7/23/90

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

CARSON CITY DISTRICT OFFICE

1535 Hot Springs Rd., Ste. 300
Carson City,NV 89706-0638

Rec'd 7/25/90

TAKE PRIDE IN AMERICA

IN REPLY REFER TO:

4130 CF
(NV-03580)

Ms. Dawn Lappin
Wild Horse Organized Assistance
P.O. Box 555
Reno, NV 89504

JUL 23 1990

Dear Ms. Lappin:

Enclosed for your review is a copy of the Sunrise Allotment Evaluation. All comments should be addressed to this office prior to August 20, 1990.

Sincerely yours,

J. Matthiessen

John Matthiessen
Area Manager
Walker Resource Area

1 Enclosure:
1. Sunrise Allotment Evaluation

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Carson City District Office
1535 Hot Springs Road, Suite 300
Carson City, Nevada 89706-0638

SUNRISE ALLOTMENT EVALUATION

July 17, 1990

Table of Contents

[1]Larger Scale Maps are available for review at the Carson City District Office.

SUNRISE ALLOTMENT EVALUATION

I. Introduction

A. Allotment Name and Number: Sunrise (03590)

B. Permittees: Joe Ricci and F.M. Fulstone, Inc.

C. Evaluation Period: 1984 to 1989 (period after the Reno Range Program Summary).

D. Selective Management Category: I

II. Initial Stocking Level

A. Livestock Use

1. Preference

Permittee	Preference (AUMs) Active	Susp.	Total	Class of Livestock	Period-of-Use	% Federal Range Use
F.M. Fulstone,Inc.	750	0	750	Cattle	06/01 -09/30	100
Joe Ricci	342	0	342	Cattle	05/01 -07/31	100

2. Other Information

The Walker Resource Area is planning to develop an allotment management plan (AMP) with F.M. Fulstone, Inc. This AMP will tentatively include six allotments, including Sunrise. Management of the Sunrise Allotment will be coordinated with Mr. Ricci.

B. Wild Horse and Burro Use

1. Appropriate Management Levels (AML)

The Walker Resource Management Plan (RMP) states that we will initially manage the horse population at current estimated population levels. Horse numbers in the Pine Nut Herd Management Area (HMA) were estimated at 387 head in 1986 (year that the RMP Record of Decision was issued). Prorated to the acreage of Sunrise Allotment (5% of HMA), the initial management level is 20 head (20 horses X 12 months = 240 AUM's). It must be realized that this is an estimate and that wild horses are free to enter and leave the allotment.

2. Herd Management Areas in Allotment

The Sunrise Allotment is located entirely in the northern portion of the Pine Nut Herd Management Area, which has been designated for continued management.

The southern portion (which lies immediately south of Sunrise Allotment) has been planned for total horse removal in the long term[2].

C. Wildlife Use

1. Mule Deer

a. Existing Numbers

Existing demand of mule deer from the Reno RPS (issued May 30, 1984) is 427 AUM's.

b. Key and Critical Areas

Sixteen square miles of key deer summer range exists along the full length of the allotment above 6500 feet elevation (refer to allotment map). Three square miles (1,920 acres) of winter range exists in the vicinity of Sunrise Chaining. In the Reno RPS, 15 riparian areas were identified for protection. Field investigation revealed that 12 of these areas were on public land and 3 were on private land.

2. Sage Grouse

Sage grouse use the southern portion of the allotment, however key use areas and strutting grounds have not been identified.

III. Allotment Profile

A. Description

Sunrise Allotment is located approximately 10 miles southeast of Carson City, Nevada, in the Pine Nut Mountains. The area is mountainous, characterized by many dense stands of pinyon pine (Pinus monophylla) and Utah juniper (Juniperus osteosperma). Chainings and seedings are found in Illinois Canyon and Sunrise Basin. Currently, 33% of the allotment is fenced (refer to allotment map). Major removals of excess wild horse have occurred in the Pine Nut Herd Use Area in 1984, 1985, and 1986.

B. Acreage

Sunrise Allotment contains 17,804 acres of public land and approximately 1015 acres of deeded land. None of this deeded land is owned by either of the two permittees.

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[2]Although the horse removal from the southern portion of the Pine Nut Herd Area may not directly effect the Sunrise Allotment, the reduction of population pressures from the adjacent allotments may indirectly effect the horse populations in Sunrise.

C. Allotment Specific Objectives

1. Land Use Plan Objectives

All citations below are from the Reno Planning Area Record of Decision (Reno ROD), issued in 1982, or Walker Management Decision Summary, issued in 1986.

a. Short Term

1) Bitterbrush will be used as a key species within mule deer habitat on all Category I allotments [Reno ROD, Decision #18].

2) Initially manage wild horses and burros in current herd areas at present estimated population levels. The entire population in the southern portion of the Pine Nut Herd Area has been identified for removal [Decision Summary, p.29, Decision 1].

3) Criteria which supported the "I" category for Sunrise Allotment constitute implied objectives. These criteria are shown below [Reno ROD, Decision #18].
   a) Present range or ecological condition is fair to poor; present range trend is downward.
   b) Present grazing management practices are inadequate to meet long-term resource objectives.
   c) Resource conflicts are evident.

b. Long Term

1) Manage wildlife habitat for a long term goal of providing forage for reasonable numbers of big game [Decision Summary, p.35, Decision 1].

2) Develop and implement AMPs on all Category I allotments [Decision Summary, p.10, Decision 2].

2. Range Program Summary (RPS)

The following objectives are from Table II in the Reno RPS, issued May 30, 1984.

a. Short Term

1) Provide for 1,092 AUM's of livestock use.

2) Protect and improve condition on riparian areas.

b. Long Term

1) Improve ecological condition on non-woodland sites and improve condition of seedings and chainings.

2) Provide 471 AUM's for mule deer to reach reasonable numbers.

3. Activity Plan Objectives

The only activity plan that applies to the Sunrise Allotment is the Pine Nut Habitat Management Plan, revised in 1987.

a. Short Term

1) Protect and improve riparian areas to a good or better condition class by May, 1989 (Pinenut HMP, Mgmt. Obj. #8).

2) Improve bitterbrush production and seedling establishment (Pinenut HMP, Mgmt. Obj. #3)

4. T & E Species

No threatened or endangered species have been identified in the Sunrise Allotment.

5. Quantifying Allotment Specific Objectives

In order to provide adequate forage for reasonable numbers of wildlife, improve bitterbrush production, improve ecological condition on non-woodland ecological sites, and improve the condition of seedings, the allowable use levels (AUL) shown below were used initially on upland sites during monitoring. These are based on yearlong levels published in the Nevada Rangeland Monitoring Handbook, issued in September 1984 (p. 23).

Key Species Common Name (Scientific Name)	Allowable Use (%)
Antelope bitterbrush (Purshia tridentata)	45
Bluegrass (Poa sp.)	55
Crested wheatgrass (Agropyron desertorum)	55
Needlegrass (Stipa sp.)	55
Indian ricegrass (Oryzopsis hymenoides)	55

In order to protect and improve riparian areas, prevent trampling damage and erosion (including head-cutting) on 12 key riparian sites. Promote aspen regeneration at Trail Spring, Upper Fenceline Spring, and Phenology Plot No. 7.

D. Key Species Identification

Refer to previous section for list of key plant species on upland sites. Key species on riparian sites may include any of the following:

Meadow Grasses and Grass-like - includes Nevada bluegrass (Poa nevadensis), sedges (Carex sp.), timothy (Phleum sp.), rushes (Juncus sp.), tufted hairgrass (Deschampsia caespitosa), etc.

Riparian Shrubs and Trees - includes wild rose (Rosa woodsii), willow (Salix sp.), quaking aspen (Populus tremuloides), etc.

IV. Management Evaluation

A. Purpose

Instruction Memorandum No. 86-706 requires the issuance of a decision or the entering into agreements within five years of the publication of the RPS. This evaluation of the Sunrise Allotment is done in preparation for the fifth-year decision or agreement.

The purpose of the allotment evaluation process is to determine if the current grazing practices are consistent with the obtainment of Land Use Plan (LUP) and allotment specific objectives for the Sunrise Allotment. If current grazing practices are not consistent with the obtainment of these objectives, then the appropriate changes in management needed to meet the objectives will be identified, and appropriate change in management implemented.

B. Summary of Study Data (refer to Evaluation Summary in Appendix)

1. Actual Use

The actual use for livestock shown in the table below is taken from actual use reports submitted by the permittees and billings (for nonuse). Mule deer and wild horse AUMs were calculated based on a yearlong season of use, then prorated for the Sunrise Allotment (Sunrise is only part of the total use areas for deer and horses)[3].

Year	Livestock Season-of-Use	Livestock (AUMs) Ricci	Fulstone	Deer (AUMs)	Horses (AUMs)	TOTAL (AUMs)
1980	Non-use	0	0	427	986	1,413
1981	Non-use	0	0	427	986	1,413
1982	05/10 - 07/15	98	0	427	986	1,511
1983	05/20 - 08/15	286	0	427	986	1,699
1984	05/30 - 07/28	152	0	427	986	1,565
1985	05/30 - 08/31	226	0	427	240	893
1986	05/21 - 07/31	119	0	458	276	853
1987	Non-use	0	0	458	276	734
1988	Non-use	0	0	458	276	734
1989	Non-use	0	0	458	276	734

[3]Mule deer numbers were provided by the Nevada Department of Wildlife and wild horse numbers are based on Bureau census records.

2. Precipitation

Based on the orographic lifting chart published in the Nevada Watershed Studies, the key area in Sunrise Allotment (located at 6300 ft. elevation) is expected to receive 12.5 inches precipitation annually. This factor was used to adjust precipitation data from the Carson City recording station, which is the closest to Sunrise Allotment. The adjusted data is displayed on the Evaluation Summary in the Appendices.

3. Utilization

a. Key Area

Key area utilization is shown on the Evaluation Summary in the appendices.

b. Use Pattern Mapping

The data below shows a breakdown by utilization classes derived from use pattern mapping.

Several years of allotment-wide utilization has been collected, however, data was mapped using different numbers of utilization classes. For the purpose of this evaluation, all data was converted to five utilization classes:

Slight	=	0 - 20% (midpoint = 10%)
Light	=	21 - 40% (midpoint = 30%)
Moderate	=	41 - 60% (midpoint = 50%)
Heavy	=	61 - 80% (midpoint = 70%)
Severe	=	81 -100% (midpoint = 90%)

Since both public land and unfenced deeded land was considered during use mapping, 18,820 acres was used for total allotment acreage. In the table below, % means the percentage of the allotment mapped in the specific utilization class.

	Utilization Classes						
Year	Slight Acres (%)	Light Acres (%)	Moderate Acres (%)	Heavy Acres (%)	Severe Acres (%)	% Heavy and Severe	Weighted Average
1980	10,010 (53)	0	3,043 (18)	4,475 (24)	932 (5)	29	36%
1985	3,297 (17)	0	12,844 (68)	2,679 (14)	0	14	46%
1986	13,194 (70)	0	4,585 (24)	1,041 (6)	0	6	23%
1987	18,535 (98)	188 (1)	97 (<1)	0	0	0	10%
1988	15,634 (83)	2,590 (14)	536 (3)	60 (<1)	0	<1	14%
1989[4]	18,048 (96)	392 (2)	312 (2)	68 (<1)	0	<1	11%

[4]Heavy use recorded in 1988 and 1989 was on meadows (unfenced private land) and crested wheatgrass (public land) in the vicinity of Chaining Springs Exclosure. No use was observed on bitterbrush.

4. Trend

One key area is located in the Sunrise Basin chaining and seeding. The table shown below summarizes the results of frequency data. Significance is based on analysis-of variance results as determined by the XMONITOR computer program (5% level of significance).

Key Species	Trend	Level of Significance
Crested wheatgrass	Upward	Non-significant
Bluegrass	Upward	Non-significant
Bitterbrush	Static	N/A

5. Range Survey Data

The range survey data, done in 1961 on the Sunrise Allotment, indicated that 1,093 AUM's were available for spring and summer cattle grazing. Interestingly, this is only 1 AUM more than the total preference for the allotment.

6. Ecological Status

A vegetative inventory was performed in the late 1970's. This inventory indicated that 15,366 acres (86%) of the allotment was in poor range condition. However, this was due to pinyon-juniper woodland being classed as a range site. Since the potential native plant community of a pinyon-juniper woodland would be significantly different from a range site, range condition (ecological status) would also be different. The ecological status of the key area has been identified as mid-seral. The key area ecological status will not be read until a significant change is indicated in key species trend.

7. Wildlife Habitat

Mule deer winter range is monitored using procedures found in BLM Manual 6630. PN-1, PN-2, PN-3 were established in Sunrise Chaining. Only PN-2 is still being recorded (refer to Trend section). Bitterbrush frequencies were too low to accurately monitor changes. No studies have been established on deer summer range.

8. Riparian Habitat

A total of 12 public land riparian habitats were identified as needing improvement through management or protection. Two of these habitats have been fenced. In 1987 and 1988, the remaining 10 habitats were evaluated (results are shown in Appendix II).

9. Wild Horse Habitat

Refer to actual use, utilization, and trend study sections.

V. Conclusions

The objectives outlined in Section III. C. are discussed below in relation to being met, not met, or not determined. Note that average use by livestock has been considerably lower than the total preference and no use has been made since 1986. Also, that allowable use levels shown in Section III. C. 5. (Quantifying Allotment Objectives) were used to determine if some of the allotment objectives were being met in the short term.

Sect. III C
Reference

1, a, 1) Bitterbrush will be used as a key species within mule deer habitat on all Category I allotments [Short Term].

Met. Bitterbrush has been used as a key species for monitoring.

1, a, 2) Initially manage wild horses and burros in current herd areas at present estimated population levels. The entire population in the southern portion of the Pine Nut Herd Area has been identified for removal [Short Term].

Met. Wild horses have been removed from the southern portion of the Pine Nut Herd Area.

1, b, 1) Manage wildlife habitat for a long term goal of providing forage for reasonable numbers of big game [Long Term].
and
2, b, 2) Provide 471 AUM's for wildlife to reach reasonable numbers [Long Term].

Not determined, but currently being met in the short term. Allotment utilization levels are below AULs and trend on key species are static to upward (refer to Utilization and Trend Sections, IV. B. 3. & 4.).

1, b, 2) All Category I allotments will have intensive grazing systems developed or existing systems revised [Long Term].

Not Met. The Walker Resource Area is currently working on an AMP that will include all of the allotments grazed by F.M. Fulstone, Inc.

2, a, 1) Provide for 1,092 AUM's of livestock use.

Not determined. Permittees have not run their full preference.

2, a, 2) Protect and improve condition on riparian areas.
and
3, a, 1) Protect and improve riparian areas to a good or better condition class by May, 1989 [Short Term].

Not Met. Objectives were being accomplished on all unprotected sites except two. On Trail Springs, the utilization was only 10% on aspen, however aspen regeneration was still not occurring. This would tend to indicate that the lack of

regeneration is due to natural limiting factors and not due to livestock and wild horse management. Head-cutting and trampling damage from wild horses was observed at Pinyon Spring.

1, a, 3) Criteria which supported the "I" category for Sunrise Allotment constitute implied objectives. These criteria are shown below.

a) Present range or ecological condition is fair to poor; present range trend is downward.

b) Present grazing management practices are inadequate to meet long-term resource objectives.

c) Resource conflicts are evident.

Due to riparian objectives not being met, the second and third criteria still apply to Sunrise Allotment. The large percentage of poor condition range was based on pinyon-juniper woodland being classified as range sites rather than woodland suitability groups during the condition inventory. The trend study shows a static to upward trend on key species.

2, b, 1) Improve ecological condition on non-woodland sites and improve condition of seedings and chainings [Long Term].

Not determined. It would require another condition class inventory to determine if this objective is being met in the long term. However, since allotment utilization levels are below AULs and trend on key species are static to upward, this objective is currently being met in the short term.

3, a, 2) Improve bitterbrush production and seedling establishment.

Not determined. Although utilization levels on bitterbrush are below AUL, monitoring indicates a static trend.

5 Quantifying Allotment Specific Objectives

In order to provide adequate forage for reasonable numbers of wildlife, improve bitterbrush production, improve ecological condition on non-woodland ecological sites, and improve the condition of seedings, the allowable use levels (AUL) shown below were used initially on upland sites during monitoring. These are based on yearlong levels published in the Nevada Rangeland Monitoring Handbook, issued in September 1984 (p. 23).

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Indian ricegrass (Oryzopsis hymenoides)	55

In order to protect and improve riparian areas, prevent trampling damage and erosion (including head-cutting) on 12 key riparian sites. Promote aspen regeneration at Trail Spring, Upper Fenceline Spring, and Phenology Plot No. 7.

The utilization of upland vegetation has been maintained below allowable use levels established for key species over the majority of the Sunrise Allotment (no use was observed on bitterbrush in 1988 and 1989). Of the 12 riparian sites identified as needing improvement through management or protection, 2 have been fenced. The remaining 10 sites that were evaluated in 1987 and 1988, showed that management objectives had been met on all but Trail Springs and Pinyon Spring (refer to answer to 3 a 1, above).

VI. Technical Recommendations

In order to meet the riparian objectives established for Sunrise Allotment, it will be necessary to fence Pinyon Spring. No recommendations are made for Trail Spring (refer to Conclusions, answer to objective 3 a 1). Once this is accomplished, the Sunrise Allotment will conform to the criteria for Category "M" allotments as shown below.

1. Present range ecological condition is satisfactory and/or improving.
2. Present management is satisfactory.
3. There are no or limited land use conflicts.

Therefore, the authors recommend the following:

A. Fence Pinyon Spring. This should be accomplished within two years based on budget and work-force constraints.

B. Once the above has been accomplished, Sunrise should be classified as an "M" allotment subject to the conditions listed below.

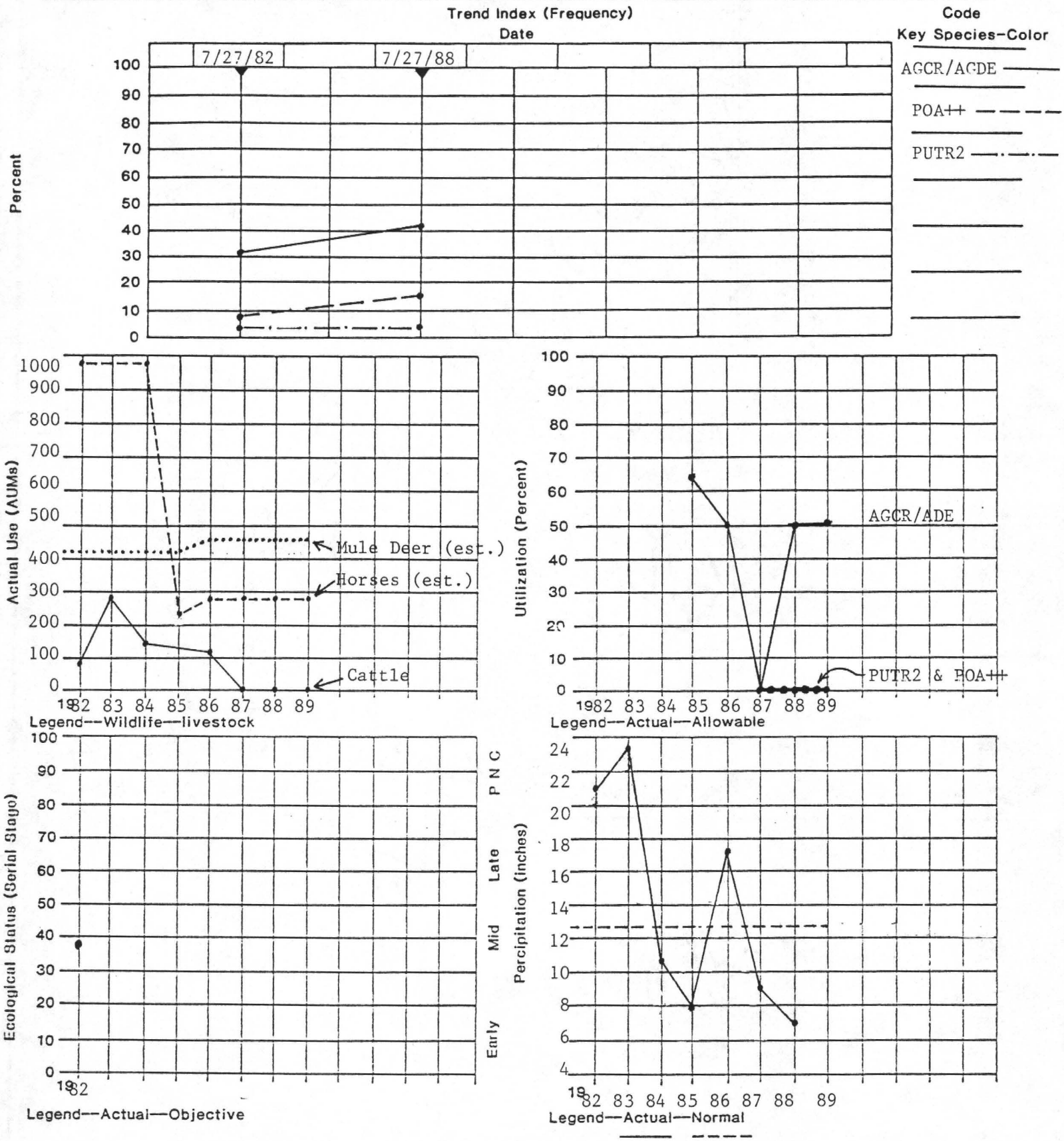
1. Utilization mapping and riparian area monitoring should continue to determine impacts of livestock grazing and the increasing wild horse population.
2. An allotment analysis will be done if/when monitoring shows there are resource conflicts occurring.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
KEY MANAGEMENT AREA
EVALUATION SUMMARY

District	
Carson City	
Planning Area	**Date**
Walker R. A.	02/05/90

Allotment Sunrise

Key Management Area W007



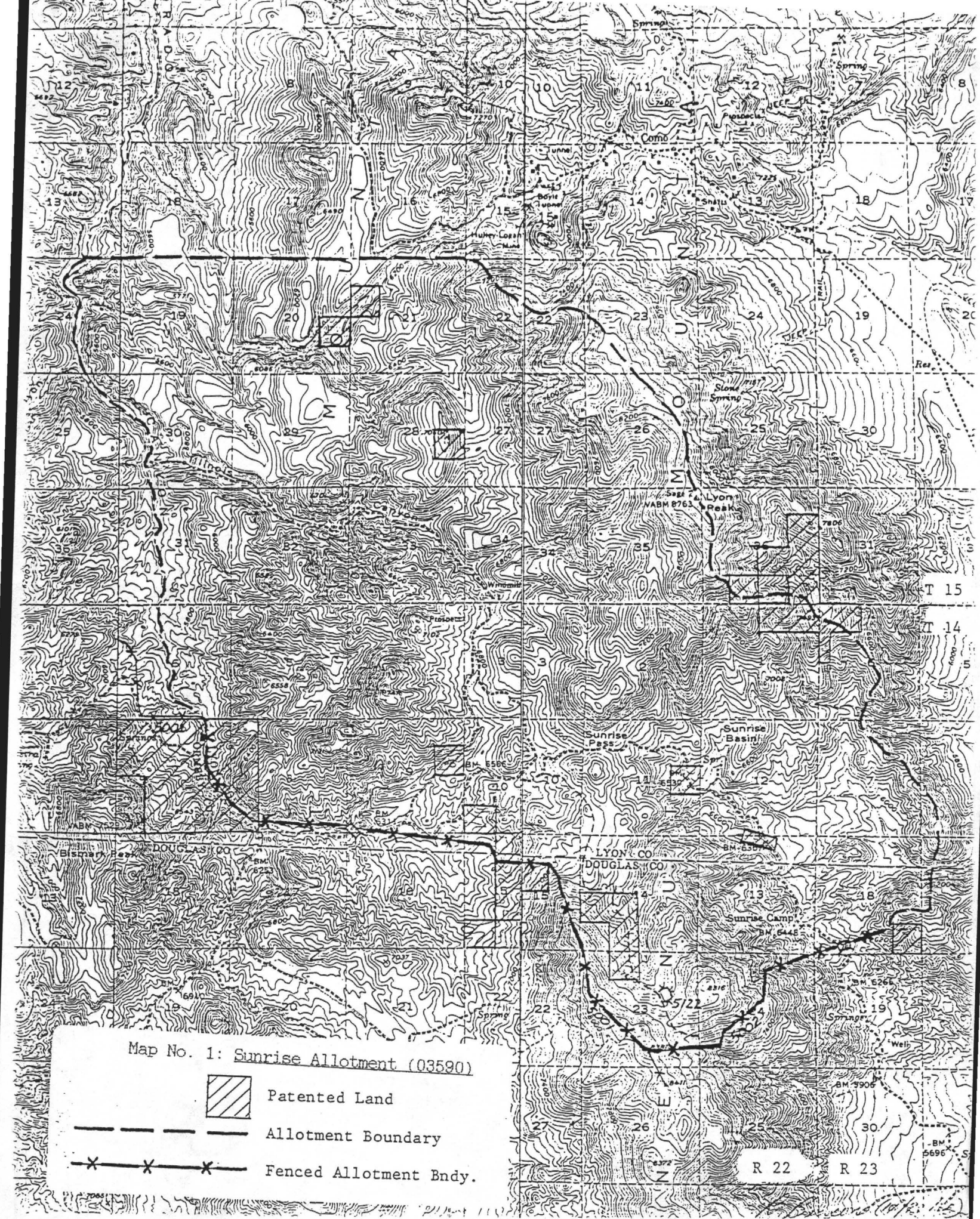
APPENDIX II
Riparian Evaluation Results

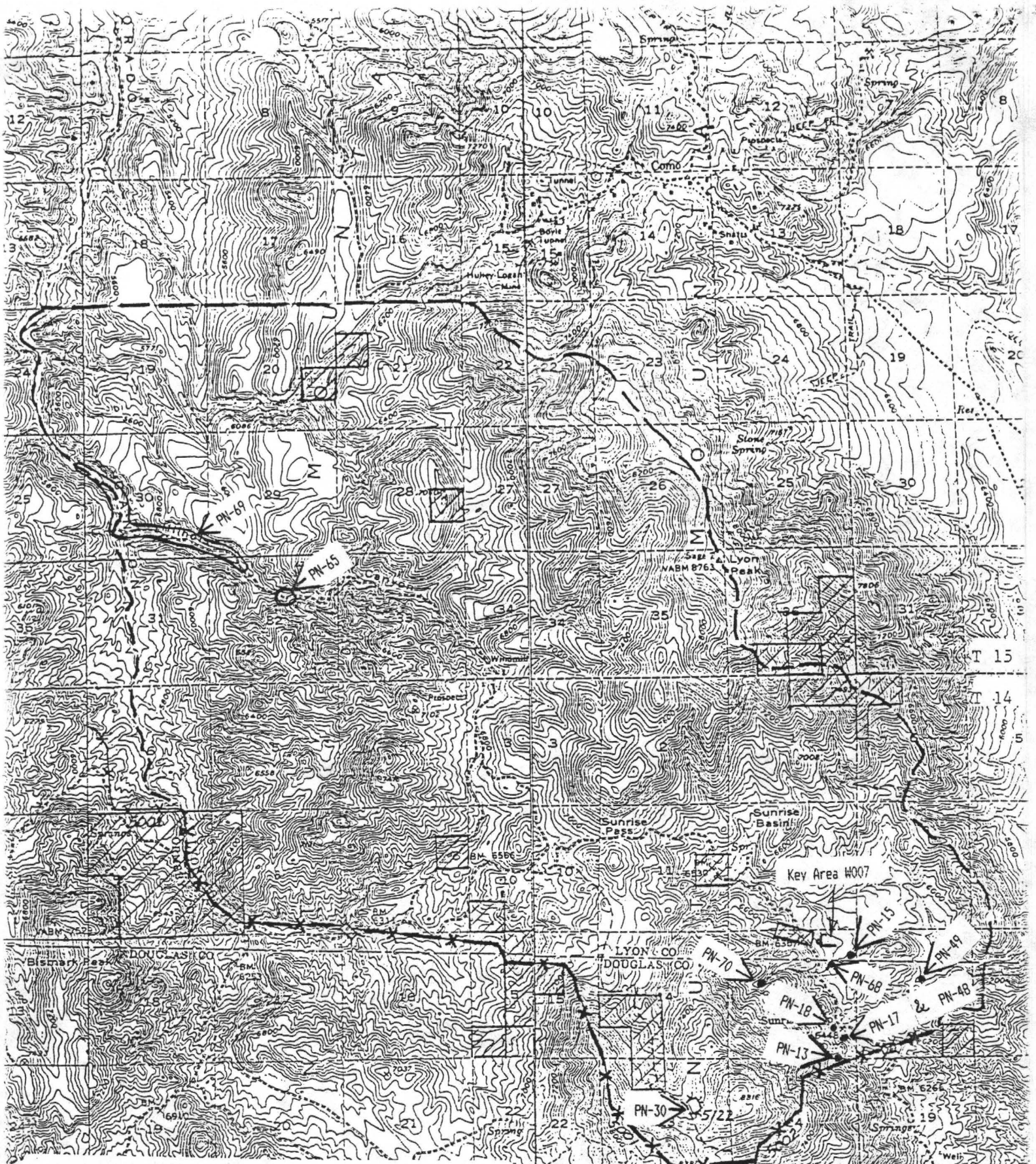
Site Number	Site Name	Key Species or Vegetation Class [1]	Objectives Met (Yes/No) [2]	Rationale
-----	Powerline Spring	N/A	Yes	This site was fenced in 1978.
PN-13	Upper Fenceline Spring	POTRT	Yes	Erosion stablized on meadow. Abundant aspen reproduction (utilization estimated as slight).
PN-15	Chaining Spring	N/A	Yes	This site was fenced in 1988.
PN-17	Trail Spring	POTRT, PPGG	No	The goal is to promote aspen regeneration. Although utilization is estimated as slight, aspen regeneration is not occurrring. Utilization on meadow grasses estimated as slight.
PN-18	Sunrise Cabin Meadow	POTRT, PPGG	Yes	Erosion stabilizing, no head-cutting. Potential erosion may be caused by recreationists driving on meadow and using old cabin. Utilization on aspen and meadow grasses estimated as slight.
PN-30	Phenology Study Plot No. 7	POTRT, SYMPH	Yes	Part of site protected by phenology study exclosure. Utilization on aspen and snowberry estimated as slight. Abundant aspen reproduction.
PN-48	Hidden Spring	PPGG, ROWO, SALIX	Yes	Utilization on meadow grasses estimated as light, slight on wild rose and willows (use by wild horses). Erosion stabilizing and no trampling damage observed.
PN-49	Pinyon Spring	PPGG, ROWO	No	Head-cutting and trampling damage from wild horses observed. Utilization by horses estimated as moderate on meadow grasses and light on wild rose.
PN-65	Illinois Canyon	PPGG, ROWO, SALIX	Yes	Erosion stabilizing. Utilization on riparian grasses and wild rose estimated as moderate, and light on willows.
PN-68	Mystery Spring	CAREX, ROWO, SALIX	Yes	Erosion stabilized. Utilization estimated as moderate on sedges, and slight on wild rose and willow.
PN-69	Lower Illinois Spring	POTRT, ROWO, PPGG, SALIX	Yes	1989 observations showed erosion to be stabilizing. Utilization recorded at light on perennial grasses and no use on wild rose, aspen, and willow.
PN-70	Upper Hidden Spring	PPGG, ROWO, SALIX	Yes	Erosion stabilized. Utilization estimated as slight on key species.

[1]Plant codes used above are defined as follows:

CAREX - sedges (Carex sp.)
POTRT - quaking aspen (Populus tremula tremuloides)
PPGG - perennial grasses and grass-like plants
ROWO - wild rose (Rosa woodsii)
SALIX - willows (Salix sp.)
SYMPH - snowberry (Symphoricorpus sp.)

[2]Refer to Quantifying Allotment Specific Objectives (Page 4).


Como
Lyon Peak
NABM 8763
Sunrise Pass
Sunrise Basin
Sunrise Camp
Bismark Peak
DOUGLAS CO
LYON CO
DOUGLAS CO
T 15
T 14
R 22
R 23
Map No. 1: Sunrise Allotment (03590)
Patented Land
Allotment Boundary
Fenced Allotment Bndy.



Map No. 2:
Key Area and Riparian Habitat Location

Key Area

PN-30 Riparian Habitat