



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Ely District Office
HC33 Box 150
Ely, Nevada 89301-9408



IN REPLY REFER TO:

6500 (NV-047)

MAR 04 1992

Dear Reader:

Enclosed is a draft copy of the Little Smoky and Big Sand Springs Valley Habitat Management Plan and the associated preliminary Environmental Assessment No. NV-040-1-10.

We request your review and comments on the proposed action to manage wildlife habitats in the plan area to good or better condition, supply ample forage for mule deer and pronghorn antelope as well as provide sufficient water for antelope. The plan also outlines management objectives for the protection of riparian areas, sage grouse and other upland game bird habitats as well as protection of habitats of threatened, endangered and candidate animal species. The area of the proposed action is located in White Pine and Nye counties of the Ely BLM District.

Your comments should be received in our office by May 1, 1992 for consideration in the proposed action. If you have any questions or require additional information, please contact:

Michael Perkins, Wildlife Biologist
Bureau of Land Management
HC33, Box 33500
Ely, Nevada 89301-9401
or call (702) 289-4865.

Sincerely,

Gene L. Drais, Manager
Egan Resource Area

2 Enclosures

1. Little Smoky and Big Sand Springs Valley Habitat Management Plan (48 pp)
2. EA No. NV-040-1-10 (16 pp)

LITTLE SMOKY AND BIG SAND SPRINGS
VALLEY HABITAT MANAGEMENT PLAN
ENVIRONMENTAL ASSESSMENT

NV-040-1-10

Michael W. Perkins
March 1992

Ely District
Bureau of Land Management
Ely, Nevada

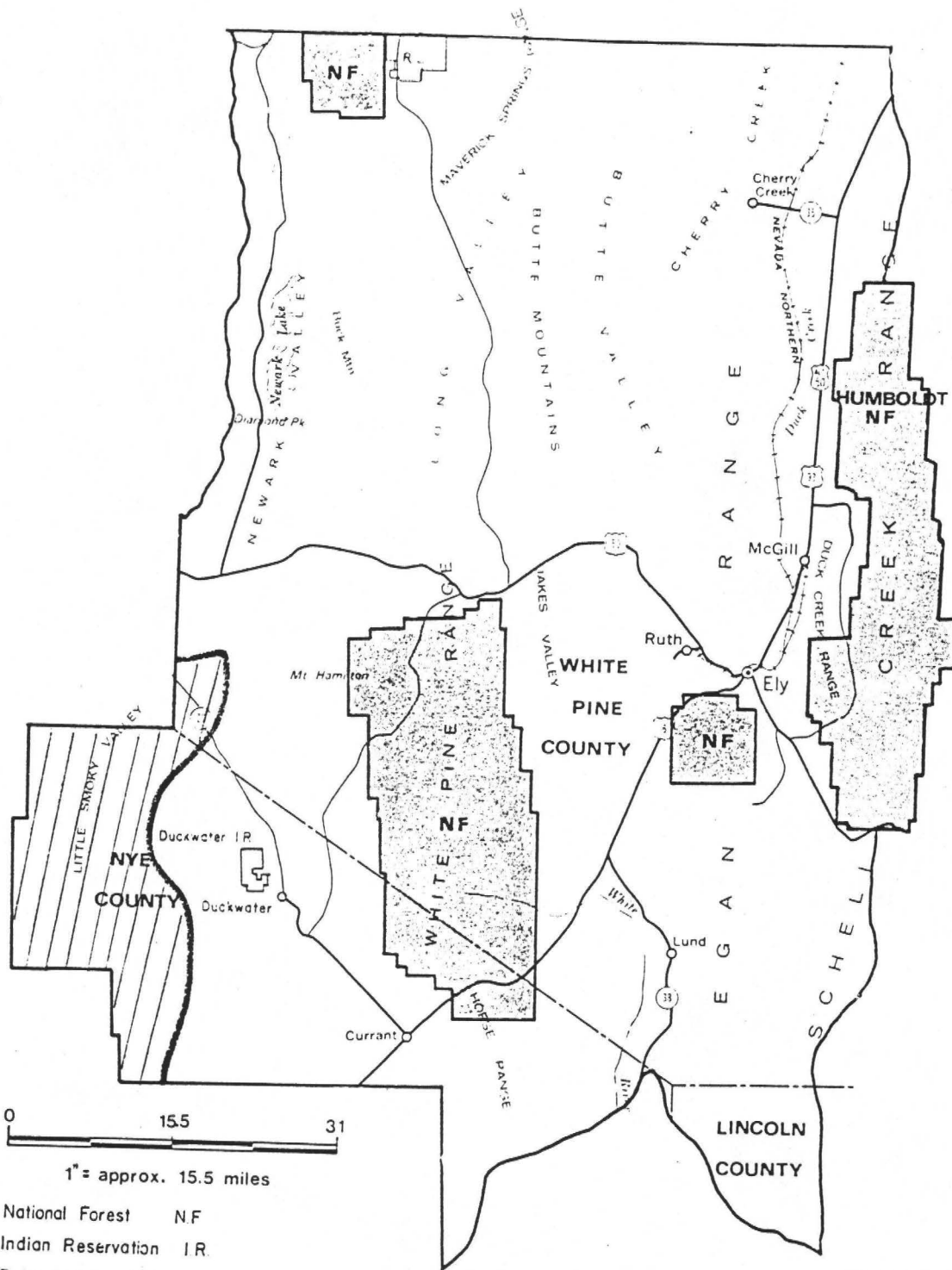


FIGURE 1.

EGAN R.A. HABITAT MANAGEMENT
ELY DISTRICT
 BUREAU OF LAND MANAGEMENT,
 U. S. DEPARTMENT OF THE INTERIOR

PLAN AREA



National Forest NF
 Indian Reservation I.R.
 Ruby Lake R.L.

I. Background Information

This EA analyzes the impacts of management objectives and planned actions of the Little Smoky and Big Sand Springs Valley Habitat Management Plan (HMP).

This habitat management plan is being written to address mule deer (both resident and migratory), pronghorn antelope (a proposed augmentation), the ferruginous hawk and upland game bird species as priority species. The plan area is located in White Pine and Nye Counties, Nevada, and approximately 288,152 acres (see figure 1).

Management objectives consist of: (1) Improve or maintain wildlife habitats within the HMP area; (2) Increase forage availability for mule deer, both resident and migratory animals; (3) Provide pronghorn antelope reliable water sources and increased forage availability to insure success of the proposed augmentation; (4) Provide for sage grouse and other upland game birds by protection of meadow habitat/and other crucial habitats; and (5) Protect habitats of T/E and candidate species.

Planned actions include improving existing forage quantity and quality by management actions via the allotment evaluation and subsequent decisions, making under-utilized forage available, developing water sources and protecting selected meadow riparian habitat.

II. Purpose and Need

The primary reason this HMP is being written is because of the importance of the area for sage grouse, mule deer and pronghorn antelope. The area also has several ferruginous hawk nest territories and the hawk has been petitioned to the U.S. Fish and Wildlife Service to be listed as a threatened and/or endangered species.

In the past and present, there has been and is over-utilization of key browse species and riparian areas by livestock and wild horses. The plan is being written to implement actions to protect crucial habitats of mule deer, pronghorn antelope, sage grouse, ferruginous hawks and other raptors.

III. Relationship to Planning

The management objectives and planned actions of this HMP are in conformance with the Egan Resource Area RMP-Record of Decision which was signed in February 1987. The plan assists with implementation of the RMP. The plan is also consistent with the Rangeland Program Summary issued for the

Egan Resource Area. These actions are consistent with other federal, state and county plans including The Policy Plan for the Management of Nevada's Wildlife through 1990. This HMP is also consistent with the White Pine County Plan for Public Lands developed in compliance with Nevada Senate Bill 40 in 1985. It does not conflict with any county or state land use or zoning decisions or recommendation.

IV. Major Issues

Conflicts among ungulates for available forage within the habitat area is the primary issue. Associated issues consist of degradation of riparian areas and habitat suitability (water availability) to allow for a pronghorn antelope augmentation.

V. Description of Proposed Action and Alternatives

A. Proposed Action

The proposed action is to implement the Little Smoky and Big Sand Springs Valley Habitat Management Plan. The plan details management of wildlife habitats in 288,152 acres of public land in the Ely District. The specific management objectives center around management of big and upland game habitats to good or better condition. Other objectives include improvement of mesic, as well as streamside riparian vegetation to good or better condition and installation of wildlife watering devices (guzzlers) for the benefit of mule deer, pronghorn antelope, and other wildlife. For more detailed information of the proposed action, see the HMP pages 19 thru 32.

Applicable Standard Operating Procedures

Standard operating procedures will be the same as listed in the Egan Resource Area - ROD signed February 1987. Pages 30-32, 1-9. Also, pages 28-29, 1 and 2 (needed for WH&B).

Description of Alternatives

No additional alternatives were considered in development of this HMP. The area would continue under present policies and management direction.

VI. Description of the Affected Environment

For a description of the HMP area affected environment see pages 2 thru 18 of the Little Smoky and Big Sand Springs Valley HMP.

VII. Environmental Consequences

A. Proposed Action

There will not be any impacts from the proposed action to the following resources: flood plains, prime or unique farmlands, wild and scenic rivers, T/E plants, and Areas of Critical Environmental Concern. Wilderness values will be enhanced by improved big game habitats as well as riparian areas being in good or better condition. Also, habitat being in good or better condition would allow these habitats to support a greater abundance and diversity of wildlife.

Threatened or Endangered Animals

Impacts to the endangered bald eagle and peregrine falcon would be realized by improved habitats for non-game bird and mammal species which are prey for these birds. Improved habitats will create a greater abundance and diversity of birds and small game and non-game species.

Candidate II species (candidates for listing) will have impacts from improved habitat conditions. These species include the snowy plover, long-gilled curlew and the white-faced ibis.

Habitats of the ferruginous hawk within the plan area will be managed to good or better conditions which will benefit the bird. The townsend ground squirrel has been determined to be the principal prey species of ferruginous hawk in the area of Nevada. The townsend ground squirrel is tied to white sage vegetation types as their principle habitat. Any negative impacts to this vegetation type would lead to reduced numbers of prey which in turn would lead to a decline of nesting pairs of the hawk. Objectives to limit the utilization level of white sage to conform with Nevada Rangeland Monitoring Task Force guidelines should benefit nesting ferruginous hawks and their prey.

Wetlands and Riparian Area

Monitoring of 6 sites, including mesic and dry meadow, aspen, cottonwood and other riparian sites for utilization values, will lead to adjustments in livestock grazing practices that will benefit riparian habitat conditions. Management of 7 acres of dry meadow, 10 acres of mesic meadow, approximately 600 acres of aspen and 174 acres of other riparian vegetation to good or better condition will benefit wildlife and other users of the HMP area.

PROJECT LOCATION
MAP

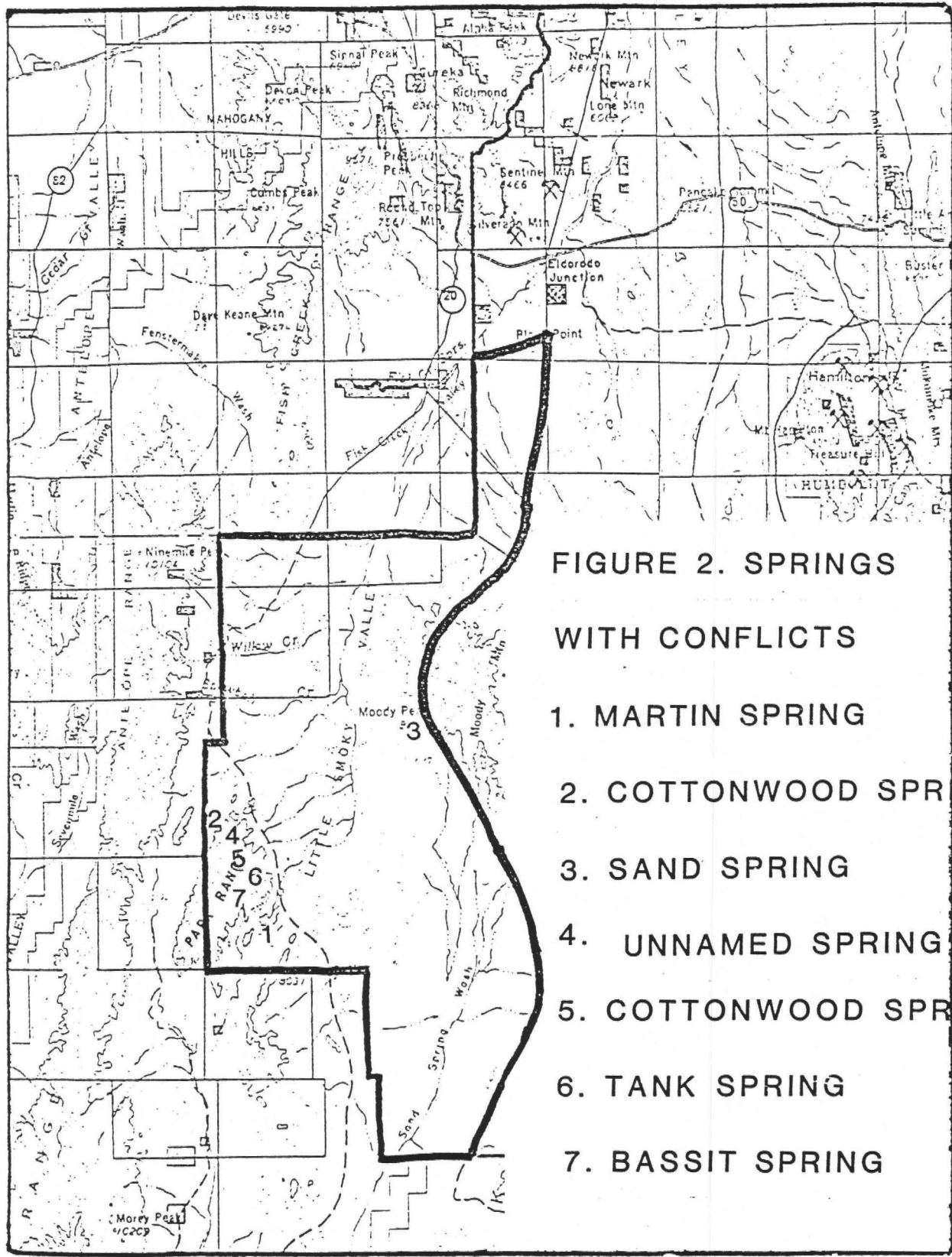


FIGURE 2. SPRINGS WITH CONFLICTS

1. MARTIN SPRING
2. COTTONWOOD SPRING
3. SAND SPRING
4. UNNAMED SPRING
5. COTTONWOOD SPRING
6. TANK SPRING
7. BASSIT SPRING



Improved riparian habitat condition will have the following benefits: increased livestock, wild horse, and wildlife forage; improved watershed, increased water quality and quantity, improved upland game bird brooding habitat, improved mule deer fawning areas and reduced sediment loads in waters.

There may be impacts to grazing by a reduction in numbers, change in season of use or use areas in order to meet riparian utilization objectives. There will be exclusion of livestock and wild horses from some riparian areas due to riparian area protection projects.

Visual Resource Management

There would be an impact to the visual resource with an improvement in riparian and other habitat types within the plan area.

The WSA portion of the HMP area is in a VRM Class II. There will be impacts to visual resources from fencing of riparian areas. Projects will introduce new lines and forms into the landscape. Since the majority of the area is in a interim Class III visual area no significant impacts are expected. Visual impacts would be minimized as much as feasible in order to protect scenic qualities of the Class III area and cause substantially unnoticeable contrasts within the WSA.

Social and Economic Values

Riparian improvements will benefit consumptive and non-consumptive wildlife users. Short term impacts to livestock permittees as well as wild horses could occur due to changes in seasons of use or use areas and/or reduction in numbers to meet riparian and upland habitat objectives.

Cultural Resources, Historical and Paleontological Values

Impacts to archaeological, historical and paleontological values will be addressed and mitigated or projects abandoned on a case by case basis.

Standard operating procedures as outlined in the Egan ROD will result in no impacts to cultural resources.


Water

Mesic riparian projects will increase water quality, quantity, and storage capacity due to elimination of livestock and wild horse trampling and increased mesic vegetation. At all spring developments water will be left at the source and water will be made available outside the fence for livestock and wild horses. All BLM water right requirements for water developments will be adhered to.

Air Quality

There may be a temporary deterioration of air quality due to ground disturbance projects.

Wild Horses

Short term riparian protection projects will impact horses by restricting their access to certain areas. Long term impacts will be beneficial due to increased water quality and quantity. Also, new fences may cause entanglement and/or death to horses. There would be a slight loss of AUMs available to wild horses due to the augmentation of antelope into the HMP area. 

Other Resources

Wildlife, mule deer and/or antelope may become entangled in riparian protection fences. In some instances, riparian protection fences will be BLM standard post and wire fences. In other cases, a post/pole buckrail design will be utilized. This will be determined on a case by case basis. Pronghorn antelope will have impacts from newly created free water sources created by guzzler installation. Pronghorns will utilize forage not previously available due to the distance from free water. Pronghorns will also have impacts from additional animals being augmented into native habitat. Mule deer will have impacts from additional free water sources (guzzler installation) and more evenly utilize forage recently unavailable due to the distance from free water. Other game and non-game species will benefit from these additional water sources. Hunters of all game species will benefit from increased animal availability. Wildlife viewers and photographers will benefit from increased numbers and viewing/photographing opportunities.

Riparian protection projects will benefit the following species:

blue grouse	chukar partridge
mule deer	sage grouse
Coopers hawk	Hungarian partridge
Goshawk	and various other game
pronghorn antelope	and non-game species.

Limiting utilization levels on browse species required by wintering mule deer will provide for adequate forage availability for wintering deer.

Livestock

Impacts to livestock will result from the following:

1. Reduced access to some riparian areas.
2. Utilization objectives on riparian and upland vegetation may result in change in seasons of use, use areas and/or reduction in cattle numbers (reduced preference).

Beneficial long term impacts:

1. Increased water quality and quantity of mesic riparian areas.
2. Increased vegetation availability within certain riparian protection projects.
3. Increased vigor and production of upland vegetation.

B. No Action

Beneficial impacts outlined under the proposed action would not occur.

Long term benefits to livestock and wild horses would not occur.

Short term detrimental impacts to wild horses, livestock and livestock permittees would not occur.

VIII. Proposed Mitigating Measures

Stocking rate and management changes arising from the allotment evaluation process should assist in mitigation of short term identified negative impacts of livestock grazing.

XI. Signatures

Prepared

by

_____ Name

_____ Date

Reviewed

by

_____ Environmental Coordinator

_____ Date

_____ ADM Resources

_____ Date

3-92

Little Smoky and Big Sand Springs
Valley Habitat Management Plan

WHA - 10

March 1992

Bureau of Land Management
Ely District Office
Ely, Nevada

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Abstract

This Habitat Management Plan (HMP) is being written to address pronghorn antelope, mule deer, T&E and candidate species and sage grouse as priority species. The plan area is located in White Pine and Nye Counties of the Egan Resource Area of the Ely BLM District. The plan area contains approximately 288, 152 acres (See Figure 1).

The main goals of this plan are to manage wildlife habitats in a good or better condition, supply ample forage for mule deer and pronghorn antelope, as well as sufficient water for antelope.

Objectives include: (1) Improve or maintain wildlife habitats within the HMP area; (2) Maintain forage availability for mule deer and pronghorn antelope; (3) Provide reliable water sources for pronghorn antelope; (4) Provide for sage grouse and other upland game birds by maintaining production of meadow habitat/and other crucial habitats; (5) Protect habitats of Threatened, Endangered and candidate animal species.

Objectives will be met by maintaining existing forage in good or better condition, making underutilized forage available, developing water sources and protecting selected meadow riparian habitat.

This HMP is written assuming a 15 year period of implementation. Some population responses may not occur for 15 to 20 years. The cost of implementation is \$41,000 + in 1990 dollars.

Both Region II and Region III offices of the Nevada Department of Wildlife (NDOW) have been involved in the preparation of this plan. People from 19 wild horse groups or associations, as well as private or concerned citizens and the Sierra Club will be contacted about the plan.

Ely District Bureau of Land Management (BLM) personnel will work closely to design a future Allotment Management Plan (AMP) for the Duckwater Allotment and a wild horse herd management area plan (HMAP) that will be critical in the success of the HMP.

I. Introduction

A. Reasons for Preparation

The Egan Record of Decision signed February 3, 1987, states on page 8 that "Habitat Management Plans will be completed on all habitat areas within the resource area".

There is a portion of one Nevada Department (NDOW) mule deer herd management unit within the HMP boundary. It is believed that mule deer from 3 NDOW management units winter within the HMP area. These deer migrate into the area from management areas (MA) 13, 14, and 16. MA 16 is contained within the HMP boundaries. There are portions of NDOW pronghorn management areas 164 and 131 in the HMP area.

There is a portion of one Nevada Department of Wildlife (NDOW) mule deer herd management unit within the HMP boundary. It is believed that mule deer from 3 NDOW Management Units winter within the HMP area. These deer migrate into the area from management areas (MA) 13, 14, and 16. MA 16 is contained within the HMP boundaries. There are portions of NDOW pronghorn management areas 164 and 131 in the HMP area.

A pronghorn antelope augmentation is proposed for the area, but not in the immediate future.

The HMP area lies within a portion of the Sand Springs East Wild Horse Herd Management Area (HMA) (Figure 8). An August 1991 census counted 936 horses in the HMA. A portion of the Monte Cristo HMA is also included in the HMP area. The August 1991 census counted 725 horses in the HMA.

Not all of the censused horses were in the HMP area, but several hundred horses are known to regularly use the area as home range.

Riparian areas within the HMP area range from pristine to deteriorated condition.

A possibility exists that desert bighorn sheep and Rocky Mountain elk also inhabit the HMP area in the vicinity of the Park Range. Both desert bighorn sheep and Rocky Mountain elk populations exist on Morey Peak just 10 miles south of the HMP area in the Tonopah Resource Area, Battle Mountain District. There are several sage grouse leks and ferruginous hawk nest sites within the HMP area.

B. Ecosystem Description

The Little Smoky/Big Sand Springs HMP area is located in southwestern White Pine and northwestern Nye counties of the Egan Resource Area of the Ely BLM District (see location map, Figure 1).

The HMP area is bounded on the west by the Shoshone - Eureka and Tonopah Resource Areas of the Battle Mountain BLM District, on the south by the Tonopah Resource Area, on the east by the Pancake Mountains and on the north by the Newark Grazing Allotment. The HMP also includes part of the Duckwater grazing allotment.

Because of their unrestricted movement, the herd boundaries of wild foraging animals can extend out of the plan area. Deer, antelope and wild horse areas extend out of the HMP area north, south and west into the Battle Mountain District and east into grazing allotments not covered by this plan. No projects or detailed planning will be made for the Battle Mountain District.

Riparian areas within the HMP area range from pristine condition to extremely poor, deteriorated condition. Conflicts stem not only from trampling but from overutilization of mesic vegetation by domestic livestock and wild horses. This has resulted in ecological degradation of some sites. Rating was done by visual inspection. Future monitoring studies and subsequent evaluations will ascertain the degree of riparian degradation.

There are two perennial creeks within the HMP area. Willow-Snowball Creek is in a fair habitat condition. Persistent drought has reduced creek flow so that it only reaches private land. Cottonwood Creek is in good condition and flows entirely on public land. Trampling by large ungulates on mesic meadow vegetation reduces the quality and quantity of waterflow and allows rabbitbrush to invade the meadows. Invasion of pinyon-juniper trees also uses water and reduces meadow size.

The following Springs (Figure 2) have conflicts associated with them:

Cottonwood Spring	-	T. 13 N.	R. 51 E.	sec. 36
Sand Spring	-	T. 13 N.	R. 54 E.	sec. 33
Unnamed Spring	-	T. 12 N.	R. 52 E.	sec. 33
Cottonwood Spring	-	T. 12 N.	R. 52 E.	sec. 5
Tank Spring	-	T. 13 N.	R. 52 E.	sec. 33
Bassit Spring	-	T. 12 N.	R. 52 E.	sec. 21

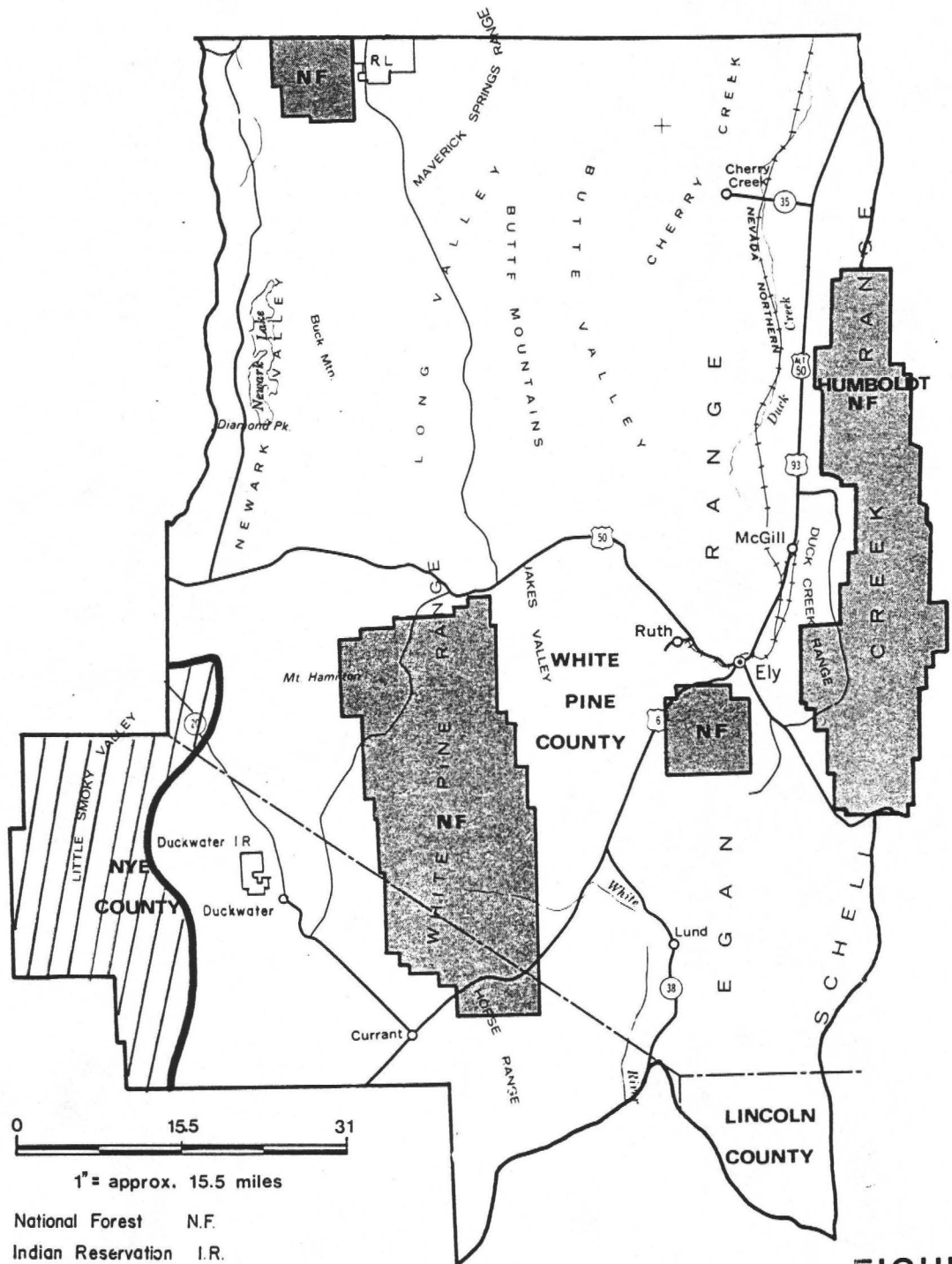


FIGURE 1.

National Forest N.F.
 Indian Reservation I.R.
 Ruby Lake R.L.

EGAN R.A. HABITAT MANAGEMENT
ELY DISTRICT
 BUREAU OF LAND MANAGEMENT
 U. S. DEPARTMENT OF THE INTERIOR

PLAN AREA



**PROJECT LOCATION
MAP**

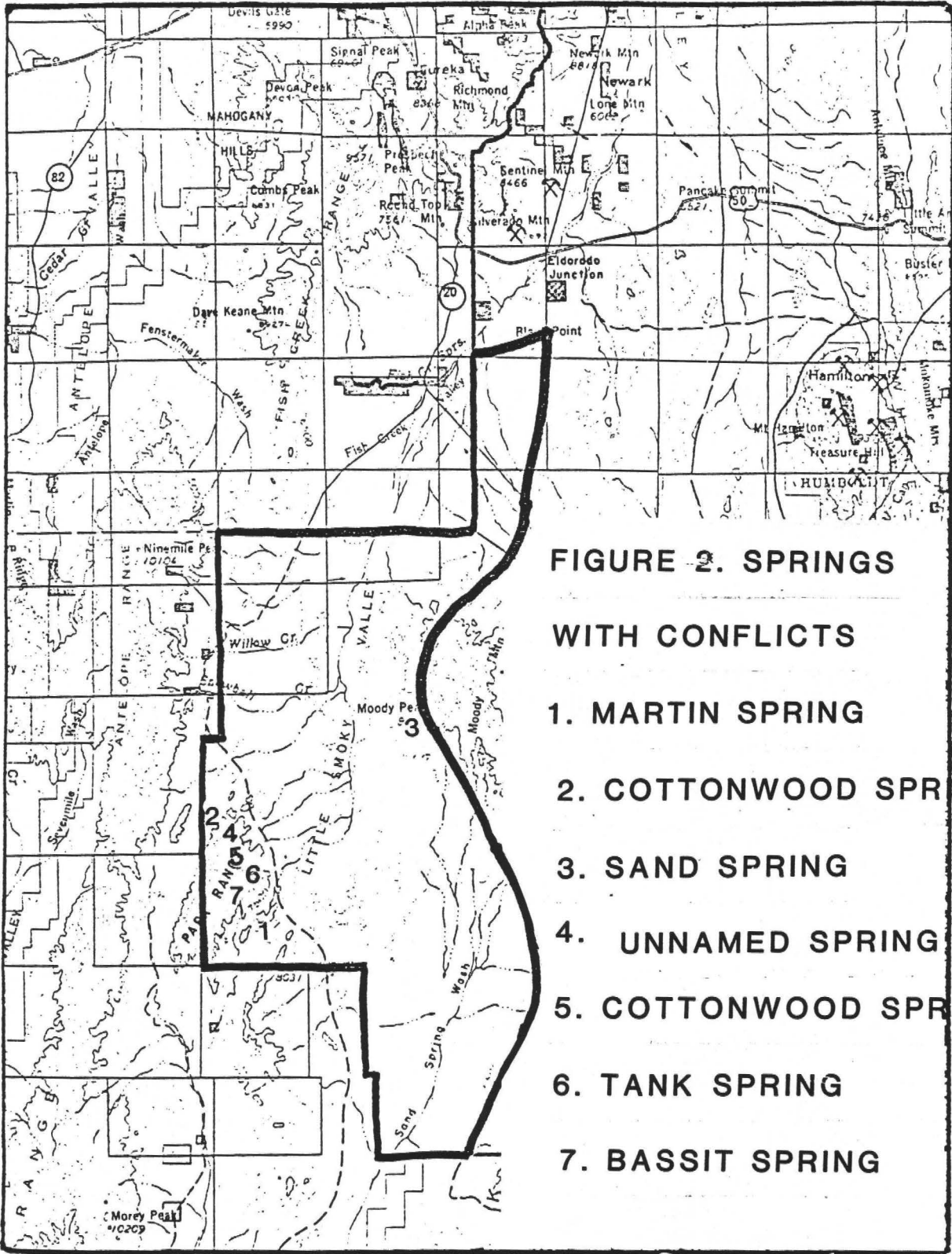


FIGURE 2. SPRINGS WITH CONFLICTS

1. MARTIN SPRING
2. COTTONWOOD SPRING
3. SAND SPRING
4. UNNAMED SPRING
5. COTTONWOOD SPRING
6. TANK SPRING
7. BASSIT SPRING



1. Climate

The climate of the HMP area is arid to semiarid. Temperatures range from maximums as high as 100 degrees F. to winter lows falling well below zero. The growing season is between 90 and 120 days. Prevailing winds are from the south-southwest in the summer and from the north in the winter. Average humidity is from 40-50 percent. Effective annual precipitation is primarily from early spring rains and winter snows. Some localized storms are quite intense and have caused flash flooding in the valleys. Desert shrubs which tap deep moisture reserves are dependent on the winter moisture, whereas grasses and forbs are dependent on spring moisture available at shallow depths. Effective precipitation is also limited by rapid evaporation rate.

2. Topography

The HMP area is rural in character. Topography consists of valley floors, alluvial fans, canyons, mountains, steep ridges, and basins. Major valleys in the HMP area are Big Sand Springs and Little Smoky. The major mountain range is the Park Range. Portuguese Mountain and Park Mountain are major (or prominent) geographic features in the area. No major streams flow in the HMP area although there are two small perennial creeks in the extreme northwestern corner of the HMP area flowing off the east side of the Antelope Range. Elevations range from about 6000 feet in the valleys to the 9058 foot Park Mountain in the southeast portion of the HMP area.

3. Geology and Soils

Three soil orders are represented in the HMP area. In order of predominance they are; Aridisols, Entisols, and Mollisols. For purposes of this discussion the HMP area will be broken down into four physiographic (landform) groups.

A. Alluvial fans and associated alluvial flats.

Soil subgroups found in this area include Typic Camborthids, Xeric Torriorthents, and Typic Torriorthents. Vegetation found on these soils consists of Wyoming and basin big sagebrush. Animal activity may be affected due to periodic flooding and inundation of subsurface burrows.

B. Alluvial fan remnants bordering mountains.

Soil subgroups found in these area's include Xerollic Durorthids and Xerollic Haplargids. Vegetation supported is primarily black sagebrush, although some area's may support Wyoming big sagebrush. Animal activity is restricted; burrowing and other subsurface activities are extremely limited due to the cemented subsurface layer.

C. Rolling rock pediments (low hills).

Soil subgroups found on this landform include Lithic Xeric Torriorthents and Lithic Xerollic Haplargids. Vegetation found on these soils include Wyoming big sagebrush, antelope bitterbrush, and occasionally black sagebrush. Subsurface animal activity can be limited to some degree by the dense clay layers but generally these soils support a wide biological diversity.

D. Mountains (Park Mt.)

Soil subgroups found on this landform consist of Lithic Xerollic Haplargids and Lithic Argixerolls. Large rounded volcanic boulders and rock outcrop exposures offer little stability for soil development. Vegetation may include antelope bitterbrush, mountain big sagebrush, Wyoming sagebrush, and pinyon pine. Animal activity is somewhat restricted. However, the large volume of boulders and associated cracks and crevices offer ample shelter for dens and middens.

4. Other Land Uses

The habitat area lies within the Basin and Range Physiographic Province which was developed by the extension or pulling apart of the region. High angle faults, uplifted and down-dropped blocks of crust, produce the characteristic basin and range geography of long sub-level, north trending mountain ranges separated by broad alluvial valleys.

a. Oil and Gas Exploration

A recent increase in exploration activity has occurred in the Egan Resource Area. There have been several development contracts issued for the area of this Habitat Management Plan. These contracts are to develop geologic knowledge of the area for oil and gas exploration. Two "wildcat" wells have been drilled in the area. Geophysical activity is expected to continue at a rate of two to four operations per year. The valley has a high potential for oil and gas while the mountains have moderate potential.

b. Minerals

There are no major mineral activities in the HMP area. Exploration in the Pancake Range is increasing and a new mine is expected to open in the near future. Exploration could increase in the HMP area with the new mine's development. The HMP area has low potential for locatable and salable mineral resources except the west side of the Park Range, which has moderate potential for barite resources.

c. Recreational Uses

Contrasting and varied topography make the HMP area visually pleasing to many people. Some recreational use of wild horses, either by viewing or photography, is made by visitors to the area. Sand Springs Valley, though remote, offers an excellent opportunity for viewing large numbers of horses.

There is recreational use of the area by the backpacking community. A portion (47,268 acres) of the area is the BLM Park Range Wilderness Study Area (WSA) and is highly suitable for solitude and backpacking adventure.

Other recreation in the area is limited, with hunting and trapping being the major recreational activities. Deer and upland game hunting occur in portions of the area. Hunting seasons for deer normally occur from August (archery) through

mid-November (rifle). Upland game seasons extend from September through late January. Trapping activities are moderate with peak activity from October through mid-February.

d. Livestock Grazing

There are currently 30,252 livestock animal unit months (AUMs) within the Duckwater Allotment. Livestock use in Little Smoky and Big Sand Springs Valleys includes both cattle and sheep. In the HMP area, cattle use, historically, has been winter use (November 1 thru April 15) and limited to the Duckwater Stockman's Association cattle and one permittee licensed by the Battle Mountain District. Up to 14,000 sheep can be found within the entire allotment at various times during the winter use period. Since the Duckwater Allotment does not have formal use areas, any of the allotment's 10 permittees could technically graze livestock in the HMP area.

e. Agricultural

There have been no DLE applications within the area.

5. Vegetation

Major plant associations are big sagebrush-grass, black sagebrush-grass, pinyon-juniper, and winterfat-saltbush flats.

The dominant shrub in the big sagebrush-grass community is big sagebrush (Artemisia tridentata). Other shrubs occurring in this type are greasewood (Sarcobatus vermiculatus), spiny hopsage (Grayia spinosa), and green rabbitbrush (Chrysothamnus viscidiflorus). At higher elevations Utah serviceberry (Amelanchier utahensis) and antelope bitterbrush (Purshia tridentata) are frequently found. Common forbs include buckwheat (Eriogonum ssp.), princesplume (Stanleya pinnata), mustards (Brassica spp.) and lupine (Lupinus spp.). Common grasses include Great Basin wildrye (Elymus cinereus), western wheatgrass (Agropyron smithii), Sandberg bluegrass (Poa secunda), bluebunch wheatgrass (Agropyron spicatum), galleta grass

(Hilaria jamesii), Indian ricegrass (Oryzopsis hymenoides), bottlebrush squirreltail (Sitanion systrix). Where perennial grasses have been overutilized or removed by fires, cheatgrass (Bromus tectorum) has become the dominant understory.

The dominant shrubs in the black sagebrush-grass community are black sagebrush (Artemisia nova), green rabbitbrush, shadscale (Artiplex confertifolia), winterfat (Ceratoides lanata), and Mormon tea (Ephedra viridis). Common forbs in this type are mustards, buckwheats, locoweed (Oxytropis spp. and Astragalus spp.) pepperweeds (Lepidium spp.) and penstemon (Penstemon spp.). Common grasses include western wheatgrass, Sandberg bluegrass, Indian ricegrass, bottlebrush squirreltail, and galleta grass.

The pinyon pine-juniper type occurs on valley benches and extends into the higher elevations. The pinyon pine (Pinus monophylla) and Utah juniper (Juniperus osteosperma) are the dominant overstory. Understory plants include segments from the big sagebrush-grass and black sagebrush-grass communities. Other shrubs occurring in the pinyon pine-juniper type are curleaf mountain mahogany (Cercocarpus ledifolius), little leaf mahogany (Cercocarpus intricatus), Mormon tea, snowberry (Symphoricarpos spp.) and cliffrose (Cowania mexicana). At higher elevations and where water is at or near the ground surface there are scattered patches of aspen (Populus tremuloides) in the area. However, this community is not extensive in the HMP area.

The fourth major plant association is the winterfat-saltbush flats. This plant association occurs on the valley bottoms and lower valley benches. The dominant shrubs in this type are shadscale (Atriplex confertifolia) and winterfat. Other common shrubs in this type are spiny hopsage, greasewood, budsage (Artemisia spinescens), green molly (Kochia americana), green rabbitbrush, and big sagebrush. The most common forbs are buckwheats and mustards. The most common grasses are galleta grass, Indian ricegrass, bottlebrush squirreltail, and various dropseeds (Sporobolus spp.).

Within the HMP area, Sand Springs Valley is the only portion that has an ecological site inventory completed. This inventory completed 87,744 acres in 1986 with the following condition breakdown:

Early Seral:	6,049 Acres
Mid Seral :	75,087 Acres
Late Seral :	6,605 Acres
PNC :	0 Acres

See Appendix F for more specific condition information.

6. Cultural

The HMP area encompasses numerous prehistoric cultural resource areas. Cultural occupation of the Little Smoky Valley area occurred from the PaleoIndian Period (12,000 B.P.) to the Late Prehistoric - Contact Period (1850 A.D.). Typical prehistoric sites within this part of the Great Basin are characterized by open lithic tool and debitage scatters. Other more unusual sites such as rock shelters with preserved perishable artifacts, rock art sites, and small hunting blinds also occur. The plan area contains at least one extensive prehistoric antelope wall or trap which dates to the Archaic Period (3,000 B.P.). This site is constructed of basalt boulders and juniper trunks and encompasses an area of at least 1/2 mile and contains over twenty individual hunting blinds.

The Park Mountain area hosts significant extensive upland manifestations of Early archaic occupation as well as Late Prehistoric occupation. Habitation structures such as rock rings and wickiups are common. The Portuguese Mountain area contains significant extensive complexes of upland rock rings and alignments which represent both habitation and pinyon nut storage caches.

Historic sites are uncommon in the area though there is evidence of late nineteenth century occupation at Sand Springs and Summit Station, which served as stage stops. Hick's Station and Pritchard's Station are just outside the boundaries of the HMP. These areas also served as stage stops.

7. Wilderness

The Park Range Wilderness Study Area (WSA) lies partially within the west central boundary of the HMP area. The Park Range WSA (NV-040-154) was designated a WSA in 1980. This WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA), and the Final Wilderness EIS was filed in October 1987. The WSA contains 47,268 acres, all of which are recommended as suitable for wilderness designation.

Only Congress can designate wilderness or release a WSA from WSA status. The Park Range W.S.A. has been recommended to Congress by the Secretary of Interior for designation as wilderness. Until Congress either designates or releases the Park Range area it will continue to be managed under the policies set forth in the Interim Management Policy and Guidelines for Lands Under Wilderness Review, (USDI, BLM, 11/10/87).

8. VRM

Since a VRM inventory has not been completed for the Egan Resource Area, the entire Resource Area is considered to be in an Interim Class III management area. WSA's are considered to be VRM Class II.

9. Water Resources

The general paucity of springs recorded on the water survey is as expected in this arid and semiarid area. Catchments and springs are the principle water source in the area. Spring sources can be found widely scattered through the mountain areas, particularly near Park Mountain. The few developed springs in the area have a low rate of flow and provide less than 2 gallons of water per minute on a regular basis. Some even dry up completely during periods of drought. Reservoirs are the principal water source in the arid valleys. These reservoirs provide an ephemeral water source, since they only catch water during high rainfall periods and dry up the remainder of the year.

Springs, reservoirs, and occasional intermittent streams from snowmelt provide a water supply of generally fair to good quality. Competition by large animals (wildlife, wild horses, livestock) for use of this water is a threat to future maintenance of water

quality and quantity as evidenced by excessive trampling of both developed and undeveloped springs and seeps.

Small riparian areas occur with seeps, springs, and creeks throughout the HMP area. Vegetation found in these areas need wetter conditions than surrounding plants. Rushes, sedges, forbs, and deciduous trees that rarely occur elsewhere are found on these sites. All large ungulates (mule deer, wild horses, and livestock) use these areas for water, shade, succulent forages, and to pick up trace minerals from the different vegetation.

Following is a list of water sources in the HMP area. These sources were identified during the water inventory conducted during 1981 - 83.

<u>Legal Description</u>	<u>Source Type</u>	<u>Condition</u>
T. 12 N., R. 52 E., sec. 05 NENW	spring	good
T. 12 N., R. 52 E., sec. 05 SENW	spring	excellent
T. 13 N., R. 51 E., sec. 36 NWSE	pipeline/trough overflow pond	good
T. 11 N., R. 52 E., sec. 02 NW	spring	unknown
T. 12 N., R. 52 E., sec. 33 NWNW	spring	good
T. 12 N., R. 52 E., sec. 21 SENW	spring	unknown
T. 13 N., R. 52 E., sec. 21 SENW	seep	unknown
T. 13 N., R. 52 E., sec. 27 NWNW	seep	unknown
T. 13 N., R. 52 E., sec. 28 NWSE	seep	unknown
T. 13 N., R. 52 E., sec. 33 NENE	tank spring	fair to good
T. 13 N., R. 52 E., sec. 33 NENE	tank spring	fair to good
T. 13 N., R. 53 E., sec. 05 NW	reservoir	dry, except spring/ early summer
T. 13 N., R. 54 E., sec. 18 NESE	reservoir	dry, except spring/ early summer
T. 13 N., R. 54 E., sec. 33 SESW	spring	unknown
T. 13 N., R. 54 E., sec. 34	spring	unknown
T. 13 1/2 N., R. 54 E., sec. 33 SESW	spring	unknown
T. 14 N., R. 52 E., sec. 14 NWSE	Willow Creek	dry, fair to good condition
T. 14 N., R. 53 E., secs. 5, 17, 19	reservoirs	dry, except spring/ early summer
T. 14 N., R. 53 E., sec. 28	well	functional
T. 15 N., R. 53 E., sec. 18 SWSW	reservoir	dry, except spring/ early summer-washed out-needs work
T. 15 N., R. 53 E., sec. 23,28,32	wells	functional
T. 15 N., R. 54 E., sec. 06	well	not functional

10. Threatened, Endangered and Candidate Species

The endangered bald eagle winters (November through May) in the plan area. The endangered peregrine falcon may be observed in any month of the year in the area. Several recent sightings have been documented.

Category 2 species represent a list of species which are being considered for listing as endangered or threatened species. These species include the ferruginous hawk, the long-billed curlew, the white faced ibis and the snowy plover. The ferruginous hawk is discussed later in this document. The white faced ibis and long-billed curlew both are believed to nest in the plan area. The nesting occurs on private lands and possible foraging for invertebrates occurs on BLM administered lands in the plan area. The snowy plover has been documented on the Dry Lake playa and is believed to nest on the playa.

T&E or candidate plant species are known to be in this area. There is potential for occurrence of some candidate species.

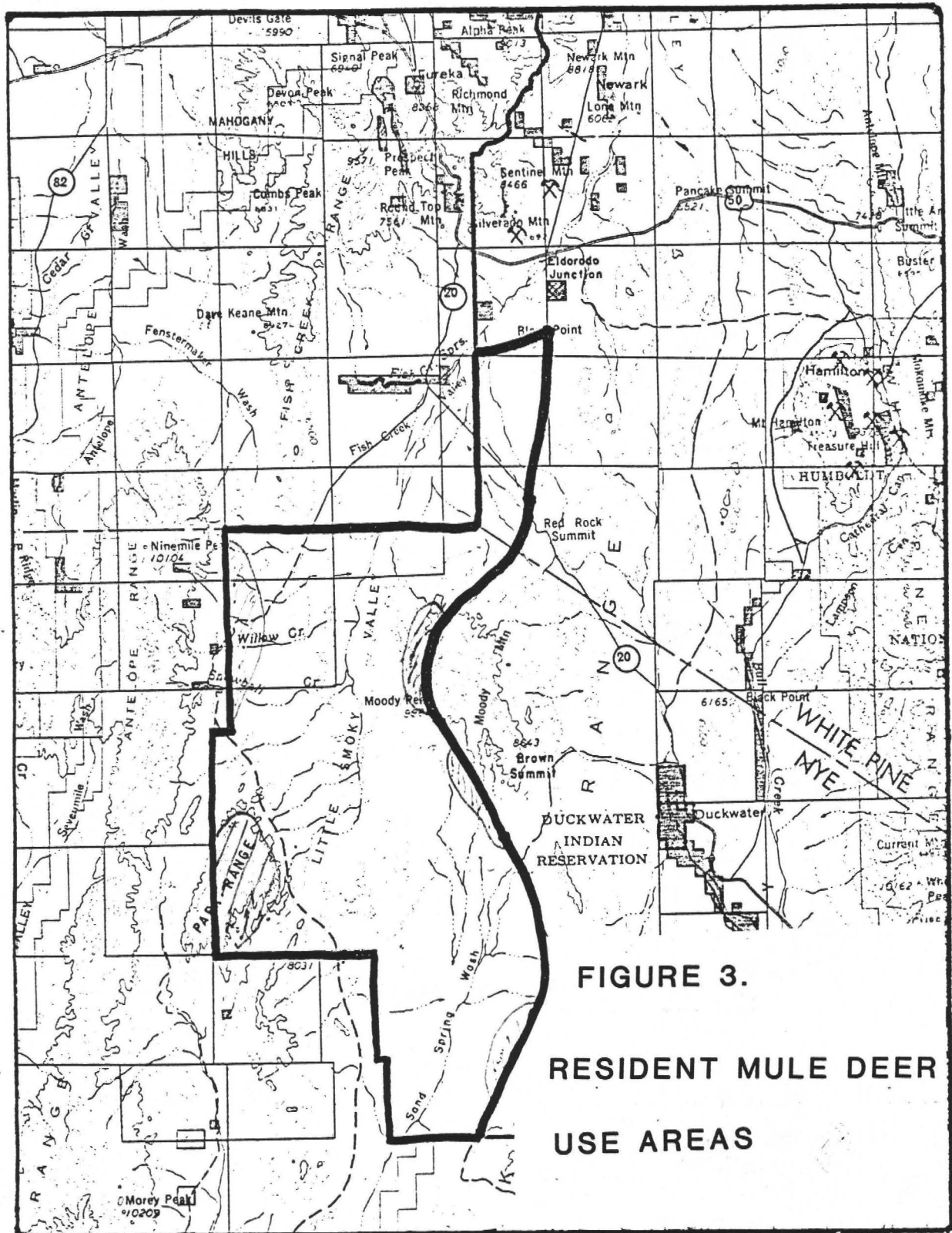
11. Fauna - General

a. Mule Deer

Resident mule deer (Figure 3) numbers are presently experiencing population declines due to three consecutive dry years which have reduced spring/summer forage availability. Winter deer use (Figure 4) of the area is contingent on the amount of snowfall received to the north. It is estimated that in years of significant snowfall that several hundred mule deer move into the HMP area to winter. The north end of the Park Range has had significant numbers of wintering deer as evidenced by the presence of numerous shed antlers.

Mule deer use higher elevation zones in the summer months, the sagebrush/mountain brush zone in the winter and yearlong, and the pinyon-juniper ecosystem yearlong. Forbs, grasses, and shrubs are major summer foods. Browse species (bitterbrush, black sage, little leaf mahogany, cliffrose, big sage, serviceberry, snowberry) and cured forbs comprise most of the winter diet.

**PROJECT LOCATION
MAP**



**FIGURE 3.
RESIDENT MULE DEER
USE AREAS**



PROJECT LOCATION
MAP

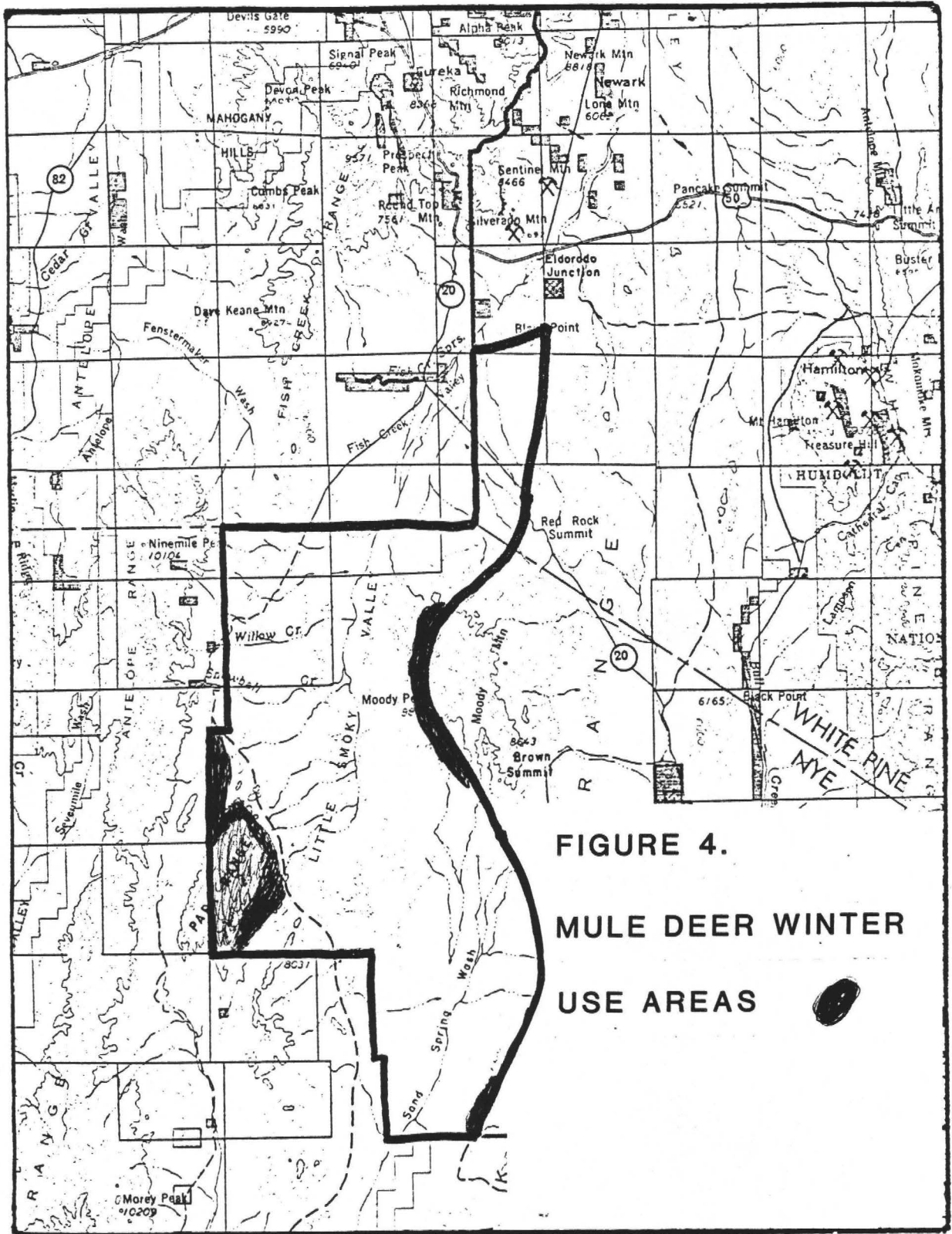


FIGURE 4.
MULE DEER WINTER
USE AREAS



b. Pronghorn Antelope

Pronghorn antelope use of the HMP area is increasing. The Little Smoky Valley portion of the area is estimated to support 30-40 pronghorns (Dale Elliot, NDOW, personal communication, 1990). (see Figure 5) Proposed augmentation(s) of antelope to the existing herds by the NDOW is planned but not in the immediate future (Bob Turner, NDOW, personal communication, 1990).

c. Mountain Lions

Mountain lion numbers are a reflection of mule deer numbers. A few inhabit the plan area yearlong. Lions are generally found in the rocky, high reaches of the mountains. Their preferred food is mule deer, but nearly anything from rodents to wild horses are eaten by mountain lions.

d. Rocky Mountain Elk

Rocky Mountain elk have not been observed nor documented in the plan area to date. Elk have been observed on Morey Peak which lies 10 miles southwest of the area. Elk have also been observed less than 10 miles northwest of the plan area on Nine Mile Peak in the Antelope Mountain Range. With the wandering/pioneering nature of the elk, it is conceivable that elk are presently utilizing the area.

e. Desert Bighorn Sheep

A reestablished desert bighorn sheep population presently inhabits Morey Peak which is 10 miles southwest of the area. Young rams have a wandering/pioneering nature and could have pioneered into the area.

PROJECT LOCATION
MAP

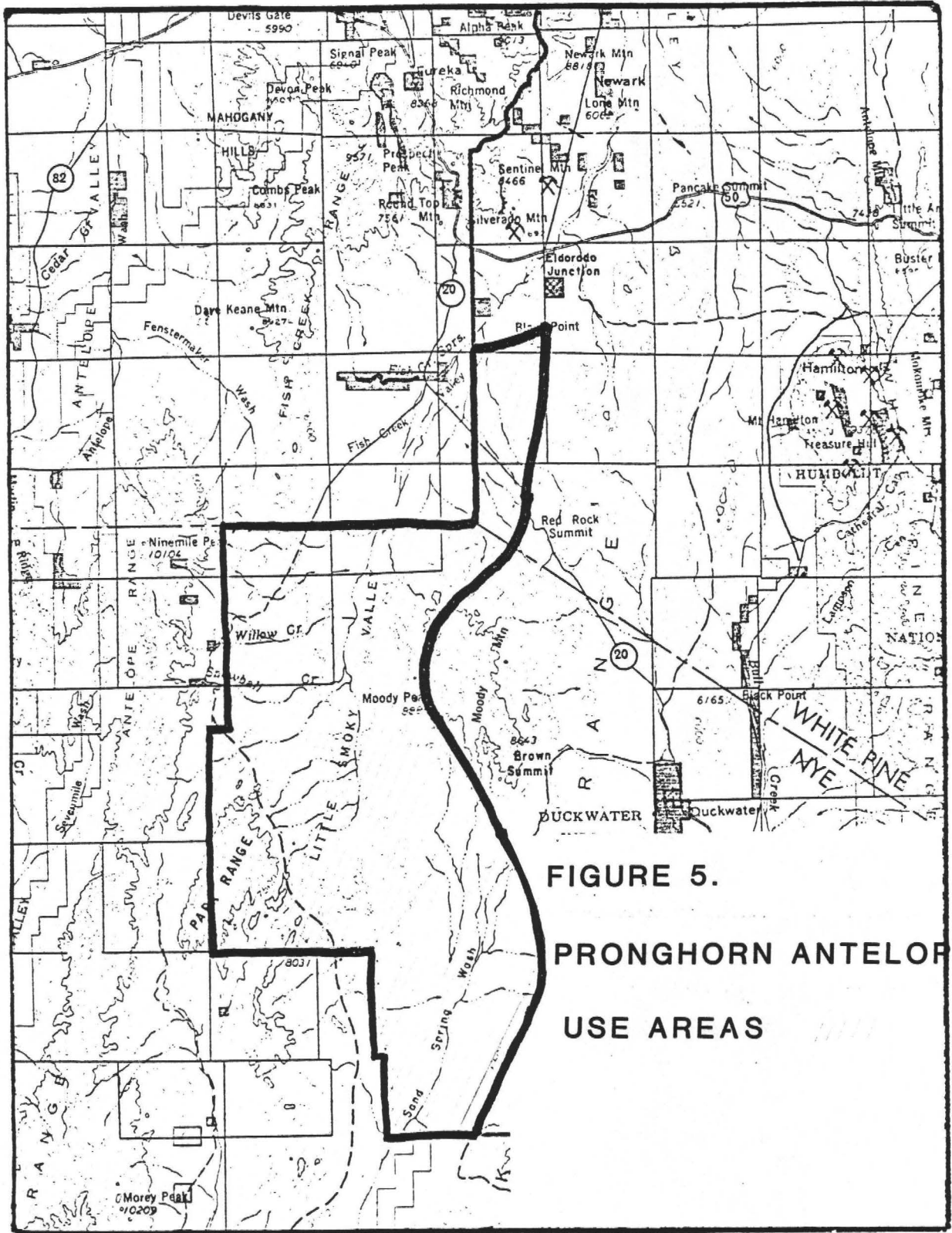


FIGURE 5.
PRONGHORN ANTELOPE
USE AREAS



f. Sage grouse

The sage grouse population in the plan area is at low to moderate levels. Eight leks (strutting grounds) and several brooding and winter areas have been identified to date (Figure 6). In the short-term, populations of sage grouse are stable to slightly increasing (NDOW, 1984). Lek surveys in the HMP area are to continue with new areas being surveyed each year. A new lek (see Appendix H) was documented in the spring of 1991 in an area that had no prior inventory data.

Food for these grouse consists of protein-rich insects (especially for young chicks), forbs, green grasses, and sage leaves.

All identified present use areas for sage grouse are crucial habitat (BLM, 1979). Historic use areas, strutting grounds, and riparian meadows are of special importance.

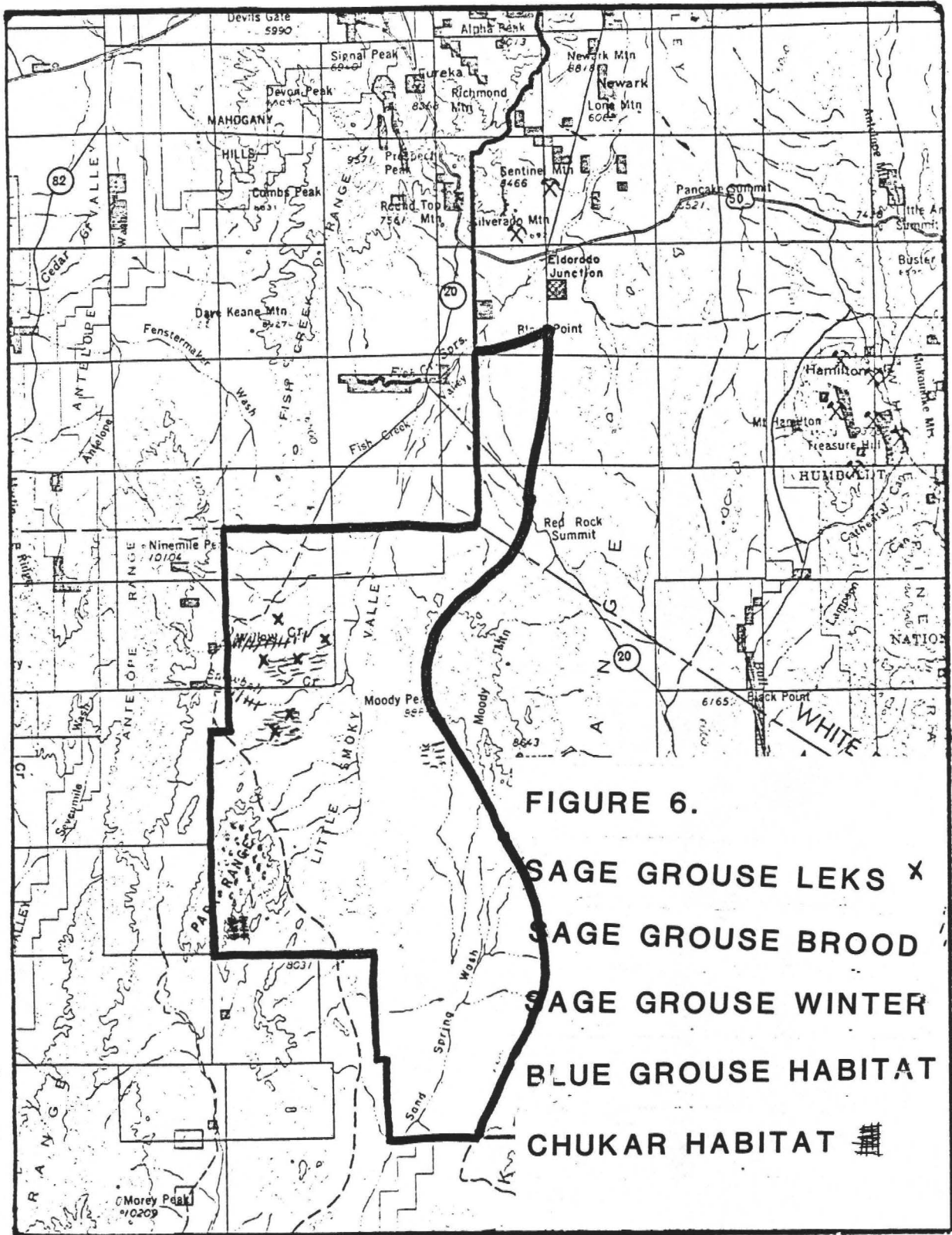
It was found that sage grouse avoided both bare ground and gullies to obtain water, and also avoid dense grass stands.

g. Other Upland Game Birds

Blue grouse populations have remained fairly stable at moderate to high levels within the state (NDOW, 1984). Fir buds and needles comprise 50 percent of the blue grouse diet. Other pine, forbs, grasses, and insects comprise the remainder of the diet. Mixed conifer and white fir areas are key blue grouse habitat as mesic meadows and upland dry meadows for brooding birds. Mixed conifer and white fir habitats are important winter areas. The only blue grouse habitat within the plan area is in the Park Range (Figure 6). No documented sightings have been made to date.

Chukar partridge and hungarian partridge possibly inhabit the plan area but their numbers are at such low levels that no extensive documented use areas have been identified.

**PROJECT LOCATION
MAP**



h. Raptors

A wide variety of raptors, (eagles, hawks, falcons, and owls) exist in the plan area. Some birds winter, some nest and summer, and some species are present yearlong in the area.

A Ferruginous hawk nesting study was conducted by the BLM in 1981, 1982, and 1983. Seven occupied territories were identified within the plan area. See Figure 7 for approximate locations. (Legal locations can be found in the Ely District files).

Presently, nest concentrations are on the east side of the Valleys which correspond to ideal nesting habitat (a southeast exposure in juniper stringers with a white sage vegetation type within 2 miles) (Perkins, et al, 1983).

Bald eagles winter in the plan area, especially in Little Smoky and Big Sand Springs Valleys. As many as four different birds have been observed in Little Smoky Valley on the same day.

The endangered peregrine falcon has been observed in the plan area several times in the past few years. This bird may be observed during any month of the year. Foraging areas for the peregrine falcon include private marsh/wetland habitats within the HMP area as well as BLM administered lands.

i. Furbearers - General

Bobcats are common in the plan area. They live mostly on the benches and mountains, but do venture into valley bottoms when prey is available. When these areas are adjacent to water, bobcat concentrations can be high (Anderson, 1982). This makes parts of the plan area very good bobcat habitat. Preferred forage for these animals includes rodents, birds, rabbits, and occasionally, young big game animals.

Coyotes are very common to the plan area. These animals can be found at all elevations. Coyotes can be as dense as one per square mile in some areas (Taylor, 1982). Preferred forage species for coyotes are generally rodents and rabbits. Domestic sheep in sheep herd areas will also be eaten. Young game animals are also occasionally taken.

PROJECT LOCATION
MAP

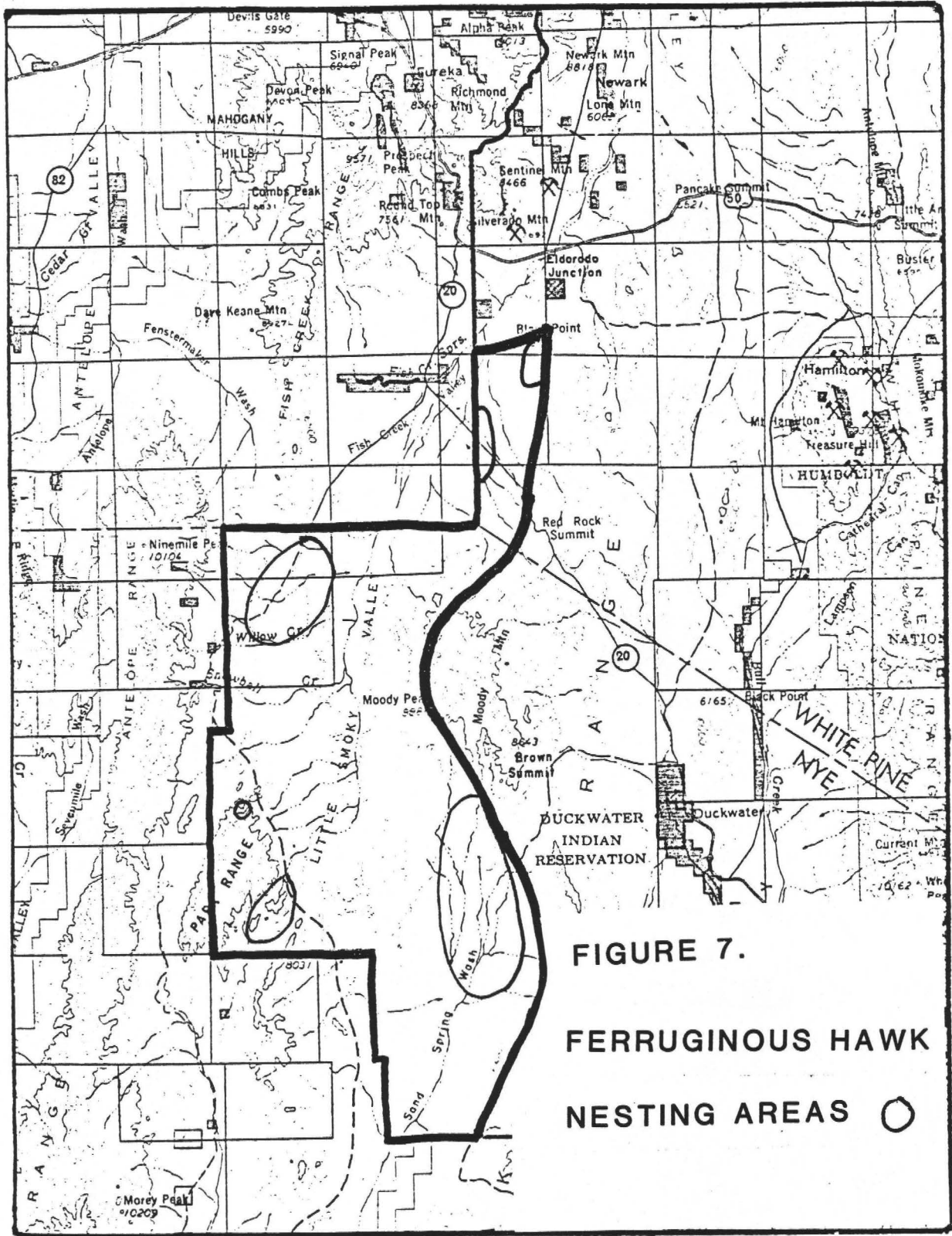


FIGURE 7.
FERRUGINOUS HAWK
NESTING AREAS ○



The Animal Damage Control (ADC) operating plan for the Ely BLM District applies to the HMP area. The ADC program is administered by the Animal Plant Health Inspection Service (APHIS). The ADC annual work plan (AWP) specifies where, when, and under what restrictions ADC activities will be carried out. The program is conducted in Nevada by the APHIS in cooperation with the State Predator and Rodent Committee, the Nevada Department of Wildlife, and the local state Grazing Boards.

A portion of the HMP area is a WSA. Certain restrictions to ADC activities apply to WSAs. For a detailed description of these restrictions, refer to the ADC plan in Ely BLM District Office.

A moderate population of kit fox and gray fox are also located in the plan area. Rodents comprise the major part of these foxes' diet.

j. Other Wildlife

Cyclic populations of jackrabbits, mountain and desert cottontail rabbits, and pygmy rabbits inhabit the plan area.

Numerous other species of birds, mammals, reptiles, and amphibians occur in the plan area.

k. Wild Horses

The HMP area includes the majority of the counted 936 horses (7/91 census) within the Sand Springs East Herd Management Area (HMA). A Herd Management Area Plan (HMAP) is presently in draft form. The plan is expected to be finalized in the 1993 fiscal year or later. In addition, a small portion of the HMP area lies within the Monte Cristo HMA. The August 1991 census of this HMA showed 725 horses, of which very few were observed in the HMP area. There is an HMAP for the Monte Cristo HMA (1977) which is presently outdated and in need of major revision. Horse use is heaviest in the HMP area on the white sage bottoms in Big Sand Springs Valley and on the north and northwest end of Moody Mountain (see Figure 8).

PROJECT LOCATION
MAP

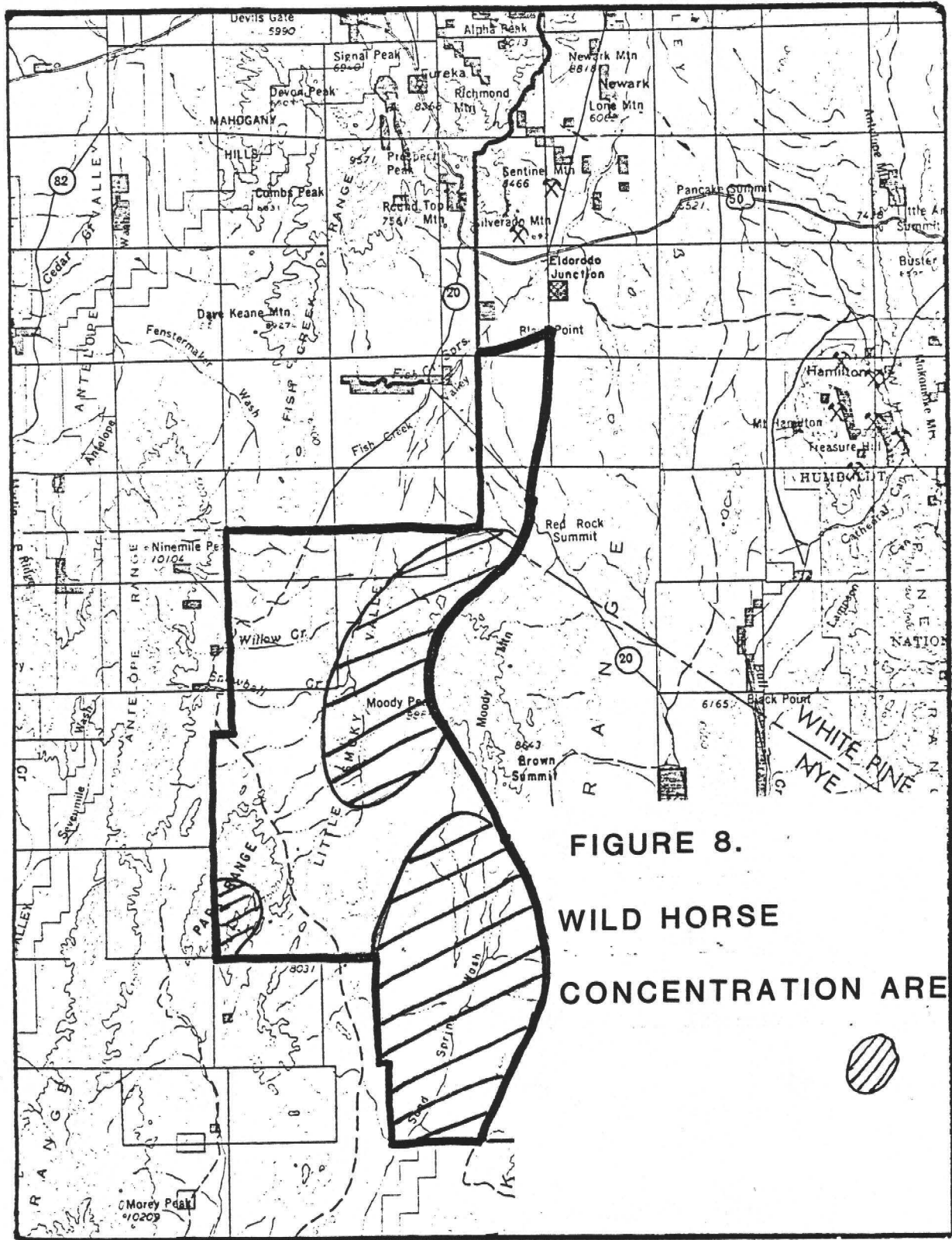


FIGURE 8.
WILD HORSE
CONCENTRATION AREAS



Livestock

For a description of livestock use see "4.d. Land Uses" section of this document.

12. Flora - Riparian Areas

"The riparian habitat is the most productive and possibly the most sensitive of North American habitats and should be managed accordingly" (Johnson et al, 1977). Up to 79 percent of the wildlife species in the plan area depend on these areas for water, food, cover, nesting, breeding, or other activity (Johnson, et al, 1977).

Riparian plan species are of concern in the plan area (see Appendix A). Not all of the species listed occur at every riparian area.

C. Relevant Constraints

This HMP is being prepared in accordance with BLM Manual 6780 - Habitat Management Plans (12-23-81). Other guidance includes the Egan Resource Area Management Plan (approved 2-3-87). See Appendix B for a list of laws and acts pertaining to and applicable to the Little Smoky, Big Sands Springs Valley Habitat Management Plan area. The Rangeland Program Summary for the Duckwater Allotment lists wildlife management objectives, and these can be found in Appendix E.

D. Sikes Act Authority

In accordance with Supplement 6 (dated 11/5/75); the Master Memorandum of Understanding between the NDOW and the BLM, Nevada State Office; the HMP meets the requirements for implementation under the Sikes Act.

II. Land Status

The Little Smoky and Big Sand Springs Valley Habitat Management Plan Area consists of approximately 288,152 acres. Table 1 shows land ownership within the Wildlife Habitat Area.

Table 1

<u>Land Status</u>	<u>Acres</u>
Public Land (BLM)	288,072
Private	80
Total	<u>288,152</u>

No management objectives will be directed at private lands.

III. Management Objectives - General

The general wildlife and riparian objectives center on managing vegetation, specifically mountain brush types, for increased vigor of the vegetation. Wildlife decisions from the Egan Record of Decision consist of:

A. Short-Term (0-5 years)

1. Habitat will be managed for "reasonable numbers" of wildlife species as determined by the Nevada Department of Wildlife.
2. Reintroductions of big game species will be accomplished in cooperation with the Nevada Department of Wildlife, where such reintroductions would not conflict with existing uses and if sufficient forage is available.
3. Habitat management plans will be completed on all wildlife habitat areas within the resource area.
4. Riparian Areas

Short-term (0-5 years)

- (1) Monitoring efforts will be intensified on riparian areas (map on page 14 of the Egan Record of Decision shows Willow-Snowball 2.0 miles winter - 4 acres riparian).
- (2) Where management objectives are not being obtained through application of management practices, fencing will be considered.

B. Long-Term (6-20 years)

1. Forage will be provided for "reasonable numbers" of big game as determined by the Nevada Department of Wildlife.
2. Additional habitat management plans will be prepared in the long term.

C. Decisions Carried Forward from Past Management Framework Plans

The following decisions were carried forward from the past MFP decisions from the Duckwater Land Use Plan and are found in the Egan Record of Decision (ROD). These decisions pertain to Wildlife Habitat Management, and are relevant to this HMP.

WILDLIFE HABITAT MANAGEMENT

Long-Term Objectives:

1. Preserve and enhance the environmental quality and variety of fish and wildlife habitat on the public lands, including the habitat of rare and endangered species.
2. Provide a variety of wildlife recreation use opportunities commensurate with public needs and resource potentials.

Management Objectives:

1. Help meet local, regional, and national consumptive and nonconsumptive demands for wildlife by helping maintain or create a sound ecological environment for wildlife.
2. Protect and enhance public land wildlife habitat through a systematic program of habitat inventory, analysis, management, evaluation, and environmental improvement.
3. Promote public understanding of and support for protection of habitat for threatened and endangered species.
4. Provide for access to wildlife areas on public lands for public use and for administrative purposes.

Decisions: Wildlife - General

1. Identify as "crucial" and maintain or improve for wildlife perpetuation, high density use areas or critical areas to the production or survival of wildlife.
2. In proposed fire rehabilitation plans, include actions to restore habitat conditions to meet wildlife food and cover requirements.

Decisions: Wildlife - Mule Deer Habitat Management

1. In all vegetative manipulation projects, create optimum edge-effect and escape cover for the benefit of deer.
2. Provide additional water in deer habitat, especially in the Pancake Range, Horse Range and Grant Range. Design water developments to provide water during the season the area is being inhabited by deer.

Decisions: Wildlife - Pronghorn Antelope Habitat Management and Habitat Expansion

1. Provide water for the benefit of pronghorn antelope in conjunction with water developments for livestock, wild horses, and other wildlife species.
2. In sagebrush control projects, create mixed communities of shrubs, grasses and forbs.

Decisions: Wildlife - Mountain Lion

1. Identify critical mountain lion use areas and protect them from disturbance during their critical use period.

Decisions: Wildlife - Bighorn Sheep

1. Determine the extent of use by bighorn sheep on public lands within the planning area.

Decisions: Wildlife - Sage Grouse Habitat Management and Habitat Expansion

1. Continue monitoring of sage grouse strutting grounds.
2. Improve sage grouse habitat by rehabilitating old meadows and creating new meadows where feasible.

Constraints

Where necessary, fence meadows to protect sage grouse needs. Provide water, both inside and outside the fenced area.

3. Provide a source of yearlong water at water developments within sage grouse use areas.
4. In known sage grouse habitat, do not manipulate low sagebrush communities having islands of big sagebrush.

Decisions: Wildlife - Chukar Partridge Habitat Management

1. Provide additional water within areas presently supporting chukar partridge.

Decisions: Wildlife - Non-Game Habitat Management

1. Monitor and protect nesting areas of the golden eagle, prairie falcon, and other birds of prey.

- D. The following is a list of plant species which are addressed specifically to benefit a primary wildlife foraging animal in a specific season:

Mountain big sage	deer/winter
Sandberg bluegrass	deer spring/summer
Forbs	all wildlife/yearlong
Bluebunch wheatgrass	deer spring/summer
Serviceberry	upland game birds/deer yearlong
Snowberry	upland game birds/deer yearlong
Bud sage	antelope/yearlong
Shadscale	antelope/yearlong,deer/winter
Saltbrush	antelope/yearlong,deer/winter
Bitterbrush	deer fall/winter
Chokecherry	upland game/fall/winter
Black sagebrush	deer/fall/winter;antelope/yearlong
Riparian species	all wildlife/yearlong

Many other forage species are utilized by wildlife which inhabit the plan area. These species will also benefit from objectives set forth in this plan.

E. HMP - Specific Management Objectives

The following list of specific management objectives were developed from the Egan Record of Decision and the general management objectives mentioned earlier. Consultation with NDOW and the Egan Resource Area staff also aided in development of these objectives.

1. Following is a list of the key areas by legal description where utilization of bitterbrush and other browse species (snowberry, cliffrose) shall not exceed 35% of current years growth by September 30. This objective will insure adequate forage availability for wintering mule deer.

Short Term

Key Area

Legal Location

Moody Mountain	T. 13 N. R. 54 E. Sec. 13
Portuguese Mountain	T. 10 N. R. 55 E. Sec. 30
Park Mountain	T. 13 N. R. 52 E. Sec. 28

Long Term

Two frequency, cover, condition, trend and phenology studies (see Appendix C for legal location) have been established in identified key areas within the HMP area. These studies have been established in accordance with BLM manual 6630. These studies will eventually determine the habitat condition rating.

2. Utilization levels will not exceed 55% of current year's growth on perennial grasses and grasslike species (Poa's, Sedges, carex, ELCI) along riparian areas and mesic meadows by May 1 on the following key locations:*

Short Term

Area

Legal location

Cottonwood Spring	T. 13 N., R. 51 E., sec. 36
Cottonwood Spring	T. 12 N., R. 52 E., sec. 5
Tank Spring	T. 13 N., R. 52 E., sec. 33
Unnamed Spring	T. 12 N., R. 52 E., sec. 33
Bassit Spring	T. 12 N., R. 52 E., sec. 21

*The above listed areas are key areas representative of conflicts from past and present use by livestock and/or wild horses.

Long Term

Long term management objectives are to be measured by methods listed in BLM manual 6630.

3. Utilization levels in following areas will not exceed 45% of current year's growth on riparian shrub species (willows, choke cherry, etc..) and utilization levels on riparian associated tree species (cottonwood, aspen) will not exceed 25% of current year's growth by November 1. This should provide for adequate regeneration of these species to achieve 60 stems per acre over 6 feet in height.

Short Term*

<u>Area</u>	<u>Legal Location</u>
Park Mountain	T. 12 N., R. 52 E., sec. 5
Park Mountain	T. 12 N., R. 52 E., sec. 7

*The above listed areas are key areas representative of conflicts from past and present use by livestock and/or wild horses.

Long Term

Long term management objectives are to be measured by standards listed in BLM manual 6630.

Short Term

4. On the following key areas, limit utilization on streamside riparian vegetation to 55% by May 1.

<u>Key Area</u>	<u>Legal Location</u>
Willow-Snowball	T. 14 N., R. 52 E., sec. 20
Cottonwood	T. 12 N., R. 52 E., sec. 7

The following table rates riparian areas in 4 classes. The table is from the Ely District Riparian Monitoring Handbook.

<u>% Optimum</u>	<u>Class</u>
76-100	Excellent
41-75	Good
21-40	Fair
0-20	Poor

Riparian utilization is not static, and fairly heavy spring grazing may not be noticeable in September. The utilization goal for riparian areas in fair to poor condition will be that of less than 40% use. This will improve these areas to good or better.

Long Term

BLM Manual 6630 along with established monitoring studies will determine the habitat condition rating within the HMP area. Streams will be managed for good or better overall habitat condition.

5. At the following white sage vegetation type locations, utilization will not exceed 55% of current year's growth by April 15th in order to provide adequate forage for ferruginous hawk prey species.

Short Term

<u>Key Area</u>	<u>Legal Location</u>
Big Sand Springs Valley	T. 11 N., R. 54 E., sec. 15
Big Sand Springs Valley	T. 12 N., R. 54 E., sec. 10
Little Smoky Valley	T. 15 N., R. 53 E., sec. 21
Little Smoky Valley	T. 14 N., R. 53 E., sec. 20

Long Term

Long term management objectives are to be measured by methods listed in BLM Manual 6630.

6. The ideal prescriptions in order to manage for sage grouse habitat as described by Don Klebenow, retired wildlife professor from University of Nevada at Reno, are as follows:
 - transition zones between vegetation types should be maximized.
 - 21 percent shrub cover of 2 feet average height around the wet meadow habitat should be maintained in a mosaic.
 - effective cover heights for the meadow should range from 2.8 inches to 6.4 inches (effective cover is the highest visual increment on a measuring rod covered by 50 percent vegetation). Effective cover should not go below 2 inches.

- grazing should be light (30 percent +) on the meadow area and should not exceed moderate use (60 percent +) but should coincide with that use needed to achieve ideal effective cover. (Klebenow, 1981.) The key use areas for sage grouse for brooding are generally meadows in deteriorated/degraded conditions. A maximum allowable utilization level on meadows within the area should be 55% by May 1.

The Egan Record of Decision (ROD) page 31 No. 8, Standard Operating Procedure (SOP) refers to sage grouse and restrictions placed on activities in and around known use areas, and reads as follows:

Time of day and/or time of year restrictions will be utilized in those areas where construction activities are in the immediate vicinity or would cross sage grouse strutting, nesting, and wintering grounds; critical mule deer and pronghorn antelope winter range; or antelope kidding areas. The restrictions are listed below.

Restrictions:

- a. Sage grouse strutting grounds: From March 1 to May 15 -- 2 hours before dawn until 10 a.m.
- b. Sage grouse nesting grounds: Late May to mid-June.
- c. Sage grouse wintering grounds: November 1 to March 31.
- d. Critical mule deer and antelope winter range: November 1 to March 31.
- e. Critical pronghorn antelope kidding areas: May 1 to June 30.

Environmental analyses will be conducted prior to implementing or carrying out any specific projects (fences, spring developments, seedings, etc.).

Manage the following key sage grouse areas for big sagebrush in mid to late seral stages with at least 25% sagebrush cover.

Short Term

<u>Area</u>	<u>Legals Location</u>
Willow Creek	T. 14 N., R. 53 E., sec. 25, 30
Willow Creek	T. 14 N., R. 52 E., sec. 10
N. Park Range	T. 13 N., R. 52 E., sec. 8

Long Term

Long term management objectives are to be measured by standards form BLM Manual 6630.

7. Short Term

Pronghorn antelope augmentation into Little Smoky or Big Sand Springs Valleys can take place when animals are available to NDOW. Releases of 50 to 100 animals will take place at predetermined locations. Utilization of antelope key forage species will not exceed 45% of current year's growth prior to and after the augmentation takes place.

Long Term

Once the pronghorn population reaches the desired level of animals (200-250 animals) monitoring developed in conformance with the 6630 manual will determine antelope habitat condition rating which will determine if more or less animals can be supported by the available habitat.

8. Short Term

Increase antelope forage availability and water availability within the habitat area.

Long Term

Monitoring developed in conformance with the 6630 manual will determine antelope habitat rating.

IV. Planned Actions

This section lists specific actions which will achieve the management objectives as well as the HMP specific objectives. In the future allotment management plan (AMP) in the HMP area, waters developed for livestock will also benefit wildlife.

A. Mule Deer

Planned Actions

1. Allowable use levels recommended in the Nevada Rangeland Monitoring Handbook (NRMH) is to limit combined utilization (livestock/wildlife) of key browse species to 45% for yearlong use. This will provide for vigorous browse communities. The level of 45% combined use is to ensure viable communities of plants, not necessarily to provide the quality of forage deer require over the winter.
2. Develop guzzlers for mule deer at the locations shown on Figure 9. These guzzlers would provide for better utilization of forage. A guzzler is a water (rain/snow) catchment device that will make additional water available for deer. Guzzlers will consist of a 3,800 gallon storage tank, float box and a drinker.

The legal descriptions for the location of the guzzlers are as follows:

T. 12 N., R. 52 E., sec. 22
T. 13 N., R. 52 E., sec. 33

Other locations may be jointly located by BLM/NDOW biologists.

Nongame and upland game will use all the guzzlers at various times during the year.

3. Riparian area protection projects to include springhead riparian fencing, stream riparian fencing, and mesic meadow exclosures, (see Figure 10) will also benefit mule deer. (See Riparian Section of this document.) Fences will be established as needed and agreed to by interested parties (Sierra Club) where over-utilization, trampling and poor water quality/quantity is a problem.

**PROJECT LOCATION
MAP**

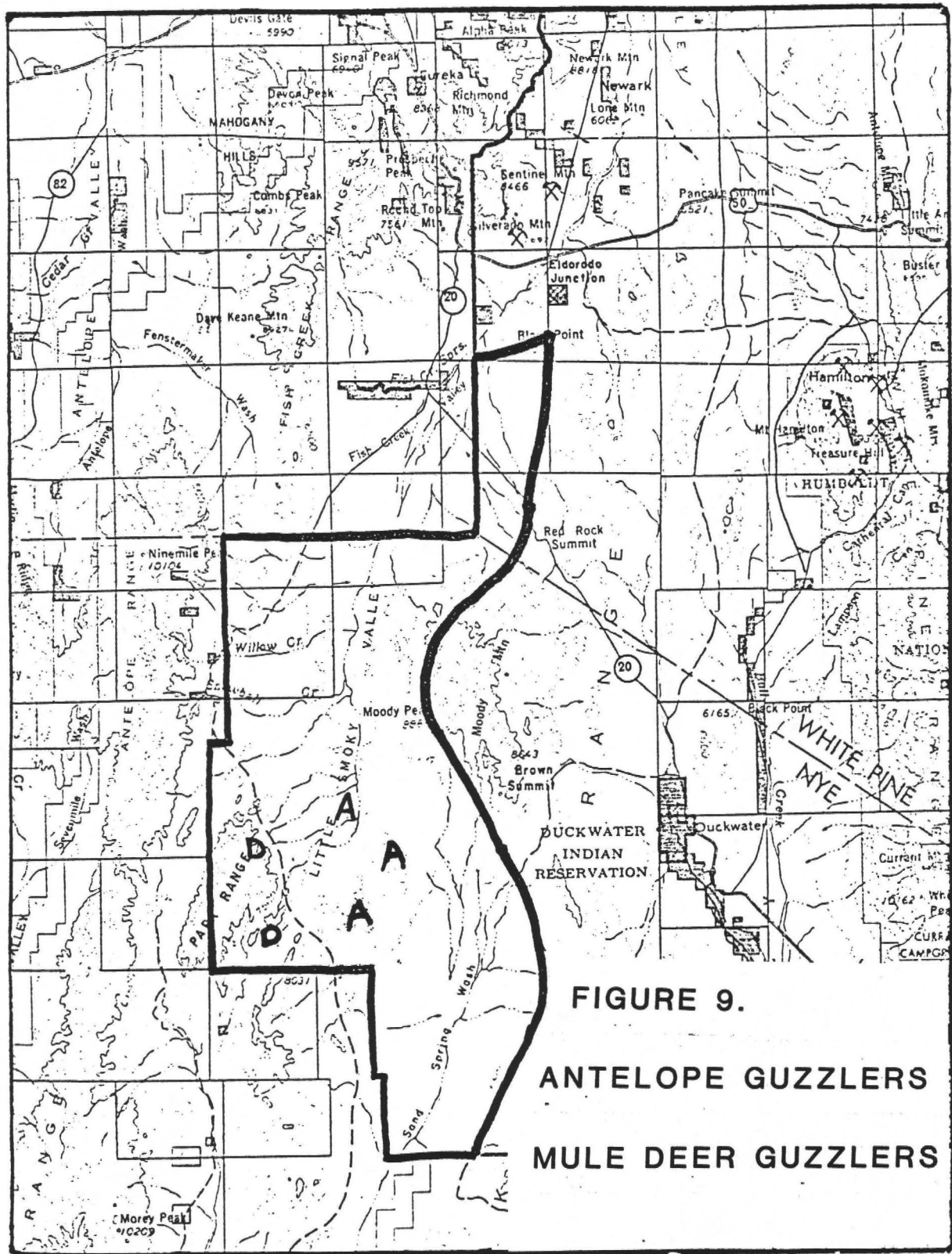


FIGURE 9.
ANTELOPE GUZZLERS A
MULE DEER GUZZLERS D



B. Pronghorn Antelope

Planned Actions

1. Antelope Guzzlers will be installed in the following locations (see Figure 9):

T. 13 1/2 N., R. 53 E., sec. 31

T. 13 N., R. 53 E., sec. 30

T. 12 N., R. 53 E., sec. 3

These guzzlers will provide additional water for antelope as well as distribute antelope use over a larger area. An objective listed in the Rangeland Program Summary (RPS) is to install only 2 wildlife guzzlers within the Duckwater allotment. New wildlife inventory information identifies the need for additional guzzlers (see Appendix E).

C. Sage Grouse

Planned Actions

Management of livestock grazing and wild horses in the plan area will be addressed in the Duckwater Allotment Evaluation. Vegetation management for sage grouse will be correlated with HMP objective E6 to assure proper seral stage at key areas.

Additional planned actions to benefit sage grouse:

1. At present there are few seismic exploration requests for this area. In future requests which conflict with known sage grouse use areas, standard stipulations to protect sage grouse will be added.

These include avoiding the 2 mile strutting, nesting, brooding area until after the use season, and working between the hours of 8:00 a.m. to 4:00 p.m. Another stipulation may be to have seismic companies make only one pass through the area. These will apply from March 1 to May 15. The Egan Resource Area is in the process of completing an Oil and Gas Amendment to the RMP. This amendment has several stipulations that directly benefit sagegrouse.

2. Future troughs (if not a closed system) along pipelines should be constructed so a small flow (0.1 gal./hr.) goes over the trough to a pipe which flows into an overflow pond.

3. Maintenance of habitat (utilization limits outlined in the NRMH) required to support and perpetuate the nongame birds and mammal species outlined in this document and the future AMP will occur and will benefit all wildlife species.
4. Proposed mesic riparian protection fences in the future AMP and this HMP as well as spring developments will benefit sage grouse (refer to Riparian Areas, planned actions).

D. Other Upland Game Birds, Blue Grouse, Hungarian and Chukar Partridge

Planned Actions

The following actions would benefit blue grouse, chukar, and Hungarian Partridge.

1. No cutting will be allowed of non-pinyon conifers, aspen and mahogany within the plan area. These trees provide winter habitat as well as forage for blue grouse.
2. Proposed mesic riparian protection fences in the future AMP and this HMP as well as spring developments will benefit upland game birds (refer to Riparian Areas, planned actions).

E. Raptors

Planned Actions

1. Known raptor nest sites will be protected from physical destruction and during the nesting season (April 1 - July 1), a one-half mile radius buffer zone will be observed on all activities.
2. If commercial cutting is to occur in an area of a known accipiter nest site, a 20-acre buffer zone will be requested. This buffer zone will limit cutting to leave at least 20 acres of woodland attendant to the nest site.
3. Before any vegetation conversion occurs in a pinyon-juniper vegetation type, all stringers will be examined for ferruginous hawk nesting activity. If any nest is found, a one-half mile radius buffer zone will be left intact.

F. Other Game and Non-game Species

Planned Actions

Install some means of escape for small mammals, birds, and other wildlife to all existing and future watering facilities in the plan area. Escape ramps will consist of bird ladders, bolt on boards floating in the trough, rock piles, and/or wire mesh. This is a standard operating procedure in the Egan ROD, page 31 no. 7 (see Appendix F. for a list of the Egan R.O.D. Wildlife SOPs). Development and installation of guzzlers will benefit other game and non-game species.

G. Threatened and Endangered and Candidate Species

Planned Actions

There are a few issues that could affect threatened and endangered species within the plan area. One issue is that of seismic activity in the vicinity of occupied ferruginous hawk nest sites, and/or the physical destruction of the nest itself.

The issues identified for the ferruginous hawk are provided for under the standard operating procedures (SOP's) outlined in the Egan ROD pages 30 thru 31.

I. Riparian Areas

Planned Actions

The following actions would improve the identified springs and riparian areas and would benefit all wildlife, wildhorses, and livestock.

1. Physically remove pinyon, juniper and brush species that have invaded meadow areas, as needed.
2. Fence springheads and associated mesic riparian areas and pipe water out for livestock and wild horses. This will increase water quantity and quality as well as provide mesic riparian habitat for all species of wildlife. Water will be left at the source on all spring developments.

3. Riparian area protection will be provided on the specific areas (see Figure 10) listed below in priority order:

<u>Area</u>	<u>Legal Location</u>
1) Cottonwood Spring	T. 13 N., R. 51 E., sec. 36
2) Sand Spring	T. 13 N., R. 54 E., sec. 33
3) Unnamed Spring	T. 12 N., R. 52 E., sec. 33
4) Tank Spring	T. 13 N., R. 52 E., sec. 33
5) Bassit Spring	T. 12 N., R. 52 E., sec. 21
6) Willow-Snowball Creek	T. 14 N., R. 52 E., sec. 19

These projects should improve riparian areas to good or better condition.

V. Evaluations and Monitoring

Several studies have been established on key areas (outlined by and in conjunction with NDOW) within the plan area (see Appendix C). Appendix C displays present status/trend of antelope winter range/summer range studies. These studies were established in coordination with the area range conservationist, as well as the district wild horse specialist and the NDOW. Studies will be established to monitor antelope range conditions.

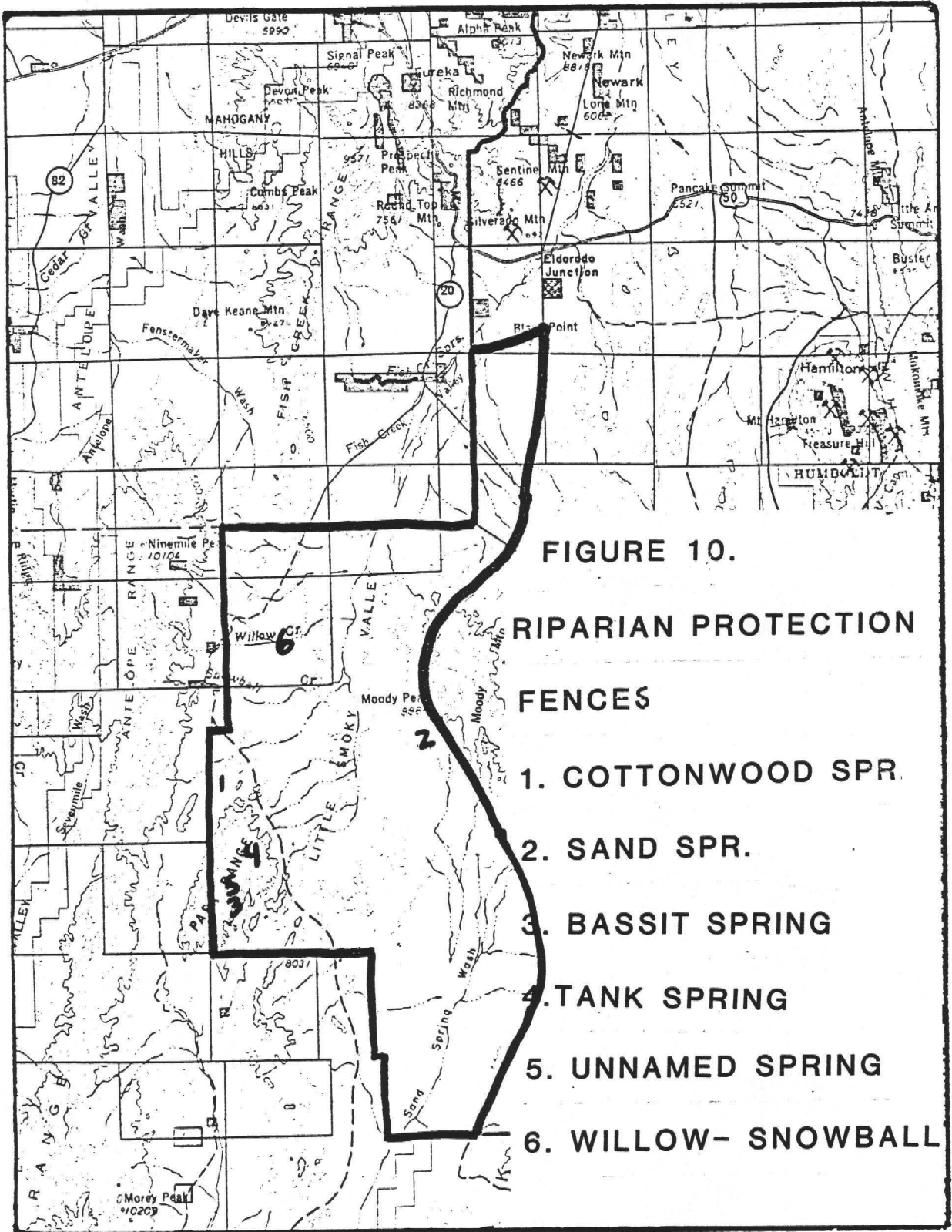
Utilization studies will be conducted yearly on all meadows and other riparian areas to determine if land use plan and Rangeland Program Summary objectives are being met. Utilization on meadows should not exceed 55 percent of current year's growth by May 1 annually. Meadows in fair to poor condition will not have utilization levels exceeding 40%.

On all vegetation manipulation projects, adherence to the Western States Sage Grouse Guidelines will be considered.

Annual inventories for sage grouse leks and winter areas will be conducted as needed.

The studies outlined below are designed to monitor the progress of specific management objectives developed for the management area in this plan. These studies are to be completed in accordance with 6630 Big Game Studies Manual and the Nevada Rangeland Monitoring Handbook (NRMH). Key areas and species were selected through consultation with NDOW and current literature on preferred wildlife forage.

**PROJECT LOCATION
MAP**



Utilization is being read on key areas within the plan area identified by NDOW. If new key areas are developed by implementation of the future AMP or this HMP, utilization will be read on these new key areas, also. Utilization is read in the fall prior to migrating deer arrival and in the spring after deer have departed. The key forage plant method will be used along with 6630 Manual.

Estimated actual use by wildlife will be determined by NDOW yearly aerial survey counts.

Frequency and production information will be obtained using the Quadrat Frequency Transect and the SCS double sampling weighted estimate transect methods described in the NRMH. Density will be measured as the number of plants per acre based on the actual number of plants within fixed sample plots. Information from these studies will be used to determine ecological condition and trend. In addition, baseline and potential density and production are used to establish specific resource objectives. These are written in terms of the number of plants per acre and pounds per acre of key species on key areas and will be monitored in that manner in the future AMP.

Wildlife studies will also include specialized studies for big game such as vegetation height and browse condition and age.

Evaluations of these studies will include a specialized summary for rating mule deer habitat and antelope habitat.

Frequency, production, and density studies will be used to determine trend toward or away from the desired seral stage for management rather than in terms of ecological climax. Riparian monitoring will be conducted as outlined in the Ely District Riparian Handbook. Utilization, actual use, and climate information will be used to determine the apparent causes for trend direction. As long as trend is in a positive direction toward achieving resource objectives, no changes in management will occur. If trend is static or already at the desired objective, downward or moving away from the management objectives, changes can be made in management of livestock, wild horses, and wildlife. Adjustments will be made based also on supporting utilization, actual use, climate, and other data which compliment the trend studies. These changes in livestock will come in the form of stocking levels, seasons of use, and other management actions after actual use, utilization, and climatic data have been analyzed. After successive management changes, 3-5 years of additional study will be

allowed to determine if the situation has been corrected. The Nevada Department of Wildlife will be notified of excessive use made by wildlife and will be responsible for adjusting numbers.

The following schedule outlines during what seasons monitoring and evaluation studies will be done, what year, and the workmonths involved. Costs are shown per one study.

- A. Pronghorn Antelope - winter - key (after augmentation takes place).
1. Utilization/Biologist/F-Sp yearly/1WM/\$2400
 2. Frequency/Trend Biologist/SU-F every 3-5/1WM/\$2400
 3. Composition
 4. Phenology
 5. Cover
 6. Condition
 7. Density/Study Specialist/1990/.1WM/\$400
 8. Concentrations/NDOW/W-Su/ /
 9. Soil Survey/Soil Scientist/1990/.1WM/\$400
- B. Mule Deer - winter
1. Utilization/Biologist/F-Sp yearly/.5WM/\$1200
 2. Browse Condition/Biologist/F yearly/.5WM/\$1200
 3. Concentrations/NDOW/yearly
 4. Density/Biologist/3-5 years/.5WM/\$1200
- C. Mule Deer - summer
1. Utilization/Biologist/F-Sp yearly/.5WM/\$1200
 2. Concentrations/NDOW/yearly
 3. Density/Biologist/3-5 years/.5WM/\$1200
- D. Mule Deer - yearlong
1. Utilization/Biologist/F-Sp yearly/.5WM/\$1200
 2. Density/Biologist/3-5 years/.5WM/\$1200
- E. Upland Game Birds
1. Strutting Ground Survey/BLM-Biologist/Sp./.1WM/\$400
 2. Brood Surveys/NDOW BLM Biologist/Sp-Su/.1WM/\$400
- F. Riparian
1. Utilization/Biologist/Sp-F/.1WM/\$100
 2. Density/Biologist//TBD
 3. Stream Survey - Willow/Snowball (5 yr. intervals)
.2WM/\$200

VI. Habitat Management Plan Progress Report

This report displays objectives, planned actions, and evaluations and monitoring techniques used to measure success of the objectives and planned actions.

VII. Coordination with Other BLM Programs, Agencies, and Organizations

A. Other BLM Programs

This HMP is being prepared in conjunction with the Duckwater allotment evaluations. By doing so, grazing management and projects will be closely coordinated to insure success of this HMP. This HMP is consistent with the District Fire Management Plan. The HMP is also being developed in coordination with the Monte Cristo Wild Horse HMAP and the draft Sand Springs East HMAP. Any future revisions of these HMAP's will be consistent with this HMP.

This HMP is being prepared jointly with other BLM programs, (recreation, lands disposal, soils, water, air, watershed, wilderness and visual.

B. Other Agencies and Organizations

NDOW has been closely involved with the development of this plan. BLM personnel from the Ely District have coordinated their input.

The U.S. Fish and Wildlife Service in Reno has been contacted and their input solicited. The Animal Plant Health Inspection Service, Animal Damage Control office in Ely has been contacted and their input solicited. Development of the future AMP will have rancher input in order for a successful AMP effort. Grazing permittees will be contacted and their input solicited.

Members of 19 Wild Horse Associations and groups will be contacted.

UNITED STATES
 DEPARTMENT OF THE INTERIOR
 BUREAU OF LAND MANAGEMENT

HABITAT MANAGEMENT PLAN PROGRESS REPORT

OBJECTIVES	DATE COMPLETED	PLANNED ACTIONS	DATE COMPLETED	EVALUATION/MONITORING	DATE COMPLETED
1. Provide habitat for reasonable numbers of wildlife as determined by the Nevada Department of Wildlife.		1. The Duckwater Allotment Evaluation limiting combined use (livestock/wildlife) on browse to 45% of current years growth and use on grasses and forbs to 55% of current years growth will insure sufficient forage for mule deer and antelope. 2. The Duckwater Allotment Evaluation will provide for proper livestock stocking levels as well as wild horse numbers.			

INSTRUCTIONS

1. List specific HMP objectives as developed from RMP/MFP planning documents or as otherwise approved.
2. List specific planned actions to be initiated to meet each specific objective.
3. List scheduled evaluation/monitoring study(s) planned to evaluate accomplishments.
4. Enter completion date for each objective, action, or evaluation/monitoring study as accomplished.

UNITED STATES
 DEPARTMENT OF THE INTERIOR
 BUREAU OF LAND MANAGEMENT

HABITAT MANAGEMENT PLAN PROGRESS REPORT

OBJECTIVES	DATE COMPLETED	PLANNED ACTIONS	DATE COMPLETED	EVALUATION/MONITORING	DATE COMPLETED
		2. Riparian area protection, also see page 31 of this document. 3. Guzzler(s) proposed for mule deer and pronghorn antelope.			

INSTRUCTIONS

1. List specific HMP objectives as developed from RMP/MFP planning documents or as otherwise approved.
2. List specific planned actions to be initiated to meet each specific objective.
3. List scheduled evaluation/monitoring study(s) planned to evaluate accomplishments.
4. Enter completion date for each objective, action, or evaluation/monitoring study as accomplished.

UNITED STATES
 DEPARTMENT OF THE INTERIOR
 BUREAU OF LAND MANAGEMENT

HABITAT MANAGEMENT PLAN PROGRESS REPORT

OBJECTIVES	DATE COMPLETED	PLANNED ACTIONS	DATE COMPLETED	EVALUATION/MONITORING	DATE COMPLETED
2. Augmentations of big game species will be accomplished in cooperation with the NDOW.		1. Augmentation of pronghorn antelope can take place when animals are available to the Department of Wildlife. 2. Two antelope guzzlers will be installed in Little Smoky Valley to develop additional water for antelope.			

INSTRUCTIONS

1. List specific HMP objectives as developed from RMP/MFP planning documents or as otherwise approved.
2. List specific planned actions to be initiated to meet each specific objective.
3. List scheduled evaluation/monitoring study(s) planned to evaluate accomplishments.
4. Enter completion date for each objective, action, or evaluation/monitoring study as accomplished.

UNITED STATES
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HABITAT MANAGEMENT PLAN PROGRESS REPORT

OBJECTIVES	DATE COMPLETED	PLANNED ACTIONS	DATE COMPLETED	EVALUATION/MONITORING	DATE COMPLETED
3. Provide sufficient water and forage for antelope augmentation(s) in Little Smoky and Big Sand Springs Valleys.		1. The Duckwater Allotment Evaluation will limit use to proper use levels (Perennial grasses and forbs 55%, shrubs 45%) for yearlong use. 2. Guzzler(s) proposed for antelope in Little Smoky Valley will provide additional water for antelope.			

INSTRUCTIONS

1. List specific HMP objectives as developed from RMP/MFP planning documents or as otherwise approved.
2. List specific planned actions to be initiated to meet each specific objective.
3. List scheduled evaluation/monitoring study(s) planned to evaluate accomplishments.
4. Enter completion date for each objective, action, or evaluation/monitoring study as accomplished.

UNITED STATES
 DEPARTMENT OF THE INTERIOR
 BUREAU OF LAND MANAGEMENT

HABITAT MANAGEMENT PLAN PROGRESS REPORT

OBJECTIVES	DATE COMPLETED	PLANNED ACTIONS	DATE COMPLETED	EVALUATION/MONITORING	DATE COMPLETED
4. Protect upland game species (sage grouse, blue grouse, pygmy and cottontail rabbits, Hungarian and chukar partridge) nesting, brooding, and wintering habitats.		1. The Duckwater Allotment Evaluation will enhance and limit utilization to proper use levels for yearlong use. P. grasses & forbs 55% and shrubs 45%. The Duckwater Allotment Evaluation will also provide for proper livestock stocking levels as well as wild horse numbers. 2. Riparian area protection projects planned will also protect certain habitats in special life cycle areas for these species.			

INSTRUCTIONS

1. List specific HMP objectives as developed from RMP/MFP planning documents or as otherwise approved.
2. List specific planned actions to be initiated to meet each specific objective.
3. List scheduled evaluation/monitoring study(s) planned to evaluate accomplishments.
4. Enter completion date for each objective, action, or evaluation/monitoring study as accomplished.

UNITED STATES
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HABITAT MANAGEMENT PLAN PROGRESS REPORT

OBJECTIVES	DATE COMPLETED	PLANNED ACTIONS	DATE COMPLETED	EVALUATION/MONITORING	DATE COMPLETED
		3. Continue sage grouse lek inventories as well as inventories for additional sage grouse winter areas.			

INSTRUCTIONS

1. List specific HMP objectives as developed from RMP/MFP planning documents or as otherwise approved.
2. List specific planned actions to be initiated to meet each specific objective.
3. List scheduled evaluation/monitoring study(s) planned to evaluate accomplishments.
4. Enter completion date for each objective, action, or evaluation/monitoring study as accomplished.

UNITED STATES
 DEPARTMENT OF THE INTERIOR
 BUREAU OF LAND MANAGEMENT

HABITAT MANAGEMENT PLAN PROGRESS REPORT

OBJECTIVES	DATE COMPLETED	PLANNED ACTIONS	DATE COMPLETED	EVALUATION/MONITORING	DATE COMPLETED
5. Protect raptor nesting habitat and raptor prey species habitat.		1. The Duckwater Allotment Evaluation will enhance white sage areas by limiting utilization to 55%. White sage areas are habitat for raptor prey species. 2. Egan ROD SOP's pages 30, 31 and 32 pertain to these species.			

INSTRUCTIONS

1. List specific HMP objectives as developed from RMP/MFP planning documents or as otherwise approved.
2. List specific planned actions to be initiated to meet each specific objective.
3. List scheduled evaluation/monitoring study(s) planned to evaluate accomplishments.
4. Enter completion date for each objective, action, or evaluation/monitoring study as accomplished.

UNITED STATES
 DEPARTMENT OF THE INTERIOR
 BUREAU OF LAND MANAGEMENT

HABITAT MANAGEMENT PLAN PROGRESS REPORT

OBJECTIVES	DATE COMPLETED	PLANNED ACTIONS	DATE COMPLETED	EVALUATION/MONITORING	DATE COMPLETED
<p>7. Manage acres of riparian and aspen areas for a late seral stage. Improve riparian and wetlands to good or better condition.</p>		<p>1. Riparian area protection projects (page 31 of this document) will improve riparian areas within the HMP area.</p> <p>2. Grazing systems developed in the future Duckwater AMP will limit use on riparian areas to proper use levels, 55% of current years growth on p. grasses and grasslike species, 45% on shrubs and 25% on riparian tree species.</p>			

INSTRUCTIONS

1. List specific HMP objectives as developed from RMP/MFP planning documents or as otherwise approved.
2. List specific planned actions to be initiated to meet each specific objective.
3. List scheduled evaluation/monitoring study(s) planned to evaluate accomplishments.
4. Enter completion date for each objective, action, or evaluation/monitoring study as accomplished.

VIII. Wildlife Economics

The following is a list of the planned wildlife projects with a cost estimate based on recent construction costs:

Cost Estimates

<u>Project</u>	<u>Cost Estimate</u>
1. Deer Waters (2 Guzzlers)	\$ 8,000
2. Meadow Rehabilitation (Willow-Snow-ball Creek)	\$ 1,700
3. Meadow Rehabilitation (Unnamed Spring) Fence	\$ 1,700
4. Bassit Spring Protection Fence	\$ 4,000
5. Redevelopment of Tank Spring	\$ 8,000
6. Martin Spring redevelopment/ Fence	\$ 8,000
7. Antelope Waters (2) (Guzzlers)	\$ 6,000

Placement of small mammal and bird escape ramps will be done in conjunction with other field activities. The cost per ramp is \$50.

Development of other springs listed in the riparian section should be done as possible, especially if they are located near springs listed in the priority list. These will cost an estimated \$2,500 each.

IX. Public Affairs

Several special interest groups are extremely interested in the plan area, including wild horse and wilderness groups. NDOW is interested because the area involves three deer herd management areas as well as two antelope herd units. The permittees have been contacted and their input solicited and incorporated into the document.

X. Costs and Funding

The costs of implementation are anticipated to be expended over the next 15-20 years. Sikes Act funding is not a realistic possibility. Most funding will be done through BLM's 8100 and 4350 monies with an estimated expenditure of \$41,000.

XI. Concurrence and Approval

This HMP is recommended and approved as written as follows:

Prepared by:

Michael W. Perkins
Egan Area Biologist
Ely BLM District

Date

Recommended by:

Gene L. Drais, Manager
Egan Resource Area
Ely BLM District

Date

Approved by:

Kenneth G. Walker
District Manager
Ely BLM District

Date

Concurrence by:

Larry Barngrover
Regional Supervisor, Region II
Nevada Department of Wildlife

Date

John Donaldson
Regional Supervisor, Region III
Nevada Department of Wildlife

Date

XII. Appendix Index

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APPENDIX A

Riparian species important to management in the Little Smoky and Big Sand Springs Valley Management Plan area, Nevada.

Rushes	<u>Juncus</u> sp.
Phlox	<u>Phlox</u> sp.
Yarrow	<u>Yarrow</u> sp.
Dandelion	<u>Taraxacum</u> sp.
Clover	<u>Trifolium</u>
Columbine	<u>Aquilegia</u>
Watercress	<u>Rorippa</u> sp.
Rose	<u>Rosa</u> sp.
Willow	<u>Salix</u> sp.
Buttercup	<u>Ranunculaceae</u> family
Nettles	<u>Urtica</u> sp.
Violets	<u>Viola</u> sp.
Mints	<u>Mentha</u> sp.
Bluegrass	<u>Poa</u> sp.
Sedges	<u>Carex</u> sp.
Longleaf cottonwood	<u>Populus</u> sp.
Elderberry	<u>Sambucus</u> <u>coerula</u>
Quaking aspen	<u>Populus</u> <u>tremuloides</u>
Green ash	<u>Fraxinus</u> sp.
River Birch	<u>Betula</u> sp.
Chokecherry	<u>Prunus</u> sp.
Balsam	<u>Balsamorhiza</u> <u>sagittata</u>
Monkeyflower	<u>Mimulus</u> <u>guttatus</u>
Onion	<u>Allium</u> sp.

APPENDIX B

The following laws and acts pertain to and are applicable to the Little Smoky Big Sand Springs Valley Habitat Management Plan:

1. Clear Air Act Amendments, P.L. 95-95, 91 Stat. 685, 42 USC 7401.
2. Federal Water Pollution Control Act Amendment, P.L. 92-500, 86 Stat. 816, 33 USC 1251, 1972 U.S. Code and Ad New 3668.
3. Salinity Control Act, P.O. 87-483, 76 Stat. 102, 43 USC 615.
4. Toxic Substances Act, P.O. 94-469, 90 Stat. 2003, 15 USC 2601, 1976. U.S. Code Cong. and .
5. Safe Drinking Water Act, P.O. 93-523, 88 Stat. 1661, 42 USC 3004.
6. Resource Recovery Act, P.L. 91-512, 48 Stat. 1227, 42 USC 3251.
7. Fish and Wildlife Coordination Act. P.L. 85-624, 72 Stat. 563, 16 USC 661, 1958 U.S. Code Cong. and Ad. News 3446, 1965 U.S. Code Cong. and Ad. News 1864.
8. Endangered Species Act, P.O. 93-205, 87 Stat. 889, 16 USC 1531, 1973 U.S. Code Cong. Ad. News 2989.
9. Bald and Golden Eagle Act, P.L. 92-535, 86 Stat. 106A, 16 USC 668, 1959, U.S. Code Cong. and Ad. News 1675, 1972 U.S. Code Cong. and Ad. News 4285.
10. Federal Land Policy and Management Act, P.L. 94-579, 90 Stat. 2743, 43 USC 7101. 1976.
11. Mining Regulations 3809, 3802.
12. 43 CFR 8352.6(b) Established designated area-policy.
13. Wild and Free Roaming Horse and Burro Act of 1971, P.L. 92-195, 85 Stat. 649, 16 U.S.C. 1331-1340.
14. 43 CFR 4100.0-1 1983 revision Grazing.
15. State of Nevada Endangered Species Act.

16. 43 CFR 2070 Designation of Areas and Sites.
17. 43 CFR Part 4700 Wild Free-Roaming Horse and Burro Protection, Management and Control.
18. Endangered Species Act 1973 as amended.
19. Taylor Grazing Act 1934.
20. National Environmental Policy Act 1969.

APPENDIX C

Big game monitoring studies in the Little Smoky, Big Sand Springs Valley HMP Area.

<u>Name</u>	<u>Location</u>	<u>Allotment</u>	<u>Date Established</u>	<u>Date Reread</u>	<u>Trend</u>
Bassit Spring	T. 12 N., R. 52 E., sec. 33	Duckwater	8-91	---	---
Tank Spring	T. 13 N., R. 52 E., sec. 33	Duckwater	8-91	---	---

APPENDIX D

<u>Allotment No.</u>	<u>Dry Meadow AC's</u>	<u>Wet Meadow AC's</u>	<u>Other/ Aspen AC's</u>	<u>Riparian AC's</u>	<u>Total Acres</u>
Duckwater 0701	7	10	696	174	887

APPENDIX E

Riparian/Wildlife objectives listed in the
Egan Rangeland Program Summary

Allotment

Duckwater
(0701)

Riparian and Wildlife Objectives

Manage rangeland habitat and forage condition to support reasonable numbers of wildlife, as follows: deer 2,313 AUMs , antelope 510 AUMs .

Maintain or improve mule deer yearlong habitat to good or better condition.

Improve and maintain habitat condition of meadows and riparian areas from fair to good or better condition for mule deer and upland game.

Protect sage grouse breeding complexes.

Protect ferruginous hawk nest sites.

Improve 5.0 miles of stream riparian in poor condition to good or better. (At most 2 mi. in HMP area)

APPENDIX F

Ecological Status Summary

Allotment Name Sand Springs
 Pasture Entire Allotment

Date Prepared _____
 Prepared by _____

Ecological Site	Acres				Rock Outcrop	Notes and Miscellaneous
	Early	Ecological Status		PNC		
		Mid	Late			
28 B 10 (Loamy 8-10")	--	11,263	728	--		
28 B 11 (Shallow Calcareous Loam 8-12")	879	6,644	581	--		
28 B 13 (Silty 8-12")	--	2,179	--			
29 X 06 (Loamy 8-10")	--	9,706	905	--		
29 X 08 (Shallow Calcareous Loam 8-12")	40	22,858	486			
29 X 16 (Loamy upland 8-10")	--	--	1,518	--		
29 X 17 (Loamy 5-8")		2,099				
29 X 20 (Silty 5-8")	4,446	7,991	1,984	--		

APPENDIX F

Ecological Status Summary

Allotment Name Sand Springs (Cont.)
 Pasture Entire Allotment

Date Prepared _____
 Prepared by _____

Ecological Site	Acres				Rock Outcrop	Notes and Miscellaneous
	Early	Ecological Status		PNC		
		Mid	Late			
29 X 25						Included with 29X20 due to small percentage of 29X25 present.
29 X 46	--	(146)	--			29X46 not mapped.
29 X 48	299	(*2546)				29X48 site description not found. *2546 acres not mapped but assumed to be in mid-seral condition. 299 acres on Portuguese Mtn. NW were mapped as 29X48.
29 X 49 (Sandy Loam 8-12")	385	6215 (1448)	374			*1294 acres of 29X49 not located, therefore, not mapped but assumed to be in mid seral condition.
Miscellaneous Ecological Sites		(1992)*	(29)			These miscellaneous ecological sites were not located or mapped (all of them comprised less than 5% of the respective (MUD's). But they were assumed to be in seral condition.

APPENDIX G

EGAN WILDLIFE S.O.P.'s

A. Standard Operating Procedures

- (1) Threatened or endangered plant or animal species clearance is required before implementation of any project. Consultation with the U.S. Fish and Wildlife Service per Section 7 of the Endangered Species Act is necessary if a threatened or endangered species or their habitat may be impacted. If there is deemed to be an adverse impact, either special design, relocation, or abandonment of the project will follow.
- (2) Alteration of sagebrush areas either through application or herbicides, prescribed burning, or by mechanical means will be in accordance with procedures specified in the Memorandum of Understanding between the Nevada Department of Wildlife and the Bureau of Land Management relating to the Western States Sage Grouse Guidelines.
- (3) Active raptor nests adjacent to areas proposed for vegetation conversion will be protected. On-the-ground work will be confined to the period preceding nesting activity or after the young have fledged (left the nest). Areas containing suitable nesting habitat will be inventoried for active raptor nests prior to initiation of any project.
- (4) Fence construction must comply with BLM Manual 1737. Lay-down fences will be constructed in wildlife areas if necessary and feasible. White topped green steel posts, flagging, etc. will be utilized in wild horse areas.
- (5) Springs will be fenced as necessary and feasible to prevent overgrazing and trampling of adjacent vegetation and provide escape area for small wildlife. Water at these spring developments will be maintained at the source.
- (6) Water for wildlife is to be made available in allotments and rested pastures, whenever feasible.
- (7) All livestock water improvement sites will have wildlife escape devices (bird ramps) in watering troughs, lateral watering sites off pipelines, and the overflow piped away from the last trough so as to provide water at ground level for wildlife.

- (8) Time of day and/or time of year restrictions will be utilized in those areas where construction activities are in the immediate vicinity or would cross sage grouse strutting, nesting, and wintering grounds; critical mule deer and pronghorn antelope winter range; or antelope kidding areas. The restrictions are listed below.

Restrictions -

- a. Sage grouse strutting grounds: From March 1 to May 15 -- 2 hours before dawn until 10 a.m.
- b. Sage grouse nesting grounds: Late May to mid-June.
- c. Sage grouse wintering grounds: November 1 to March 31.
- d. Critical mule deer and antelope winter range: November 1 to March 31.
- e. Environmental analyses, including categorical exclusions, will be conducted prior to implementing any HMP's, or carrying out any specific projects (fences, spring developments, seedings, etc.)

APPENDIX H

Sage Grouse Lek Locations

Egan Resource Area Sage Grouse Leks 1991

<u>Map Reference</u>	<u>Legal Location</u>	<u>Date</u>	<u>Status</u>	<u>Remarks</u>
Nine Mile Peak	T. 14 N., R. 53 E., sec. 25 SE, sec. 30 SW	4-09-91	A. 11 males, 2 females	--
Nine Mile Peak	T. 14 N., R. 52 E., sec. 25 NE	4-09-91	A. 2 males	--
Nine Mile Peak	T. 14 N., R. 52 E., sec. 16 NW			
Nine Mile Peak	T. 14 N., R. 52 E., sec. 03 SW	4-09-91	A. 4 males	--
Nine Mile Peak	T. 14 N., R. 53 E., sec. 31 SW	4-09-91	A. 7 males, 1 female	New lek
Antelope	T. 13 N., R. 52 E., sec. 33	--	NC	--
Antelope	T. 12 N., R. 52 E., sec. 33	--	NC	--
Antelope	T. 13 N., R. 52 E., sec. 08 NE	--	NC	--



**COMMISSION FOR THE
PRESERVATION OF WILD HORSES**

**Stewart Facility
Capitol Complex
Carson City, Nevada 89710
(702) 687-5589**

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Reno, Nevada

April 8, 1992

Gene L. Drais, Manager
Egan Resource Area
BLM-Ely District Office
HC33 Box 150
Ely, Nevada 89301-9408

Dear Mr. Drais,

Thank you for the opportunity to review and comment on the draft copy of the Little Smoky and Big Sand Springs Valley Habitat Management Plan and associated preliminary EA No. NV-040-1-10.

On page 7, you state "there will be a slight loss of AUM's to wild horses due to augmentation of antelope into the HMP area." First of all, there has been no AML established through monitoring data, and there is no HMAP nor AMP that shows what the proposed actions are and how they will impact wild horses and/or their habitat. Why do you refer to wild horses taking a loss to their AUM's and not refer to livestock taking any loss at all? How have you determined where the extra AUM's are going to come from and what data is that based on? Would you please supply us with that analysis.

You mention potential fencing projects to protect wildlife and riparian areas. We would request to be notified on any fencing project that will affect wild horses and/or their habitat.

If you have any questions, please feel free to call.

Sincerely,

A handwritten signature in cursive script that reads "Catherine Barcomb".

CATHERINE BARCOMB
Executive Director

ROUTING AND TRANSMITTAL SLIP

Date

9-8-92

TO: (Name, office symbol, room number, building, Agency/Post)

Initials

Date

1.

2.

Cathie

3.

4.

5.

Action	File	Note and Return
Approval	For Clearance	Per Conversation
As Requested	For Correction	Prepare Reply
Circulate	For Your Information	See Me
Comment	Investigate	Signature
Coordination	Justify	

REMARKS

on page 8 - under Livestock
 you will note that your
 comment on loss of AUMS
 for livestock as well as
 w/horses has been included
 in final EA. Thank for

DO NOT use this form as a RECORD of approvals, concurrences, disposals, ^{your} clearances, and similar actions ^{comment!}

FROM: (Name, org. symbol, Agency/Post)

Room No.—Bldg.

Thank
 Mike Perkins

Phone No.