



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Nevada State Office
P.O. Box 12000
Reno, Nevada 89520

IN REPLY
REFER TO:
1602.31
(NV-040)

FEB 3 1987

Dear Reader:

Enclosed for your information is a copy of the Record of Decision (ROD) for the Egan Resource Management Plan (RMP). This ROD is the approval of the Egan RMP and it completes the process which included the development of draft and final management plans and associated environmental impact statements (EIS). All of the planning documents are available for review by the public at the BLM District Office, Ely, Nevada.

Part I of the ROD displays the management decisions to be implemented as a result of the planning process. The Management Decision Summary, Part II, provides a detailed summary of Part I decisions and past decisions yet to be implemented. Part II includes the management actions, standard operating procedures, and implementation strategies for the management plan.

The wilderness recommendations made in the RMP are only preliminary. This is because designation of areas as wilderness requires Congressional action. Since this is the case, a separate legislative wilderness EIS is being prepared which will be filed with the Secretary of the Interior. The Secretary is required by the Federal Land Policy and Management Act (FLPMA) to make his wilderness recommendations to the President by 1991. Prior to this date he will ensure that mineral surveys are conducted by the U.S. Geological Survey and the Bureau of Mines on all areas recommended as suitable for wilderness designation. After receiving the Secretary's recommendations, the President has until 1993 to forward his recommendations to Congress.

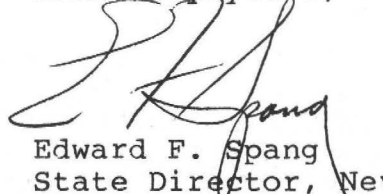
A Rangeland Program Summary (RPS) will be issued. The RPS will summarize allotment specific objectives for livestock, vegetation, wildlife, wild horses and burros along with monitoring, scheduling, and identifying range improvements for each allotment. It will also outline the monitoring program upon which each allotment's grazing use will be evaluated. Periodic updates of the RPS will be issued as the rangeland management program is implemented. The RPS will identify specific agreements and identify those allotments where decisions will be issued.

The next phase of the RMP/EIS process is the implementation phase. More detailed and site specific plans will be developed and approved prior to commencement of work on the ground. Such activity plans include, among others, grazing allotment management plans (AMP's), wildlife habitat management plans (HMP's), and wild horse herd management area plans (HMAP's). Once these plans are developed and approved, work will commence on the ground.

Please be aware that the planning process does not end with the ROD. One of the requirements of BLM planning is a review process to determine whether the plan is still current and is moving toward accomplishment. The Egan RMP will be monitored yearly and shall be reviewed at a minimum of five year intervals to determine whether mitigating measures are satisfactory, whether there has been significant change in related plans, or whether there is new data of significance to the plan. The review process will be used to determine whether there is sufficient cause to warrant amendment or revision of the plan.

We wish to express our appreciation to all those who participated in the development of the Egan RMP. Quality planning is dependent on the active participation of private citizens. We look forward to your continued assistance in our planning and other land management activities.

Sincerely yours,



Edward F. Spang
State Director, Nevada

Egan Resource Area
Record of Decision
and
Management Decisions Summary

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Ely District
Ely, Nevada

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PART I - RECORD OF DECISION

Egan Resource Management Plan Egan Resource Area Ely District, Nevada

A. INTRODUCTION

The Egan Resource Area consists of approximately 3.8 million acres of public land in eastern Nevada (see map page 2). This Record of Decision applies to the entire Resource Area. Management Framework Plan (MFP) decisions were issued for the Cherry Creek Planning Area in 1979 and for the Duckwater Planning Area in 1974. Certain past MFP decisions, which were unaltered by the Egan RMP and are still valid, will remain in effect until changed through a subsequent planning action. The MFP decisions are included in Part II, Management Decision Summary in the section titled, "Management Actions Carried Forward From Previous Land Use Plans."

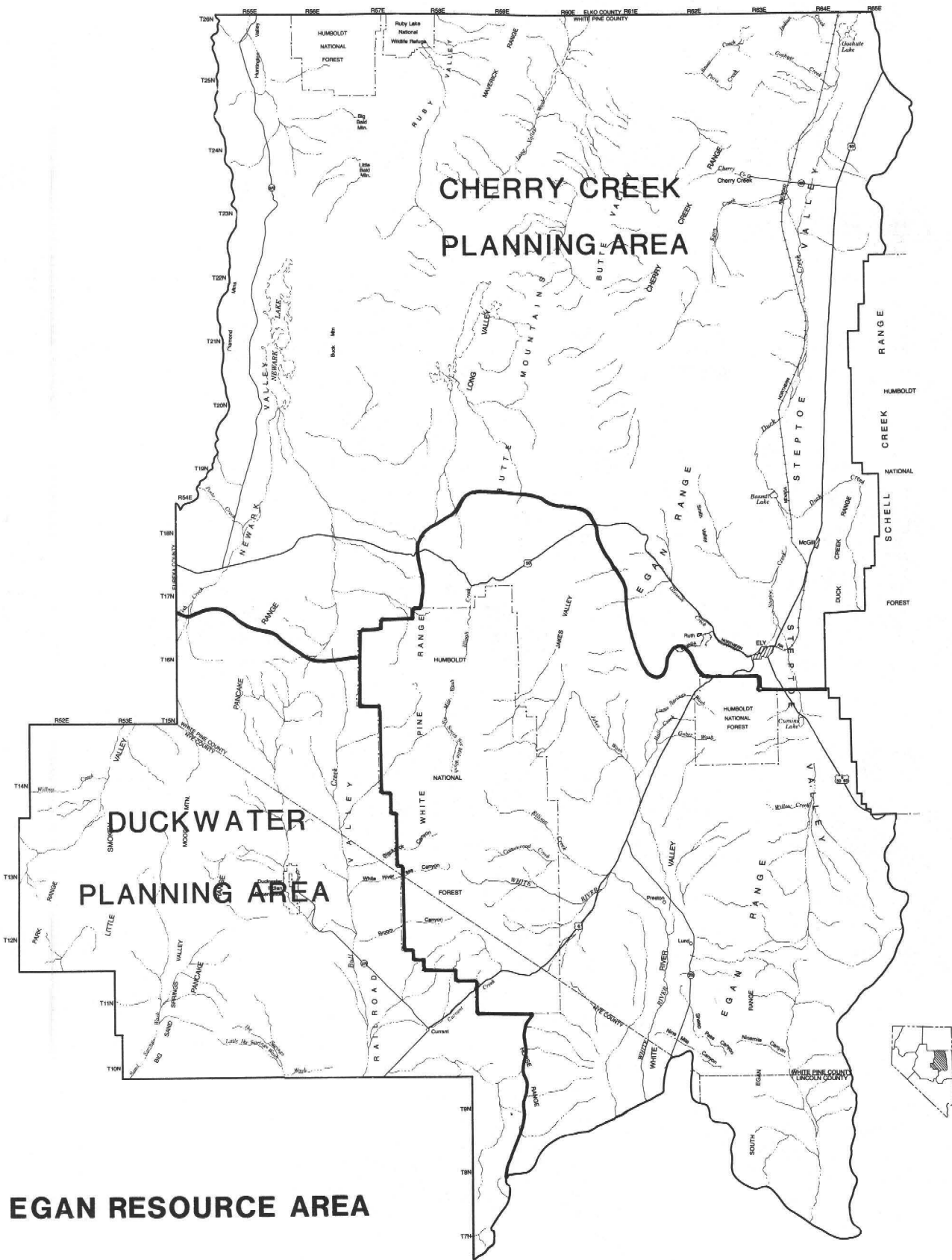
The RMP provides for management of the public lands within the Egan Resource Area. These management decisions are a result of BLM planning efforts that were developed in the Draft Egan RMP and EIS and resolution of protests received on the Proposed RMP and FEIS documents dated September 21, 1984. Major management decisions of the RMP are listed in Part I of this document. The Management Decision Summary, Part II, provides a detailed summary of the decisions which include management actions, standard operating procedures, and implementation strategies for the plan.

B. MANAGEMENT DECISIONS

1. Rangeland Management

a. Short-Term (0-5 years)

- (1) Initially authorize livestock use at the three year average licensed use, which is 123,461 AUM's, or 57% of total active preference. The three year average use is used for analysis only and would not be required as a stocking rate. Any permittee may activate his/her nonuse at any time unless emergency conditions such as fire or flood were to preclude it.
- (2) Develop and implement range improvement projects which emphasize greatest return on investment in relationship to resource needs. Short term range improvements within the Egan



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EGAN RECORD OF DECISION

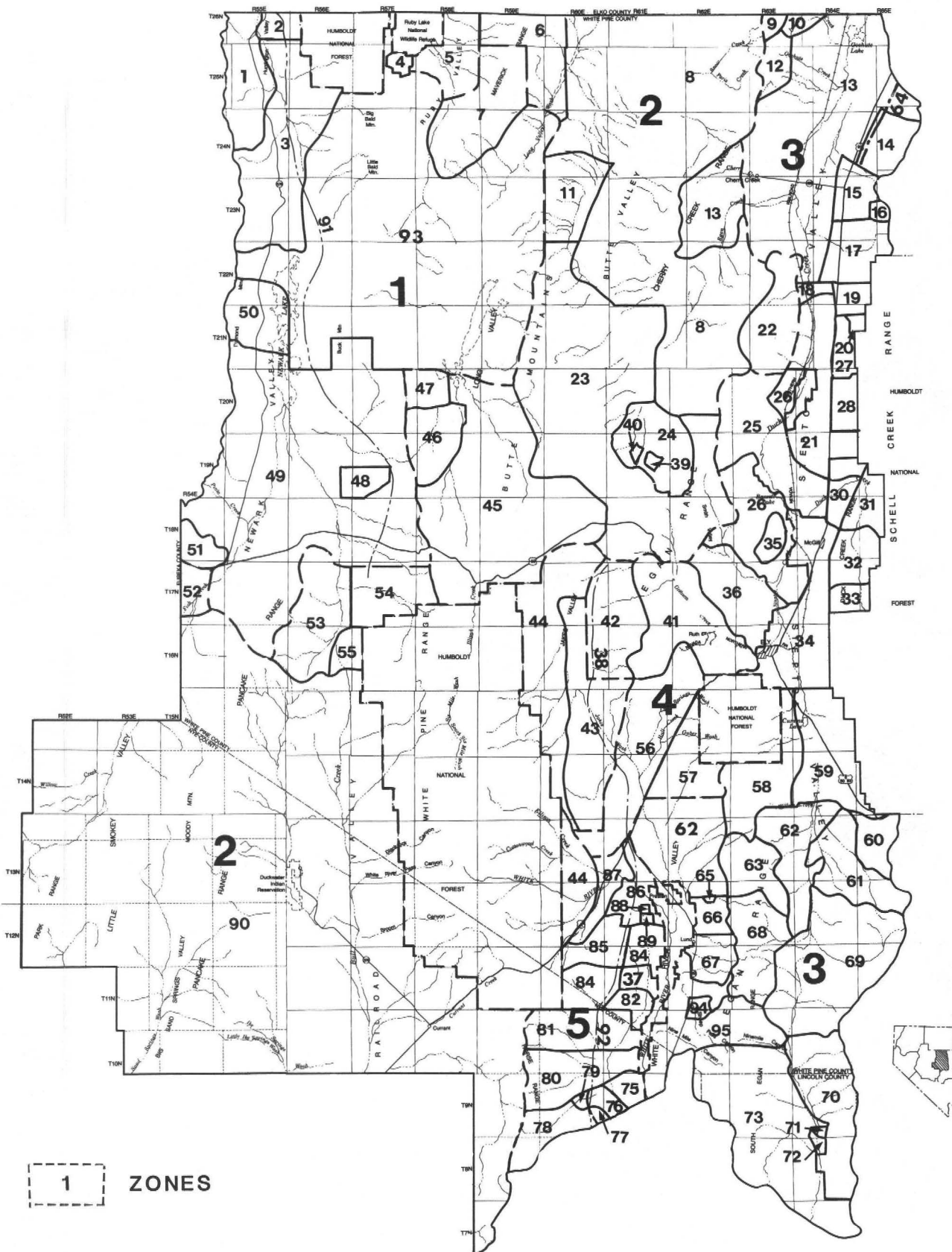
LOCATION MAP

Resource Area consist of 7½ miles of pipeline, 14 wells, 1 guzzler, 6 spring developments, and 24,200 acres of burning and seeding.

- (3) Continue existing rangeland monitoring studies and establish new studies as needed.
- (4) Monitoring studies will be used to determine if adjustments in livestock numbers are necessary.
- (5) All vegetation will be managed for those successional stages which would best meet the objective of this proposed plan. The existing vegetation type acreages by zone are listed in Appendix 3 of the Final RMP. The implementation of grazing systems, construction of range improvements, initial stocking rates, and future adjustments of livestock and wild horse numbers, if necessary, will result in the anticipated levels through management identified in Appendix 4 of the Final RMP.

b. Long-Term (6-20 years)

- (1) Develop and implement range improvements which emphasize greatest return on investment in relationship to resource needs. Long term range improvements within the resource area include a pipeline, two guzzlers, 1,000 acres of burn, and 2,200 acres of burning and seeding.
- (2) Future adjustments in livestock use will be based on data provided through the rangeland monitoring program.
- (3) The rangeland monitoring program will provide data to determine the need for additional improvements.
- (3) The allotment categories (see map page 4 and list page 5) of maintain (M), improve (I), and custodial (C) will be evaluated periodically to assure the management objectives are being reached and that range improvements are done on those allotments with the greatest potential for improvement in resource conditions and return on investment. Allotment management plans will be developed in a priority order with "I" first, "M" second, and "C" the lowest priority. The White Rock AMP is proposed. Additional allotment management plans will be developed, but there is not sufficient information to list these presently.



SEE BACK OF MAP FOR LIST
OF GRAZING ALLOTMENTS
AND MANAGEMENT
CATEGORIZATION.

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GRAZING ALLOTMENTS AND
MANAGEMENT ZONES

Grazing Allotments
MIC Categories

1. Railroad Pass (I)
2. White Pine Seeding (M)
3. Cold Creek (I)
4. Fort Ruby (M)
5. Ruby Valley (I)
6. Horse Haven (I)
7. Maverick Springs (I)
8. Medicine Butte (I)
9. McDermitt Creek (M)
10. Indian Creek (M)
11. North Butte (I)
12. Goshute Basin (M)
13. Cherry Creek (I)
14. Becky Creek (M)
15. North Steptoe (M)
16. Lovell Peak (M)
17. Schellbourne (M)
18. Middle Steptoe (C)
19. Whiteman Creek (C)
20. Bennett Creek (M)
21. Duck Creek Flat (M)
22. Gold Canyon (M)
23. Thirty Mile Spring (I)
24. South Butte (M)
25. Steptoe (M)
26. Heusser Mountain (M)
27. Big Indian Creek (C)
28. Second Creek (M)
29. Gallagher Gap (M)
30. Schoolhouse Spring (C)
31. Duckcreek Basin (M)
32. Duckcreek (M)
33. Gilford Meadows (M)
34. West Schell Bench (M)
35. Goat Ranch (I)
36. Georgetown Ranch (C)
37. Sheep Pass (I)
38. Jakes Unit Trail (M)
39. Butte Seeding (M)
40. South Butte Seeding (M)
41. Copper Flat (M)
42. Badger Spring (I)
43. Indian Jake (I)
44. Tom Plain (C)
45. Moorman Ranch (I)
46. Sabala Spring (M)
47. Dry Mountain (M)
48. North Pancake (M)
49. Newark (I)
50. Strawberry (M)
51. Silverado (C)
52. Black Point (C)
53. South Pancake (M)
54. Six Mile (M)
55. Monte Cristo (I)
56. Giroux Wash (I)
57. Dark Peak (I)
58. Lake Area (I)
59. Tamberlaine (M)
60. Cold Spring (M)
61. Connors Summit (M)
62. White Rock (I)
63. Little White Rock (M)
64. North Steptoe Trail (C)
65. Sawmill Bench (M)
66. Rock Canyon (C)
67. Brown Knoll (I)
68. Chimney Rock (M)
69. Cattle Camp/Cave Valley (I)
70. Cave Valley Ranch (I)
71. Haggerty Wash (M)
72. Cave Valley Seeding (M)
73. Shingle Pass (M)
74. Dee Gee Spring (C)
75. Sorenson Well (C)
76. East Wells (C)
77. Sheep Trail Seeding (M)
78. Wells Station (I)
79. Maybe Seeding (M)
80. Cove (M)
81. North Cove (I)
82. Swamp Cedar (M)
83. Big Six Well (C)
84. Douglas Point (I)
85. Douglas Canyon (C)
86. Preston (C)
87. McQueen Flat (M)
88. Willow Springs Addition (M)
89. Willow Springs Seeding (M)
90. Duckwater (I)
91. Warm Springs Trail (M)
92. Preston-Lund Trail (M)
93. Warm Springs (I)
94. Six Mile Ranch (M)

2. Wild Horses

a. Short-Term (0-5 years)

(1) Wild horses will be managed at a total of 1,451 animals according to the following populations within the herd use areas (see map page 7):

a. Sand Springs	494
b. Monte Cristo	96
c. Buck and Bald	700
d. Butte	60
e. Cherry Creek	11
f. Antelope	14
g. Jake's Wash	20
h. White River	20
i. Diamond Hills	36

(2) Continue existing rangeland monitoring studies and establish new studies as needed.

(3) Monitoring studies will be used to determine if adjustments in wild horse numbers are necessary to meet management objectives.

b. Long-Term (6-20 years)

(1) Future adjustments in wild horse numbers will be based on data provided through the rangeland monitoring program.

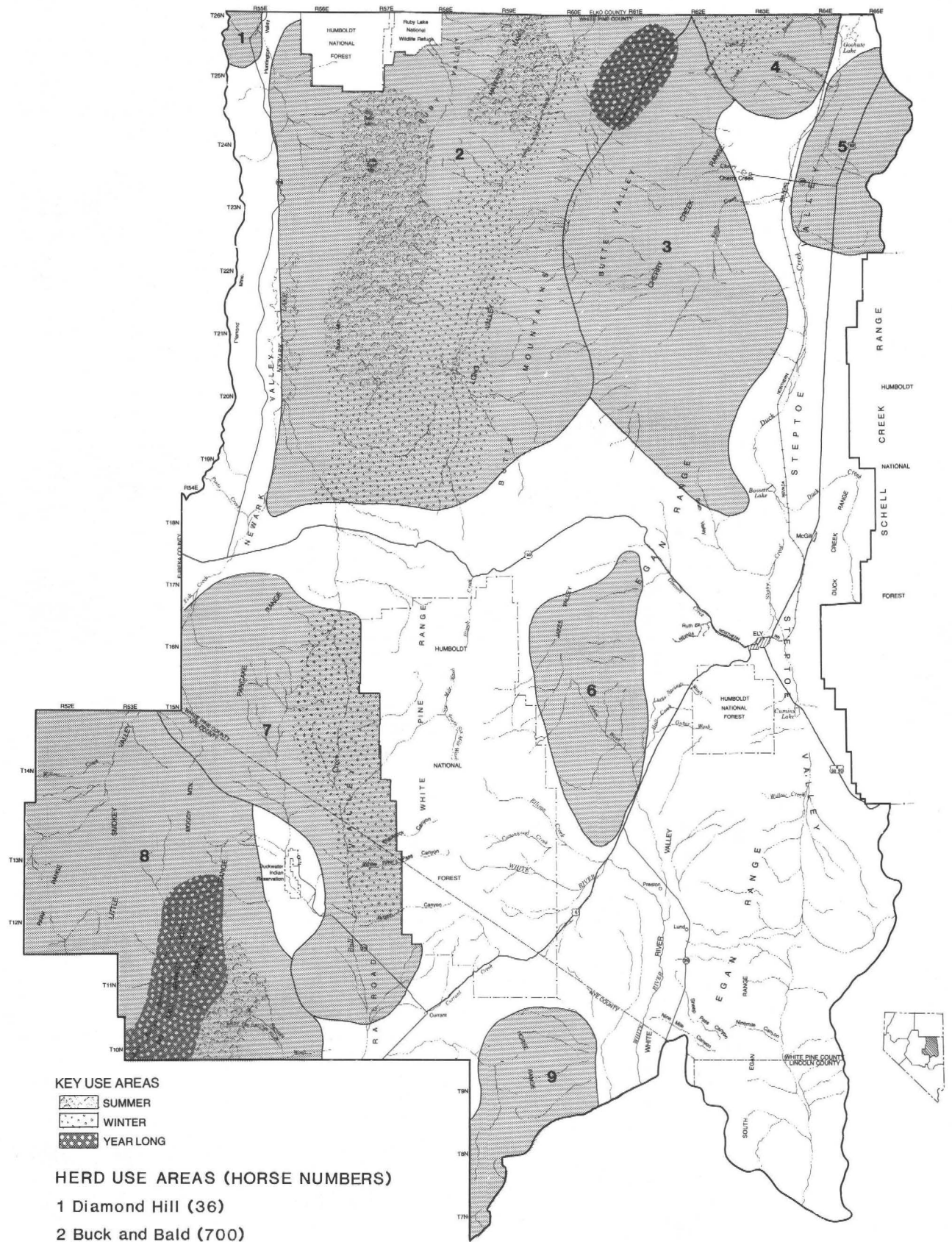
(2) The rangeland monitoring program will also provide data to determine the need for additional improvements for wild horses.

3. Wildlife

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.



KEY USE AREAS
 SUMMER
 WINTER
 YEAR LONG

- HERD USE AREAS (HORSE NUMBERS)**
- 1 Diamond Hill (36)
 - 2 Buck and Bald (700)
 - 3 Butte (60)
 - 4 Cherry Creek (11)
 - 5 Antelope (14)
 - 6 Jakes Wash (20)
 - 7 Monte Cristo (96)
 - 8 Sand Springs (494)
 - 9 White River (20)

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EGAN RECORD OF DECISION

WILD HORSE HERD USE AREAS

(3) Habitat management plans will be completed on all wildlife habitat areas within the resource area (see maps on pages 9 and 10).

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.

4. Realty Management

a. Dispose of up to 39,555 acres of land in the long term in the resource area according to the following breakdown by management zone (see map page 11):

1. Zone 1 - up to 3,840 acres
2. Zone 2 - up to 4,721 acres
3. Zone 3 - up to 24,858 acres
4. Zone 4 - up to 160 acres
5. Zone 5 - up to 5,976 acres

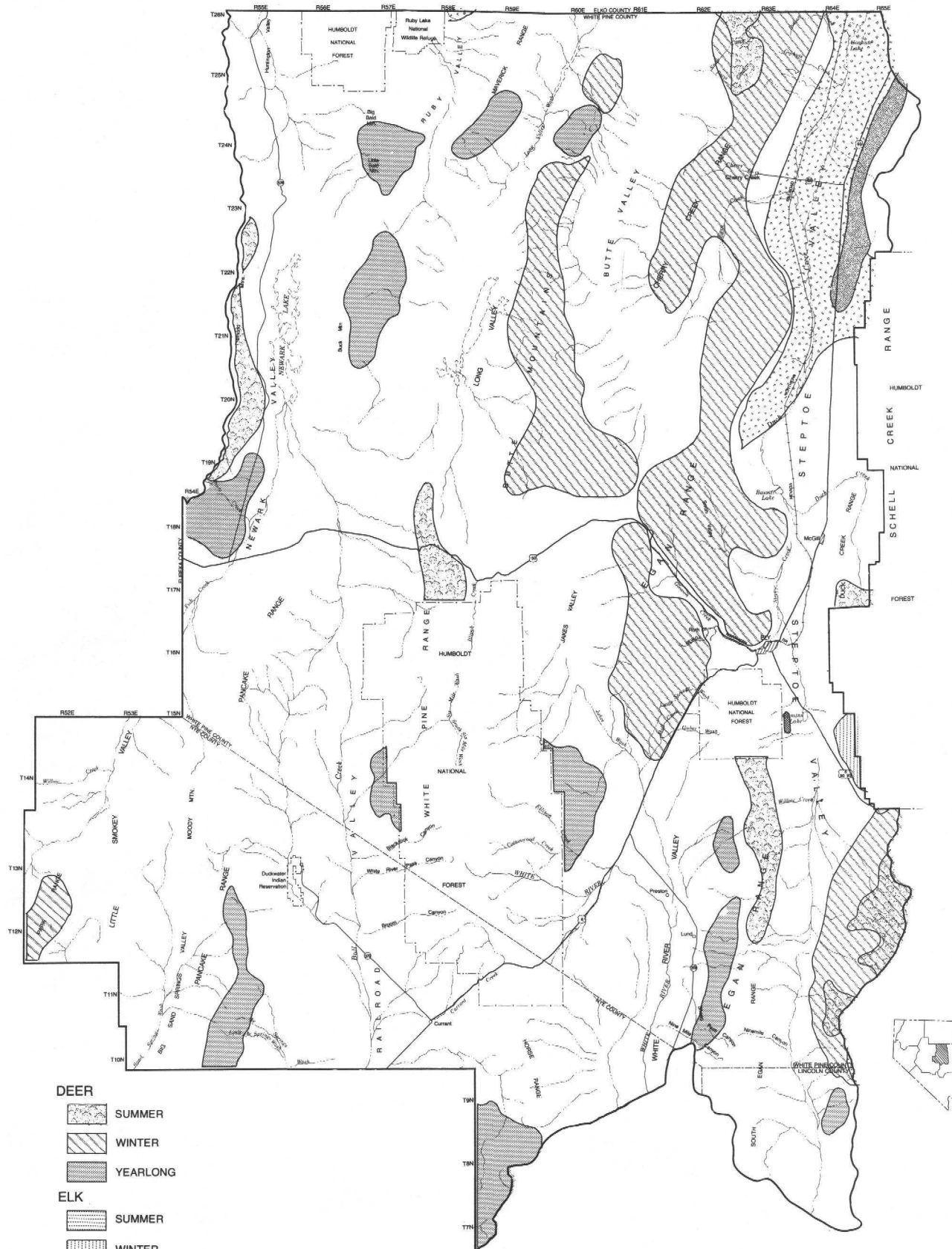
These lands are not in big game or upland game habitat or in wild horse herd use areas. All land disposal would be done in a planned and orderly manner.

b. Other lands may be appropriately applied for at a later date under one of several methods, including Recreation and Public Purposes applications, direct sales, exchanges, and Desert Land Entry applications. These other lands would be outside the 39,555 acres and will be evaluated on a case by case basis through a plan amendment.

c. Designate two additional utility and transportation corridors, one running north and south and one running east and west (see map page 12).

5. Wilderness

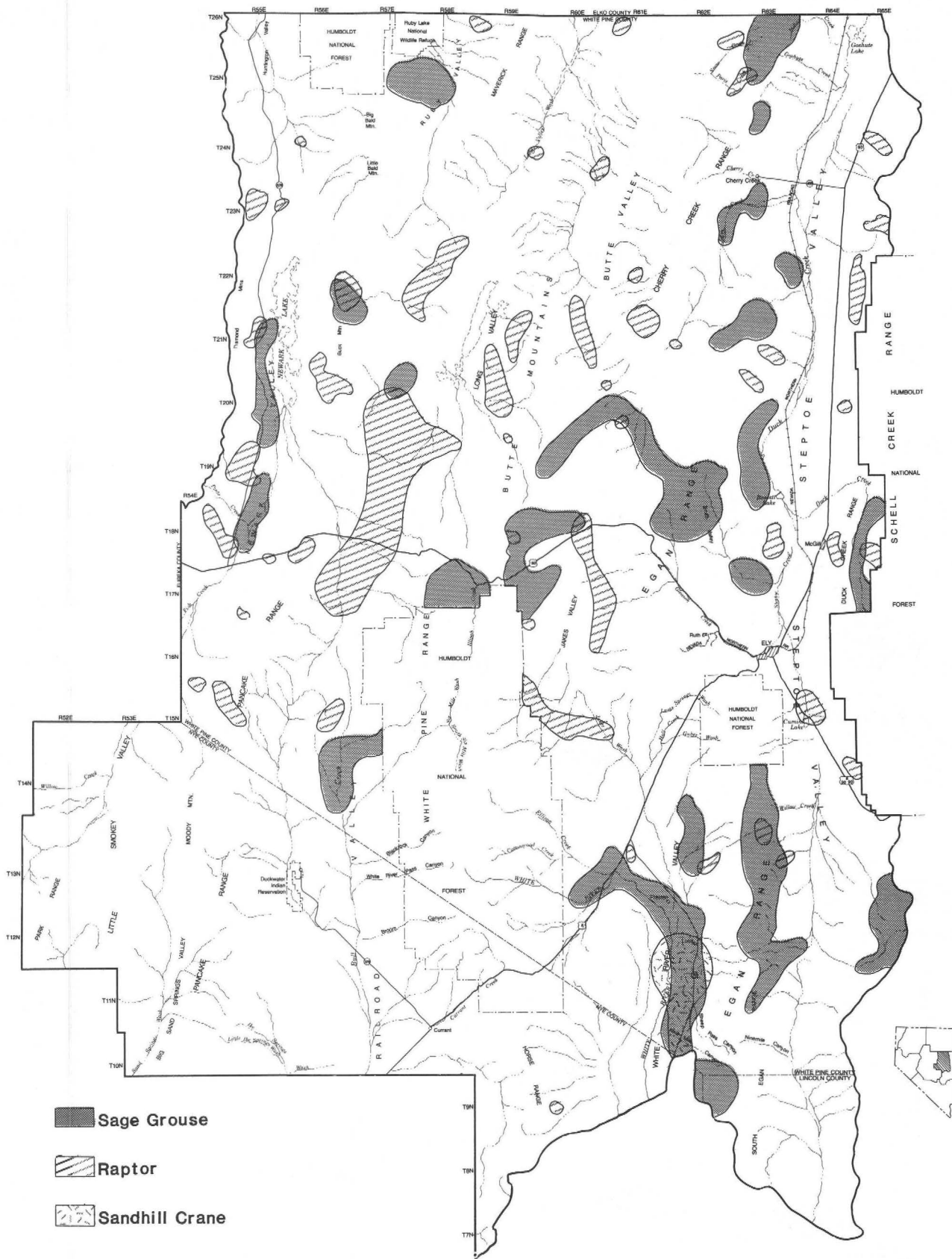
a. Recommend portions of three Wilderness Study Areas (WSA's) totaling 106,598 acres as preliminarily suitable for wilderness designation (see map page 12).



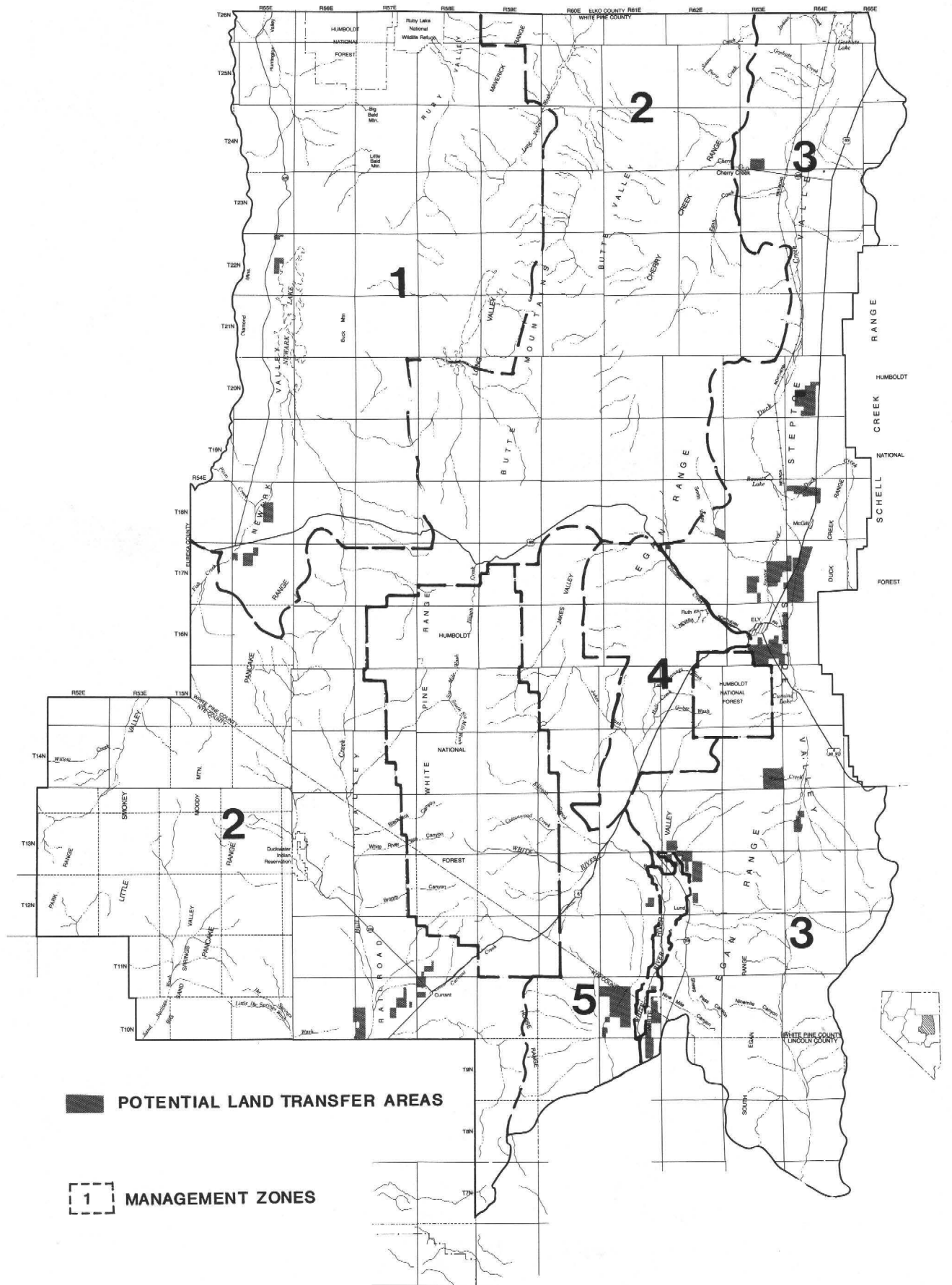
- DEER**
-  SUMMER
 -  WINTER
 -  YEARLONG
- ELK**
-  SUMMER
 -  WINTER
 -  YEARLONG
- ANTELOPE**
-  WINTER
 -  YEARLONG

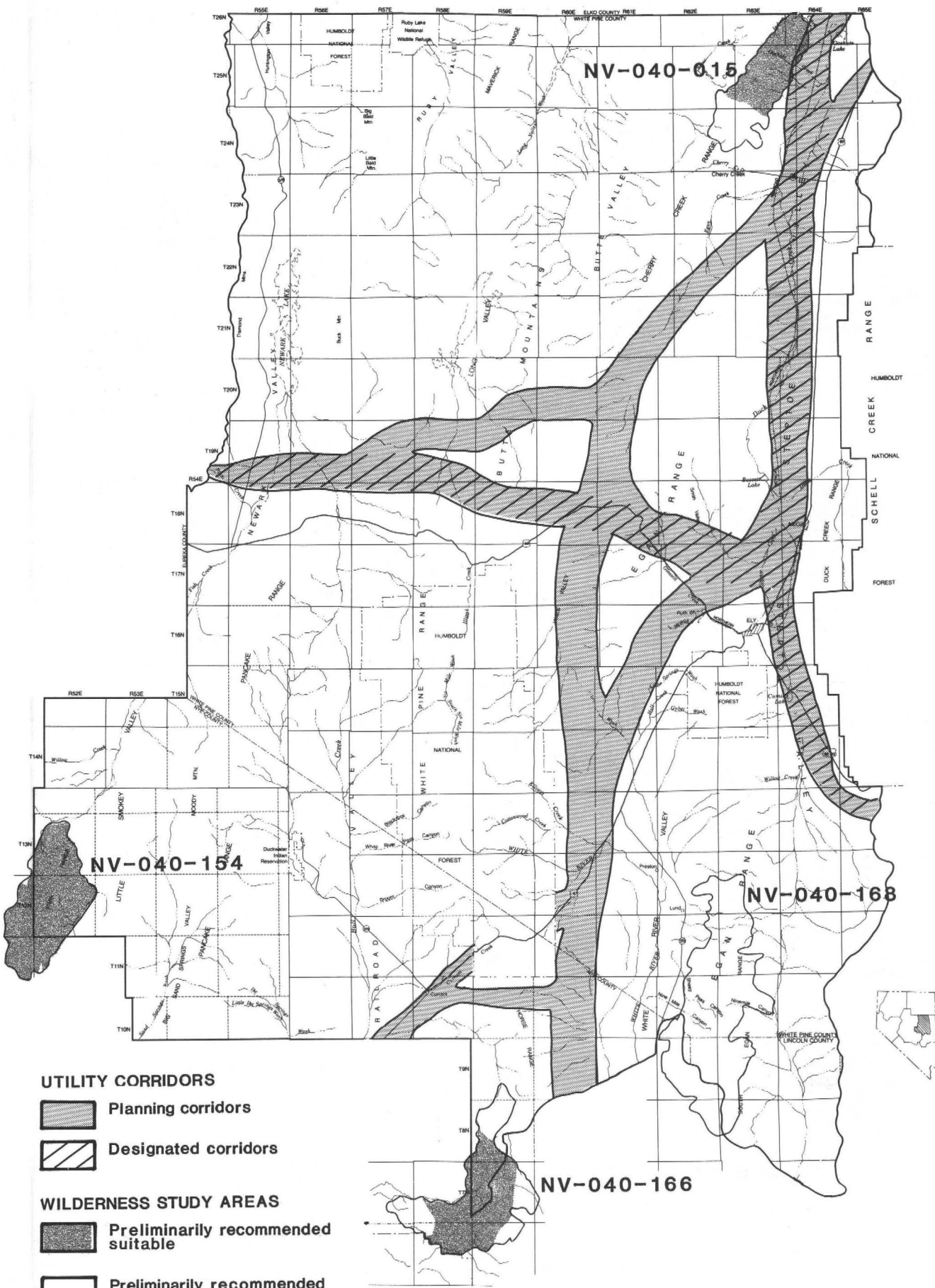
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BIG GAME HABITAT



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EGAN RECORD OF DECISION
SAGE GROUSE, RAPTOR AND
SANDHILL CRANE HABITAT





- UTILITY CORRIDORS**
-  Planning corridors
 -  Designated corridors
- WILDERNESS STUDY AREAS**
-  Preliminarily recommended suitable
 -  Preliminarily recommended nonsuitable

NV-040-015 GOSHUTE CANYON
NV-040-154 PARK RANGE
NV-040-166 RIORDAN'S WELL
NV-040-168 SOUTH EGAN RANGE

UNITED STATES DEPARTMENT OF THE INTERIOR
 BUREAU OF LAND MANAGEMENT
EGAN RECORD OF DECISION
UTILITY CORRIDORS AND
PRELIMINARY WILDERNESS
RECOMMENDATIONS
 1986

- b. Recommend portions of three WSA's and all of one WSA totaling 130,182 acres as preliminarily nonsuitable for wilderness designation (see map page 12).

6. Riparian Areas

a. Short-Term (0-5 years)

- (1) Monitoring efforts will be intensified on riparian areas (see map page 14).
- (2) Where management objectives are not being obtained through application of management practices, fencing will be considered.

7. Fire Management

a. Short-Term (0-5 years)

- (1) A resource area-wide fire management plan will be developed which allows a broad spectrum of uses. Fire would be used as a tool when it is the most effective and efficient method for improving habitat and increasing available forage.

8. Off Road Vehicle Management

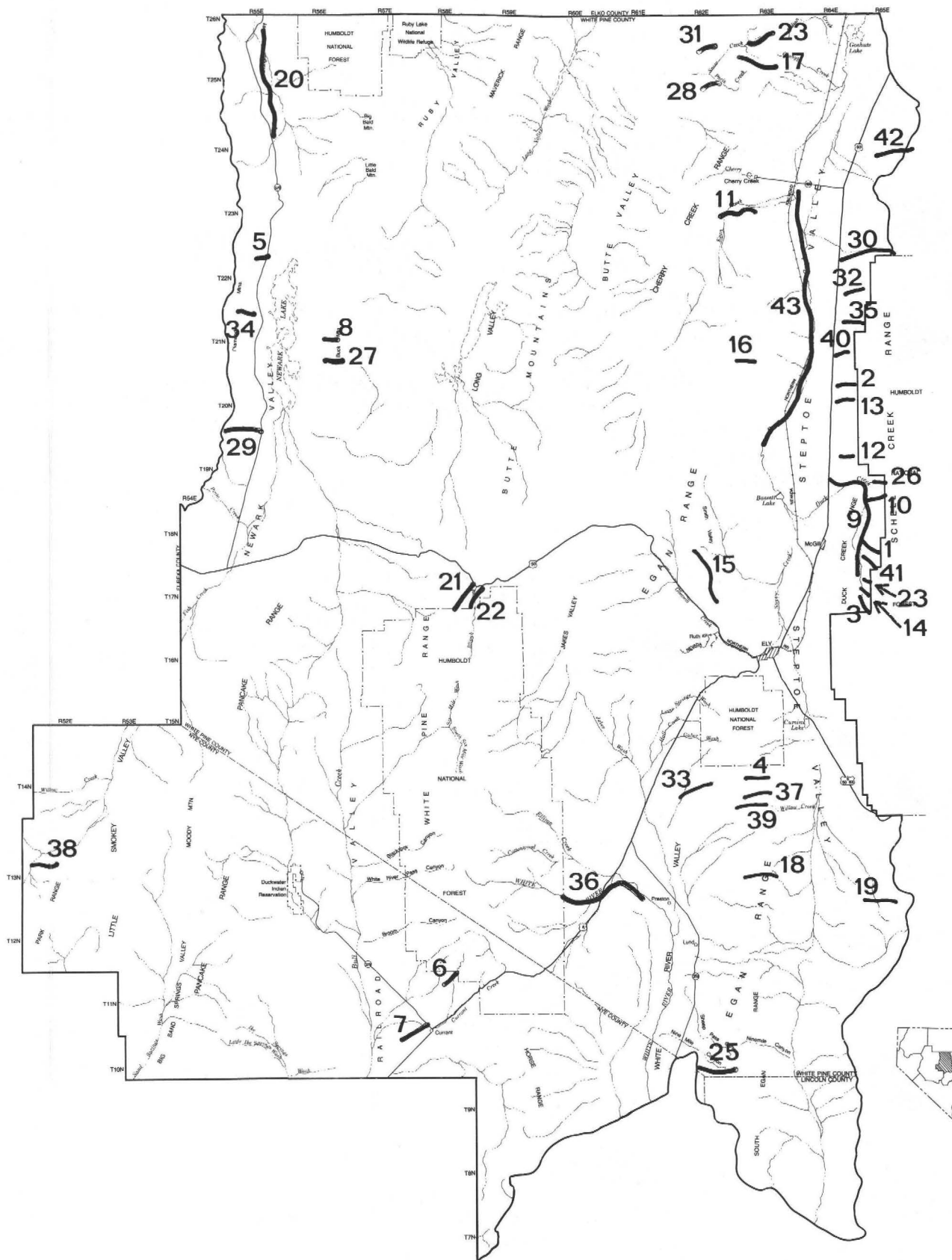
- a. Within the northern portion of the Riordan's Well WSA and the central portion of the South Egan Range WSA, ORV use is designated as "limited" to existing roads and trails (see map page 16).
- b. The remainder of the resource area is designated as "open" to ORV use.

9. Special Management Areas

- a. Designate an 80 acre geologic area and initiate a withdrawal from mineral entry to protect a large limestone cave within T. 10 N., R. 62 E., sec. 25, and T. 10 N., 5R. 63 E., sec. 30 (approximate-unsurveyed).

C. RATIONALE FOR RMP DECISIONS

The RMP includes, to a greater degree than does any of the individual alternatives proposed, a balanced approach to land management of approximately 3.8 million acres of public



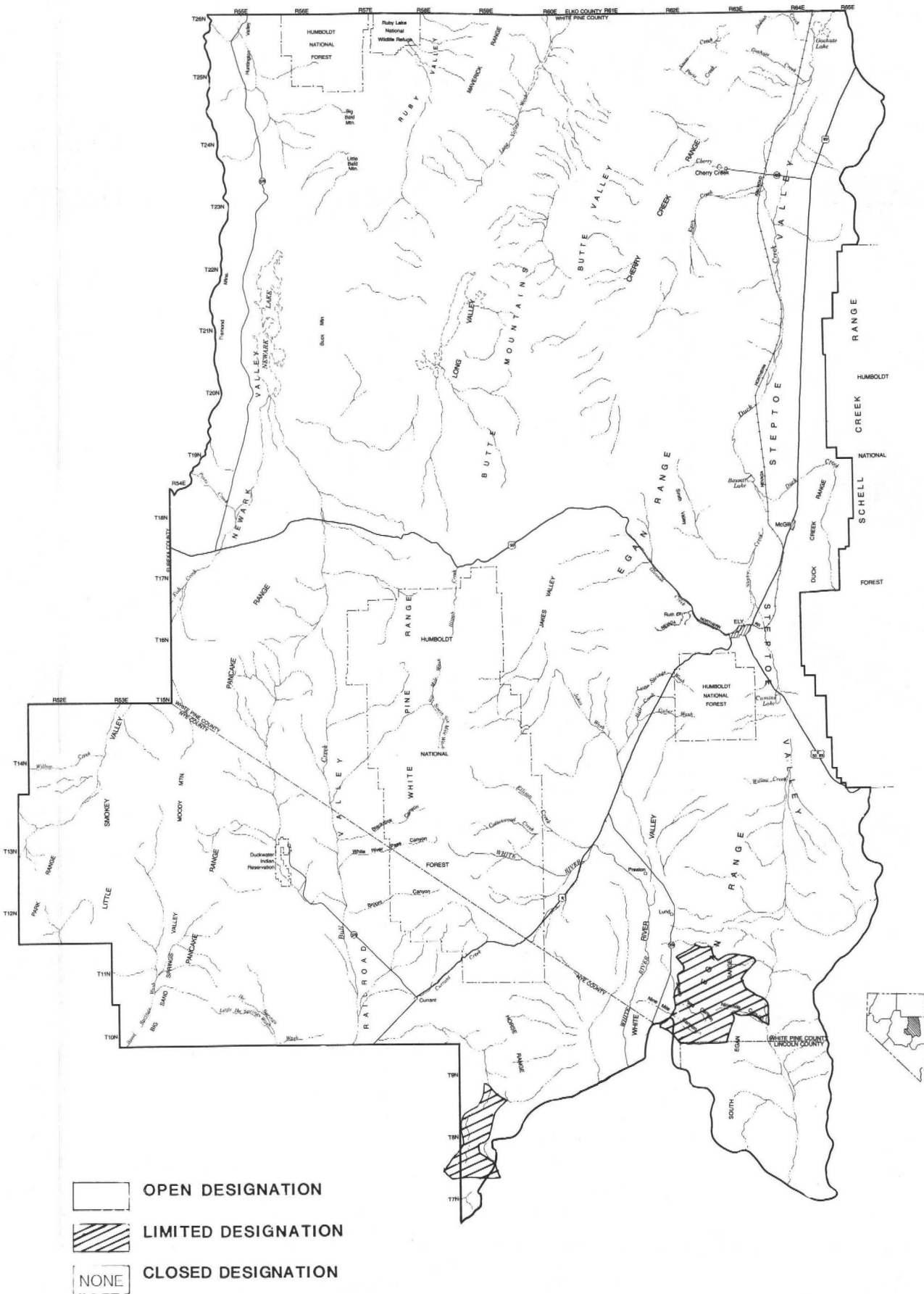
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 BUREAU OF LAND MANAGEMENT
 EGAN RECORD OF DECISION

FOR STREAM IDENTIFICATION BY
 NUMBER, REFER TO BACK OF MAP.

STREAM RIPARIAN HABITAT

Stream Riparian Habitat

No.	Stream	BLM Administered Miles	Acres of Stream Riparian
1	Berry	1.0	1.0
2	Big Indian	1.2	1.0
3	Boneyard	0.5	.2
4	Bullwhack	2.0	.5
5	Cold	.25	.5
6	Crystal	3.0	.4
7	Currant	2.0	.05
8	Deadman	0.5	1.0
9	Duckcreek Basin	1.0	14.0
10	East	1.5	7.0
11	Egan	2.0	3.0
12	First	.75	.3
13	Fitzhugh	1.0	2.0
14	Gilford	1.0	2.0
15	Gleason	2.0	5.0
16	Gold	2.2	5.0
17	Goshute	7.0	15.0
18	Haggerty	2.0	1.0
19	Horse and Cattle	2.5	1.0
20	Huntington	.25	.2
21	Illipah	3.2	4.0
22	Illipah unnamed	2.0	2.0
23	Indian	.25	.4
24	McDonald	.25	1.0
25	Nine Mile	3.0	4.0
26	North	.5	.03
27	Old Deadman	2.5	1.5
28	Paris	2.0	12.0
29	Pinto	1.0	1.0
30	Schell	1.5	1.0
31	Snow	3.0	.5
32	Tehema	1.7	.3
33	Water Canyon	7.0	7.0
34	Wtr Cnyn(Sadler)	2.5	15.0
35	Whiteman	2.0	1.0
36	White River	1.0	4.0
37	Willow	1.5	2.0
38	Willow-Snowball	2.0(Winter)	4.0
39	Williams	2.0	.5
40	Wilson-Mattier	2.3	4.0
41	Worthington	1.0	.5
42	Zips Cabin	.75	2.0
43	Duck Creek	30.0(Winter) 0.0(Summer)	4129.0
Totals		88.9(Summer) 121.8(Winter)	



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EGAN RECORD OF DECISION
OFF-ROAD VEHICLE (ORV)
DESIGNATIONS

land in east central Nevada. This plan makes provision for protecting fragile and unique resources while not overly restricting the ability of other resources to provide economic goods and services. The plan is a realistic and practical combination of features of the various proposed alternatives that were presented in the Draft EIS. This plan provides a framework for the future management of the public lands and resources in the Egan Resource Area that is consistent with existing legislation, regulations, and the policy of management of public lands on the basis of multiple use and sustained yield. This plan proposes to do this in "a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmosphere, water resources, and archaeological values" (FLPMA, Sec. 102 (a) (7) and (8)). In this sense, the proposed plan is the environmentally preferred plan.

D. SUMMARY OF ALTERNATIVES

The six alternatives presented in the Egan RMP are briefly summarized below.

Preferred Alternative:

This alternative emphasizes a balanced approach to land management in the resource area. Fragile and unique resources would be protected while not overly restricting the ability of other resources to provide economic goods and services. It is a combination of various alternatives.

Alternative A:

This alternative represents a continuation of present resource management uses and levels. The resource area would continue to be managed without a long-range plan and actions would be determined on a case-by-case basis as circumstances and/or public demand dictate.

Alternative B:

This alternative is oriented toward preservation of natural values, with emphasis on protecting wildlife and riparian habitats, wild horses, and wilderness values.

Alternative C:

This alternative is designed to provide a wide variety of goods and services to the public within the sustained use capabilities of the Egan Resource Area.

Alternative D:

This alternative is designed to emphasize the management of those resources contributing to the commercial well-being of the resource area.

Alternative E:

This alternative is designed to emphasize the protection of natural values through the removal of all livestock grazing from public lands.

E. MITIGATION

No specific mitigating measures were identified. However, Standard Operating Procedures (SOPs) have been developed and incorporated into the plan. SOPs are located in Part II, Management Decision Summary. Any adverse environmental impacts will be minimized through the use of the SOP's presented in the Proposed RMP and through site specific mitigation developed on an individual project basis.

F. PLAN MONITORING

The resource management plan will be evaluated at five-year intervals to determine if there is sufficient cause to warrant revision or amendment. The evaluation will consist of a review of the issues and management actions. The review will determine if these components are meeting the needs of management and define necessary changes as appropriate.

G. RECORD OF DECISION

This document meets the requirement for a Record of Decision as Provided in 40 CFR 1505.2.



Edward F. Spang, Nevada State Director

2/3/87
Date

PART II - MANAGEMENT DECISIONS SUMMARY

A. RESOURCE DECISIONS

1. Rangeland Management

a. Short-Term and Long-Term Management Actions

- (1) Initially authorize livestock use at the three year average licensed use, which is 123,461 AUM's, or 57% of total active preference. The three year average use is used for analysis only and would not be required as a stocking rate. Any permittee may activate his/her nonuse at any time unless emergency conditions such as fire or flood were to preclude it.
- (2) Develop and implement range improvement projects which emphasize greatest return on investment in relationship to resource needs. Short term range improvements within the Egan Resource Area consist of 7½ miles of pipeline, 14 wells, 1 guzzler, 6 spring developments, and 24,200 acres of burning and seeding. Long term range improvements within the resource area include a pipeline, 2 guzzlers, 1,000 acres of burn, and 2,200 acres of burning and seeding.
- (3) Continue existing rangeland monitoring studies and establish new studies as needed.
- (4) Monitoring studies will be used to determine if adjustments in livestock numbers are necessary.
- (5) All vegetation will be managed for those successional stages which would best meet the objective of this proposed plan.
- (6) The rangeland monitoring program will provide data to determine the need for additional improvements.
- (7) The allotment categories (see map page 4 and list page 5) of maintain (M), improve (I), and custodial (C) will be evaluated periodically to assure the management objectives are being reached and that range improvements are done

on those allotments with the greatest potential for improvement in resource conditions and return on investment. Allotment management plans will be developed in a priority order with "I" first, "M" second, and "C" the lowest priority. The White Rock AMP is proposed. Additional allotment management plans will be developed, but there is not sufficient information to list these presently.

b. Standard Operating Procedures

- (1) Environmental analysis will be conducted before project and activity plan development so that, depending on impact, modification or abandonment of the proposed project may be considered.
- (2) Threatened or endangered plant or animal species clearance is required before implementation of any project. Consultation with the Fish and Wildlife Service per Section 7 of the Endangered Species Act is necessary if a threatened or endangered species or its habitat may be impacted. If there is deemed to be an adverse impact, either special design, relocation, or abandonment of the project will follow.
- (3) Cultural resource protection requires compliance with Section 106 of the National Historic Preservation Act of 1966, Section 2(b) of Executive Order 11593, and Section 101(b)(4) of the National Environmental Policy Act (NEPA) of 1969 and, Section 2 (b) of the Archaeological Resources Protection Act of 1979. Prior to project approval, intensive field (Class III) inventories will be conducted in specific areas that would be impacted by implementing activities. If cultural or paleontological sites are found, every effort will be made to avoid impacts. However, where that is not possible, BLM will consult with the State Historic Preservation Officer and the Advisory Council on Historic Preservation, in accordance with the Programmatic Memorandum of Agreement by and

between the BLM and the Council dated January 14, 1980. This agreement sets forth a procedure for developing appropriate mitigative measures to lessen the impact of adverse effects.

- (4) Visual resource management requires all actions to be in compliance with BLM Visual Resource Management Design Procedures in BLM Manual 8400. On any project which has a visual contrast rating that exceeds the recommended maximum for the visual class zone in which it is proposed, the visual contrasts will be considered significant and mitigating measures must be examined.
- (5) Deferral of livestock use will be in effect for a minimum of two growing seasons following vegetation conversion projects so vegetation may be reestablished. This may require a decision or a temporary nonuse agreement with the rancher involved to suspend use in all or part of the allotment until the vegetation can be properly managed for grazing.
- (6) Only the minimal amount of vegetative clearing will be allowed on project sites requiring excavation.
- (7) Soils inventories will be completed prior to planning vegetation conversions to determine land treatment feasibility.
- (8) Fence construction must comply with BLM Manual 1737.
- (9) Physiological requirements for the management of different vegetation types will be determined by BLM based on the best available scientific information. Methods of management to meet these requirements will be determined through consultation with and recommendations from the Coordinated Resource Management and Planning (CRMP) Committee.

- (10) Water availability will be ascertained by well site investigation before water well development. The investigation will involve a detailed hydrogeological study of the site to determine ground water availability.
- (11) Vegetative conversions that require herbicides will be accomplished in accordance with Washington Office Instruction Memorandum 81-135 and Departmental Manual 517 with regards to safety and application.
- (12) Prior to the approval of a project which may harm or destroy any Native American religious or cultural sites, the affected Native American tribes or organizations will be contacted for their input as required by the American Indian Religious Freedom Act of 1978.
- (13) Environmental analyses, including categorical exclusions, will be conducted prior to implementing any AMP's or carrying out any specific projects (fences, spring developments, seedings, etc.).
- (14) Precede any vegetation conversion in pinyon-juniper areas with commercial firewood and post sales.
- (15) Any future land disposals would consider ownership patterns to eliminate the possibility of splitting allotments or use areas of livestock so the animals are able to move freely from one use area to another.
- (16) Livestock permits will be adjusted, if necessary, to reflect decreases in public land acreage available for livestock grazing use within an allotment as a result of realty actions.
- (17) Water for wildlife and wild horses is to be made available in allotments and rested pastures, whenever feasible.
- (18) Project area cleanup will be accomplished by removing all refuse to a sanitary landfill.
- (19) 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.

c. Implementation

Introduction

The livestock management decisions will be implemented through allotment management plans. These plans will identify such details as the grazing system to be used for livestock and vegetation management, and the location of range improvements for the benefit of livestock. The management actions developed for these plans will be integrated into a total management program designed to assure progress towards meeting the objectives of the resource management plan.

Implementation will take place through coordination, consultation, and cooperation. Coordinated resource management and planning is an advisory process that brings together all interests concerned with the management of resources in a given local area (landowners, land management agencies, wildlife groups, wild horse groups, and conservation organizations) and is the recommended public process through which consultation and coordination will take place. Grazing adjustments, if required, will be based upon a combination of reliable vegetation monitoring studies, consultation and coordination, and inventory.

Livestock grazing allotment management plans will include one or more of the grazing treatments described below. The grazing treatments will be designed to provide forage for consumptive use while maintaining proper and judicious use levels for key forage species. Existing allotment management plans consist of those for the Cold Creek, Cattle Camp/Cave Valley, Duck Creek Flat, Steptoe and Heusser Mountain Allotments (see map page 4). The White Rock allotment management plan is proposed (see map page 4). Additional AMP's will be developed, but there is not sufficient information to list these presently.

Grazing systems would include one or more of the following treatments in combination.

Treatment 1: Rest from livestock grazing for two consecutive growing seasons (approximately May 1 of one year to August 31 of the following year). Two growing seasons of rest would allow key management species to improve vigor and increase litter accumulation, seed production, and seeding establishment.

Treatment 2: Rest from livestock grazing for at least one year in both the spring (April 1 to May 30) and summer (June 1 to September 1) during each three or four year cycle.

Treatment 3: Graze each pasture at some time during each grazing year.

Treatment 4: Graze no pasture more than twice in the same growing season (spring or summer) during any three or four year cycle.

Treatment 5: Graze livestock to late fall only (approximately July 16 to November 15), and rest during the spring or summer the following year to improve the vigor, density, and reproduction of key grass species.

Treatment 6: Provide rest from livestock grazing for two years until seedlings are established or until it is determined that vegetation manipulation or recovery project is unsuccessful. This treatment provides the protection necessary for establishment or recovery of key management species following wildfire, prescribed burning, seeding, or spraying projects.

Treatment 7: Defer livestock grazing from early spring to midsummer each year (Approximately April 1 to June 30). Improved vigor and reproduction for key management species in each allotment would result.

Treatment 8: Allow grazing on winterfat/nuttall saltbrush up to 80 percent utilization during the dormant period (approximately November 1 to March 1), and rest from grazing March 1 to October 31 each year.

Treatment 9: Provide for rest of key mule deer winter ranges during the flowering period of key forage species June 1 to July 30 each year.


Treatment 10: Provide for rest from grazing of antelope kidding grounds from May 1 to June 15 each year.

SELECTIVE MANAGEMENT

It is the policy of the Bureau of Land Management to address rangeland management problems through a



KEY USE AREAS

-  SUMMER
-  WINTER
-  YEAR LONG

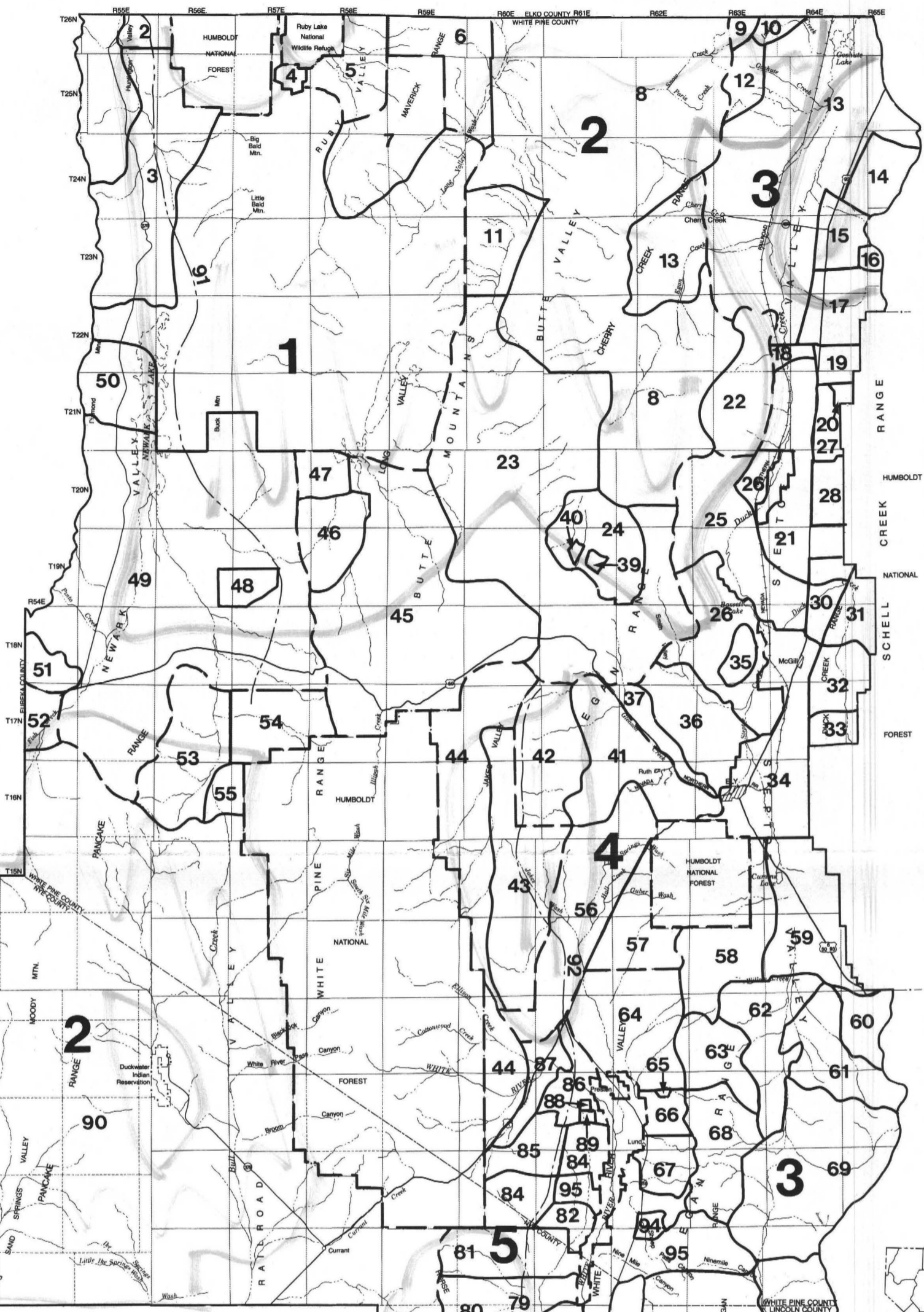
HERD AREAS (HORSE NUMBERS)

- 1 DIAMOND HILL (36)
- 2 BUCK AND BALD (1185)
- 3 BUTTE (60)
- 4 CHERRY CREEK (11)
- 5 ANTELOPE VALLEY (14)
- 6 JAKES WASH (20)
- 7 MONTE CRISTO (365)
- 8 SAND SPRINGS (300)
- 9 WHITE RIVER (20)

1

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
EGAN RESOURCE MANAGEMENT PLAN
WILD HORSE HERD USE AREAS

1983



GRAZING ALLOTMENTS

- | | | |
|----------------------------|-----------------------------|---------------------------------|
| 1 Railroad Pass 0601 | 33 Gilford Meadows 0424 | 65 Sawmill Bench 0807 |
| 2 White Pine Seeding 0602 | 34 West Schell Bench 0433 | 66 Rock Canyon 0808 |
| 3 Gold Creek 0609 | 35 Goat Ranch 0421 | 67 Brown Knoll 0831 |
| 4 Fort Ruby 0605 | 36 Georgetown Ranch 0422 | 68 Chimney Rock 0914 |
| 5 Ruby Valley 0619 | 37 Gleason Creek 0429 | 69 Cattle Camp/Cave Valley 0903 |
| 6 Horse Haven 0620 | 38 Jakes Unit Trail 0821 | 70 Cave Valley Ranch 0904 |
| 7 Maverick Springs 0621 | 39 Butte Seeding 0507 | 71 Haggerty Wash 0907 |
| 8 Medicine Butte 0501 | 40 South Butte Seeding 0506 | 72 Cave Valley Seeding 0908 |
| 9 McDermitt Creek 0505 | 41 Copper Flat 0427 | 73 Shingle Pass 0906 |
| 10 Indian Creek 0401 | 42 Badger Spring 0823 | 74 Dee Gee Springs 0815 |
| 11 North Butte 0502 | 43 Indian Jake 0804 | 75 Sorenson Well 0818 |
| 12 Goshute Basin 0402 | 44 Tom Plain 0803 | 76 East Wells 0830 |
| 13 Cherry Creek 0403 | 45 Moorman Ranch | 77 Sheep Trail Seeding 0825 |
| 14 Becky Creek 0404 | 46 Sabala Springs 0610 | 78 Wells Station 0819 |
| 15 North Steptoe 0405 | 47 Dry Mountain 0609 | 79 Maybe Seeding 0828 |
| 16 Lovell Peak 0406 | 48 North Pancake 0612 | 80 Cove 0817 |
| 17 Shellbourne 0407 | 49 Newark 0608 | 81 North Cove 0816 |
| 18 Middle Steptoe 0411 | 50 Strawberry 0607 | 82 Swamp Cedar 0832 |
| 19 Whiteman Creek 0408 | 51 Silverado 0623 | 83 Big Six Well 0812 |
| 20 Bennett Creek 0409 | 52 Black Point 0617 | 84 Douglas Point 0810 |
| 21 Duck Creek Flat 0412 | 53 South Pancake 0615 | 85 Douglas Canyon 0811 |
| 22 Gold Canyon 0413 | 54 Six Mile 0613 | 86 Preston 0806 |
| 23 Thirty Mile Spring 0503 | 55 Monte Cristo 0614 | 87 McQueen Flat 0805 |
| 24 South Butte 0504 | 56 Giroux Wash 0826 | 88 Willow Springs Addition 0825 |
| 25 Steptoe 0415 | 57 Dark Peak 0827 | 89 Willow Springs Seeding 0824 |
| 26 Heusser Mountain 0416 | 58 Lake Area 0910 | 90 Duckwater 0701 |
| 27 Big Indian Creek 0410 | 59 Tamberlain 0901 | 91 Warm Springs Trail 0622 |
| 28 Second Creek 0417 | 60 Cold Spring 0909 | 92 Preston-Lund Trail 0822 |
| 29 Gallagher Gap 0418 | 61 Willow Springs 0129 | 93 Warm Springs 0606 |
| 30 Schoolhouse Spring 0420 | 62 White Rock 0902 | 94 Six Mile Ranch 0814 |
| 31 Duckcreek Basin 0419 | 63 Little White Rock 0913 | 95 Sheep Pass 0905 |
| 32 Duckcreek 0423 | 64 White Rock 0902 | |

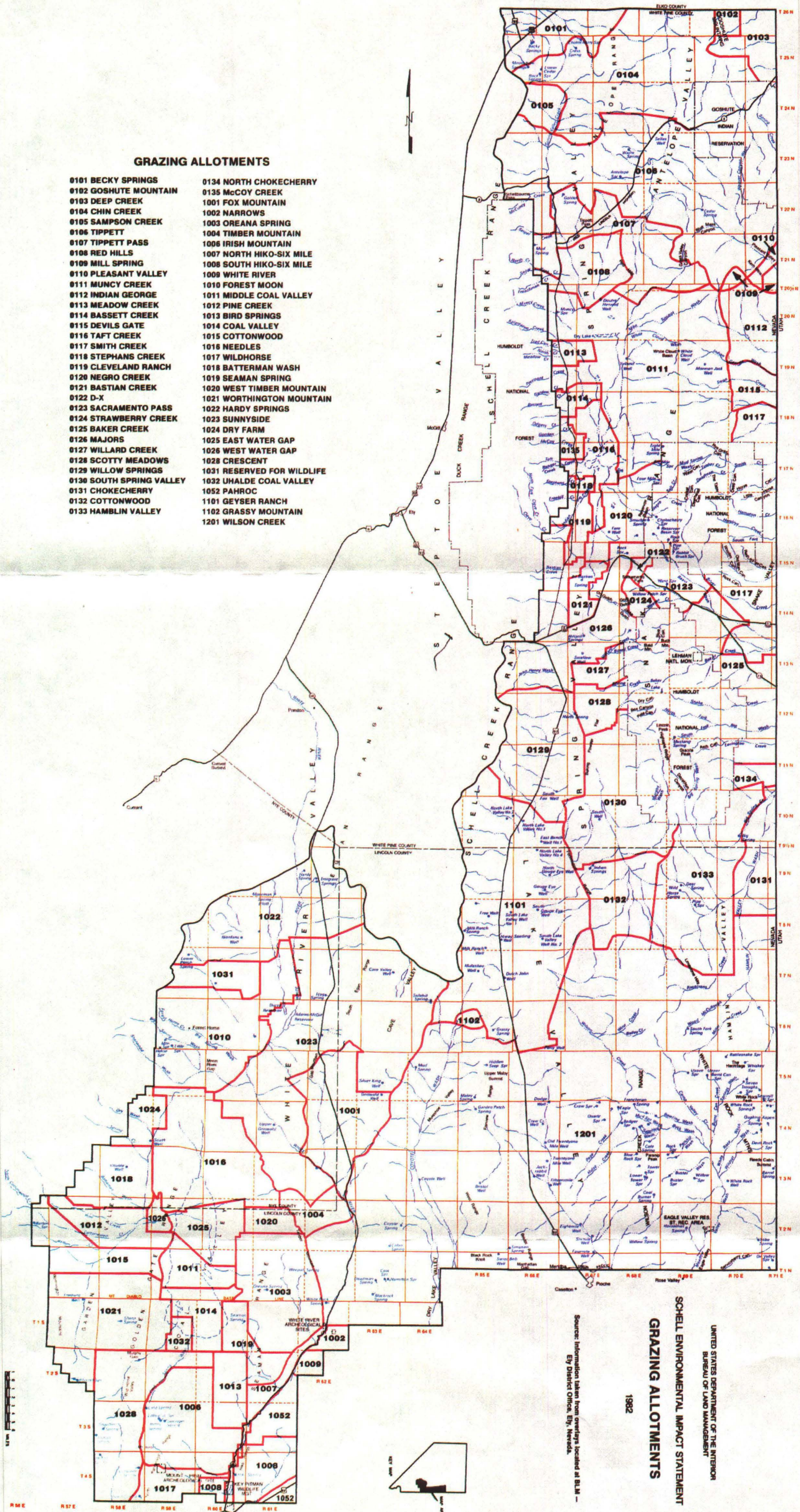
ZONES



UNITED STATES DEPARTMENT OF THE INTERIOR
 BUREAU OF LAND MANAGEMENT
EGAN RESOURCE MANAGEMENT PLAN
GRAZING ALLOTMENTS
AND
MANAGEMENT ZONES
 1983

GRAZING ALLOTMENTS

- | | |
|--------------------------|----------------------------|
| 0101 BECKY SPRINGS | 0134 NORTH CHOKECHERRY |
| 0102 GOSHUTE MOUNTAIN | 0135 McCOY CREEK |
| 0103 DEEP CREEK | 1001 FOX MOUNTAIN |
| 0104 CHIN CREEK | 1002 NARROWS |
| 0105 SAMPSON CREEK | 1003 OREANA SPRING |
| 0106 TIPPETT | 1004 TIMBER MOUNTAIN |
| 0107 TIPPETT PASS | 1006 IRISH MOUNTAIN |
| 0108 RED HILLS | 1007 NORTH HIKO-SIX MILE |
| 0109 MILL SPRING | 1008 SOUTH HIKO-SIX MILE |
| 0110 PLEASANT VALLEY | 1009 WHITE RIVER |
| 0111 MUNCY CREEK | 1010 FOREST MOON |
| 0112 INDIAN GEORGE | 1011 MIDDLE COAL VALLEY |
| 0113 MEADOW CREEK | 1012 PINE CREEK |
| 0114 BASSETT CREEK | 1013 BIRD SPRINGS |
| 0115 DEVILS GATE | 1014 COAL VALLEY |
| 0116 TAFT CREEK | 1015 COTTONWOOD |
| 0117 SMITH CREEK | 1016 NEEDLES |
| 0118 STEPHANS CREEK | 1017 WILDHORSE |
| 0119 CLEVELAND RANCH | 1018 BATTERMAN WASH |
| 0120 NEGRO CREEK | 1019 SEAMAN SPRING |
| 0121 BASTIAN CREEK | 1020 WEST TIMBER MOUNTAIN |
| 0122 D-X | 1021 WORTHINGTON MOUNTAIN |
| 0123 SACRAMENTO PASS | 1022 HARDY SPRINGS |
| 0124 STRAWBERRY CREEK | 1023 SUNNYSIDE |
| 0125 BAKER CREEK | 1024 DRY FARM |
| 0126 MAJORS | 1025 EAST WATER GAP |
| 0127 WILLARD CREEK | 1026 WEST WATER GAP |
| 0128 SCOTTY MEADOWS | 1028 CRESCENT |
| 0129 WILLOW SPRINGS | 1031 RESERVED FOR WILDLIFE |
| 0130 SOUTH SPRING VALLEY | 1032 UHALDE COAL VALLEY |
| 0131 CHOKECHERRY | 1052 PAHROC |
| 0132 COTTONWOOD | 1101 GEYSER RANCH |
| 0133 HAMBLIN VALLEY | 1102 GRASSY MOUNTAIN |
| | 1201 WILSON CREEK |



UNITED STATES DEPARTMENT OF THE INTERIOR
 BUREAU OF LAND MANAGEMENT
SCHELL ENVIRONMENTAL IMPACT STATEMENT
GRAZING ALLOTMENTS
 1982




Source: Information taken from consulting records at BLM -
 Ely District Office, Ely, Nevada.

WILDLIFE

KEY RANGE

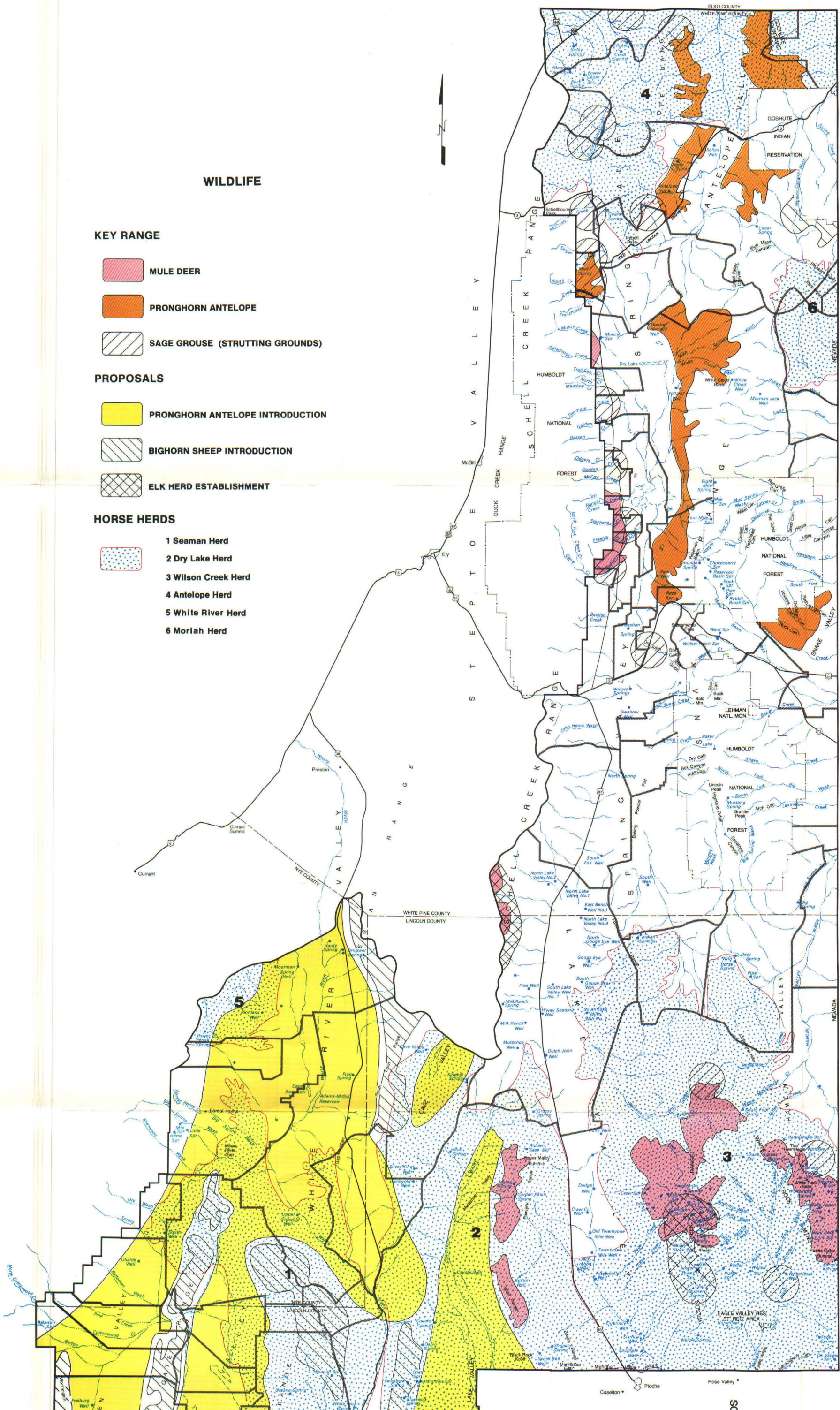
-  MULE DEER
-  PRONGHORN ANTELOPE
-  SAGE GROUSE (STRUTTING GROUNDS)

PROPOSALS

-  PRONGHORN ANTELOPE INTRODUCTION
-  BIGHORN SHEEP INTRODUCTION
-  ELK HERD ESTABLISHMENT

HORSE HERDS

-  1 Seaman Herd
-  2 Dry Lake Herd
-  3 Wilson Creek Herd
-  4 Antelope Herd
-  5 White River Herd
-  6 Moriah Herd



WILDLIFE

KEY RANGE

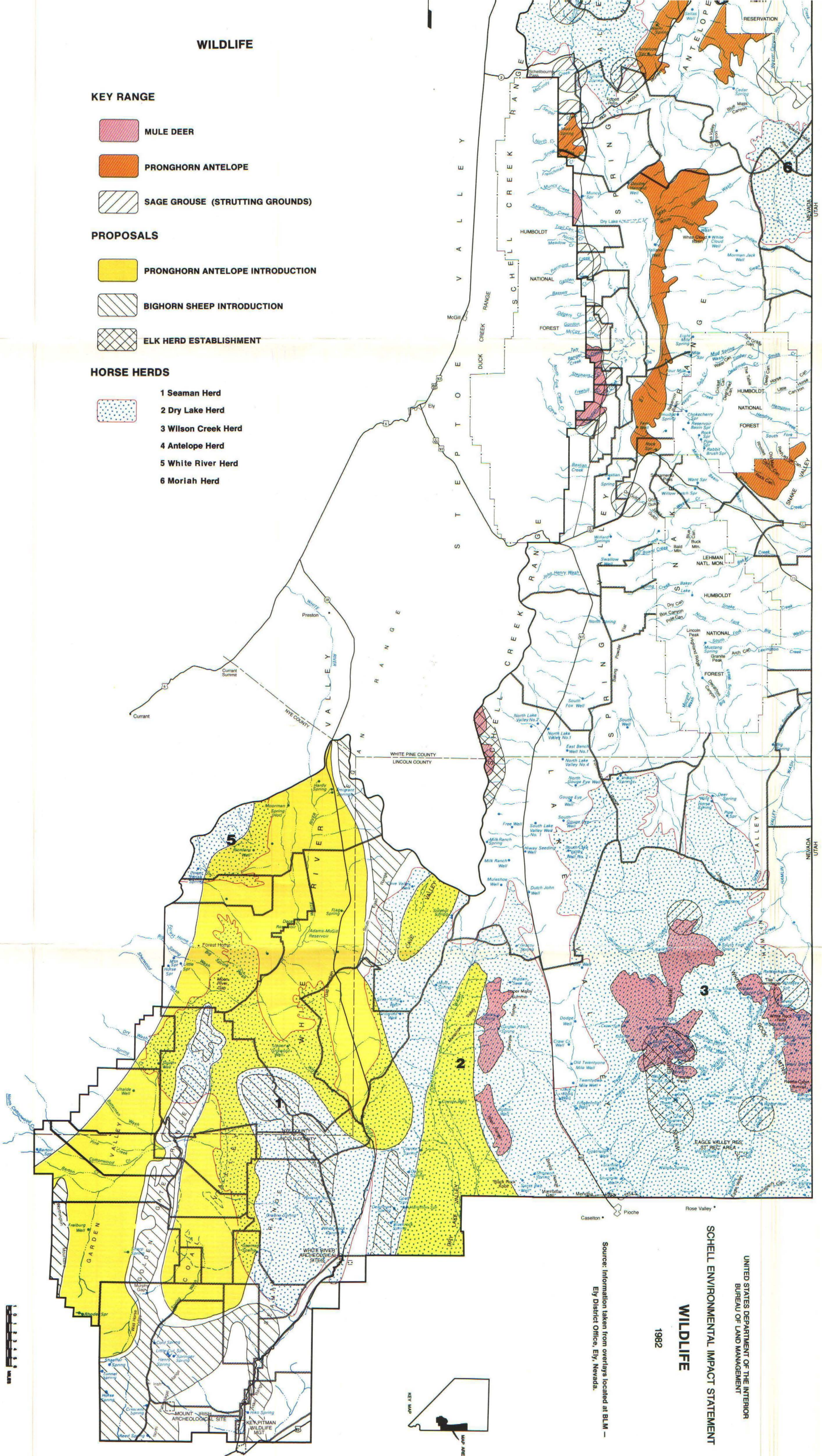
-  MULE DEER
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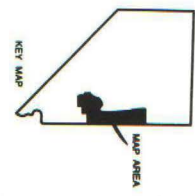
HORSE HERDS

-  1 Seaman Herd
-  2 Dry Lake Herd
-  3 Wilson Creek Herd
-  4 Antelope Herd
-  5 White River Herd
-  6 Moriah Herd



Source: Information taken from overlays located at BLM - Ely District Office, Ely, Nevada.

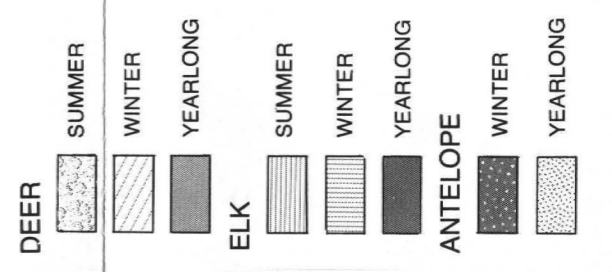
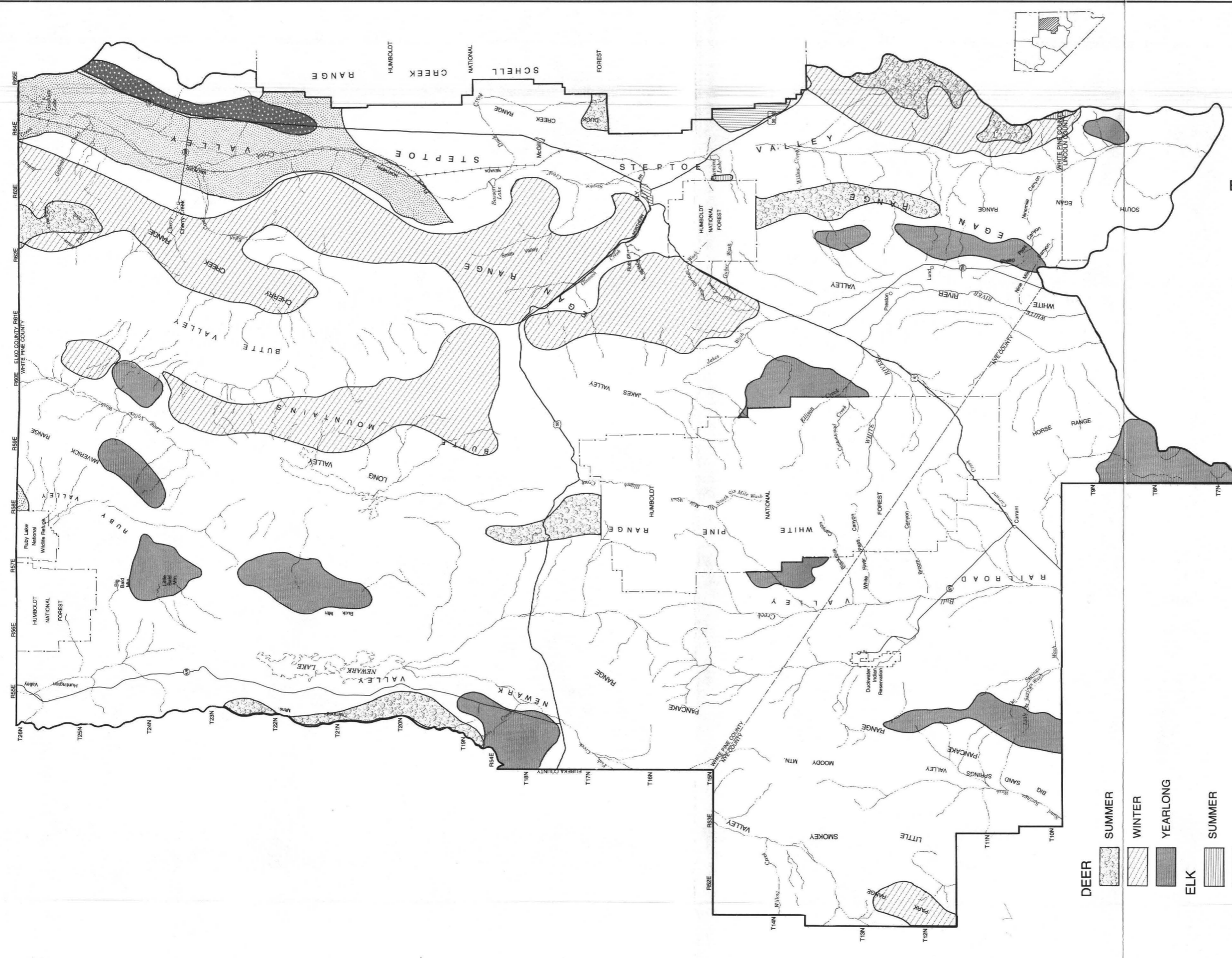
UNITED STATES DEPARTMENT OF THE INTERIOR
 BUREAU OF LAND MANAGEMENT
SHELL ENVIRONMENTAL IMPACT STATEMENT
WILDLIFE
 1982



UNITED STATES DEPARTMENT OF THE INTERIOR
 BUREAU OF LAND MANAGEMENT
 EGAN RESOURCE MANAGEMENT PLAN

WILDLIFE HABITAT
 BIG GAME

1983



selective management approach. The Bureau has developed three categories into which allotments will be grouped according to their resource needs and potential for improvement. The names and objectives of the three categories are: 1) maintain the current satisfactory condition (M); 2) improve the current unsatisfactory condition (I); and 3) manage in a custodial fashion (C). The list on page 5 lists each allotment and its final category designation.

SPECIFIC IMPLEMENTATION PROCEDURES

A rangeland program summary will be issued upon completion of the Resource Management Plan to inform livestock grazing permittees and interested publics about implementation of the rangeland management program.

The RPS will summarize allotment specific objectives for livestock, vegetation, wildlife, and wild horses and burros along with monitoring scheduling and identifying range improvements for each allotment. It will also outline the monitoring program upon which each allotment's grazing use will be evaluated. Periodic updates of the RPS will be issued as the rangeland management program is implemented. The RPS will identify specific agreements and identify those allotments where decisions will be issued.

Range management actions for livestock use and wild horse numbers will be based upon data obtained through the monitoring program and will consider recommendations made through the coordinated resource management and planning process. Actions could include, but will not be limited to, change in seasons-of-use, change in livestock numbers, correction of livestock distribution problems, alteration of the number of wild horses, development of range improvements, and taking site-specific measures to achieve improvements in wildlife habitat.

The implementation strategy for the management actions identified in Table 2-1 of the final RMP/EIS (reproduced below) related to livestock grazing allotments will be dependent on and priority established according to the selective management category of the allotments.

EGAN RESOURCE MANAGEMENT PLAN

Table 2-1

PRIORITY OF IMPLEMENTATION
ACTION BY ALLOTMENT CATEGORY

<u>Implementation Action</u>	<u>Allotment Category</u>	<u>Priority</u>
Fund rangeland improvements with appropriated funds	M	2
	I	1
	C	3
Develop allotment management plans	M	2
	I	1
	C	3
Use supervision	M	3
	I	1
	C	2

MONITORING

A rangeland monitoring system was initiated in the Egan Resource Area during 1982. The purpose of the program is to provide management with reliable data to determine if livestock, wild horse, and wildlife management actions are meeting resource management objectives. It incorporates approved methods in the Nevada Rangeland Monitoring Handbook (Nevada Range Studies Task Group, 1984). The vegetation monitoring system being used includes:

Utilization: BLM uses the Key Forage Plant Method--an ocular estimate for judging utilization of key species by weight. In this method, the examiner divides noticeable utilization among six classes of use within a key management area; no-use (0 percent), slight (1-20 percent), light (21-40 percent), moderate (41-60 percent), heavy 61-80 percent), and severe (81-100 percent).

Actual Use: Livestock operators will provide records of actual livestock use. Use of the range by wild horses will be determined through census figures, with refinement made by season-of-use data as available. Actual use and season-of-use by big game animals will be determined in cooperation with the Nevada Department of Wildlife.

Climatic Data: Annual precipitation and length of growing season have a marked influence on seasonal vegetation growth and production. Official weather stations and Bureau of Land Management and Nevada State climatic stations will provide the climatic data. This data will be used to correlate seasonal weather to plant growth throughout the resource area as determined in the utilization and trend studies.

Trend: Trend is the direction of change in condition of the range observed over time. Changes in trend are categorized as upward, downward, or not apparent. From three to five years of observation are needed before any trend can be detected on most range sites. Trend is measured by using several methods, primarily by noting changes in the frequency of key species in key areas over time, using the Quadrat Frequency Method. Additional monitoring will be conducted in crucial wildlife and wild horse areas. Information gained through these efforts and other studies will be used in making any grazing decisions. For more detailed information on these monitoring procedures, refer to the Nevada Rangeland Monitoring Handbook (Nevada Range Studies Task Group, 1984), technical references in the 4400 Manual Series (USDI, BLM), and the Nevada Wildlife Manual Supplement 6630 (USDI, BLM, Aug. 1982).

The monitoring program for those allotments in the "maintain" and "custodial" categories will be of low intensity. For the "improve" category allotments, monitoring intensity will be variable, focusing on the effects of management actions on range condition. The monitoring program will be an integral part of the resource management plan.

2. Wild Horses

a. Short-Term and Long-Term Management Actions

- (1) Wild horses will be managed at a total of 1,451 animals according to the following populations within the herd use areas (see map page 7). It should be noted that because of the small scale, this map is for general location only.

a. Sand Springs	494
b. Monte Cristo	96
c. Buck and Bald	700
d. Butte	60
e. Cherry Creek	11
f. Antelope	14
g. Jake's Wash	20
h. White River	20
i. Diamond Hills	36

The Monte Cristo Herd Management Area would be managed at 96 animals in accordance with an approved management plan; small portions of the Diamond Hills, Cherry Creek, Antelope, and White River wild horse herds occur in the Egan Resource Area, but would be managed by other resource areas (Shoshone-Eureka, Wells, and Schell) containing the bulk of the herds; the Buck and Bald Herd Management Area would be managed at approximately 700 animals which is an interim level established through a gathering plan and environmental assessment written in 1981; the remaining herds would be managed at their 1982-83 levels.

- (2) Continue existing rangeland monitoring studies and establish new studies as needed.
- (3) Monitoring studies will be used to determine if adjustments in wild horse numbers are necessary to meet management objectives.
- (4) Future adjustments in wild horse numbers will be based on data provided through the rangeland monitoring program.
- (5) The rangeland monitoring program will also provide data to determine the need for additional improvements for wild horses.

b. Standard Operating Procedures

- (1) Fence construction must comply with BLM Manual 1737. Lay-down fences will be constructed in wild horse areas if necessary and feasible. Fences in wild horse areas will contrast enough with surroundings so as to be visible to horses and will have gates installed at least once every mile and at all corners. Fences in wild horse herd use areas will be located to minimize interference with the normal

distribution and movement of wild horses. Selected portions of new fences constructed in these areas will be flagged or otherwise marked for one year after construction to make them more visible to horses.

- (2) Water for wild horses is to be made available on a yearlong basis in allotments and rested pastures, whenever feasible.
- (3) When required, excess wild horses will be removed from public lands and put in custody of individuals, organizations, or other government agencies. Field destruction of wild horses or burros, including cases of sick or lame animals, will be made only with appropriate authorization.
- (4) Environmental analyses, including categorical exclusions, will be conducted prior to implementing any HMAP's, gathering excess animals, or carrying out any specific projects (fences, spring developments, seedings, etc.).
- (5) Any future land disposals would consider ownership patterns to eliminate the possibility of splitting use areas of wild horses, so the animals are able to move freely from one use area to another.

c. Implementation

The wild horse management decisions will be implemented through wild horse herd management area plans. These plans will identify such details as the location of range improvements for the benefit of wild horses. The management actions developed for these plans will be integrated into a total management program designed to assure progress towards meeting the objectives of the resource management plan.

Censuses will be conducted periodically and herd management levels will be maintained by gathering excess animals.

The management of wild horses will be coordinated through wild horse herd management area plans. Wild horses will not be maintained outside of 1971 use areas. While it is recognized that some wild horses may drift outside these areas, management will be designed to minimize such drift.

Studies will be undertaken in conjunction with the Battle Mountain BLM District to determine the accuracy of the existing boundary of the Diamond Valley Herd Management Area.

3. Wildlife

a. Short-Term and Long-Term Management Actions

- (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 (see maps pages 9 and 10).
- (4) Forage will be provided for "reasonable numbers" of big game as determined by the Nevada Department of Wildlife.
- (5) Additional habitat management plans will be prepared in the long term.

b. 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 of 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.
- (5) Springs will be fenced as necessary and feasible to prevent overgrazing and trampling of adjacent vegetation and provide escape areas 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. Critical pronghorn antelope kidding areas: May 1 to June 30.
- (9) 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.).

c. Implementation

The wildlife management decisions will be implemented through wildlife habitat management plans. These plans will identify such details as the location of range improvements for the benefit of wildlife. The management actions developed for these plans will be integrated into a total management program designed to assure progress towards meeting the objectives of the resource management plan.

The development of wildlife habitat improvement projects will be guided by wildlife habitat management plans. The development of plans will be closely coordinated with the implementation of allotment management plans to meet the objectives of both programs. Wildlife habitat management plans will address four major themes: management of crucial habitats to provide for threatened, endangered, or sensitive species where present; management of big game ranges to provide habitat for reasonable numbers of animals over the long term; improvement of riparian, wetland, and aquatic habitats; and management of other habitats to meet needs of upland game and nongame animals.

4. Realty Management

a. Short-Term and Long-Term Management Actions

- (1) Dispose of up to 39,555 acres of land in the long term in the resource area according to the following breakdown by management zone (see map page 11). It should be noted that, because of the small scale, this map is for general location only.

1. Zone 1 - up to 3,840 acres
2. Zone 2 - up to 4,721 acres
3. Zone 3 - up to 24,858 acres
4. Zone 4 - up to 160 acres
5. Zone 5 - up to 5,976 acres

These lands are not in big game or upland game habitat or in wild horse herd use areas. All land disposal would be done in a planned and orderly manner. Land disposals will not adversely affect threatened or endangered species or their habitat, or reduce the likelihood of their recovery, nor will they lead to the loss, destruction, or degradation of wetlands or riparian areas, or lead to the modification, occupancy, or loss of the natural and beneficial functions of floodplains.

- (2) Other lands may be appropriately applied for at a later date under one of several methods, including Recreation and Public Purposes applications, direct sales, exchanges, and Desert Land Entry applications. These other lands would be outside the 39,555 acres and will be evaluated on a case-by-case basis through a plan amendment.
- (3) Designate two additional utility and transportation corridors, one running north and south and one running east and west (see map page 12).

b. Standard Operating Procedures

- (1) Environmental assessment will be conducted before project development so that, depending on impacts, modification or abandonment of the proposed project may be considered.
- (2) Rights-of-way for public access will be reserved prior to disposal of lands where necessary.
- (3) None of the lands identified as suitable for disposal or use authorization will be transferred to other ownership if the cultural resources survey shows they contain sites determined to be eligible for inclusion in the National Register of Historic Places (USDI, NPS, 1979).

- (4) Livestock permits will be adjusted, if necessary, to reflect decreases in public land acreage available for livestock grazing use within an allotment as a result of realty actions.

c. Implementation

All land disposal actions (title transfers) or land use authorizations are discretionary. Actual disposal may be at the initiative of the Bureau or in response to expressions of interest/applications from non-Bureau individuals and entities. Proposed realty actions will be evaluated through the environmental analysis process to determine if the action is consistent with the plan. The decision to dispose of or issue a use authorization for a particular parcel will consider conflicts identified in required cultural resource, mineral, and/or other resource reports. Unsurveyed lands will be surveyed prior to title transfer. Public lands may be leased or uses authorized on unsurveyed lands.

The RMP does not propose any acreage for immediate sale to the private sector. It identifies a pool of lands with the potential for future transfer to state and local governments, as well as to the private sector. Preliminary analysis indicates that those tracts of public land identified meet the disposal criteria outlined in Section 203 of FLPMA, or other disposal authority.

Implementation will be accomplished through the following steps:

- (1) Internal or external initiation of a land use or transfer action.
- (2) Analysis of the proposal in relationship to multiple use management and resource needs.
- (3) Notification of affected and interested publics.
- (4) The decision to accept or reject the proposal.

The following include some of the land disposal actions which are likely to occur.

- (1) Recreation and Public Purposes Act disposals to local governments for definitely established or proposed projects for which there is a demonstrated public need and a reasonable timetable for development.

- (2) Public sales for orderly community expansion.
- (3) Private exchanges where the Bureau would acquire lands having high public values.
- (4) Desert Land Applications for agricultural development.
- (5) Public sales of unmanageable parcels to meet specific needs.
- (6) Other land sales including trespass resolution cases.

The designation of rights-of-way corridors is intended to minimize the proliferation of dispersed rights-of-way by indicating the Bureau's preferred location. Designation does not mean that future rights-of-way are restricted to corridors, nor is it a commitment by the Bureau to approve all rights-of-way applications within corridors - a corridor is not a withdrawal.

Corridor management involves encouraging prospective applicants to locate within corridors. This may limit other activities within corridors which are not compatible with right-of-way use. Land disposals within the corridors will be analyzed for their impact on future right-of-way activities.

All applications for right-of-way grants, whether or not they are within designated corridors, are subject to standard approval procedures as outlined in the right-of-way regulations (43 CFR 2802). These procedures include: 1) Preparation of an environmental assessment in accordance with the National Environmental Policy Act of 1969; 2) A determination of compliance of the applicant's proposed plan with applicable Federal and State laws; 3) Consultation with Federal, State, and local agencies; and 4) Any other action necessary to fully evaluate and make a decision to approve or deny the application and prescribe suitable terms and conditions for the grant or permit. Consultation and coordination with the public, including adjacent landowners, will occur throughout the process.

Corridors provide for a variety of right-of-way uses including powerlines, pipelines, railroads, and highways. The major use expected in the RMP area is powerlines.

5. Wilderness

a. Management Actions Preliminarily Recommended

- (1) Recommend portions of three Wilderness Study Areas (WSA's) totaling 106,598 acres as preliminarily suitable for wilderness designation (see map page 12).
- (2) Recommend portions of three WSA's and all of one WSA totaling 130,182 acres as preliminarily nonsuitable for wilderness designation (see map page 12).

b. Standard Operating Procedures

- (1) Compliance with wilderness directives on proposed projects will be in accordance with Section 603 (a) of the Federal Land Policy and Management Act (1976), which provides that until Congress acts on Wilderness Study Areas or on lands still under wilderness review, the following policy shall prevail: Existing multiple-use activities, including grazing, will continue, but new or expanded existing uses will be allowed only if the impacts would not impair the area's suitability for designation as wilderness. Proposed uses and projects will be analyzed on a case-by-case basis to assure compliance with the Interim Management Policy and Guidelines for Lands Under Wilderness Review. After designation the areas will be managed in accordance with the wilderness management plan developed for each area and with the Wilderness Management Policy.

c. Implementation

All wilderness study areas will continue to be protected under the Bureau's Interim Management Policy and Guidelines for Lands Under Wilderness Review. Wilderness recommendations made in the final environmental impact statement for the resource management plan are preliminary and subject to change during administrative review. A separate final legislative environmental impact statement is being prepared for the wilderness study recommendations and will be filed by the Secretary of the Interior. Mineral surveys by the U.S. Geological Survey and Bureau of Mines are currently

underway for each area recommended as preliminarily suitable. The Federal Land Policy and Management Act of 1976 requires the Secretary of the Interior to review areas of the public lands determined to have wilderness characteristics, and to report to the President by October 21, 1991, his recommendations as to the suitability or nonsuitability of each such area for preservation as wilderness. The President is required to report his recommendations to Congress by October 21, 1993. Areas designated as wilderness by Congress will be managed under the Bureau's Wilderness Management Policy.

The sequence for implementation is as follows:

- (1) Public Announcement: When the Secretary of the Interior files the Final Wilderness EIS, recommendations for suitable/nonsuitable areas will be made public.
- (2) Nonsuitable Areas: Lands released by Congress shall be managed similarly to other lands covered by the RMP.
- (3) Suitable Areas: A Wilderness Management Plan will be prepared, with public participation, on each new wilderness area designated by Congress. Existing management plans will be reviewed and amended, if needed, to comply with wilderness management guidelines.

6. Riparian Areas

a. Short-Term and Long-Term Management Actions

- (1) Monitoring efforts will be intensified on riparian areas (see map page 14).
- (2) Where management objectives are not being obtained through application of management practices, fencing will be considered.

b. Standard Operating Procedures

- (1) Vegetation conversion that would alter the potential natural plant composition will not be allowed in riparian areas.

- (2) Springs will be fenced as necessary and feasible to prevent overgrazing and trampling of adjacent vegetation and provide escape areas for small wildlife. Water at these spring developments will be maintained at the source.

c. Implementation

- (1) Riparian and aquatic habitat improvement measures could include managing livestock through grazing systems consistent with maintaining riparian vegetation in optimum condition, pasture fencing, or fencing areas to exclude livestock and wild horses. Whether to use protective fencing, grazing systems, some other appropriate measure, or a combination of methods will be determined on an individual basis for each stream or riparian area.

7. Fire Management

a. Short-Term and Long-Term Management Actions

- (1) A resource area-wide fire management plan would be developed which allows a broad spectrum of uses. Fire would be used as a tool when it is the most effective and efficient method for improving habitat and increasing available forage.

b. Standard Operating Procedures

- (1) Alteration of sagebrush areas through prescribed burning 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.
- (2) Fire management plans will be developed before any prescribed burning occurs on any native vegetation.
- (3) Precede any vegetation conversion in pinyon-juniper areas with firewood and post sales.

c. Implementation

Fire management plans will be used to accomplish the RMP objective. They will be developed through a coordinated resources approach and public input and, after implementation, will be monitored on an on-going basis.

8. Off-Road Vehicle Management

a. Short-Term and Long-Term Management Actions

- (1) Within the northern portion of the Riordan's Well WSA and the central portion of the South Egan Range WSA, ORV use is designated as "limited" to existing roads and trails (see map page 16).
- (2) The remainder of the resource area is designated as "open" to ORV use (see map page 16).

b. Standard Operating Procedures

- (1) All lands not specifically designated closed or limited to off-road vehicles will be designated open to such use. This action is mandated by Executive Orders 11644 and 11989 and will be carried out in conformance with regulations published in 43 CFR 8340, and with BLM Manual Sections 8340, 8341, and 8342.

c. Implementation

- (1) Prepare ORV implementation plan.
- (2) Prepare Federal Register notice.
- (3) Publish notice.
- (4) Implement plan.

9. Special Management Areas

a. Short-Term and Long-Term Management Actions

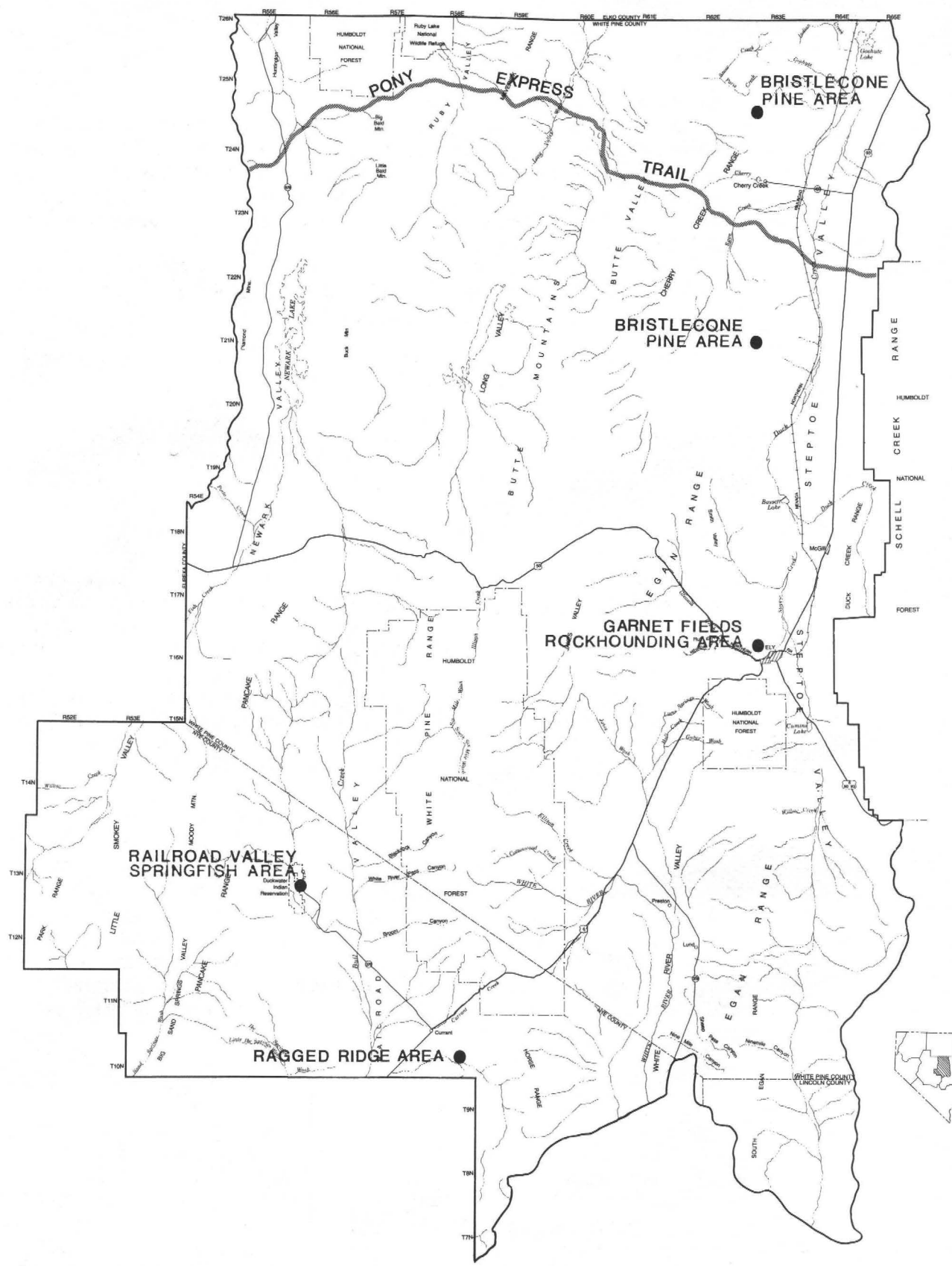
- (1) Designate an 80 acre geologic area and initiate a withdrawal from mineral entry to protect a large limestone cave within T. 10 N., R. 62 E., sec. 25, and T. 10 N., R. 63 E., sec. (approximate-unsurveyed).

b. Standard Operating Procedures

- (1) Pending the development of a management plan for the 34,560 acre Sunshine Locality National Register District (Federal Register, March 7, 1978), any project which may affect the Sunshine Locality will be subject to the review and consultation procedures authorized in Section 106 of the National Historic Preservation Act of 1966 and as required in the Code of Federal Regulations (36 CFR 800).
- (2) Any activity planned within a quarter-mile on either side of the Pony Express Trail (see map page 41) must undergo a visual assessment in conjunction with environmental review to determine whether or not the activity will adversely affect the visual integrity of the trail. Appropriate mitigation will take place as necessary to keep the management corridor in as natural a condition as possible for users to relive the conditions of the 1860's. Nondiscretionary activity (e.g., mineral exploration) will also be mitigated to preserve the visual integrity of the trail.
- (3) Areas of critical environmental concern will receive priority designation and protection during the land use planning process per Sections 201 and 202 of the Federal Land Policy and Management Act.
- (4) All woodland product harvest permits and contracts will include a stipulation to prohibit the cutting of rare or unique trees and vegetation. In particular, cutting of aspen, limber pine, and bristlecone pine will be prohibited except where prescribed for the health or regeneration of the stand.

c. Implementation

The designation of a geologic area is a recognition of the special resources of an area and a commitment to provide management which protects and/or enhances the area. Part of the decision is to withdraw the area from mineral entry. No action that is inconsistent with the terms of the designation will be permitted after designation, unless it is found



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SPECIAL MANAGEMENT AREAS

through the plan amendment process that the public benefits of such an action outweigh the public benefits of continuing the protection and that there is no feasible alternative to the proposed inconsistent action. Protection of the Geologic Area will be accomplished through implementing the following actions.

- (1) Survey the potential geologic area area to determine exact legal location.
- (2) Designate and withdraw from mineral entry the area through the Federal Register.
- (3) Prepare a Geologic Area Management Plan which will detail the management practices and allowable uses needed to protect the area.

B. AMENDMENTS

The Egan Resource Management Plan may be amended when there is a need based on land use plan monitoring and evaluation findings; new data; new or revised policy; a change in the scope of resource uses; or a change in the terms, conditions, and decisions of the approved plan. Amendments may be made through such processes as environmental assessments or environmental impact statements (depending on the level of intensity of the change) and must meet all prescribed requirements of public involvement, coordination, and consistency.

C. PLAN MONITORING

The resource management plan will be evaluated at five-year intervals to determine if there is sufficient cause to warrant revision or amendment. The evaluation will consist of a review of the issues, objective and management actions. The review will determine if these components are meeting the needs of management and define necessary changes as appropriate.

D. RELATIONSHIP WITH THE RANGELAND PROGRAM SUMMARY

The RPS will summarize allotment specific objectives for livestock, vegetation, wildlife, and wild horses and burros along with monitoring scheduling and identifying range improvements for each allotment. It will also outline the monitoring program upon which each allotment's grazing use will be evaluated. Periodic updates of the RPS will be issued as the rangeland management program is implemented.

E. SUPPORT REQUIREMENTS

Support requirements will be determined at the activity plan level.

F. MANAGEMENT ACTIONS CARRIED FORWARD FROM PREVIOUS LAND USE PLANS

The resource management plan was limited in scope to certain issues. It is intended to provide guidance for the management of resource values and uses. Resource uses or management actions not mentioned in this plan shall be clearly consistent with the terms, conditions, and decisions of the approved plan.

Past Management Framework Plans (MFP'S), from the Cherry Creek Planning Area and the Duckwater Planning Area (see map page 2) are brought forward in this section of the Management Decision Summary. The following objectives and decisions are still valid and remain unaltered by this Record of Decision and will remain in effect until expressly changed by a subsequent documented planning action.

1. Past MFP Decisions From the Cherry Creek Land Use Plan (see map page 2)

a. FOREST MANAGEMENT

Objective:

Manage all sites identified as suitable for Christmas tree, fence post, green firewood, or pine nut production so as to provide 1,000 cords of fuelwood (500 MBF), 1,500 posts (13 MBF), and 2,000 Christmas trees annually.

Decisions

- 1) Prepare forest management plans for the stands found most suitable for sales of forest products. Attempt to complete two plans per year. Examples would be to designate specific sites as green firewood cutting areas or as post cutting areas.
- 2) Continue to allow free use collection of pine nuts on a district-wide basis, designating the more popular areas for non-commercial use only.
- 3) Request a product value appraisal of pinyon and juniper to determine the value of chips and green standing timber.
- 4) Use selective cuts and controlled burns to open stands and stimulate Christmas tree growth.

- 5) Continue the existing program for cutting of dead and down firewood in burns, chainings, and other areas on the district where concentrations occur.
- 6) Continue issuing personal and family Christmas tree permits via the purchase of a Christmas tree tag.

Objective:

Participate in cooperative research studies to develop new pinyon and juniper products and test other species for possible introduction or reintroduction.

Decisions

- 1) Cooperate and share information with all other agencies involved in feasibility or pilot studies of cement board, rubber, wax, or other product manufacturing which would utilize pinyon or juniper.
- 2) Initiate a cooperative agreement with the Nevada Division of Forestry to test indigenous conifers, for hardiness and survivability in northeast Nevada.

Objective:

Provide for protection of all forest types from unnecessary destruction by man, fire, disease or insects.

Decisions

- 1) Develop a coordinated surveillance program with the Nevada Division of Forestry and the U.S. Forest Service.

b. WATERSHED

Objective:

Design all efforts in the Butte and Newark Planning Units towards erosion prevention and reduction through management changes and watershed treatment by 1990.

Decisions

- 1) Establish utilization limits to maintain watershed cover, plant vigor and soil fertility in consideration of plant phenology, physiology, terrain, water availability, wildlife needs, grazing system and aesthetic values.
- 2) Utilize chemical, mechanical, watershed tillage, water control and management as acceptable treatment practices as per policy and legal constraints.

- a. Areas of intermingled low and big sage will not be treated unless agreed upon by the BLM and NDOW.
- b. Management in the Goshute Creek (see map page 14) watershed will consist of structures needed to prevent head cutting and/or lowering of the water table, and treatments for improvement of the fisheries.

Objective:

Design all efforts in the Steptoe Planning Unit towards reducing flood and sediment damage.

Decisions

- 1) Continue to support the flood and sediment damage reduction efforts in Murry Canyon and Gleason Creek (see map page 14) drainages as they effect the City of Ely, and restrict unplanned and uncontrolled surface disturbance activities.
- 2) Do not allow developments on public land in the flood prone area that could cause losses to life and property. Retain in Federal ownership if necessary.
- 3) In the Gleason Creek watershed, consider alternatives to reduce the peak flow to a quantity that the City of Ely's storm system can handle. Reduce the peak flow from 630 cfs to 210 cfs.

Objective:

Maintain or improve water quality of the planning area to a minimum of Class C as defined by the Nevada Water Pollution Control Regulations.

Decisions

- 1) Monitor surface vegetation and trend on priority management areas to be included in the analysis of water quality maintenance.
- 2) Monitor waters in priority management areas for water quality. Pursue source identification for those waters that don't meet Nevada State Class C water quality standards. Initiate watershed improvements to maintain or improve water quality within the Nevada State Class C standards.

Objective:

Cooperate and coordinate information with other Federal, State and local agencies plus all organizations interested in the development of Best Management Practice Plans (208), in accordance with the Federal Water Pollution Control Act Amendments of 1972.

Decision

- 1) Cooperate and coordinate with Federal, State and local agencies plus all organizations interested in planning, implementing, and coordinating the various point and non-point source pollution controls through the development of Best Management Practices Plans.

c. WILDLIFE

Objective:

In suitable wildlife habitat provide yearlong sources of available water, designed for use by wildlife to fulfill specific requirements of each species.

Decision

- 1) Develop additional water sources as necessary to approach the optimum condition for each species in areas where it occurs according to the following chart:

<u>Species</u>	<u>Optimum Distance Between Waters</u>
Chukar	1 mile
Elk	less than 3 miles
Antelope	1 to 3 miles
Mule Deer	less than 2 miles
Hungarian Partridge	(1 at each site)

Objective:

In all management efforts insure that specific wildlife habitat requirements will be provided and that crucial habitat areas will be protected for wildlife.

Decisions

- 1) In blue grouse habitat, manage stands of white fir or aspen for the desired seral stage for blue grouse.
- 2) In vegetation manipulation projects, leave standing dead trees for perches or nesting sites where practical, following constraints for perches for raptors in sage grouse strutting areas.

- 3) Adjust powerline routes where they intersect strutting grounds to prevent line of sight visibility by raptors.
- 4) Insure that all new powerlines are built and existing powerlines are modified to eliminate raptor electrocutions.

d. RECREATION

Objective: Garnet Fields Rockhounding Area

Management objectives for the 1,200 acre designated Garnet Fields Rockhounding Area (see map page 41) are:

1. Manage the area for recreational rockhounding.
2. Restrict competitive or conflicting resource activities.
3. Continue a public relations program to encourage use.
4. Provide an on-site interpretive program to aid the visitor.
5. Provide facilities to accommodate basic visitor needs.

Decision

- 1) Develop a recreation area management plan (RAMP) to outline specific activity planning for the Garnet Fields Rockhounding Area.

Objective: Fishing

Maintain fishing opportunities through retention of lands in Federal ownership and cooperation with Nevada Department of Wildlife stocking programs.

Decisions

- 1) Protect public fishing opportunities by retaining Federal lands in public ownership adjacent to the streams listed below (see map page 14).

Duck Creek
East Creek
Berry Creek
Egan Creek
Huntington Creek

- 2) Maintain and/or improve fisherman success by cooperating with the Nevada Department of Wildlife in their stocking program of streams in the Cherry Creek Planning Area.

Objective: Sightseeing - Botanical

Maximize botanical sightseeing opportunities of two bristlecone pine areas. These difficult to reach and little known areas require improved access and an information and education program to expand public awareness, interest and on-site enjoyment of bristlecone pine.

Decision

- 1) Evaluate the potential for site specific interpretation of two Bristlecone Pine areas (see map page 41). If appropriate, develop an on-site interpretive display so visitors may enjoy their experience more fully.

Objective: Sightseeing - Zoological

Through interpretation, public information and education, improved access, and stream manipulation, provide an improved viewing opportunity of the Utah Cutthroat Trout in Goshute Creek (see map page 14).

Decision

- 1) Upon approval of the Goshute HMP, develop an on-site interpretive sign describing the importance of the Utah Cutthroat Trout in Goshute Creek (see map page 14). The interpretative sign could be combined with one for the Goshute Canyon WSA (see map page 12).

e. CULTURAL RESOURCES

Objective:

Protect and manage cultural resource properties in the planning area as provided under the National Historic Preservation Act, NEPA, Executive Order 11593, and ARPA (1979).

Decision

- 1) Protect and manage the following known significant cultural resource sites by preparing Cultural Resource Management Plans (CRMP).

Listed in order of priority:

1. Sunshine Locality.
2. Pony Express Trail and associated historical sites (see map page 41).

2. Past MFP Decisions From the Duckwater Land Use Plan (see map page 2).

- a. FOREST MANAGEMENT

Objectives:

1. Achieve multiple use objectives through pinyon-juniper management.
2. Increase sustained yield production of woodland products to the extent benefits exceed costs and conform to environmental needs.
3. Coordinate all management actions involving pinyon-juniper areas with the Inter-Tribal Indian Council, Nevada Department of Wildlife, and other concerned groups.

Decisions

- 1) Manage the woodland resource in the planning area on a multiple-use basis with general emphasis toward using it as a means of enhancing other resource values (see map page 50).

Leave pinyon-juniper along travel influence zones, rights-of-way or similar disturbance areas to preserve aesthetic values as far as practical and possible.

Make pinyon-juniper plantings where feasible in conjunction with development of historical, or other similar sites and in rehabilitation of disturbed areas.

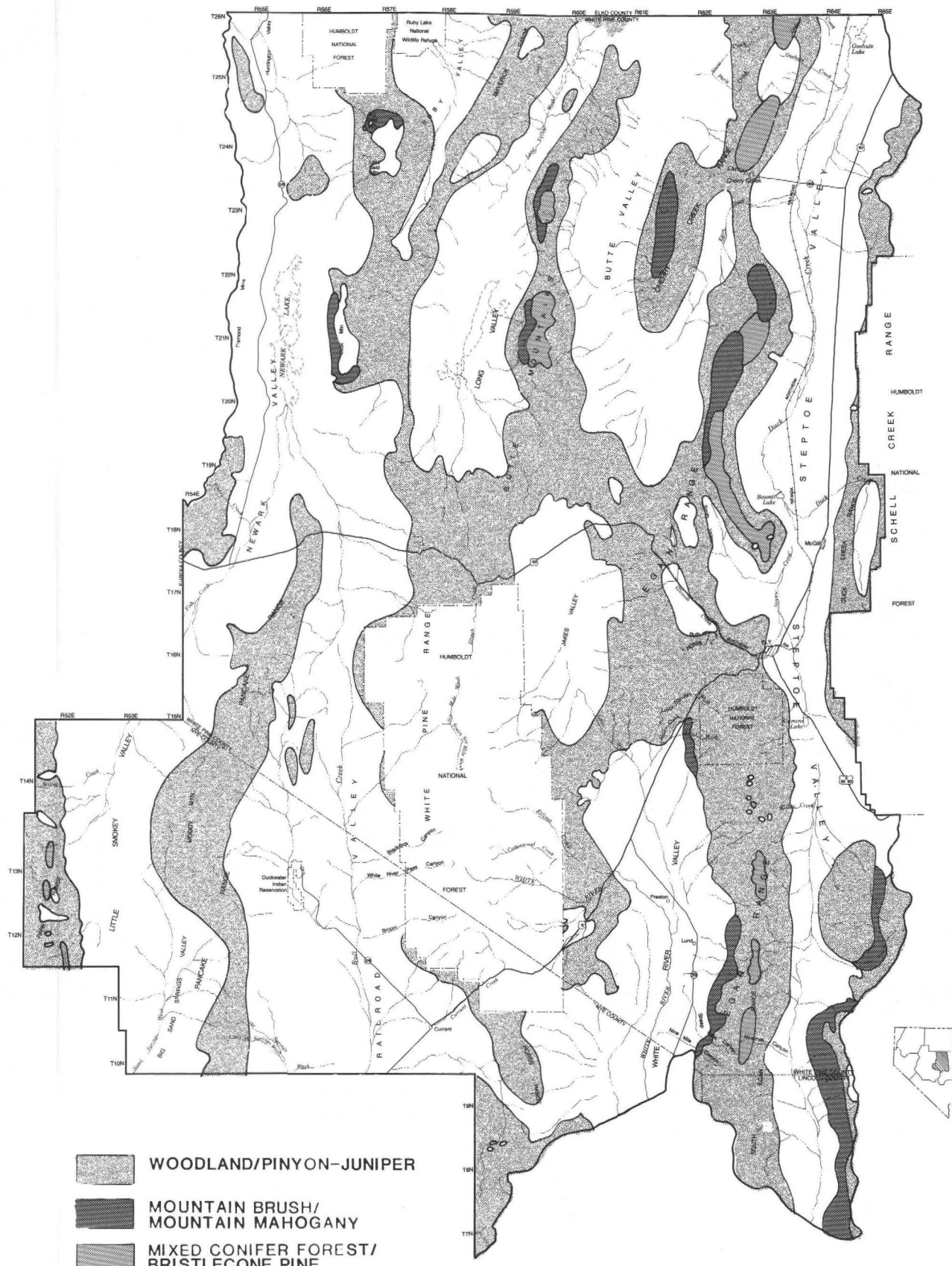
Selectively open up closed stands of pinyon-juniper to improve: watershed conditions; habitat conditions for wildlife, livestock, and wild horses; recreation values; and production of other forest products such as Christmas trees and firewood.


Program forest product sales, free use, etc., in areas proposed for pinyon-juniper conversion.

Constraints

General. Consider the potential value of pinyon-juniper in providing wood products and as a source of energy fuel in development of all activity plans involving the woodland resource.

4 4 0 0 0



-  WOODLAND/PINYON-JUNIPER
-  MOUNTAIN BRUSH/
MOUNTAIN MAHOGANY
-  MIXED CONIFER FOREST/
BRISTLECONE PINE

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WOODLAND RESOURCES

Harvest of forest products except pine nuts will not be permitted in the Ragged Ridge area (see map page 41).

- 2) Complete an inventory of woodland resources in the planning area and develop a woodland management plan.
- 3) Take steps to apply present research findings in development of woodland management plans and encourage new research on a cooperative basis to broaden use opportunities and management techniques.

b. WATERSHED

General Objectives:

1. Invest in watershed needs to provide protection from further deterioration.
2. Develop, improve, and invest in watersheds to supply or meet identified needs which are in addition to those required to meet objective 1.

Specific Objectives:

1. Maintain erosion rates within tolerable limits defined by the Universal Soil Loss Equation System of the Soil Conservation Service.
2. Maintain or improve water quality to a minimum of Class C water quality standards of the State of Nevada.
3. Control and prevent flood and sediment damage from storms with less than 20 year frequency intervals.

Decisions

- 1) Monitor current erosion rates. Compare measured rates with tolerable limits. Initiate action to reduce rates that exceed tolerable limits.
- 2) Monitor water quality on stream courses and water impoundments below where management activities have caused significant soil disturbance. Monitoring should include physical, chemical, and biological parameters. Measured parameters should be compared with the State of Nevada Class C water quality standards. Mitigation should be proposed for those waters where measured parameters exceed Class C standards.

- 3) Provide stream bank stablization protection from potential damage of 20 year floods.
- 4) Intensive watershed planning action should be completed with the following priorities (see map page 53):

<u>Watershed No.</u>	<u>Name</u>
1-005	Upper Duckwater
2-006	Middle Duckwater
3-007	Upper Bull Creek
4-013	Lower Bull Creek
5-014	Lower Duckwater
6-011	Upper Fish Creek
7-009	Burnt Station
8-008	Little Smokey
9-010	Sand Springs
10-012	Cold Springs

Constraints

Follow the above priorities within limits imposed by funding and other resource priorities.

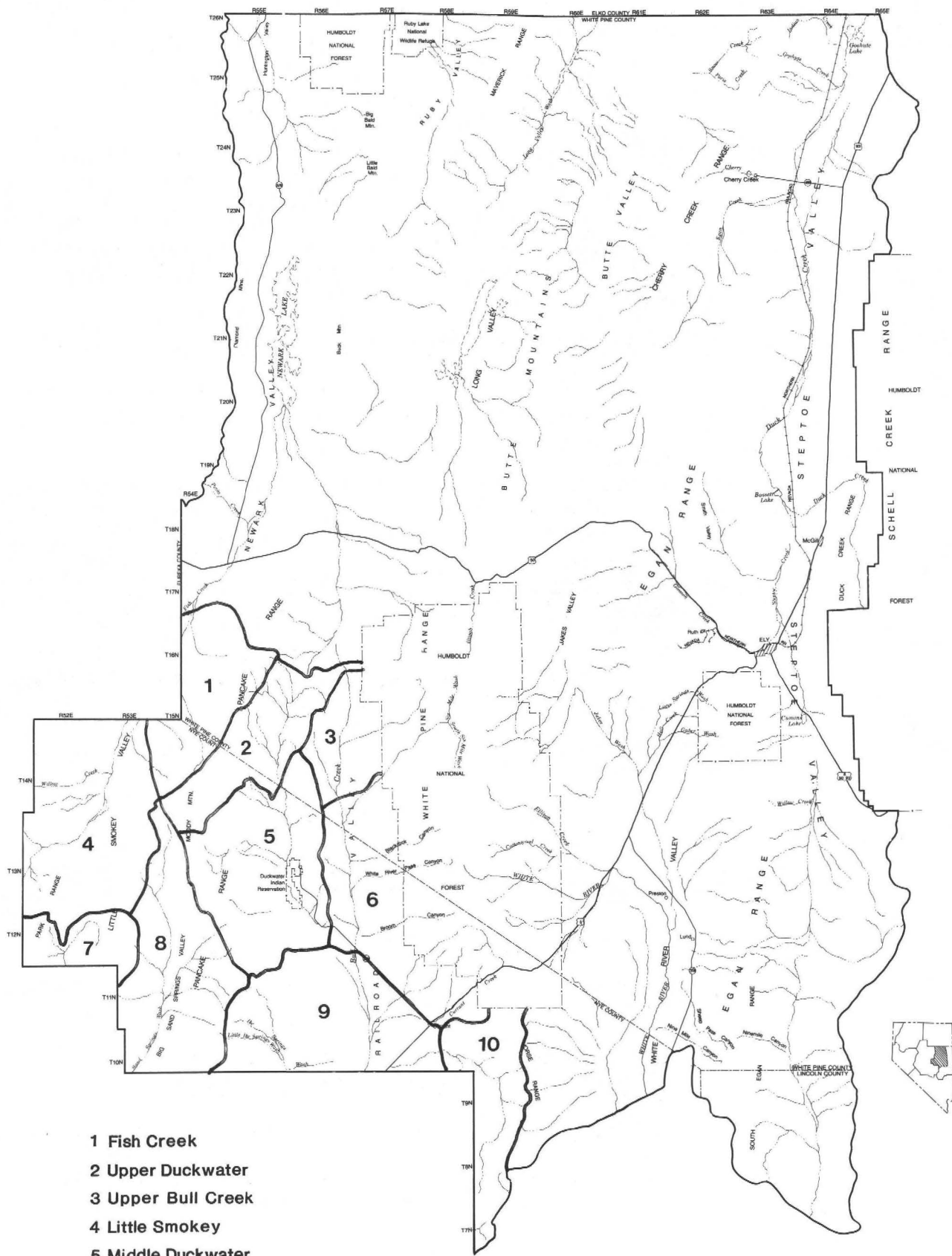
c. WILDLIFE HABITAT MANAGEMENT

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.

Specific 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.



- 1 Fish Creek
- 2 Upper Duckwater
- 3 Upper Bull Creek
- 4 Little Smokey
- 5 Middle Duckwater
- 6 Lower Bull Creek
- 7 Burnt Station
- 8 Sand Spring
- 9 Lower Duckwater
- 10 Cold Springs

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DUCKWATER PLANNING AREA
WATERSHEDS

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 (see map page 9). 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.

Decisions: Wildlife - Rare and Endangered Wildlife

- 1) Protect/enhance critical habitat of the threatened Railroad Valley Springfish (see map page 41) on the one-half mile of outflow from Big Warm Springs on public lands. Work closely with the operators of the catfish farm, the U.S. Fish and Wildlife Service, NDOW, and the University of Nevada, Las Vegas (UNLV) to accomplish this action.
- 2) Conduct intensive inventory and monitoring to determine the presence of any threatened and endangered wildlife, and their habitat.

d. RECREATION

Long-Term Objectives:

1. Provide for an adequate variety and supply of quality outdoor recreation uses on the public lands commensurate with public needs, resource potentials, and consistent with a quality environment.
2. Preserve and protect significant natural, historic, and cultural resources and provide for their public use and development where consistent with preservation goals.

Specific Objectives:

1. Collect and maintain visitor use, characteristics, and demands.
2. Identify, evaluate, and provide appropriate public access to land based recreation areas.
3. Establish and maintain control of recreation use through public education, regulation, land classification and enforcement.
4. Increase the capacity to provide adequate recreation facilities and respond to increasing demands for outdoor recreation opportunities.
5. Preserve, protect, and develop archaeological, primitive historical, cultural and natural values.

Decisions: Recreation - Geological Features

- 1) Determine the significance of existing geological features.
- 2) Seek the assistance of qualified personnel in determining the significance of geological features.
- 3) Develop an interpretive plan and interpret significant geological values as necessary.

Decisions: Recreation - Aesthetics Management

- 1) Manage the recreation resource in coordination with other resource uses to preserve aesthetic values and environmental quality.

Decisions: Recreation - Hunting, Fishing Qualities, and Nonconsumptive Uses

- 1) Improve hunting opportunities through implementation of coordinated resource activity plans.
- 2) Work with the Nevada Department of Wildlife in any effort they may have in developing new fisheries on public lands.
- 3) Develop brochures and other media concerning the makeup of natural communities, plant and animal species present, physical features, etc.

Decisions: Recreation - Ragged Ridge

- 1) Conduct a detailed inventory of the Ragged Ridge area (see map page 41) for the purpose of determining the kind of land use designation and the specific area best suited for special classification.

Notes

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Antelope ~~Range~~ Wild Horse
Herd Management Area Plan

Schell Resource Area

Ely District

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Antelope Range Herd Management Area Plan

I. Introduction

Preparation of a wild horse herd management area plan designed to specifically manage the wild horses populating the Antelope Range herd area with multiple use taken into consideration was recommended by the Schell Management Framework Plan (Ely Bureau of Land Management, U.S. Department of Interior, 1983).

The Antelope Range Herd Management Area Plan (HMAP) is designed to effectively manage the wild horse population inhabiting the Antelope Range Herd Management Area (HMA) in accordance with Washington Office Instruction Memorandum 83-289, Title 43 Code of Federal Regulations, Part 4700, and Nevada State Office Manual Supplement 4730.6. The wild horse population will be managed as a component of the public lands in a manner that maintains or improves the rangeland ecosystem. The HMAP adheres to the multiple-use policy specified in the Wild Free-Roaming Horse and Burro Act of 1971 (P.L. 92-195) and the Federal Land Policy and Management Act of 1976 (P.L. 94-579), while maintaining the free-roaming behavior of the wild horses within the HMA.

This HMAP was developed in coordination with other resource users in the Antelope Range Area and coordinates the objectives of the other resources in the area.

In 1982, the Schell Grazing EIS outlined five objectives for the resource area. The Antelope Range HMA is subject to those objectives which are as follows:

1. Manage the vegetation resource and its uses to attain utilization rates not to exceed those recommended by the Nevada Rangeland Monitoring Task Force for sustained yield (45 percent for shrubs, 55 percent for grasses and forbs).
2. Attain and maintain habitat for reasonable numbers of wildlife, reestablish bighorn, pronghorn antelope, and elk on historic ranges, and protect crucial wildlife habitat.
3. Upgrade and maintain all riparian and wetland areas in good or better condition.
4. Maximize livestock based on sustained yield of the forage resource.

The above objectives are derived from the scoping process of the Schell Grazing EIS. ~~the following objectives are derived from the scoping process of the Schell Grazing EIS.~~ Please bring objectives and decisions from the ROD into this section, including the EIS objectives.

5. Maximize wild horse numbers based on sustained yield of the forage resource.

In the 1983 Schell Resource Area Decision Summary and Record of Decision, the Antelope Horse Herd area was designated as the priority area for a management plan (BLM, 1983). It was chosen because of the potential multiple use conflicts.

II. Background Information

A. Location and Setting

The HMA is located approximately 50 miles northeast of Ely, Nevada. A location map and a map of the HMA can be found in Appendix I (Map #1 and Map #2). The Antelope Range wild horse herd inhabits two BLM districts - Ely and Elko. The herd area is bounded on the east by the Nevada-Utah State line and is bisected in an east-west direction by the White Pine-Elko County line, which is also the Ely-Elko District boundary. The HMA encompasses 368,962 acres (359,180 Federal acres and 9,782 acres of private land) within the Ely District, Schell Resource Area and 368,963 acres within the Elko District, Wells Resource Area for a total acreage figure of 737,925. Private (patented) land is interspersed throughout the area. A land status map (Map #3) can be found in Appendix I.

Since the HMA is divided equally between the Schell and Wells Resource Areas, each resource area is responsible for administration of its own portion of the Antelope herd. Because of this, the Antelope Range HMAP will address only those resource issues and management objectives as they pertain to wild horses within the Ely District. It will not address management within the Elko District, even though the HMA falls within the boundaries of both Districts. A separate HMAP will be needed, to address management of the horses in the Elko District. This is in compliance with the Wells RMP/EIS Record of Decision. In the meantime, this plan identifies issues and objectives for herd management in the Ely District. All management of the Antelope Range wild horse herd within either District will be coordinated with the other District prior to implementing any management actions affecting the wild horses in the Antelope Range HMA.

B. Resource Information

A complete discussion of the existing environment can be found in the Schell Resource Area Unit Resource Analysis.

1. Topography

Major valleys in the plan area are Steptoe, North Spring and Antelope Valleys. Major mountain ranges are the northern Schell Creek and Antelope ranges. The southern Boone Springs Hills and Black Hills are also familiar geographic features. No major streams flow in the plan area. Five small creeks (North, Chin, Middle, Sampson and Sharp) are located in the Antelope and Schell Creek Ranges.

Elevation ranges from 5,700 feet in the valleys to the 10,008 foot Becky Peak in the Schell Creek Range.

2. Climate

The climate of the Management Plan area is semi-arid. Temperatures range from -28° to 102° F. The growing season is between 90 and 120 days. Prevailing winds are from the south-southwest in the summer, from the north in the winter. Average humidity is from 40-50%. Precipitation averages 8 inches in the valley floors and increases with rises in elevation to 16+ inches in the higher mountains with an overall average of 8-9 inches. (See Schell URA-2 for a detailed description of precipitation patterns in the area.) Some localized storms are quite intense and have caused flash flooding in Spring and Antelope 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 soil depths. Benefits from the precipitation are limited by a rapid evaporation rate. Annual free water evaporation rates range from 46-48 inches.

3. Soils

The soils of the Antelope Range Plan area reflect the extremes of elevation and topography. These vary from very shallow, extremely stony soils of the higher elevations, to very deep, gravelly soils, to nearly gravel free silty soils and playas of the lower valley floors. (See Schell URA-3 for a complete description of the geology and soils of the area.)

4. Minerals

Mining activity began in portions of the plan area as early as 1859. Four mining districts have been established within the area with numerous isolated prospect pits scattered throughout the area. Little activity is presently occurring but could pick up as demand and technology change. (See Schell URA-3 and 4 for a detailed description of mining districts, ore bodies and production potential.)

5. Recreation

Recreation in the area is limited, with hunting and trapping being the major recreational activities. Very little sightseeing or recreational horse viewing has been noted. This is probably due to the remoteness of the area. Some post and woodcutting takes place, particularly in the Antelope Range. An area on the north end of the Antelope Range has been set up as a commercial woodcut area. However, recreation and woodcutting presently cause no major disturbance to wild horses.

6. Water

The Antelope Range HMA is well watered in the upper elevations of the Schell Creek Range and North Antelope Range. In other parts of the plan area water is not well distributed or is lacking. Available water is provided via streams, springs, seeps, reservoirs, and wells. Map #4 showing existing waters can be found in Appendix I.

Where water currently exists, there appears to be little conflict in consumption needs between foraging animals. Problems center around water distribution, competition for space near isolated waters, seasonal availability of well water and vegetation associated with the water.

Be specific - what are the problems? This will set the stage for your objective.

a. Ecosystems/Plant Communities

Major ecosystems in the plan area are the pinyon-juniper woodland and the cold desert ecosystem. At higher elevations small, isolated communities of coniferous forest occur. The cold desert ecosystem is composed of two major vegetative zones - the shadscale zone and the sagebrush zone.

The pinyon-juniper zone, scattered throughout the area generally occurs at 6,000-8,000 feet elevation, between the shrub zone in the valleys and the conifer zone at higher elevations of the Schell Creek and Antelope Ranges. Stands of these trees vary in density from scattered to closed (solid) stands.

The shadscale zone is found mostly in the bottoms of the Antelope and North Spring Valleys. Plants in this zone must have a higher salinity tolerance than in other zones. Important plants in this zone are shadscale, winterfat, black sagebrush and black greasewood. This zone serves as important winter range for both wild horses and livestock, and year-round pronghorn antelope range. Despite the low productivity, the protein content of species within this zone is high.

The sagebrush zone, which is scattered throughout the plan area, occurs between 5,500 feet and 7,000 feet elevation. Big sagebrush along with desirable perennial grasses and forbs occur in this zone. This zone is important to livestock as spring-fall range. Wild horses use this area for year-round forage. Mule deer use this zone year-round and it is especially important for winter forage. Sage grouse are dependent on this zone for nearly all aspects of the life cycle. Some stands of big sage can and have become very dense and closed.

The coniferous zone is generally located at 9,000 feet or higher. Large fir and pines characterize this zone; understory vegetation is sparse. Mule deer and wild horses use these areas in summer for forage and shading. Eagles, hawks, and blue grouse need this zone for nesting, wintering and roosting.

Throughout each of these zones, small riparian areas occur with seeps, springs and creeks. 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, small wildlife, wild horses and livestock, use these areas for water, shade, succulent forage and to pick up trace minerals from the different vegetation. Sage grouse chicks are especially dependent on these areas for insects and forbs until these are able to survive on a sagebrush diet. Some hawks, such as the Cooper's and Goshawk are dependent on these areas for nesting. Riparian areas are used by and are depended on by up to 97% of the non-game wildlife species that occur in the HMA. (See Schell URA-2 for a complete list of species associated with each vegetation zone.)

b. Threatened and Endangered Plants

There are no threatened or endangered plant species known from within the Antelope Range HMA.

However, a plant, Thelypodium sagittatum var. ovalifolium has been located southeast of Becky Springs and south of Henriod Ranch. This species is on the State of Nevada's threatened and endangered plant species "watch" list. Species under this heading have no special status but are being monitored.

c. Poisonous Plants

Poisonous or noxious plants other than halogeton and larkspur are quite limited in the plan area.

8. Animals

a. Wildlife

About 363 species of wildlife occur in the Antelope Range HMA. This includes 75 species of mammals, 247 species of birds, 11 amphibians, 28 reptiles and 1 species of fish (Steptoe Dace). (A complete listing of species can be found in Schell URA-2.)

Several species of wildlife occurring in the area are quite important. Mule deer, pronghorn antelope, mountain lions, coyotes, bobcats and kit foxes provide the main game and furbearer species. Blue grouse, sage grouse and chukar (gray) partridge and cottontail rabbits constitute the major upland game species.

Two species of wildlife within this plan area are on the Federal Threatened and Endangered Species Listing. Bald eagles, endangered, commonly winter in North Spring and Antelope Valleys.

Peregrine falcons, endangered, have been known to migrate through this area. No nests are known to occur.

Three species in the area are on the Federal list of species which may be proposed for threatened and endangered status.

Spotted bats, category 2, may occur in the plan area which is well within its range of occurrence.

Steptoe Dace, category 2, which occur in Lookout Spring (T. 26 N., R. 67 E., sec. 30, SESE) are on the State of Nevada's and the federal sensitive list.

Ferruginous hawks which are now on a Federal special concern list, category 2, nest within the plan area.

b. Livestock

Livestock grazing is an important resource use within the herd area. The Ely District portion of the herd area encompasses parts of seven allotments in the Schell Resource Area - Becky Springs, Chin Creek, Deep Creek, Goshute Mountain, Sampson Creek, Tippet and Tippet Pass. The extent of livestock use and grazing management on the first six allotments has the greatest impact on the Antelope Wild Horse herd since the

majority of the horses can be found there. Tippet Pass has very little use by the Antelope herd wild horses. In addition, the HMA also falls within the boundaries of five allotments in the Egan Resource Area - Cherry Creek, Becky Creek, North Steptoe, Lovell Peak, and Schellbourne. Wild horse use is minimal on these allotments. Table 1 shows the livestock AUM's, season of use, and class of livestock for each allotment within the HMA.

Table 1. Livestock Operations in the Antelope Range Herd Management Area, Ely District.

<u>Allotment</u>	<u>AUM's Active Preference</u>	<u>Season of Use</u>	<u>Class of Livestock</u>
Becky Springs*	3,842	11/1 - 5/30	Cattle/Sheep
Goshute Mountain*	465	1/1 - 4/7	Sheep
Deep Creek*	2,083	Yearlong	Cattle
Chin Creek*	13,115	Yearlong	Cattle/Sheep
Sampson Creek*	1,592	3/1 - 6/30	Sheep
Tippet	13,615	Yearlong	Cattle/Sheep
Tippet Pass	8,177	Yearlong	Cattle/Sheep
Cherry Creek	7,040	Yearlong	Cattle
Becky Creek	671	6/1 - 8/3	Sheep
North Steptoe	700	3/1 - 3/31	Sheep
Lovell Peak	105	7/10 - 1/25	Sheep
Schellbourne	799	5/1 - 3/1	Cattle/Sheep

* The entire allotment lies within the Antelope Range HMA.

The major external influence on this herd unit is livestock grazing. Competition for existing forage in the past was extreme, but in recent years voluntary reductions in numbers by livestock permittees and wild horse gathers have reduced this competition between horses and domestic livestock. Continuous heavy utilization of the forage has occurred in the valley bottoms and around waters, particularly in Spring Valley where the greatest number of horses concentrate in the winter months. This can be readily seen by the heavy utilization on the winterfat (Ceratoides lanata) flats and riparian areas.

Since this section is the "livestock" section, your discussion regarding wild horses belongs in the next section i.e. 8c. I suggest you put your utilization narrative in the vegetation section and discuss the relative importance of the various herbivores on utilization in that section. For example;

Section
 Livestock - Narrative Talk about voluntary reductions etc
 Wild horse - Talk about concentration areas, removal etc
 Vegetation - Talk about utilization trend condit. riparian etc.

c. Wild Horses

1) Wild Horse Use History

Although it is not known exactly when horses first inhabited the Antelope Range HMA or what their early numbers were, it is evident that they have occupied the area for quite some time.

History of wild horses in the area before 1971 is sketchy and not very well documented. Approximately 100 horses resided in the Becky Peak area. Others were known to exist in the Chin Creek area, Antelope Valley, Dolly Varden, and Ferber Flat. It is known that some animals were trapped near Becky Spring in Horse Canyon prior to 1971.

Horses have always been a part of the range scene, at least since contemporary livestock use began. In several cases, homesteaders, ranchers, and miners would turn horses out on the range during the winter when weather prevented them from using horses for their occupational needs. In the spring, they would roundup, sort out, and keep those that were fit for work. Remaining horses would be turned out or sent to processing plants. Due to the natural tendency of domestic animals to go wild, many horses escaped and were never retrieved. There were always some horses left on the range.

There is some evidence that the Army Remount Service was active in at least part of the area. When they were in operation during the early 1900's through 1940, remount stallions of various breeds were released on the range to upgrade the existing herd. These stallions were mainly thoroughbreds or Morgans, but a few draft blood lines were introduced to develop a hardier strain for pulling supply wagons and heavy artillery. Native stallions were often shot to allow breeding dominance by the remount stallions.

2) Present Situation

The horses in the area of the Schell Creek Range primarily graze in Spring Valley during the winter and early spring; some also graze in Steptoe Valley on the west side of the Schell Creek Range and in Antelope Valley on the east side of the Antelope Range. Horses in this area will stay in the pinyon-juniper zone on the lower benches during the day and graze in the valley bottoms in the evening. During open winter when there is little snow on the Schell Creek Range and the Antelope Range, the horses will stay high on the open slopes and will not move down into the valleys. It is possible to see a few horses in this area at all different elevations during any time of the

year, but the majority of the bands will follow a migrational pattern based on climatic and seasonal conditions. There is also movement of horses from the north end of Becky Peak and the north end of the Antelope Range into the Elko District. This movement is based on seasonal and climatic conditions when snow levels on these mountains force horses down into the lower elevations in the Elko District.

The horses in the area of the Goshute Mountains generally graze in the low, rolling mountains on a yearlong basis, and horses on the west and southwest sides of the Goshute Mountains move into Antelope Valley and graze there. During the summer months, horses in the Ferber Flat area in the Elko District move down into the Ely District closer to water. During the winter, when snow is available, they will move back into the Ferber Flat area. Horses occupying the Goshute Mountains move freely back and forth between the Ely and Elko Districts, and into Utah.

Even though general seasonal use areas are known, additional information is needed to accurately determine migrations and seasonal movement patterns. Map #5 showing general seasonal use areas can be found in Appendix I.

No census had been conducted on the HMA prior to 1971. The first aerial census was completed on the area in 1975. Subsequent censuses were conducted but were during a period when claiming operations were also being conducted. The results of these censuses are as follows in Table 2.

The overall condition of the horses in the HMA is good. Occasionally a poor condition horse is found, its condition a result of lameness, old age, injury, parasites, disease, and/or nutritional deficiencies. Mares sometimes exhibit poor health after birthing and while nursing a foal. In extreme cases, a horse may become so debilitated that it is unable to reach areas offering the necessary forage, water, and cover required for survival. But the majority of horses in the HMA are sound, relatively healthy, and adapted to the type of environment they live in.

Wild horses in the Antelope HMA possess a variety of colors with variations from white to black and all shades in between. The herd contains a preponderance of sorrels and bays.

Table 2. Antelope Range Wild Horse Herd Census Results

1975	Ely	275	Elko	127	Total	402
1978*	Ely	149	Elko	449	Total	598
1979	Ely	547	(includes 122 horses counted by Ely on the Elko District; but a complete census was not conducted on the Elko District)			
1980**	(Post gather census)					
	Ely	167	Elko	191	Total	358
1981	Ely	288	Elko	164	Total	452
1983	Ely	303	Elko	249	Total	552
1985	Ely	451	Elko	267	Total	718
1987***	(Post gather census)					
	Ely	782	Elko	366	Total	1,148

* In 1978 an emergency postcensus removal of 41 wild horses was conducted at Ayarbe Spring because of severe drought conditions.

** In January of 1980 a total of 711 horses were gathered off the Antelope Area by the Ely and Elko Districts to reduce combined overutilization of the vegetation resource by domestic livestock and wild horses. Also in 1980, only 25 percent of livestock grazing preference was activated with 5 permittees taking total nonuse.

*** In September of 1986, 107 horses were removed from the Ely Antelope herd. There were 58 more horses removed from Ely's Antelope herd and 340 from Elko's Antelope herd in February 1987. This census was completed after the horses were gathered and shows the number of horses remaining after the gather completion.

This belongs in the livestock section

A large percentage of the bay and brown horses have lighter tones around the eyes, on the muzzle, and in the gaskin region. Table 3 depicts the color variations from the horses gathered in 1980.

Table 3. Antelope Range Wild Horse Color Variations *

<u>Color</u>	<u>Percentage</u>
Sorrel	45%
Bay	26%
Brown	8%
Buckskin	5%
Black	4%
Red Roan	3%
Red Dun	2%
Dun	2%
Strawberry Roan	1%
Blue Roan	1%
Gray	<1%
Grulla	<1%
Palomino	<1%
Chestnut	<1%

* Percentage of color is based on averages from all horses gathered in 1980.

Based on the 1980 capture data the Antelope Range HMA population exhibited a sex ratio of 58 females to 42 males, with variations in any given age class. This appears to be a healthy sex ratio and does not present a management problem for the herd at this time.

Age distribution is an important population characteristic which influences both natality and mortality (Odum, 1971). Odum states further that the ratio of the various age groups in a population determines the current reproductive status of the population and the future of the population can be determined from the age structure. Populations can be divided into three separate ecological periods: prereproductive, reproductive, and postreproductive (Smith, 1974). Reproduction is restricted to particular age groups and mortality is more conspicuous to others. Smith suggests constructing an age pyramid (bargraph) for presentation of the age structure and subsequent analysis of the age ratios. This technique was utilized for depiction of the Antelope Range HMA population sample from the 1980 gather data (see Figure 1).

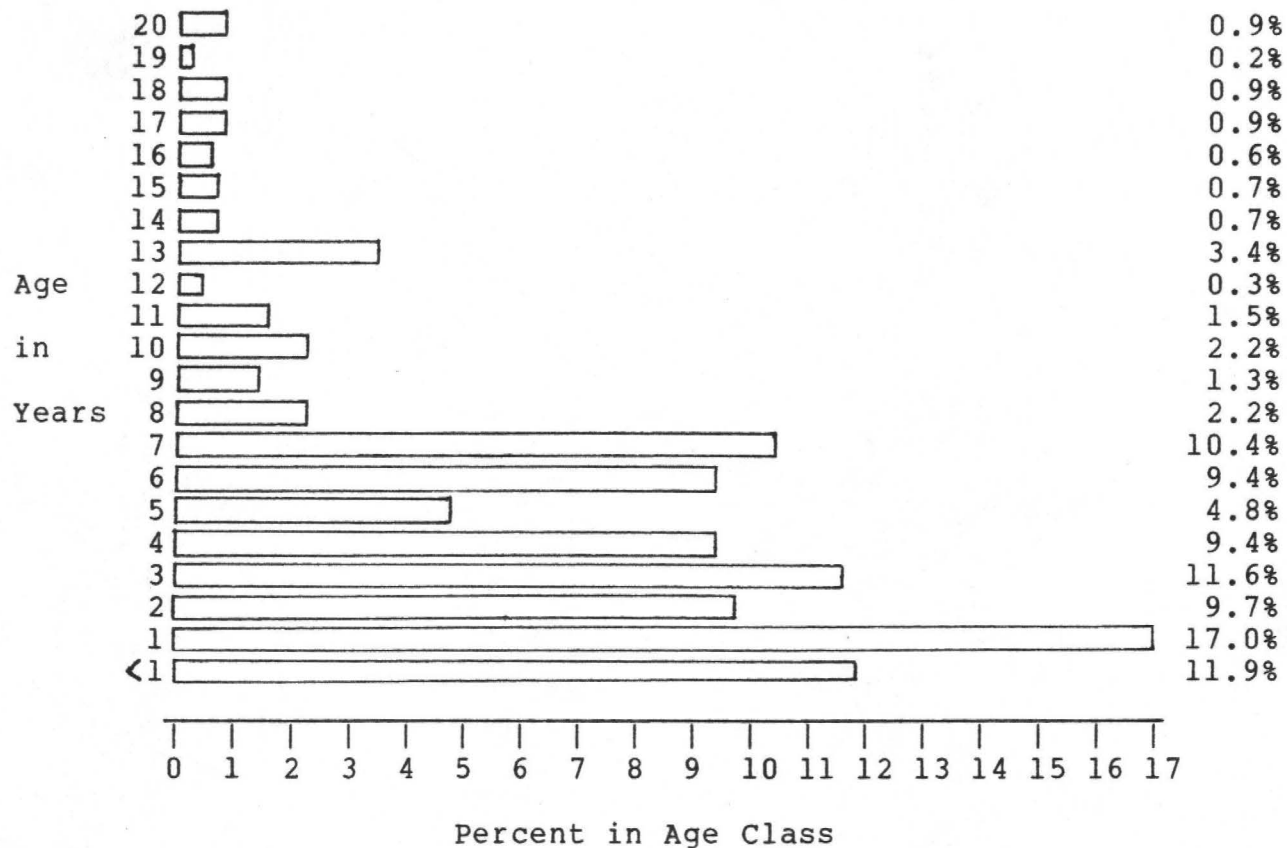


Figure 1. Antelope Range Wild Horse Herd Age Class Structure

Mortality rates in a wild population are extremely difficult to determine. Many ways are available to obtain estimates of mortality, but these are only approximations. One such way to do this is by taking a population sample and developing a time specific life table. This data is limited in some ways, but does provide a starting place to determine mortality and, conversely, survival. A life table was not developed using the 1980 capture data, but will be developed when more data becomes available. It will be added as an appendix to this plan.

A reproductive rate was calculated based on the 1980 capture data, and from 1981, 1983, and 1985 census data. The remaining census data was not used since there was no data on young versus adults obtained during the inventories. The reproductive rate was calculated to be 18.0 percent based on the formula:

$$\text{Reproductive Rate} = \frac{\text{Number of Animals 0-1 Year of Age}}{\text{Number of Animals 1 Year of Age and Older}}$$

This is in accordance with Nevada State Office Manual Supplement 4730.11A5a(1).

The wild horse habitat requirements can be divided into four categories - forage, water, cover, and living space - all of which are equally important. Wild horse forage conditions are very similar to that of livestock forage conditions due to a considerable dietary overlap (see Elko D.O. Fecal Analysis reports). Some monitoring studies have been established in the Antelope Range HMA. Ultimately these studies (actual use, utilization and trend) will be used to determine proper grazing levels of wild horses, livestock, and wildlife on the range. Sufficient data is not available to make adjustments at this time. Ecological site condition has been determined on key areas but not throughout the HMA. All studies data is on file at the Ely District Office.

Water is available throughout most of the HMA, but poor water distribution is a problem which results in uneven use of available forage. The availability of water needs to be increased, and yearlong water should be made available at all water sources for horse use, wherever possible. Refer to Appendix I, Map #4 for locations of current water sources and Map #6 for locations of proposed waters.

move this to water section or move water section here

Cover for horses can be provided by either vegetation or terrain. The rugged hills in the HMA (Antelope Range, Schell Creek Range, and others) and the pinyon-juniper vegetation provide excellent cover for escape and protection from adverse weather conditions. Cover is lacking in the valley bottoms but this does not presently appear to be a problem.

The HMA covers sufficient acreage to provide adequate living space for the Antelope Range herd. Fencing in the HMA does not seriously impede the horses' movement since they are mostly open ended fences. Refer to Appendix I, Map #7 for the locations of existing and proposed fences.

C. Reference to the Land Use Plan

As stated earlier, the Wells Resource Area management of the Antelope horses within its boundaries will be addressed in a separate HMAP. This is in compliance with the Wells RMP and Record of Decision. Management of the Ely Antelope herd by this HMAP is in compliance with the Schell Resource Area MFP and Record of Decision, and the Proposed Egan RMP.

A Coordinated Management Planning meeting to set management objectives was held in February 1984. The participants included personnel from both the Ely and Elko BLM Districts, National Mustang Association, Nevada Department of Wildlife, and livestock permittees. At this meeting it was recommended that combined Ely and Elko District wild horse management numbers be initially set at 452, the census numbers available in 1982 for the Antelope HMA (1981 inventory). In addition, a range of 250 to 600 horses was recommended as the level within which wild horse numbers would be allowed to fluctuate. The recommended management number of 452 is not in compliance with the Schell MFP. Therefore, the Ely District will manage its herd at the 1983 inventory level of 303 horses, ~~with a range of ± 10 percent.~~ This is in compliance with the Schell MFP and Egan RMP. The Elko District will manage its herd in compliance with the Wells RMP at 164 horses (1981 Elko census). Wildlife populations will use existing and reasonable numbers, and initial livestock stocking levels will be based on existing use and/or interim stocking rate agreements. Any future adjustments in management numbers will be determined through and based on monitoring studies.

D. Existing Projects

Existing projects in the HMA include fences, wells, reservoirs, and pipelines. Individual projects are shown on Map #4, Existing Waters, and Map #7, Existing and Proposed Fences, in Appendix I. Water availability within the HMA could be improved to better distribute grazing pressure from not only wild horses, but livestock and wildlife as well. At the present time, poor water distribution in the HMA is resulting in uneven use of the available forage. Improvement of water distribution will spread out grazing pressure, thus reducing heavy utilization in some areas and increasing utilization in presently unused areas. Water in the valley bottoms and benchlands is presently provided by reservoirs, wells, rain and snow for the most part. Water in the mountains is provided mainly by spring sources. Map #6, Proposed Water Developments, in Appendix I shows the locations of those waters proposed for future development.

There are a few fences in this area that alter the north-south movement of horses. These fences force the horses, which are accustomed to them, to run along the fence line for four to five miles before they can get around them. Since these fences run from mountain range to mountain range across the valley bottoms, they do not greatly interfere with the normal seasonal migrations which are generally in an east-west direction from the mountains to the valleys. Fences along the Goshute Indian Reservation boundary have kept the horses concentrated on public lands and off the reservation.

This paragraph belongs in the Mgt Methods Section as a way to maintain or preserve free roaming behavior

New fencing for livestock control and management will be minimized in the herd area. Use of herding and salting will be emphasized. ~~If~~ ^{in accordance with the NPS manual supplement #730} fences ~~are~~ ^{are} absolutely necessary they will be designed with wild horses in mind. Fencing for the most part will be open-end allotment boundary and pasture drift fences across the valley bottoms, and gap fences across narrow canyons. In either case, horses will have access around the ends. Gates will be opened when livestock are not authorized in the area, except on those fences designed to protect vegetation treatments and riparian areas. New fences will be flagged to increase visibility to wild horses.

who will open the

III. Objectives

Based upon the information presented under Section I, Introduction, and Section II, Background Information, the following objectives have been identified for the Antelope Range Wild Horse Herd. These objectives have been coordinated with the objectives and actions of the other resource activity plans in the Antelope Range HMA. The overall objective is to maintain and manage the wild free-roaming horse population as a recognized component of the public land environment, in balance with its habitat and other resource uses.

You need to go back to the Background section & set the stage for this objective. You have never mentioned what the current seral stages are so you can't have an objective to A. Habitat Objectives change.

The habitat objectives for the Antelope Range HMA are as follows:

1. Manage for the most appropriate seral stages to provide desired quantity, quality, variety and density of forage in order to meet the requirements of the wild horses and other foraging animals. Refer to Appendix II for Specific Management Objectives (seral stages) by key management areas. Ecological condition trends toward or away from desired seral stages will be measured on the key management areas.

2. Generally maintain utilization levels on key forage species in the herd area at approximately 45 percent on shrubs, and 55 percent on grasses and forbs.

3. Provide water yearlong for wild horses throughout the Antelope Range HMA where possible.

B. Animal Objectives

The Antelope Range HMA wild horse population objectives are as follows:

1. Maintain or improve the wild free-roaming characteristics of the horses in the Antelope Range HMA.

2. Manage the wild horse population at an appropriate management level of 303 wild horses with a range of 273 to 333 (± 10 percent) in order to maintain a viable breeding population.

IV. Management Methods

A. Habitat Maintenance and Improvements

The planned actions needed to achieve the habitat objectives established in this plan are as follows:

1. To provide the desired quantity, quality, variety, and density of forage and to maintain the proper utilization of forage species by grazing animals in the Antelope Range HMA the following steps will be taken:

This objective is not properly stated. The AMK of 303 is a constraint from the land Use plan. Your true objective is to maintain that AMK thru periodic removals which gets you to a need for a \pm variation.

You need to set stage for this in Background section. For example, you previously said that horses had adequate living space

This objective must be obtainable. I don't believe a horse can be used to attain

This is not an objective. It is a constraint from land use plan

You need to set the stage for a \pm variation in the Background section

a. The wild horse population will be initially adjusted to the appropriate management level of 303 animals within the Antelope Range HMA (see planned actions for Animal Objective #2). This initial adjustment in the wild horse population will have a direct impact on the utilization levels within the HMA, by reducing the forage utilization in critical areas.

Utilization levels will be used as one of the major factors in determining the number of animals to be maintained in the HMA.

Some key areas have been and others will be established through consultation with the affected livestock permittees, wild horse interests, and the Nevada Department of Wildlife. The results of monitoring studies on these key areas will be used for subsequent adjustments in the numbers of grazing animals, either up or down.

No If additional forage is available after meeting livestock number objectives and reasonable wildlife numbers have been reached, all available forage will be divided proportionately among all foraging animals based on animal numbers and forage preference.

If monitoring data shows reductions of animal numbers are necessary, reductions will be made in the following manner:

adjustments a. Where a foraging animal can be identified as the primary agent causing forage resource damage in a specific area, reductions will be made from the numbers of this particular foraging animal. This foraging animal will be determined from monitoring studies, utilization, actual use, sightings, counts, etc.

No b. Where a single offending foraging animal cannot be determined in a problem area, reductions will be made proportionately according to forage preference. Whether this action will be a specific number in a specific area or an overall reduction in numbers will be determined by the circumstance involved.

b. Seedings and other vegetation manipulation practices (sagebrush and pinyon-juniper conversions) have been proposed by other resource activity plans for the HMA to provide additional forage and distribute grazing into presently ungrazed or lightly grazed areas.

c. The planned actions in the other resource activity plans (AMP's and HMP) will also help distribute animals for proper grazing pressure and utilization. These include establishing grazing systems and seasonal use areas conducive to increasing key forage species, and prescribed burns in selected areas to stimulate grass/forb production.

2. Yearlong water for wild horses will be provided and water distribution and availability will be improved through spring developments, pipeline construction, and development of catchment reservoirs. Many areas receive very little use due to the lack of water. Improved water distribution will relieve many areas of the heavy use they presently receive as a result of better distribution of grazing animals. The water developments identified below and shown on Map #6 in Appendix I have been proposed by other resource activities but will have major benefits to wild horses. The first four of these waters are very important to the improvement of wild horse habitat. These projects will be funded using wild horse funding when available. All projects are listed in descending priority for development and for consideration of joint funding with other resource activities at such time as any resource activity is capable of funding the project:

- a. Domingo Well Spring and Pipeline (redevelopment)*
- b. Kingsley Spring Pipeline*
- c. Cattail Spring and Pipeline*
- d. Ayarbe Spring Redevelopment
- e. Black Hills Well Pipeline
- f. Grouse Spring
- g. Skull Spring
- h. Horse Spring
- i. Deep Creek Well and Pipeline
- j. Goshute Reservoir
- k. Antelope Well Pipeline
- l. North Creek Pipeline
- m. Cress Spring
- n. Sampson Creek Pipeline
- o. Camp Spring
- p. Lookout Spring Pipeline
- q. Tunnel Canyon Spring Redevelopment
- r. Sharp Creek Pipeline
- s. North Spring
- t. South Spring
- u. Sand Spring
- v. Water Canyon Pipeline

* The National Mustang Association has expressed an interest in entering into Cooperative Agreements to assist BLM in development of these waters for wild horse use.

In the event the above projects do not provide adequate water for wild horses, an inventory will be conducted to determine requirements for additional water to be developed in addition to those proposed. Waters to be developed will remain in scope with the land use plan as amended.

3. Wild horse habitat studies will be established in areas where none exist to determine the impact of grazing animals on the HMA. Existing studies will continue to be read. These include utilization, trend, precipitation and wild horse population estimates. All vegetative studies will be coordinated with the Schell Resource Area wildlife biologist and range conservationist in charge of each grazing allotment and all other interested parties. Refer to the Evaluation and Revision Section for details on studies.

B. Animal Characteristics and Population Levels

The planned actions to achieve the animal objectives established in the HMAP are as follows:

1. In order to maintain or improve the wild free-roaming characteristics of the horses in the Antelope Range HMA, the following will be accomplished:

All projects proposed for the Antelope Range HMA will be analyzed in depth through an environmental analysis (EA) to determine if the project will impact the wild free-roaming characteristics of wild horses. Wild horse distribution, seasonal movements, daily movements, and home ranges will also be preserved in accordance with NSO Manual Supplement 4730, Release NV 4-6.

Resource uses involving an increase in human activity in the HMA (eg. mining) and fences will be evaluated closely. These types of activities will most likely impact the free-roaming characteristics of the horses. Each activity or project will be handled on an individual basis. In analyzing the impacts, the overall and cumulative impact will also be analyzed.

At the present time the fences proposed in the Antelope Range HMA, when constructed, will be designed to preserve the normal distribution and movement patterns for the majority of animals in accordance with NSO Manual Supplement 4730, Release NV 4-6.

2. In order to manage the number of wild horses (303) as the appropriate management level from which to begin monitoring studies within the HMA the following actions are necessary:

It is necessary to initially remove approximately 150 head of wild horses from the Antelope Mountains and/or the north end of the East Antelope Bench to reduce grazing pressure on the winterfat flats. This is the number estimated at the present time based on the latest (1985) census information.

The number of remaining horses will not be allowed to drop below 273. Gathering down to the low end of the management range will allow for fewer gathers over a longer time period to maintain the herd within the limits of 273 to 333 horses. The actual number to be removed, as well as the removal method, will be determined in a later capture plan and EA.

Once the appropriate management level has been achieved, periodic removal of excess horses will still be required. The population range is to be 273 to 333 horses. Basically, the population will be allowed to increase to 333 animals and then reduced back to 273 and allowed to increase again. This will result in a gather every two or three years, based on the 18 percent reproductive rate calculated for the Antelope Range herd.

To assure proper management of the total Antelope Range horse herd, the level of horse use on the adjacent Elko District will also be considered.

3. Studies information relative to sex ratios, age structures, productivity and survival, color, animal condition, home ranges and seasonal movements will be evaluated on the Antelope Range horse population.

For details on studies see the Evaluation and Revision Section.

V. Evaluation and Revision

This plan and associated studies will be evaluated periodically to determine if objectives are being met.

As the wild horse program is a relatively new program, much of the data necessary to intensively manage the horses is unavailable. Thus the need for studies is essential. Studies as described in this plan, will be established to collect the necessary data. Until the data becomes available the best available information must be utilized in developing interim management actions. The following studies have been or will be conducted to evaluate the effectiveness of the management methods identified in this plan in meeting the objectives:

A. Habitat Studies

1. Trend - Trend is defined as a change in vegetation and soil characteristics as a direct result of environmental factors. The frequency sampling procedure described by Tueller et. al., (1972) will be the methodology utilized to determine trend. The data collected will be stored in the allotment files located in the Ely Bureau of Land Management Office. Trend plots will be located on key areas in each allotment within the herd area and will be read every three to five years within the herd area.

2. Utilization - Utilization is defined as the amount of current year's growth removed from the plant. Utilization studies help to evaluate management systems by determining patterns and quantity of use. The Expanded Key Forage Plant Method is the technique adopted for this management plan. Section 4412.22 of the Bureau of Land Management Manual and the Nevada Range Monitoring Procedures Handbook (1981) delineates this particular method in detail. Utilization data will be collected annually contiguous with movement of livestock from the management area, thus acquiring livestock and wild horse use patterns. The utilization studies will be timed where possible to determine levels of use between grazing animals particularly between horses and cattle or sheep. Data will be correlated with trend, wild horse population estimates, and livestock actual use information.

3. Precipitation - Precipitation data will be gathered for the HMA at least quarterly. There are rain gauges located on each allotment within the area which will continue to be read.

4. Population Estimates - Wild horse population estimates will be used to help evaluate the plan effectiveness. Estimates will be obtained from aerial census using a Bell 47G3 B-1 helicopter. The census will be conducted at least once every five years, but preferably every three years, in accordance with NSO Manual Supplement 4730, by the Ely District Wild Horse Specialist. Census will be conducted in late June or early July and require approximately 10 hours to complete each census. Wild horse sighting locations and census route will be plotted on a map. All censuses will be conducted simultaneously with censuses on the Elko District Antelope herd.

B. Wild Horse Population Studies

1. Home Range and Seasonal Movements - A comprehensive study will be conducted to understand home ranges and seasonal movements of wild horses. The study will be conducted seasonally four times a year in January, April, July,

and October. The preferred method is through aerial observations from a B-1 helicopter but an alternate method using a vehicle for on the ground observations may be used. Sighting locations will be plotted on a map using either method. Horses may be captured, marked, and released for further study of movement patterns. This will be accomplished by collaring horses, observing animals in the field, and by recording animal locations during aerial censuses. Collaring horses may be accomplished either during removal roundups or special captures. Horses collared and released will be monitored to determine movements and mortality.

2. Productivity and Survival - General productivity indices will be estimated from the relative age composition (percent foals) of the HMA population as per NSO Manual 4730 (Wolfe, 1980). Aerial (B-1 helicopter) censuses, as well as field observations, will be used to secure the desired data.

Information on young/adult ratios will be collected when funding is available, but should be gathered at least once every three years. Young/adult surveys will be conducted in July and again the following January.

First year survival rates will be approximated through shrinkage of foal incidence between the surveys (Wolfe, 1980).

3. Color - Updated color data will be determined concurrent with other population studies and from information obtained during gather operations.

4. Animal Condition - Physical condition of wild horses will be determined concurrent with collecting other population data, from general observations made in the field, and from information obtained during gather operations.

5. Age Structure - Relative age structure of the Antelope Range HMA population will be periodically evaluated and updated as a result of gathering operations. This information will be further supplemented as described in NSO Manual 4730.

6. Sex Ratio Determination - The sex ratio of the Antelope Range wild horse population will be estimated from an analysis of capture data obtained whenever excess animals are removed from the HMA.

VI. Coordination

Information on horse numbers and locations may occasionally be provided by Nevada Department of Wildlife. All studies affecting wild horses, wildlife and livestock will be closely coordinated.

All actions pertaining to the Antelope Range wild horse herd will be coordinated between the Ely and Elko Districts prior to initiating the action. If, as a result of this coordination, it is determined that a memorandum of understanding will facilitate coordination between districts, one will be drawn up between the two districts and will be included as an appendix to this plan.

VII. Modification and Review

A joint review of this plan will be conducted periodically by the the Ely District Wild Horse Specialist and the Schell Resource Area Manager. This plan may be modified if data from public input, resource studies, or experience gained in plan operation indicate that changes are desirable.

All studies will be evaluated to see if objectives are being met. If not this plan may have to be revised.

It is understood that all actions undertaken pursuant to this plan are contingent upon available funding.

VIII. Approval

Prepared By:

Robert E. Brown
Robert E. Brown, Wild Horse Specialist
Ely District

January 21, 1987
Date

Concurred By:

Gerald M. Smith
Gerald M. Smith, Area Manager
Schell Resource Area

January 21, 1987
Date

Recommended By:

Kenneth G. Walker
Kenneth G. Walker, District Manager
Ely District

3-12-87
Date

Approved By:

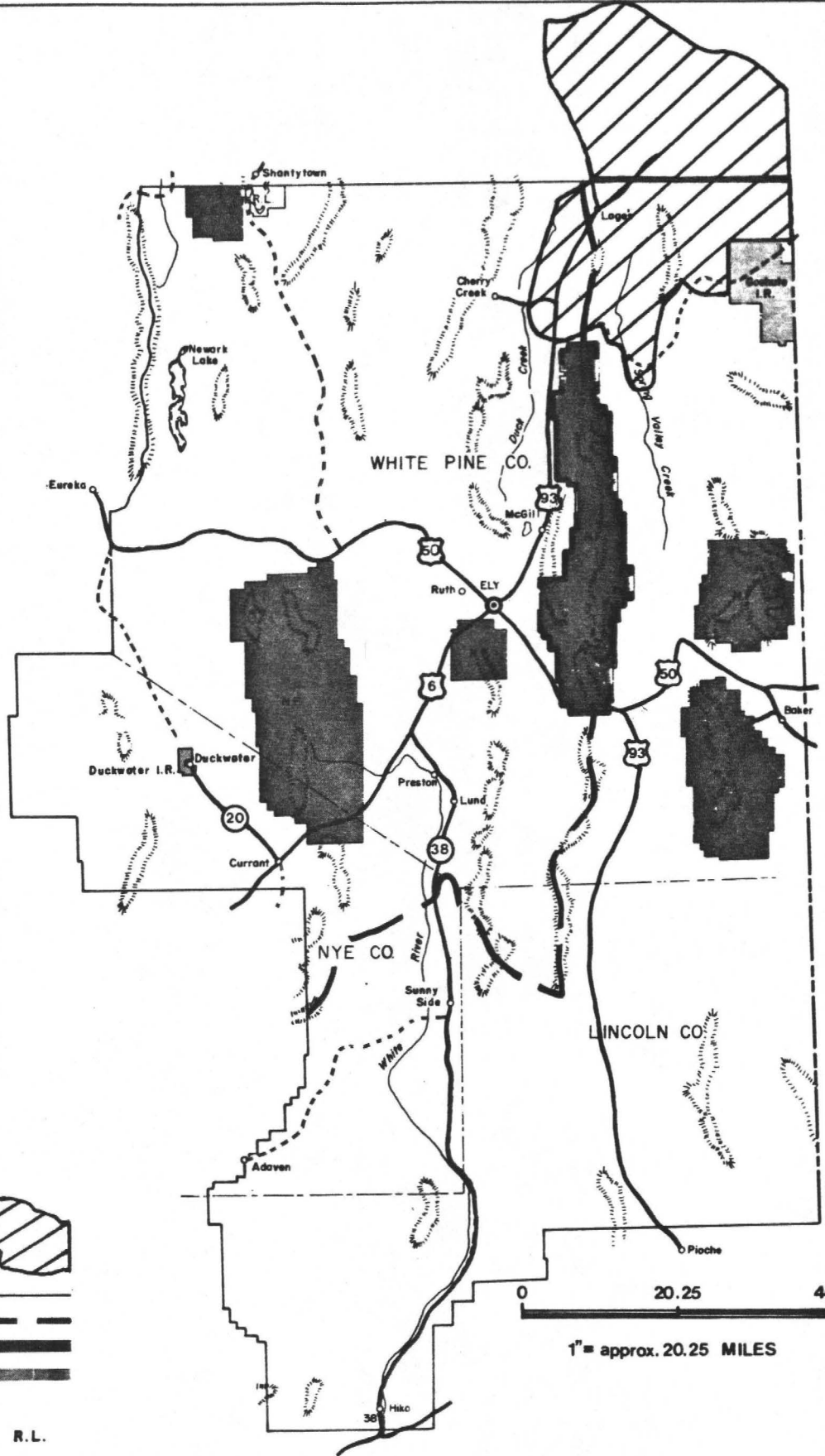
Edward F. Spang, Nevada State Director

Date

APPENDIX I

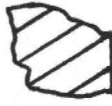
Maps

- Map #1 - Location
- Map #2 - Antelope Range HMA
- Map #3 - Land Status
- Map #4 - Existing Waters (Ely District)
- Map #5 - General Seasonal Use Areas (Ely District)
- Map #6 - Proposed Water Developments (Ely District)
- Map #7 - Existing and Proposed Fences (Ely District)



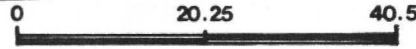
Map # 1
Location

Antelope Range HMA



- District Boundary
- Resource Area Boundary
- Humboldt National Forest
- Indian Reservation
- Ruby Lake National Wildlife Refuge

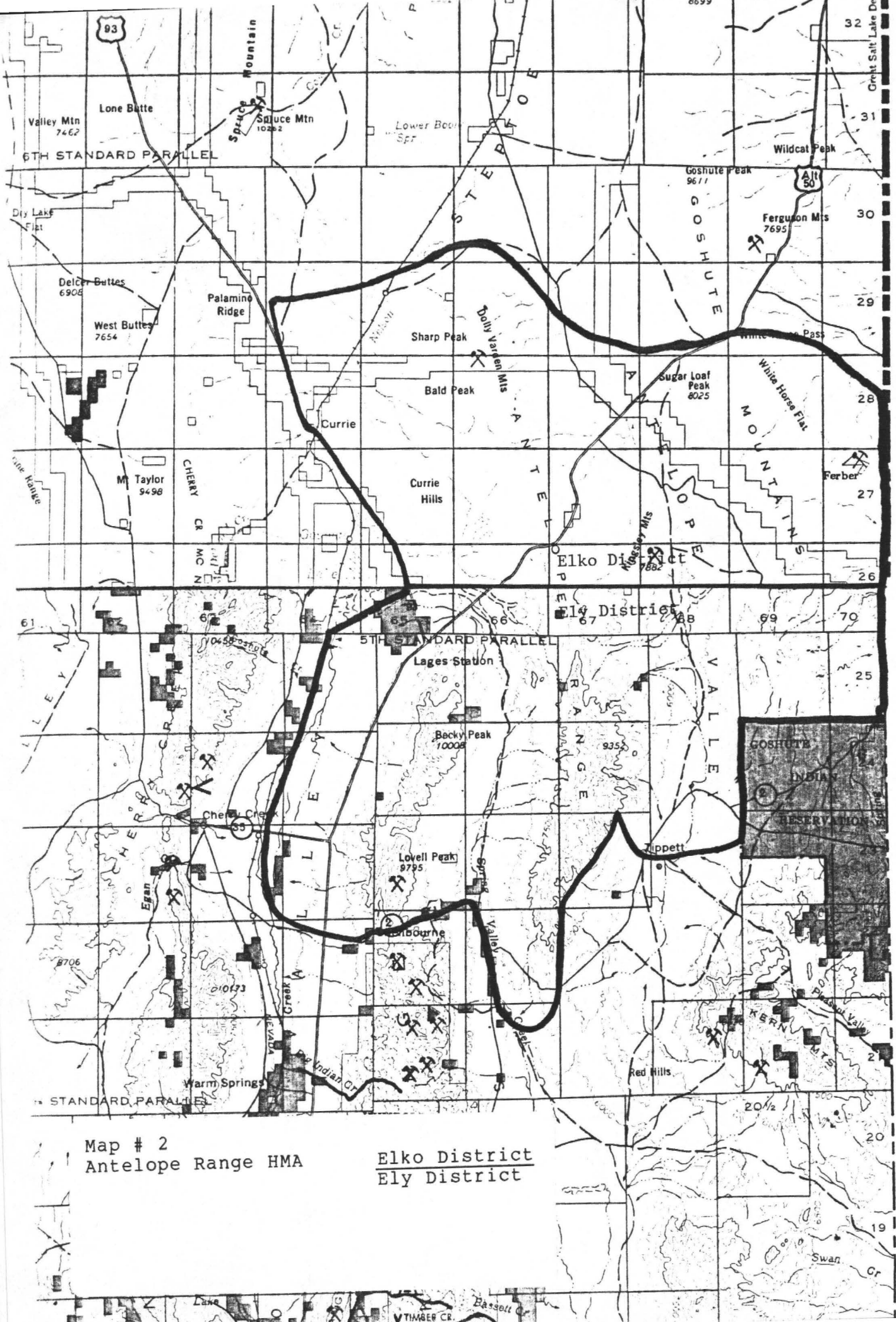
R.L.



1" = approx. 20.25 MILES

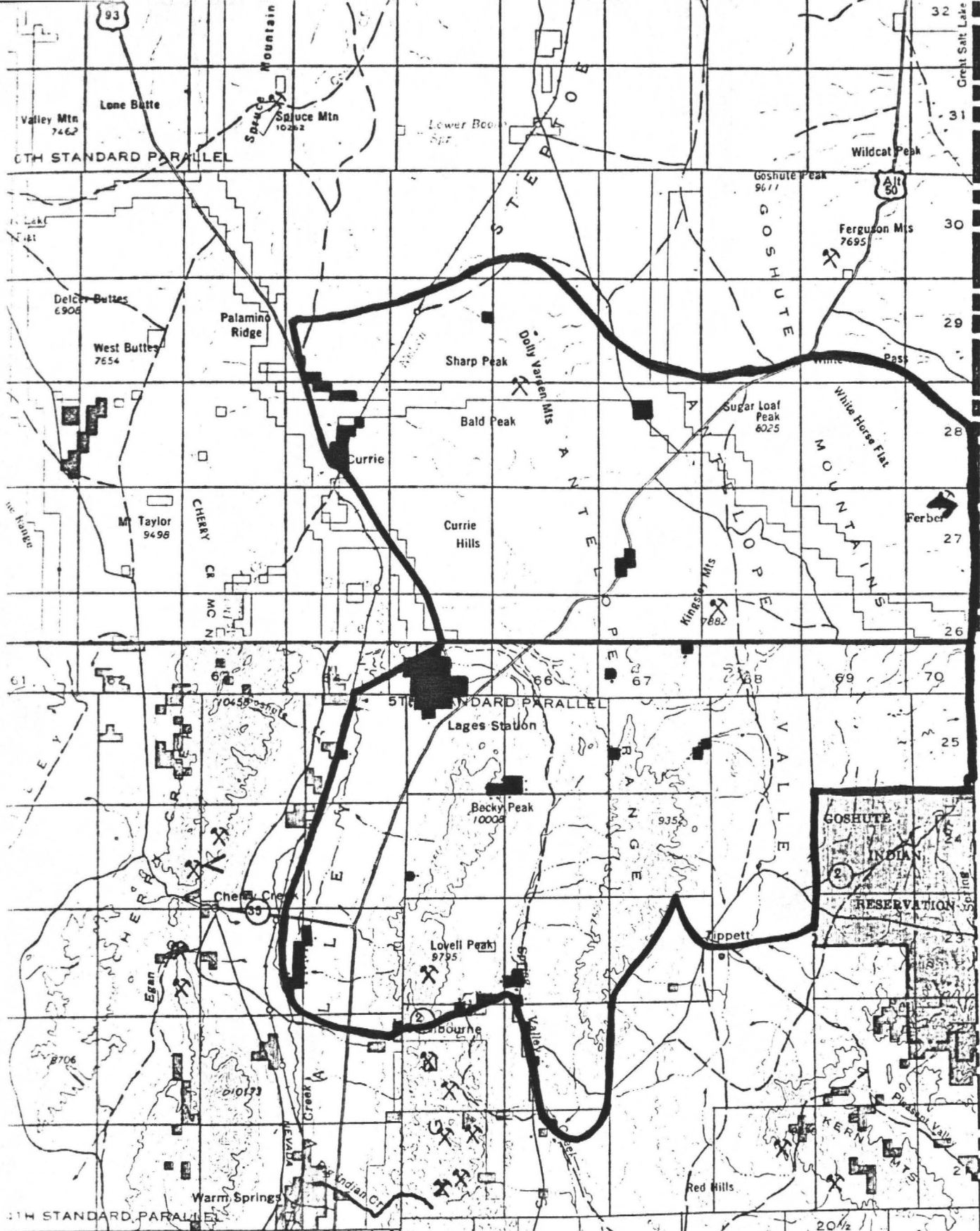
ELY DISTRICT

BUREAU OF LAND MANAGEMENT
U. S. DEPARTMENT OF THE INTERIOR



Map # 2
Antelope Range HMA

Elko District
Ely District

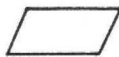


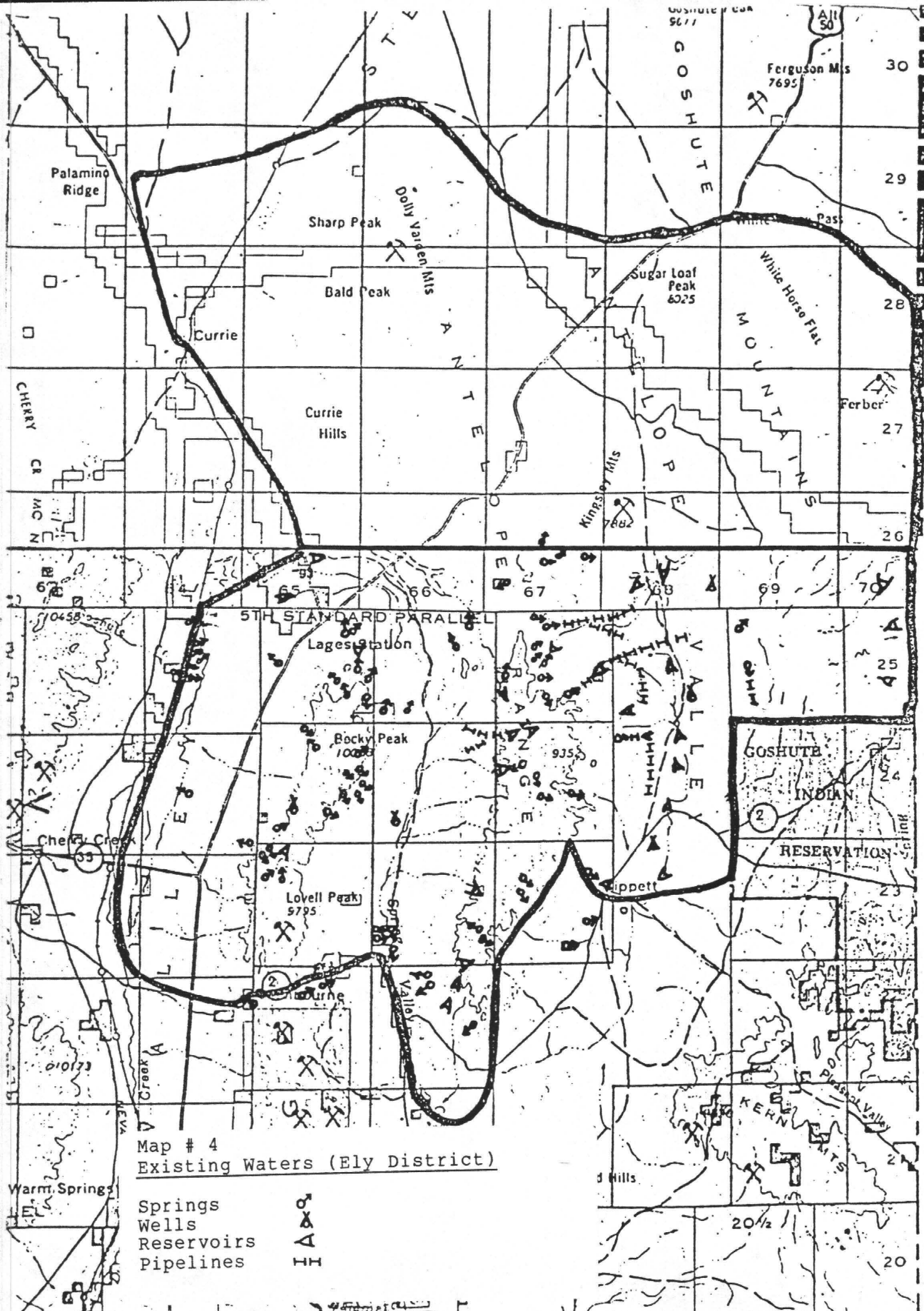
Map # 3
Land Status

Private (patented) Land



Public (BLM) Land

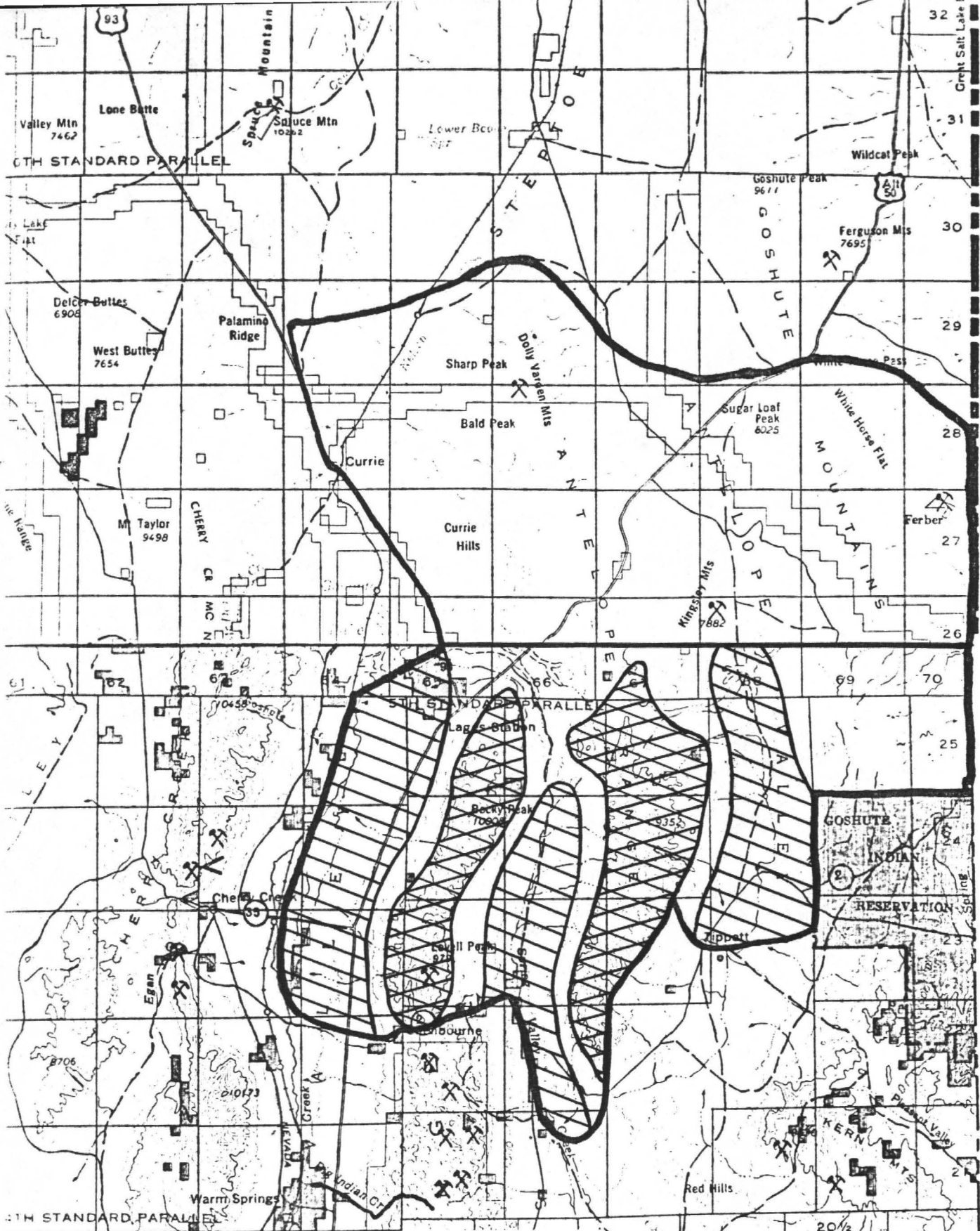







Map # 4
Existing Waters (Ely District)

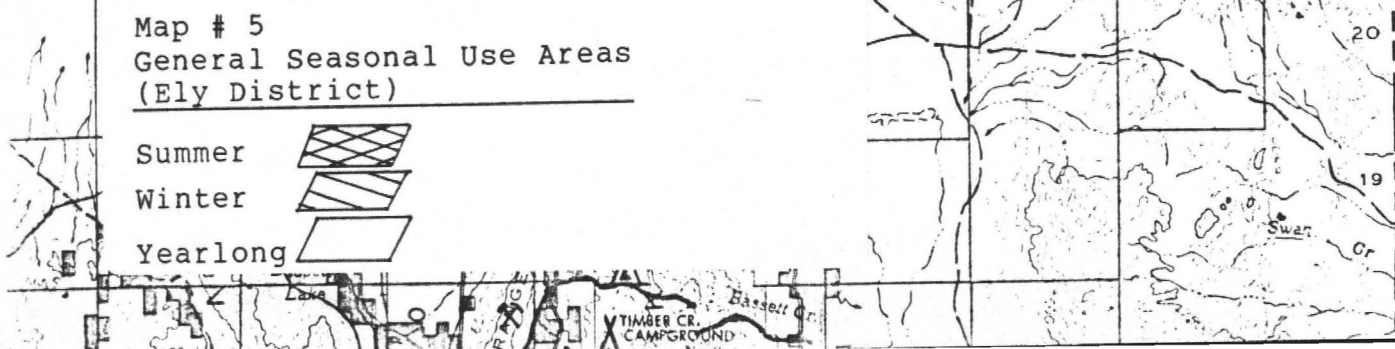
Springs
Wells
Reservoirs
Pipelines

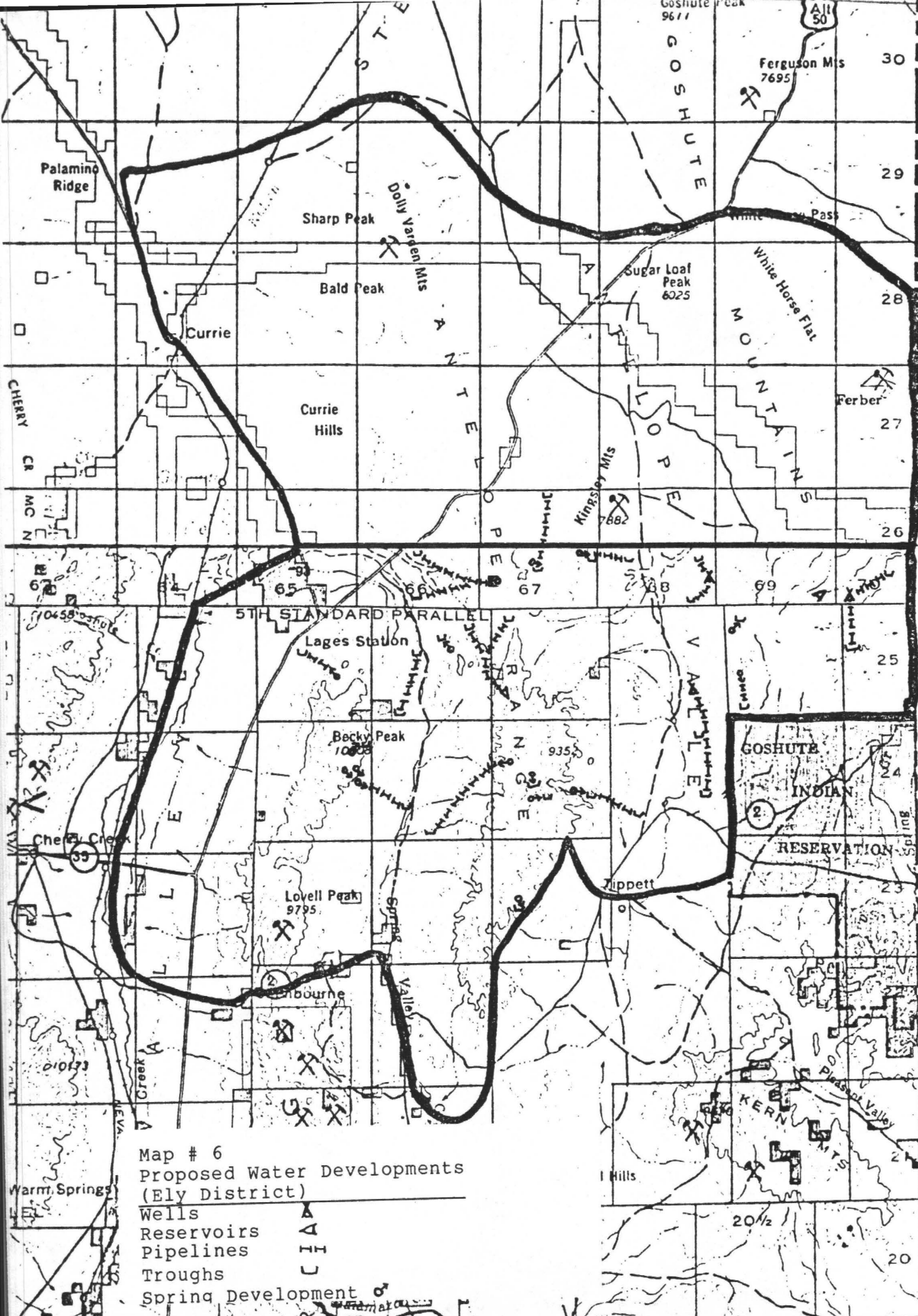
HA
H



Map # 5
 General Seasonal Use Areas
 (Ely District)

- Summer 
- Winter 
- Yearlong 

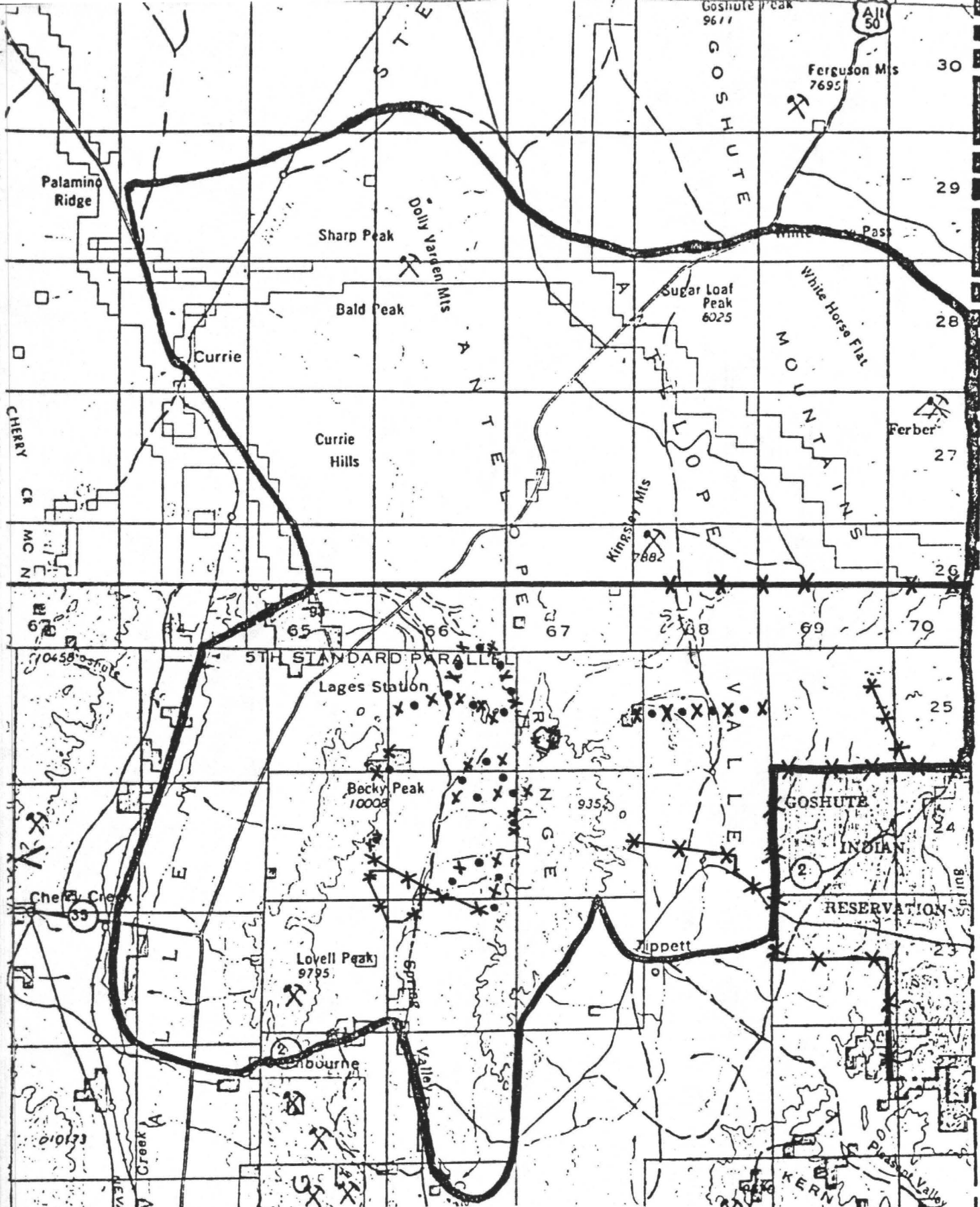




Map # 6
 Proposed Water Developments
 (Ely District)

- Wells
- Reservoirs
- Pipelines
- Troughs
- Spring development

▲
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 ▲
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Map # 7
Existing and Proposed Fences
(Ely District)

Existing Fences * - * - *

Proposed Fences x • x • x

APPENDIX II
Specific
Management Objectives

Management areas were chosen which could be used to address problems and measure effectiveness of solutions for each foraging animal group of the Antelope Range Plan Area. Many of these areas overlapped and could be combined so that livestock, wild horses and wildlife needs could be addressed in common (Fig. II-1). Each management area is (or will be) represented by one or more key use areas. The primary foraging animals were identified for each management area. For each management area the location, Soil Conservation Service (SCS) ecological site number, the district study number, and the present production and density of plant species have been identified.

The specific resource objectives were developed using the SCS ecological site descriptions to obtain a realistic idea of potential production for each species while taking into consideration response potential of each management area based on present species composition and whether or not vegetative treatment is to be proposed (realizing that certain communities cannot respond favorably to grazing treatments alone). Also considered was the fact that the unusually high amounts of precipitation over the last 2 to 3 years have resulted in higher levels of production than could be expected in normal years. For instance, production of desirable species on some management areas exceeded potential according to range site descriptions. Although it would be desirable to maintain this high level of production, it is recognized that this may not be possible. Therefore, these species are to be maintained at the potential level, as a minimum, even though this level is less than present production. In instances where production of undesirable species, particularly shrubs, exceeded potential levels for the site, it had to be recognized that the only way to decrease this level would be vegetative treatment. Where such treatments were proposed, the objective would be to decrease the density and production of that species. For those areas where shrubs would not be reduced without losing desirable species, the objective is to maintain production of undesirable shrubs at or below present levels, which equates to preventing any increase. If desired species are producing at or near the potential for that site, the objective for these species will be to maintain present production.

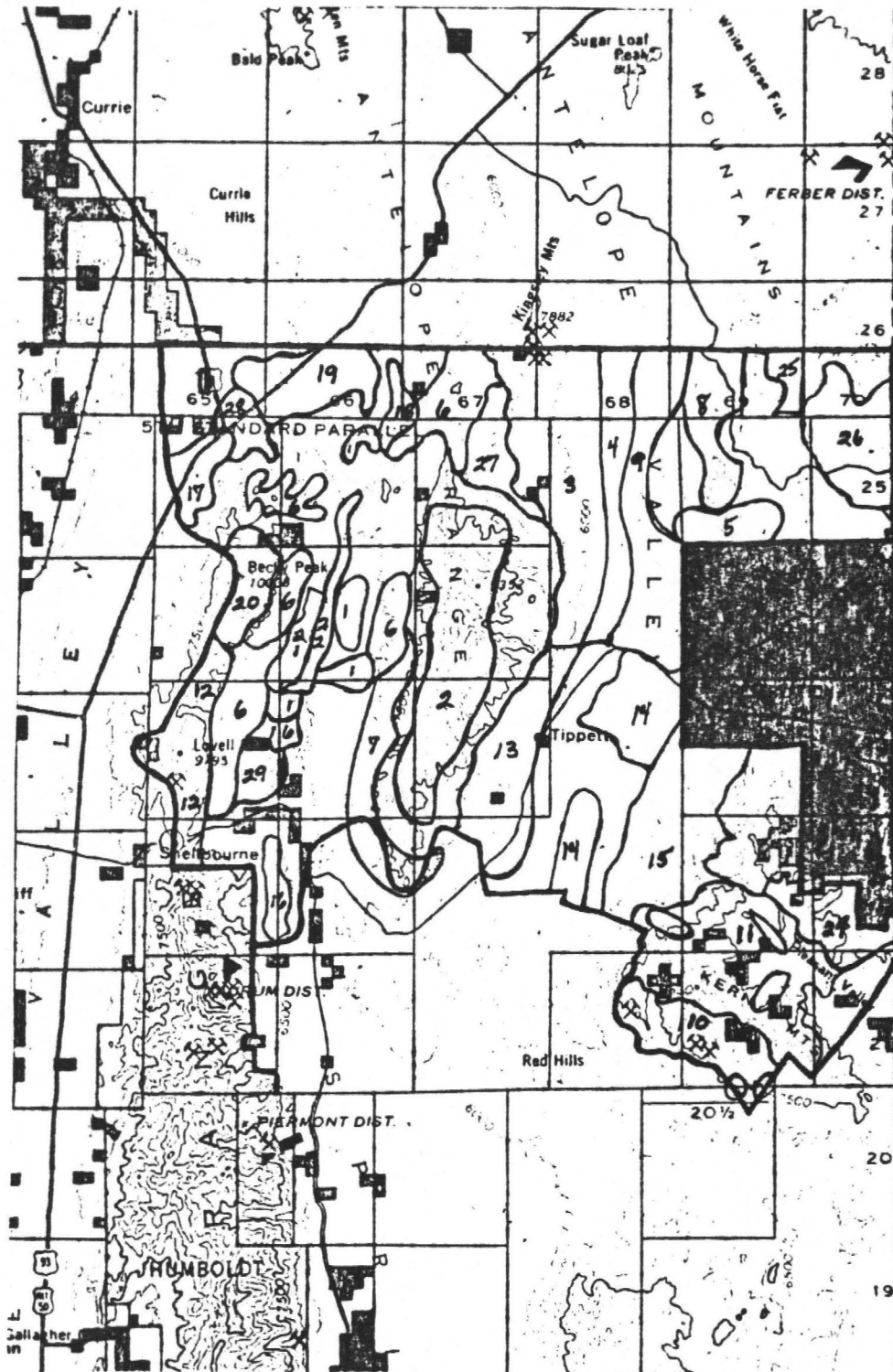


Figure II-1. Management Areas Corresponding to the Management Objectives and Management Actions for the Antelope Range Herd Management Area Plan Area, Nevada.

The specific resource objectives identify key forage species, the existing density and production, and the levels of density and production to be managed for after plan implementation. Objectives for an individual key species may vary greatly between different areas because of site potential and proposed treatments. Monitoring studies will be used to measure the relative success of achieving these objectives. If the resources are responding favorably and moving toward desired levels on management areas, it is assumed that the overall area will be in upward trend in areas where conditions are improving (desirable species are increasing) or static trend in areas where good conditions are being maintained or downward trend has been halted. Under this assumption, even those species for which no data was available should be expected to respond in the same manner as the listed species. Monitoring will pick up any increases in species diversity as well as production. Also portions of the planning area were not included in management areas because these portions were not critical to the development and implementation of the plan. These areas will not be intensively monitored, but will be affected by the plan and are expected to respond in a similar manner to the management areas.

Numbers of foraging animals from which monitoring will be based are as follows:

- a. Present numbers of wildlife will be used.
- b. Existing use and/or interim numbers of livestock as determined in each Allotment Management Plan will be used.
- c. ~~The 1983 wild horse inventory number of 303 animals will be used.~~ *↖ The AML*

Specific Management Objectives

1. Management Area - Seedings

Foraging Animal - Livestock

<u>Location</u>	<u>Ecological Site</u>	<u>Studies Number</u>
T. 23 N., R. 66 E., sec. 6 (Henriod Seeding)	Not Applicable	TAR 12

<u>Key Species</u>	<u>Present Situation</u>		<u>Management Objective</u>	
	<u>Density</u> (Plants/ac.)	<u>Production</u> (Lbs./ac.)	<u>Density</u>	<u>Production</u>
Crested Wheatgrass	76,000	179	Increase	200
Wyoming Big Sagebrush	3,000	110	Maintain	110

Ecological Status - Not Applicable -
(% of Climax or PNC**)

Relative Composition (all species)	Grasses - 59%	50-75%
	Forbs - -	
	Shrubs - 41%	25-50%

** PNC = Potential Natural Community - the biotic community that would become established if all successional sequences were completed without interferences by man under the present environmental conditions.

- 0 - 25% of PNC = Early Seral Stage
- 26 - 50% of PNC = Mid Seral Stage
- 51 - 75% of PNC = Late Seral Stage
- 76 - 100% of PNC = Climax or PNC

<u>Location</u>	<u>Ecological Site</u>	<u>Studies Number</u>
T. 25 N., R. 66 E., sec. 12 (Flat Spring Seeding)	Not Applicable	CCR 6

<u>Key Species</u>	<u>Present Situation</u>		<u>Management Objective</u>	
	<u>Density</u> (Plants/ac.)	<u>Production</u> (Lbs./ac.)	<u>Density</u>	<u>Production</u>
Crested Wheatgrass	18,000	85	Increase	150
Forbs	581	2	Increase	10
Wyoming Big Sagebrush	6,000	188	Decrease	100

Ecological Status - Not Applicable -
(% of Climax or PNC**)

Relative Composition (all species)	Grasses - 26%	45-70%
	Forbs - 1%	2-5%
	Shrubs - 73%	25-50%

** PNC = Potential Natural Community.

<u>Location</u>	<u>Ecological Site</u>	<u>Studies Number</u>
T. 24 N., R. 66 E., sec. 3, NE ⁴ (North Creek Seeding)	Not Applicable	CCR 5

<u>Key Species</u>	<u>Present Situation</u>		<u>Management Objective</u>	
	<u>Density</u> (Plants/ac.)	<u>Production</u> (Lbs./ac.)	<u>Density</u>	<u>Production</u>
Crested Wheatgrass	38,000	184	Increase	200
Forbs	27,000	8	Increase	10
Black Sagebrush	12,000	467	Decrease	400
Wyoming Big Sagebrush*	400	-	Maintain	-

Ecological Status - Not Applicable -
(% of Climax or PNC**)

Relative Composition (all species)	Grasses - 28%	45-70%
	Forbs - 1%	1-5%
	Shrubs - 71%	25-50%

One area of Wyoming big sagebrush is used by sage grouse for hunting pressure escape cover and possibly wintering. This area should be maintained at the present density.

** PNC = Potential Natural Community.

<u>Location</u>	<u>Ecological Site</u>	<u>Studies Number</u>
T. 24 N., R. 66 E., sec. 34 (Robison Seeding)	Not Applicable	CCR 7

<u>Key Species</u>	<u>Present Situation</u>		<u>Management Objective</u>	
	<u>Density</u> (Plants/ac.)	<u>Production</u> (Lbs./ac.)	<u>Density</u>	<u>Production</u>
Crested Wheatgrass	17,000	4	Increase	150
Black Sagebrush	4,300	370	Decrease	200

Ecological Status - Not Applicable -
(% of Climax or PNC**)

Relative Composition (all species)	Grasses - 5%	30-60%
	Forbs - -	-
	Shrubs - 95%	40-70%

** PNC = Potential Natural Community.

2. Management Area - Antelope Mountains - Chin Creek, and Tippet Allotments

Foraging Animals - Upland Game Birds, Deer Summer, Cattle, Sheep, Wild Horses

<u>Location</u>	<u>Ecological Site</u>	<u>Studies Number</u>
T. 24 N., R. 67 E., sec. 9, SW ⁴	D28BO37N	CCR 3

<u>Key Species</u>	<u>Present Situation</u>		<u>Management Objective</u>	
	<u>Density</u> (Plants/ac.)	<u>Production</u> (Lbs./ac.)	<u>Density</u>	<u>Production</u>
Bluebunch Wheatgrass	30,000	49	Increase	60
Forbs	59,000	113	Maintain	Above 75
Low Sagebrush	45,000	250	Maintain	Maintain

Ecological Status Late Seral Stage Late Seral Stage
(% of Climax or PNC**) (55% of PNC) (51-75% of PNC)

Relative Composition (all species)	Grasses - 26%	25-45%
	Forbs - 28%	10-20%
	Shrubs - 46%	45-55%

** PNC = Potential Natural Community.

<u>Location</u>	<u>Ecological Site</u>		<u>Studies Number</u>	
T. 25 N., R. 67 E., sec. 31, SWNE	D28B026N		CCW 2	
	<u>Present Situation</u>		<u>Management Objective</u>	
<u>Key Species</u>	<u>Density</u> (Plants/ac.)	<u>Production*</u> (Lbs./ac.)	<u>Density</u>	<u>Production</u>
Needle Grasses (Thurber's and Letterman)	17,000	44	Maintain or Increase	Maintain Above 44
Forbs	63,000	280	Maintain	Maintain Above 150
Snowberry	3,000	70	Increase	100

<u>Ecological Status</u> (% of Climax or PNC**)	Mid Seral Stage (38% of PNC)		Mid Seral Stage (35-50% of PNC)	

<u>Relative Composition</u> (all species)	Grasses - 21%		20-40%	
	Forbs - 21%		10-20%	
	Shrubs - 58%		55-65%	
* Need to increase total production from 800 lbs/ac to 950 lbs/ac.				
** PNC = Potential Natural Community.				

<u>Location</u>	<u>Ecological Site</u>		<u>Studies Number</u>	
T. 24 N., R. 67 E., sec. 33	D28B030N		TAR 15	
	<u>Present Situation</u>		<u>Management Objective</u>	
<u>Key Species</u>	<u>Density</u> (Plants/ac.)	<u>Production</u> (Lbs./ac.)	<u>Density</u>	<u>Production</u>
Western Wheatgrass	204,000	145	Maintain	Maintain Over 100
Forbs*	12,000	37	Increase	75
Mountain Big Sagebrush	2,000	698	Maintain	Maintain Above 500

<u>Ecological Status</u> (% of Climax or PNC**)	Mid Seral Stage (33% of PNC)		Mid Seral Stage (30-50% of PNC)	

<u>Relative Composition</u> (all species)	Grasses - 17%		20-50%	
	Forbs - 6%		5-10%	
	Shrubs - 77%		45-70%	
* Larkspur will be monitored separately because of poisoning problems.				
** PNC = Potential Natural Community.				

<u>Location</u>	<u>Ecological Site</u>		<u>Studies Number</u>	
T. 23 N., R. 67 E., sec. 17	D28B022N		TAR 14	
	<u>Present Situation</u>		<u>Management Objective</u>	
<u>Key Species</u>	<u>Density</u> (Plants/ac.)	<u>Production*</u> (Lbs./ac.)	<u>Density</u>	<u>Production</u>
Western Wheatgrass	23,000	38	Increase	100
Forbs	176,000	70	Maintain	150
Mountain Big Sagebrush	16,000	57	or Increase	
			Maintain	Maintain

Ecological Status (% of Climax or PNC**)	Mid Seral Stage (42% of PNC)	Mid Seral Stage (45-65% of PNC)
---	---------------------------------	------------------------------------

Relative Composition (all species)	Grasses - 45%	45-50%
	Forbs - 31%	15-25%
	Shrubs - 24%	20-30%

* Increase total production from 200 lbs/ac to 500 or more lbs/ac.

** PNC = Potential Natural Community.

3. Management Area - East Antelope Bench, North - Chin Creek Allotment

Foraging Animals - Antelope Kidding Ground, Antelope Winter, Cattle, Sheep, Wild Horses

<u>Location</u>	<u>Ecological Site</u>	<u>Studies Number</u>
T. 24 N., R. 68 E., sec. 8, SWNE	D28A026N	CCR 8

<u>Key Species</u>	<u>Present Situation</u>		<u>Management Objective</u>	
	<u>Density</u> (Plants/ac.)	<u>Production</u> (Lbs./ac.)	<u>Density</u>	<u>Production</u>
Indian ricegrass	1,000	19	Increase	60
Forbs	2,900	1	Increase	10
Winterfat*	23,000	35	Maintain	50
Bud Sagebrush*	16,000	18	Maintain	30
Shadscale*	1,500	100	Increase	30

<u>Ecological Status</u> (% of Climax or PNC**)	<u>Early Mid Seral</u> (28% of PNC)	<u>Mid Seral Stage</u> (26-50% of PNC)
--	--	---

<u>Relative Composition</u> (all species)	Grasses - 79%	40-65%
	Forbs - -	0-5%
	Shrubs - 21%	30-60%

** PNC = Potential Natural Community.

<u>Location</u>	<u>Ecological Site</u>	<u>Studies Number</u>
T. 24 N., R. 68 E., sec. 8, NWNW ⁴	D28A026N	CCW 1

<u>Key Species</u>	<u>Present Situation</u>		<u>Management Objective</u>	
	<u>Density</u> (Plants/ac.)	<u>Production</u> (Lbs./ac.)	<u>Density</u>	<u>Production</u>
Indian ricegrass	8,700	50	Increase	75
Forbs	-	1	Increase	10
Shadscale*	1,100	21	Increase	30
Winterfat*	580	3	Increase	20
Bud Sagebrush*	-	3	Increase	15

<u>Ecological Status</u> (% of Climax or PNC**)	<u>Early Mid Seral</u> (32% of PNC)	<u>Mid Seral Stage</u> (26-50% of PNC)
--	--	---

<u>Relative Composition</u> (all species)	Grasses - 46%	40-55%
	Forbs - 1%	1-5%
	Shrubs - 53%	45-60%

* Increase overall production of shrubs, but not one species at the expense of the others because they are codominants.

** PNC = Potential Natural Community.

4. Management Area - Antelope Valley Bottom - Chin Creek Allotment

Foraging Animals - Antelope Yearlong, Cattle, Sheep,
Wild Horses

<u>Location</u>	<u>Ecological Site</u>		<u>Studies Number</u>	
T. 25 N., R. 68 E., sec. 27, SW ⁴	D28B109N		CCR 1	
	<u>Present Situation</u>		<u>Management Objective</u>	
<u>Key Species</u>	<u>Density</u> (Plants/ac.)	<u>Production</u> (Lbs./ac.)	<u>Density</u>	<u>Production</u>
Salt Sage (A. Tridentata)	8,700	29	Maintain	30
Winterfat	9,800	164	Maintain or Increase	245

<u>Ecological Status</u> (% of Climax or PNC**)	<u>Late Seral Stage</u> (72% of PNC)		<u>Late Seral to Climax</u> (70-90% of PNC)	

<u>Relative Composition***</u> (all species)	Grasses - -		0-10%	
	Forbs - -		0-10%	
	Shrubs - 100%		80-100%	

* Total production should be increased from 200 lbs/ac to 350 lbs/ac.

** PNC = Potential Natural Community.

*** It is desirable, but perhaps not feasible, to increase forbs and grasses without interseeding.

5. Management Area - Ayarbe - Chin Creek Allotment

Foraging Animals - Antelope Key Winter, Sheep, Cattle
Wild Horses

<u>Location</u>	<u>Ecological Site</u>		<u>Studies Number</u>	
T. 25 N., R. 69 E., sec. 31, SWNE	D28A024N		CCW 3	
	<u>Present Situation</u>		<u>Management Objective</u>	
<u>Key Species</u>	<u>Density</u> (Plants/ac.)	<u>Production</u> (Lbs./ac.)	<u>Density</u>	<u>Production</u>
Indian ricegrass	580	22	Increase	50
Forbs	2,300	Trace	Maintain or Increase	15
Shadscale	1,400	32	Increase	75
Black Sagebrush	400	-	T	10

<u>Ecological Status</u> (% of Climax or PNC**)	Early Seral (25% of PNC)		Mid Seral Stage (26-50% of PNC)	

<u>Relative Composition</u> (all species)	Grasses - 61%*		30-55%	
	Forbs - -		0-5%	
	Shrubs - 39%		40-65%	

* Relatively high production of grasses (particularly Stipa comata) due to high ppt. year.

** PNC = Potential Natural Community.

<u>Location</u>	<u>Ecological Site</u>	<u>Studies Number</u>
T. 25 N., R. 69 E., sec. 28, SE ⁴	D28A013N	CCR 4

<u>Key Species</u>	<u>Present Situation</u>		<u>Management Objective</u>	
	<u>Density</u> (Plants/ac.)	<u>Production</u> (Lbs./ac.)	<u>Density</u>	<u>Production</u>
Indian ricegrass	10,000	100	Maintain	Maintain
Forbs*	2,000	(Trace)	Increase	12
Winterfat	3,000	5	Increase	40
Shadscale	900	6	Increase	12

<u>Ecological Status</u> (% of Climax or PNC**)	<u>Late Seral Stage</u> (59% of PNC)	<u>Late Seral Stage</u> (51-75% of PNC)
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<u>Relative Composition</u> (all species)	Grasses - 33%	35-45%
	Forbs - 8%	5-10%
	Shrubs - 59%	45-60%

* Need to increase forbs other than Opuntia.

** PNC = Potential Natural Community.

6. Management Areas -

Foraging Animals -

Antelope Mountains

Pronghorn Antelope Winter, Mule Deer Summer & Winter, Pronghorn Antelope Yearlong, Cattle, Sheep, Wild Horses. Chin Creek Allotment

Cedar Pass

Cattle-Sheep, Mule Deer Summer/Winter. Tippett Allotment

Sharp Creek

Pronghorn Antelope Yearlong, Cattle-Sheep, Mule Deer Winter, Wild Horses. Chin Creek Allotment

East Schell Bench

Pronghorn Antelope Yearlong, Mule Deer Winter, Sheep, Wild Horses. Sampson Creek Allotment

These treatment areas will have key areas established at the time treatment is done. At this time, specific management objectives will be established by species. In general pinyon-juniper will be reduced. Preferred forage will be increased to the following approximate percentages:

Grasses (40-60%) (5-10 species).
Forbs (10-30%) (20-40 species).
Shrubs (5-30%) (5-10 species).

Exact species and composition will be determined at the time of treatment based on what can grow on the specific sites.

7. Management Area - Sharp Creek - Chin Creek Allotment, Tippett Allotment, Tippett Pass Allotment

Foraging Animals - Deer Winter, Wild Horses, Cattle-Sheep

No specific resource objectives were developed for this Management Area because no key areas have been established yet. Until now, there has been no need to establish key areas here since little or no use has been made in this area. Implementation of planned actions will be necessary in this area to help meet objectives in other Management Areas. As implementation occurs and use patterns develop, key areas and specific resource objectives will be established.

8. Management Area - Black Hills - Chin Creek Allotment

Foraging Animals - Pronghorn Antelope Yearlong, Wild Horses

No specific resource objectives were developed for this Management Area because no key areas have been established yet. Until now, there has been no need for key areas here. Implementation of planned actions will be necessary in this area to help meet objectives in other Management Areas. As implementation occurs and use patterns develop, key areas and specific resource objectives will be established.

9. Management Area - East Antelope Valley - Chin Creek Allotment

Foraging Animals - Antelope Yearlong, Cattle, Wild Horses

<u>Location</u>	<u>Ecological Site</u>		<u>Studies Number</u>	
T. 26 N., R. 68 E., sec. 26, SW ⁴	D28A021N		CCR 2	
	<u>Present Situation</u>		<u>Management Objective</u>	
<u>Key Species</u>	<u>Density</u> (Plants/ac.)	<u>Production*</u> (Lbs./ac.)	<u>Density</u>	<u>Production</u>
Indian ricegrass	11,000	103	Maintain	Maintain
Forbs	-	(Trace)	Increase	10
Winterfat	15,000	68	Maintain or Increase	100

<u>Ecological Status</u> (% of Climax or PNC**)	<u>Late Seral Stage</u> (71% of PNC)	<u>Late Seral Stage</u> (70-75% of PNC)
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<u>Relative Composition</u> (all species)	<u>Grasses - 39%</u>	<u>35-45%</u>
	<u>Forbs - -</u>	<u>0-10%</u>
	<u>Shrubs - 61%</u>	<u>55-70%</u>

* Increase total production from 250 lbs/ac to 450 lbs/ac.

** PNC = Potential Natural Community.

10. Management Area - Tungstonia Seeding - Tippet Allotment

Foraging Animals - Deer Winter, Cattle, Sheep

<u>Location</u>	<u>Ecological Site</u>	<u>Studies Number</u>
T. 20 N., R. 69 E., sec. 33	Not Applicable	TAR 13

<u>Key Species</u>	<u>Present Situation</u>		<u>Management Objective</u>	
	<u>Density</u> (Plants/ac.)	<u>Production*</u> (Lbs./ac.)	<u>Density</u>	<u>Production</u>
Crested Wheatgrass	22,000	140	Maintain	Maintain
Native Grasses	22,000	114	Maintain or Increase	140
Forbs	-	12	Increase	15
Antelope Bitterbrush	-	14	Maintain or Increase	40
Trees (P/J)	267	-	Maintain below 400	-

Ecological Status - Not Applicable -
(% of Climax or PNC**)

Relative Composition (all species)	Grasses - 82%	75-85%
	Forbs - 5%	5-10%
	Shrubs - 13%	10-20%

* Increase total production from 300 lbs/ac to 400 lbs/ac.

** PNC = Potential Natural Community.

11. Management Area - Multiple Use Chainings - Tippett Allotment

Foraging Animals - Deer Yearlong, Cattle, Sheep

<u>Location</u>	<u>Ecological Site</u>	<u>Studies Number</u>
T. 22 N., R. 68 E., sec. 25, NE ⁴ (Moffat Chaining)	Not Applicable	TAR 9

<u>Key Species</u>	<u>Present Situation</u>		<u>Management Objective</u>	
	<u>Density</u> (Plants/ac.)	<u>Production</u> (Lbs./ac.)	<u>Density</u>	<u>Production</u>
Crested Wheatgrass	23,000	194	Maintain	Maintain
Native Grasses	5,000	47	Increase	60
Forbs	-	(Trace)	Increase	10
Trees (P/J)	166	-	Maintain below 400	-

Ecological Status - Not Applicable -
(% of Climax or PNC**)

Relative Composition	Grasses - 65%	60-70%
(all species)	Forbs - -	0-5%
	Shrubs - 35%	30-40%

** PNC = Potential Natural Community.

<u>Location</u>	<u>Ecological Site</u>	<u>Studies Number</u>
T. 22 N., R. 69 E., sec. 27, SE ⁴ (Blind Spring Chaining)	Not Applicable	TAR 10

<u>Key Species</u>	<u>Present Situation</u>		<u>Management Objective</u>	
	<u>Density</u> (Plants/ac.)	<u>Production</u> (Lbs./ac.)	<u>Density</u>	<u>Production</u>
Crested Wheatgrass	110,000	368	Maintain or Decrease	Maintain Above 250
Native Grasses	128,000	25	Maintain or Decrease	40
Forbs	-	(Trace)	Increase	10
Antelope Bitterbrush	167	-	Increase	25
Trees (P/J)	223	-	Maintain Under 400	-

Ecological Status - Not Applicable -
(% of Climax or PNC**)

Relative Composition (all species)	Grasses - 98%	80-90%
	Forbs - -	0-5%
	Shrubs - 2%	5-15%

** PNC = Potential Natural Community.

<u>Location</u>	<u>Ecological Site</u>		<u>Studies Number</u>	
T. 24 N., R. 65 E., sec. 27, SW ⁴ (Calcutta Burn)	D28B037N		TAR 2	
	<u>Present Situation</u>		<u>Management Objective</u>	
<u>Key Species</u>	<u>Density</u> (Plants/ac.)	<u>Production</u> (Lbs./ac.)	<u>Density</u>	<u>Production</u>
Bluebunch Wheatgrass	16,000	50	Maintain	60
Forbs	70,400	84	Maintain	Maintain Above 55
Low Sagebrush	71,000	331	Maintain	Maintain Above 150

Ecological Status (% of Climax or PNC**)	Late Seral Stage (57% of PNC)	Late Seral Stage (50-75% of PNC)
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Relative Composition (all species)	Grasses - 20%	20-35%
	Forbs - 17%	10-20%
	Shrubs - 63%	50-65%

** PNC = Potential Natural Community.

13. Management Area - East Antelope Bench - Tippet Allotment

Foraging Animals - Antelope Key Winter, Sheep, Cattle

<u>Location</u>	<u>Ecological Site</u>		<u>Studies Number</u>	
T. 22 N., R. 67 E., sec. 11, SE ⁴	D28A012N		TAR 6	
	<u>Present Situation</u>		<u>Management Objective</u>	
<u>Key Species</u>	<u>Density</u> (Plants/ac.)	<u>Production*</u> (Lbs./ac.)	<u>Density</u>	<u>Production</u>
Indian Ricegrass	10,000	47	Increase	60
Shadscale	1,000	4	Increase	50

Ecological Status (% of Climax or PNC**)	Early Seral Stage (23% of PNC)	Mid Seral Stage (26-50% of PNC)
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Relative Composition (all species)	Grasses - 33%	25-35%
	Forbs - -	0-5%
	Shrubs - 67%	60-70%

* Increase total production from 150 lbs/ac to 250 lbs/ac.

** PNC = Potential Natural Community.

<u>Location</u>	<u>Ecological Site</u>		<u>Studies Number</u>	
T. 22 N., R. 67 E.	D28A012N		TAW 2	
	<u>Present Situation</u>		<u>Management Objective</u>	
<u>Key Species</u>	<u>Density</u> (Plants/ac.)	<u>Production</u> (Lbs./ac.)	<u>Density</u>	<u>Production</u>
Indian Ricegrass	6,000	14	Increase	50
Forbs	-	-	Increase	5
Shadscale	1,000	29	Increase	60

Ecological Status (% of Climax or PNC**)	Early Seral Stage (24% of PNC)	Mid Seral Stage (26-50% of PNC)
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Relative Composition (all species)	Grasses - 18%	20-30%
	Forbs - -	0-5%
	Shrubs - 82%	65-80%

** PNC = Potential Natural Community.

<u>Location</u>	<u>Ecological Site</u>		<u>Studies Number</u>	
T. 24 N., R. 68 E., sec. 30, SE ⁴	D28A074N		TAR 5	
	<u>Present Situation</u>		<u>Management Objective</u>	
<u>Key Species</u>	<u>Density</u> (Plants/ac.)	<u>Production</u> (Lbs./ac.)	<u>Density</u>	<u>Production</u>
Indian Ricegrass	11,000	178	Maintain	Maintain Above 125
Shadscale	400	1	Increase	10
Little Rabbitbrush	6,000	61	Maintain	Maintain

Ecological Status (% of Climax or PNC**)	Early Seral Stage (20% of PNC)	Mid Seral Stage (26-50% of PNC)
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Relative Composition (all species)	Grasses - 74%	30-50%
	Forbs - -	0-5%
	Shrubs - 26%	45-55%

** PNC = Potential Natural Community.

14. Management Area - Antelope Valley - Tippet Allotment

Foraging Animals - Antelope Yearlong, Cattle, Sheep

<u>Location</u>	<u>Ecological Site</u>		<u>Studies Number</u>	
T. 23 N., R. 68 E., sec. 2, NW ⁴	D28B071N		TAR 3	
	<u>Present Situation</u>		<u>Management Objective</u>	
<u>Key Species</u>	<u>Density</u> (Plants/ac.)	<u>Production</u> (Lbs./ac.)	<u>Density</u>	<u>Production</u>
Western Wheatgrass	130,000	134	Maintain	Maintain Above 100
Forbs	5,000	21	Increase	25
Winterfat	-	-	Increase	10
Shadscale	-	(Trace)	Increase	10

<u>Ecological Status</u> (% of Climax or PNC**)	<u>Early Late Seral</u> (53% of PNC)		<u>Late Seral Stage</u> (51-70% of PNC)	

<u>Relative Composition</u> (all species)	<u>Grasses - 65%</u>		55-65%	
	<u>Forbs - 25%</u>		15-20%	
	<u>Shrubs - 10%</u>		15-30%	

** PNC = Potential Natural Community.

<u>Location</u>	<u>Ecological Site</u>		<u>Studies Number</u>	
T. 23 N., R. 68 E., sec. 1, NW ⁴	D28B109N		TAR 4	
	<u>Present Situation</u>		<u>Management Objective</u>	
<u>Key Species</u>	<u>Density</u> (Plants/ac.)	<u>Production*</u> (Lbs./ac.)	<u>Density</u>	<u>Production</u>
Indian Ricegrass	7,000	23	Increase	50
Winterfat	12,000	255	Maintain	Maintain Above 245

<u>Ecological Status</u> (% of Climax or PNC**)	<u>Early Climax</u> (78% of PNC)	<u>Climax</u> (76-100% of PNC)

<u>Relative Composition</u> (all species)	<u>Grasses -</u>	<u>Forbs -</u>	<u>Shrubs -</u>	<u>5-15%</u>	<u>0-5%</u>	<u>80-90%</u>
	8%	-	92%			

* Increase total production from 250 lbs/ac to 350 lbs/ac.

** PNC = Potential Natural Community.

<u>Location</u>	<u>Ecological Site</u>		<u>Studies Number</u>	
T. 22 N., R. 68 E., sec. 21, SW ⁴	D28B109N		TAR 7	
	<u>Present Situation</u>		<u>Management Objective</u>	
<u>Key Species*</u>	<u>Density</u> (Plants/ac.)	<u>Production</u> (Lbs./ac.)	<u>Density</u>	<u>Production</u>
Winterfat	300,000	415	Maintain or Decrease	Maintain Above 245

<u>Ecological Status</u> (% of Climax or PNC**)	<u>Late Seral</u> (70% of PNC)	<u>Late Seral to Climax</u> (70-100% of PNC)

<u>Relative Composition</u> (all species)	<u>Grasses -</u>	<u>Forbs -</u>	<u>Shrubs -</u>	<u>0-10%</u>	<u>0-5%</u>	<u>85-100%</u>
	-	-	100%			

* An increase in species diversity is desirable but unpredictable.

** PNC = Potential Natural Community.

*** Although these Key areas are in MLRA 28A, there is no appropriate site description developed, therefore, descriptions from MLRA 28B are used for now.

15. Management Area - East Antelope Valley South - Tippet Allotment
Foraging Animals - Antelope Yearlong, Cattle, Sheep

<u>Location</u>	<u>Ecological Site</u>		<u>Studies Number</u>	
T. 23 N., R. 68 E., sec. 34	D28A021N		TAR 8	
	<u>Present Situation</u>		<u>Management Objective</u>	
<u>Key Species</u>	<u>Density</u> (Plants/ac.)	<u>Production</u> (Lbs./ac.)	<u>Density</u>	<u>Production</u>
Indian Ricegrass	42,000	123	Maintain	150
Winterfat	89,000	323	Maintain	Maintain Above 200
Bud Sagebrush	1,600	23	Increase	30

<u>Ecological Status</u> (% of Climax or PNC**)	Late Seral (61% of PNC)		Late Seral (60-75% of PNC)	

<u>Relative Composition</u> (all species)	Grasses - 26%		25-30%	
	Forbs - -		0-5%	
	Shrubs - 74%		70-75%	

** PNC = Potential Natural Community.

<u>Location</u>	<u>Ecological Site</u>		<u>Studies Number</u>	
T. 22 N., R. 69 E., sec. 13, NWNE	D28A013N		TAW 1	
	<u>Present Situation</u>		<u>Management Objective</u>	
<u>Key Species</u>	<u>Density</u> (Plants/ac.)	<u>Production*</u> (Lbs./ac.)	<u>Density</u>	<u>Production</u>
Indian Ricegrass	581	5	Increase	15
Forbs	2,300	(Trace)	Increase	5
Black Sagebrush	2,000	138	Maintain	160
Winterfat	3,400	1	Maintain or Increase	10

<u>Ecological Status</u> (% of Climax or PNC**)	Mid Seral (46% of PNC)		Mid to Late Seral (45-75% of PNC)	

<u>Relative Composition</u> (all species)	Grasses - 4%		5-10%	
	Forbs - -		0-5%	
	Shrubs - 96%		85-95%	

* Increase total production from 200 lbs/ac to 400 lbs/ac.

** PNC = Potential Natural Community.

16. Management Area - Spring Gulch North/Stone House - Tippet Allotment

Foraging Animals - Deer Winter, Sage Grouse, Cattle-Sheep, Wild Horses

No specific resource objectives were developed for this Management Area because no key areas have been established yet. Until now, there has been no need to establish key areas here since little or no use has been made in this area. Implementation of planned actions will be necessary in this area to help meet objectives in other Management Areas. As implementation occurs and use patterns develop, key areas and specific resource objectives will be established.

17. Management Area - Water Canyon - Becky Springs Allotment

Foraging Animals - Antelope Yearlong, Sheep, Cattle, Wild Horses

<u>Location</u>	<u>Ecological Site</u>		<u>Studies Number</u>	
T. 25 N., R. 65 E., sec. 22, SW ⁴	D28B011N		BSR 1	
	<u>Present Situation</u>		<u>Management Objective</u>	
	<u>Density</u>	<u>Production*</u>	<u>Density</u>	<u>Production</u>
<u>Key Species</u>	(Plants/ac.)	(Lbs./ac.)		
Indian Ricegrass*	1,700	2	Increase	10
Forbs	580	7	Increase	14
Bud Sagebrush	67	(Trace)	Maintain	5
Winterfat	334	82	Maintain	Maintain Above 70

<u>Ecological Status</u>	<u>Late Mid Seral</u>		<u>Mid to Late Seral</u>	
(% of Climax or PNC**)	(50% of PNC)		(50-65% of PNC)	

<u>Relative Composition</u>	<u>Grasses - 33%</u>		<u>30-40%</u>	
(all species)	<u>Forbs - 2%</u>		<u>2-5%</u>	
	<u>Shrubs - 65%</u>		<u>60-70%</u>	

* Increase total production from 400 lbs/ac to 550 lbs/ac.

** PNC = Potential Natural Community.

18. Management Area - Lookout Springs - Becky Springs Allotment

Foraging Animals - Antelope Yearlong, Sheep, Wild Horses

<u>Location</u>	<u>Ecological Site</u>		<u>Studies Number</u>	
T. 26 N., R. 66 E., sec. 25, SW ⁴	D28B011N		BSR 2	
	<u>Present Situation</u>		<u>Management Objective</u>	
<u>Key Species</u>	<u>Density</u> (Plants/ac.)	<u>Production*</u> (Lbs./ac.)	<u>Density</u>	<u>Production</u>
Squirreltail	3,000	29	Maintain	Maintain
Forbs	-	3	Increase	5
Black Sagebrush	4,000	358	Maintain	Maintain

<u>Ecological Status</u> (% of Climax or PNC**)	<u>Mid Seral Stage</u> (43% of PNC)		<u>Mid to Late Seral</u> (45-60% of PNC)	

<u>Relative Composition</u> (all species)	Grasses - 8%		10-15%	
	Forbs - 1%		1-5%	
	Shrubs - 91%		80-90%	

** PNC = Potential Natural Community.

<u>Location</u>	<u>Ecological Site</u>		<u>Studies Number</u>	
T. 26 N., R. 66 E., sec. 25, SW ⁴	D28B011N		BSR 3	
	<u>Present Situation</u>		<u>Management Objective</u>	
<u>Key Species</u>	<u>Density</u> (Plants/ac.)	<u>Production*</u> (Lbs./ac.)	<u>Density</u>	<u>Production</u>
Squirreltail	5,000	6	Increase	10
Forbs	1,200	4	Increase	8
Black Sagebrush	3,000	112	Increase	120

<u>Ecological Status</u> (% of Climax or PNC**)	<u>Mid Seral Stage</u> (40% of PNC)		<u>Mid to Late Seral</u> (40-60% of PNC)	

<u>Relative Composition</u> (all species)	Grasses - 2%		5-20%	
	Forbs - 3%		3-10%	
	Shrubs - 95%		70-90%	

* Increase total production.

** PNC = Potential Natural Community.

19. Management Area - Old Highway Bench - Becky Springs Allotment

Foraging Animals - Pronghorn Antelope Yearlong, Sheep-Cattle, Wild Horses

No specific resource objectives were developed for this Management Area because no key areas have been established yet. Until now, there has been no need to establish key areas here since little or no use has been made in this area. Implementation of planned actions will be necessary in this area to help meet objectives in other Management Areas. As implementation occurs and use patterns develop, key areas and specific resource objectives will be established.

20. Management Area - Becky Peak - Sampson Creek Allotment

Foraging Animals - Deer Summer, Sheep, Wild Horses

<u>Location</u>	<u>Ecological Site</u>		<u>Studies Number</u>	
T. 24 N., R. 65 E., sec. 2, NE ⁴	028B037N		SCR 1	
<u>Key Species</u>	<u>Present Situation</u>		<u>Management Objective</u>	
	<u>Density</u> (Plants/ac.)	<u>Production</u> (Lbs./ac.)	<u>Density</u>	<u>Production</u>
Bluebunch Wheatgrass	1,000	15	Increase	30
Perennial Forbs*	42,000	100	Maintain	75
Low Sagebrush	14,000	500	Maintain	200

<u>Ecological Status</u> (% of Climax or PNC**)	<u>Early-Late Seral</u> (57% of PNC)		<u>Late Seral</u> (51-75% of PNC)	

<u>Relative Composition</u> (all species)	<u>Grasses</u> - 28%		25-40%	
	<u>Forbs</u> - 12%		10-15%	
	<u>Shrubs</u> - 60%		50-60%	

* Due to climatic conditions, total forb production exceeded potential. The objective is to at least maintain potential.

** PNC = Potential Natural Community.

21. Management Area - Black Sage Foothills - Sampson Creek Allotment
Foraging Animals - Antelope Yearlong, Sheep, Wild Horses, Cattle

<u>Location</u>	<u>Ecological Site</u>		<u>Studies Number</u>	
T. 24 N., R. 66 E., sec. 30	D28B011N		SCR 2	
	<u>Present Situation</u>		<u>Management Objective</u>	
<u>Key Species</u>	<u>Density</u> (Plants/ac.)	<u>Production*</u> (Lbs./ac.)	<u>Density</u>	<u>Production</u>
Squirreltail	6,000	24	Maintain	Maintain
Black Sagebrush	7,000	339	Maintain	Maintain

<u>Ecological Status</u> (% of Climax or PNC**)	<u>Mid Seral Stage</u> (40% of PNC)	<u>Mid to Late Seral</u> (40-60% of PNC)
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<u>Relative Composition</u> (all species)	Grasses - 10%	10-20%
	Forbs - -	0-5%
	Shrubs - 90%	75-90%

* Increase total production.

** PNC = Potential Natural Community.

22. Management Area - Spring Valley Bottom - Sampson Creek Allotment
Foraging Animals - Antelope Yearlong, Sheep, Cattle, Wild Horses

<u>Location</u>	<u>Ecological Site</u>		<u>Studies Number</u>	
T. 24 N., R. 66 E., sec. 32, NE ⁴	D28B013N		SCR 3	
	<u>Present Situation</u>		<u>Management Objective</u>	
<u>Key Species</u>	<u>Density</u> (Plants/ac.)	<u>Production</u> (Lbs./ac.)	<u>Density</u>	<u>Production</u>
Indian Ricegrass	42,000	15	Maintain	30
Forbs	-	-	Increase	5
Winterfat	233,000	296	Maintain	300

<u>Ecological Status</u> (% of Climax or PNC**)	<u>Late Seral</u> (55% of PNC)	<u>Late Seral</u> (51-75% of PNC)
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<u>Relative Composition</u> (all species)	Grasses - 42%	30-45%
	Forbs - -	0-5%
	Shrubs - 58%	55-65%

** PNC = Potential Natural Community.

24. Management Area - South Indian Reservation - Tippet Allotment

Foraging Animals - Deer Summer, Cattle

No specific resource objectives were developed for this Management Area because no key areas have been established yet. Until now, there has been no need to establish key areas here since little or no use has been made in this area. Implementation of planned actions will be necessary in this area to help meet objectives in other Management Areas. As implementation occurs and use patterns develop, key areas and specific resource objectives will be established.

25. Management Area - Goshute Mountain Allotment

Foraging Animals - Antelope Yearlong, Sheep, Horses

<u>Location</u>	<u>Ecological Site</u>		<u>Studies Number</u>	
T. 26 N., R. 69 E., sec. 35, SE ⁴	D28A013N		GMR 1	
	<u>Present Situation</u>		<u>Management Objective</u>	
<u>Key Species</u>	<u>Density</u> (Plants/ac.)	<u>Production</u> (Lbs./ac.)	<u>Density</u>	<u>Production</u>
Indian Ricegrass	-	3	Increase	5
Shadscale	1,000	6	Increase	20
Black Sagebrush	15,000	314	Maintain	Maintain Above 200

<u>Ecological Status</u> (% of Climax or PNC**)	Mid Seral Stage (40% of PNC)		Mid to Late Seral (40-65% of PNC)	

<u>Relative Composition</u> (all species)	Grasses -	4%	5-15%	
	Forbs -	-	0-5%	
	Shrubs -	96%	80-95%	

** PNC = Potential Natural Community.

26. Management Area - Deep Creek Allotment

Foraging Animals - Antelope Yearlong, Cattle, Wild Horses

<u>Location</u>	<u>Ecological Site</u>		<u>Studies Number</u>	
T. 26 N., R. 70 E., sec. 33, SW ⁴	D28A012N		DCR 1	
	<u>Present Situation</u>		<u>Management Objective</u>	
<u>Key Species</u>	<u>Density</u> (Plants/ac.)	<u>Production</u> (Lbs./ac.)	<u>Density</u>	<u>Production</u>
Indian Ricegrass	16,000	13	Increase	25
Forbs	-	12	Increase	15
Bud Sagebrush	-	2	Increase	5
Shadscale	867	29	Increase	50
Winterfat	-	7	Increase	10

<u>Ecological Status</u> (% of Climax or PNC**)	<u>Early Seral Stage</u> (25% of PNC)	<u>Mid Seral Stage</u> (26-50% of PNC)
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<u>Relative Composition</u> (all species)	Grasses - 26%	20-30%
	Forbs - 4%	5-10%
	Shrubs - 70%	65-75%

** PNC = Potential Natural Community.

27. Management Area - East Chin Creek - Chin Creek Allotment

Foraging Animals - Pronghorn Antelope Winter/Yearlong,
Wild Horses, Cattle-Sheep

No specific resource objectives were developed for this Management Area because no key areas have been established yet. Until now, there has been no need to establish key areas here since little or no use has been made in this area. Implementation of planned actions will be necessary in this area to help meet objectives in other Management Areas. As implementation occurs and use patterns develop, key areas and specific resource objectives will be established.

28. Management Area - Becky Springs Area - Becky Springs Allotment

Foraging Animals - Pronghorn Antelope - Winter/Yearlong,
Wild Horses, Cattle/Sheep

No specific resource objectives were developed for this Management Area because no key areas have been established yet. Until now, there has been no need to establish key areas here since little or no use has been made in this area. Implementation of planned actions will be necessary in this area to help meet objectives in other Management Areas. As implementation occurs and use patterns develop, key areas and specific resource objectives will be established.

29. Management Area - Spring Gulch South - Tippet Allotment

Foraging Animals - Pronghorn Antelope - Yearlong, Wild Horses

No specific resource objectives were developed for this Management Area because no key areas have been established yet. Until now, there has been no need to establish key areas here since little or no use has been made in this area. Implementation of planned actions will be necessary in this area to help meet objectives in other Management Areas. As implementation occurs and use patterns develop, key areas and specific resource objectives will be established.

Maintain 21% shrub cover not to exceed a maximum height of 24 inches for sage grouse strutting and nesting areas.

Because the soil survey and ecological site correlation efforts have just begun in the plan area, some of the ecological site descriptions used to formulate specific objectives may eventually be revised thus requiring minor adjustments in the objectives. This is further complicated by the fact that two major land Resource Areas (28A and 28B) join within the planning area so that some key areas now identified as 28B sites may be 28A sites and vice versa.

Allotment specific, wild horse specific and wildlife specific management objectives are listed in detail in each individual foraging animal plan (see AMP, WHMP, HMP).

APPENDIX III

Environmental Analysis

A mid-level environmental analysis (EA-NV-040-4-40) was prepared for the Antelope Range Herd Management Area Plan, the Antelope Range Habitat Management Plan (wildlife), and Allotment Management Plans for the Chin Creek, Tippet, Becky Springs, Goshute Mountain, Deep Creek, and Sampson Creek grazing allotments. This environmental analysis is on file at the Ely District Office. In addition, site specific environmental analyses will be prepared prior to initiating any actions to be accomplished as a result of this HMAP.

APPENDIX IV

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