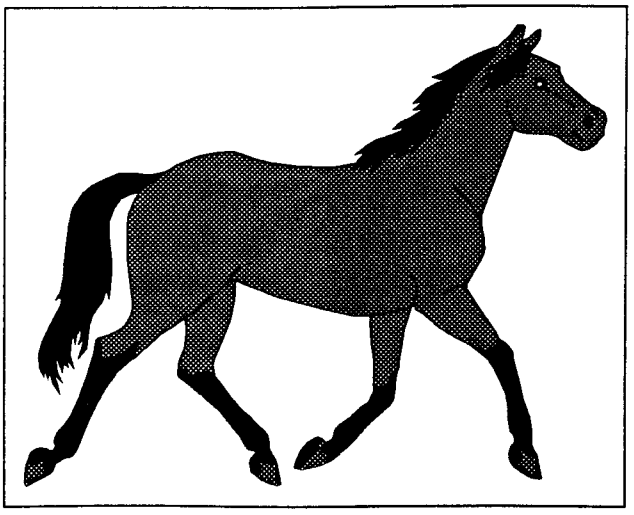
Enclosure

FAX
916-279-3171

DRAFT ENVIRONMENTAL ASSESSMENT BUCKHORN AND COPPERSMITH HERD MANAGEMENT AREA GATHER - FY 1996

CA-028-95-08

Susanville District
Surprise Resource Area
September 11, 1995



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BACKGROUND

The Proposed Action would occur on the Surprise Resource Area, Tuledad/Home Camp Planning Unit, Washoe County, Nevada and Lassen and Modoc Counties, California.

LAW

Public Law 92-195, known as the Wild Free-Roaming Horse and Burro Act - The general concept of the Law is to preserve healthy thriving populations of wild horses and burros for future generations to enjoy. Some specific portions of the Law that have a bearing on wild horse management are as follows:

> Section 1 - "It is the policy of Congress that wild free-roaming horses and burros shall be protected from capture, branding, harassment, or death; and to accomplish this they are to be considered in the area where presently found, as an integral part of the natural system of the public lands."
>
> Section 3.(a) - "The Secretary shall manage wild free-roaming horses and burros in a manner that is designed to achieve and maintain a thriving natural ecological balance on the public lands."
>
> "All management activities shall be at the minimal feasible level and shall be carried out in consultation with the wildlife agency of the State wherein such lands are located in order to protect the natural ecological balance of all wildlife species which inhabit such lands, particularly endangered wildlife species. Any adjustments in forage allocations on any such lands shall take into consideration the needs of other wildlife species which inhabit such lands."
>
> Section 3.(b) - "Where an area is found to be overpopulated, the Secretary, after consulting with the Advisory Board, may order old, sick, or lame animals to be destroyed in the most humane manner possible, and he may cause additional excess wild free-roaming horses and burros to be captured and removed for private maintenance under humane conditions and care."

Public Law 94-579, known as the "Federal Land Policy and Management Act" passed October 21, 1976, states in its preamble as follows:

> "To establish public land policy; to establish guidelines for its administration; to provide for the management, protection, development, and enhancement of the public lands; and for other purposes."

Section 102.(a)(8) states: "The Congress declares that it is the policy of the United States that the public lands be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archaeological values; that, where appropriate, will preserve and protect certain public lands in their natural condition; that will provide food and habitat for fish and wildlife and domestic animals; and that will provide for outdoor recreation and human occupancy and use."

Section 103.(a) states: "Without altering in any way the meaning of the following terms as used in any other statute, whether or not such statute is referred to in, or amended by, this Act, as used in this Act."

Section 202(a) states: "The Secretary shall, with public involvement and consistent with the terms and conditions of this Act, develop, maintain, and when appropriate, revise land use plans which provide by tracts or areas for the use of the public lands. Land use plans shall be developed for the public lands regardless of whether such lands previously have been classified, withdrawn, set aside, or otherwise designated for one or more uses."

Section 202(c)(1) and (7) states: "In the development and revision of land use plans, the Secretary shall - (1) use and observe the principles of multiple use and sustained yield set forth in this and other applicable law; (7) weigh long-term benefits to the public against short-term benefits."

Section 404 provides for the gathering of wild horses and burros using the helicopter.

Public Law 94-579 provides the basic planning for tracts of public lands administered by the Bureau of Land Management. This law calls for multiple use management with long term benefits to the American public.

Wild horse management is a portion of this bigger plan and is subject to restrictions placed on it by such Land Use Plans. The Land Use Plan should set limits on wild horse populations to integrate wild horse use into the total use. Also this plan may place other restrictions on horse use and management.

Public Law 95-514 known as the Public Rangelands Improvement Act was passed on October 25, 1978.

Section 2(a)(6) states: "The Act of December 15, 1971 (85 Stat. 649, 16 U.S.C. 1331 et seq.), continues to be successful in its goal to protecting wild free-roaming horses and burros from capture, branding, harassment and death, but that certain amendments are necessary thereto to avoid excessive costs in the administration of the Act, and to facilitate the humane adoption or disposal of excess wild free-roaming horses and burros which because they exceed the carrying capacity of the range, pose a threat to their own habitat, fish, wildlife, recreation, water and soil conservation, domestic livestock grazing and other rangeland values."

Section 2(b)(4) states: "Continue the policy of protecting wild free-roaming horses and burros from capture, branding, harassment, or death, while at the same time facilitating the removal and disposal of excess wild free-roaming horses and burros which pose a threat to themselves and their habitats and to other rangeland values."

Section 4(b) states: "The Secretary shall manage the public rangelands in accordance with the Taylor Grazing Act (43 U.S.C. 315-315(o), the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701-1782) and other applicable law consistent with the public rangelands improvement program pursuant to this Act. Except where the land use planning process required pursuant to section 202 of the Federal Land Policy and Management Act (43 U.S.C. 1712) determines otherwise or the Secretary determines and set forth his reasons for this determination that grazing uses should be discontinued (either temporarily or permanently) on certain lands, the goal of such management shall be to improve the range conditions of the public rangelands so that they become as productive as feasible in accordance with the rangeland management objectives established through the land use planning process and consistent with the values and objectives listed in sections 2(a) and (b)(2) of this Act."

Section 12 provides for the "Experimental Stewardship Program" which allows for experimental approaches to managing rangelands.

Section 14 deals with determinations of over population and how to conduct population reductions.

Section 14(b)(1) states in part: "and determine whether appropriate management levels should be achieved by the removal or destruction of excess animals or other options (such as sterilization, or natural controls on population levels."

Note that this portion of Section 14 provides for other options (not specified) for population control.

Section 14(b)(2) in part states: "Where the Secretary determines on the basis of (i) the current inventory of lands within his jurisdiction; (ii) information contained in any land use planning completed pursuant to section 202 of the Federal Land Policy and Management Act of 1976; (iii) information contained in court ordered environmental impact statements as defined in section 2 of the Public Range Lands Improvement Act of 1978; and (iv) such additional information as becomes available to him from time to time, including that information developed in the research study mandated by this section, or in the absence of the information contained in (i-iv) above on the basis of all information currently available to him, that an overpopulation exists on a given area of the public lands and that action is necessary to remove excess animals, he shall immediately remove excess animals from the range so as to achieve appropriate management levels. Such action shall be taken in the following order and priority until all excess animals have been removed so as to restore a thriving natural ecological balance to the range and protect the range from the deterioration associated with overpopulation."

Section 14(2)(b)(B) provides for what has become known as the "Regular Adoption Program" which offers wild horses for private ownership.

Section 14(2)(b)(c) provides for the destruction of wild horses for which no adoption demand exists.

Section 14(b)(3)(b) states: "A new subsection (f) is added to section 2 of the Act of December 15, 1971, as amended (16 U.S.C. 1332) to read as follows: (f) excess animals means wild free-roaming horses or burros (1) which have been removed from an area by the Secretary pursuant to applicable law or, (2) which must be removed from an area in order to preserve and maintain a thriving natural ecological balance and multiple-use relationships in that area."

MANAGEMENT FRAMEWORK PLAN (MFP)

In 1977, the Tuledad/Home Camp Management Framework Plan 3 was developed, to implement PL 94-579 section 202(a), . The MFP is in compliance with the above Public Laws, and the Proposed Action has been reviewed for conformance with the resource decisions found in the MFP (43 CFR 1610.5, BLM MS 1617.3). The following are MFP decisions which have a direct impact on wild horse herd management in the Buckhorn and Coppersmith wild horse herds:

Range Management Decision H 1.1 - Manage and protect a viable, self sustaining horse population.

Range Management Decision H 1.4 - Manage and protect no less than 100 horses in the Tuledad Planning Unit.

Range Management Decision H 2.1 - Remove excess numbers of horses from the area.

Range Management Decision H 3.1 - Develop management plans for each herd management area.

Range Management Decision H 6.1 - Conduct routine inventories (of wild horse populations).

Range Management Decision RM 1.1 - 1) Initiate a systematic livestock management plan for the Tuledad Allotment. 6) Implement a monitoring system capable of providing reliable data to assess achievement of management objectives.

Watershed Decision W 1.1 - Implement livestock managment plans that restore vegetation to site potential.

GRAZING ENVIRONMENTAL IMPACT STATEMENT (GEIS)

In 1978, a Grazing Environmental Impact Statement (GEIS) covering the Tuledad/Home Camp Planning Unit was written. This GEIS analyzed the effects of a variety of livestock management systems on the environment, including wild horses. The selected grazing program from the GEIS was outlined in the Tuledad/Home Camp Range Program Summary (RPS). Implementation progress has been summarized in subsequent RPS Updates.

MFP IMPLEMENTATION

In 1978, the Bare Creek-Silver Creek-Newlands Aquatic Habitat Management Plan (AHMP) was written in coordination with the California Department of Fish and Game. These watersheds are part of the western half of the Coppersmith Wild Horse Herd Management Area. The majority of the watersheds are extremely steep and rocky. They are capable of providing marginal wild horse spring, summer, and fall habitat; deep winter snows make the watersheds unsuitable for wild horse winter habitat, and the limited access routes out of the area make it easy for wild horses making late fall use in the watersheds to get trapped and die in the higher elevations during hard winters.

Through the AHMP, livestock use of the public lands was reduced or eliminated in the uplands and along the perennial creeks in the watersheds. At the time the AHMP was written, there were 54 horses counted in the Coppersmith Herd and none were found in the Bare Creek or Silver Creek watersheds. The decision was made through the plan that wild horses would be excluded from the watershed because of the intensive grazing management needed to recover and maintain the cold water fishery potential of the perennial creeks.

The following objectives were developed for the plan:

1. Increase the average stream area shaded to 80% in Upper Bare Creek in 10 years.
2. Increase ground cover (including litter and canopy cover) to 90-100% in the streambank zone in 10 years.

3. Increase live vegetation and litter ground cover in 10 years to reduce bare ground (rock not considered ground cover on meadow habitat) on riparian habitat from 50% to 10%.
4. Reduce seasonally high water temperatures to less than 68 degrees F. in any portion of the stream.
5. Decrease suspended solid samples during spring runoff and after rains to less than 25 Jackson turbidity units in 10 years.
6. Expand the fisheries and habitat management on private intervening lands by encouraging land exchanges, easements, cooperative agreements, and/or by setting an example to follow on public lands.
7. Improve the pool quality ratings on all portions of the streams on public land from Class 4 and 5 to Classes 1, 2, and 3 within 15 years.
8. Improve the riffle quality on all portions of the stream on public land from Class 3, 4, and 5 to Class 2 or 1 within 10 years.
9. Establish minimum streamflow requirements needed to maintain aquatic and riparian habitats on Silver Creek (Sworinger Reservoir) and Bare Creek (Newland Reservoir).
10. Induce and maintain an upward trend toward range site potential on the streamside community with the ultimate achievement of site potential in 15 years.
11. Induce and maintain an upward trend toward range site potential on all habitat types within the Aquatic Habitat Area.
12. Increase the carrying capacity of deer winter and summer habitat to accommodate a 50% increase.
13. Increase the present California Valley quail and cottontail habitat by providing dense cover or brush piles (one per every 1/4 mile) along that portion of Bare Creek on public land.
14. Maintain the existence of snag trees on all public land up to a potential density of 3.5 dead trees per acre. Yearly steps should be taken to protect snags from being cut for firewood.
15. Increase the diversity in all habitat types by management, protection, or improvement.

In 1980, MFP decision RM 1.1 was implemented and the Tuledad Allotment Management Plan (AMP) was developed. The Tuledad Allotment contains both the Buckhorn and the Coppersmith HMA's. This was the first AMP implemented following the completion of the Tuledad/Home Camp GEIS.

The following objectives were developed for the allotment:

1. Initiate and maintain an upward trend toward range site potential.
2. Demonstrate a statistically significant increase in ground cover (including litter) within six years on key study plots.

3. Increase canopy cover of rushes, sedges, and grasses to 90-100 percent (reduce bare ground to 0-10%) within six years on all wet meadows and riparian communities.
4. Demonstrate a statistically significant increase in perennial grass basal cover within 12 years on key study plots.
5. Increase livestock productive capacity (i.e., increased calf crop, increase lamb and calf weights).
6. Reduce and maintain wild horse numbers at proper management levels of 100 head as per Tuledad/Home Camp MFP.
7. Improve and maintain bitterbrush in a satisfactory condition for game and non-game species in all pastures.
8. Improve wildlife habitat to the point where it could sustain a population of 3,750 deer and 1,000 antelope.
9. Improve soil stability by initiating or maintaining an upward trend toward range site potential.

In 1984, MFP Range Management Decision H 3.1 was implemented, and Herd Management Area Plans (HMAP) were developed for the Buckhorn and Coppersmith wild horse herds. These plans were developed as part of the Modoc/Washoe Experimental Stewardship Wild Horse Experiment which was initiated in 1982. Six factors were compared among three wild horse herds; 1) adoptability of excess horses, 2) effects of inbreeding compared with outbreeding, 3) herd health, 4) herd viability, 5) herd manageability, and 6) management and adoption costs. The Buckhorn and Coppersmith HMAP's called for Structured Herd Management to be used to manage the two herds.

PLAN EVALUATION

In 1986, the Bureau began evaluating the resource conditions in the Tuledad Allotment.

The Draft Bare Creek AHMP evaluation was completed.

The objectives to increase ground cover, reduce bare ground, improve pool and riffle quality, and induce upward trend in all habitat types have been partially met. Conditions continue to improve in the area; however, as horse numbers have increased since the last gather (1989 to 1995), more and more bands are using the Bare Creek, Silver Creek, and North Creek watersheds. Due to the steep terrain, most of the wild horse use, especially in the late summer, is concentrated in the bottoms of the drainages and on the small meadows. This continuous, season-long wild horse use along the streambanks is beginning to slow the current upward trend toward meeting the AHMP objectives. The Bare Creek Exclosure fence has always required some maintenance each year to repair breaks due to snow and spring runoff; however, the fence is becoming more difficult to keep maintained, as the horses are now breaking down the fence several times each year.

The Tuledad AMP evaluation, which included communication and coordination with the Modoc/Washoe Experimental Stewardship Committee, the California Department of Fish and Game and the Nevada Department of Wildlife, was completed in 1991.

The AMP evaluation concluded that most of the upland plant communities above 5500 feet are moving toward becoming more like the Natural Resource Conservation Service (NRCS) established "climax" communities, or site potential (objectives 1 and 9). Ground cover and perennial grass basal cover is increasing on the key study plot sites (most above 5500') (objectives 2 and 4). Herbaceous vegetation on these upland communities is not being negatively impacted by the existing wild horse use on the allotment. Based on fecal studies, horses do not use significant amounts of bitterbrush, and they are probably not having any negative impact on bitterbrush stands in the allotment (objective 7). Wild horse numbers are no longer in compliance with objective 6 of the AMP.

The AMP evaluation recognized a shortage of quantitative data in riparian, aspen, and mountain brush communities in the Tuledad Allotment. Results of the few studies performed in riparian areas are mixed. Objective 3, increasing the canopy cover of rushes, sedges and grasses on all wet meadows and riparian communities is being partially met on the allotment; however, it is not being met in several areas of the allotment, especially the Wire Lakes and Buckhorn areas. These two areas are at the center of the spring, summer, and fall range for the Coppersmith and Buckhorn WHMA's respectively.

The AMP made several recommendations for future management. Among them were to establish studies in willow, riparian, and aspen communities to obtain utilization and vigor data; to monitor deer, pronghorn, and wild horse seasonal movements; and to limit utilization to a 2" stubble height in riparian areas in late use areas.

INTERIM GRAZING DECISION (IGD)

In 1992, the "Tuledad Interim Grazing Decision" was issued prior to the grazing season to address the livestock impacts on antelope bitterbrush and riparian communities within the allotment. For the duration of the decision, domestic livestock grazing was held at or below 60% of the allowed active Animal Unit Months (AUM's); cattle and sheep were herded out of the majority of the Buckhorn and Wire Lakes areas; and studies were established on 14 riparian complexes throughout the allotment.

INTEGRATED MANAGEMENT PLAN

Currently, a comprehensive and fully integrated plan is being developed which will address the unresolved conflicts, including wild horse use, in the antelope bitterbrush, aspen, riparian, and mountain brush communities. This plan will include both the Buckhorn and the Coppersmith wild horse herd areas and may amend the HMAPs, the Tuledad AMP, and/or the Bare Creek AHMP. Objectives from these plans will be modified, and new, more site-specific objectives will be developed.

NEED FOR ACTION

An analysis of the current monitoring data, utilization mapping, wild horse counts, and the most recent trend data, found that there are excess wild horses on the two HMAs. With the current numbers, a thriving natural ecological balance and multiple use relationships cannot be maintained.

Three main issues will be addressed in this EA: 1) Impacts on riparian areas. 2) Impacts on wild horses. 3) Impacts on domestic livestock grazing.

On the spring, summer, and fall ranges of the Buckhorn and Coppersmith HMAs, there are areas where, in the absence of cattle, wild horses make heavy and severe use on riparian areas. Increasing numbers of wild horses from the Coppersmith Herd are using the Bare/North/Silver Creek watersheds; these watersheds support cold water fisheries habitat which is being negatively impacted by wild horse use.

Wild horse winter habitat is limited both in area and in forage availability in the Buckhorn and Coppersmith HMAs; as wild horse numbers continue to increase, the limitations of the winter range areas are resulting in poor conditions of horses by spring and may result in herd die-offs during winters with heavy snow. Individual bands of wild horses are expanding their summer home ranges into portions of the both the HMA's which are less suited to wild horse use and which have rarely received wild horse use in the past. Some bands of wild horses in the Coppersmith HMA are leaving the HMA in the summer and entering areas which are not allocated for wild horse use.

Wild horses use the two HMA's season-long every year. As wild horse numbers have increased, their use of the forage in the two HMA's has increased. The utilization standards of 60% set through the MFP, the AMP, and the IGD are beginning to be met (especially in riparian areas and upland areas around water) earlier in the growing season due to wild horse use in the spring. These standards are often met or nearly met before livestock are scheduled to enter areas used by wild horses. As a result, livestock operators are frequently asked to avoid some areas or to place fewer livestock in some areas, even when those areas were scheduled for use in the annual use plan. In addition, livestock are frequently held fully responsible for the failure of some areas

(especially riparian areas) to meet utilization standards or allotment objectives when wild horses were partially or fully responsible for the impacts.

Impacts on cultural resources will not be addressed in this document for two reasons. First, there would be no impacts on cultural resources as a result of a wild horse gather. The trap sites are temporary and have already been assessed for cultural resources. Equipment used in the gather would enter on existing roads. The gather itself would be conducted with a helicopter and on horseback and would have no impact on surface resources. Second, the impacts wild horses have on cultural resources are essentially the same regardless of the number of horses using the area. Most cultural resources are located in and around riparian areas and water sources which would continue to receive wild horse use whether wild horse numbers were reduced or not.

Impacts on wilderness resources will not be addressed in this document because wild horse gathering would have virtually no affects on wilderness values. No traps or gathering equipment would enter any wilderness study areas. The helicopter would fly over one small area of one wilderness study area for no more than two or three days.

The process for arriving at the recommended wild horse management levels conforms with BLM Instructional Memo No. 90-30 (IM 90-30) issued October 12, 1989.

PROPOSED ACTION

Gather wild horses on the Buckhorn and Coppersmith HMAs beginning November 1, 1995 to the minimum recommended management levels. Each HMA would be gathered to the minimum management level and allowed to increase to the maximum management level (see Table 1) before further analysis.

Table 1. Herd Management Areas and Wild Horse Population Levels.

HMA	1995 Census	Recommended Management Levels Min	Max	Approximate Number to be Removed
Buckhorn	176	59	85	117
Coppersmith	137	50	75	87

These herds would also be restructured at this gather. Herd integrity would be carefully preserved. The goal is that only horses which are four years old and younger would be removed. Younger horses are more adoptable; they cost BLM less for holding and maintenance, and generally spend less time in holding facilities.

For specifics of the gather see the "Helicopter Gathering Plan for Wild Horses in the Buckhorn and Coppersmith Herd Management Areas" (Appendix 1).

OTHER ALTERNATIVES

Do not gather wild horses at this time (No Action). Wait until the East Lassen EIS and subsequent activity plans have been completed (2 to 3 years), or until monitoring data shows that there has been a degradation in the condition of the upland vegetation.

Another alternative to gather wild horses on the two HMA's, without structuring the herds was considered but dropped. This alternative was not given further consideration, because it violates the BLM policy of selectively removing younger horses at gathers. Also it is outside the criteria of the "Susanville District Wild Horse and Burro Policy" and "Modoc/Washoe Experimental Stewardship Wild Horse Experiment."

DESCRIPTION OF THE ENVIRONMENT

WEATHER

Six of the past nine years have had below normal precipitation in northwestern Nevada and northeastern California (see Table 2). For some adjacent areas with long term weather records, the 1993-94 water year was the driest in history (Medford, OR). Upland production in these two HMA's has not been seriously impacted by this period of drought in the last four years. Spring of 1992 was extremely dry with low production by perennial herbaceous vegetation in the uplands. Use by livestock, wild horses, and wildlife was concentrated in the ephemeral lakebeds and other riparian communities. The winter of 1992-93 was very wet; the next spring, herbaceous upland vegetation, especially forbs, was very productive. 1994 was a very dry year. Precipitation was well timed to produce grasses in the spring; however, most upland vegetation cured fairly early in the year and use was again concentrated in the riparian communities in the late summer and fall. The 1995 season has been extremely wet; the late winter, spring, and summer had mild temperatures. Grass and forb production has been excellent, and most upland species remained green and succulent through July.

Table 2. Cedarville crop year precipitation (September to June). Median 11.33 inches.

YEAR	PRECIPITATION	PERCENT OF MEDIAN
1986-87	8.63	74%
1987-88	10.06	89%
1988-89	11.29	100%
1989-90	9.65	85%
1990-91	10.06	89%
1991-92	8.73	77%
1992-93	17.82	157%
1993-94	8.30	73%
1994-95	17.78	157%

WATER

The Buckhorn HMA contains approximately 15 springs (8 public, 7 private), 14 ephemeral lakebeds, and 7 miles of creeks (5 public, 2 private). In addition to these naturally occuring water sources, the HMA includes 1 developed spring and 44 reservoirs most of which augment existing springs and ephemeral lakebeds.

The Coppersmith HMA contains approximately 29 springs (17 public, 12 private), 9 ephemeral lakebeds, and 28 miles of creeks (15 public, 13 private). In addition to these naturally occuring water sources, the HMA includes 4 developed springs and 13 reservoirs many of which augment existing springs and ephemeral lakebeds.

SOILS AND VEGETATION

The HMA's lie in the southwest corner of the Surprise Resource Area in northwestern Washoe County, Nevada and northeastern Lassen County, California. Elevations range from 4500 feet in Surprise Valley to 8000 feet in the South Warner Mountains. The soils range from deep, highly productive loams and clay loams on the foothills of the South Warners, to less productive volcanic clay loams and clays in the mid elevation tables and rims, to highly variable alkaline influenced soils on the lake beds and lake terraces in South Surprise Valley and Duck Flat. The highest elevations in the HMA's are dominated by mountain big sagebrush/grass communities and include pockets of ponderosa pine, white fir, and aspen. The mid elevations are about evenly split by big sagebrush and low sagebrush dominated communities. They also include a large variety of mountain brush, bitterbrush, mountain mahogany, western juniper, and Douglas rabbitbrush co-dominated communities. The lowest elevation communities are dominated by basin big sagebrush and desert shrubs on the lake terraces, greasewood on the lake flats, and basin wildrye in the less alkaline drainages between the lake terraces and the lake flats. Grasses and grass-like plants make up about 15% of the total vegetation. Riparian areas occupy less than 1% of the total

area. The plant communities on the four HMA's range from early to late successional stages. Trend is generally moving toward NRCS identified site potentials in upland areas, as a result of changes in livestock management and maintenance of both livestock and wild horse numbers around carrying capacity over the past 15 years. See Appendix 7 for NRCS Range Site Descriptions and Condition/Trend monitoring.

Most of the larger, more productive, more accessible, and more dependable riparian areas within the HMA's are on private fenced and unfenced land. Many acres of the most productive private lands within the HMA's are fenced and unavailable to wild horses.

WILDLIFE

These HMA's provide habitat for the large variety of wildlife typically found in the northwestern Great Basin. The most common species include pronghorn antelope, sage grouse, black-tailed jackrabbits, horned larks, Brewer's sparrows, deer mice, coyotes, raptors, and bobcats. There are mule deer in areas where big sagebrush and other taller shrubs provide cover.

Over half of the wildlife species in this area are dependant upon riparian communities for habitat during some portion of the year. Many of the less common species, including voles, killdeer, amphibians, and song birds are totally dependent on riparian habitat and do not occur in areas without riparian communities. Sage grouse are dependent upon meadows at springs for brood rearing habitat. Most wildlife species depend on riparian areas as a source of drinking water. It is likely that many of the higher elevation herbaceous riparian communities were once dominated by willow and other riparian shrubs. These communities would have supported a wide variety of birds, amphibians, and reptiles which are currently limited to the relatively few areas in the two HMA's which still support woody riparian vegetation.

During the summer of 1992 and 1994, competition for water between pronghorn antelope and wild horses was observed at several different locations. Intra- and inter-specific interaction and stress has increased. Displacement of pronghorn antelope by wild horses at water holes has been observed. Pronghorn antelope will frequently wait until wild horses leave the area before attempting to use water holes. As water becomes scarce in the late summer, and as numbers of wild horses increase, the amount of time available for pronghorn antelope to use water holes is steadily decreasing.

Although mule deer do not appear to be a major faunal component of either the current climax plant community or the ecosystem that existed at the time of contact with Europeans, public interest in theEast Lassen Deer Herd, which herd area includes both HMA's, is high.

THREATENED AND ENDANGERED SPECIES

No federally listed threatened or endangered plants or animals are known to occur within the two HMA's.

WILD HORSES

Herd Management Area Plans

In 1984, Herd Management Area Plans were developed, including the **Coppersmith HMAP (Herd Area #CA-261)** and the **Buckhorn HMAP (Herd Area #CA-262)**, which delineated management area boundaries and included objectives, management methods, and oportunities for plan evaluation and revision.

The objectives of the Coppersmith HMAP include:

1) Maintaining a healthy and viable wild, free-roaming horse herd in the Coppersmith HMA. (RM decision H 1.1),
2) Maintaining a minimum of 50 and a maximum of 75 head of wild horses through periodic removal. (RM H 1.4, 2.1),
3) Developing a highly adoptable horse through the selection of desirable breeding horses, and
4) Providing a highly adoptable horse for the Adoption Program through the selection of horses 4 years and under for adoption.

The objectives of the Buckhorn HMAP include the above four, plus:

5) Reducing inbreeding problems through the introduction of new animals into the herd from other wild and free-roaming horse herds, and
6) Providing at least two full years of rest on the Cottonwood Mountain Burn Area through grazing exclusion.

To meet these objectives, selection criteria, to be used during periodic gathers, were developed for each of the herds. The Coppersmith wild horse herd would be selected for:

1) Light saddle horse conformation,
2) Dark hooves,
3) All coat colors, and
4) Size of 15 hands or more.

The Buckhorn wild horse herd would be selected for,

1) Light saddle horse conformation,

2) Dark hooves,
3) All coat colors, with an emphasis on maintaining the existing variety of paints, sorrels, palominos, greys, and roans, and
4) Size of 15 hands or more.

Conformance with the HMAPs, specifically keeping wild horse numbers within the carrying capacity of the range in combination with the other uses of the range, has resulted in thriving wild horse herds. This was reflected by the low death loss during the winter of 1992-93, while some neighboring horse herds had significant death losses. The annual rates of increase for these herds in the 1986 - 1989 period, the time between the last two gathers, was 26% for the Buckhorn herd and 18% for the Coppersmith herd. As the numbers of wild horses have increased, the annual rate of increase has dropped for both herds and is now calculated at 16% for the Buckhorn herd and 15% for the Coppersmith herd (see Table 3).

Wild Horse Diets

A study of herbivore diets by A.E. Bullock in 1976 and 1977 on the **Tuledad Allotment** using fecal analysis found that, through the year, wild horse diets contained 89.76% grass and grass-like plants. Spring diets were the most varied. Several early spring samples contained less than 50% grass and up to 60% forbs and shrubs. Winter samples were mostly grasses and grass-like species. Some samples contained 100% grass. Fifty six samples were collected from four different habitat types, juniper/shrub, sagebrush/mixed shrub, mountain shrub, and wet meadow/juniper habitat types.

The main conclusions drawn from this study which pertain to wild horses include:

1) Wild horses depend primarily on grasses throughout the growing season and during open winters.
2) Wild horse diets normally have little overlap with pronghorn antelope, mule deer, or domestic sheep diets in the summer and fall when forage supplies are shortest.
3) Wild horse diets greatly overlap cattle diets throughout the spring, summer, and fall.
4) The time of greatest dietary overlap among wild horses, pronghorn antelope, mule deer, domestic sheep, and cattle is in the spring when there is an abundance of forage.

Table 3. Wild Horse Count and Calculation of Yearly Increase.

BUCKHORN	ADULTS ONLY			TOTAL		
1989 gather			58			73
1990	58	9	67	73	12	85
1991	67	11	78	85	14	99
1992	78	12	90	99	16	115
1993	90	14	104	115	18	133
1994	104	17	121	133	21	154
1995	121	19	140	154	25	179
1995 count			149			176
Calculated on 16% annual increase since 1989 gather. 1995 - 28 bands. Average 6 horses per band (2-14 range). 16% foals.						

COPPERSMITH	ADULTS ONLY			TOTAL		
1989 gather			51			60
1990	51	8	59	60	9	69
1991	59	9	68	69	10	79
1992	68	10	78	79	12	91
1993	78	12	90	91	14	105
1994	90	14	104	105	16	121
1995	104	16	120	121	18	139
1995 count			120			137
Calculated on 15% annual increase since 1989 gather. 1995 - 25 bands. Average 5 horses per band (1-13 range). 12% foals.						

Current Wild Horse Population Levels

The following Table 5 documents counts and gathers made in the Buckhorn and Coppersmith HMA's.

Table 5. Wild Horse Census and Removal

DATE	CENSUS METHOD	COUNTED			REMOVED		
		BUCKHORN	COPPERSMITH	BOTH	BUCKHORN	COPPERSMITH	BOTH
Feb-73				222			
Aug-74				228			
Feb-75				223			
Sep-77		293	54	347	32	0	32
Oct-78		99	76	175			
Nov-79		111	122	233	0	96	96
May-82		121	60	181			
1983	gather	185			135	0	135
Sep-85	gather		106		0	56	56
Oct-86	gather	108	67	175	56	17	73
Sep-89	gather	107	82	189	49	31	80
Apr-93	air	89	74	163			
Sep-93	air	145	59	204			
Jun-94	ground	122	104	226			
Aug-95	air	176	137	313			

Topography in the two HMA's greatly affects the accuracy of censuses. The Coppersmith HMA has more western juniper and steep canyons which conceal wild horses from aerial counts. The Buckhorn HMA has more low sagebrush, rolling hills, and open ephemeral lakebeds which maximize wild horse visibility from the air. Therefore, aerial counts in the Buckhorn HMA tend to vary less than aerial counts in the Coppersmith HMA. The time of year, time of day, and water supply can greatly affect the numbers of wild horses counted in the Coppersmith HMA. Counts conducted late in the year when most of the horses are in the highest elevations of the HMA, late in the day when horses are coming in to water, and on dry years when water sources are limited yield the most accurate counts.

Riparian Vegetation Demand

The amount of riparian forage that is produced and that may be consumed by wild horses in the two HMA's is calculated in Appendix 3. Due to the presence of several ephemeral lakebeds in each of the HMA's, riparian forage production is extremely variable. The following Table 4 summarizes this information.

Table 4. Wild Horse Riparian Species Forage Demand and Current Riparian Species Forage Production.

HMA		1995 count	Recommended Minimum Number	Recommended Maximum Number	Total Riparian Forage Production (lbs)
Buckhorn	number	176 horses	59 horses	85 horses	
	forage demand	364,320 lbs	122,130 lbs	175,950 lbs	44,700 - 4,716,700
Coppersmith	number	137 horses	50 horses	75 horses	
	forage demand	283,590 lbs	103,500 lbs	155,250 lbs	105,950 - 2,473,950

Wild Horse Herd Behavior and Home Range Expansion

Topography also affects wild horse behavior. These two HMA's have an unusually high range of elevations throughout. There are numerous steep canyons, rims, and rocky soils which limit wild horse movements within the HMA's. This type of topography results in individual bands of wild horses occupying very specific and consistent yearly "home ranges" during the spring, summer, fall, and open winters. These bands stay in their home ranges until winter snows force them into lower elevations, and they return to their home ranges as soon as the weather and snow levels allow them in the spring. The loyalty of the lead mares in these bands to their individual home ranges results in little mixing of adult horses between the two HMA's in the summer. Younger horses and bachelor bands, especially in home ranges along the edges of the HMA's, may move between the two HMA's; however, fences, private land, and topography severely restricts this movement. Winter ranges for the two herds are similarly separated by private land and fences which restrict movement between the two herds on all but the snowiest winters when horses are desperate for forage and are able to walk over fences on the snow.

In the Coppersmith HMA, wild horse bands are beginning to make use of the less suitable and more remote areas within and north of the HMA. During the 1995 census, two bands of horses were found in the Bare Creek Drainage. This drainage is extremely steep and has a number of fenced, private land parcels which make movement within the drainage and between summer and winter habitat very difficult. In addition, one band of horses is now using the Snake Lake/Van Riper Spring area north of the Coppersmith HMA on private land.

The Cottonwood Mountain Fire Rehabilitation Fence and the fence on the south boundary of the Tuledad Allotment restrict wild horses from leaving the Buckhorn HMA; however, as wild horse numbers have increased, the number of bands using the SOB and Four Lakes area of the Buckhorn HMA has increased dramatically. During the 1995 census, 13 separate bands were found in the SOB Lake area alone.

Monitoring Results and Recommended Management Levels

In 1992, 1993, and 1994, wild horse utilization on key areas in the two HMAs exceeded utilization standards specified in the MFP and in the Interim Grazing Decision of 1992. As a result of the pasture rotations, and reduced cattle numbers, there were key areas on these two HMAs which were used by wild horses, but not by cattle. Wild horse utilization was determined in these key areas.

DEFINITIONS

Slight Utilization occurs when less than 20% of the annual production of forage plants has been consumed.

Light Utilization occurs when 20% - 40% of the annual production of forage plants has been consumed.

Moderate Utilization occurs when 40% - 60% of the annual production of forage plants has been consumed.

Heavy Utilization occurs when 60% - 80% of the annual production of forage plants has been consumed.

Severe Utilization occurs when 80% - 100% of the annual production of forage plants has been consumed.

Riparian areas were chosen as key areas for several reasons. In September of 1991, the BLM completed the Riparian-Wetland Initiative for the 1990's. This document outlines how the BLM intends to manage the publicly owned riparian areas on BLM lands in the future. This initiative describes four broad goals for riparian areas. Among them is the first goal of restoring 75% of all riparian areas to properly functioning condition by 1997. Riparian areas were targeted for improvement in the MFP. Upland areas generally have an upward condition trend, while accessible riparian areas have remained static and in early to mid seral stages. A summary of the most recent trend monitoring data is contained in Appendix 7. Utilization monitoring over the past several years has shown that the areas in the most degraded condition, riparian communities, have continued to receive unacceptably heavy utilization. Utilization monitoring for the allotment which contains the Buckhorn and Coppersmith HMAs is shown in Appendix 5.

The trend data and subsequent utilization mapping, indicated that upland vegetation condition trend was, and remains, unchanged or upward, while riparian area condition was poor. Utilization has been heavy and severe in riparian areas since the last condition studies. This level of utilization would be expected to maintain poor condition. Actual Use Reports (Appendix 6) for the period 1989-95 showed steady cattle use, with reductions during the past several years in response to the drought and changes in management.

Appropriate management levels (AML) based on the monitoring data were developed in Appendix 2. The recommended wild horse management levels from Appendix 2 are shown in Table 6.

Table 6. Wild Horse Population Analysis

HMA	HMAP MINIMUM	HMAP MAXIMUM	WINTER MINIMUM	WINTER MAXIMUM	ANALYSIS MINIMUM	ANALYSIS MAXIMUM	RECOM MINIMUM	RECOM MAXIMUM
BUCKHORN	50	75	59	85	40	82	59	85
COPPERSMITH	50	75	50	75	42	86	50	75

Under the proposed action, the management levels for the Buckhorn HMA would be changed from the range of 50-75 (AML 63) set in the HMAP to 59-85 (AML 72).

1. The Buckhorn HMA has more and better quality winter habitat than the Coppersmith HMA. Most of the identified winter habitat is on unfenced land, and fences in this HMA do not obstruct wild horse movement between the lower and higher elevation portions of the winter habitat areas.

2. The Buckhorn HMA has extremely variable riparian forage production. The riparian utilization transects were read on an exceptionally dry year (1992) when the ephemeral lakebeds were producing below normal amounts of forage. Therefore, the resulting population range of 40-82 (AML 61) was lower than it would be on an average, or even somewhat below average precipitation year.

3. Herd range expansion is apparently not yet having a serious impact on other resources in the HMA at the existing numbers.

Under the Proposed Action, the management levels for the Coppersmith HMA would stay the same as the HMAP levels of 50-75 (AML 63).

1. The winter monitoring information demonstrates that the winter wild horse habitat is especially limited in area in the Coppersmith HMA. Much of the area shown as winter habitat in Appendix 2 is on fenced private land. Much of the remaining winter habitat in the Coppersmith HMA, especially the north facing slopes around Surprise Valley, have little herbaceous understory.

2. The riparian transects were read in both above average and below average forage production years (1993 and 1994). The resulting population range (42-86) is wider than the HMAP range (50-75); however, the AML (64) is only slightly higher than the HMAP AML (63).

3. Herd range expansion into non-HMA areas and into less suitable areas within the Coppersmith HMA is impacting soil and vegetation resources in the Bare Creek watershed and the perennial cold water streams in the watershed.

LIVESTOCK

Both of the HMA's lie within the Tuledad Allotment.

Beginning with the 1934 passage of the Taylor Grazing Act and the end of nomadic sheep bands, livestock numbers using the land within the two HMA's has been continuously reduced. Two livestock adjudications and the GEIS have reduced the livestock Animal Unit Months (AUM) preference from over 23,000 to 9,982 AUMs. Through inactive permits and voluntary reductions in use, the actual number of AUMs used on the Tuledad Allotment has averaged 77% of preference over the last 15 years. Since the last wild horse gather in 1989, the actual use has been even lower than this due to the years of drought, changes in livestock operations, and efforts to resolve the East Lassen Deer Herd issue. The following Table 7 details livestock actual use since the last wild horse gather.

Table 7. Livestock Actual Use

YEAR	COPPERSMITH	BUCKHORN	BOTH	%PREF
1994	3487	3295	6782	69%
1993	2912	3249	6161	63%
1992	2816	3339	6155	63%
1991	5233	1056	6289	64%
1990			6386	65%
1989	2760	2458	5218	53%

The Tuledad Allotment Management Plan (AMP) was implemented in 1980. The grazing system selected from the GEIS for the AMP was outlined in the Tuledad/Home Camp Range Program Summary (RPS). The AMP called for a two pasture rest-rotation grazing system for the Tuledad Allotment. Each year, one pasture was to be used before seedripe on grasses and the second pasture was to be used after seedripe on grasses. The following year, the pastures would be switched. Implementation progress has been summarized in subsequent RPS Updates.

Over time, through fencing, seeding, fire rehabilitation, and recognition of seasonal use patterns, the two pastures in the allotment were divided into nine "use areas". These use areas include seven native range and two seedings. They have allowed for annual management flexibility, as well as additional seasonal and year-long rest within the two pasture system.

The Tuledad and Worland Crested Wheatgrass Seedings are located on the western edge of Duck Flat below 4800 feet. These seedings typically reach range readiness by April 1 and provide the permittees with early April turnout for approximately 400 cattle. Sheep use is not permitted in the seedings.

The Bare Creek and Rye Patch Areas are low elevation "use areas," generally below 5700 feet. These "use areas" provide early season forage for both cattle and sheep. Range readiness in these units is based on perennial grasses (Poa secunda and Sitanion hystrix) and normally occurs around April 16. Cattle use is permitted after range readiness has been reached.

Early season use is alternated annually between the Rye Patch and Bare Creek Use Areas. The areas are not fenced from the South or North Pastures, respectively; however, the elevation differences on each pasture significantly influence livestock use patterns. When the South Pasture is scheduled for late use, cattle will generally not use the dry lower Rye Patch Use Area. The analogous situation is true for the Bare Creek Use Area in the North Pasture. Although some drift to the lower elevation use areas does occur, cattle and sheep are not herded into the low elevation use areas. This provides riparian areas within these areas yearlong rest.

Sheep are allowed onto the unit after March 26. This on-date coincides with the off-date for Winnemucca District Allotment (Coyote AMP). Range readiness is not a turnout criteria for sheep use, because sheep use and movements are closely controlled by the herders and they are grazing dried grasses, dormant shrubs, and annual forbs, all of which regrow after the sheep have moved on. Sheep lamb in the Rye Patch and Bare Creek Use Areas, then are split into three ewe/lamb bands and one small ewe only band (dry ewes). The ewe/lamb bands skim the entire allotment before going to summer range on the Modoc National Forest. The dry band continues to move through the allotment all season.

The North and South Use Areas are the largest areas in the allotment and lie between 5700 feet and 6800 feet. The two units receive alternate year treatments of early use (May 16 to July 15) and late use (July 16 to September 30). The late use period is based on seed ripe of key perennial grass species in the pasture. Seed ripe normally occurs between July 16 and July 30. Late season cattle use is restricted to the scheduled late use pastures.

The Cottonwood, Bald Mountain, and Boot Lake Areas are high elevation units (6500 feet to 7700 feet). These units usually do not receive cattle use before July 16. Sheep are allowed to skim lightly through the Cottonwood and Boot Lake units in late June (June 16 - June 30). Sheep trail back through these three units in the fall (early October) on their way to winter range.

Between 1986 and 1991 the AMP was evaluated. Several problems were identified, including continued poor condition of several antelope bitterbrush stands, lack of adequate monitoring on riparian systems, and failure of many riparian systems (especially the higher elevation riparian areas) to meet the objectives of the AMP. The California Department of Fish and Game, and the Nevada Department of Wildlife are unhappy with the health of the East Lassen County mule deer herd; they feel resource conditions on the Tuledad Allotment, and several other BLM allotments, are contributing to the poor winter survival of this mule deer herd.

To address the problems of the AMP and the concerns of both the wildlife agencies and the general public, a three-phase strategy was developed.

The first phase was to issue Interim Grazing Decisions (IGD) which effect immediate, short-term changes in grazing practices on the Tuledad and Twin Peaks Allotments. The changes made in the Tuledad Allotment IGD in 1992 include:

1) Alternating early and late season use of the North and South Pastures on a two year, rather than an annual basis. This is to allow for more successful reproduction of antelope bitterbrush which flowers and sets seed on two-year-old wood.
2) Not allowing any late season (after "red juice stage") use in three key antelope bitterbrush stands on the Coppersmith Hills, Buckhorn Road, and Cottonwood Mountain. To comply with this portion of the IGD, the Tuledad Allotment permittees are using a rider to move cattle out of the key antelope bitterbrush stands when cattle are making late season use in the pasture.
3) Initiating intensive riparian area utilization monitoring on 14 riparian areas throughout the allotment.
4) Limiting use of these riparian areas to an average 2" stubble height.

The second phase, now in progress, is to develop an Integrated Management Plan that would address issues associated with the entire East Lassen Deer Herd area. This integrated, comprehensive plan will establish habitat objectives for specific planning compartments within the area. From 1992 through 1994 vegetation data was collected so that critical habitat features can be described or quantified. Monitoring data for all the allotments has been collected since 1992 for development of the integrated plan. Wildlife population data and desired mule deer habitat descriptions will need to be provided by the wildlife agencies before completion of the plan. The plan is estimated to be completed within 18 months.

The third phase, implementation of the integrated plan, is anticipated to be completed within 12 to 18 months of completion of the integrated plan. Once the integrated plan is completed, a management program addressing the long term goals for the East Lassen Herd Area will be put into effect.

IMPACTS OF THE ALTERNATIVES

Three issues were identified for assessing the alternatives: 1) Impacts on riparian areas. 2) Impacts on wild horses. 3) Impacts on domestic livestock grazing. The analysis of alternatives will focus on these three issues along the effects of the alternatives on wildlife.

RIPARIAN AREAS

Proposed Action

Implementing the proposed action would help meet the riparian area objectives from the MFP and address the growing concerns over riparian forage utilization and the impacts of heavy grazing on other resource values in the HMA's. Reducing wild horse numbers to levels which are within the carrying capacity of the plant communities which are most the most vulnerable to use (riparian areas), in conjunction with maintaining the appropriate livestock grazing management system, would result in more acceptable utilization levels on riparian areas in the HMA's. At current numbers, wild horses are capable of consuming all the available riparian forage on a dry year similar to 1992.

Due to the continuous presence of water, vegetative response in riparian areas, to both appropriate and inappropriate grazing, is faster and more dramatic than on upland areas. Positive changes in vegetation and the resulting effects on hydrologic functions are the first steps in changing a non-functioning riparian area to a properly functioning riparian area.

Beginning positive changes in riparian areas include: 1) increasing amounts of litter and ground cover (decreasing bare ground), 2) increasing diversity of species and structures of vegetation, and 3) changes in vegetative composition to species with root masses and structural conditions which are better at retaining soil, slowing runoff, and providing forage and cover for a wider range of animal species. In spring meadows, increased ground cover reduces soil loss to wind and water erosion. Along creeks, ground cover and residual vegetation slows runoff and traps sediment. Over time, degraded creek banks build up, creeks narrow, water temperatures drop, and the water table adjacent to the creek rises. These changes improve the value of creeks for wildlife, scenic, and recreational uses.

No Action Alternative

Wild horse use on riparian areas would continue to increase as the populations continue to grow. Degraded riparian communities would continue to be dominated by upland plants. Continued trampling of spring meadows would reduce the abilities of some springs to continue to provide water and riparian vegetation. Degraded creeks would continue to

produce low quality riparian vegetation and wildlife habitat. Functional riparian areas would be at risk of becoming non-functional.

Due to the presence of several ephemeral lakebeds in each of the HMA's, riparian forage production is extremely variable. On a year with average or somewhat above average amounts of winter snows and spring runoff, the lakebeds may grow an abundance of vegetation which is accessible to most grazing animals. On this type of year, the lakebeds are capable of supporting nearly all the forage demands of the current populations of pronghorn antelope, livestock, and wild horses. On a year with below average precipitation, or precipitation which falls as rain in the late summer and fall, these lakebeds may produce virtually no forage. On a year with exceptionally high snowfall or spring precipitation, the lakebeds are frequently flooded and support only emergent vegetation which can grow up through the water. On these last two types of years, the lakebeds cannot be depended upon to provide any forage for grazing animals. The lakebeds did not produce any significant forage in 1992 when the precipitation levels were 77% of normal and fell in the form of scattered fall and late spring showers. At current wild horse numbers, wild horses would be capable of consuming all the available riparian forage on a year similar to 1992. This would leave no riparian vegetation for wildlife forage or habitat, soil protection, or scenic values.

The high concentration of horses, especially around water sources and ephemeral lakebeds, results in virtually no rest for the vegetation; as one band leaves an area, another band replaces it immediately.

WILD HORSES

The current monitoring data found that the present wild horse numbers are not in balance with a "thriving natural ecological balance and multiple use relationships" on the Buckhorn and Coppersmith HMA's. IM 90-30 defined "thriving natural ecological balance" as "the condition of the public range that exists when resource objectives related to wild horses and burros in approved land use and/or activity plans have been achieved."

The first wild horse objective in the Tuledad/Home Camp MFP Summary is, "Protect and manage wild and free-roaming horses ... as components of the public land in a manner to achieve ecological balance with other uses." The poor condition and deaths of wild horses following the winter of 1992-3 indicated that wild horse populations were not in balance with their winter range carrying capacities.

There is a finite amount of land available. Wild horses are not native to the HMA's. Of the predators native to the HMA's, only the mountain lion still exists (in much lower numbers) within these two herd areas. The other large native predators (wolves and grizzly bears) have been completely eliminated from the area. The remaining predators are not capable of keeping wild horse populations under control. Since the passage of the Wild Horse and Burro Act, wild horses

may not be captured by the general public. Therefore, the BLM essentially has two options: 1) Allow wild horses to increase, over populate the land, damage other resources, and eventually starve to death during harsh winters and droughts, or 2) Gather wild horses and remove some of them from the land.

Proposed Action

Gathering is inherently risky. Running wild horses into a trap, then loading them onto a truck, is a source of risk and stress for the animals. Horses have been injured and killed during gathering, but it is not common. Foals can be separated from mares (although few young foals are present in the herds by late summer and fall). Band social structure can be disrupted by mixing with other bands, or by leaving a band with too few individuals.

Wild horses which would remain in the Buckhorn and Coppersmith HMA's would benefit from being gathered in several ways.

Reducing the numbers in the HMA's from current population levels would put wild horse numbers back within the known carrying capacity of their winter range and the summer riparian habitat. Based on the generally poor condition of the wild horses in these two herds in the spring of 1993, it is our belief that a serious winter die-off was narrowly averted in the winter of 1992-93.

There would be less competition between bands of wild horses and between wild horses and wildlife for water and space. This reduces stress levels, especially on the very young horses, the very old horses, and the bands of young and old bachelor males. Less stress means horses are better able to obtain food, build fat reserves, and survive harsh winters. It also tends to prevent bands of horses, especially bachelor bands, from leaving the HMA's in search of additional habitat and entering areas which are not allocated wild horse use.

Restructuring of the herds maintains herd integrity. All base herd horses which are gathered would be returned to the HMA's. Additional horses from within the HMA's would be chosen to replace any base herd horses which have died, and to establish the populations of each HMA at the minimum recommended numbers. The sex ratios of the base herds would be maintained at 2.3:1 for the Buckhorn herd and at 1:1 for the Coppersmith herd through selection of appropriate numbers of males and females. Replacement animals would come first from healthy horses over 5 years which fit the conformation criteria of the HMAP's. The last gather occurred six years ago, therefore, it is anticipated that there would be sufficient horses over 5 years old to replace all of the base herd horses. If not, then younger horses would be chosen. It is also reasonable to expect that there would be more horses over 5 years old than are needed to replace base herd horses. If this occurs, these older horses would be held for adoption and/or considered for use in the prison gentling programs. Any excess horses over 5 years of age

which are not placed in a reasonable amount of time would be returned to the HMA's, even if to do so would exceed minimum recommended numbers. These horses would not be considered base herd horses. Ideally, it would only be necessary to remove horses under 5 years of age because if only younger horses are removed, band social structures and use areas are left intact. Younger horses are generally highly adoptable, spend little time in holding facilities, and quickly move on to suitable adoptive homes.

Gathering provides the opportunity to see most of the horses in the herd. Age structures, sex ratios, health (including genetic problems), and reproductive rates of the herds can be determined. The presence of large numbers of non-base herd horses over seven years of age would indicate that horses from other HMA's are entering these two HMA's. These herds were last gathered in 1989. In the intervening years, counts have become opportunistic and inconsistent, and knowledge of herd structure and health has declined.

Implementing the proposed action would result in the removal of approximately 204 wild horses from the two HMA's. The selection of excess horses for removal and placement in the Susanville adoption program would be carried out following the Susanville District Wild Horse and Burro Policy. The goals of this plan are to make wild horse gahering as safe as possible for the horses, assure that the excess horses are adopted into adequate, healthy settings, and the horses that remain on the land are healthy and vigorous and within the carrying capacity of their habitat.

No Action

Implementing the No Action Alternative would mean that horses would not be gathered from these HMA's at this time. The horses would not face any of the stress or potential dangers associated with gathering. There would be no disruption of band social structure or separation of mares from foals due to gathering.

Implementing the No Action Alternative would increase the risk of die-offs during severe winters. It is believed that a history of regular gathering and removal has kept wild horse populations within the carrying capacity of the HMA's and has prevented serious winter mortality. Adjacent herds which were exceeding their HMA carrying capacity had large die-offs in the winter of 1992-93. The increasing numbers of horses has resulted in several bands of wild horses remaining in the lower elevations of Express Canyon and Rye Patch Canyon through the late summer. These areas have few water sources, and the vegetation is cured and of low forage value by late summer. It is expected that horses using these lower elevation communities will enter the winter in poorer condition than the horses using the higher elevations, especially on dry years.

Implementing the No Action Alternative would increase competition between bands of wild horses and between wild horses and wildlife for forage, water, and space. It would also increase the movement of wild horses into less suitable portions of the Buckhorn and Coppersmith HMA's and, in some cases, out of the Coppersmith HMA entirely.

The following Table 8 projects wild horse populations through the year 2000 for both the Proposed Action and No Action Alternative.

Table 8. Wild Horse Population Projection (Proposed Action and No Action).

HMA	1995 COUNT	1996		1997		1998		1999		2000	
		PROP ACTION (1)	NO ACTION (2)	PROP ACTION (1)	NO ACTION (2)	PROP ACTION (1)	NO ACTION (2)	PROP ACTION (1)	NO ACTION (2)	PROP ACTION (1)	NO ACTION (2)
BUCKHORN	176	59	204	75	237	89	275	103	319	121	370
COPPERSMITH	137	50	158	64	182	76	209	88	240	104	276

(1) Assumes rate of increase follows average population increase following a gather of a structured herd.
(2) Assumes rate of increase continues at 16% per year for the Buckhorn Herd and 15% per year for the Coppersmith Her

LIVESTOCK

Proposed Action

Implementation of the Proposed Action would reduce the competition between wild horses and livestock for drinking water, especially on dry years and lower elevation areas.

Implementation of the Proposed Action would have little impact on the amount of herbaceous upland forage available for livestock. It would increase the amount of herbaceous riparian vegetation in the HMA's; however, little if any of this additional vegetation would be available for livestock forage.

No Action

Implementing the No Action alternative would increase competition between wild horses and livestock for drinking water. When wild horses are using drinking water sources, they frequently prevent cattle from reaching the water, especially when water sources are scarce. Sheep generally do not experience this problem because they enter areas in large numbers and are accompanied by herders and dogs.

If wild horse numbers continue to increase each year, they would begin to compete with livestock for upland herbaceous vegetation. Implementation of the No Action alternative

would increase utilization levels on both upland and riparian areas. Wild horses would begin to use species which are less palatable to wild horses, including bitterbrush and willow. As use levels increased, livestock stocking rate calculations would go down, and livestock numbers and/or seasons of use in the Tuledad Allotment would be reduced, even though such reductions would have little effect on riparian area use levels.

WILDLIFE

Proposed Action

Implementation of the proposed action would reduce the competition between wild horses and pronghorn antelope, and probably other species of wildlife, for drinking water. Horses are the largest animal in this area; whenever there is direct competition between horses and other herbivores for drinking water, horses will dominate.

Reducing wild horse numbers may slightly benefit animals which use meadows for important stages of their development such as sage grouse, which use meadows for rearing their chicks. With fewer horses present some of the spring meadows may receive lighter wild horse utilization, reducing the chances of nest trampling by wild horses and increasing the height of the herbaceous vegetation which protects nests and young animals from predation.

Reducing wild horse numbers is not believed to have a significant impact on mule deer populations in the area. Mule deer and wild horses have little dietary overlap. Mule deer tend to use areas with taller brush, while wild horses tend to be in the open, so there is little habitat overlap. Wild horses can frequently be found using stock ponds and other larger, open sources of drinking water. Mule deer, when given a choice, use small springs and seeps for drinking water. As sources of drinking water dry up, there is undoubtedly greater overlap in the use of drinking water sources. Also mule deer are more active at night, so their use of stock ponds would not be observed, however their tracks remain. Many more pronghorn antelope tracks are found at stock ponds than mule deer tracks.

No Action

The main impact of implementing the No Action Alternative would be the continuing increase in competition between wild horses and wildlife species for drinking water and the use of riparian and meadow habitats associated with springs and creeks.

UNAVOIDABLE ADVERSE IMPACTS OF PROPOSED ACTION

In the short term, the individual wild horses removed from the HMA's would no longer be wild and free roaming horses, and they would not be returned to the HMA's once they were adopted to suitable homes. All horses in the HMA's would be stressed from the gathering, transporting, examining, and holding processes; there would be some chance of injury, disease, or death to individual horses through these processes.

There would be no long term adverse impacts on wild horses as a result of implementing the Proposed Action. Wild horses returned to the HMA's would rapidly recover from the stress of gathering. Assuming resource conditions do not drastically change (through large fires, very extreme weather, etc), wild horse populations in the HMA's would be expected to return to current levels in five to seven years.

There would be no long term adverse impacts on other resources in the HMA's as a result of implementing the Proposed Action.

CUMULATIVE IMPACTS

Proposed Action

Implementation of the Proposed Action would result in returning wild horse numbers to a point where wild horse use is part of a "thriving natural ecological balance and multiple use relationship" in the Buckhorn and Coppersmith HMA's.

No Action

Implementation of the No Action Alternative would result in increased, season-long utilization of all herbaceous riparian vegetation in the two HMA's. Riparian areas which are currently receiving heavy and severe wild horse use would continue to receive heavy and severe wild horse use. Riparian areas on the winter, spring, and fall wild horse use areas; in more inaccessible portions of the HMA's; and on areas adjacent to the HMA's which currently receive light or no use by wild horses would begin to receive moderate and heavy wild horse use. Species and structural diversity in riparian areas would be reduced, and bare ground would increase. As a result, habitat conditions for most riparian area dependent wildlife species would be degraded; soil loss would increase; drinking water sources in the HMA's would be reduced; and fish habitat would be lost.

Implementation of the No Action Alternative would eventually result in increased season-long utilization of upland herbaceous vegetation by wild horses. This would also cause increased use on upland shrubs, including bitterbrush, because livestock and wildlife and eventually wild horses would be forced to use more shrubs in the absence of herbaceous

vegetation. Upland sites would begin to move away from SCS Site Potential , bare ground and trailing would increase, and soil erosion would increase.

The long-term cumulative impacts of implementing the No Action alternative on multiple uses in the two HMA's would be 1) inconsistent recreational opportunities for wild horse viewing (as wild horse populations expand and crash), 2) decreased opportunities for wildlife viewing, 3) decreased hunting opportunities for pronghorn, sage grouse, fish, and probably mule deer, 4) decreased livestock grazing opportunities, 5) decreased scenic recreational values (due to loss of soil, vegetation, and water quality), and 6) decreased health of wild horses within the Buckhorn and Coppersmith HMA's (would result in periodic, catastrophic winter death losses).

DESCRIPTION OF MITIGATION MEASURES AND RESIDUAL IMPACTS

Implementation of the proposed action following the Susanville District wild horse management policies would result in the most safe and humane treatment of the horses possible during a gather and adoption process. No residual impacts are anticipated and no mitigation measures would be required.

PERSONS/AGENCIES CONSULTED: California Department of Fish and Game, Nevada Department of Wildlife, American Mustang and Burro Association, Inc., Tuledad Allotment permittees.

The preliminary assessment for the need to gather in the Buckhorn and Coppersmith HMA's was issued as a draft in September of 1994. This assessment considered only information concerning winter condition of horses. Both formal and informal public comments were received in response to the preliminary assessment from the Nevada Commission for the Preservation of Wild Horses, the Animal Protection Institute, the American Mustang and Burro Association, and the Nevada Department of Wildlife. As a result of these comments, the BLM decided not to gather the two HMA's until further information concerning summer habitat and herd movements could be gathered and analyzed. Environmental Assessment CA-028-95-08 represents that analysis.

PREPARER: Tara de Valois; SRA Range Conservationist

DATE:

APPENDIX 1

HELICOPTER GATHERING PLAN

FOR WILD HORSES IN THE

BUCKHORN AND COPPERSMITH

HERD MANAGEMENT AREAS

DRAFT

HELICOPTER GATHERING PLAN

FOR

WILD HORSES

IN THE

BUCKHORN AND COPPERSMITH

HERD MANAGEMENT AREAS

Susanville District
Surprise Resource Area
Fiscal Year 1996

I. INTRODUCTION

The purpose of this removal plan is to outline the methods and procedures to be used in removing approximately 117 wild horses from the Buckhorn Herd Management Area and 87 wild horses from the Coppersmith Herd Management Area. The proposed action would take the wild horse population to the lower limit of established population range for each area. The populations of wild horses would then be allowed to increase for three years, at which time, it is projected that the populations would be at the upper end if the established population range. At that time, the need for another removal would be determined based upon the actual wild horse populations present and the results of East Lassen Integrated Management Planning effort.

The proposed removals would begin about November 1, 1995 and would take two to three weeks to complete. If the removals are not completed during this time due to inclement weather or other factors, they will be completed during the summer/fall of 1996.

II. GENERAL AREA DESCRIPTION - BACKGROUND DATA

The Buckhorn and Coppersmith HMAs are located approximately 35 miles south of Cedarville, California, in Washoe County, Nevada and Lassen County, California. See Map 1 for general locations.

The acreage and land status for each HMA is as follows:

HMA Name	Acres Private	Acres Public	Total Acres
Buckhorn	3,320	62,320	65,640
Coppersmith	7,740	63,020	70,760

The Herd Management Areas are located in the Tuledad-Home Camp Planning Unit of Surprise Resource Area. See Map 2- Planning Unit Map. The Environmental Impact Statement for the Unit was completed in 1978.

Elevations range from 5,000 feet to 8000 feet within the areas.

Vegetation is typical of the northern Great Basin Ecosystem. Various species of sagebrush dominate the aspect with horse brush and rabbit brush also occurring. The dominant perennial grasses are bluebunch wheatgrass, Thurber's needlegrass, Idaho fescue and squirreltail.

Appropriate management levels for wild horses in the Buckhorn and Coppersmith HMAs were determined by analysis of current monitoring data. In these two HMAs the goal is to have wild horses be part of a thriving natural ecological balance among the multiple uses.

Proposed gathering and removal for FY 1996 will be conducted in the Coppersmith HMA (CA-261) and the Buckhorn HMA (CA-262). See Maps 3, and 4 for specific locations.

III. JUSTIFICATION

The Wild Free-Roaming Horse and Burro Act of 1971 (Public Law 92-195) as amended, Section 3(b)(2) states "...if an overpopulation exists on a given area of public lands and that action is necessary to remove excess animals, he shall immediately remove excess animals from the range so as to achieve appropriate management levels. Such action shall be taken, in the following order and priority until all excess animals have been removed so as to restore a thriving natural ecological balance to the range, and protect the range from the deterioration associated with the overpopulation."

The 1995 Analysis for the Buckhorn and Coppersmith HMAs completed in September, 1995, established the appropriate management levels (AMLs) for the HMAs as follows:

HMA Name	AML
Buckhorn	72
Coppersmith	63

The above populations have been determined to be the median number within a range of levels necessary to achieve and maintain a natural thriving ecological balance in each area.

Based on the carrying capacity for wild horses, population ranges have been established as follows:

HMA Name	Population Range
Buckhorn	59-85
Coppersmith	50-75

The maximum number for each range is the carrying capacity for wild horses determined from the monitoring data analysis. The minimum number for each range is calculated from the maximum range figure and is the level of animals which are projected to increase to the maximum range figure in three years. In three years, the current populations will be determined, and a decision made regarding the need for further removal.

IV. POPULATION AND REMOVAL DATA

The Buckhorn HMA was last gathered in the fall of 1989 when 87 horses were gathered. 58 horses were returned to the HMA at that time. The HMA was placed under structured management[1] with the removal.

The Coppersmith HMA was last gathered also in the fall of 1989. At that time 52 animals were gathered and 21 were released back to the HMA. The herd was structured at that time.

The Buckhorn and Coppersmith HMAs were last censused on August 24, 1995. The results of the censuses were as follows:

HMA Name	8/24/95 Census
Buckhorn	176
Coppersmith	137

Estimated gathering and removal for each area is as follows:

HMA Name	Est. # to Gather	# Return To The Range	# to Remove	Total to Remain
Buckhorn	176	59	117	59
Coppersmith	137	50	87	50
Totals	313	109	204	109

[1]A base herd within a herd management area that has been established through the selection and retention of primarily older animals which are well adapted to the specific area.

The above figures for capture and removal are for estimation purposes only. It is recognized that all animals within each area cannot be practically captured.

Enough animals will be released to insure that the number of wild horses falls within the established population range. Any base herd horses that have died since the last structuring and removal will be replaced with young animals from those gathered.

It is recognized that the minimum range figure may not be able to be achieved by removing only horses four years and younger. The removal of older horses will only be done if they can be readily placed through adoption or placed into the prison gentling program.

V. METHODS OF REMOVAL

Gathering will conducted by contract or by the Susanville District wild horse gathering crew.

Gathering of wild horses will be done by using a helicopter to herd the animals to a trap constructed of portable pipe panels. The helicopter will be used in such a manner that bands will remain together. Rate of movement and distance animals travel will be based on terrain, physical barriers, weather and condition of animals. All traps and wings will be constructed in such a manner to facilitate safe, humane capture of animals. At all times, gathering will be the under direct supervision of a duly authorized employee of the Bureau of Land Management. Humane procedures prescribed by the BLM will be used in all gathering and handling operations.

The majority of the wild horses in each herd management areas will have to be gathered so AML can be achieved by removing only horses five years or younger. This will be done only if practical and at no time will horses be placed under undue stress during the gathering operation. The welfare and humane treatment of the animals will remain the district's highest priority.

Captured animals will be shipped to the BLM's Litchfield Wild Horse and Burro Holding Facility in straight deck trucks. Here the animals will be sorted by age and sex. The Litchfield Facility is well set up to provide for humane handling, preparation, and care of captured animals, with a minimum of stress. It is planned to excess only animals of the ages 4 and under. Older animals will be released back to the area from which they were captured. Animals to be released back to the home range will be kept separate from the

other animals and released back to the home range as quickly as possible. Younger animals will be released back to the home range as necessary to insure the population of animals falls within the population range established from the appropriate management level.

All publicity, formal public contact and inquiries will be handled through the Surprise Resource Area Manager.

VI. REFERENCE TO ENVIRONMENTAL ASSESSMENT

Environmental Assessment No. CA-028-95-08 was prepared in September, 1995 to analyze impacts associated with the removal and age structure re-adjustment.

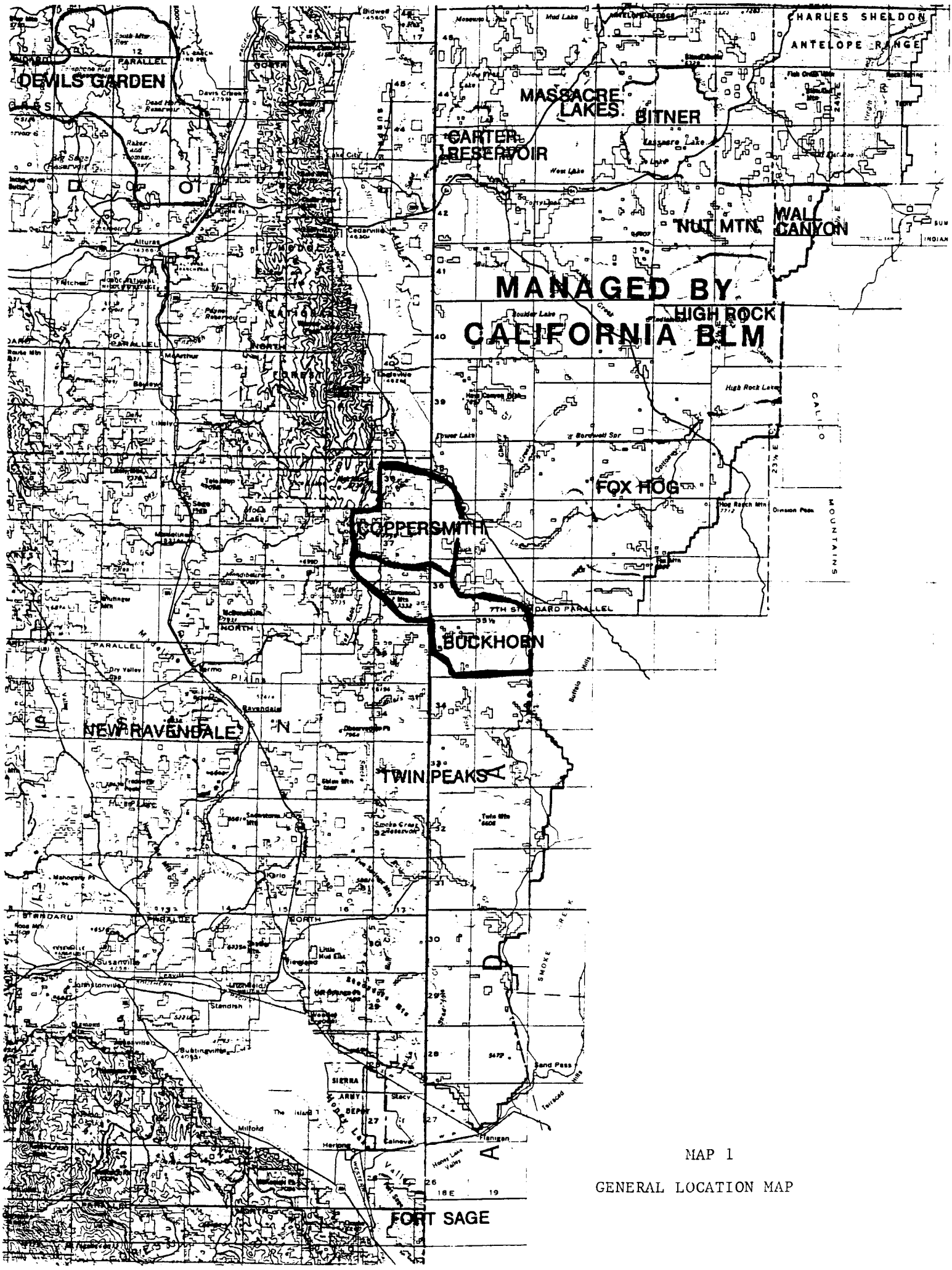
VII. PUBLIC NOTIFICATION

The proposed use of a helicopter and motor vehicles for removal of wild horses from the Buckhorn and Coppersmith HMAs will be presented at public meetings in Susanville, CA on October 3, 1995, and in Cedarville, CA on October 4, 1995.

Prepared by: _____ Date _____
Wild Horse and Burro Specialist

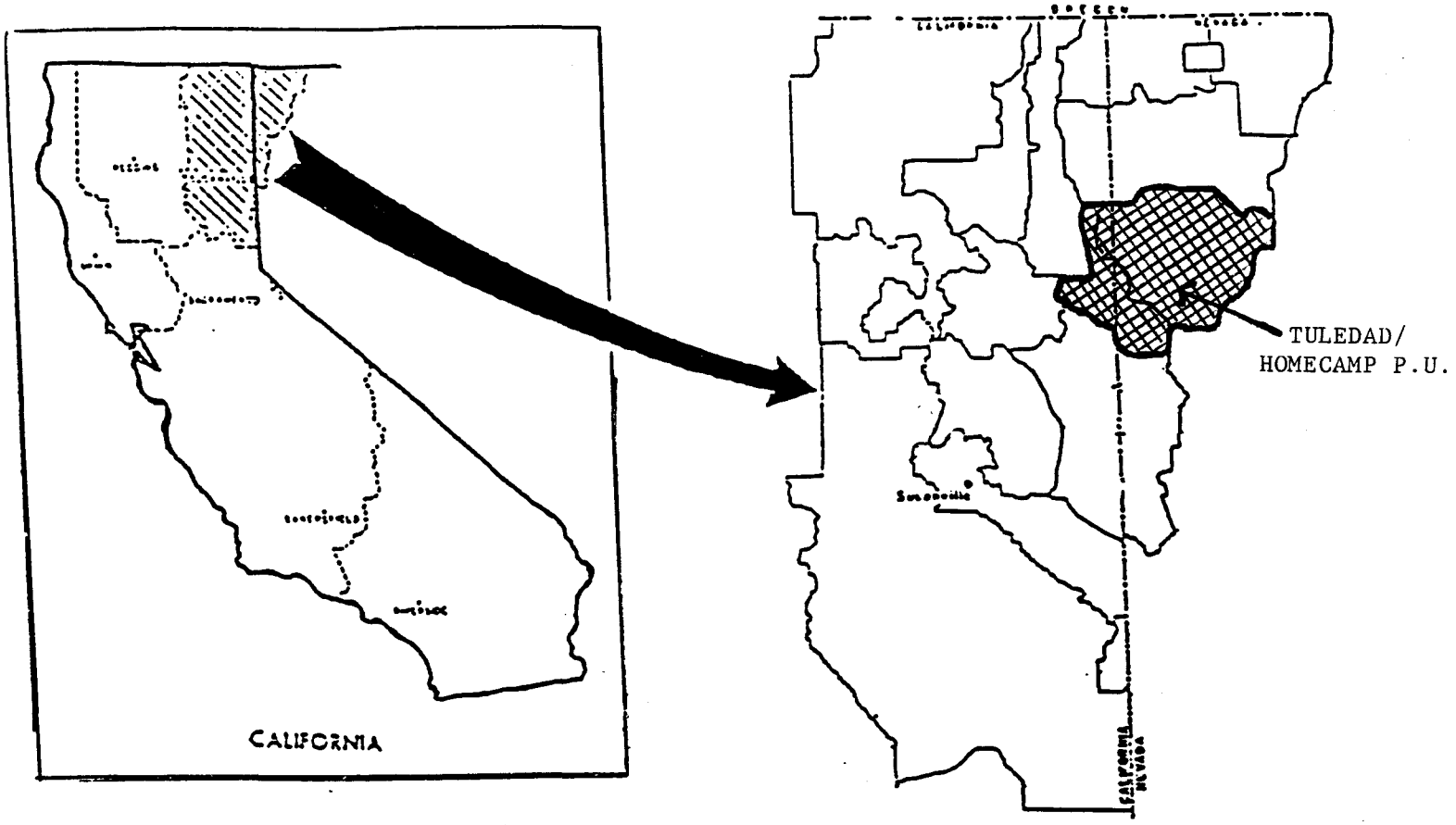
Approved by: _____ Date _____
Area Manager, Surprise R.A.

Attachments



MAP 1

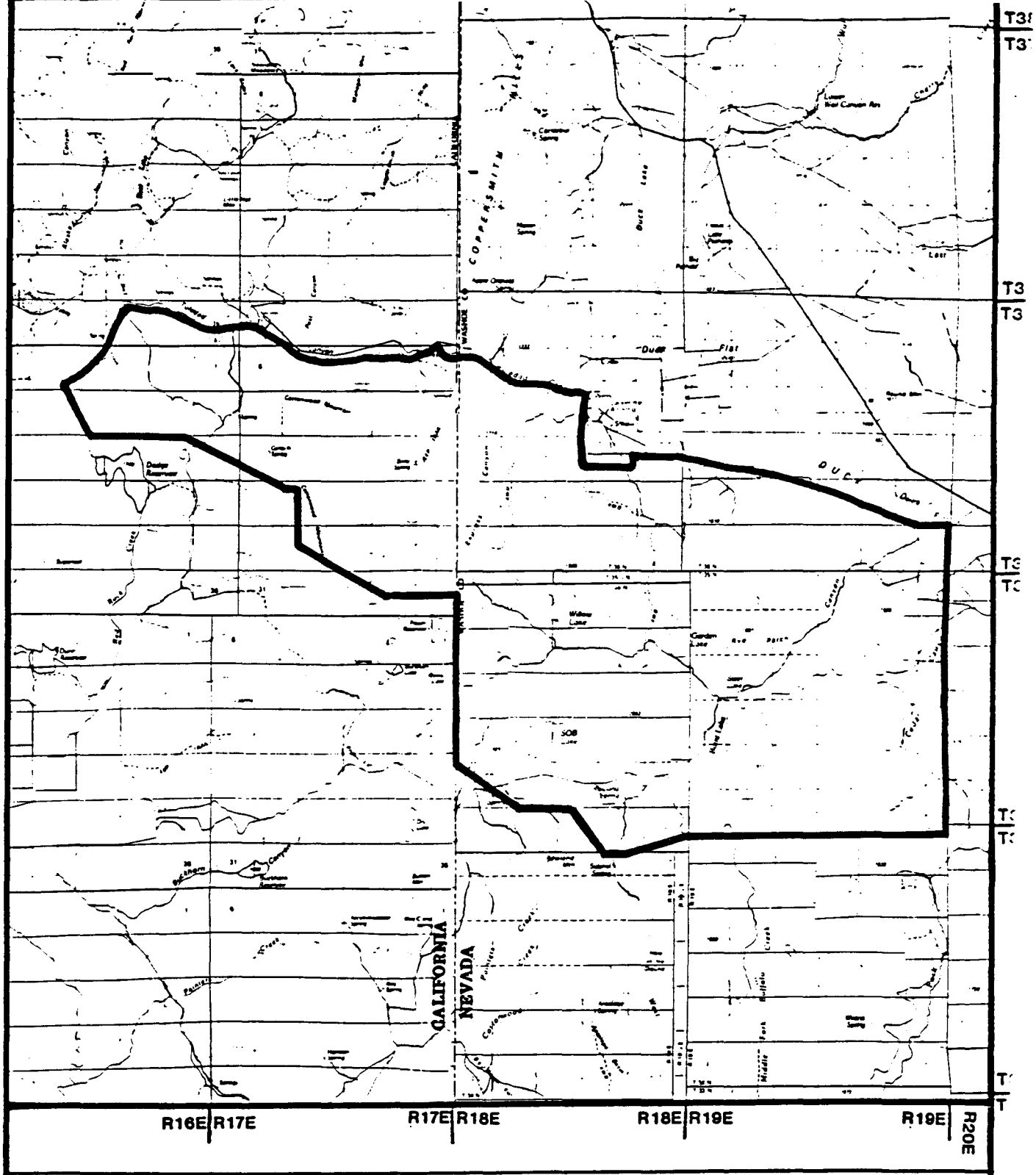
GENERAL LOCATION MAP



MAP 2

TULEDAD/HOMECAMP PLANNING UNIT

SUSANVILLE DISTRICT



Herd Management Area boundary

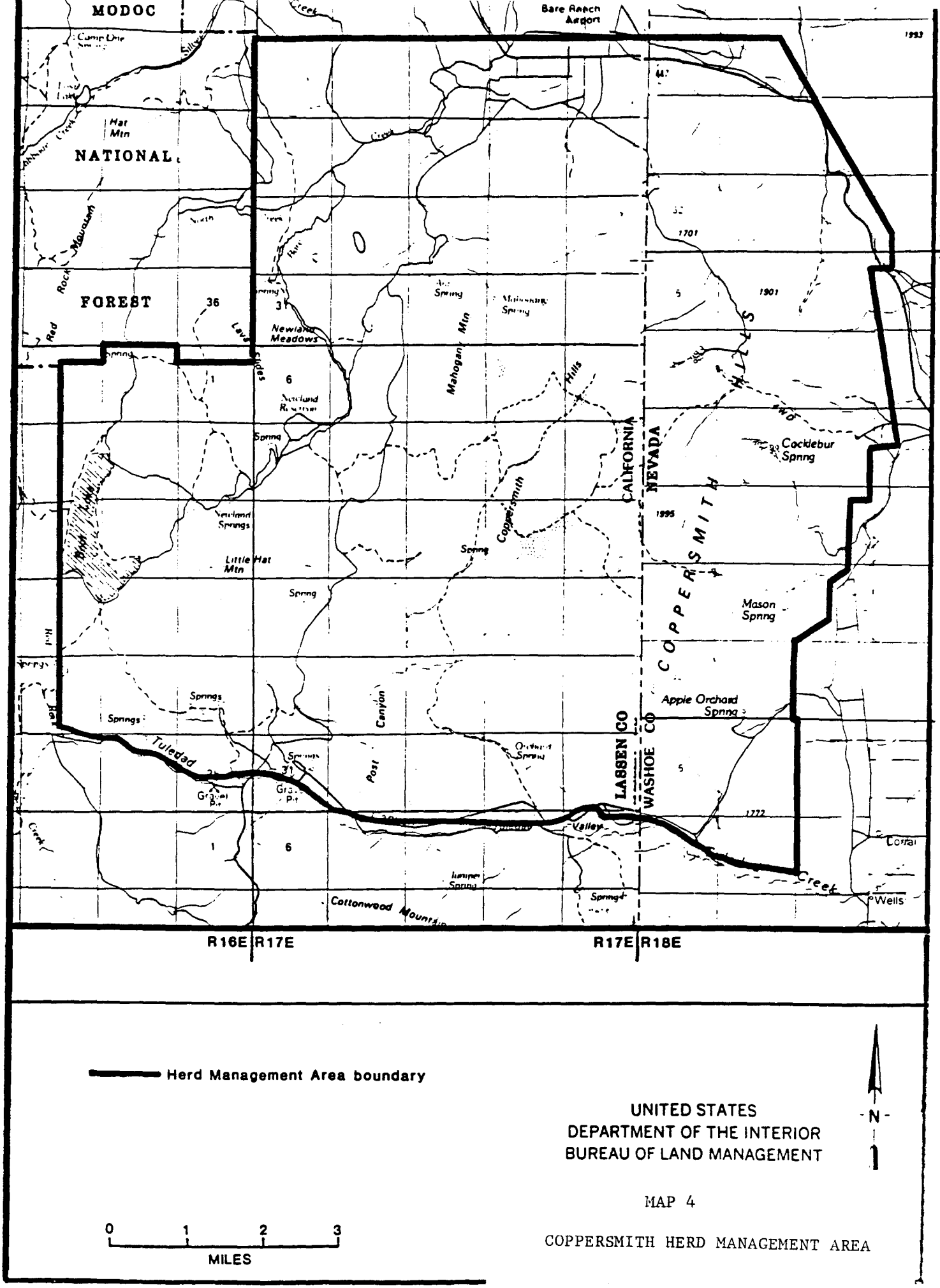
N

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

MAP 3

BUCKHORN HERD MANAGEMENT AREA

0 2 4 6
MILES


MODOC
NATIONAL
FOREST
Bare Ranch Airport
Hat Mtn
Rock Museum
Red
Lava
Cinder
Newland Meadows
Mahogany Mtn
Hills
Cocklebur Spring
Coppersmith
CALIFORNIA
NEVADA
COPPERSMITH HILLS
Newland Springs
Little Hat Mtn
Mason Spring
Apple Orchard Spring
Tuledad
Post
Canyon
LASSEN CO
WASHOE CO
Valley
Corral
Creek
Wells
Cottonwood Mountain
Juniper Spring
R16E R17E
R17E R18E
Herd Management Area boundary
0 1 2 3
MILES
N
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MAP 4
COPPERSMITH HERD MANAGEMENT AREA

APPENDIX 2

POPULATION ANALYSIS

FOR WILD HORSES IN THE

BUCKHORN AND COPPERSMITH

HERD MANAGEMENT AREAS

WILD HORSE POPULATION ANALYSIS
BUCKHORN AND COPPERSMITH
HERD MANAGEMENT AREAS

INTRODUCTION

The purpose of this population analysis was to determine the current appropriate management levels (AMLs) for wild horses on the Buckhorn and Coppersmith Herd Management Areas (HMAs). The most recent monitoring data was used. The existing wild horse population minimum level was established at 100 head for the Tuledad Herd Area in the Management Framework Plan (MFP) in 1979. The Tuledad Herd Area was later subdivided into the Buckhorn and Coppersmith Herd Areas. Maximum levels were established at 75 head for each of the HMAs (150 total for the Tuledad Herd Area) in 1983, following consultation with the Modoc-Washoe Experimental Stewardship Program, including Dawn Lappin and Jim Clapp who represented the wild horse interests in the area, and the livestock operators in the Tuledad Allotment. During the years since 1983, the BLM Surprise Resource Area has been gathering horses on a three year rotation (1983, 1986, 1989); however, the last gather for these two herds was six years ago. This analysis is in compliance with BLM Instruction Memorandum 90-30.

The information used for this analysis is contained in Appendix 5 (Utilization) and the end of Appendix 2 (Winter Habitat Use). The key areas used in the the following calculations are riparian areas with study sites established following the Interim Grazing Decision of 1992. The utilization data in Appendix 5 was collected in 1992, 1993, and 1994 in areas which, due to herding and pasture rotations of livestock, received primarily wild horse use.

Monitoring and control of utilization in riparian areas is becoming more important for several reasons. Heavy grazing use of riparian-wetland areas 1) changes the vegetation composition to species which are less effective in slowing runoff and soil loss, 2) increases the trampling of vegetation which exposes more soil to erosive forces, and 3) reduces the amount of residual surface vegetation available to slow runoff. The evaluation of the Tuledad Allotment found that, while upland herbaceous vegetation is either unchanged or improving, riparian area vegetation and hydrologic conditions are poor and not improving. The BLM has a goal to have 75% of the riparian-wetland areas on public land in properly functioning condition by 1997. Research has repeatedly shown the importance of both woody and herbaceous riparian vegetation for wildlife habitat and forage; the fact that riparian areas represent only a small percentage of the available area make each riparian area very important.

The maximum appropriate wild horse population levels were determined using the Desired Stocking Rate formula. Wild horse Actual Use was calculated from the 1995 counts, assuming a 16% yearly increase for the Buckhorn Herd and a 15% increase for the Coppersmith Herd (see Table 3). The Desired Key Management Area Utilization came from the Interim Grazing Decision two inch stubble height requirement, which translates into 50% utilization on riparian areas dominated by *Poa nevadensis* with a potential height of ten inches.

The Desired Stocking Level (BLM technical reference 4400-7, Appendix 2, Page 1, p.54):

$$\frac{\text{Actual Use}}{\text{Key Management Area Utilization}} = \frac{\text{Desired Actual Use}}{\text{Desired Key Management Area Utilization}}$$

The Desired Actual Use is equivalent to the maximum appropriate wild horse use, expressed as Animal Unit Months (AUMs). One AUM is equal to 800 pounds of useable forage, or one cow with one calf for one month. Horses generally use closer to 1000 pounds of forage each month; however, the standard conversion normally used is one AUM for one horse for one month. Therefore, the Desired Actual Use divided by 12 months is equivalent to the maximum appropriate number of wild horses for the HMA. Minimum wild horse numbers were calculated from the maximum numbers using the average rates of increase for structured wild horse herds following a gather. The Appropriate Management Level (AML) was the median of these maximum and minimum numbers.

ANALYSIS

BUCKHORN HMA

Desired Utilization = 50%
Actual Use = 115 horses X 12 months = 1380 AUMs
Actual Utilization = 70% Rowland Spring Key Area 1992

Maximum Wild Horse Use

$$\frac{1380 \text{ AUMs X } .50}{.70} = 986 \text{ AUMs}$$

Maximum Wild Horse Numbers

$$\frac{986 \text{ AUMs}}{12 \text{ months}} = 82 \text{ wild horses}$$

Minimum Wild Horse Numbers

86 horses = 73 horses
1.178 (average population increase 4th year post gather for a structured herd)

73 horses = 63 horses
1.157 (average population increase 3rd year post gather for a structured herd)

63 horses = 53 horses
1.1873 (average population increase 2nd year post gather for a structured herd)

53 horses = 42 horses
1.276 (average population increase 1st year post gather for a structured herd)

Appropriate Management Level

$$86 \text{ maximum} - 42 \text{ minimum} = \frac{44}{2} = 22 + 42 = 64 \text{ AML}$$

Minimum Wild Horse Numbers

82 horses = 70 horses
1.178 (average population increase 4th year post gather for a structured herd)

70 horses = 61 horses
1.157 (average population increase 3rd year post gather for a structured herd)

61 horses = 51 horses
1.1873 (average population increase 2nd year post gather for a structured herd)

51 horses = 40 horses
1.276 (average population increase 1st year post gather for a structured herd)

Appropriate Management Level

$$82 \text{ maximum} - 40 \text{ minimum} = \frac{42}{2} = 21 + 40 = 61 \text{ AML}$$

COPPERSMITH HMA

Desired Utilization = 50%
Actual Use = 121 horses X 12 months = 1452 AUMs
Actual Utilization = 78% CELE Spring Key Area
70% Ant Spring Key Area
80% Bud Brown Meadow Key Area
65% Post Spring Key Area
70% Average Utilization on Key Areas

Maximum Wild Horse Use

$$\frac{1452 \text{ AUMs} \times .50}{.70} = 1037 \text{ AUMs}$$

Maximum Wild Horse Numbers

$$\frac{1037 \text{ AUMs}}{12 \text{ months}} = 86 \text{ wild horses}$$

TO: Buckhorn / Coppersmith WHMP Files

FROM: Richard Westman, Supervisory Range Conservationist

SUBJECT: Monitoring of the Winter Range on the Coppersmith and Buckhorn WHMA's.

I. Winter Range Monitoring

Establishing an ecological balance for the wild horse herds includes, in part, having the wild horse herd populations in balance with their winter and summer range areas. The winter range area is a primary factor in limiting horse herd numbers for the Coppersmith and Buckhorn WHMA's. Upland areas are improving and generally are capable of providing adequate forage for wild horses, livestock and wildlife. This is supported by current trend studies and annual utilization monitoring. Utilization problems are mainly associated with specific areas, such as riparian and mountain brush sites, and not the upland areas. The controversy over the East Lassen Deer Herd Area, which these two herds are a part of, raised the issue that both of these WHMA's were supporting more horses than the rangeland resources could support without adverse impacts. An Interim Grazing Decision was issued in the spring of 1992. This Decision put a temporary reduction from active preference into effect and modified the grazing system to provide additional resource protection for riparian and bitterbrush areas. While these interim measures are in place, a process has been started which will establish a carrying capacity for all ungulates within the East Lassen Area. No interim measures are implemented for the wild horse herds. Therefore it is recommended, until the East Lassen Integrated Plan is completed, to establish an interim management range for each of these herds based on the capacity of the winter range. This action will meet two objectives. One, prevent increased resource damage by allowing an annual increase of horse numbers until the East Lassen Plan is completed. Two, prevent the winter death loss of wild horses which will occur if their populations increase beyond the capacity of the winter range.

The winter of 1992 - 93 was above average in snowfall amounts.but other weather conditions were about normal. This situation provided an opportunity to evaluate the carrying capacity of the winter range in an above normal season. A number of wild horse herds adjacent to these WHMA's where showing serious problems because of the winter conditions. As the winter continued, concerns for the welfare of these wild horse herds increased. Monitoring of the Buckhorn and Coppersmith horse herds was increased. This monitoring consisted of frequent observations of animal condition from the ground and aerial reconnaissance.Highway 447 goes through the north end of the winter range of both herd areas. This permitted for frequent ground observations throughout the winter season. In addition, two separate helicopter flights were also used to monitor these WHMA's. The helicopter flights were conducted during mid-winter and in early spring. This monitoring effort identified those areas suitable as a winter range for each horse herd area. Condition of wild horses were observed throughout the winter and early spring. This monitoring also included a search for animals that may have died as a result of the winter conditions. The findings for each herd management area are outlined below.

II. COPPERSMITH WHMA

All of the horses were located on the lower elevation ground at the very northeastern corner of the WHMA (See map 1). Approximately 55 to 65 horses were located on this area from mid november until early april. Most of the use was below the 4800' elevation. Above this level the snow was fairly deep (2-3') and no animal tracks of any kind could be seen in the snow. Snow was too deep for horses in the Bud Brown and Upper Tuledad Canyon Area. This is areas often used by horses during mild winters. Horses condition and appearance was very good early in the winter. Condition remained fair to good throughout most of the winter period. Toward early spring animals were in fair shape with several showing signs of a tough winter. However, no dead animals were found during ground and aerial flight observations. Most of the grass plants received heavy use while use on the browse plants ranged from heavy to light use.

Our observations on this winter use area indicate that the current numbers are the maximum amount the winter range can support during an above normal winter. An increase in the horse numbers would make these herds reach capacity of the winter range during normal to above normal winter conditions.

II. BUCKHORN WHMA

All of the horses were located on the lower elevation areas less than 5000 - 4800' level, primarily along the north and east edges of the WHMA. Horses were scattered from the lower end of Tuledad Canyon, south and east to Rye Patch Sheep Camp. Approximately 8-10 animals were located in Lower Tuledad Canyon west of Express Canyon. An additional 8 horses were located in the Old Camp Pasture which is just outside the WHMA. There were approximately 70 to 80 horses were located on this area from mid november until early april. Snow was fairly deep and restricted use on the balance of the WHMA. Horse condition and appearance was very much the same as observed on the Coppersmith herd. Horses condition and appearance was very good early in the winter. Condition remained fair to good throughout most of the winter period. Toward early spring animals were in fair shape with several showing signs of a tough winter. However, no dead animals were found during ground and aerial flight observations. Most of the grass plants received heavy use while use on the browse plants ranged from heavy to light use.

Our observations on this winter use area indicate that the current numbers are the maximum amount the winter range can support during a above normal winter. Horse condition and vegetation use indicate that this area was being used to the fullest extent. Also, a small percentage of the animals were beginning to move out beyond the boundaries of the WHMA. An increase in the horse numbers would result in these herds exceeding the capacity of the winter range during normal to above normal winter conditions.

IV. COPPERSMITH AND BUCKHORN WHMA'S RECOMMENDED NUMBERS BASED ON WINTER RANGE CAPACITY.

Both herd areas were inventoried by helicopter in the spring to get an accurate count of animals making it through the winter, evaluate animal condition and determine percent of animals that were lost during the winter. Number of horses and their location are shown on attachment --. No dead horses were observed during the flight of both management areas.

Based on the above information, it is recommended that the interim management range for horses on both of these WHMA's not exceed the capacity of the winter range. Currently, the maximum capacity for the winter range on each WHMA is as follows:

Buckhorn - 59 to 85 horses
Coppersmith - 50 to 75 horses

APPENDIX 3

RIPARIAN AREA FORAGE PRODUCTION

AND

WILD HORSE DEMAND FOR RIPARIAN SPECIES

RIPARIAN AREA FORAGE PRODUCTION
AND
WILD HORSE DEMAND FOR RIPARIAN SPECIES

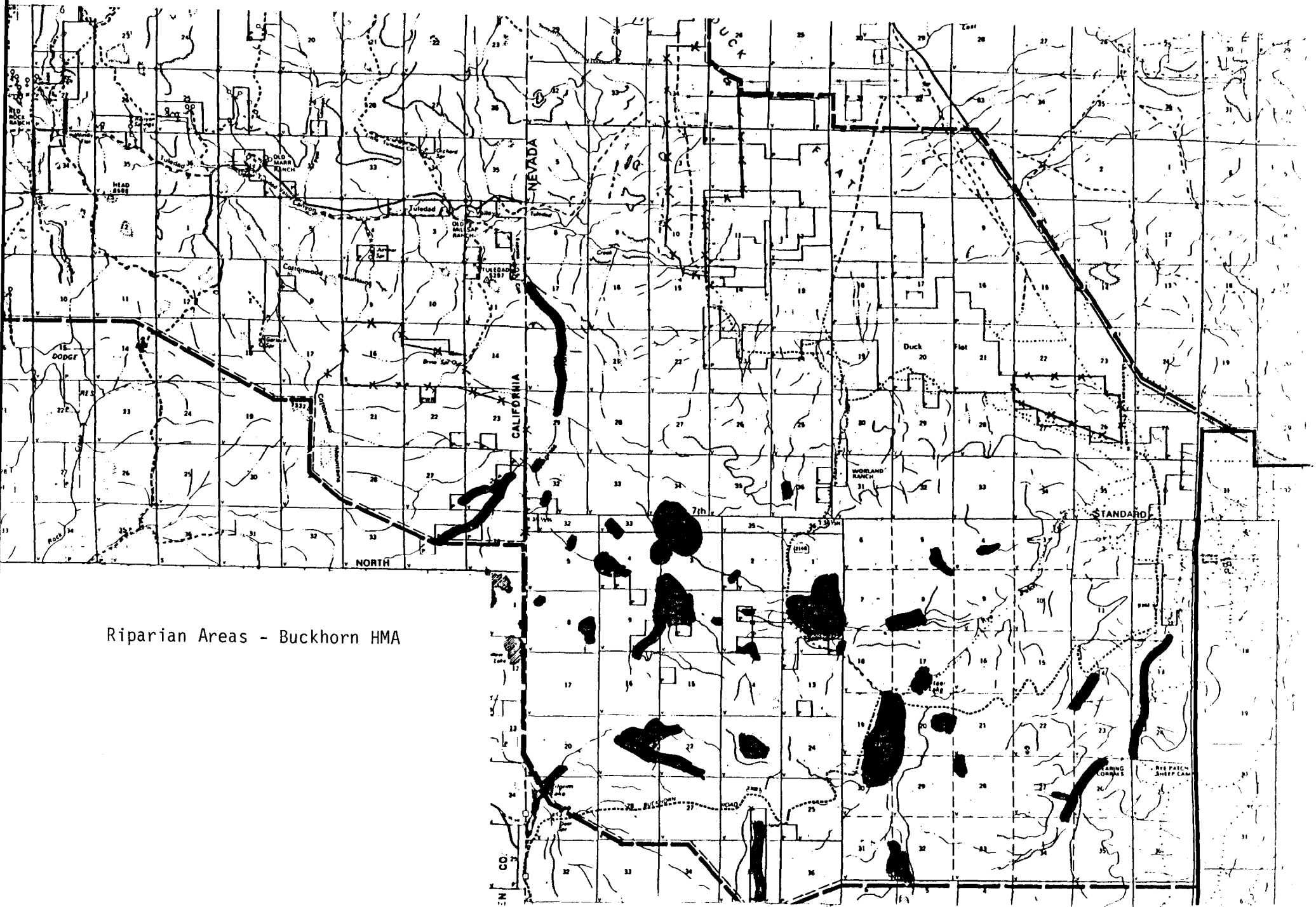
INTRODUCTION

The purpose of this appendix is to compare the amount of forage being produced by riparian areas with the wild horse dietary demand for riparian species. There are many generalizations and assumptions in what follows.

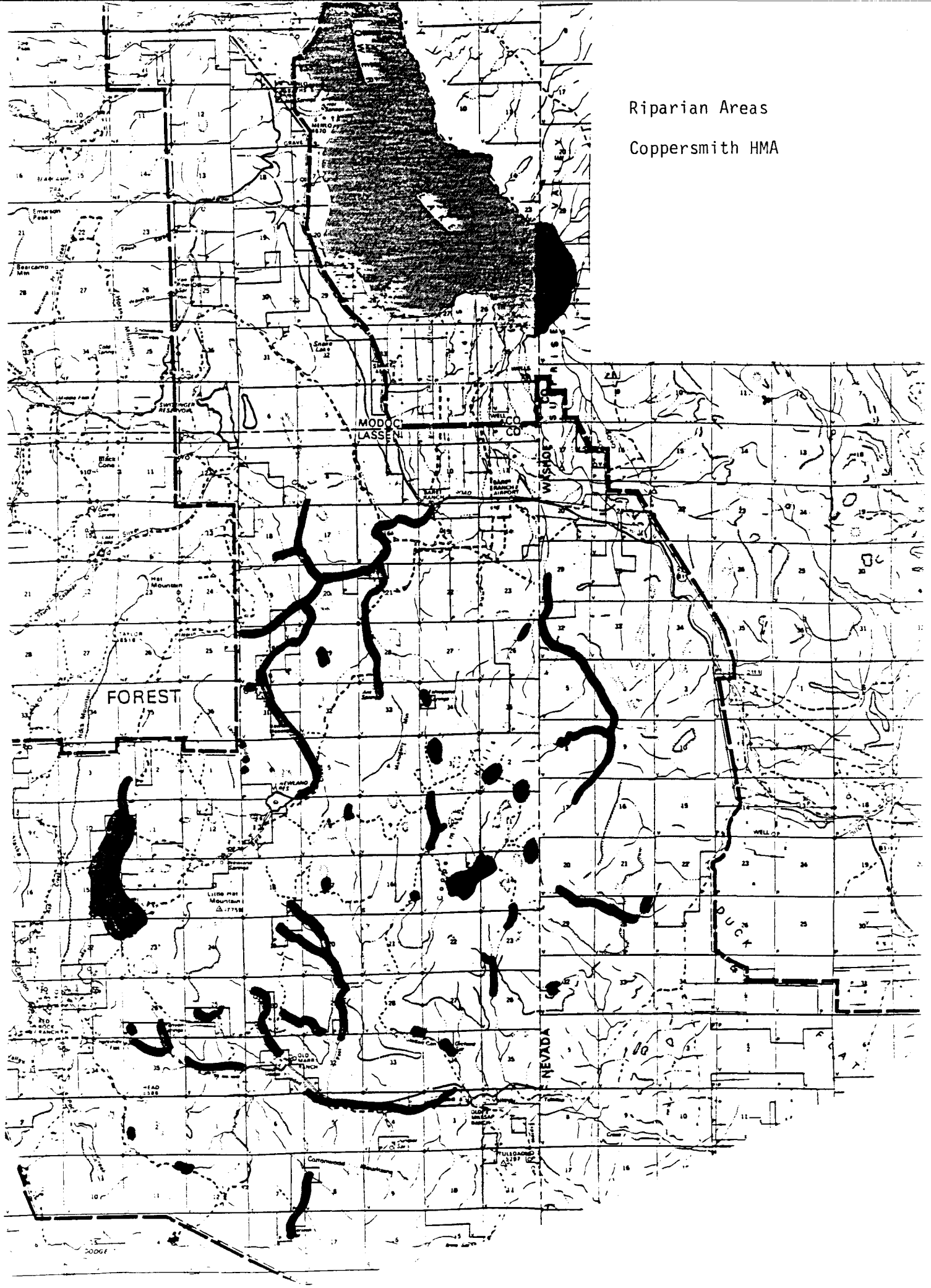
The riparian areas identified on the maps in this appendix are areas which currently produce riparian vegetation. They are not all the areas which have the correct landscape position to potentially have, or historically may have had, riparian vegetation. Therefore, the number of riparian acres identified in this appendix are likely conservative.

The range sites are from the Soil Conservation Service, Nevada MLR 23, Range Site Guide. However, in Nevada, range sites are not broken down to production per condition class. Also, because riparian areas have generally been lumped with surrounding uplands, there is not a range site which corresponds to a riparian willow community which would likely be the climax community in some of the riparian areas in these HMAs. As a result all the production estimates came from the Soil Conservation Service, Oregon High Desert Province, Range Site Guide.

The wild horse diet information came from a one year study on the Tuledad Allotment, within the two HMA's. The method of diet component identification was fecal analysis. Fecal analysis tends to over estimate coarse plants, such as grasses, rushes, and shrubs, and to under estimate succulent plants, such as spring forbs.



Riparian Areas - Buckhorn HMA


Riparian Areas
Coppersmith HMA
MODOC
LASSEN
CO
CO
WASHOE
FOREST
NEVADA

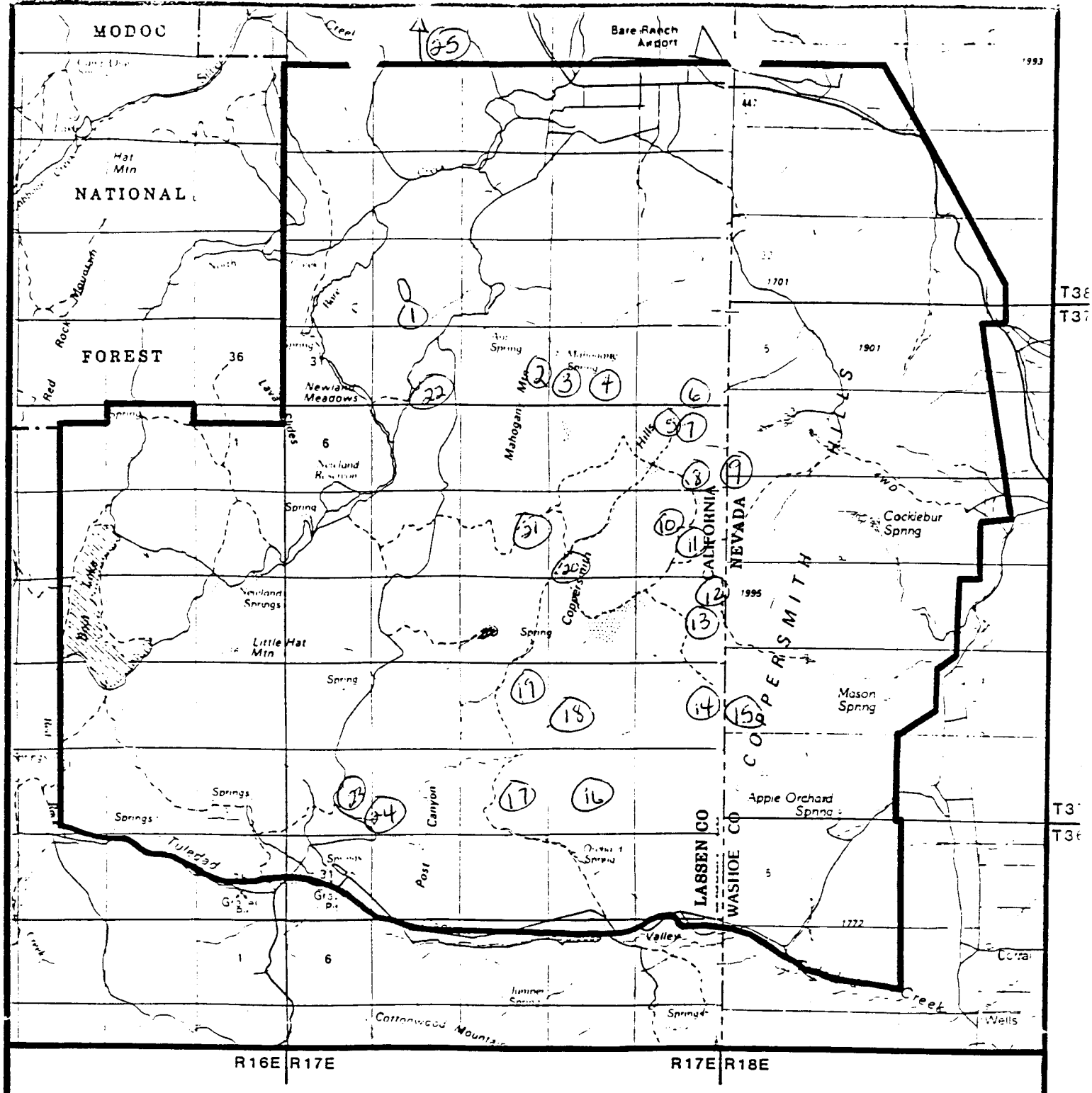
APPENDIX 4

WILD HORSE COUNT DATA

FOR WILD HORSES IN THE

BUCKHORN AND COPPERSMITH

HERD MANAGEMENT AREAS



Herd Management Area boundary

DATE OF CENSUS: AUGUST 04, 1995

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
CALIFORNIA STATE OFFICE
HERD MANAGEMENT AREA
COPPERSMITH

N

0 1 2 3
MILES

CA-261

WILD HORSE AND BURRO
OBSERVATION

DISTRICT: Susanville
RESOURCE AREA: Surprise
OBSERVERS: deVaLois, Jeffers, Uchida
HMA/HOME RANGE: Coppersmith

DATE	MAP REF.	TOTAL	ADULTS	YOUNG	REMARKS
8/24/95	1	9	7	2	
	2	2	2		
	3	5	5		
	4	4	3	1	
	5	3	2	1	
	6	4	3	1	
	7	8	6	2	
	8	5	5		
	9	5	5		
	10	5	4	1	
	11	9	7	2	
	12	4	4		
	13	9	8	1	
	14	7	6	1	
	15	5	5		
	16	5	4	1	
	17	11	11		
	18	4	3	1	
	19	3	3		
	20	5	5		
SUB ~~TOTALS~~		112	98	14	

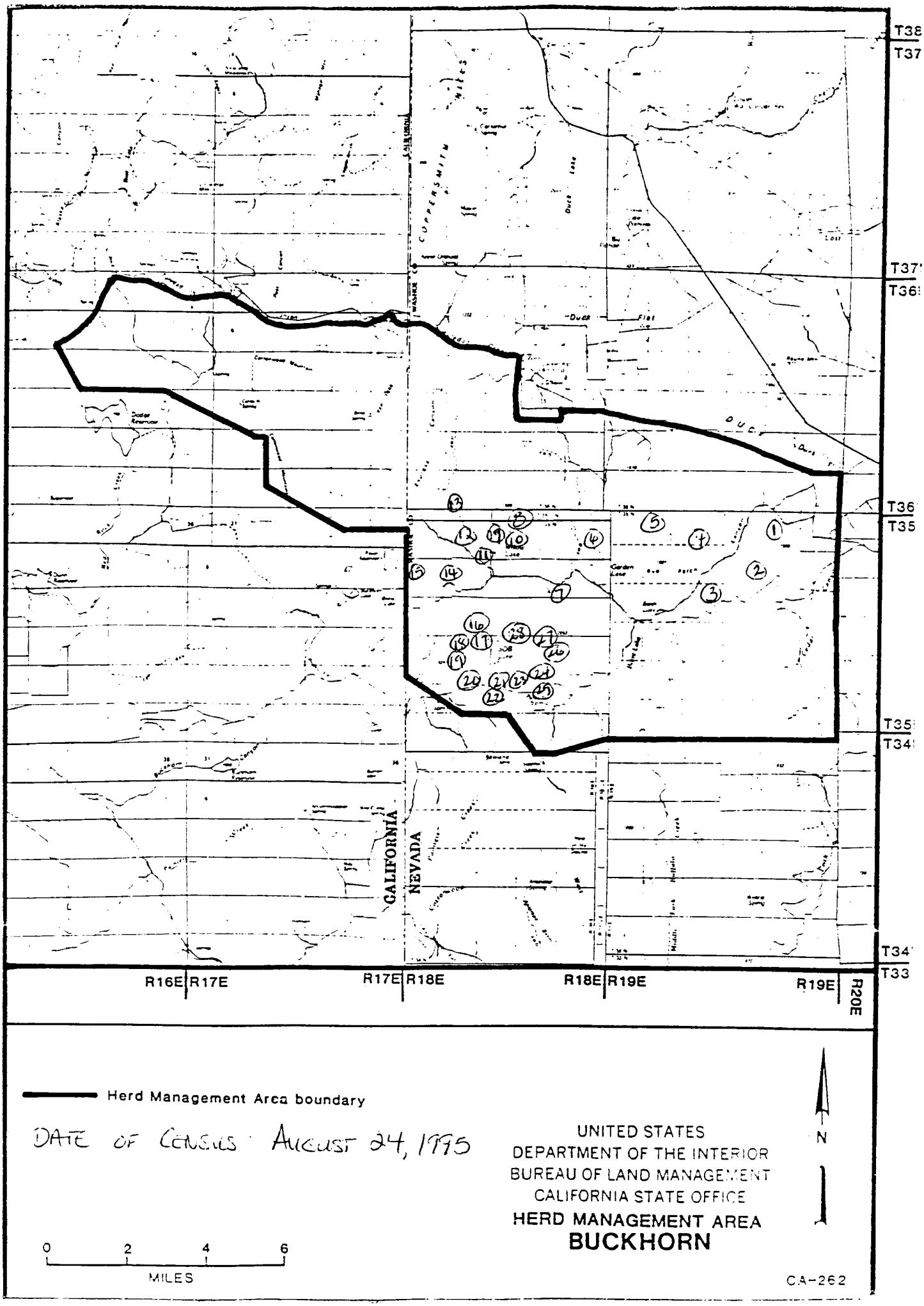
WILD HORSE AND BURRO
OBSERVATION

DISTRICT: Susanville
RESOURCE AREA: Surprise
OBSERVERS: deBolois, E. Jeffers, Davids
HMA/HOME RANGE: Cappiromith

DATE	MAP REF.	TOTAL	ADULTS	YOUNG	REMARKS
8/24/95	21	13	11	2	
	22	1	1		
	23	4	4		
	24	3	3		
	25	4	3	1	north of HMA near Van Riper Spring. Very young foal
SUB TOTAL		112	98	14	
TOTALS		137	120	17	

12 0/0
17
137

Pg. 2 of 2 Pgs.



Herd Management Area boundary

DATE OF CENSUS AUGUST 24, 1995

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
CALIFORNIA STATE OFFICE

HERD MANAGEMENT AREA
BUCKHORN

CA-262

WILD HORSE AND BURRO
OBSERVATION

DISTRICT: Susanville
RESOURCE AREA: Surprise
OBSERVERS: deVolois, K. Jeffers, Uchida
HMA/HOME RANGE: Buckhorn

DATE	MAP REF.	TOTAL	ADULTS	YOUNG	REMARKS
8/24/95	1	6	5	1	
	2	2	2		
	3	5	4	1	
	4	7	6	1	
	5	14	13	1	
	6	2	2		
	7	10	10		
	8	3	3		
	9	5	4	1	
	10	4	3	1	
	11	7	7		
	12	4	3	1	
	13	5	3	2	
	14	7	6	1	
	15	8	6	2	
	16	5	4	1	Bay Paint
	17	7	6	1	
	18	3	2	1	
	19	9	8	1	
	20	9	7	2	Palomino Paints w/ white foal
Sub TOTALS		122	104	18	

WILD HORSE AND BURRO
OBSERVATION

DISTRICT: Susanville
RESOURCE AREA: Surprise
OBSERVERS: DeVaris, R. Jeffers, Uchida
HMA/HOME RANGE: Buckhorn

DATE	MAP REF.	TOTAL	ADULTS	YOUNG	REMARKS
8/24/95	21	8	7	1	
	22	6	4	2	
	23	7	6	1	
	24	7	6	1	Calico Paint
	25	12	11	1	
	26	7	5	2	
	27	3	3		
	28	4	3	1	
SUB TOTAL		122	104	18	27/176 = 15%
TOTALS		176	149	27	

APPENDIX 6

1989 - 1994 ACTUAL USE MONITORING

BUCKHORN AND COPPERSMITH

HERD MANAGEMENT AREAS

Remarks (*Include other information such as death losses, disease, and unauthorized use by strays.*)

1989 USE BY PASTURE

TULEDAD SEEDING	~	119
POWELL BASIN	~	387
EXPRESS	~	359
BOOT LAKE	~	169
WHALE LAKE	~	734
		1,768

The Paperwork Reduction Act of 1980 (44 U.S.C. 3501, et seq.) requires us to inform you that:

This information is being collected to gather and document the actual amount of livestock grazing use on the public lands.

This information will be used to calculate your billing and to help evaluate the effectiveness of management actions in meeting resource management objectives.

Response to this request is mandatory under 43 CFR 4120.2–2(d), 4120.2–3(e), and 4130.5–1(e).

GPO 840 – 743

2644

Form 4130–5
(August 1983)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCT

FORM APPROVED
OMB NO. 1004–0051
Expires: January 31, 1986

ACTUAL GRAZING USE REPORT

Dear Sir: NORTH FORK RANCH

DUE 10-30-89

In accordance with the terms and conditions of the permit or lease which authorizes your grazing use, please complete this form and return to the Resource Area Office within 15 days after completing your authorized grazing use (43 CFR 4120.2–2(d), 4120.2–3(e), and 4130.5–1(e)). This information, along with other studies data, is needed to evaluate the effectiveness of present management. Use a separate line for every day that you either turn livestock in or take livestock out of an allotment or pasture. Your cooperation in providing accurate information will be appreciated.

Allotment
TUNEDAD

ACTUAL GRAZING USE				FOR BLM USE ONLY				
				CALCULATION OF AUM'S GRAZING USE				
PASTURE (PLEASE LIST)	DATE (Mo., Day, Yr.)	NUMBER AND KIND OR CLASS OF LIVESTOCK		NO. AND KIND OF LIVESTOCK	GRAZING PERIOD		% PL USE	AUM'S
		TURNED IN	TAKEN OUT		BEGIN	END		
				266 C	04/16	04/16		8
				295 C	04/17	04/17		26
				316 C	04/20	04/25		85
				316 C	04/27	05/01		28
				339 C	05/02	05/04		30
				341 C	05/05	05/22		184
				346 C	05/27	06/05		145
				353 C	06/06	07/09		359
				353 C	07/10	07/25		169
				353 C	07/26	09/26		665
				179 C	09/27	10/07		59
				52 C	10/08	10/10		5
				49 C	10/11	10/12		3
				25 C	10/13	10/14		2
				~~TOTAL ACTIVE PREFERENCE~~				2,099
				ACTIVE USE 1989				1768
				NON-USE 1989				331

I CERTIFY That this is a complete and accurate report of my grazing use.

Signature of Permittee/Lessee Bud Hallsworth

Date 10-26-89

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

OCT

Form 4130–5
(August 1983)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004–0051
Expires: January 31, 1986

ACTUAL GRAZING USE REPORT

Dear Sir: LAZY SJ RANCH

DUE 10-30-89

In accordance with the terms and conditions of the permit or lease which authorizes your grazing use, please complete this form and return to the Resource Area Office within 15 days after completing your authorized grazing use (43 CFR 4120.2–2(d), 4120.2–3(e), and 4130.5–1(e)). This information, along with other studies data, is needed to evaluate the effectiveness of present management. Use a separate line for every day that you either turn livestock in or take livestock out of an allotment or pasture. Your cooperation in providing accurate information will be appreciated.

Allotment
TULEDAD

ACTUAL GRAZING USE				FOR BLM USE ONLY				
				CALCULATION OF AUM'S GRAZING USE				
PASTURE (PLEASE LIST)	DATE (Mo., Day, Yr.)	NUMBER AND KIND OR CLASS OF LIVESTOCK		NO. AND KIND OF LIVESTOCK	GRAZING PERIOD		% PL USE	AUM'S
		TURNED IN	TAKEN OUT		BEGIN	END		
76 Seeding	4-15-89	50		50C	04/15	04/24	95%	
Rye patch	11-25-89	50		100C	04/25	05/01	95%	
" " Area	5 2-89	50		150C	05/02	09/01	95%	
				124C	09/02	09/28	95%	
	9-1-89		26					
	9-28-89		126	TOTAL ACTIVE PREFERENCE				733
				ACTIVE USE 1989				719
				NON-USE 1989				14
				PASTURE USE 1989				
				OVER Tuledad Seeding			~	16
				RYE PATCH			~	598
				South PASTURE			~	105

I CERTIFY That this is a complete and accurate report of my grazing use.

Signature of Permittee/Leassee: Lazy S J Ranch, Inc. Kamille Gallacher

Date: 10-13-89

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

Form 4130–5
(August 1983)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004–0051
Expires: January 31, 1986

GF# 042643
SCHEDULE 1

ACTUAL GRAZING USE REPORT

OCT 6

Dear Sir:

In accordance with the terms and conditions of the permit or lease which authorizes your grazing use, please complete this form and return to the Resource Area Office within 15 days after completing your authorized grazing use (43 CFR 4120.2–2(d), 4120.2–3(e), and 4130.5–1(e)). This information, along with other studies data, is needed to evaluate the effectiveness of present management. Use a separate line for every day that you either turn livestock in or take livestock out of an allotment or pasture. Your cooperation in providing accurate information will be appreciated.

Allotment: TULE DAM # 0902

ACTUAL GRAZING USE				FOR BLM USE ONLY				
				CALCULATION OF AUM'S GRAZING USE				
PASTURE	DATE (Mo., Day, Yr.)	NUMBER AND KIND OR CLASS OF LIVESTOCK		NO. AND KIND OF LIVE-STOCK	GRAZING PERIOD		% PL USE	AUM'S
		TURNED IN	TAKEN OUT		BEGIN	END		
	09/26	2,000 S		2000S	09/26	10/18	9½%	284
	10/18		2,000 S					
				TOTAL ACTIVE PREFERENCE				457
				ACTIVE USE 1989 –				284
				NON-USE 1989 –				203

I CERTIFY That this is a complete and accurate report of my grazing use.

Signature of Permittee Leassee [signature] [illegible]

Date 10/26/89

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

Form 4130–5
(August 1983)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCT 6

FORM APPROVED
OMB NO. 1004–0051
Expires: January 31, 1986

GR#04 2615
SCHEDULE 1

ACTUAL GRAZING USE REPORT

Dear Sir:

In accordance with the terms and conditions of the permit or lease which authorizes your grazing use, please complete this form and return to the Resource Area Office within 15 days after completing your authorized grazing use (43 CFR 4120.2–2(d), 4120.2–3(e), and 4130.5–1(e)). This information, along with other studies data, is needed to evaluate the effectiveness of present management. Use a separate line for every day that you either turn livestock in or take livestock out of an allotment or pasture. Your cooperation in providing accurate information will be appreciated.

Allotment: Tuledad #0802 (Cows)

ACTUAL GRAZING USE				FOR BLM USE ONLY — CALCULATION OF AUM'S GRAZING USE				
PASTURE	DATE (Mo., Day, Yr.)	NUMBER AND KIND OR CLASS OF LIVESTOCK		NO. AND KIND OF LIVESTOCK	GRAZING PERIOD		% PL USE	AUM'S
		TURNED IN	TAKEN OUT		BEGIN	END		
NORTHLAND Section	04/07	110 C		110 C	04/07	04/16	96%	35
WEST CROSS Section	04/17	90 C		200 C	04/17	05/05	96%	120
" "	05/05		200 C	200 C	05/06	06/06	96%	202
RYE PATCH	05/06	200 C		200 C	06/07	07/09	96%	208
" "	06/06		200 C	200 C	07/10	08/31	96%	335
SOUTH PASTURE	06/07	200 C		200 C	09/01	09/30	96%	189
" "	07/09		200 C					
ROOT LAKE	07/10	200 C		TOTAL ACTIVE PREFERENCE				4,008
" "	08/31		200 C	ACTIVE USE	1989	—		1,089
CLOVER LAKE	09/01	200C		NON-USE	1989	—		2,919
" "	09/30		200 C	73% NON-USE 1989				

I CERTIFY That this is a complete and accurate report of my grazing use.

Signature of Permittee Leassee [signature] Date 10/26/89

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

Form 4130–5
(August 1983)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED
OCT 6

FORM APPROVED
OMB NO. 1004–0051
Expires: January 31, 1986

ORH 04/26/15
SCHEDULE 3

ACTUAL GRAZING USE REPORT

Dear Sir:

In accordance with the terms and conditions of the permit or lease which authorizes your grazing use, please complete this form and return to the Resource Area Office within 15 days after completing your authorized grazing use (43 CFR 4120.2–2(d), 4120.2–3(e), and 4130.5–1(e)). This information, along with other studies data, is needed to evaluate the effectiveness of present management. Use a separate line for every day that you either turn livestock in or take livestock out of an allotment or pasture. Your cooperation in providing accurate information will be appreciated.

Allotment: Tuledad #0802 (Sheep)

ACTUAL GRAZING USE				FOR BLM USE ONLY — CALCULATION OF AUM'S GRAZING USE				
PASTURE	DATE (Mo., Day, Yr.)	NUMBER AND KIND OR CLASS OF LIVESTOCK		NO. AND KIND OF LIVESTOCK	GRAZING PERIOD		% PL USE	AUM'S
		TURNED IN	TAKEN OUT		BEGIN	END		
	03/26	2,000 S		2,000 S	03/26	04/12	100%	237
	04/12		2,000 S	1,000 S	04/13	05/05	100%	151
	04/13	1,000 S		1,500 S	05/06	05/25	100%	197
	05/05		1,000 S	2,500 S	05/26	06/30	100%	592
	05/06	1,500 S		1,500 S	07/01	07/07	100%	69
	05/25		1,500 S	500 S	07/09	08/10	100%	112
	05/26	2,500 S						
	06/30		2,500 S					
	07/01	1,500 S		TOTAL ACTUAL PREFERENCE				1,387
	07/07		1,500 S	ACTUAL USE 1989				1,358
	07/09	500 S		NON-USE 1989				29
	08/10		500 S					

I CERTIFY That this is a complete and accurate report of my grazing use.

Signature of Permittee/Leassee [signature] Date 10/26/89

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

Form 4130–5
(March 1989)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004–0051
Expires: October 31, 1991

GR# 042630
SEC 1

ACTUAL GRAZING USE REPORT

Dear Sir:

In accordance with the terms and conditions of the permit or lease which authorizes your grazing use, please complete this form and return to the Resource Area Office within 15 days after completing your authorized grazing use (43 CFR 4130.6–2(d)). This information, along with other studies data, is needed to evaluate the effectiveness of present management. Use a separate line for every day that you either turn livestock in or take livestock out of an allotment or pasture. Your cooperation in providing accurate information will be appreciated.

Allotment: Tuledad #0802

ACTUAL GRAZING USE				FOR BLM USE ONLY				
				CALCULATION OF AUM'S GRAZING USE				
PASTURE	DATE (Mo., Day, Yr.)	NUMBER AND KIND OR CLASS OF LIVESTOCK		NO. AND KIND OF LIVESTOCK	GRAZING PERIOD		% PL USE	AUM'S
		TURNED IN	TAKEN OUT		BEGIN	END		
South	4/20/90	160 C		160 C	04/20	06/15	100%	300
	6/16/90		1 C	159 C	06/16	07/13	100%	146
	7/13/90		1 C	158 C	07/14	09/25	100%	384
	9/25/90		15 C	143 C	09/26	09/26	100%	5
	9/26/90		10 C	133 C	09/27	09/27	100%	4
	9/27/90		35 C	98 C	09/28	09/28	100%	3
	9/28/90		61 C	37 C	09/29	10/05	100%	9
	10/5/90		37 C	~~TOTAL ACTIVE PASTURE~~				~~884~~
	10/6/90		27 C	~~TOTAL ACTIVE USE 1990~~				~~854~~
				10 C	10/06	10/15	100%	3
				TOTAL ACTIVE PASTURE				884
				ACTIVE USE 1990				854
				NON-USE 1990			—	30
				3% NON USE				
				OUT 10/04/90				

I CERTIFY That this is a complete and accurate report of my grazing use.

Signature of Permittee/Leasee: RAFTER D RANCH [signature] Date: 11/2/90

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on reverse)

Form 4130–5
(August 1983)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004–0051
Expires: January 31, 1986

ACTUAL GRAZING USE REPORT

GR#04264 4
sch 2

Dear Sir:

In accordance with the terms and conditions of the permit or lease which authorizes your grazing use, please complete this form and return to the Resource Area Office within 15 days after completing your authorized grazing use (43 CFR 4120.2–2(d), 4120.2–3(e), and 4130.5–1(e)). This information, along with other studies data, is needed to evaluate the effectiveness of present management. Use a separate line for every day that you either turn livestock in or take livestock out of an allotment or pasture. Your cooperation in providing accurate information will be appreciated.

Allotment

ACTUAL GRAZING USE				FOR BLM USE ONLY				
				CALCULATION OF AUM'S GRAZING USE				
PASTURE	DATE (Mo., Day, Yr.)	NUMBER AND KIND OR CLASS OF LIVESTOCK		NO. AND KIND OF LIVE-STOCK	GRAZING PERIOD		% PL USE	AUM'S
		TURNED IN	TAKEN OUT		BEGIN	END		
[illegible]	[illegible]	[illegible]	15 BULLS [illegible]	299 C	04/19	04/19	91%	9
[illegible]	[illegible]	[illegible]		299 C	04/20	04/22	91%	27
[illegible]	[illegible]	46 PR		345 C	04/23	05/15	91%	237
Tolman Bull	5-16-90	30 PR		345 C	05/16	09/12	91%	1310
	9-12-90		4 Bulls 135 Pr	226 C	09/13	09/29	91%	115
	9-29-90		11 Bulls 181 Pr					
				TOTAL ACTIVE PREFERENCE				2,099
				ACTIVE USE 1990				1,698
				NON-USE 1990				401
				19% NON USE 1990				
				USE BY PASTURE				
				Tuledad Seeding				
				EXPRESS Canyon				

I CERTIFY That this is a complete and accurate report of my grazing use.

Signature of Permittee/Leassee Gary Tolman Date 10/9/90

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

Wes Cook

Form 4130–5
(March 1989)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004–0051
Expires: October 31, 1991

ACTUAL GRAZING USE REPORT

Dear Sir:

In accordance with the terms and conditions of the permit or lease which authorizes your grazing use, please complete this form and return to the Resource Area Office within 15 days after completing your authorized grazing use (43 CFR 4130.6–2(d)). This information, along with other studies data, is needed to evaluate the effectiveness of present management. Use a separate line for every day that you either turn livestock in or take livestock out of an allotment or pasture. Your cooperation in providing accurate information will be appreciated.

Allotment: Tuledad #0802 Sheep

ACTUAL GRAZING USE				FOR BLM USE ONLY — CALCULATION OF AUM'S GRAZING USE				
PASTURE	DATE (Mo. Day. Yr.)	NUMBER AND KIND OR CLASS OF LIVESTOCK		NO. AND KIND OF LIVESTOCK	GRAZING PERIOD		% PL USE	AUM'S
		TURNED IN	TAKEN OUT		BEGIN	END		
				~~GR# 042615 SCH 3~~				
Tuledad	3/26	2000						
"	4/12		1000	2,000 S	03/26	04/12	100%	237
"	5/6	700		1,000 S	04/13	05/05	100%	151
"	5/26	1000		1,700 S	05/06	05/25	100%	224
"	7/1		1000	2,700 S	05/26	07/01	100%	657
"	7/8		1000	1,700 S	07/02	07/08	100%	78
"	8/5		700	700 S	07/09	08/05	100%	129
				GR# 042643 SCH 1 (MUNIA LS)				
"	9/25	2500		2,500 S	09/25	10/18	94%	371
"	10/18		1500	1,000 S	10/19	10/24	94%	37
"	10/24		1000					
				GR# 042615 SCH 3	TOTAL ACTIVE PREFERENCE			1,387
					ACTIVE USE 1990			1,476
					TNR 1990			89
				GR# 042643	SCH 1	MUNIA LS		
				TOTAL ACTIVE	PREFERENCE			487
		12/06/90 avg		1990 ACTIVE USE				408
				1990 NON-USE				79

I CERTIFY That this is a complete and accurate report of my grazing use.

Signature of Permittee/Lessee Wes Cook Date

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

Continued on reverse

Wes Cook

Form 4130–5
(March 1989)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004–0051
Expires: October 31, 1991

GR# 042615
SCH 1

ACTUAL GRAZING USE REPORT

Dear Sir:

In accordance with the terms and conditions of the permit or lease which authorizes your grazing use, please complete this form and return to the Resource Area Office within 15 days after completing your authorized grazing use (43 CFR 4130.6–2(d)). This information, along with other studies data, is needed to evaluate the effectiveness of present management. Use a separate line for every day that you either turn livestock in or take livestock out of an allotment or pasture. Your cooperation in providing accurate information will be appreciated.

Allotment: Tuledad #0802 Cattle

ACTUAL GRAZING USE				FOR BLM USE ONLY — CALCULATION OF AUM'S GRAZING USE				
PASTURE	DATE (Mo. Day Yr.)	NUMBER AND KIND OR CLASS OF LIVESTOCK		NO. AND KIND OF LIVESTOCK	GRAZING PERIOD		% PL USE	AUM'S
		TURNED IN	TAKEN OUT		BEGIN	END		
Tuledad	4/1	157		157C	04/01	04/16	96%	79
"	4/17	53		210 C	04/17	04/24	96%	53
"	4/25	8		218 C	04/25	09/15	96%	991
"	9/15		50	168 C	09/16	09/30	96%	80
"	9/30		168					1,203
				TOTAL ACTIVE PREFERENCE				3,125
				ACTIVE USE 1990				1,203
				NON-USE 1990				1,922
				62% NON-USE 1990				
				12/06/90				

I CERTIFY That this is a complete and accurate report of my grazing use

Signature of Permittee Lessee: Wesley Cook — Date:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

Form 4130–5
(March 1989)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004–0051
Expires: October 31, 1991

RECEIVED
OCT 1 7 ...
Bureau of Land Management
Cedarville, CA 96104

ACTUAL GRAZING USE REPORT

Dear Sir: LAZY S J RANCH

In accordance with the terms and conditions of the permit or lease which authorizes your grazing use, please complete this form and return to the Bureau of Land Management Cedarville, CA 96104 Resource Area Office within 15 days after completing your authorized grazing use (43 CFR 4130.6–2(d)). This information, along with other studies data, is needed to evaluate the effectiveness of present management. Use a separate line for every day that you either turn livestock in or take livestock out of an allotment or pasture. Your cooperation in providing accurate information will be appreciated.

Allotment: TULEDAD

ACTUAL GRAZING USE				FOR BLM USE ONLY — CALCULATION OF AUM'S GRAZING USE				
PASTURE	DATE (Mo., Day, Yr.)	NUMBER AND KIND OR CLASS OF LIVESTOCK — TURNED IN	TAKEN OUT	NO. AND KIND OF LIVESTOCK	GRAZING PERIOD — BEGIN	END	% PL USE	AUM'S
North	5-1-91	148		148C	05/11	09/14	95	587
"	9-14-91		50	98C	09/15	09/18	95	12
"	9-18-91		27	71C	09/19	10/1	95	29
"	10-1-91		71					
					preference :			733
						activated :		628
							86% use	

Fee Credit #C802-3C
Saddle Pit Reservoir
Lava Reservoir
~~$___.00~~ $300.00
[illegible signature]

GABS 10-18-91 TWV

I CERTIFY That this is a complete and accurate report of my grazing use.

Signature of Permittee Leassee: Lazy SJ Ranch Inc [signature] Date: 11-12-91

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on reverse)

Form 4130–5
(March 1989)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004–0051
Expires: October 31, 1991

ACTUAL GRAZING USE REPORT

GR #01/2641

Dear Sir:

In accordance with the terms and conditions of the permit or lease which authorizes your grazing use, please complete this form and return to the Resource Area Office within 15 days after completing your authorized grazing use (43 CFR 4130.6–2(d)). This information, along with other studies data, is needed to evaluate the effectiveness of present management. Use a separate line for every day that you either turn livestock in or take livestock out of an allotment or pasture. Your cooperation in providing accurate information will be appreciated.

Allotment: Tuledad #0802

ACTUAL GRAZING USE				FOR BLM USE ONLY — CALCULATION OF AUM'S GRAZING USE				
PASTURE	DATE (Mo. Day Yr)	NUMBER AND KIND OR CLASS OF LIVESTOCK		NO. AND KIND OF LIVESTOCK	GRAZING PERIOD		% PL USE	AUM'S
		TURNED IN	TAKEN OUT		BEGIN	END		
	4-17-90	80		80c	04/17	05/05	95%	47
	5-6-90	80		160c	05/06	08/23	95%	550
			~~A 29~~	130c	08/24	09/29	95%	150
	8-23		30					
	9-29		125					
				TOTAL ACTIVE PREFERENCE				733
				ACTIVE USE 1990				747
				NON-USE 1990				
				TNR 1990				14

I CERTIFY That this is a complete and accurate report of my grazing use

Signature of Permittee Leassee: [signature]

Date: 10-4-90

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

Remarks (Include other information such as death losses, disease, and unauthorized use by strays.)

I was very pleased with the distribution of the spade heifer. I did not notice any problems with the cow calf segment. Bulls paid no attention to the heifers.

I was also very pleased with our range rider. He kept the cattle well dispersed, salted and alot of fencing done. We have not noticed as many strays in our cattle as there were last year.

There continues to be a problem with the sheepherders cutting fences to pass thru or lifting the bottom wire up to the top wire. I have no problem with this, if they would fix it back the way it was. They don't however and then cattle find the holes and we have to fix it for them.

Form 4130–5
(March 1989)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004–0051
Expires: October 31, 1991

ACTUAL GRAZING USE REPORT

OCT

Dear Sir: North Fork Ranch

In accordance with the terms and conditions of the permit or lease which authorizes your grazing use, please complete this form and return to the Resource Area Office within 15 days after completing your authorized grazing use (43 CFR 4130.6–2(d)). This information, along with other studies data, is needed to evaluate the effectiveness of present management. Use a separate line for every day that you either turn livestock in or take livestock out of an allotment or pasture. Your cooperation in providing accurate information will be appreciated.

Allotment: Tuledad 802

ACTUAL GRAZING USE				FOR BLM USE ONLY				
				CALCULATION OF AUM'S GRAZING USE				
PASTURE	DATE (Mo. Day. Yr.)	NUMBER AND KIND OR CLASS OF LIVESTOCK		NO. AND KIND OF LIVESTOCK	GRAZING PERIOD		% PL USE	AUM'S
		TURNED IN	TAKEN OUT		BEGIN	END		
NORTHSIDE	4-16-91	215 HERS		315C	041691	041691	91	6
NORTHSIDE	4-17-91	238 HERS		453C	041791	041991	91	21
NORTHSIDE	4-20-91	132 HERS		585C	042091	081491	91	3045
				441C	051591	091591	91	422
NORTHSIDE	8-14-91		144 HERS	317C	091691	100191	91	152
NORTHSIDE	9-15-91		124 HERS					
NORTHSIDE	10-1-91		317 HERS				ACTUAL	3669
							ALLOWED	3691
								171% Cur
FC 082 → 3 ~~AB~~								
SADDLE PIT & LAVA RESERVOIRS								
~~$1 HEC~~ #340								

I CERTIFY That this is a complete and accurate report of my grazing use.

Signature of Permittee Lessee: Cary Nolan MGR. Date: 10-11-91

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

Form 4130–5
(March 1989)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004–0051
Expires: October 31, 1991

ACTUAL GRAZING USE REPORT

Returned 11/[illegible]/91

Dear Sir: WES COOK

In accordance with the terms and conditions of the permit or lease which authorizes your grazing use, please complete this form and return to the Resource Area Office within 15 days after completing your authorized grazing use (43 CFR 4130.6–2(d)). This information, along with other studies data, is needed to evaluate the effectiveness of present management. Use a separate line for every day that you either turn livestock in or take livestock out of an allotment or pasture. Your cooperation in providing accurate information will be appreciated.

Allotment: TULEDAD Sheep

ACTUAL GRAZING USE				FOR BLM USE ONLY				
				CALCULATION OF AUM'S GRAZING USE				
PASTURE	DATE (Mo. Day Yr.)	NUMBER AND KIND OR CLASS OF LIVESTOCK		NO. AND KIND OF LIVESTOCK	GRAZING PERIOD		% PL USE	AUM'S
		TURNED IN	TAKEN OUT		BEGIN	END		
~~Buledad~~	3/26/91	2000		2000 S	3/26/91	4/13/91	100	350
	4/13/91		1000	1000 S	4/14/91	5/06/91	100	151
	5/6	1000		2000 S	5/07/91	5/25/91	100	350
	5/25	1000		3000 S	5/26/91	6/30/91	100	710
	6/30		1000	2000 S	7/01/91	7/05/91	100	105
	7/8		1000	1000 S	7/09/91	7/31/91	100	151
	7/31		1000		Schedule #3		active	1017
	9/25	2600					preference	1414
	10/17		1600	2600 S	9/25/91	10/17/91	100	393
	10/20		1000	1000 S	10/18/91	10/24/91	100	46
					schedule #3		active	356
Cattle				145 C/C	use		preference	1414
North Pasture	4/16	78		105 C	4/16/91	4/17/91	96%	7
	4/17	82		191 C	4/18/91	9/05/91	96%	850
	9/5		91	100 C	9/06/91	9/30/91	96%	79
	9/31		100		Schedule #1		actual	936
				23	pasture		preference	4006

I CERTIFY That this is a complete and accurate report of my grazing use on GAPS 11-26-91 TJM

Signature of Permittee Lessee: Wesley Cook Date: 11/5/91

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on reverse) FEE CREDIT ON REVERSE.

Form 4130–5
(March 1989)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

ACTUAL GRAZING USE REPORT

RECEIVED
OCT 26 1992
of Land Management
ville, CA 96104

FORM APPROVED
OMB NO. 1004–0051
Expires: October 31, 1991

042615 sch. 1

Dear Sir: Wes Cook

In accordance with the terms and conditions of the permit or lease which authorizes grazing use, please complete this form and return to the Resource Area Office within 15 days after completing your authorized grazing use (43 CFR 4130.6–2(d)). This information, along with other studies data, is needed to evaluate the effectiveness of present management. Use a separate line for every day that you either turn livestock in or take livestock out of an allotment or pasture. Your cooperation in providing accurate information will be appreciated.

Allotment Tuledad 042615 (cattle)

ACTUAL GRAZING USE				FOR BLM USE ONLY				
				CALCULATION OF AUM'S GRAZING USE				
PASTURE	DATE (Mo. Day Yr.)	NUMBER AND KIND OR CLASS OF LIVESTOCK		NO. AND KIND OF LIVESTOCK	GRAZING PERIOD		% PL USE	AUM'S
		TURNED IN	TAKEN OUT		BEGIN	END		
Sand Pasture	4/15/92	150 C		150C	4/15	9/15	9/0	729
South Pasture	7/9/92		150 C	NORTH P: 327 (cattle)			SOUTH P:	407 Cattle
North Pasture	7/9/92	150 C			1792	ANNUAL	USE:	3102
North Pasture	9/15/92		150 C		ACTIVE	PREFERENCE:		5400
Sage Tuledad	3/24/92	1000				9/0	USE:	57%
	3/28/92	2000						
	4/12/92		1000	1000S	3/24	3/27	100	26 N
	5/3/92	500		3000S	3/28	4/11	100	296 N
	5/27/92	1000		2000S	4/12	5/6	100	327 S
	6/16/92		1000	2500S	5/7	5/26	100	329 S
	7/1/92		2000	3500S	5/27	6/15	100	460 S
	8/2/92		500	2500S	6/16	6/30		247 N
	9/1/92	1000		500S	7/1	8/2		108 N
	10/1/92	2000		1000S	7/1	7/30		197 N
	10/16/92		1000	3000S	10/1	10/15	100	296 N
	10/23/92		2000	2000S	10/16	10/23	100	165 N
				[illegible]	7/92	10/27/92	61	2393

I CERTIFY That this is a complete and accurate report of my grazing use.

Signature of Permittee/Leassee Wesley Cook Date 10/25/92

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

Continued on reverse

Remarks (Include other information such as death losses, disease, and unauthorized use by strays.)

TURNED OUT HEIFERS LOOSE IN EXPRESS CANYON. WE TYED TO HOLD THEM LOW AT FIRST AND LET THEM DRIFT HIGHER LATER. ACCORDING TO THE NEW INTRIM PLAN. WE HAD SOME TROUBLE HOLDING THE YEARLING CATTLE LOW UNTIL MAY, HOWEVER WITH OUR CAMP MANS EFFORTS (BRUCE) I THINK WE WERE 90% EFFECTIVE. WE GOT INTO COTTONWOOD ON TIME. THERE WAS A LITTLE DRIFT INTO THERE EARLIER, BUT VERY SMALL.
WE STARTED PUTTING CATTLE INTO THE NORTH PASTURE ON 7-6 AND PRETTY MUCH FINISHED UP ON 7-12. A FEW WERE MISSED AND WE FLEW THEN BRUCE FINISHED UP.

BY MID AUGUST CATTLE WERE SHOWING UP AT THE BARE RANCH IN SMALL NUMBERS. AND BY THE END OF AUGUST WE WERE PRETTY WELL GATHERED. THE NORMAL TAIL ENDERS WERE GATHERED BY MID TO LATE SEPTEMBER. NO CATTLE WERE ALLOWED IN THE WIRE CAVE, BUD BROWN AREAS, HOWEVER HORSE AND DEER USE THERE WAS PRETTY HEAVY. DUE TO A LACK OF FLEXIBILITY IT WAS DIFFICULT TO REALLY SCATTER THE CATTLE ON SUCH A DRY YEAR. HAD WE BEEN ABLE TO THE RIPARIAN AREAS WOULD HAVE LOOKED BETTER. HORSE USE ON THESE AREAS IS HEAVY AND CONSTANT.

THE GAIN ON OUR HEIFERS WAS AROUND 30 LBS LESS THAN LAST YEAR. I FEEL AS THOUGH THE NEW INTRIM PLAN IS PART OF THE REASON FOR THIS AS IT RESTRICTED OUR MOVEMENT AND LIMITED OUR OPTIONS.

Form 4130–5
(March 1989)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED
NOV 1 1992

FORM APPROVED
OMB NO. 1004–0051
Expires: October 31, 1991

ACTUAL GRAZING USE REPORT

Dear Sir:

In accordance with the terms and conditions of the permit or lease which authorizes your grazing use, please complete this form and return to the Resource Area Office within 15 days after completing your authorized grazing use (43 CFR 4130.6–2(d)). This information, along with other studies data, is needed to evaluate the effectiveness of present management. Use a separate line for every day that you either turn livestock in or take livestock out of an allotment or pasture. Your cooperation in providing accurate information will be appreciated.

Allotment: TULEDAD

ACTUAL GRAZING USE				FOR BLM USE ONLY				
				CALCULATION OF AUM'S GRAZING USE				
PASTURE	DATE (Mo., Day, Yr.)	NUMBER AND KIND OR CLASS OF LIVESTOCK		NO. AND KIND OF LIVESTOCK	GRAZING PERIOD		% PL USE	AUM'S
		TURNED IN	TAKEN OUT		BEGIN	END		
SOUTH	4-15-92	572		572	4/15	7/9	91	1472
				572	7/10	8/9	91	931
NORTH	8-16-92		35	537	8/10	9/16	91	112
	8-17-92		63	474	8/17	9/22	91	199
	8-31-92		284	190	8/31	9/1	91	11
	9-2-92		123	67	9/2	9/9	91	16
	9-10-92		47	20	9/10	9/23	91	8
	9-23-92		192		1472 Actual Use =			1472
			(1 strait)	North Pasture = 57 AUMs				
				South Pasture = 1472 AUMs				
Actual Pasture 2-5-								

I CERTIFY That this is a complete and accurate report of my grazing use.

Signature of Permittee/Lessee: Gary Dalton

Date: 11-19-92

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Form 4130–5
(March 1989)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004–0051
Expires: October 31, 1991

042641 sch. 1

ACTUAL GRAZING USE REPORT

Dear Sir: Lazy SJ Ranch c/o Wayne Dollarhide

In accordance with the terms and conditions of the permit or lease which authorizes your grazing use, please complete this form and return to the Resource Area Office within 15 days after completing your authorized grazing use (43 CFR 4130.6–2(d)). This information, along with other studies data, is needed to evaluate the effectiveness of present management. Use a separate line for every day that you either turn livestock in or take livestock out of an allotment or pasture. Your cooperation in providing accurate information will be appreciated.

Allotment Tuledad 0802

ACTUAL GRAZING USE				FOR BLM USE ONLY				
				CALCULATION OF AUM'S GRAZING USE				
PASTURE	DATE (Mo. Day Yr.)	NUMBER AND KIND OR CLASS OF LIVESTOCK		NO. AND KIND OF LIVE STOCK	GRAZING PERIOD		% PL USE	AUM'S
		TURNED IN	TAKEN OUT		BEGIN	END		
South	4-23-92	92		[illegible]	4/2[illegible]	5/6	[illegible]	40
South	5-7-92	53		140[illegible]	[illegible]7	[illegible]	[illegible]	41
South	5-16-92	9		13[illegible]	[illegible]16	5/2[illegible]	1	[illegible]
South	6-3-92	9		10[illegible]	[illegible]1	[illegible]11[illegible]	[illegible]	[illegible]18
South	7-8-92		161	[illegible]				
North	7-8-92	161			[illegible]16	[illegible]	[illegible]	671
North	9-12-92		161		[illegible]	[illegible]	[illegible]	[illegible]
								[illegible]
				[illegible]	[illegible]	[illegible]		[illegible]
				[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	10/13/92	TRN	81					

I CERTIFY That this is a complete and accurate report of my grazing use

Signature of Permittee/Leassee: Wayne C. Dollarhide

Date: 9-29-92

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on reverse)

Form 4130-5
(May 1992)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0051
Expires: March 31, 1995

ACTUAL GRAZING USE REPORT

North Fork Ranch Co.
042644 sch. 2 - 802

Dear Sir: Bill Hollandsworth

In accordance with the terms and conditions of the permit or lease which authorizes your grazing use, please complete this form and return to the Resource Area Office within 15 days after completing your authorized grazing use (43 CFR 4130.6–2(d)). This information, along with other studies data, is needed to evaluate the effectiveness of present management. Use a separate line for every day that you either turn livestock in or take livestock out of an allotment or pasture. Your cooperation in providing accurate information will be appreciated.

Allotment: Tuledad Allotment

ACTUAL GRAZING USE				FOR BLM USE ONLY				
				CALCULATION OF AUM'S GRAZING USE				
PASTURE	DATE (Mo., Day, Yr.)	NUMBER AND KIND OR CLASS OF LIVESTOCK		NO. AND KIND OF LIVESTOCK	GRAZING PERIOD		% PL USE	AUM'S
		TURNED IN	TAKEN OUT		BEGIN	END		
LOWER EXPRESS	4-21-93	46		46	4/21	5/5	91	21
BOKU LAKE GARDEN LAKE	5-6-93	437		485	5/6	5/26	91	305
UPPER EXPRESS	5-27-93	90		575	5/27	7/15	91	860
		527 total	2	S. Pasture actual use :				1136
				575	7/14	9/29	91	1507
				103	~~9~~ 9/30	10/1	91	6
Windy + BOOTLAKE LOWER TULEDAD	9-29-93		472	63	10/2	10/31	91	57
LOWER TULEDAD	10-1-93		40 1	N. Pasture actual use				1370
			63?					~~2750~~
				Total 1493 actual use :				2556
					Total active pref. :			2958
								86%
ON CHBS 10/25								

I CERTIFY That this is a complete and accurate report of my grazing use.

Signature of Permittee/Lessee: Lee Hollandsworth

Date: 10-15-93

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on reverse)

Form 4130-5
(May 1992)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0051
Expires: March 31, 1995

042615 sch. 3 - 802

ACTUAL GRAZING USE REPORT

Dear Sir: Wes Cook

In accordance with the terms and conditions of the permit or lease which authorizes your grazing use, please complete this form and return to the Resource Area Office within 15 days after completing your authorized grazing use (43 CFR 4130.6–2(d)). This information, along with other studies data, is needed to evaluate the effectiveness of present management. Use a separate line for every day that you either turn livestock in or take livestock out of an allotment or pasture. Your cooperation in providing accurate information will be appreciated.

Allotment: Tuledad Allotment (sheep)

ACTUAL GRAZING USE				FOR BLM USE ONLY				
				CALCULATION OF AUM'S GRAZING USE				
PASTURE	DATE (Mo., Day, Yr.)	NUMBER AND KIND OR CLASS OF LIVESTOCK		NO. AND KIND OF LIVESTOCK	GRAZING PERIOD		% PL USE	AUM'S
		TURNED IN	TAKEN OUT		BEGIN	END		
[illegible]	[illegible]	[illegible]		1000 S	3/25	5/26	100	414
[illegible]	[illegible]	[illegible]		850 S	5/27	7/1	100	201
[illegible]	[illegible]		[illegible]	1000 S	9/12	10/24	100	283
[illegible]	5/27	[illegible]		north pasture actual				898
[illegible]	7/1		850					
[illegible]	7/12		1700	2000 S	5/27	4/12	100	224
[illegible]	8/26		450	1000 S	4/13	5/26	100	289
[illegible]	9/27	[illegible]		2150 S	5/27	7/14	100	693
South Unit	7/15	1650		450 S	7/15	8/15	100	95
[illegible]	8/15		1650	1650 S	10/1	10/10	100	109
[illegible]	[illegible]		[illegible]	south pasture actual				1410
				1993 total actual				2308
					active preference			2429
					% use '93:			95%

I CERTIFY That this is a complete and accurate report of my grazing use.

Signature of Permittee/Leassee: [signature] Date: 10/4/93

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on reverse)

Form 4130-5
(May 1992)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0051
Expires: March 31, 1995

ACTUAL GRAZING USE REPORT

Lazy SJ Ranch
042641 sch. 1 - 802

...agement
LA 5104

Dear Sir: Lavelle Dollarhide

In accordance with the terms and conditions of the permit or lease which authorizes your grazing use, please complete this form and return to the Resource Area Office within 15 days after completing your authorized grazing use (43 CFR 4130.6–2(d)). This information, along with other studies data, is needed to evaluate the effectiveness of present management. Use a separate line for every day that you either turn livestock in or take livestock out of an allotment or pasture. Your cooperation in providing accurate information will be appreciated.

Allotment: Tuledad Allotment

ACTUAL GRAZING USE				FOR BLM USE ONLY — CALCULATION OF AUM'S GRAZING USE				
PASTURE	DATE (Mo., Day, Yr.)	NUMBER AND KIND OR CLASS OF LIVESTOCK		NO. AND KIND OF LIVESTOCK	GRAZING PERIOD		% PL USE	AUM'S
		TURNED IN	TAKEN OUT		BEGIN	END		
2 S. Pasture	5-17-93	112		112	5/17	5/18	95	
	5-18-93	6		~~130~~ 130	5/18	8/31	95	
				114	9/1	9/07	95	
	8-31-93		16					
				112	5/17	5/17	95	3
	9-27		114	130	5/18	7/15	95	240
			2	S. Pasture actual use:				243
				130	7/16	8/31	95	191
				114	9/1	9/27	95	96
			1	N. Pasture actual use:				287
				Total 1993 actual use:				530
						active preference		EC2
DNGABS 10/25								

I CERTIFY That this is a complete and accurate report of my grazing use.

Signature of Permittee/Leassee: Lavelle Dollarhide — Date: 10-20-93

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on reverse)

Form 4130-5
(May 1992)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIV

FORM APPROVED
OMB NO. 1004-0051
Expires: March 31, 1995

042615 sch. 1 - 802

ACTUAL GRAZING USE REPORT

Dear Sir: Wes Cook

In accordance with the terms and conditions of the permit or lease which authorizes your grazing use, please complete this form and return to the Resource Area Office within 15 days after completing your authorized grazing use (43 CFR 4130.6–2(d)). This information, along with other studies data, is needed to evaluate the effectiveness of present management. Use a separate line for every day that you either turn livestock in or take livestock out of an allotment or pasture. Your cooperation in providing accurate information will be appreciated.

Allotment: Tuledad Allotment (cattle)

ACTUAL GRAZING USE				FOR BLM USE ONLY — CALCULATION OF AUM'S GRAZING USE				
PASTURE	DATE (Mo., Day, Yr.)	NUMBER AND KIND OR CLASS OF LIVESTOCK		NO. AND KIND OF LIVESTOCK	GRAZING PERIOD		% PL USE	AUM'S
		TURNED IN	TAKEN OUT		BEGIN	END		
[illegible]	4/15/93	75		95 c	4/16	4/19	96	12
" "	4/20 [illegible]	[illegible]		150 c	4/20	7/12	96	398
[illegible]	7/12/93		120	south pasture actual				410
[illegible]	7/13/93	140						
[illegible]	9/16		47	150 c	7/13	9/15	96	308
" "	9/22		25	103 c	9/16	9/30	96	49
				north pasture actual				357
				1993 total actual:				676
				active preference:				3194
					% use '93:			21%

I CERTIFY That this is a complete and accurate report of my grazing use.

Signature of Permittee/Leassee [signature] Date [illegible]

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(Continued on reverse)

Form 4130-5
(May 1992)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Returned 12/19/94

FORM APPROVED
OMB NO. 1004-0051
Expires: March 31, 1995

ACTUAL GRAZING USE REPORT

Dear Sir:

In accordance with the terms and conditions of the permit or lease which authorizes your grazing use, please complete this form and return to the Surprise Resource Area Office within 15 days after completing your authorized grazing use (43 CFR 4130.6–2(d)). This information, along with other studies data, is needed to evaluate the effectiveness of present management. Use a separate line for every day that you either turn livestock in or take livestock out of an allotment or pasture. Your cooperation in providing accurate information will be appreciated.

Allotment Toledo Cattle

ACTUAL GRAZING USE				FOR BLM USE ONLY				
				CALCULATION OF AUM'S GRAZING USE				
PASTURE	DATE (Mo., Day, Yr.)	NUMBER AND KIND OR CLASS OF LIVESTOCK		NO. AND KIND OF LIVESTOCK	GRAZING PERIOD		% PL USE	AUM'S
		TURNED IN	TAKEN OUT		BEGIN	END		
North	4/19	[illegible]		155c	4/19	4/2[illegible]	[illegible]%	[illegible]
[illegible]	4/24	95		25[illegible]	4/24	4/2[illegible]	[illegible]%	[illegible]
North	4/29	41		[illegible]	[illegible]	7/7	[illegible]%	[illegible]
					North	[illegible]	[illegible]	[illegible]
North	7/7		55					
Moved To	South	Pasture	[illegible] - 7/12					
				236	7/8	[illegible]	[illegible]%	
South	[illegible]/29		54	18[illegible]	7/30	[illegible]	[illegible]%	[illegible]
South	8/21		110	72	8/2[illegible]	[illegible]	[illegible]%	[illegible]
South	[illegible]/2[illegible]		30		South Pasture			
North [illegible]								
				1994	ACTUAL	USE	:	
				Active	[illegible]	[illegible]	[illegible]	3194
[illegible]	[illegible]	Ap[illegible]	[illegible] 7/5-7/21		[illegible]/2	[illegible]	1994 :	
[illegible]	North [illegible]	[illegible]	[illegible]	)				
				[illegible]	[illegible]	[illegible]	[illegible]	

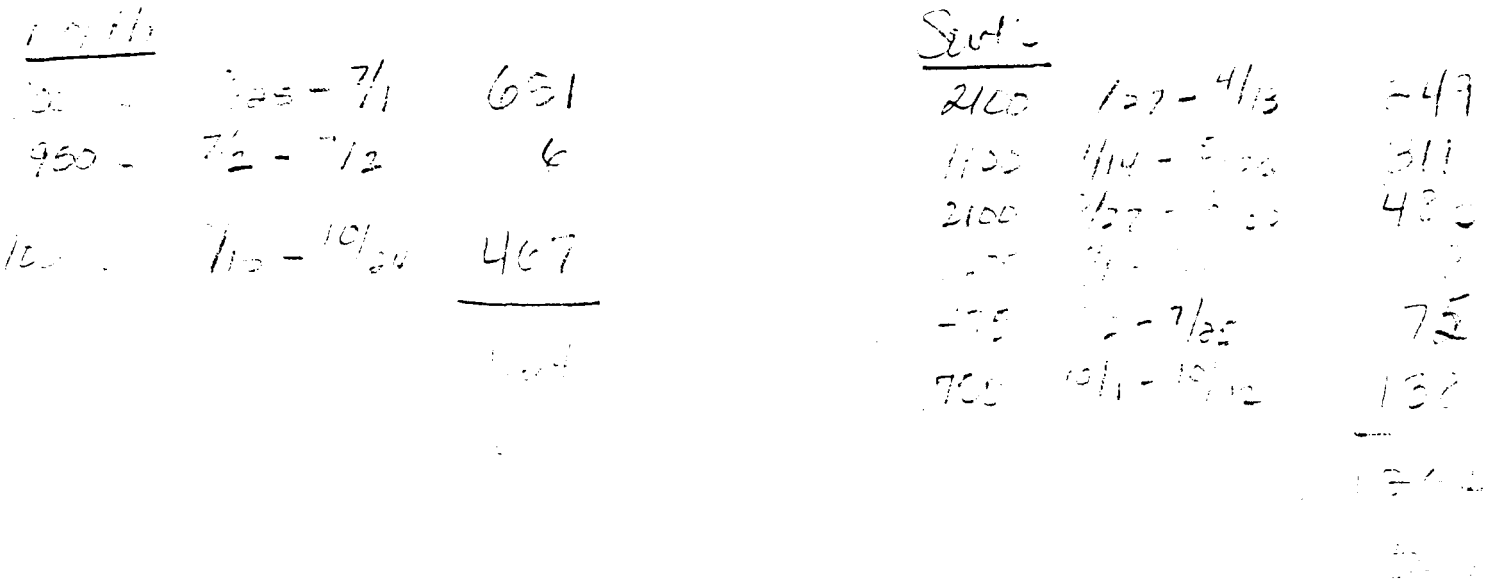
I CERTIFY That this is a complete and accurate report of my grazing use.

Signature of Permittee/Leassee [signature] Date 11/25/94

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on reverse)

Remarks *(Include other information such as death losses, disease, and unauthorized use by strays.)*



The Paperwork Reduction Act of 1980 (44 U.S.C. 3501, et seq.) requires us to inform you that:

This information is being collected to gather and document the actual amount of livestock grazing use on the public lands.

This information will be used to calculate your billing and to help evaluate the effectiveness of management actions in meeting resource management objectives.

Response to this request is mandatory under 43 CFR 4130.6–2(d).

*U.S. GPO: 1992-673-017/47032

Form 4130-5
(May 1992)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Returned 12/19/94

FORM APPROVED
OMB NO. 1004-0051
Expires: March 31, 1995

ACTUAL GRAZING USE REPORT

Dear Sir:

In accordance with the terms and conditions of the permit or lease which authorizes your grazing use, please complete this form and return to the Surprise Resource Area Office within 15 days after completing your authorized grazing use (43 CFR 4130.6–2(d)). This information, along with other studies data, is needed to evaluate the effectiveness of present management. Use a separate line for every day that you either turn livestock in or take livestock out of an allotment or pasture. Your cooperation in providing accurate information will be appreciated.

Allotment: Tuledad — SHEEP

ACTUAL GRAZING USE				FOR BLM USE ONLY — CALCULATION OF AUM'S GRAZING USE				
PASTURE	DATE (Mo., Day, Yr.)	NUMBER AND KIND OR CLASS OF LIVESTOCK — TURNED IN	TAKEN OUT	NO. AND KIND OF LIVE-STOCK	GRAZING PERIOD — BEGIN	END	% PL USE	AUM'S
South	3/25	1000		1000	3/25	[illegible]	100	
"	3/27	2100		2100	3/27	4/26		
"	4/?		1000	[illegible]	5/31	6/30		
"	5/20	1000		[illegible]	7/1	7/1		
[illegible]	6/30		825	1425	7/2	7/2		
"	7/1		850	[illegible]	7/3	7/25		
"	7/2		950	(75 [illegible]	Both [illegible]			
"	7/25		201					
North	8/15	1000		[illegible]	[illegible]	[illegible]		
Both	10/1	2250		[illegible]	10/1	[illegible]		
South	[illegible]		1750	[illegible]	10/13	[illegible]		
North	10/24		1000		Actual	[illegible]	[illegible]	[illegible]
[illegible]				Active [illegible]				
[illegible]	[illegible]	North Pasture [illegible]			[illegible] Active		[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]					
[illegible]	[illegible]	[illegible]	Tule[illegible]	[illegible], North [illegible]			[illegible]	[illegible]
In [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	and [illegible]	[illegible]	[illegible]	[illegible]

I CERTIFY That this is a complete and accurate report of my grazing use.

Signature of Permittee/Leassee: [signature]

Date: 11/25/94

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on reverse)

Form 4130-5
(May 1992)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0051
Expires: March 31, 1995

42641 -SH 1

ACTUAL GRAZING USE REPORT

Dear Sir:

In accordance with the terms and conditions of the permit or lease which authorizes your grazing use, please complete this form and return to the Surprise Resource Area Office within 15 days after completing your authorized grazing use (43 CFR 4130.6–2(d)). This information, along with other studies data, is needed to evaluate the effectiveness of present management. Use a separate line for every day that you either turn livestock in or take livestock out of an allotment or pasture. Your cooperation in providing accurate information will be appreciated.

Allotment: Tuledad SH2

ACTUAL GRAZING USE				FOR BLM USE ONLY — CALCULATION OF AUM'S GRAZING USE				
PASTURE	DATE (Mo., Day, Yr.)	NUMBER AND KIND OR CLASS OF LIVESTOCK		NO. AND KIND OF LIVESTOCK	GRAZING PERIOD		% PL USE	AUM'S
		TURNED IN	TAKEN OUT		BEGIN	END		
Ball Mt. North	4-23-94	48		48 C	4/23	5/22	95	45
Duck Lake	5-23-94	112		160 C	5/23	7/5	95	220
					NORTH PASTURE			265
	7-8-94		2					
	8-22 94		7	160 C	7/6	7/8	95	15
	8-26 94		14	158 C	7/9	8/22		202
	9-16 94		3	151 C	8/23	8/26		19
	9-23 94		48	137 C	8/27	9/16		70
	9-24-94		82	134 C	9/17	9/23		29
	10-3 94		1	86 C	9/24	9/24		3
	10-6 94		2	4 C	9/25	10/9		2
	10 9-94		2	3 C	10/4	10/6		1
				1 C	10/7	10/9		
					SOUTH PASTURE			38
				TOTAL ACTUAL USE 1994:				345
BILL #	60026411			ACTIVE PREFERENCE				802
On CATTLE	10/19/94	TDV		% USE 1994:				90%

I CERTIFY That this is a complete and accurate report of my grazing use.

Signature of Permittee/Leassee: Randle Hollandsworth Lazy S J Ranch Inc — Date: 10-11-94

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on reverse)

Form 4130-5
(May 1992)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED
OCT 12 199..

FORM APPROVED
OMB NO. 1004-0051
Expires: March 31, 1995

42644 sh 2

ACTUAL GRAZING USE REPORT

Dear Sir:

In accordance with the terms and conditions of the permit or lease which authorizes your grazing use, please complete this form and return to the Surprise Resource Area Office within 15 days after completing your authorized grazing use (43 CFR 4130.6–2(d)). This information, along with other studies data, is needed to evaluate the effectiveness of present management. Use a separate line for every day that you either turn livestock in or take livestock out of an allotment or pasture. Your cooperation in providing accurate information will be appreciated.

Allotment: Tuledad 502

ACTUAL GRAZING USE				FOR BLM USE ONLY — CALCULATION OF AUM'S GRAZING USE				
PASTURE	DATE (Mo., Day, Yr.)	NUMBER AND KIND OR CLASS OF LIVESTOCK		NO. AND KIND OF LIVESTOCK	GRAZING PERIOD		% PL USE	AUM'S
		TURNED IN	TAKEN OUT		BEGIN	END		
	4-15-94	201		201 Y	4/15	4/15	91	6
	4-16-94	371		572 Y	4/16	7/5	91	1382
		572		55% NORTH PASTURE:				1392
	7-26-94		29					
	8-1-94		29	572	7/6	7/26	91	354
	8-24-94		190	543	7/27	8/1	91	97
	9-22-94		249	514	8/2	8/24	91	354
	10-1-94		34	324	8/25	9/23	91	291
			531	75	9/24	10/1	91	18
			+ 3	dead 45%	SOUTH PASTURE:			1119
			534					
			38?					
				TOTAL	1994	ACTUAL USE		2511
				ACTIVE	PREFERENCE			2958
					% USE	1994		85%
BILL #	6004264420							
DR. GRASS	10/19/94	TDN						

I CERTIFY That this is a complete and accurate report of my grazing use.

Signature of Permittee/Lessee: Bill K. Kennett Date: 10-10-94

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(Continued on reverse)

APPENDIX 7

CONDITION AND TREND MONITORING

BUCKHORN AND COPPERSMITH

HERD MANAGEMENT AREAS

RANGE SITE NAME	GRASS/SEDGE	FORBS	SHRUBS	%	ACRES
BUCKHORN \ COPPERSMITH HERD AREAS - WINTER USE AREAS.					
II. FOOTHILL AREAS (ELEVATION 4500' TO 5500')				**10**	**17,313**
These vegetative communities proved for approximately 25% of the wild horse AUMs. The average season of use is December 1 to February 28.					
Loamy Bottom 8-12	Basin wildrye blurgrass	lupine poverty weed	Basin big sagebrush rubber rabbitbrush	1	2,211
Loamy 8-10	needlegrass ricegrass squireltail Basin wildrye	lupine phlox eriogonum	Wyoming big sagebrush spiny hopsage rabbitbrush Basin big sagebrush	9	15,102
.II. VALLEY SLOPES (ELEVATION 4500' TO 5000')				**3**	**3,161**
These vegetative communities provide approximately 10% of the annual livestock AUMs. The average season of use is from April 15 to April 30 and September 15 to October 15.					
Loamy 5-8	Indian ricegrass squireltail	annuals	shadescale bud sagebrush spiny hopsage	T	47
Dune 8-10	needle and thread Basin wildrye Indian ricegrass	penstomen scurfpea	Basin big sagebrush spiny hopsage greasewood	1	288
Dry Floodplain 8-10	Basin wildrye salt grass bluegrass	poverty weed thelypody	Basin big sagebrush rubber rabbitbrush greasewood	2	2,826
IV. BOTTOM LANDS (ELEVATION 3500' TO 4500')				**7**	**10,985**
These vegetative communities provide approximately 5% of the annual livestock AUMs. The average season of use is from April 15 to April 30 and September 15 to October 15.					
Saline Bottom 6-10 Sodic Flat 6-8	Basin wildrye saltgrass squireltail	poverty weed	greasewood shadscale rabbitbrush	7	10,985
ALLOTMENT TOTALS ---- * Acres include total of federal and private.				**100**	**162,427**

Table 1 - Range sites and major vegetative communities in the Tuledad Allotment.

RANGE SITE NAME	GRASS/SEDGE	FORBS	SHRUBS	%	ACRES
BUCHHORN / COPPERSMITH HERD AREAS - SPRING, SUMMER AND FALL USE AREAS.					
I. UPLAND AREAS (ELEVATION 5500' TO 7000')				80	30,958
These vegetative communities provide approximately 70% of the wild horse AUMs. The season of use ranges from March 15 to November 30.					
**Well Drianed Fan 12-14 **Stoney Loam 12-14	Blue Bunch Wheatgrass Idaho Fescue Thurbers needlegrass carex	Lupine Hawksbeard Balsamroot Phlox	mountian sagebrush	2	3,584
*Loamy 14-16	Idaho Fescue Thurber Needlegrass Blue Bunch Wheatgrass Basin Wildrye bluegrass carex	Balsamroot Hawksbeard Lupine phlox	mountian sagebrush bitterbrush snowberry serviceberry	25	41,180
*Loamy 10-12	Bluebunch wheatgrass needlegrass Basin wildrye	Lupine phlox eriogonum	Wyoming big sagebrush bitterbrush rabbitbrush	2	3,268
Clay Basin 12-14	Nevada bluegrass creeping wildrye mat muhly	poverty weed evening primrose dock	silver sagebrush rabbitbrush greasewood	T	271
Clay Pan 14-16 Scabland 10-14	Idaho fescue bluegrass needlegrass	Balsmroot aster Lupine clover	low sagebrush serviceberry rabbitbrush	32	52,760
Wet Clay Basin	mat muhly sedge rush	poverty weed evening primrose dock	silver sagebrush	2	3,669
Churning Clay	squirretail bluegrass needlegrass	erigonum lupine phlox	rubber rabitbrush low sagebrush	3	5,318
Loamy 16+	Mountian brome needlegrass Idaho fescue bluegrass	larkspur balsmroot hawksberd wyethia	mountian sagebrush snowberry	1	1,217
Dry Meadow	Nevada bluegrass perennial grasses carex	yarrow wild iris dandelion clover buttercup	willow rose silver sagebrush big sagebrush	T	752

April, 1987
Evaluation
K. Cooper

ALLOTMENT: TULEDAD PASTURE: SOUTH EVALUATION PERIOD: 1980 to 1986

KEY AREA TRANSECT #	Estimate/Measured ECOLOGICAL STATUS	OBJECTIVES BY KEY AREA	KEY SPECIES	UTILIZATION Horses, CATTLE, Sheep	CLIMATIC FACTORS	TREND CHANGE	OTHER CHANGES	STATISTIC RESULTS	COMMENTS
51828 Reservoir End Plot 82 vs 86	"Estimate" Mid Seral NV23-17 Stoney Claypan	Total Cover ↑ 6yrs Basal Cover Perennial Grass ↑ 12yrs	Stth2	80 Light Late 81 Light Late 82* Light Season 83 Slight Late 84 Light Early 85 Light Late 86* Light Early	Ppt ↑ Ppt ↓ Ppt → Ppt → Ppt ↑ Ppt ↓ Ppt ↑	Total Cover ↑ 15.8 - 21.5 Perennial Grass Cover ↑ 2.8 to 3.5 Perennial Grass Freq. →↑	Ltr Cover ↑ 9.8 to 10.8 Arar Cover ↑ 6.6 to 12.5	ANOVA Gross Cover N.S. Gross Freq. N.S.	Trend on this site is stable. Most measured changes were not significant. Site appears to be impacted by grazing animals very little.
51828 Churning Clay Trend Plot D	"Estimate" Mid Seral NV23-1 Churning Clay	Total Cover ↑ 6yrs Basal Cover Perennial Grass ↑ 12yrs	Sihy Feld	80 Moderate Late 81 Moderate Late 82 Moderate Season 83 Moderate Late 84 Heavy Early 85 Moderate Late 86 Moderate Early	Ppt ↑ Ppt ↓ Ppt → Ppt → Ppt ↑ Ppt ↓ Ppt ↑	→		NA	Site has not been Resampled. This site makes up a very small % of South Pasture. Not a good Key Area. Maintain Plot but read only on a 10 year basis

April, 1987
Evaluation
R Cooper

ALLOTMENT: TULEDAD PASTURE: SOUTH EVALUATION PERIOD: 1980 to 1986

KEY AREA TRANSECT #	Estimate/Measured ECOLOGICAL STATUS	OBJECTIVES BY KEY AREA	KEY SPECIES	UTILIZATION Horses, Cattle, Sheep	CLIMATIC FACTORS	TREND CHANGE	OTHER CHANGES	STATISTIC RESULTS (0.1 Level)	COMMENTS
3361721 Cottonwood Burn Trend Plot 81 vs 86	"Estimate" Early Seral NV23-7 Loamy 12"-16"	Total Cover ↑ 6 years Basal Cover Perennial Grass ↑ 12years	Feid Stoc2 Stth2 Elci2	80* - Heavy Late 81 - Heavy Late 82 - Heavy Late 83 - Rest 84 - Rest 85 - Light Late 86* - Moderate Late	Ppt ↑ Ppt ↓ Ppt → Ppt → Ppt ↑ Ppt ↓ Ppt ↑	Total Cover ↑ 37 / 24.1 Perennial Grass Basal Cover ↑ 1.5 / 3.1 Perennial Grass Frequency →	Artr Cover ↑ 0 / 13.5 Artr Frq ↑ 0 / 10 LTTR ↑ 4.3 / 16.9	ANOVA Grass Cover N.S Grass Frq NS LTTR 95% Artr Cover 95% & Frq	Perennial Grass response is slow Feid was adversely affected by heat of wildfire, % cover of Feid has declined. Artr is reoccupying the site. ↑ very obvious change. Early grazing utilization in 80, 81, 82 has resulted in slower response by p. grasses. UPLAND TYPE: UPWARD TREND
5351811 Cook's Cabin Trend Plot 80 vs 86	"Estimate" Mid Seral NV23-17 Stoney Claypan	same as above	Feid Agsp	80* - Light Late 81 - Light Late 82 - Moderate Season 83 - Moderate Late 84 - Light Early 85 - Light Late 86* - Moderate Early	Ppt ↑ Ppt ↓ Ppt → Ppt → Ppt ↑ Ppt ↓ Ppt ↑	Total Cover ↑ 24 / 36 Perennial Grass Basal Cover ↑ 24 / 5.7 Perennial Grass Freq ↓	LTTR Cover ↑ 4.9 to 15.7 Arar 8 Cover ↑ 13.2 to 29.8 Arar Frq ↓ 37 to 29	ANOVA Grass Cover N.S. Grass Frq 95% LTTR N.S. Arar Cover N.S. Arar Frq N.S.	Feid shows a decline in frequency. This is attributed to reading frequency on the upslope line in 1980 and then on the center line in 1986. ↑ This site has changed very little in 6 years. Increase in litter was the obvious visual change.
5351809 Wasted Walk Trend Plot 80 vs 86	"Estimate" Mid Seral (Late Seral Possible) NV23-7 Loamy 12"-16"	Total Cover ↑ 6years Basal Cover Perennial Grass ↑ 12years	Feid Agsp Stth2 Stoc2 Putr2	80* Moderate Late 81 Moderate Late 82 Moderate Season 83 Moderate Late 84 Heavy Early 85 Light Late 86* Moderate Early	Ppt ↑ Ppt ↓ Ppt → Ppt → Ppt ↑ Ppt ↓ Ppt ↑	Total Cover ↑ 33 / 44.5 Perennial Grass Basal Cover ↓ 12.2 / 10.2 Perennial Grass Freq ↑ Browse Cover ↑	LTTR Cover ↓ 38.1 to 32.1 Artr Cover ↑ 14.6 to 24.6	ANOVA Grass Cover N.S. Grass Frq 90% LTTR Cover N.S Browse Cover N.S. Artr Cover N.S.	This site has changed very little in 6 years. Vegetation is impacted by cattle, sheep, deer, wild horses. The lower litter cover corresponds to a difference in measure sites during the late use treatment and the early use treatment. STABLE TREND
5351825 Burnt Lake Trend Plot 80 vs 86	"Estimate" Mid Seral NV23-7 Loamy 12"-16"	Total Cover ↑ 6years Basal Cover Perennial Grass ↑ 12years	Feid Agsp Stth2 Stoc2 Putr2	80* Moderate Late 81 Moderate Late 82 MODERATE Season 83 MODERATE LATE 84 MODERATE Early 85 Heavy Late 86* MODERATE Early	Ppt ↑ Ppt ↓ Ppt → Ppt → Ppt ↑ Ppt ↓ Ppt ↑	Total Cover ↑ 39.4 / 43.2 Perennial Grass Basal Cover ↓ 5.8 / 5.7 Perennial Grass Frq →	LTTR Cover ↓ 37.4 / 33.1 Artr Cover ↑ 15.5 / 22.3 Artr Frq ↓	ANOVA Grass Cover N.S. Grass Frq N.S. LTTR Cover N.S. Artr Cover Frq N.S.	This site has changed very little in 6 years. All measurement changes were non significant The difference in litter cover is for the same reason as identified in 5351809. Site is stable trend
5351826 SOB LAKE Trend Plot 80 vs 86	"Estimate" Mid Seral NV23-7 Loamy 12"-16"	Total Cover ↑ 6years Basal Cover Perennial Grass ↑ 12years	Feid Agsp Stth2	80* MODERATE Late 81 HEAVY Late 82 MODERATE Season 83 MODERATE LATE 84 MODERATE Early 85 MODERATE Late 86* MODERATE Early	Ppt ↑ Ppt ↓ Ppt → Ppt → Ppt ↑ Ppt ↓ Ppt ↑	Total Cover ↓ 35.6 / 30.0 Perennial Grass Basal Cover ↓ 9.1 / 8.8 Perennial Grass Frq →	LTTR Cover ↓ 42.6 / 30.3 Artr Cover ↓ 17.6 / 12.8 Arty Frq ↓ 23 / 16 Standing Dead LTTR ↑ 0 / 5.7	ANOVA Grass Cover N.S. Grass Frq N.S LTTR Cover N.S Artr Cover Frq N.S.	This site is heavily impact by deer, sheep and cattle As with several sites along the Bucktown Rd., Artr and Putr are dying. This corresponds with the slight decrease in total cover STABLE to Down TREND

Evaluation
R. Cooper

ALLOTMENT: TULEDAD PASTURE: NORTH EVALUATION PERIOD: 1960 to 1986 PAGE 1 OF 1

KEY AREA / TRANSECT #	Estimate / Measured ECOLOGICAL STATUS	OBJECTIVES BY KEY AREA	KEY SPECIES	UTILIZATION	CLIMATIC FACTORS	TREND CHANGE	OTHER CHANGES	STATISTIC RESULTS	COMMENTS
5361707 GERLACH 1.16 TREN LOT 82-86	"ESTIMATE" MID SERAL (High End) NV23-17 SIGNEY CLAYPAN	TOTAL COVER ↑ 6yrs. BASAL COVER ↑ 12yrs PERENNIAL GRASS	FEID STTH2 PUTR2	80 Moderate Early 81 Heavy Early 82 LIGHT Rest 83 SLIGHT Early 84 HEAVY Late 85 LIGHT Early 86 Moderate Late	Ppt ↑ Ppt ↓ Ppt → Ppt → Ppt ↑ Ppt ↓ Ppt ↑	Total Cover ↑ 32.3 to 38.4 Perennial Grass Basal Cover 7.9 5.7 ↓ Perennial Grass Freq. ↑	LTTR Cover ↑ 9.8 - 21.1 Arar Cover ↑ 19.7 - 27.5 Arar Freq ↓ 60 - 40	Gross Cover (90%) LTTR Cover NS Gross Freq. N.S. Arar Cover NS Freq 95%	UPWARD TREND ↑ TOTAL Grass Cover is Down, However the decline occurs in POSE; FEID & STTH2 increased at a 90% sig. level. The measurements shows a sig decline in Arar and in POSE. Focal.
5371614 BOOT LAKE TREND PLOT 82-86	"Estimate" MID SERAL NV23-7 Loamy 12"-16"	TOTAL COVER ↑ 6yrs Basal Cover Perennial Grasses ↑ 12yrs	FEID STCC2	80 Moderate Late 81 Moderate Late 82 Light Late 83 Moderate Late 84 Rest 85 Heavy Late 86 Heavy late	Ppt ↑ Ppt ↓ Ppt → Ppt → Ppt ↑ Ppt ↓ Ppt ↑	TOTAL COVER ↓ 39.2 - 35.0 PERENNIAL Grass Basal Cover ↓ Perennial Grass Freq ↓	LTTR Cover ↑ 31.1 - 42 Artv Cover ↑ 22.5 - 23.2 Artv Freq ↓ 1 -	Gross Cover N.S. LTTR Cover N.S. Gross Freq N.S. Artv Cover Freq N.S.	STABLE/DOWN →↓ ALTHOUGH THE DATA ANALYSIS INDICATES N.S. the general trend based on my observations is down. I think most of the trend can be attributed to recent utilization. There were also some plant ID?
5371703 Mahogany Ridge Trend Plot 82-86	"Estimate" MID Seral (High End) NV23-7 Loamy 12"-16"	TOTAL COVER ↑ 6yrs Basal Cover Perennial Grasses ↑ 12yrs	FEID STTH2 STCC2 PUTR2	80 Moderate Early 81 Heavy Early 82 Slight Rest 83 Moderate Early 84 Moderate Late 85 Heavy Early 86 Moderate Late	Ppt ↑ Ppt ↓ Ppt → Ppt → Ppt ↑ Ppt ↓ Ppt ↑	TOTAL COVER ↑ 35 - 43.3 Perennial Gross Basal Cover 8.5 8.1 ↓ Perennial Gross Freq. ↓	LTTR Cover ↑ 38 - 43 Artv Cover ↑ 15 - 18 Artv Freq ↓ 15 - 3	Gross Cover NS Gross Freq 90% LTTR Cover NS Artv Freq Cover NS	STABLE → This site is heavily impacted by cattle, horses, deer and always has. Site has changed very little. The radical change frequency of vegetation puts some doubt in the data. frequencies
71! Wire Lake Trend Plot 82-86	"Estimate" MID Seral NV23-7 Loamy 12"-16"	TOTAL COVER ↑ 6yrs Basal Cover Perennial Grasses ↑ 12yrs	FEID STTH2 STCC2	80 Moderate Early 81 Heavy Early 82 Slight Rest 83 Heavy Early 84 Heavy Late 85 Heavy Early 86 Heavy Late	Ppt ↑ Ppt ↓ Ppt → Ppt → Ppt ↑ Ppt ↓ Ppt ↑	Total Cover ↑ 30.8 - 41.5 Perennial Grass Basal Cover ↓ 5.3 - 4.5 Perennial Grass Freq ↓ 10.5 6.5 PUTR Freq ↓	LTTR Cover ↑ 34.8 - 36 Artv Cover ↑ 10.8 - 16.2 Artv Freq ↓ 10.5 - 3 PUTR2 Cover ↑ 6.3 13.7	Grass Cover NS Grass Freq 95% LTTR Cover (95%) Putr Cover 75% Freq NS Artv Cover NS Freq NS	STABLE/DOWN ↓→ Site is heavily grazed by cattle and horses. Cover indicators are stable to upward while Frequency indicators are radically down. General Appearance is stable or down

APPENDIX 8

DEFINITIONS

DEFINITION

Animal Unit Month (AUM): The amount of forage required to support one cow and one calf or five ewes with lambs for one month.

Base Herd: The reproductive horses returned to a herd management area following a gather. In the Susanville District, this number is the minimum management level.

Herd Integrity: Returning horses for the Base Herd which reflect existing characteristics in the herd that have made it well adapted to its habitat.

Light saddle horse conformation: There are three general types of horse conformation, draft, warmblood, and light. Light horses are the most commonly used horses for recreational riding. They have the least distance around the chest as compared to height, lighter bones, and less muscular structure than either draft or warmblooded horses.

Multiple Use: Management of the public lands and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the American people. Multiple use is making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions. The use of some land for less than all of the resources is a consideration. Combinations of balanced and diverse resource uses take into account the long-term needs of future generations for renewable and nonrenewable resources including, but not limited to recreation, range, timber, minerals, watershed, wildlife and fish, and natural scenic, scientific and historical values. Harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment with consideration being given to the relative values of the resources and not necessarily to the combination of uses that will give the greatest economic return or the greatest unit output.

Red Juice Stage: Refers to antelope bitterbrush seed development. This stage occurs after flowering is completed and a fruit with bright red juice has developed. Red juice stage usually occurs between late June and mid July, depending on elevation and temperature. Ungulate use of antelope bitterbrush commonly increases markedly during this stage.

Riparian Area: An area of land directly influenced by permanent water. It has different physical, soil, and vegetation characteristics than the surrounding uplands reflecting the influence of permanent water. Riparian areas occur as stream side corridors, lake shore margins, and meadows below springs.

Soil Conservation Service (SCS) Site Potential: "The natural plant community of a range site in the absence of abnormal disturbances and physical site deterioration."

Structured Herd Management: Parent stock are selected to be retained in a Base Herd. They are usually five years and over when selected and appear to have the ability to produce offspring that will be highly adoptable. The Base Herd horses remain in the HMA for the extent of their natural lives. Younger horses are selected during gathers as needed to complete the Base Herd and to replace Base Herd horses that have died. Structured herd management was developed by the Susanville District. It is analogous to, but more detailed than, the general BLM policy of selective removal.

Thriving Natural Ecological Balance: Congress, in effect, declared that wild horses be considered as a native wildlife species, and that they be managed to achieve and maintain a balance on the Public Lands. Natural ecological balance is created by nature not by a Congressional Act. The act did not create a natural ecological niche for wild horses. Only in a few cases do wild horses exist in situations approaching a natural ecological niche. In a few herds, mountain lions are keeping wild horse populations in balance with the other resources. In the absence of effective predators, the ecological balance must be achieved by the actions of man. This balance must protect the soil, vegetation and other uses.

Use Area: An area within a pasture in which, due to fencing, elevation, natural boundaries, water distribution, or vegetation type, use patterns are different from adjacent areas. Use areas generally do not have fences or complete boundaries surrounding them; therefore, livestock use cannot be 100% controlled between use areas. However, with appropriate management, the majority of the livestock use within a use area can be controlled.

APPENDIX 5

1992 - 1994 UTILIZATION MONITORING

BUCKHORN AND COPPERSMITH

HERD MANAGEMENT AREAS

USDI – BUREAU OF LAND MANAGEMENT – SURPRISE RESOURCE AREA
RIPARIAN MEADOW UTILIZATION

STUDY SITE	DATE	EXAMINER
Cercocarpus Pit	10/4/93	DiValois

LOCATION

	HEIGHT		TYPE		HEIGHT		TYPE		HEIGHT		TYPE		HEIGHT		TYPE
NO	GR.	UNG.	HIT*	NO	GR.	UNG.	HIT*	NO	GR.	UNG.	HIT*	NO	GR.	UNG.	HIT*
1	0.5		B	26	2.0		G	51	1.5		B	76	1.5		B
2	0.5		F	27	2.0		L	52	1.5		G	77	1.5		B
3	1.5		H	28	1.0		L	53	0.5		L	78	0.5		B
4	2.0		B	29	1.5		G	54	1.5		G	79	1.5		B
5	2.0		B	30			B	55	1.0		G	80	1.0		G
6	2.0		K	31	1.5		L	56	2.0		G	81	1.0		B
7	0.5		B	32	2.5		B	57	1.5		B	82	0.5		G
8	0.5		B	33	1.0		L	58	1.5		B	83	1.0		G
9	2.5		B	34	1.0		B	59	1.0		L	84	1.0		B
10	2.0		B	35			B	60	1.0		G	85	2.0		G
11			B	36	2.5		B	61	2.0		L	86			B
12			B	37			B	62	1.0		B	87			H
13			B	38			B	63	0.5		G	88	1.0		B
14	2.5		G	39	2.0		B	64			B	89	1.0		B
15	3.0		G	40	2.0		G	65	2.0		B	90	1.5		B
16	1.0		G	41	1.5		B	66	1.0		L	91			B
17			H	42	2.0		G	67	1.5		B	92			B
18	2.0		H	43	1.0		G	68	1.5		G	93	2.5		B
19	2.0		L	44			B	69			B	94	1.5		L
20	0.5		B	45	1.0		B	70	1.5		H	95	3.0		B
21	2.0		L	46	1.0		G	71	1.0		B	96	1.0		L
22			B	47	1.5		B	72		10.0	L	97	1.0		L
23	0.5		B	48	2.0		B	73	0.5		G	98			B
24	0.5		H	49	2.0		B	74	1.5		H	99	6.5		B
25	1.5		B	50	1.5		B	75	1.0		B	100		5.0	B

PERCENT GRASS:	21	95	
PERCENT FORBS:	1	5	
PERCENT SHRUBS:	0	0	
PERCENT LITTER:	–	100	NUMBER
PERCENT ROCK:	1		TOT. HEIGHT
PERCENT BARE:	56		AVE. HEIGHT
	100		UTILIZATION

AVERAGE STUBBLE HEIGHT: 1.6

GRASSES		
TOT	GR	UNG
82	80	2
120	150	
1.5	7.5	
78%		

FORBS		
TOT	GR	UNG
1	1	0
	0.5	–
	0.5	–
	–	

UTILIZATION = [1 – (AVE. HEIGHT. GR. / AVE. HEIGHT. UNG.)] X (NUM GR. / TOT. SAMPLED)
AVERAGE STUBBLE HEIGHT = TOTAL STUBBLE HEIGHT / TOTAL NUMBER OF PLANTS SAMPLED

*GRASS/GRASS–LIKE (G), FORB (F), SHRUB/TREE (S), LITTER (L), ROCK (R), BARE (B), WATER (W), MOSS (M), OR HOOF PRINT (H)

NOTES ON REVERSE

Form RIPUTL93.WK1

NOTES:

SOIL SURFACE CONDITION: Heavily, repeatedly, trampled by horses. Thin mucky

ANIMAL SPECIES/TRACES OBSERVED: Wild horses - tracks, manure
Domestic sheep tracks, manure (<1 week old)
One hand trailed through

SURFACE WATER PRESENT/NOT PRESENT? No surface water on transect. Soil is dry and cracked. Nearest water is approximately 10 feet west of center.

SPECIES ENCOUNTERED: All grass-likes encountered on tape with more than 1.0 inch of stubble left are rushes. Grasses are used to within 0.5 inches of the surface throughout the site. Sagebrush is encroaching on the wet areas.

OTHER:

USDI – BUREAU OF LAND MANAGEMENT – SURPRISE RESOURCE AREA
RIPARIAN MEADOW UTILIZATION

STUDY SITE	DATE	EXAMINER
CELE PIT	7/13/93	de Valois

LOCATION 190°S

NO	HEIGHT GR.	HEIGHT UNG.	TYPE HIT*	NO	HEIGHT GR.	HEIGHT UNG.	TYPE HIT*	NO	HEIGHT GR.	HEIGHT UNG.	TYPE HIT*	NO	HEIGHT GR.	HEIGHT UNG.	TYPE HIT*
1		4F	B	26	2		G	51		5	B	76	3		W1"
2	1.5		F	27		1	F	52	3		G	77	5		L
3	1F		B	28	4		G	53		0.5	F	78	2		B
4	1F		B	29	4		G	54		3	F	79	4		B
5	1		F	30		7	B	55	1		G	80	3		B
6	1.5		R	31	2		B	56		3F	W2"	81	3		B
7	0.5		F	32		8	H	57	4.5		W5"	82		9	L
8	6		4	33	1.5		G	58	3		W2"	83	2		G
9	2		G	34		1	F	59	3		G	84	2		B
10		2	F	35	2.5		H	60		2.5	F	85	2		B
11		6	B	36		3F	B	61	2		W1"	86			B
12		7	B	37			G	62	2		G	87		3F	B
13		2F	B	38		3F	B	63		6	G	88	5		B
14		4	G	39		1.5F	B	64		10	H W2"	89	1.5		B
15		5	W3"	40		5	H	65	3		G	90		1.5	G
16		2	G	41		5	L	66		2	F	91	2		
17	1.5		B	42		6	L	67	1		L	92		0.5F	H W2"
18	4		G	43		4	H	68	3		G	93		8	B
19	1		B	44	2		B	69	2		B	94	2		B
20	3		G	45		5	B	70	2		B	95	1.5		B
21	3		G	46	4		B	71	1		B	96		3.5	G
22	3		B	47		6	H	72		11	L	97	3		G
23	4		H	48	4		B	73		10	B	98	3		G
24	3		W1"	49	5		B	74	3		W1"	99	2		W5"
25	2		H W2"	50	5		H	75	4		B	100		4	B

PERCENT GRASS:	23	70
PERCENT FORBS:	10	30
PERCENT SHRUBS:	0	0
PERCENT LITTER:	6	100
PERCENT ROCK:	1	
PERCENT BARE:	60	
	100	

AVE STUBBLE HT 3"

	GRASSES TOT	GR	UNG	FORBS TOT	GR	UNG
NUMBER	78	55	23	20	5	15
TOT. HEIGHT		154.5	138		5	32
AVE. HEIGHT		2.8	6		1	2
UTILIZATION		40%			13%	

CALCULATIONS:

UTILIZATION = [1 – (AVE. GR. HT. / AVE. UNG. HT.)] X (NO. GR. / TOT. SAMPLED)

*GRASS/GRASS–LIKE (G), FORB (F), SHRUB/TREE (S), LITTER (L), ROCK (R), BARE (B), WATER (W), MOSS (M), OR HOOF PRINT (H)

NOTES ON REVERSE

Form RIPUTL93.WK1

NOTES:

SOIL SURFACE CONDITION: EXTREME horse trampling, hummocky. Few rocks

ANIMAL SPECIES/TRACES OBSERVED: Horse tracks and manure. Sheep trailed down the canyon & through the meadow, however horse tracks have obliterated the sheep tracks

SURFACE WATER PRESENT/NOT PRESENT?

Surface water present throughout. All water is present in either old or new hoofprints.

SPECIES ENCOUNTERED: Sedges, carex, monkeyflower, clover ARCA, foxtail barley, Taraxicum, AFF, PPFF, Penstemon, SIHY, Agrostis, JUOR, Yampa. ARCA is increasing. SIHY & other PPFG have blades rarely, most under cover of ARCA. Only one grassed grass hit on transect (others were juncus)

OTHER: Transect is immediately adjacent to Cercocarpus Pit. Horses have been using the meadow all spring (9 here today). Up to 60 total used the area season-long 92.

Meadow is fed by a perennial seep. Has the potential to increase in ground cover and diversity if rested from intermittent trampling.

0.3 mi from junction Bone Creek Road to Road Pit, East to junction, South 0.3 mi. Transect is ~ 300' East of road in a small seep at the base of a hill. If you drive past Cercocarpus Pit you've gone too far.

USDI - BUREAU OF LAND MANAGEMENT - SURPRISE RESOURCE AREA

RIPARIAN MEADOW UTILIZATION

STUDY SITE Ant Spring | DATE 10-01-94 | EXAMINER DeDalais

LOCATION

NO	HEIGHT (IN) GR.	HEIGHT (IN) UNG.	TYPE HIT*	NO	HEIGHT (IN) GR.	HEIGHT (IN) UNG.	TYPE HIT*	NO	HEIGHT (IN) GR.	HEIGHT (IN) UNG.	TYPE HIT*	NO	HEIGHT (IN) GR.	HEIGHT (IN) UNG.	TYPE HIT*
1		2.5 R	B G	26		1 F	F G	51		1 R	M G	76		1.5	M G
2		2.5 R	wH G	27		1 F	F G	52		6	L R	77	1		M G
3	3		wH R	28	2		G R	53		4	G R	78		1 R	B R
4		4	M R	29		1 R	M G	54	1		M R	79	2		B R
5		2 R	wH G	30	3		wH R	55		0.5 F	F G	80	1		G R
6		2 R	wH G	31	2		M R	56		1 R	B R	81		1	B G
7		4 R	wH G	32	3		M R	57		1 R	B R	82	1		M R
8	2		M G	33	1.5		M G	58		5.5	G G	83		2 R	G R
9	2		L R	34	0.5		M G	59		2.5	L G	84		1 R	M G
10		1.5 R	wH G	35		1 R	G G	60	1		G G	85		1 F	F G
11		1 R	G G	36	1		G G	61		2.5 R	wH G	86	2		wH G
12	1.5		B R	37		0.5 R	G G	62	3		G R	87		2	wH R
13		2 R	M G	38	1.5		G G	63		2 R	L G	88		1 F	B F
14		1.5 R	R G	39		1.5 R	~~B~~ L G	64	1.5		M R	89		4	S G
15	1		G G	40		1.5 R	M R	65	1.5		G G	90	1		H R
16		3 R	B R	41		1 F	F G	66		3 R	B R	91		2 R	G G
		1 F	L G	42	3		wH R	67	1		G G	92	3		L G
	2		wH G	43		2.5	B G	68	2		B R	93	2		wH R
19	2		M R	44	1		G G	69		4	wH G	94		1.5 R	wH R
20	1.5		G G	45	4		wH R	70		4.5	wB R	95	1.5		G G
21		2.5 R	wH R	46		2 R	L R	71		3	wB R	96	1		G G
22	2 L		wH R	47	3		wH R	72		3	W G	97	2.5		G R
23		2 R	L G	48	1		G R	73	2		M R	98		1.5 R	L R
24	1		R G	49		2	L G	74		1 R	L G	99		1.5 F	wH G
25		1 R	L G	50	1.5		G G	75		3	G R	100		1 F	wH G

PERCENT GRASS:	24	83
PERCENT FORBS:	5	17
PERCENT SHRUBS:	0	0
PERCENT LITTER/MOSS:	31	100
PERCENT ROCK/WATER:	3	
PERCENT BARE/HOOF:	37	
	100	

AVERAGE STUBBLE HEIGHT: 1.9

	GRASSES TOT	GRASSES GR.	GRASSES UNG.	FORBS TOT	FORBS GR.	FORBS UNG.
NUMBER	92	43	49	8	0	8
TOTAL HEIGHT		77	109		-	8
AVE. HEIGHT		1.8	2.2		-	1
UTILIZATION		9% regrowth			-	

UTILIZATION = [1 - (AVE. HEIGHT GR. / AVE. HEIGHT UNG.)] X (NUM GR. / TOTAL SAMPLED)

AVERAGE STUBBLE HEIGHT = TOTAL STUBBLE HEIGHT / TOTAL NUMBER OF PLANTS SAMPLED

*GRASS AND GRASS-LIKES (G), FORB (F), SHRUB/TREE (S), ROCK (R), BARE (B), WATER (W), MOSS (M), OR HOOFPRINT (H)

NOTES ON REVERSE

form 0994RPUT.wk4

NOTES:

SOIL SURFACE CONDITIONS: Trampled hummocky, area of bare ground
Soil saturated, wetted margin around meadow

ANIMAL SPECIES/TRACES OBSERVED: Horse tracks & manure, very recent
Some cow tracks, few recent, some manure
Frogs, dragonfly, Clarks nutcrackers, many birds, insects.

SURFACE WATER? Present, rapid surface flow. Water in all
hoofprints, up to 5" deep.

PHENOLOGY OF RIPARIAN VEGETATION: Seed dispersal on grasses, sedges, rushes.
Leaves are still growing. Regrowth on all in bare areas. Irrk regrowth

PHENOLOGY OF UPLAND VEGETATION:
Artemisia, Chrysothamnus late bloom to seed set

UTILIZATION CAGE: Clover max 3" - very little in cage, most is
Rushes (coarse) max 24", most 12" covered with watercress.
Carex (coarse) max 23" (w/seed), most 12" Watercress much denser inside
Grass (phleum) max 16" (w/ seed), sparse inside Ground cover 100%
Erect forbs max 7"

OTHER:

Approximately 70% use assuming ~~AGST~~/JUBA 12" potential used to 2"

USDI - BUREAU OF LAND MANAGEMENT - SURPRISE RESOURCE AREA
RIPARIAN MEADOW UTILIZATION

STUDY SITE: Bud Brown | DATE: 10-26-94 | EXAMINER: deValais

LOCATION:

NO	HEIGHT (IN) GR.	HEIGHT (IN) UNG.	TYPE HIT*	NO	HEIGHT (IN) GR.	HEIGHT (IN) UNG.	TYPE HIT*	NO	HEIGHT (IN) GR.	HEIGHT (IN) UNG.	TYPE HIT*	NO	HEIGHT (IN) GR.	HEIGHT (IN) UNG.	TYPE HIT*
1	2		G	26		1	Gre	51	0.5F		Fcd	76	1		W
2		1	Bre	27		2	Wre	52	0.5F		Fcd	77		1	Gre
3	1		H	28		1.5	W	53	0.5F		Fcd	78		1	Wre
4	0.5F		Fcd	29	1F		Fcd	54	0.5F		Fcd	79	0.5F		Fcd
5		1	Wre	30	0.5F		Bcd	55	1F		Wcd	80	1F		Wcd
6	0.5F		WFcd	31	1		G	56	1		B	81	1F		Wcd
7	0.5F		Fcd	32	0.5F		Wcd	57	1F		Wcd	82		1.5	Gre
8	1F		Wwcd	33	0.5F		Fcd	58	0.5F		Fcd	83			W
9	1F		Wcd	34	1		G	59			W	84	0.5F		Wcd
10	0.5F		Wcd	35	0.5F		Wcd	60		1	Wcd	85	0.5F		Fcd
11	0.5		G	36	0.5F		Fcd	61	0.5F		Lcd	86		2	Wre
12		1	Lcd	37	0.5F		Wcd	62	0.5F		Wcd	87	3		W
13	0.5F		Wcd	38	0.5F		Fcd	63	1		G	88	1F		Wcd
14	0.5F		Fcd	39	0.5F		Fcd	64		1.5	L	89	0.5F		Bcd
15	1		W	40			W	65	4		G	90	0.5F		Bcd
16	0.5F		Fcd	41	2F		Bwcd	66		1	Bre	91	0.5F		Fcd
	.5F		Bcd	42	2		G	67			W	92	0.5F		Fcd
	0.5F		Fcd	43	0.5F		Lcd	68	1F		Wcd	93	0.5F		Fcd
19	1F		Fcd	44	0.5F		Fcd	69	1		W	94		1	Gre
20	0.5F		Fcd	45	1F		Wcd	70		3	W	95	0.5F		Wcd
21			W	46	0.5F		Fcd	71			W	96	0.5F		Fcd
22	2		G	47	0.5F		Fcd	72	2		W	97	0.5F		Bcd
23	1		B	48		0.5	Lre	73		1	Bre	98		1	G
24	0.5F		Fcd	49	1F		Bcd	74	0.5F		Fcd	99	1F		Fcd
25		2	Wre	50	0.5F		Wcd	75	1F		Wwcd	100	0.5F		Wcd

PERCENT GRASS:	13	31
PERCENT FORBS:	29	69
PERCENT SHRUBS:	0	0
PERCENT LITTER/MOSS:	5	100
PERCENT ROCK/WATER:	40	
PERCENT BARE/HOOF:	13	
	100	

AVERAGE STUBBLE HEIGHT: 0.9

	GRASSES TOT	GRASSES GR.	GRASSES UNG.	FORBS TOT	FORBS GR.	FORBS UNG.
NUMBER	35	16	19	59	59	0
TOTAL HEIGHT		24.5	25		38.5	—
AVE. HEIGHT		1.5	1.3		0.7	—
UTILIZATION		—			—	

UTILIZATION = [1 - (AVE. HEIGHT GR. / AVE. HEIGHT UNG.)] X (NUM GR. / TOTAL SAMPLED)
AVERAGE STUBBLE HEIGHT = TOTAL STUBBLE HEIGHT / TOTAL NUMBER OF PLANTS SAMPLED

*GRASS AND GRASS-LIKES (G), FORB (F), SHRUB/TREE (S), ROCK (R), BARE (B), WATER (W), MOSS (M), OR HOOFPRINT (H)

NOTES ON REVERSE

form 0994RPUT.wk4

NOTES:

SOIL SURFACE CONDITIONS: Very hummocky. Soil saturated
Vegetation used to the maximum poss. bee amount, repe

ANIMAL SPECIES/TRACES OBSERVED: Horse tracks and manure
Two porcupines and much manure on transect (adult + young)

SURFACE WATER? Present - rapid surface flow along north edge of meadow, standing throughout meadow.

PHENOLOGY OF RIPARIAN VEGETATION: Regrowing

PHENOLOGY OF UPLAND VEGETATION: ~~Regrowing~~ Cured, dormant mostly
(some regrowth on grasses)

UTILIZATION CAGE: Moved Utilization Cage
OLD LOCATION - PHOTO - Soil saturated, no open water visible thru veg.
Clover up to 12", most 8" Watercress 6" ave
Grass leaves to 15" Hummocks have filled in with vegetation
culms to 30" Vegetation is a solid mat holding cage down
OTHER: New location - see transect for veg heights, hummocks, wate

Approximately 80% use

USDI - BUREAU OF LAND MANAGEMENT - SURPRISE RESOURCE AREA
RIPARIAN MEADOW UTILIZATION

STUDY SITE Post Canyon Spring | DATE 10-8-94 | EXAMINER deValois

TION

NO	HEIGHT (IN) GR.	UNG.	TYPE HIT*	NO	HEIGHT (IN) GR.	UNG.	TYPE HIT*	NO	HEIGHT (IN) GR.	UNG.	TYPE HIT*	NO	HEIGHT (IN) GR.	UNG.	TYPE HIT*
1	1.5		H K	26	1.5		W G	51	1.5		L	76	2 F		R F
2	1.5		G K	27	3		W	52		4.5	L G	77		2	R G
3	1.5		B K	28	1		G	53	1		L	78	1.5		B
4	1.5		W K	29	1		G	54	2		R	79	2		L
5	0.5 F		F WL	30		1	F	55	2		M	80	0.5 F		B F
6	2		W	31	1		G	56	2		R	81	1		H
7	1.5		G	32		2	G R	57	1		R	82	1.5		B
8	0.5		G	33		5	W R	58	1		L	83	1		L
9	1		G	34	1		R	59	0.5		L	84	2		R
10	1		G	35	1		W	60	3		B	85	1.5		R
11	1		R	36		2.5	G L	61	1.5		B	86	2		L
12	1 F		R F	37	0.5		G	62	1		L	87		2	L G
13	3		W	38	1 F		R F WL	63	1 F		R F D	88	1		L
14		2.5	W R	39	1		W S	64	2		L	89	3		R
15	1		G	40	1		M	65	2		L	90		3	H G
16	1		M	41	1 F		W F	66		3	L G	91	1 F		F Y
	3.5 F		F G	42	2		R	67	1		R	92		5.5	R K
		3	B R	43	4		W R	68		4.5	L G	93			R
19		2.5	B R	44	4		R R	69	2		L	94			R
20	1.5		R	45	3		R R	70	1.5		L	95		9	R G
21	1		G	46	2		W G	71		7	L G	96	1		R
22			R	47	1.5		R	72			R	97	2		G
23	1		R	48		3	R G	73		1.5	R G R	98	1 F		L F D
24	1		G	49			R	74	3		B	99	1		G
25		1.5	B R	50	1		R	75	[illegible]		L R	100	2		L

PERCENT GRASS:	16	80
PERCENT FORBS:	4	20
PERCENT SHRUBS:	0	0
PERCENT LITTER/MOSS:	24	100
PERCENT ROCK/WATER:	43	
PERCENT BARE/HOOF:	13	
	100	

AVERAGE STUBBLE HEIGHT: 1.9

	GRASSES TOT	GR.	UNG.	FORBS TOT	GR.	UNG.
NUMBER	84	65	19	10	10	0
TOTAL HEIGHT	102.5	65			9.5	—
AVE. HEIGHT	1.6	3.4			1	—
UTILIZATION	42% by height				—	

UTILIZATION = [1 - (AVE. HEIGHT GR. / AVE. HEIGHT UNG.)] X (NUM GR. / TOTAL SAMPLED)
AGE STUBBLE HEIGHT = TOTAL STUBBLE HEIGHT / TOTAL NUMBER OF PLANTS SAMPLED

*GRASS AND GRASS-LIKES (G), FORB (F), SHRUB/TREE (S), ROCK (R), BARE (B), WATER (W), MOSS (M), OR HOOFPRINT (H)

NOTES ON REVERSE

form 0994RPUT.wk4

NOTES:

SOIL SURFACE CONDITIONS: Very rocky. Hummocky, trampled

ANIMAL SPECIES/TRACES OBSERVED: Horse tracks & manure (fresh)
Horses in main Post Canyon below Spring
Old Cattle manure Frogs, flies, birds, hornets

SURFACE WATER? Present in hoofprints to 4". Soil saturated to edge of meadow. Small surface flow.

PHENOLOGY OF RIPARIAN VEGETATION: Grasses regrowing. Carex and Juncus very green & still growing. Forbs regrowing

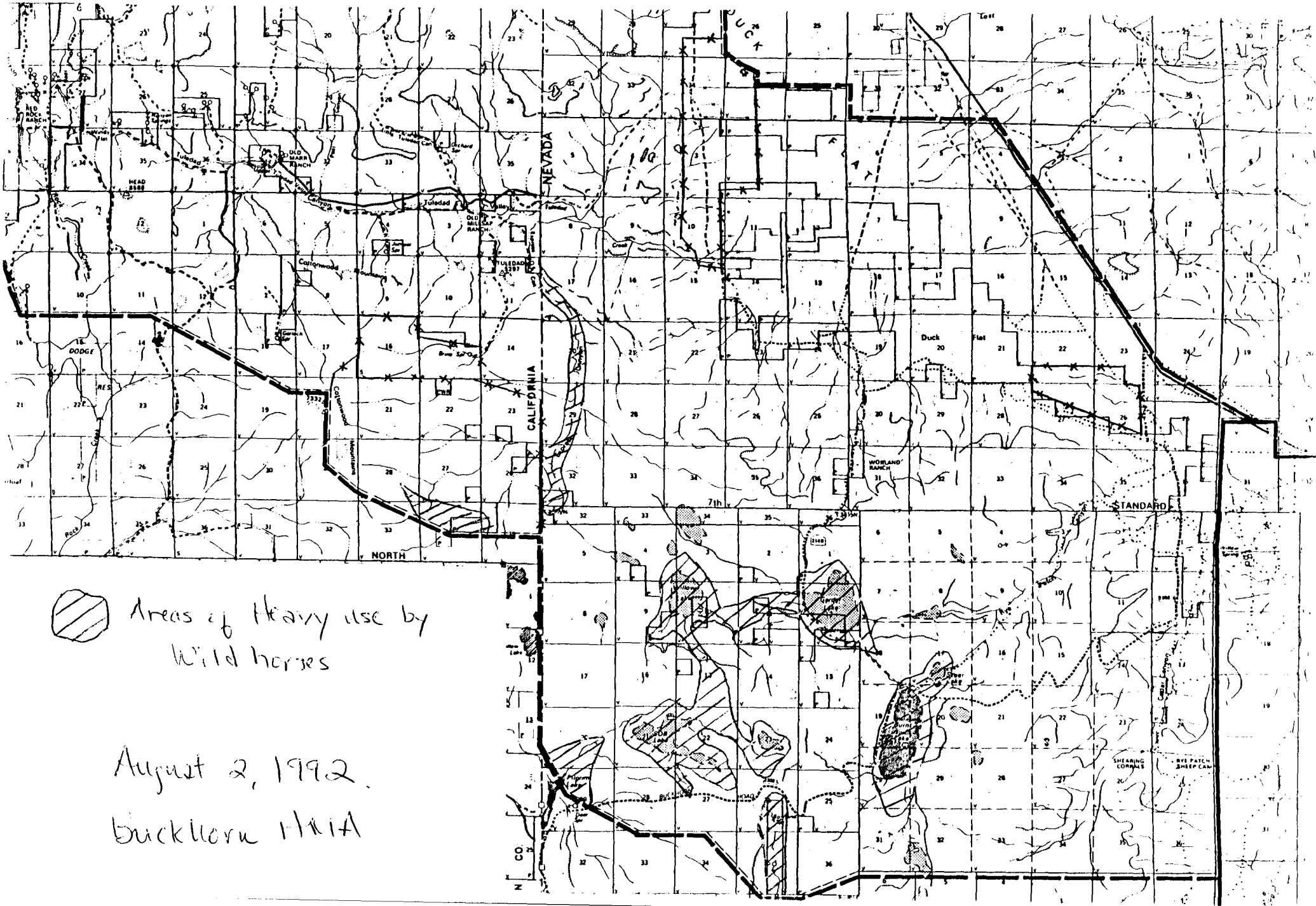
PHENOLOGY OF UPLAND VEGETATION: Cured. Late bloom/seed set
on Artemisia & Chrysothamnus

UTILIZATION CAGE: Moved cage

OLD LOCATION - PHOTO - AVE 8"	New location - Photo - Ave
Rushes to 16", most 6"	Rushes
Grasses to 20", most <10"	Grasses
Forbs scarce (yarrow) 2"	forbs

OTHER:

Approximately 65% use based on Juncus 35% left (ave 8")



Areas of Heavy use by Wild horses

August 2, 1992.

Bucklorn HMA