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PINE NUT MOUNTAIN WILD HORSE CAPTURE PLAN
CARSON CITY DISTRICT
BUREAU OF LAND MANAGEMENT
June 1979

Prepared by:

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21 Aug 79
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8-21-79
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8-21-79
Date

Enclosure 2

PINE NUT MOUNTAIN WILD HORSE CAPTURE PLAN

I. Introduction

The purpose of the Pine Nut Wild Horse Capture Plan is to reduce the heavy overuse problem that is occurring in the Pine Nut Mountain Range. Wild horses are the main contributor to the overuse problem as several of the livestock permittees have reduced their permits or are taking non-use.

Wild horses would be left in the lower elevations along the west and northwest portion of the mountain range. Wild horses in other areas of the range would be removed and put up for adoption. The roundup would be conducted by the crew from Palomino Valley Corrals, using a helicopter and portable corrals.

A. Background Information

1. Map

See attached map ($\frac{1}{2}$ " per mile) showing the present herd area, allotments and areas where wild horses would be left. (Attachment I)

2. Location and Area

The Pine Nut wild horse herd area is located in the Pine Nut Mountain Range east of Carson City, Nevada, and south of Dayton, Nevada. The herd area presently covers approximately 250,000 acres of public land and 77,000 acres of private land. The wild horses have increased their use area by moving into the Buckskin Range and Lincoln Flat on the east side of the Pine Nut Mountains, adding 60,000 acres of public land to the herd area since 1975, when the wild horses were first inventoried.

3. Resource Data

The Pine Nut wild horse herd area encompasses the entire Pine Nut Mountain Range and the wild horse herd has an effect on all the allotments within the area.

The population of wild horses in the Pine Nut Mountains, Buckskin Range and Lincoln Flat was inventoried by helicopter in April 1978, and 639 wild horses were counted. The weather conditions were ideal, with light winds and clear skies making it possible to fly the area continuously. An aerial inventory in 1975 indicated there were 297 wild horses in the area; however, this was probably an incomplete count. The weather conditions were opposite those of 1978: low clouds and rain reduced visibility some of the time, and the helicopter was grounded for a day due to high winds. As a result, the area was not flown continuously.

In spite of the lack of consistent inventory results, there is little doubt the horse population has increased. As a result of the increase, there are problems in the area. The wild horses have enlarged their use area in an attempt to meet their forage needs. They have moved into the Buckskin Mountains and Lincoln Flat, east of the Pine Nut Mountains. They graze lawns in the subdivisions on the west side of the Pine Nut Mountains. Because of the increased wild horse use in the subdivisions and the subsequent numerous complaints received, we made two emergency roundups in the subdivision areas. In the Johnson Lane vicinity, we rounded up 65 wild horses in January 1978, and another 82 wild horses in December 1978. We are still receiving complaints about wild horses causing problems in the subdivision near Johnson Lane and Fish Springs Flat, and these complaints are documented in the files in the Carson City BLM Office.

The vegetation in the area has been receiving heavy to severe use as a result of the high number of wild horses. Trend plots established in the area for comparison of protected areas and unprotected areas show a noticeable difference even in areas of no livestock use (Table I) (see attached photos). The studies show that the vegetation resource is being damaged due to overuse and the forage is not adequate for the large number of wild horses.

The utilization studies of vegetation (see Table II) indicates that the area is being over-utilized. In some of the allotments, the livestock permittees have been taking non-use due to the lack of forage caused by the wild horses (Table III). The utilization studies in the allotments with non-use are showing heavy use and this reflects only the wild horses. The unfenced Sunrise, Brunswick, and Illinois seedings are receiving severe

use by the wild horses. Areas around water sources are receiving severe use, according to the utilization studies. Unfenced water sources are being trampled by the wild horses and livestock, in certain areas, and, as a result, some of the water sources are not producing much water.

The utilization studies also reflect the results of the range survey completed in 1959. The forage in the Pine Nuts was surveyed to be 22,389 Animal Unit Months (AUMs) and 17,743 AUMs were allocated to livestock and the remaining 4,692 AUMs were allocated to wildlife. No forage was set aside for wild horses during the adjudication (because they had no official status) and with the present large number of wild horses, the forage is over-allocated (see Table IV) by 8,400 AUMs, assuming 700 wild horses in the area. The large over-commitment of the vegetation is resulting in grasses being eliminated and brush species increasing in the area.

Wildlife

Resident and migratory deer use the horse herd area. The Nevada Department of Wildlife estimates that over the last 15 years, an average of 1,855 resident deer use the area. The NDW has recommended that BLM manage for 1,400 head. This would require 4,200 AUMs. The NDW states that the present deer population is limited by the loss of habitat, caused by urban encroachment and deterioration of the remaining habitat by livestock and wild horses. The summer range which is a critical area for nursing does is in poor condition due primarily to intense competition for forage among wild horses, livestock and deer. A portion of the Carson interstate deer herd winters along the southern and eastern portions of the horse herd area. The NDW has recommended that 2,929 head of these migratory deer be allocated 4,169 AUMs. (See map.)

Nevada Department of Wildlife has further recommended that the wild horses be reduced from a 1977 estimated 350 horses in the Pine Nut Range to 50 or fewer animals.

Sage grouse use areas include the meadows just south of Slater's Mine, the meadows at the east side of Mt. Siegel and the Bald Mountain area. Strutting grounds have not been identified, but obviously do exist. The Nevada Department of Wildlife reported: "Grazing and general habitat conditions have been detrimental to this species..."

(NDW: Wildlife Habitat Plans for the Future Input into Land Management Agencies Planning Systems - Pine Nut-Markleeville Planning Units). Grazing by sheep, cattle and horses has depleted the quality and quantity of valuable forbs in occupied sage grouse habitat.

At the present time, the BLM is conducting a new range survey, using the Soil Vegetation Inventory Method, with information expected to be available by 1980. With the present Environmental Statement schedule of 1981 for the Pine Nut Unit, forage will be reallocated at that time. The Capture Plan is an interim management step pending a final decision of wild horse, livestock and wildlife forage allocation. If wild horse use in the area could be reduced soon, the vegetative resource would start to recover. Should wild horses not be removed, the resource will be reduced to such a point that it will take many years for recovery.

Trifolium andersonii beatlayae is on the threatened and/or endangered plant list prepared by the Nevada State Museum. This plant is in the wild horse area and has been located southwest of Sunrise Camp (see Attachment II). No known threatened and/or endangered animals occur in the area; however, a complete inventory has not been conducted.

There are three Wilderness Intensive Inventory Units in the Pine Nut Mountain Range. No long-term adverse impacts are anticipated due to the wild horse gathering. (See Attachment III)

4. Existing Projects

There are several Bureau of Land Management projects in the area: fences, wildlife projects and some water developments. The majority of the surface water is on private land and some has been developed for livestock use.

5. Coordination

The management of wild horses in the Pine Nut Mountains is essential to insure that the vegetation resource will not be completely destroyed, especially in critical areas. The resource is presently in such a poor state in some

areas, and declining in others, that some of the livestock users have been forced to take non-use.

The area is used by deer, chukar, sage grouse, mountain lion and many non-game species. The numerous springs and riparian habitat are grazed heavily. Due to this grazing and trampling, the areas around springs do not furnish adequate cover or suitable habitat for wildlife.

The wild horse area in the Pine Nut Mountains is critical to both resident deer and winter range for the Carson interstate deer herd. Forage demand for wild horses in the Pine Nut Mountains is increasing each year. As a result of the increased wild horse use, pressure is increasing on winter deer range at the lower elevations. Use will become more critical as time goes on and the wild horse use increases.

The Management Framework Plan (MFP) Decision of 1975 is to maintain a wild horse herd of 40 horses in the Eldorado-Brunswick Canyon area and surrounding areas.

The present MFP decision will be re-evaluated. A new decision will be made when forage is allocated, based on data from the range survey presently being conducted and the completion of an environmental statement.

The Capture Plan is an interim measure to help alleviate the resource damage being caused by wild horses. Interim management will not be for specific herd characteristics.

B. Objectives

The objective of the Capture Plan is to remove approximately 500 wild horses, which would leave, with this year's increase, approximately 200 horses in the Eldorado-Brunswick Canyon area and the Johnson Lane-Fish Spring area.

This removal would allow the vegetation resource to recover from the heavy use. The 200 remaining wild horses would consume 2,400 AUMs of forage.

C. Management Methods

Prior to wild horse removal, the entire area will be aerial surveyed and inventoried to obtain an up-to-date count. The exact number of horses to be removed will then be determined, to leave 200 horses in the area.

The methods of capture are portable pipe corrals, riders on horses, and a helicopter.

The wild horse population should be reduced to approximately 200 as an interim management measure, to protect the vegetative resource pending the completion of the Range Survey and Environmental Statement, while satisfying public desires to have wild horses in the area.

D. Cooperative Arrangements

Cooperative agreements should be made with some of the private landowners in the area regarding water that they own. The agreements should be made to allow the horses to continue to use these waters.

E. Management Facilities and Equipment

No permanent management facilities will be constructed in the area. The only equipment used will be portable pipe corrals, which will be removed after the capture is completed. Trucks will transport the horses from the trap site to Palomino Valley Placement Center, north of Reno.

F. Studies and Assessment

The wild horses will be monitored in the future for population growth and areas of use to make sure all their requirements for food, water and cover are met. The Pine Nut Mountain wild horse area will continue to be studied for forage utilization and trend of the vegetation resource.

G. Modification

The plan may be modified as studies dictate and the need arises.

Table I. Vegetative Trend Plot Index

<u>Allotment</u>	<u>Plot No.</u>	<u>Year Established</u>	<u>Trend Index</u>	<u>Year Reread</u>	<u>Trend Index</u>	<u>Trend Status</u>
Buckeye	1	75	27	79	20	Down
	2	75	150	79	121	Down
	2A	74	139	79	107	Down
	3	75	111	79	126	Up
	4	75	87	79	66	Down
	5	75	33	79	15	Down
	6	75	135	79	52	Down
Churchill Canyon	7	76	115	79	87	Down
	1	75	105	79	106	Up
	2	75	111	79	110	Down
	3	75	95	79	67	Down
	4	75	139	79	55	Down
	5	75	81	79	102	Up
	Clifton	1	75	45	79	44
2		75	10	79	10	Static
El Dorado	1	75	96	79	125	Up
	2	75	90	79	29	Down
Hackett Canyon	1	76	18	79	19	Up
	2	76	39	79	13	Down
Jacobsen Ranch	1	76	32	79	14	Down
Mill Canyon	1	75	32	79	24	Down
	2	75	48	79	50	Up
	3	76	60	79	58	Down
Rawe Peak	1	76	45	79	63	Up
	2	76	104	79	93	Down
Pine Nut	1	75	75	79	45	Down
	2	75	93	79	81	Down
	3	75	47	79	24	Down
Sand Canyon	1	76	87	79	52	Down
	2	76	107	79	105	Down

<u>Allotment</u>	<u>Plot No.</u>	<u>Year Established</u>	<u>Trend Index</u>	<u>Year Reread</u>	<u>Trend Index</u>	<u>Trend Status</u>
Spring Gulch	1	76	70	79	84	Up
	2	76	100	79	101	Up
	3	76	102	79	73	Down
	4	76	121	79	109	Down
	5	76	35	79	30	Down
Sunrise	1	74	77	79	50	Down
	2	71	32	79	21	Down
	3	75	21	79	21	Static

TOTAL: 27 Down*
9 Up
2 Static

NOTE: Trend Index is calculated from the following factors: Composition, Vegetative Cover, Litter and Seedings.

*Areas of downward trend correspond with areas of heavy horse concentration.

Table II.

RANGE UTILIZATION STUDIESPercent of Key Forage Species Utilized

<u>Allotment</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>
Buckeye	18%	83%	78%	
Churchill Canyon	69%	52%	73%	83%
Clifton	20%	17%	65%	
El Dorado	-	-	90%	
Gold Hill	29%	-	-	
Mill Canyon	40%	67%	70%	69%
Pine Nut	28%	-	71%	
Rawe Peak	28%	14%	28%	
Sand Canyon	47%	60%	-	
Sunrise	35%	65%	50%	

Table III.

Non-Use 1979 Grazing Year

<u>Allotment</u>	<u>AUMs</u>
Buckeye	954
Churchill Canyon	822
Clifton	218
Fish Springs	270
Hackett Canyon	32
Jacobsen	180
Mill Canyon	1449
Pine Nut	608
Rawe Peak	316
Sand Canyon	250
Sunrise	<u>1093</u>
TOTAL	6192

Table IV.

Forage Survey and Adjudication

<u>Allotment</u>	<u>Total AUMs</u>	<u>Livestock Demand</u>	<u>Wildlife AUMs</u>
Buckeye	5,308	4,757	551
Churchill Canyon	6,032	5,394	638
Clifton	2,206	772	1,434
El Dorado	948	946	2
Fish Springs	347	270	77
Hackett Canyon	489	538	-----
Jacobsen	220	180	40
Mill Canyon	2,796	2,049	747
Pine Nut	2,114	943	1,171
Rawe Peak	586	552	34
Sand Canyon	250	250	-----
Sunrise	<u>1,093</u>	<u>1,092</u>	<u>1</u>
TOTAL	22,389	17,743	4,695

Phenology Plot No. 10 - Churchill Canyon Allotment

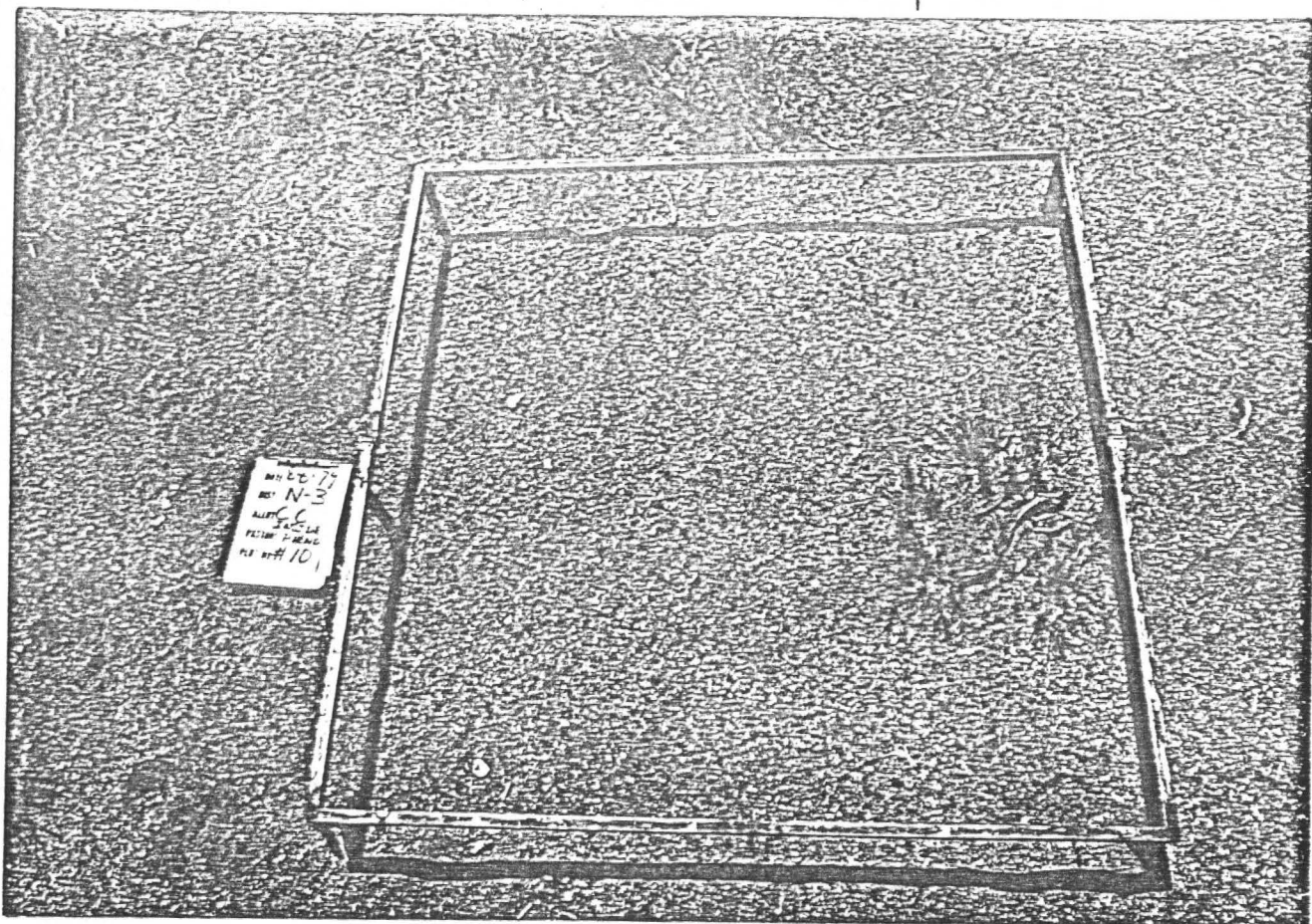


Photo No. 1 - This trend plot has been protected from all grazing except wildlife for three years. Note the desirable grass plant that is beginning to recover, and regain vigor.

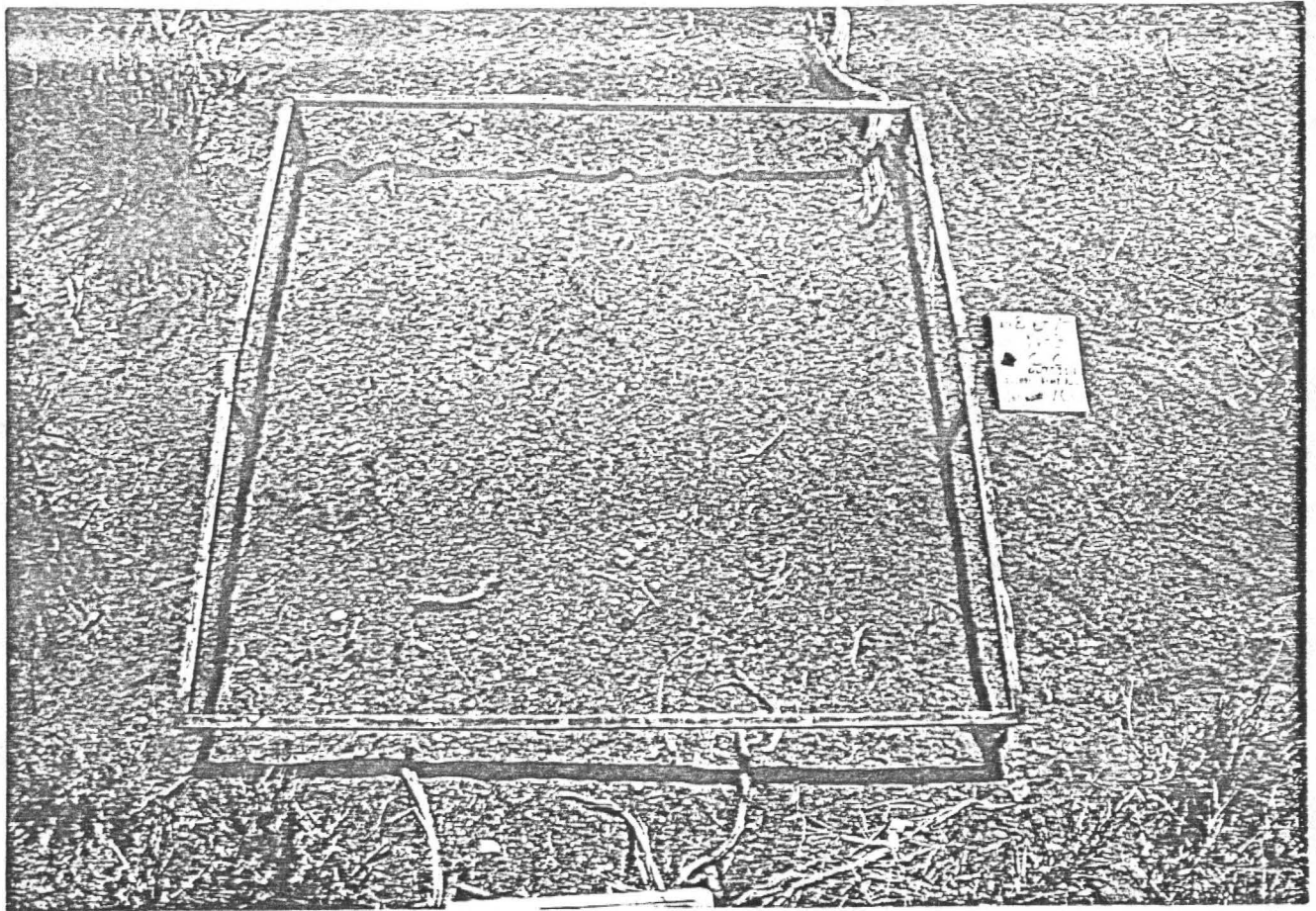


Photo No. 2 - This trend plot was established to compare a protected area with an unprotected area. It was established the same time the protected plot was. (Compare to Photo No. 1.) The two dead grass plants (lower left corner) were once desirable forage plants.

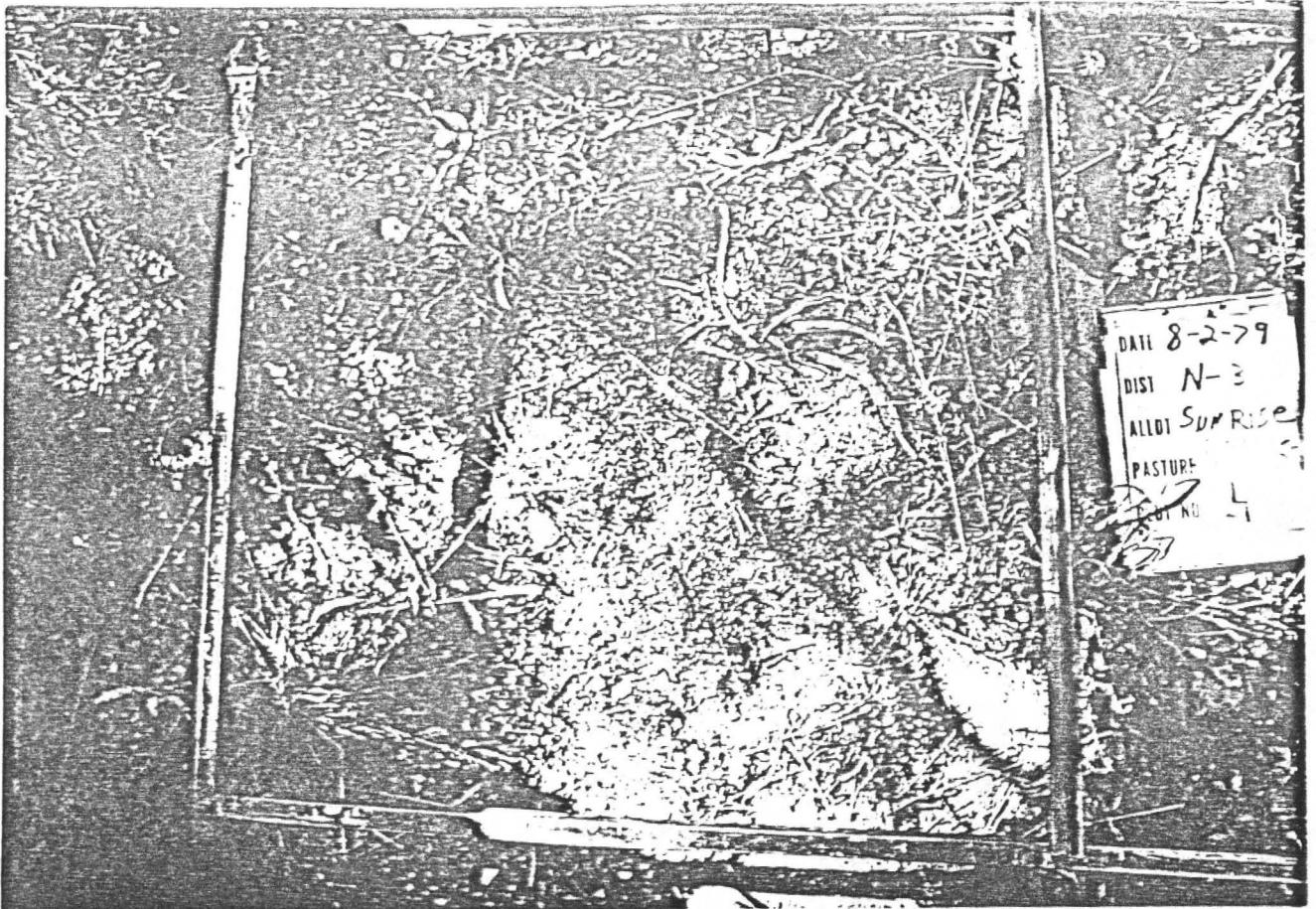


Photo No. 3 - This trend plot has been protected from grazing except wildlife for three years. Note the desirable grasses that have recovered and show excellent vigor.

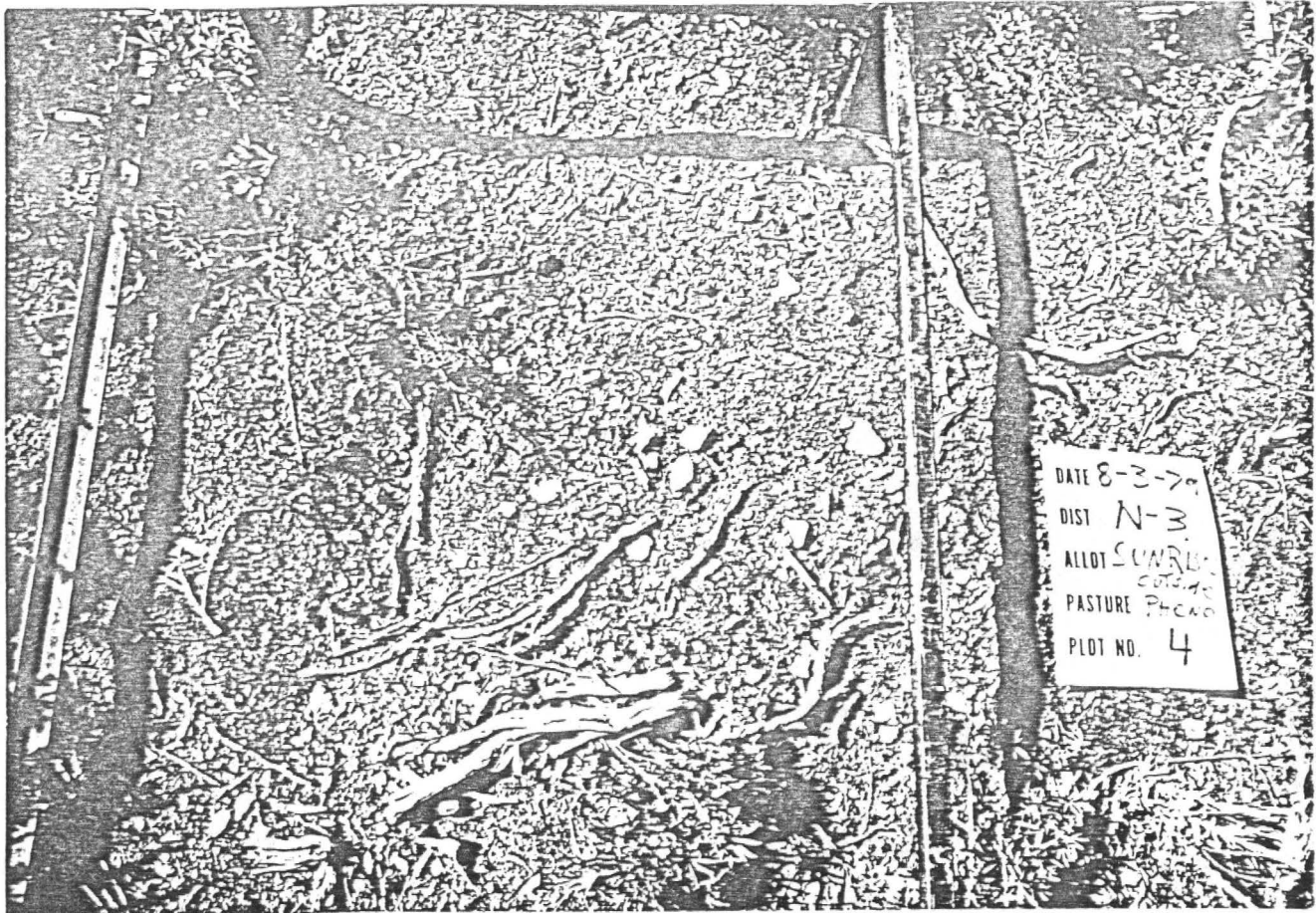


Photo No. 4 - This trend plot is unprotected (compare with Photo No. 3). This plot was established to compare apparent trend with a protected plot. Note the increase of an undesirable poisonous forb, lupin and very little grass.

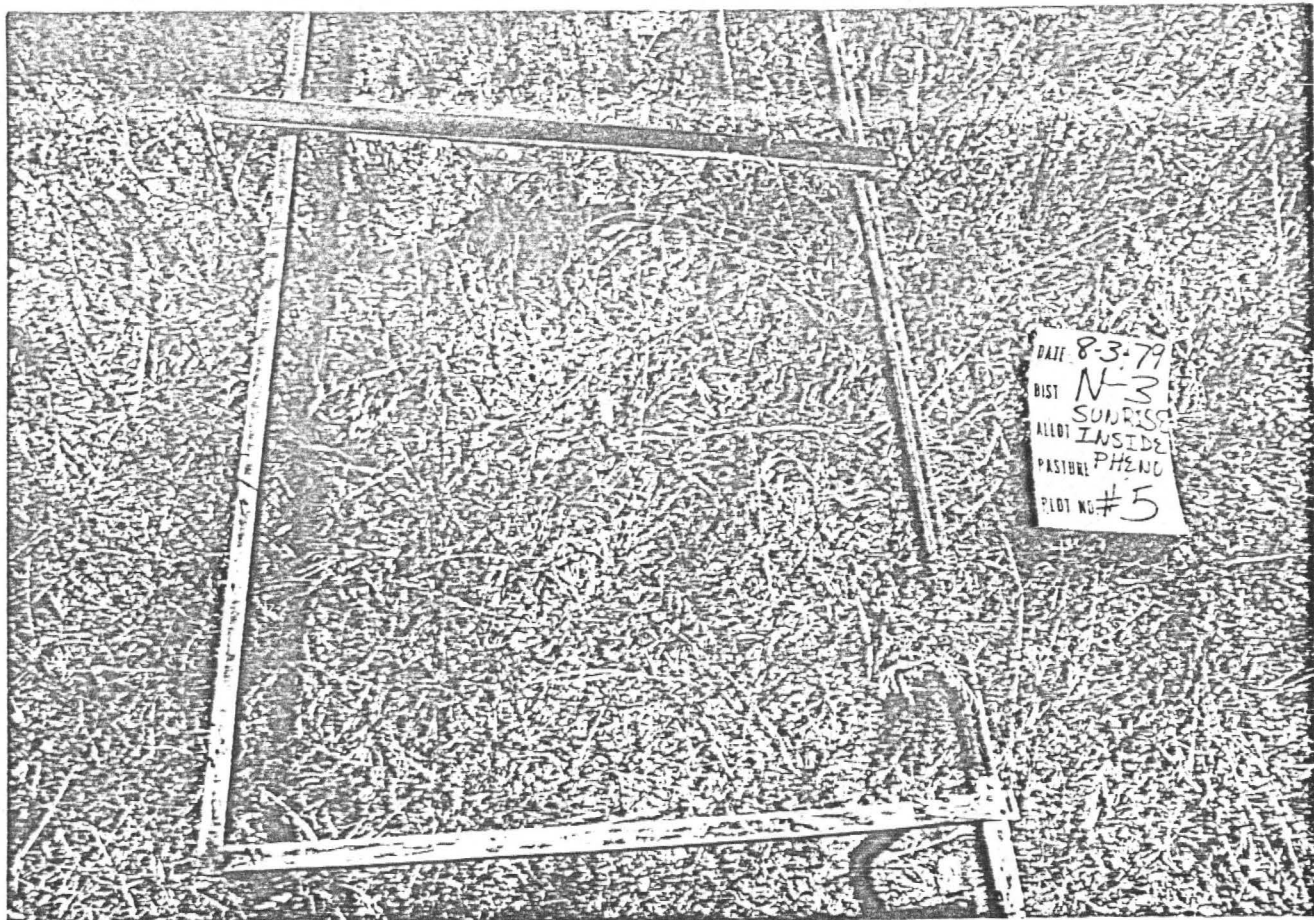


Photo No. 5 - This photo is a trend plot, designed to monitor a specific area inside the meadow, away from the water source. Note the abundance of grasses and grass-like plants. (Compare to Photo No. 6.)



Photo No. 6 - This plot was once part of the meadow. It is located just across the fence from Photo No. 5. Note the bare ground and vegetation grazed to the soil surface.

There has been no livestock in the area for two years.

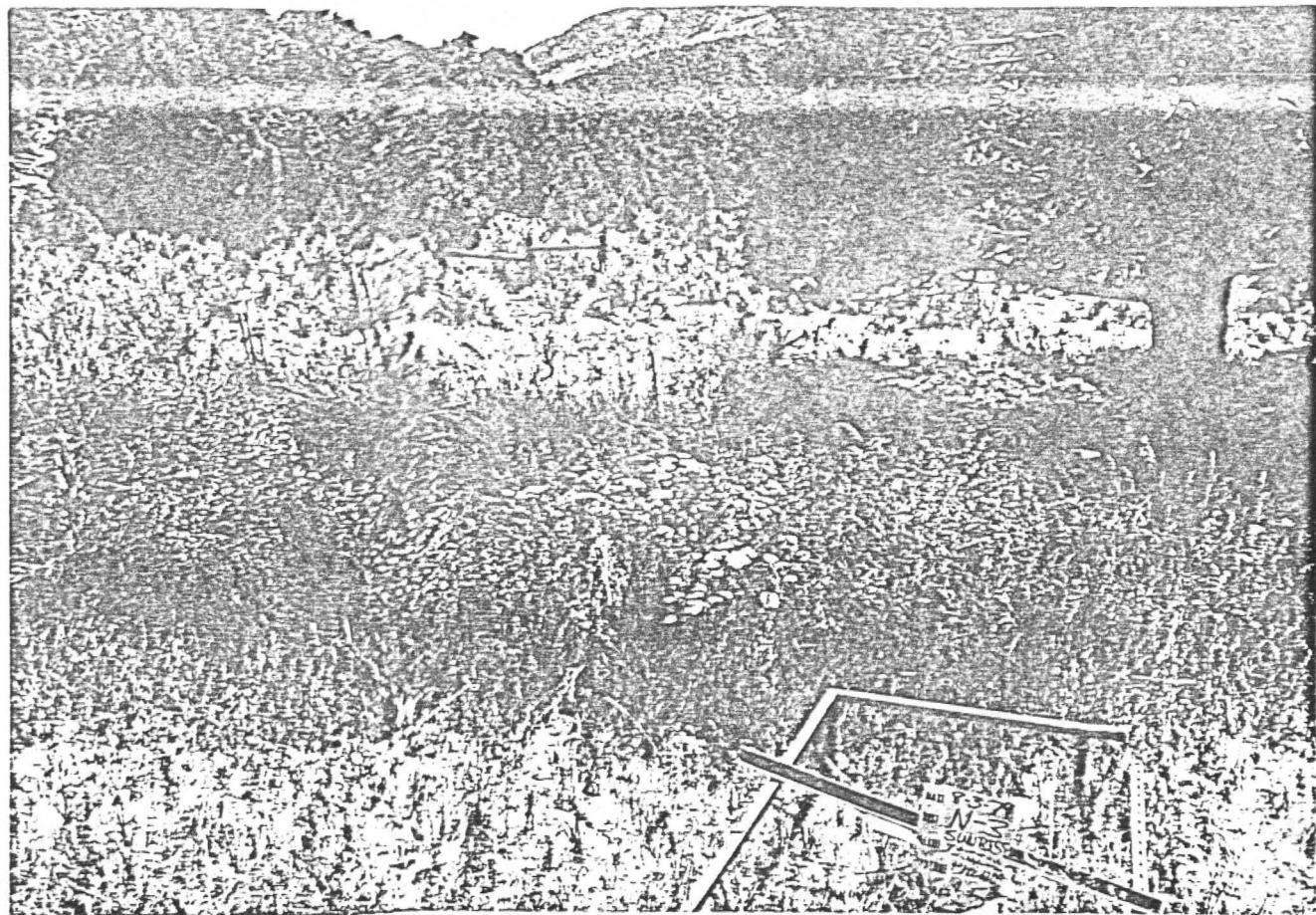


Photo No. 7 - This photo is an overview of Photo No. 5 . Note the vegetative potential when the meadow is protected from grazing.

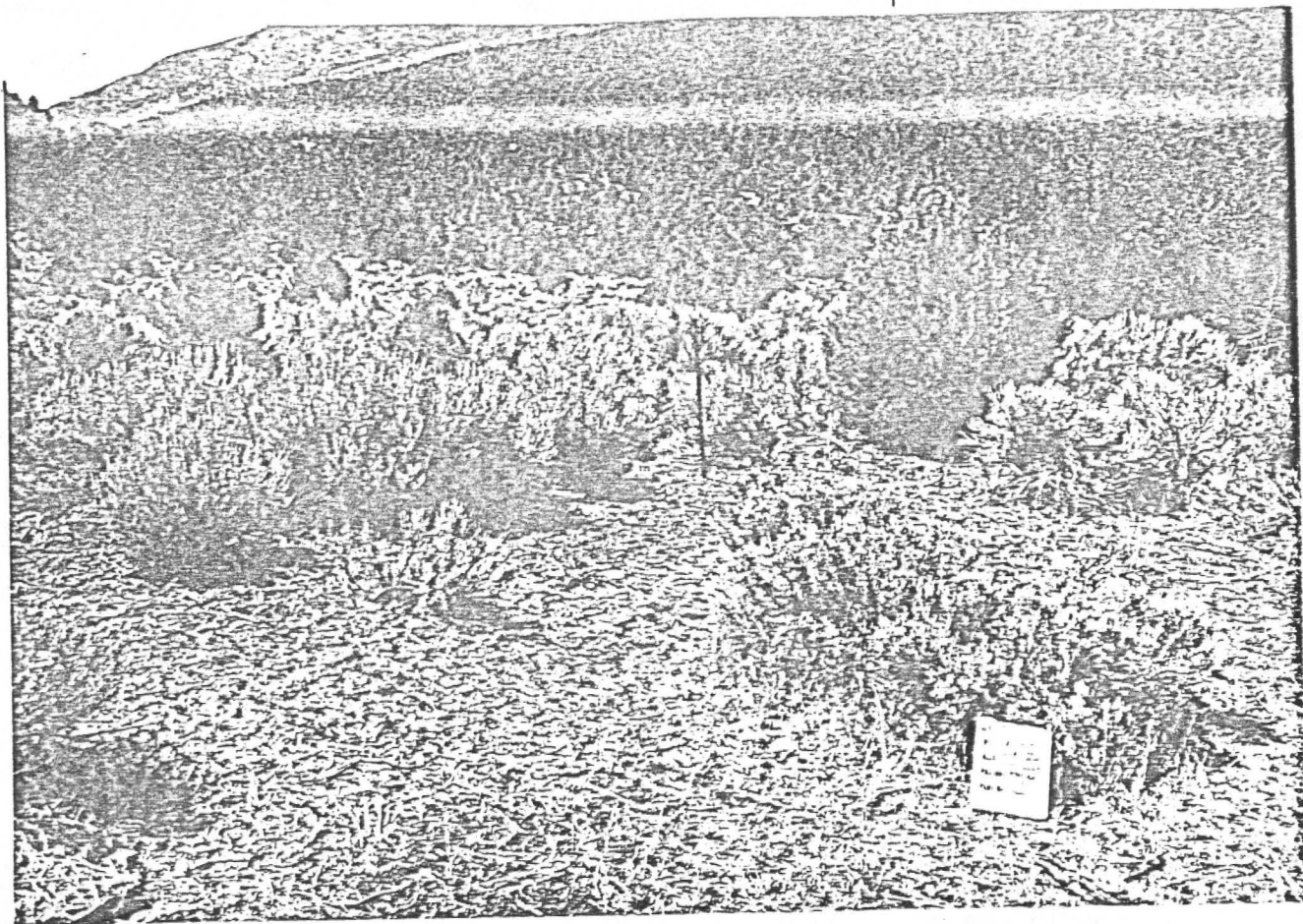


Photo No. 8 - This photo is an overview of Photo No. 6. Note the outline where the meadow once existed. The only meadow left in the area is protected by fence.

There has been no livestock in the area for two years.

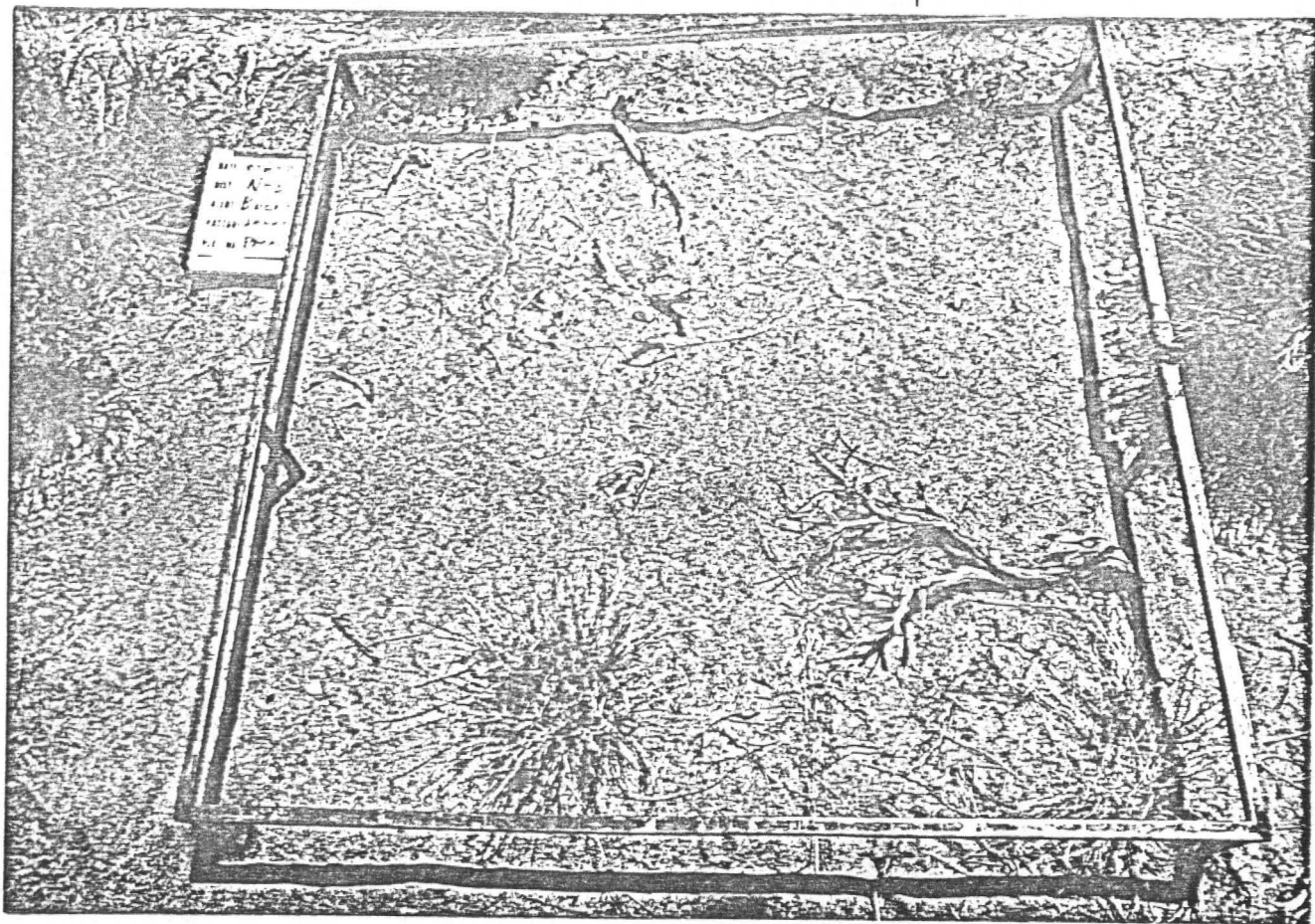


Photo No. 9 - This plot has been protected for three years. Compare the subtle differences of Photo No. 10. Note the excellent vigor of the grass plants and accumulation of litter.

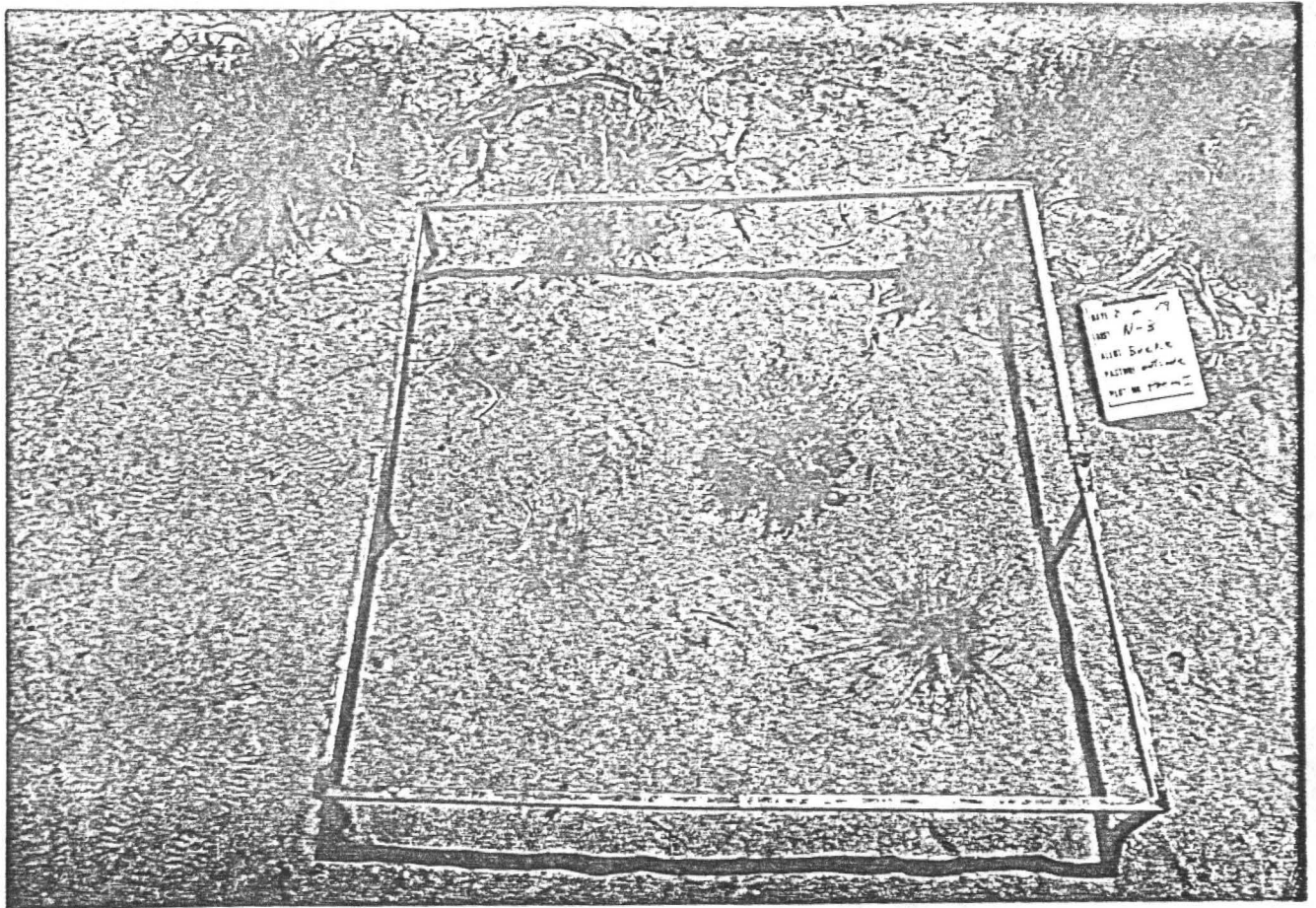
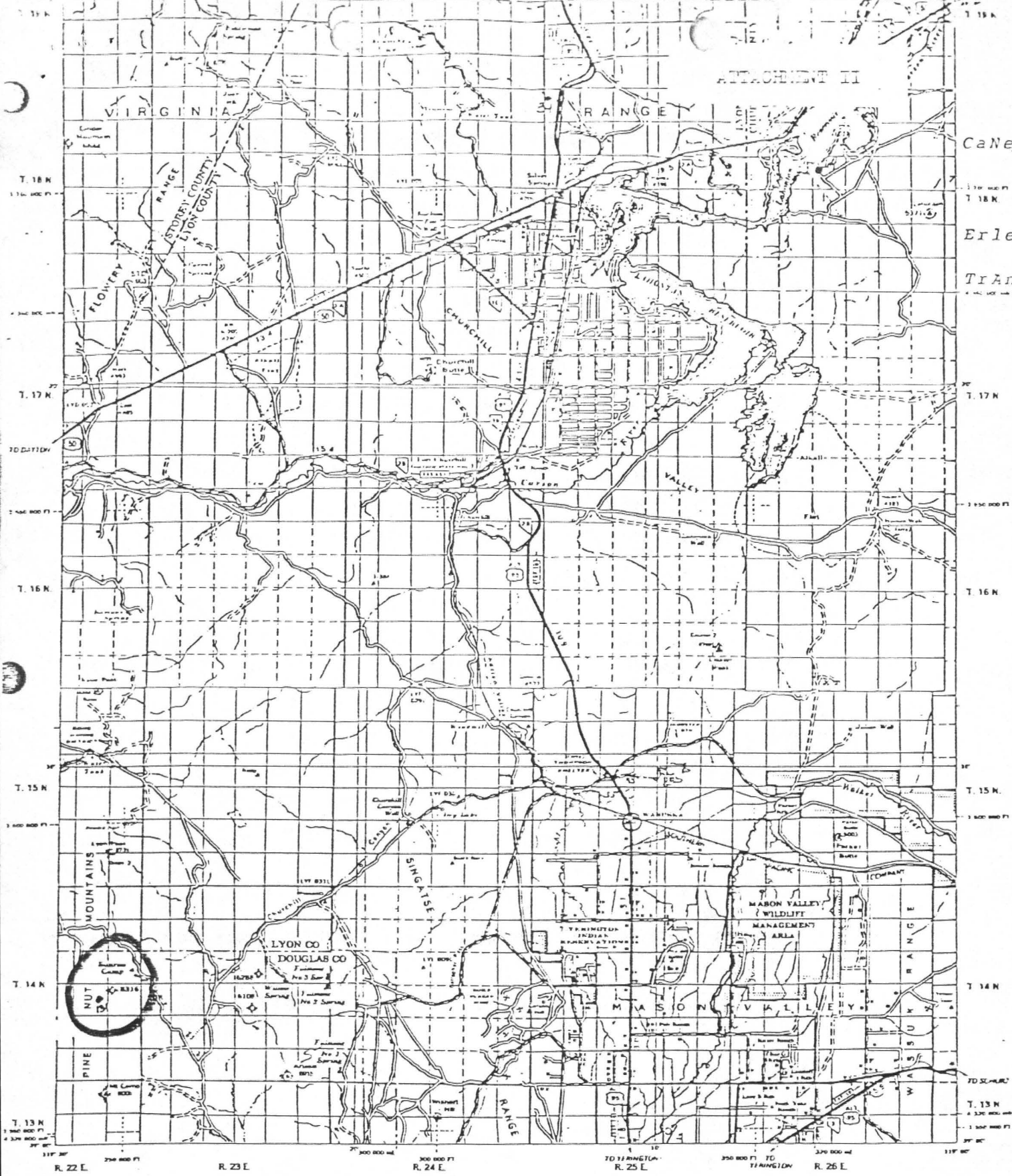


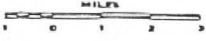
Photo No. 10 - This plot is for comparison to a protected site. (Compare to Photo No. 9 .)

Note the poor vigor of the two grass plants and that one is dead. These plants have been continuously grazed. This photo was taken in August, and the plants are still trying to put out leaves.

ATTACHMENT II



1. Contour Interval: 20 Feet
 2. Spot Elevation: 100 Feet
 3. 1000 Feet Contour Interval
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 199. 980000 Feet Contour Interval
 200. 985000 Feet Contour Interval
 201. 990000 Feet Contour Interval
 202. 995000 Feet Contour Interval
 203. 1000000 Feet Contour Interval



KEY TO ENLARGEMENTS



LOCATION DIAGRAM

CALIFORNIA	5-12	5-11	5-10
	6-12	6-11	6-10
	7-12	7-11	7-10

QUADRANGLE LOCATION



GENERAL HIGHWAY MAP
 QUADRANGLE 6-11

CHURCHILL COUNTY 1969
 DOUGLAS COUNTY 1965
 LYON COUNTY 1968
 STOREY COUNTY 1965

PREPARED BY
 NEVADA STATE HIGHWAY DEPARTMENT
 PLANNING SURVEY DIVISION

PINE NUT MOUNTAIN WILD HORSE INTERIM MANAGEMENT PLAN

PUBLIC PARTICIPATION PLAN

Publics Affected

A. Special Interest Groups

American Horse Protection Association, Inc.
American Humane Association
Audubon Society
Carson City District Licensees
Humane Society of the United States
International Society for the Protection of Mustangs and Burros, Inc.
Nevada Cattlemen's Association
Nevada Humane Society, Inc.
Nevada Organization for Wildlife
Nevada Outdoor Recreation Association
Nevada Wildlife Federation
Nevada Woolgrowers Association
Sierra Club
Wild Horse Organized Assistance, Inc.

B. News Media

District Media
State Media
Regional and/or National Media

C. Local, Regional, and National Citizens

D. The State Multiple Use Advisory Committee on Federal Lands

E. University of Nevada - Reno

College of Agriculture
Division of Agricultural and Resource Economics
Division of Plant, Soil and Water Science
Division of Renewable Natural Resources
Division of Animal Science

F. Government Agencies

Department of the Interior

Bureau of Land Management
Washington, D.C. Office
Nevada State Office
Carson City District
Other Nevada BLM Districts

Bureau of Indian Affairs

State of Nevada

Governor's Office
Planning Coordinator
Department of Agriculture
Department of Conservation and Natural Resources
Department of Wildlife

Carson River Basin

Council of Governments

Douglas County Officials

Lyon County Officials

Carson City Officials

Long Range Goals

To develop public support and commitment to the following interim management objective for the Pine Nut Wild Horse Herd:

Reduce the Pine Nut Mountain Herd to about 200 wild horses, which are damaging the range resource due to overpopulation.

Short Range Goals

To capture, remove and/or relocate excess horses from the Pine Nut Herd in accordance with the Pine Nut Wild Horse Capture Plan and Environmental Assessment.

To inform the public of the need and rationale for these actions.

To allow the public to observe the horses without creating management difficulties or safety hazards.

To submit timely news releases regarding the roundup and subsequent actions.

To fully inform those range users and the special interests most affected by the proposed action in advance of the roundup.

Courses of Action

Meetings, letters of intent, and/or telephone communications will be used to inform the appropriate representatives of the state and federal agencies and others affected of our herd management plan and the required roundup of wild horses.

News releases will be issued describing the actions and their results as appropriate.

Timetable of Actions

Upon approval of the Environmental Assessment and Capture Plan, a timetable for the required actions will be developed and the interested publics involved will be notified of the schedule.

News releases will be issued, as warranted by the interest generated by the actions, informing the public of our progress.

Followup news releases will be issued when roundup, adoption, etc., has been completed to summarize the events and re-emphasize the long range results expected from the actions.

Communication Methods

1. Personal Contacts
2. Letters and News Releases
3. Public Meeting for Use of Helicopter

Provisions for Two-Way Communications

News media will be monitored for editorials regarding the actions taken.

News reports and editorials about roundups in Nevada and elsewhere are continually reviewed to determine attitudes and values of the public.

8/21/79

DECISION RECORD/RATIONALE

A. Decision

Based on the Environmental Assessment, a net beneficial impact to the human environment would result, with a minimum of adverse environmental impacts, from implementing the proposed action; therefore, the alternatives are rejected and the proposed action is adopted in its entirety.

B. Rationale

As an interim measure, the capture and removal of wild horses from the Pine Nut Mountains would alleviate pressures on the range, which is being over-utilized to such a degree that the vegetation condition is deteriorating. This action would reduce the deterioration of valuable wildlife habitat and prevent the possible extirpation of sage grouse in the area. The removal of wild horses would greatly benefit the range, as well as the 200 horses that will remain in the area. The horses removed would be adopted by people for use as pets and pleasure riding. The Nevada Department of Wildlife, livestock permittees, some land owners and other public interests are favorable to the proposed action.

An Environmental Impact Statement is not required for this action.

The proposed action is an interim management decision. Land use planning for this area will be revised and completed in 1981.

Rudolph W. Reimold
Rudolph W. Reimold
Walker Area Manager

8-21-79
Date

Concurred:

Thomas J. Owen, actg
Thomas J. Owen
District Manager

8-21-79
Date

Enclosure 3

ENVIRONMENTAL ASSESSMENT

Pine Nut Mountain Wild Horse Capture

The purpose of the Environmental Assessment is to analyze the effects of wild horse removal from the Pine Nut Mountain Range. (See also Pine Nut Wild Horse Capture Plan dated June 1979.)

I. DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

The proposed action is to remove wild horses (about 500) from the Pine Nut Mountain Range and the Buckskin Mountains, until approximately 200 remain in the Pine Nut Range only. The capture method will be gathering with a helicopter and riders on horseback near the trap sites. The equipment will be portable pipe corrals set up prior to horse removal and taken down after the roundup has been completed. The traps will have to be moved several times, depending on the terrain at the locations of the horses, when roundup operations begin.

The wild horses will be inventoried by air prior to any roundup to determine how many need to be removed. The captured horses will be transported to the Palomino Valley Placement Center for adoption.

Alternatives to the proposed action are to take no action; remove all the horses from the area; or, to follow the 1975 Management Framework Plan decision to leave 40 horses.

II. DESCRIPTION OF THE EXISTING ENVIRONMENT

The Pine Nut wild horse herd area encompasses the entire Pine Nut Mountain Range, which is located east of Gardnerville and Carson City, Nevada, and south of Dayton, Nevada. The herd area presently covers approximately 250,000 acres of public land and 77,000 acres of private land. The wild horses have also increased their range by moving into the Buckskin Range and Lincoln Flat on the east side of the Pine Nut Mountains. This includes an additional 60,000 acres of public land not figured in the herd area in 1975 when the first comprehensive herd inventory was conducted. (See Attachment I - Map of Wild Horse Area.)

The herd area is a mountain range, characterized by small valleys, basins, canyons and alluvial fans. There are four basic vegetative types within the wild horse area: northern desert shrub, pinyon-juniper, and small areas of salt desert shrub, and mid-grassbunch.

The northern desert shrub community consists of big sagebrush, in areas of deep, well-drained soils; low sagebrush and black sagebrush, mostly on the alluvial fans and lower elevations; and low sagebrush on the higher mountain slopes and ridges. Other plants in these areas are low rabbitbrush, squaw tea, rubber rabbitbrush, horsebrush, galleta grass, Indian ricegrass, needle and thread grass, Sandberg bluegrass, squirreltail and cheatgrass.

The pinyon-juniper community is located on the mountain slopes. This vegetation is important to the wild horses and wildlife for escape and shelter. The understory consists of big sagebrush, low sagebrush, rabbitbrush, squaw tea, horsebrush, bitterbrush, Indian ricegrass, galleta grass, Great Basin wildrye, Sandberg bluegrass, needle and thread grass, squirreltail and cheatgrass.

The mid-grassbunch community was introduced by seeding crested wheatgrass in an area of pinyon juniper after chaining in the 1960s, but such areas are being slowly re-invaded by pinyon-juniper and sagebrush. These areas receive severe wild horse use, due to the availability of desirable forage and easy access.

The salt desert shrub community is located on the east side of the wild horse area, where the precipitation is low. The vegetation consists of desert greasewood, shadscale, bud sagebrush, winterfat, Indian ricegrass, galleta grass and desert needlegrass.

A diversity of wildlife is found in the wild horse area. The distribution and abundance of species is influenced by the different vegetation zones and the proximity to water and riparian habitats.

Resident and migratory deer use the horse herd area. The Nevada Department of Wildlife estimates that over the last 15 years, an average of 1,855 resident deer use the area each year. The NDW has recommended that the BLM manage for 1,400 head. This would require 4,200 AUMs. The NDW states that the present deer population is limited by the loss of habitat caused by urban encroachment and deterioration of the remaining habitat by livestock and wild horses. The summer range which is a critical area for nursing does, is in poor condition due primarily to intense competition for forage among wild horses, livestock and deer. A portion of the Carson interstate deer herd winters along the southern and eastern portions of the horse herd area. The NDW has recommended that 2929 head of these migratory deer be allocated 4,169 AUMs. (See map.)

There are over 250 species of birds known to occupy this portion of Nevada during different seasons of the year. Sage grouse use areas include the meadows just south of Slater's Mine, the meadows on the east side of Mt. Siegel, and the Bald Mountain area. Strutting grounds have not been identified, but obviously do exist. NDW states "grazing and general habitat conditions have been detrimental to this species..." "grazing by sheep, cattle and horses has depleted the quality and quantity of valuable forbs in occupied habitats." (NDW: Wildlife Habitat Plans for the Future - Input into Land Management Agencies Planning Systems - Pine Nut-Markleeville Planning Units.) Other upland game species are mountain quail, valley quail, chukar partridge and mourning dove. Other birds include passerine birds and raptors.

Some of the common mammals in the Pine Nut Mountains are black-tailed jackrabbits, cottontail rabbits, coyotes, mountain lions, bobcats, and numerous small rodents. Year-long use by horses is highly detrimental to non-game species, because they are dependent upon riparian habitat for feeding and rearing young. Riparian areas are generally in the worst condition because wild horses and livestock concentrate in these areas for forage and water.

The Pine Nut wild horse area encompasses the whole Pine Nut Mountain Range, and horse use affects mainly 14 allotments within the area. The vegetation has been receiving heavy to severe use by the wild horses.

The population of wild horses in the Pine Nut Mountains, Buckskin Range and Lincoln Flat was inventoried by helicopter in April 1978 and 639 wild horses were counted. The weather conditions were ideal, with light winds and clear skies making it possible to fly the area continuously. An aerial inventory in 1975 tallied 297 wild horses in the area; however, this was probably an incomplete count. The weather conditions were opposite those of 1978. Low clouds and rain reduced visibility some of the time, and the helicopter was grounded for a day due to high winds; as a result, the area was not flown continuously.

The wild horses have enlarged their use area in an attempt to meet their forage needs. They have moved into the Buckskin Mountains on the east side of the Pine Nut Mountains, as well as causing problems by grazing lawns, eating hay stacks, and harassing domestic horses in the subdivisions on the west side of the Pine Nut Mountains. As a result of increased wild horse use in the subdivisions and the numerous complaints received, BLM made two emergency roundups in the subdivision areas. In January 1978, 65 wild horses were rounded up, and 82 wild horses were removed in December 1978. We are still receiving complaints about wild horse problems in the subdivision near Johnson Lane and Fish Springs Flat. These complaints are documented in the files of the Carson City BLM Office.

Range studies indicate that the vegetation resource is being damaged due to overuse - forage is not adequate to supply the present demand. Trend plots established for comparison of protected areas and unprotected areas show a substantial difference, even in areas of no livestock use (see Attachment II, Trend Plot Photographs and Table I - Trend Index).

Vegetation utilization studies (see Table II) indicate that the area is being over-utilized. In 11 allotments, the livestock permittees have been taking non-use due to the lack of forage caused by the wild horses (see Table III). The utilization studies in the allotments with non-use are showing heavy use, reflecting the wild horse presence. The Sunrise, Brunswick, and Illinois seedings are receiving severe use by the wild horses since these seedings are unfenced. Areas around water sources are receiving severe use. The water sources which are not fenced are being trampled by the wild horses and livestock, and, as a result, are not producing much water. The utilization studies also reflect the range survey and forage allocations completed in 1959. The forage in the Pine Nuts was surveyed as 22,389 Animal Unit Months (AUMs). Some 17,743 AUMs were allocated to livestock and the remaining 4,692 AUMs were allocated to wildlife. No forage was allocated for the wild horses (because they had no official status) during the adjudication. At the present time, according to NDW, the total deer demand in the Pine Nut Range is 8,371 AUMs on public and private lands. With the large number of wild horses, the forage is over-allocated (see Table IV) by 8,400 AUMs, estimating 700 horses in the area. The large over-commitment of the vegetation is resulting in elimination of grasses, and, as the brush increases, heavier utilization of the shrubs is occurring.

There are three recommended Wilderness Intensive Inventory Units in the Pine Nut Mountain Range: Eastern Pine Nut, Lyon Peak and Burbank Canyon (see Attachment III).

Trifolium andersonii beatlayae is on the threatened and/or endangered plant list prepared by the Nevada State Museum. This plant is in the wild horse area and has been located southwest of Sunrise Camp (see Attachment IV). No known threatened and/or endangered animals occur in the area; however, a complete inventory has not been conducted.

III. ANALYSIS OF THE PROPOSED ACTION AND ALTERNATIVES

A. Proposed Action

1. Environmental Impacts

a. Anticipated Impacts

Horses may experience stress during capture operations, but would eventually benefit when adopted and given proper care. Some horses may be injured or killed in the process of capture or being transported to the adoption center. Horses left in the Pine Nut Mountains will have better habitat, as the competition for food and water will be greatly reduced.

The vegetation resource in the area will recover from the overuse that is occurring. Grasses would have a chance to recover their vigor and re-establish themselves once they are allowed to go to seed.

The removal of the wild horses would make the area more desirable for wildlife. Mule deer habitat would benefit greatly, primarily on the summer range, but the winter range would also have less grazing pressure. If the livestock permittees activated the present non-use, the benefit would be lessened. Sage grouse would likewise benefit from the lessened competition on meadows. Year-long use by wild horses on riparian habitats, which non-game species are highly dependent upon, would be greatly reduced. Since livestock use is not year-long, its impacts are not as detrimental. The removal of the wild horses would allow the livestock permittees to make some grazing use of their allotments. This would be more desirable than the continued heavy year-around use by the wild horses, because the season of use by livestock is administratively controlled by BLM,

Until forage is re-allocated (scheduled in 1981) to meet wildlife, wild horse and livestock demands, there will continue to be overuse of forage, even with the proposed reduction of wild horses.

The wild horses remaining in the Pine Nut Mountains would be allowed to roam at will and redistribute themselves. The horses would still be visible to the public.

Some wild horse and burro interest groups or individuals may be against a roundup in the area. Some groups advocate a hands-off approach allowing nature to take its course.

b. Possible Mitigating or Enhancing Measures

- (1) A veterinarian should be available or on stand-by during capture and removal operations.
- (2) Wings on the corrals or traps should be constructed of material which would not cause injury to the horses.
- (3) Archaeological clearance of the corrals and trap sites should be done prior to construction, when the specific sites are selected.
- (4) Coordination with the wilderness specialist should be done prior to construction of the corrals and traps to avoid any possible impacts to wilderness characteristics in the three wilderness intensive inventory units.
- (5) No new roads, trails or permanent structures should be constructed. Travel should be confined to existing roads and trails, especially in areas of potential wilderness.
- (6) Only whole bands of horses should be removed, so band structures would not be disturbed.
- (7) No roundup should be done during the months of March, April and May, when the majority of foaling occurs.

c. Recommendations for Mitigation or Enhancement

All the above mitigating or enhancing measures be adopted as stated.

d. Residual Impacts

Localized disturbance to the soil and vegetation cannot be entirely avoided under the proposed action.

Natural revegetation will reduce the severity of the disturbance over a short period of time.

Injury or death of some wild horses may occur, despite safety and humane precautions.

2. Relationship Between Short-Term Use and Long-Term Productivity

The removal of wild horses from the area would affect the short-term heavy use of the area, but over a long-term, the wild horse population would rebuild. The wild horse population will have to be continuously reduced or the long-term productivity of the area will remain reduced.

3. Irreversible and Irretrievable Commitments of Resources

If a wild horse is sick or injured, it may be destroyed.

B. Alternative No. 1 - Remove All The Wild Horses

1. Environmental Impacts

a. Anticipated Impacts

This alternative would have the greatest impact on the wild horses in the Pine Nut Mountains. The horses would not be a part of the environment as they are now. The environment would be one of typical sagebrush and pinyon-juniper, common to all mountain ranges in the Great Basin. The main uses would be grazing by livestock and wildlife.

The vegetative resource would benefit greatly from the action. It has been heavily utilized and is showing signs of damage by declining range condition. This action would totally remove the heavy year-around use by wild horses. The desirable forage species would recover and become re-established.

This alternative would be the most beneficial for wildlife. Game and non-game species would increase in diversity and abundance, even if livestock grazing privileges were re-activated. Water quality and quantity would improve, as would the associated riparian habitats. Complete removal of the wild horses would prevent further migrations into adjacent allotments.

The public would lose the opportunity to observe wild horses in their free-roaming state in the Pine Nut Mountains. Wild horses could be observed at several other locations near Carson City and Reno, but observation opportunities for the region would be reduced.

b. Possible Mitigating or Enhancing Measures

- (1) A veterinarian should be available or on standby during the capture and removal.
- (2) Wings on the traps or corrals should be constructed of material which will not cause injury to the horses.
- (3) Archaeological clearance of the corrals and trap site should be done prior to construction.
- (4) Coordination with the wilderness specialist should be done prior to the construction of the corrals and traps, to avoid possible impacts of wilderness characteristics in the three wilderness intensive inventory units.
- (5) No new roads, trails or permanent structures should be constructed in the area.
- (6) The roundup should be conducted following the Bureau's guidelines for humane and safe treatment of the animals.

2. Relationship Between Short-Term Use and Long-Term Productivity

The complete removal of all the wild horses from the area would eliminate the long-term population productivity of the horses. The complete removal would also have a large short-term increase in vegetation in the Pine Nut Mountains, but over the long-term, productivity would level off.

3. Irreversible and Irretrievable Commitments of Resources

Sick or severely injured horses will be destroyed.

C. Alternative No. 2 - No Action

1. Environmental Impacts

a. Anticipated Impacts

The "no action" alternative would degrade the vegetation resource in the area to the point that the desirable forage plants may disappear in the accessible areas. The wild horse population would continue to increase in the area and continually increase pressure on the remaining vegetation. Presently, vegetation use is already heavy to severe, and by taking no action, the resource would be used to such an extent that additional desirable plants would tend to disappear, and be replaced by undesirable plants. The vegetative resource is in such a deteriorated condition presently that the horses are beginning to move into other areas in search of forage. Eventually, the remaining horses would suffer from lack of forage. The "no action" alternative would be highly detrimental to wildlife. With increased numbers of horses, additional pressure would be put on the deer summer and winter range. Even if livestock numbers were reduced, the deer habitat would continue to suffer. Year-long grazing on meadow areas could eventually eliminate sage grouse in the Pine Nut Mountains, even with a continued NDW "no hunting" policy. Meadows and riparian habitats would continue to deteriorate, with year-long horse use. These areas would have to be fenced to protect them from erosion and insure some suitable habitat for the grouse.

Non-game species would decrease both in diversity and abundance. Some rodent populations may increase. Severely overgrazed meadows and riparian habitats would deteriorate to the point of excluding many bird species.

b. Possible Mitigating or Enhancing Measures

- (1) Riparian and meadow areas should be fenced to protect critical wildlife habitat.
- (2) Livestock should be reduced annually as wild horse numbers increase.

c. Recommendations for Mitigation or Enhancement

All the possible mitigating or enhancing measures be adopted as stated.

d. Residual Impacts

The residual impacts of taking "no action" would be detrimental to the resource. Soil erosion would increase as the desirable forage is depleted. Meadows and riparian areas would be destroyed and undesirable plants would increase. Key wildlife areas would continue to decline, further limiting deer population in the Pine Nut Mountains.

2. Relationship Between Short-Term Use and Long-Term Productivity

The over-utilization of forage would continue and accelerate as animal populations increased. As forage was depleted, animals would move into other areas; the animal populations would level off due to starvation and diminished survival. The forage could be used to such an extent that it would never recover without extensive seedings or other costly rehabilitation efforts. The Bureau's image as range managers would be greatly injured if the resource were lost. The public would be concerned if large numbers of animals starved.

3. Irreversible and Irretrievable Commitments of Resources

The "no action" alternative would result in the soil/vegetation resource being damaged to the point that it would possibly never recover to a desirable state in many areas.

Sage grouse could possibly be totally eliminated in this area due to loss of habitat.

Deer numbers would decline, livestock grazing would be discontinued, and eventually wild horses would move to other areas when the range resource is totally lost.

D. Alternative No. 3 - Management Framework Plan Decision

1. Environmental Impacts

a. Anticipated Impacts

The 1975 Management Framework Plan (MFP) decision is to maintain a wild horse herd of 40 horses in the Eldorado-Brunswick Canyon area.

The anticipated impacts of this alternative would be very similar to the proposed action. The vegetation resource would recover more rapidly, with more net benefit to deer, sage grouse, non-game species, the remaining wild horses and livestock. The NDW has recommended the following:

"Reduce wild and free roaming horses from an 1977 estimated 350 horses in the Pine Nut Range to 50 or fewer animals. This will significantly reduce competition between deer and horses for forbs and grass."

(NDW: Wildlife Habitat Plans for the Future - Input into Land Management Agencies Planning Systems - Pine Nut - Markleeville Planning Units)

This alternative would be controversial, because many people in the subdivisions of Pinyon Hills, Johnson Lane, Fish Springs and elsewhere want horses in the area. At the present time, BLM is conducting a new range survey, using the Soil Vegetation Inventory Method, with information expected to be available by 1980. An environmental statement is scheduled in 1981 for the Pine Nut Unit, and forage will be reallocated at that time. Due to the intensive public involvement expected in that process, and the new data from the range survey, at that time a new MFP decision will be made on desirable numbers of wild horses to be managed in the Pine Nut area which would more accurately reflect public goals and range capability than the 1975 decision.

b. Possible Mitigating or Enhancing Measures

Same as proposed action.

- c. Recommendations for Mitigation or Enhancement
Same as proposed action.

- d. Residual Impacts
Same as proposed action.

- 2. Relationship Between Short-Term Use and Long-Term Productivity
Same as proposed action.

- 3. Irreversible and Irretrievable Commitments of Resources
Same as proposed action.

V. PERSONS, GROUPS AND GOVERNMENT AGENCIES CONSULTED

Fred Smith, Nevada Department of Wildlife
Fred Fulstone, Livestock Permittee

VI. INTENSITY OF PUBLIC INTEREST

People in the surrounding area and elsewhere vary in their opinions about the management of wild horses. Some recommend that the BLM not do anything with the wild horses while others feel some should be removed, because there are too many. Numerous complaints have been received from residents in the Pinyon Hills, Johnson Lane and Fish Springs subdivisions and are on file in the Carson City District Office.

The Nevada Department of Wildlife would like to see the wild horses removed to improve wildlife habitat.

The livestock permittees would like to see the wild horses removed so they would have some forage left for livestock use.

VII. PARTICIPATING AND REVIEWING STAFF

Dan Delany, Wildlife Biologist, Walker Resource Area
Frank D'Amore, Staff Wilderness Specialist
Steve Weiss, Recreation Planner, Walker Resource Area
Eddie Mayo, Staff Range Conservationist
Brian Hatoff, Staff Archaeologist
Joan Comanor, Environmental Coordinator

Initials

DD
FD
SW
EM
BH
JC

Prepared by:

Hal M. Bybee

Hal M. Bybee
Range Conservationist
Walker Resource Area

21 Aug 79
Date

Table I. Vegetative Trend Plot Index

<u>Allotment</u>	<u>Plot No.</u>	<u>Year Established</u>	<u>Trend Index</u>	<u>Year Reread</u>	<u>Trend Index</u>	<u>Trend Status</u>
Buckeye	1	75	27	79	20	Down
	2	75	150	79	121	Down
	2A	74	139	79	107	Down
	3	75	111	79	126	Up
	4	75	87	79	66	Down
	5	75	33	79	15	Down
	6	75	135	79	52	Down
	7	76	115	79	87	Down
Churchill Canyon	1	75	105	79	106	Up
	2	75	111	79	110	Down
	3	75	95	79	67	Down
	4	75	139	79	55	Down
	5	75	81	79	102	Up
Clifton	1	75	45	79	44	Down
	2	75	10	79	10	Static
El Dorado	1	75	96	79	125	Up
	2	75	90	79	29	Down
Hackett Canyon	1	76	18	79	19	Up
	2	76	39	79	13	Down
Jacobsen Ranch	1	76	32	79	14	Down
Mill Canyon	1	75	32	79	24	Down
	2	75	48	79	50	Up
	3	76	60	79	58	Down
Rawe Peak	1	76	45	79	63	Up
	2	76	104	79	93	Down
Pine Nut	1	75	75	79	45	Down
	2	75	93	79	81	Down
	3	75	47	79	24	Down
Sand Canyon	1	76	87	79	52	Down
	2	76	107	79	105	Down

TABLE 1. Continued

<u>Allotment</u>	<u>Plot No.</u>	<u>Year Established</u>	<u>Trend Index</u>	<u>Year Reread</u>	<u>Trend Index</u>	<u>Trend Status</u>
Spring Gulch	1	76	70	79	84	Up
	2	76	100	79	101	Up
	3	76	102	79	73	Down
	4	76	121	79	109	Down
	5	76	35	79	30	Down
Sunrise	1	74	77	79	50	Down
	2	71	32	79	21	Down
	3	75	21	79	21	Static

TOTAL: 27 Down*
 9 Up
 2 Static

NOTE: Trend Index is calculated from the following factors: Composition, Vegetative Cover, Litter and Seedings.

*Areas of downward trend correspond with areas of heavy horse concentration.

Table II.

RANGE UTILIZATION STUDIESPercent of Key Forage Species Utilized

<u>Allotment</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>
Buckeye	18%	83%	78%	
Churchill Canyon	69%	52%	73%	83%
Clifton	20%	17%	65%	
El Dorado	-	-	90%	
Gold Hill	29%	-	-	
Mill Canyon	40%	67%	70%	69%
Pine Nut	28%	-	71%	
Rawe Peak	28%	14%	28%	
Sand Canyon	47%	60%	-	
Sunrise	35%	65%	50%	

Table III.

Non-Use 1979 Grazing Year

<u>Allotment</u>	<u>AUMs</u>
Buckeye	954
Churchill Canyon	822
Clifton	218
Fish Springs	270
Hackett Canyon	32
Jacobsen	180
Mill Canyon	1449
Pine Nut	608
Rawe Peak	316
Sand Canyon	250
Sunrise	<u>1093</u>
TOTAL	6192

Table IV.

Forage Survey and Adjudication

<u>Allotment</u>	<u>Total AUMs</u>	<u>Livestock Demand</u>	<u>Wildlife AUMs</u>
Buckeye	5,308	4,757	551
Churchill Canyon	6,032	5,394	638
Clifton	2,206	772	1,434
El Dorado	948	946	2
Fish Springs	347	270	77
Hackett Canyon	489	538	-----
Jacobsen	220	180	40
Mill Canyon	2,796	2,049	747
Pine Nut	2,114	943	1,171
Rawe Peak	586	552	34
Sand Canyon	250	250	-----
Sunrise	<u>1,093</u>	<u>1,092</u>	<u>1</u>
TOTAL	22,389	17,743	4,695

ATTACHMENT II

TREND PLOT PHOTOS AND COMPARISON PHOTOS

Phenology Plot No. 10 - Churchill Canyon Allotment

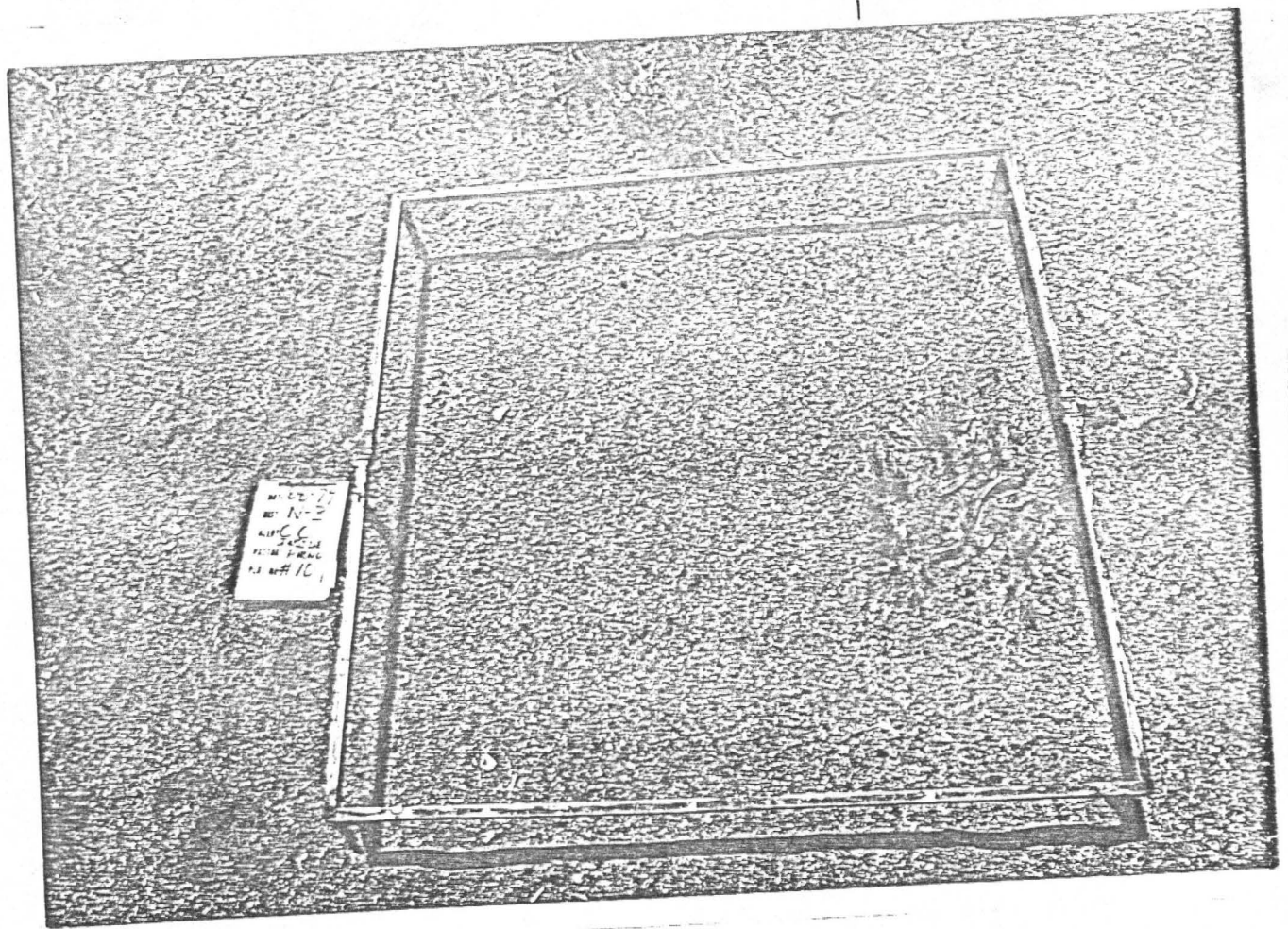


Photo No. 1 - This trend plot has been protected from all grazing except wildlife for three years. Note the desirable grass plant that is beginning to recover, and regain vigor.



Photo No. 2 - This trend plot was established to compare a protected area with an unprotected area. It was established the same time the protected plot was. (Compare to Photo No. 1.) The two dead grass plants (lower left corner) were once desirable forage plants.

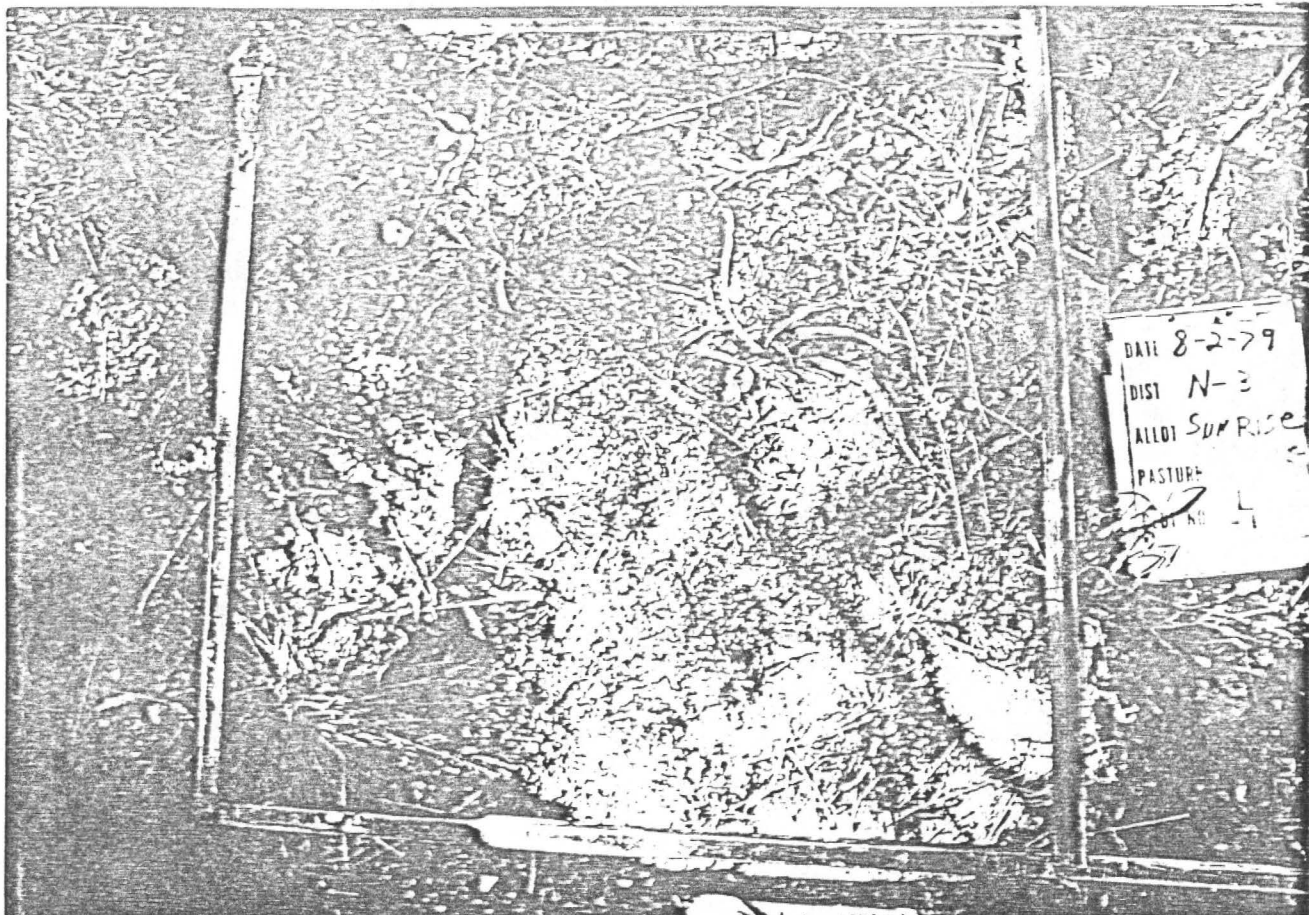


Photo No. 3 - This trend plot has been protected from grazing except wildlife for three years. Note the desirable grasses that have recovered and show excellent vigor.

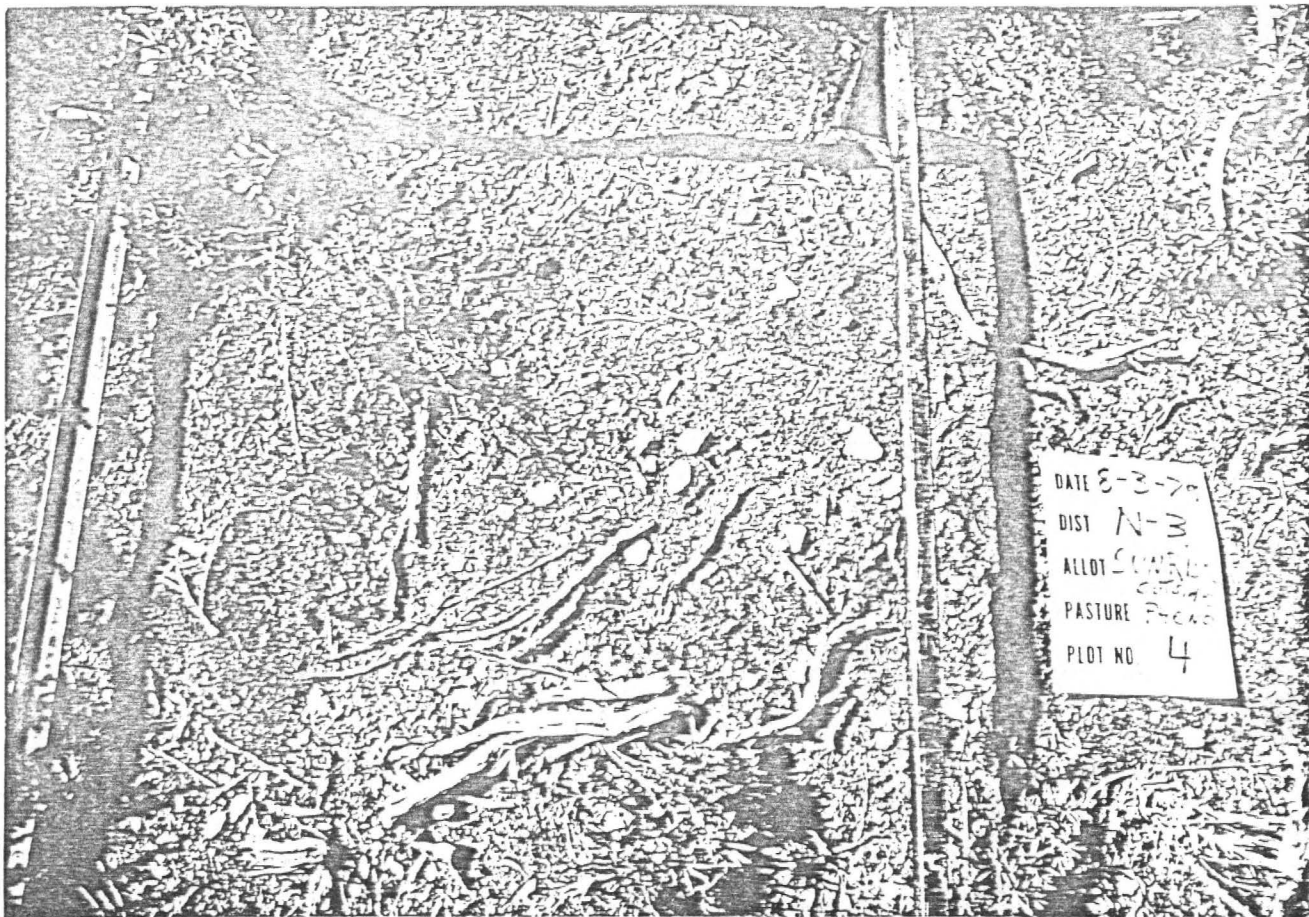
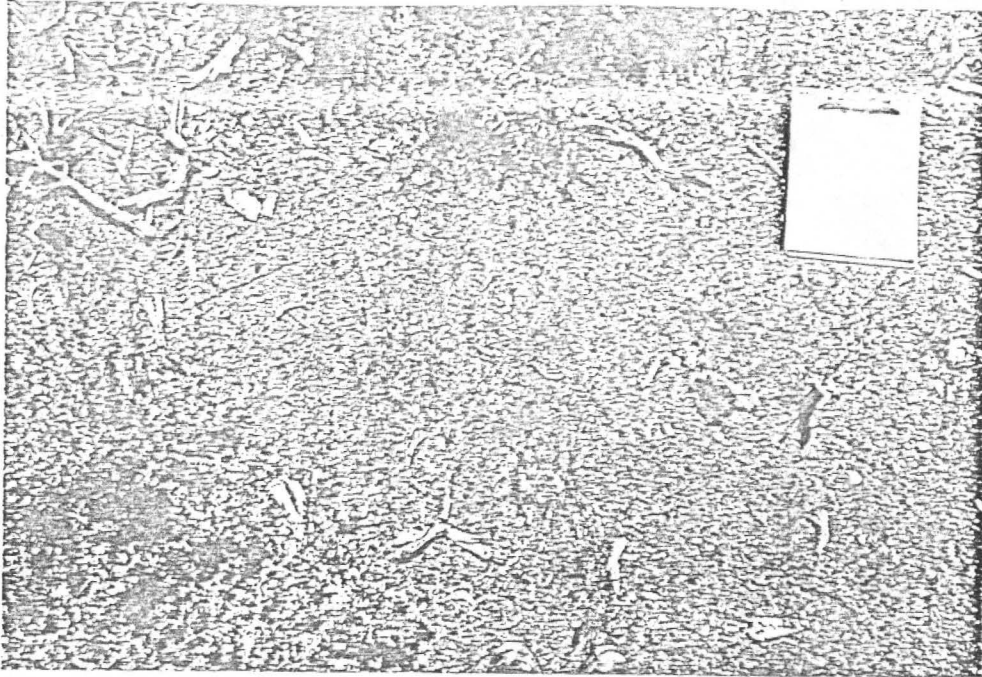
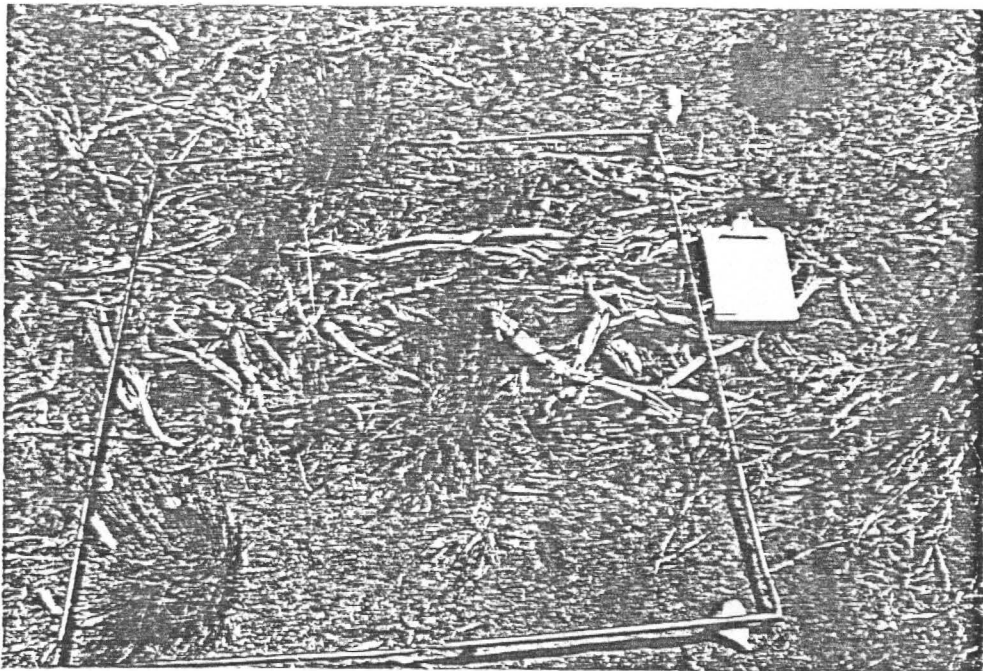


Photo No. 4 - This trend plot is unprotected (compare with Photo No. 3). This plot was established to compare apparent trend with a protected plot. Note the increase of an undesirable poisonous forb, lupine and very little grass.



This photo is the unprotected trend plot in the Sunrise Seeding. The frame is missing, but the corner angle irons mark the edge of the plot. Note the poor vigor of the crested wheatgrass. Livestock have not grazed this area for two years.

Photo No. 6



This photo is the protected trend plot within the seeding. Note the plant vigor and litter accumulation.

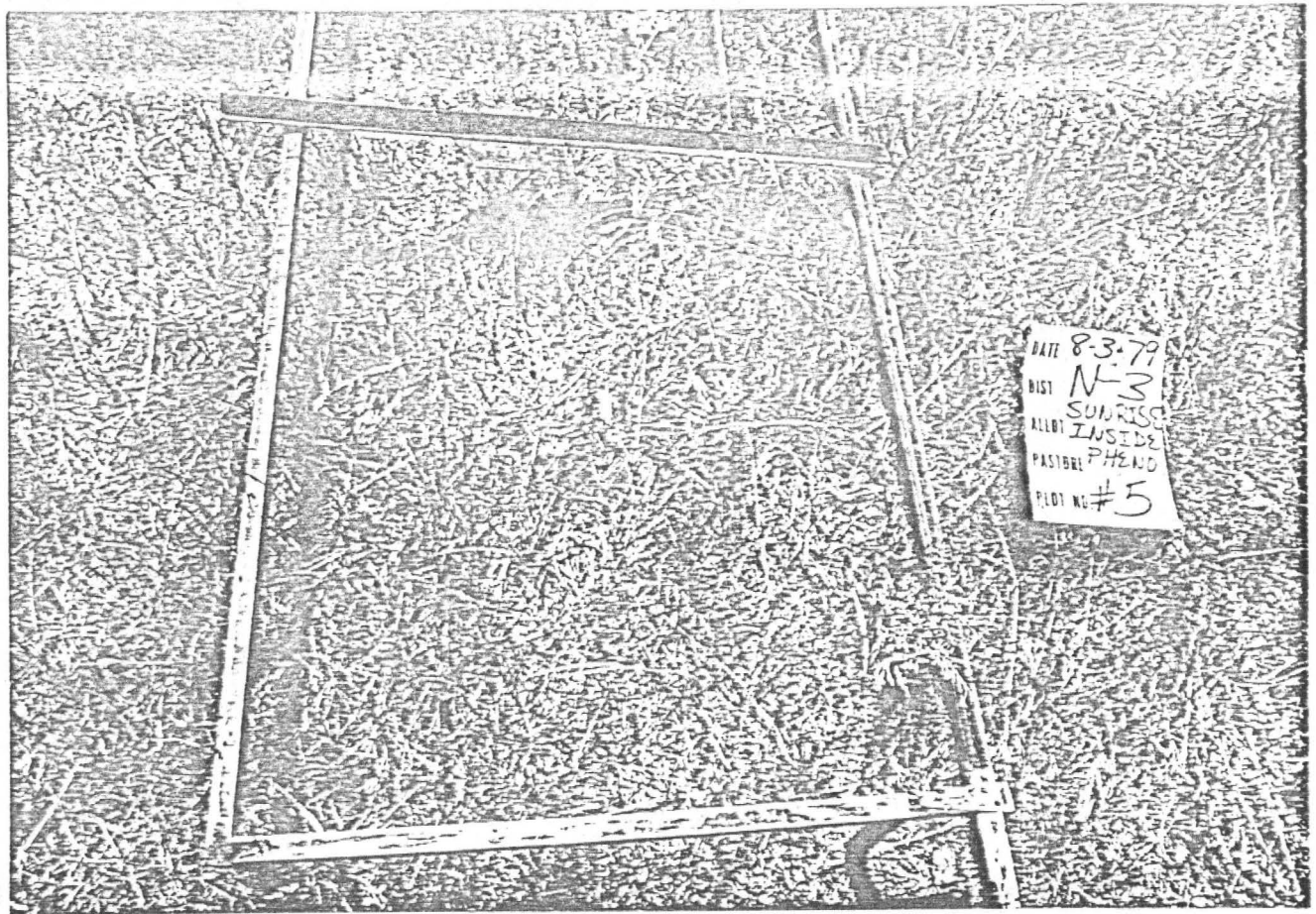


Photo No. 7 - This photo is a trend plot, designed to monitor a specific area inside the meadow, away from the water source. Note the abundance of grasses and grass-like plants. (Compare to Photo No. 8.)



Photo No. 8 - This plot was once part of the meadow. It is located just across the fence from Photo No. 7. Note the bare ground and vegetation grazed to the soil surface.

There has been no livestock in the area for two years.



Photo No. 9 - This photo is an overview of Photo No. 7. Note the vegetative potential when the meadow is protected from grazing.

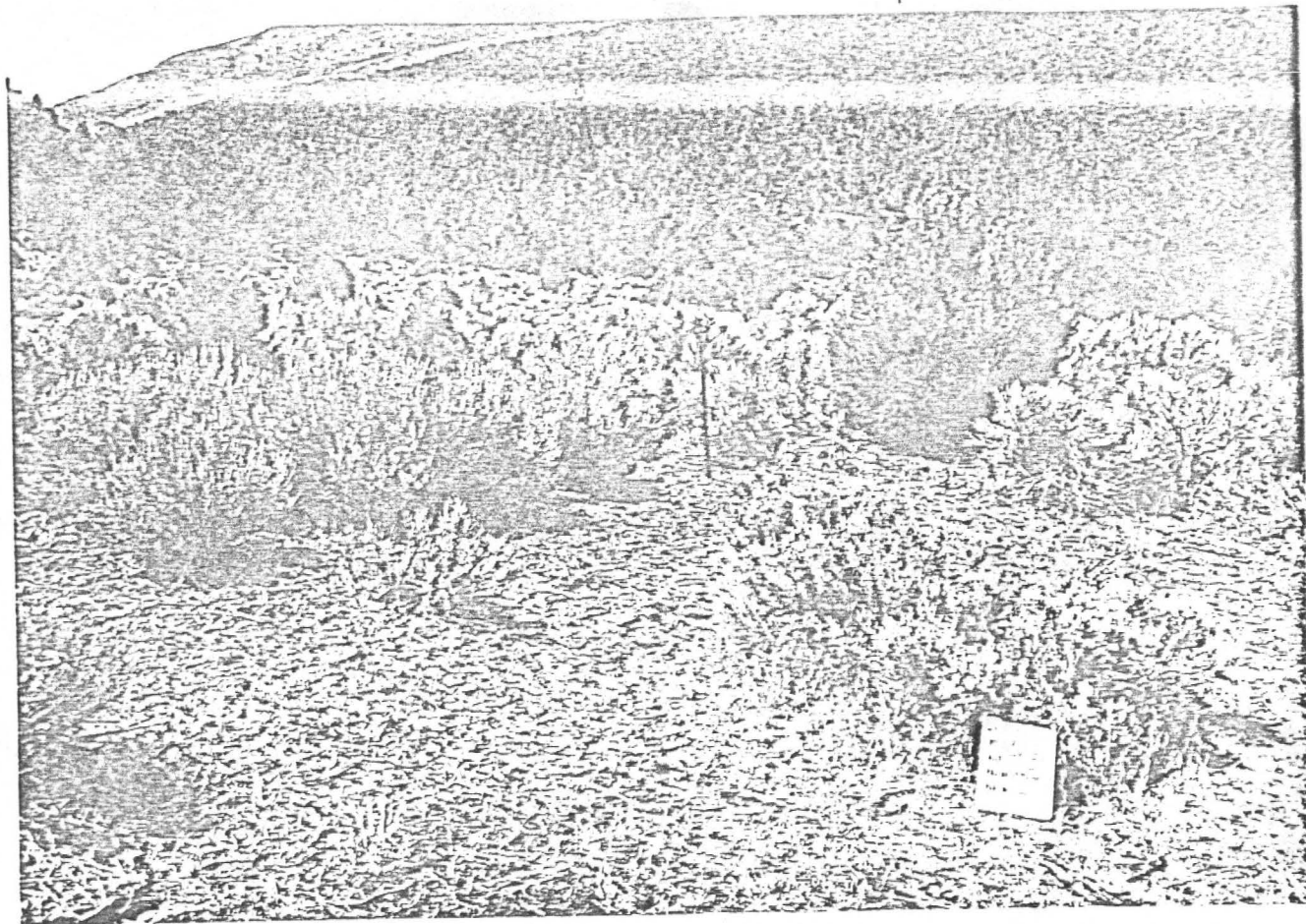


Photo No. 10 - This photo is an overview of Photo No. 8. Note the outline where the meadow once existed. The only meadow left in the area is protected by fence.

There has been no livestock in the area for two years.



Photo No. 11 - This plot has been protected for three years. Compare the subtle differences of Photo No. 12. Note the excellent vigor of the grass plants and accumulation of litter.

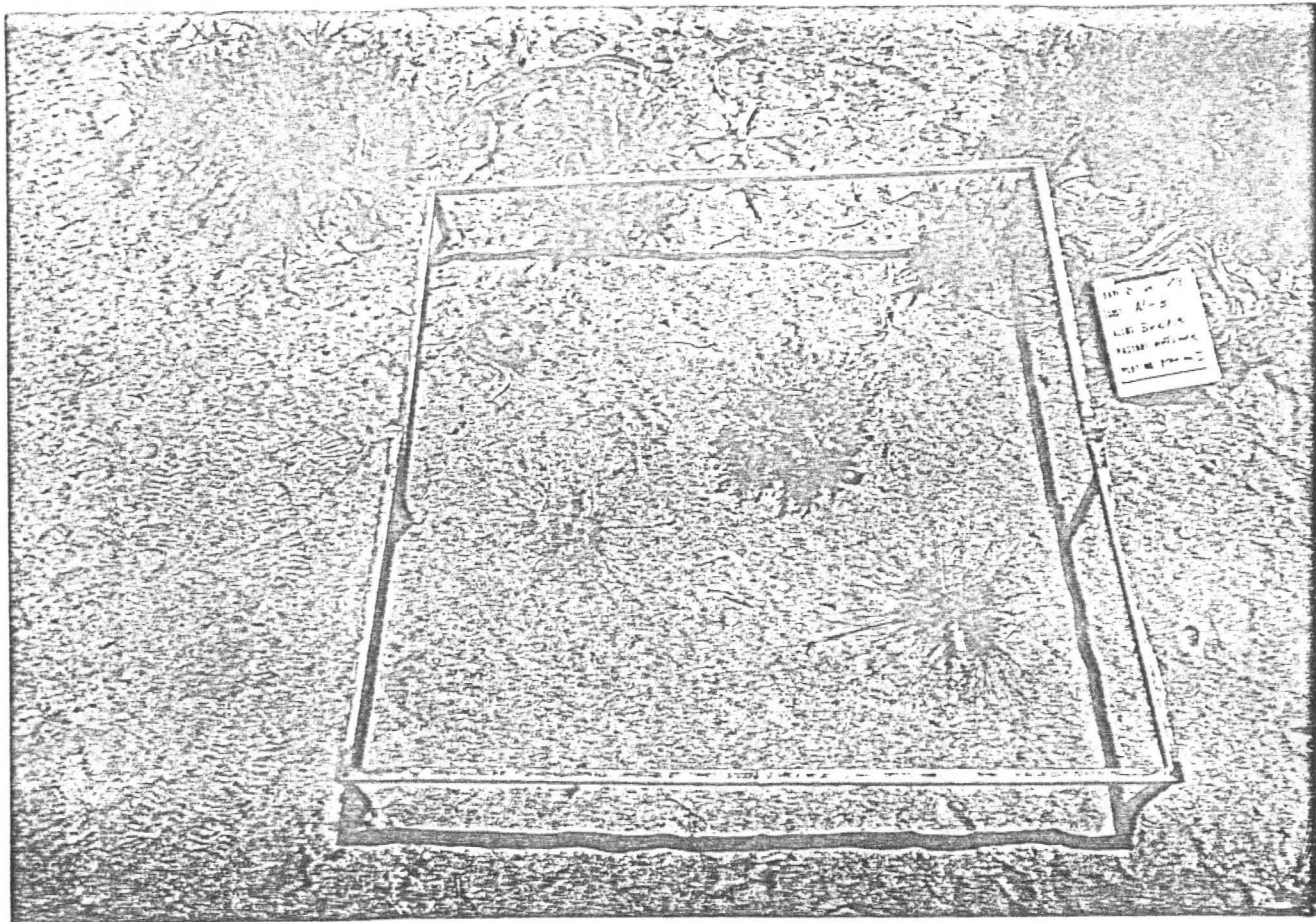
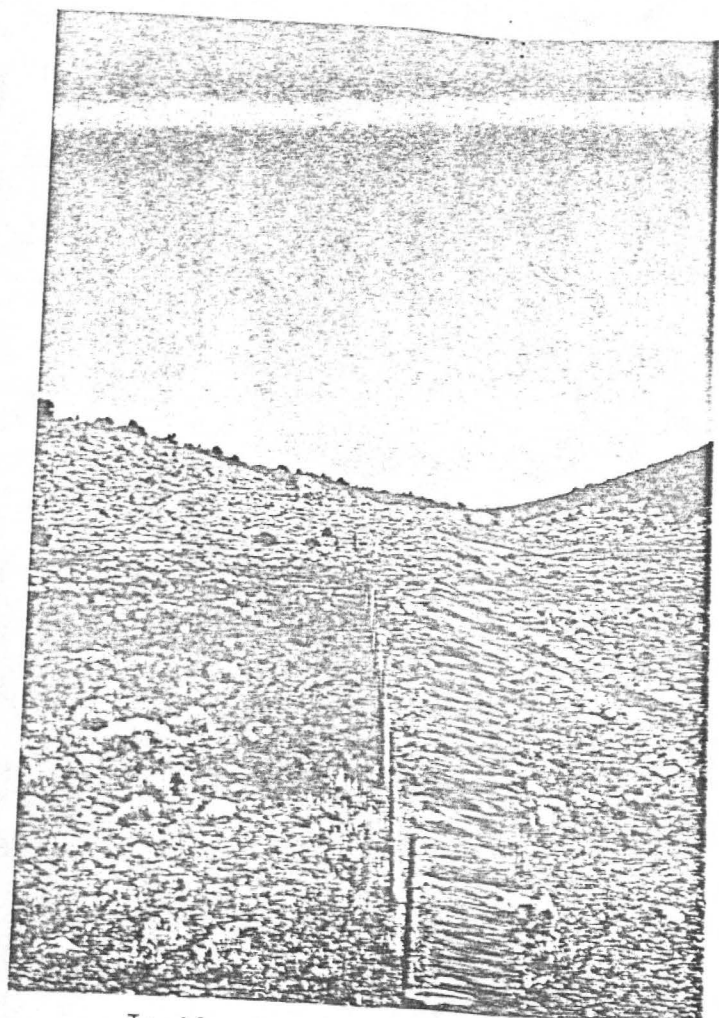


Photo No. 12 - This plot is for comparison to a protected site. (Compare to Photo No. 11.)

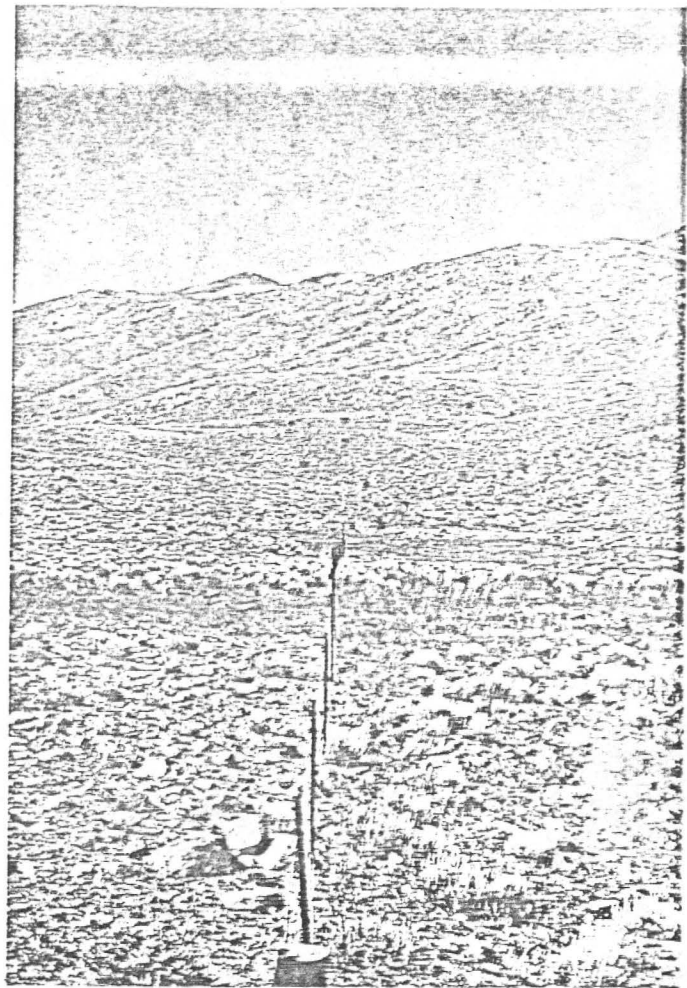
Note the poor vigor of the two grass plants and that one is dead. These plants have been continuously grazed. This photo was taken in August, and the plants are still trying to put out leaves.



Inside

Outside

Photo No. 13



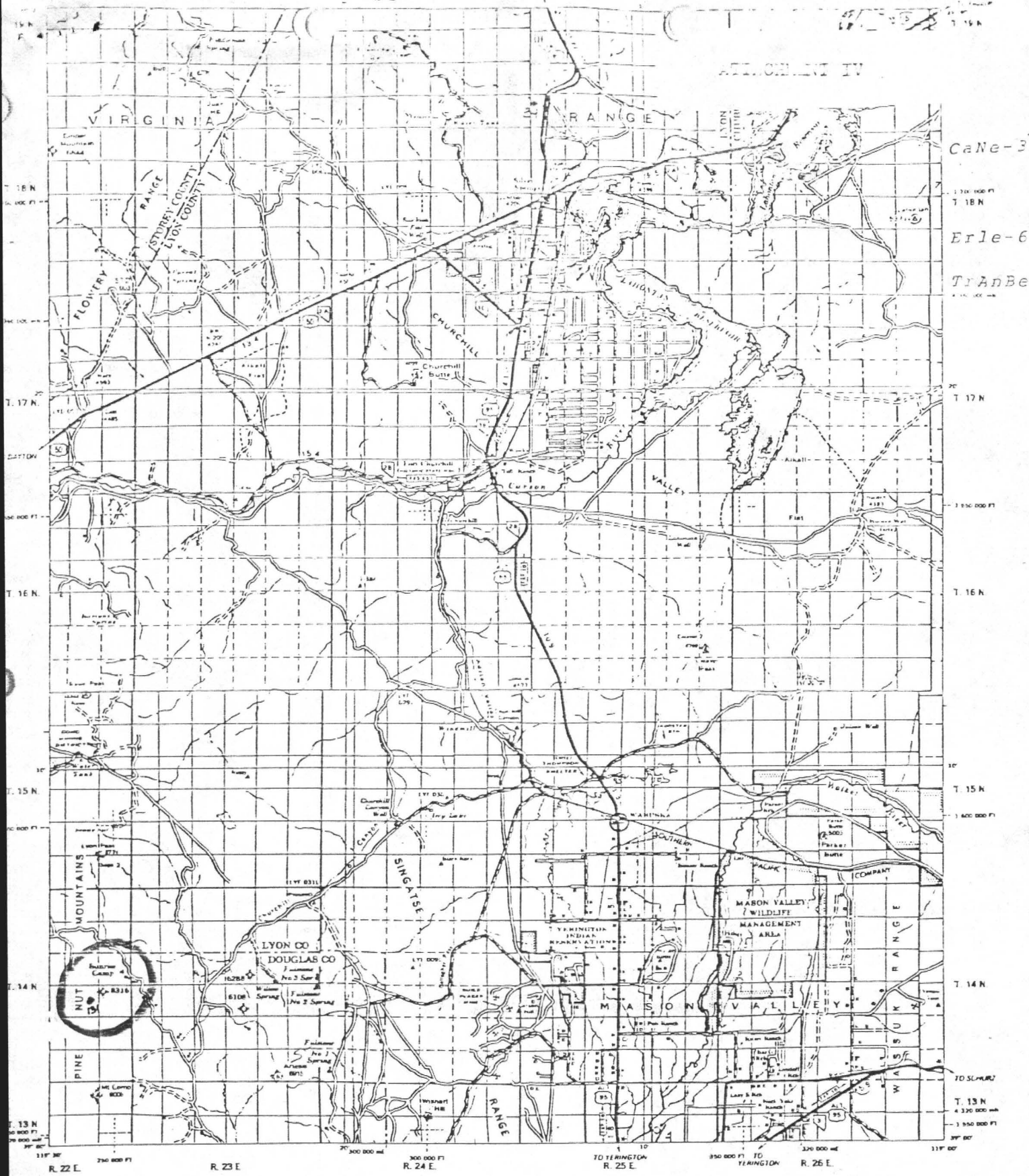
Outside

Inside

Photo No. 14

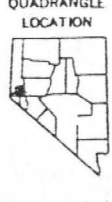
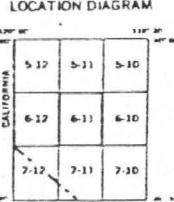
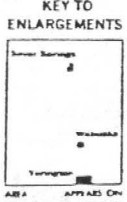
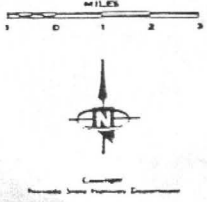
These two photos were taken in a meadow area fenced to protect key sage grouse habitat. Note the regrowth of the meadow inside the enclosure. These photos were taken five days after the fence was built. No livestock were in this allotment at the time.

ATTACHMENT IV



CaNe-34
 Erle-6
 TranBe

Topographic Symbols
 General Symbols and Abbreviations
 100 000 Feet Contour Interval
 Contour Interval 200 Feet
 200 000 Feet Contour Interval
 Contour Interval 200 Feet
 300 000 Feet Contour Interval
 Contour Interval 200 Feet
 400 000 Feet Contour Interval
 Contour Interval 200 Feet
 500 000 Feet Contour Interval
 Contour Interval 200 Feet
 600 000 Feet Contour Interval
 Contour Interval 200 Feet
 700 000 Feet Contour Interval
 Contour Interval 200 Feet
 800 000 Feet Contour Interval
 Contour Interval 200 Feet
 900 000 Feet Contour Interval
 Contour Interval 200 Feet
 1 000 000 Feet Contour Interval
 Contour Interval 200 Feet



GENERAL HIGHWAY MAP
QUADRANGLE 6-11
 CHURCHILL COUNTY 1969
 DOUGLAS COUNTY 1965
 LYON COUNTY 1968
 STOREY COUNTY 1965
 PREPARED BY
 NEVADA STATE HIGHWAY DEPARTMENT
 PLANNING SURVEY DIVISION