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**ROCK CREEK  
(SPANISH RANCH AND SQUAW VALLEY)  
AND ANDRAE ALLOTMENT EVALUATIONS**

*Executive Summary*

745-1871

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SPANISH RANCH, SQUAW VALLEY, AND ANDRAE ALLOTMENTS EVALUATION  
EXECUTIVE SUMMARY

*Introduction*

The Spanish Ranch, Squaw Valley, Elevenmile Flat, and Andrae Allotments are generally located north of Battle Mountain, Nevada and west of Tuscarora, Nevada. (Refer to Map 1 for a general location and Maps 2 and 3 for allotment maps. Some of the important uses and resource values within these allotments include livestock grazing, wild horses, mule deer, pronghorn antelope, and sage grouse habitat, and fisheries habitat, including redband trout and the threatened Lahontan cutthroat trout.

Since 1978, monitoring data have been collected and during the years 1994-1996, the data were analyzed through the allotment evaluation process to determine what changes in existing management, if any, are required to meet the specific multiple use objectives for these allotments. These multiple use objectives were developed through the Environmental Impact Statement (EIS) and Resource Management Plan (RMP) for the Elko Resource Area, the Rangeland Program Summary (RPS), and the Record of Decision for the Grazing EIS for the Paradise-Denio Resource Area, Winnemucca District.

*Objectives*

Below are tabular summaries of the objectives for the Spanish Ranch and Squaw Valley and Andrae Allotments. The very general RMP objectives are addressed through RPS and allotment key area objectives. Where there is redundancy between RPS and key area objectives, they have been presented together as a single objective. Also included are the Standards for Rangeland Health for the Northeastern Great Basin Area of Nevada.

Table 1. Summary of Status of Objectives for the Spanish Ranch and Squaw Valley Allotments.

Objective	Status of Objective			
	Met	Making Progress Towards/Partially Met	Not Met	Other
<i>In the long-term, provide forage to sustain 57,530 AUMs for livestock grazing.</i>			✓	
<i>Improve ecological status from late to PNC (potential natural community) on 800 acres.</i>			✓	
<i>Maintain or enhance the current forage value condition on non-native range.</i>		✓		
<i>Limit annual utilization level on crested wheatgrass to a maximum of 55%. Key Areas RC-01, RC-02 Key Area RC-03</i>	✓		✓	
<i>Maintain or statistically increase the frequency of crested wheatgrass at the 10% significance level by the year 2007. (Key Areas RC-01, RC-02, RC-03)</i>	✓			



Objective	Status of Objective			
	Met	Making Progress Towards/Partially Met	Not Met	Other
<i>In the short-term, maintain or enhance native vegetation with utilization levels not to exceed 50% on the key species [herbaceous]. Key Areas RC-04, RC-07, RC-10, RC-12 Key Areas RC-09, RC-11, RC-13, RC-14</i>	✓	✓		
<i>Statistically increase frequency at the 10% significance level by the year 2007 of the key species. Key Area RC-11 Key Area RC-12 Key Areas RC-13, RC-04, RC-14</i>	✓	✓		✓ <sup>1</sup>
<i>Increase percent composition by weight of bluebunch wheatgrass from 6% to 9% in five years and 20% in 20 years at Key Area RC-04 and from 5% to 8% in five years and 17% in 20 years at Key Area RC-14.</i>	✓		✓	
<i>Manage rangeland habitat and forage condition to support 5,015 AUMs for reasonable numbers of mule deer...</i>	✓			
<i>...and 101 AUMs for reasonable numbers of antelope.</i>		✓		
<i>Maintain or improve to at least good condition all crucial mule deer and pronghorn antelope habitat.</i>	✓ ✓			
<i>Limit annual utilization on antelope bitterbrush to 45%. Key Area RC-12 Key Area RC-04</i>		✓	✓	
<i>In the short-term improve and in the long-term maintain key browse species (antelope bitterbrush, early sagebrush, Wyoming big sagebrush, and snowberry) to 45% of the overall species composition at the key areas. Key Areas RC-04, RC-07, RC-11, RC-12, RC-13, RC-14 Key Areas RC-05, RC-10</i>	✓			✓ <sup>2</sup>

Objective	Status of Objective			
	Met	Making Progress Towards/Partially Met	Not Met	Other
<i>Improve or maintain water availability [for mule deer] on average of between two to four miles apart throughout all key areas.</i>	✓			
<i>Within identified seasonal habitat antelope use area, reduce shrub height to an optimum level of 10-20" for the benefit of pronghorn antelope.</i>	✓			
<i>Improve and maintain forb composition from 1983 levels to 8% of overall species composition for the benefit of sage grouse. Key Area RC-10 Key Areas RC-04, RC-11, RC-12, RC-14</i>	✓		✓	
<i>Manage rangeland to protect or enhance crucial sage grouse strutting or nesting habitat. Strutting habitat Nesting habitat</i>		✓		✓ <sup>2</sup>
<i>Improve and maintain meadow and riparian areas for mule deer, sage grouse and native trout on 4.6 miles of Rock Creek, 1.5 miles of Toe Jam, 3.5 miles of Red Cow Creek, 1.0 mile of Winters Creek, and 3.0 miles of Willow Creek. Techniques which would result in a minimum improvement of 30 percent in habitat condition in the short-term from the date of implementation would be used.</i>			✓	
<i>Utilization levels will not exceed 50% on meadow and riparian areas.</i>			✓	
<i>Maintain management levels at 119 horses (1428 AUMs) within the Rock Creek Herd Area. Per IBLA decision this has been reworded as: Manage for a wild horse herd size which will maintain a thriving ecological balance consistent with other multiple uses while remaining within the wild horse herd area.</i>			✓	
<i>Improve ecological condition of winter use areas in early seral to mid-seral condition by 2007.</i>	✓			

Objective	Status of Objective			
	Met	Making Progress Towards/Partially Met	Not Met	Other
<i>Improve species diversity of early seral range sites within winter use area from big sagebrush, Sandberg's bluegrass, phlox and annual forbs by increasing composition of key species including bluebunch wheatgrass, needlegrasses and/or Indian ricegrass by 2007.</i>		✓		
<i>Annual utilization of key species (bluebunch wheatgrass, needlegrasses, and/or Indian ricegrass) will not exceed 30% by cattle in the fall and 50% by horses in the spring within the winter use area.</i>			✓	
<i>Upland Sites: Upland soils exhibit infiltration and permeability rates that are appropriate to soil type, climate, and land form.</i>		✓		
<i>Riparian and Wetland Sites: Riparian and wetland areas exhibit a properly functioning condition and achieve state water quality criteria.</i>			✓	
<i>Habitat: Habitats exhibit a healthy, productive, and diverse population of native and/or desirable plant species, appropriate to the site characteristics, to provide suitable feed, water, cover and living space for animal species and maintain ecological processes. Habitat conditions meet the life cycle requirements of threatened and endangered species.</i>		✓		
<i>Land use plans will recognize cultural resources within the context of multiple use.</i>	✓			
<b>Spanish Ranch and Squaw Valley Allotments Total</b>	<b>14</b>	<b>9</b>	<b>11</b>	<b>3</b>
<sup>1</sup>	This is a long-term objective. Changes in trend are generally not discernible in a short period of time. This objective will be re-evaluated.			
<sup>2</sup>	No data are available.			

Table 2. Summary of Status of Objectives for the Andrae Allotment.

Objective	Status of Objective			
	Met	Making Progress Towards/Partially Met	Not Met	Other
<i>In the long-term, provide forage to sustain 4,580 AUMs for livestock grazing.</i>			✓ <sup>1</sup>	
<i>In the long-term, maintain the present ecological status on the allotment.</i>		✓		✓ <sup>2</sup>
<i>In the short-term, maintain or enhance native vegetation with utilization levels not to exceed 50% on the key species [herbaceous].</i>	✓			
<i>Manage rangeland habitat and forage condition to support 75 AUMs for reasonable numbers of mule deer.</i>	✓			
<i>Maintain or improve to at least good condition all crucial mule deer habitat.</i>	✓			
<i>The degree of allowable summer use of current year's growth of bitterbrush will not exceed 25% as measured after livestock season-of-use and will not collectively exceed 50% use after winter use by big game.</i>		✓		
<i>Maintain form and age class of bitterbrush in satisfactory condition.</i>	✓			
<i>Maintain 30% or less absolute shrub canopy cover.</i>	✓			
<i>Manage rangeland to protect or enhance crucial sage grouse strutting or nesting habitat.</i> Strutting habitat Resting & foraging habitat Nesting habitat	✓ <sup>4</sup>	✓		✓ <sup>3</sup>
<i>Improve and maintain meadow and riparian areas for mule deer, sage grouse and native trout.</i>		✓		
<i>Utilization levels will not exceed 50% on meadow and riparian areas.</i>		✓		
<i>Upland Sites: Upland soils exhibit infiltration and permeability rates that are appropriate to soil type, climate, and land form.</i>		✓		

Objective	Status of Objective			
	Met	Making Progress Towards/Partially Met	Not Met	Other
<i>Riparian and Wetland Sites: Riparian and wetland areas exhibit a properly functioning condition and achieve state water quality criteria.</i>		✓		
<i>Habitat: Habitats exhibit a healthy, productive, and diverse population of native and/or desirable plant species, appropriate to the site characteristics, to provide suitable feed, water, cover and living space for animal species and maintain ecological processes. Habitat conditions meet the life cycle requirements of threatened and endangered species.</i>		✓		
<i>Land use plans will recognize cultural resources within the context of multiple use.</i>	✓			
<b>Andrae Allotment Total</b>	<b>7</b>	<b>8</b>	<b>1</b>	<b>2</b>
<sup>1</sup> Total number of AUMs of specified livestock grazing for the Andrae Allotment has remained at 4,564 throughout the evaluation period. Therefore, although data indicate that the carrying capacity is higher, as shown in the Technical Recommendations section, this objective has not been met. <sup>2</sup> Changes in ecological status at Key Areas -03 and 04 can not be determined. <sup>3</sup> No data are available. <sup>4</sup> Likely Met at Key Area-03 and met at Key Area-04.				

### Technical Recommendations

Through the allotment evaluation, objectives that are not being met were identified. The key concerns identified through this process were riparian condition, especially fisheries habitat for redband trout and the threatened Lahontan cutthroat trout, over-utilization of meadow areas, failure to maintain a wild horse herd which results in a thriving ecological balance, and over-use of antelope bitterbrush, particularly in the Andrae Allotment. Summarized below are the key technical recommendations that are made in this allotment evaluation to ensure that objectives are met or that progress will be made in meeting objectives for these three allotments. For summarization purposes, not all technical recommendations made in the Allotment Evaluation are presented in this Executive Summary.

The Elevenmile Flat Allotment is primarily a early season and late fall/winter use allotment. To facilitate management of the Elevenmile Flat and Squaw Valley Allotments, the allotment evaluation recommends modifying the season of use for the Elevenmile Flat Allotment to coordinate use of it in conjunction with the Willow Creek Ridge/Ivanhoe Pasture of the Squaw Valley Allotment.

- A. Carrying Capacity Recommendations  
Carrying capacity recommendations for the Spanish Ranch, Squaw Valley, and Andrae Allotments are displayed in Tables 3, 4, and 5 below. (Refer to Maps 3, 4, 5, and 6 for pasture locations.)



Table 3. Estimated carrying capacity by pasture for the Spanish Ranch Allotment.

SPANISH RANCH ALLOTMENT	
PASTURE	ESTIMATED CARRYING CAPACITY <sup>1</sup>
Hot Creek	278
Sixmile/Cottonwood	7,232
Red Cow	4,450
Cornucopia	3,060
Fourmile	4,172
Winters Creek	2,781
Burner Hills <sup>2</sup>	5,841 <sup>2</sup>
<b>TOTAL</b>	<b>27,814</b>
<sup>1</sup> All pastures but Hot Creek would be licensed at 74% public land. Hot Creek would be licensed at 100% public land. <sup>2</sup> Includes capacity allocated to wild horses and domestic livestock.	

Table 4. Estimated Carrying Capacity by Pasture for the Squaw Valley Allotment.

SQUAW VALLEY ALLOTMENT	
PASTURE	ESTIMATED CARRYING CAPACITY
Horseshoe Seeding	1,720
Midas Seeding	777
Rock Creek Seeding	821
Willow Creek Ridge/Ivanhoe	17,896
Willow Creek Riparian	617
Frazer Creek	1,234
Scraper Springs/Soldier Creek <sup>1</sup>	4,320 <sup>1</sup>
Trout/Middle Rock and Toe Jam	4,011
Upper Rock and Toe Jam	2,778
<b>TOTAL</b>	<b>34,174</b>
<sup>1</sup> Includes capacity allocated to wild horses and domestic livestock.	

Table 5. Carrying Capacity by Pasture for the Andrae Allotment.

ANDRAE ALLOTMENT	
PASTURE	ESTIMATED CARRYING CAPACITY
West	3,943
East	3,139
Total	7,082

B. Term Grazing Permit

Establish total number of AUMs of specified livestock grazing for Ellison Ranching Company at 22,201 AUMs for Spanish Ranch Allotment, 27,738 AUMs for Squaw Valley Allotment, and 6,858 AUMs for Andrae Allotment. Maintain grazing preference on the Elevenmile Flat Allotment at 1,542 AUMs.

Note: The season of use for Elevenmile Flat Allotment is outlined to incorporate this allotment into the management of the Squaw Valley Allotment and implementation of the grazing system.

Displayed in Tables 6 and 7 below are the terms and conditions, including total number of AUMs of specified livestock grazing, for Ellison Ranching Company and Nelo Mori as proposed in this Allotment Evaluation. Ellison's and Mori's use on all other allotments will remain as currently permitted.

Table 6. Proposed term grazing permit modifications for Ellison Ranching Company

<i>Allotment/ Pasture</i>	<i>Livestock Number &amp; Kind<sup>1</sup></i>	<i>Begin Period</i>	<i>End Period</i>	<i>%PL</i>	<i>Type Use</i>	<i>AUMs</i>
<b>Spanish Ranch</b>						
Native	3,777 Cattle	3/25	11/15	74	active	21,685
Native	190 Sheep	6/10	7/15	74	active	166
Native	305 Sheep	10/05	10/31	74	active	42
FFR	95 Cattle	3/1	2/28	100	custodial	308
Total						22,201

<i>Allotment/ Pasture</i>	<i>Livestock Number &amp; Kind <sup>1</sup></i>	<i>Begin Period</i>	<i>End Period</i>	<i>%PL</i>	<i>Type Use</i>	<i>AUMs</i>
<b>Squaw Valley</b>						
Native	2,824 Cattle	3/16	11/30	80	active	19,316
Native	17 Horses	5/1	11/30	80	active	96
Native	7,800 Sheep	4/8	7/15	80	active	4,062
Native	4,930 Sheep	10/21	11/20	80	active	804
Midas Sdg.	111 Cattle	3/16	11/20	85	active	777
Rock Ck Sdg.	100 Cattle	3/16	11/20	100	active	821
Horseshoe Sdg.	199 Cattle	3/16	11/20	100	active	1,638
Horseshoe Sdg.	10 Horses	3/16	11/20	100	active	82
FFR	12 Cattle	3/1	2/28	100	active	<u>142</u>
Total						27,738
<b>Andrae</b>	2,005 Cattle	4/1	7/10	100	active	6,658
	33 Horses	5/1	10/31	100	active	<u>200</u>
Total						6,858
<b>Elevenmile Flat</b>	2,372 Cattle	3/16	4/30	39	active	1,399
	8,000 Sheep	4/1	4/20	39	active	25
	2,000 Sheep	11/1	11/20	39	active	103
	2,000 Sheep	11/21	2/28	39	custodial	<u>15</u>
Total						1,542

<sup>1</sup> Actual number of cattle, sheep, or horses that can be grazed will vary each year depending on which pasture is rested and the length of time cattle may graze specific pastures. The approximate "base number" of cattle that can graze within the Spanish Ranch Allotment will be:

- Year 1: 3,430 cattle
- Year 2: 3,834 cattle
- Year 3: 3,366 cattle
- Year 4: 3,585 cattle

Grazing use will be in accordance with the Multiple Use Decision issued [to implement the Technical Recommendations selected from this allotment evaluation].

Table 7. Proposed term grazing permit modifications for Nelo Mori.

<i>Allotment/ Pasture</i>	<i>Livestock Number &amp; Kind</i>	<i>Begin Period</i>	<i>End Period</i>	<i>%PL</i>	<i>Type Use</i>	<i>AUMs</i>
Andrae	75 Cattle	4/1	6/30	100	active	224

Terms and Conditions added or modified based on this allotment evaluation:

**Spanish Ranch Allotment:**

The approximate "base number" of cattle that can graze will be:

- Year 1: 3,430 cattle
- Year 2: 3,834 cattle

Year 3: 3,366 cattle  
Year 4: 3,585 cattle

The grazing system will be re-evaluated at the end of the first four-year cycle. Annual and long term adjustments (at the end of the four-year cycle) in the grazing system may be made depending on progress in meeting resource objectives.

**Squaw Valley Allotment:**

The grazing system will be re-evaluated at the end of the first four-year cycle. Annual and long term adjustments (at the end of the four-year cycle) in the grazing system may be made depending on progress in meeting resource objectives.

**Andrae Allotment:**

The grazing system will be re-evaluated at the end of the first four-year cycle. Annual and long term adjustments (at the end of the four-year cycle) in the grazing system may be made depending on progress in meeting resource objectives.

C. Flexibility and Billing Procedures

1. Flexibility -- Spanish Ranch and Squaw Valley Allotments

The livestock permittee will have the flexibility to adjust his livestock numbers within the grazing system outlined as long as the total number of AUMs of specified livestock grazing for the allotment and target AUMs for each pasture are not exceeded. Moves **between pastures** can vary by five days before or after the scheduled dates, except for the riparian pastures listed below. Because of riparian concerns, limited flexibility will be allowed within riparian pastures as follows:

Frazer Creek:	No flexibility on off-dates.
Trout Creek/Middle Rock:	No flexibility on off-dates, with the exception of year 4. In Year 4, use may be extended until 8/31 depending on utilization of woody and herbaceous vegetation.
Upper Rock and Toe Jam:	No flexibility on off-dates.
Middle Rock Creek Gorge:	No grazing use beyond 6/15.
Winters Creek:	No flexibility on off-date in Year 3.
Fourmile:	No flexibility on off-date in Year 1.
Red Cow:	No flexibility on off-dates.

2. Flexibility -- Andrae Allotment

The livestock permittees will have the flexibility to adjust their livestock numbers within the grazing system outlined as long as total number of AUMs of specified livestock grazing for the allotment and target AUMs for each pasture are not exceeded.

Use in the West Pasture may extend until 5/31. Use may begin in the East Pasture as early as 4/1.

3. Billing Procedures -- Nelo Mori and Ellison Ranching Company  
Nelo Mori will have "after-the-fact" billing privileges for the Andrae Allotment; Ellison Ranching Company will have "after-the-fact" billing privileges for Spanish Ranch, Squaw Valley, Elevenmile Flat, and Andrae Allotments. Prior to the grazing season, the livestock permittee will apply for grazing use in conformance with their term permit and any multiple use decisions or allotment management plans. The livestock permittee will submit accurate actual use records by pasture to the Elko District within 15 days after closure of the authorized grazing season. One billing notice based on the actual use report will be issued within two weeks of receipt of the actual use report. Payment of grazing fees must be made within 15 days of the bill due date. Failure to pay the grazing bill within 15 days of the due date specified in the bill shall result in a late fee assessment of \$25.00 or 10 percent of the grazing bill, whichever is greater, but not to exceed \$250.00. Repeated delays in payment of "after-the-fact" billings or noncompliance with the terms and conditions of the permit (including failure to submit actual use report within 15 days) shall be cause to revoke "after-the fact" billing privileges (43 CFR 4130.8-1(f)).

D. Proposed Grazing Systems

Outlined in the Allotment Evaluation are proposed grazing systems for the Spanish Ranch, Squaw Valley, and Andrae Allotments. For the Spanish Ranch and the Squaw Valley Allotments there are two options outlined for each. For the Andrae Allotment there is only one option.

1. Spanish Ranch Allotment  
Implement one of the grazing systems outlined below. *Option 1a.* would be implemented if the proposed land exchange is **not** completed. *Option 1b.* would be implemented if the proposed land exchange is completed.
- 1a. *Option 1a. Without the Proposed Land Exchange: Rest Red Cow Pasture One Year in Four and Construct Public Land Riparian Pastures or Exclosures in Cottonwood and Sixmile Creek Watersheds*  
Under this option, implement the grazing system outlined in Table 8 below for the Spanish Ranch Allotment. Exclosures or riparian pastures would be constructed to protect key riparian habitats (stream, spring, aspen, etc.) on public lands. For riparian pastures, grazing would be limited to those treatments shown to improve riparian habitats based on local experience and relevant literature. Additional preliminary field work, survey, and design are needed before specific locations can be identified. If this system can not be successfully implemented with the minimal fencing, then additional fencing will be required.

See Map 4 for location of pastures and proposed range improvements needed to implement this system. Not shown are potential exclosure or riparian pasture locations for Sixmile and Cottonwood Creek watersheds. These locations have not been established yet.



Table 8. *Option 1a. Without the Proposed Land Exchange, Rest Red Cow Pasture One Year in Four*  
 -- Proposed Grazing System for the Spanish Ranch Allotment.

PASTURE	Estimated Capacity (AUMs) <sup>1</sup>	YEAR			
		1	2	3	4
Burner Hills	(5,841 total) 4,011	3/25-6/11	3/25-6/5	3/25-6/21	3/25-6/15
Winters Creek *	2,781	4/1-6/11	Rest	3/15-6/21 <sup>2</sup>	4/6-6/15
Cornucopia	3,060	3/25-5/31	3/25-5/31	3/25-5/31	3/25-5/31
Fourmile *	4,172	6/12-7/31 <sup>2</sup>	6/1-7/10	4/19-6/10	Rest
Red Cow *	4,450	Rest-gather any drift & move to Cottonwood	6/22-7/20 <sup>2</sup>	6/11-7/10 <sup>2</sup>	6/16-7/15 <sup>2</sup>
Cottonwood/Sixmile *	7,232	8/1-11/15	7/21-11/15	7/11-11/15	7/16-11/15
Hot Creek	278 <sup>3</sup>	3/1-2/28	3/1-2/28	3/1-2/28	3/1-2/28

\* Pastures with fisheries values.  
<sup>1</sup> Flexibility will be authorized in the use of each pasture provided that target AUMs for each pasture and the total number of AUMs of specified livestock grazing for the allotment is not exceeded. (i.e., the total allotment capacity exceeds the total number of AUMs of specified livestock grazing.)  
<sup>2</sup> This pasture has no flexibility in the off-date for the year footnoted and shaded.  
<sup>3</sup> All pastures but Hot Creek would be licensed at 74% public land. Hot Creek would be licensed at 100% public land.

1b. *Option 1b. With Land Exchange: Only Burner Hills and Red Cow Pastures (and possibly Hot Creek) remain public lands and part of the Spanish Ranch Allotment*

In January 1996, Ellison Ranching Company proposed a land exchange with the Bureau of Land Management. If this exchange were completed as proposed, the land status would be changed from the current pattern of interspersed private within public lands to a pattern of more consolidated blocks of private lands adjacent to public lands. (See Map 6 for an **approximate** depiction of the resultant land status.) With this option (if the proposed land exchange is completed), the Burner Hills and Red Cow Pastures would remain within the Spanish Ranch Allotment. The Hot Creek Pasture may remain as part of the allotment or it might become all privately owned lands. The Winters Creek, Fourmile, Cottonwood, and Sixmile Pastures would become privately owned pastures.

Under Option 1b., implement the following grazing system outlined in Table 9 on the Spanish Ranch Allotment if the proposed land exchange is completed. See Map 5 for location of proposed pastures and proposed range improvements needed to implement this system.

It should be noted that the environmental impacts of this exchange proposal have not yet been analyzed nor has the National Environmental Policy Act (NEPA) documentation been completed. The impacts associated with this exchange proposal will be analyzed and documented in documents other than this allotment evaluation. Public consultation for the process will be conducted as appropriate.

Table 9. *Option 1b. With Land Exchange: Only Burner Hills and Red Cow Pastures (and possibly Hot Creek) remain public lands and part of the Spanish Ranch Allotment -- Proposed Grazing System for the Spanish Ranch Allotment if the Proposed Land Exchange is Completed.*

PASTURE <sup>1</sup>	Estimated Capacity (AUMs) <sup>2</sup>	YEAR			
		1	2	3	4
Burner Hills	(7,893 total) 6,063	3/25-10/31	3/25-10/31	3/25-10/31	3/25-10/31
Red Cow/Cornucopia *	10,149	off by 6/15	off by 6/15	Rest	off by 6/15 or hot or late use not to exceed 8 weeks <sup>3</sup>
Hot Creek <sup>4</sup>	278	3/1-2/28	3/1-2/28	3/1-2/28	3/1-2/28

\* Riparian pasture

<sup>1</sup> Ellison Ranching Company will retain private ownership of a corridor along the South Fork of the Owyhee River. This corridor may be used to trail cattle to and from private lands to the Burner Hills and Red Cow/Cornucopia Pastures.

<sup>2</sup> Flexibility will be authorized in the use of each pasture provided that target AUMs for each pasture and the total number of AUMs of specified livestock grazing for the allotment is not exceeded. (i.e., the total allotment capacity exceeds the total number of AUMs of specified livestock grazing.) These pastures would become essentially all private land; they would be licensed at 100% public land.

<sup>3</sup> The period of use for hot season is defined as mid-June to mid-September. Late use is defined as the period from mid-September to the end of the grazing season.

<sup>4</sup> The Hot Creek Pasture may become completely private land. If it becomes private, the carrying capacity for this pasture would be deducted from the total number of AUMs of specified livestock grazing for the Spanish Ranch Allotment.

2. Squaw Valley Allotment

Implement one of the two grazing systems outlined below (either Option 2a. or 2b.) for the Squaw Valley Allotment.

Lahontan cutthroat trout are currently found in stream reaches that are fairly inaccessible to livestock and/or are fairly resistant to habitat condition changes due to grazing. Based on these current resource conditions and the expected time frames for implementation of either Option 2a. or 2b., an interim grazing system is not recommended for the Squaw Valley Allotment. Depending on BLM funding and manpower and outside (non-BLM) funding opportunities, construction of the necessary range improvements to implement the proposed grazing system options may begin as early as 1997 and is expected to be

completed within five years. If the necessary range improvements are not completed within five years, an interim grazing system with specified season-of-use and/or utilization criteria will be implemented.

2a. *Option 2a. Construct Riparian Enclosure(s) on Rock Creek in Upper Rock/Toe Jam Pasture*

With this option, enclosures within the Upper Rock Creek/Toe Jam Pasture would be constructed to protect small but sensitive areas along Rock Creek. The grazing treatment for this pasture is designed for resilient stream types in good condition but is not expected to be effective on areas accessible to cattle grazing with existing habitat problems. These vulnerable areas would then be fenced within an enclosure(s) to exclude any livestock grazing. Approximate carrying capacity for the Upper Rock Creek/Toe Jam Pasture would be 2,777 AUMs. Under both Option 2a. and 2b., enclosures would be constructed along Toe Jam Creek to enhance riparian habitat.

Under Option 2a., implement the grazing system outlined below in Table 10, on the Squaw Valley Allotment. See Map 4 for location of pastures and proposed range improvements needed to implement this system.

Table 10. *Option 2a. Construct Riparian Enclosure(s) on Rock Creek in Upper Rock/Toe Jam Pasture -- Proposed Grazing System for the Squaw Valley Allotment.*

PASTURE	Estimated Capacity (AUMs) <sup>1</sup>	YEAR			
		1	2	3	4
Willow Creek Ridge/Ivanhoe	17,896	3/16-11/20 Flexible	3/16-11/20 Flexible	3/16-11/20 Flexible	3/16-11/20 Flexible
Willow Creek Riparian *	617	Limited trailing <sup>2</sup>	Limited trailing <sup>2</sup>	Limited trailing <sup>2</sup>	Limited trailing <sup>2</sup>
Scraper Springs/Soldier Creek	3,150 (4,320 total)	3/16-11/20 Flexible	3/16-11/20 Flexible	3/16-11/20 Flexible	3/16-11/20 Flexible
Frazer Creek *	1,234	off by 5/1	off by 6/1	off by 7/1	off by 5/1
Middle Rock/Toe Jam/ Trout Creek *	4,011	5/3-7/5	6/2-7/15 <sup>3</sup>	Rest	7/2-8/15 <sup>3</sup>
Upper Rock/Toe Jam Creek *	2,778	7/6-8/20	7/16-8/31	Rest	8/16-9/15
Horseshoe Seeding	1,720	3/16-11/20 Flexible	3/16-11/20 Flexible	3/16-11/20 Flexible	3/16-11/20 Flexible
Midas Seeding	777	3/16-11/20 Flexible	3/16-11/20 Flexible	3/16-11/20 Flexible	3/16-11/20 Flexible

PASTURE	Estimated Capacity (AUMs) <sup>1</sup>	YEAR			
		1	2	3	4
Rock Creek Seeding	821	3/16-11/20 Flexible	3/16-11/20 Flexible	3/16-11/20 Flexible	3/16-11/20 Flexible
Sheep use	approx. 4,500	graze/trail in spring and fall	graze/trail in spring and fall	graze/trail in spring and fall	graze/trail in spring and fall
<p>* Riparian pastures.</p> <p><sup>1</sup> Flexibility will be authorized in the use of each pasture provided that target AUMs for each pasture and the total number of AUMs of specified livestock grazing for the allotment is not exceeded. (i.e., the total allotment capacity exceeds the total number of AUMs of specified livestock grazing.) These pastures would be licensed at 80% public land.</p> <p><sup>2</sup> Limited trailing by steers, cow-calf pairs, bulls, or sheep may occur in early and late summer or fall but will not exceed one day at a time for cattle (trailing through, not grazing) and no more than four days total for sheep. Adjustments in the amount of use may be made depending on progress in meeting resource objectives.</p> <p><sup>3</sup> This pasture has no flexibility in the off-dates for the years footnoted and shaded. The permittee has flexibility in the on-date of the next pastures.</p>					

2b. *Option 2b. No Riparian Enclosures on Rock Creek in Upper Rock/Toe Jam Pasture*

Under this option, no enclosures to protect the fragile areas of Rock Creek would be built. Instead, the pasture division fence would be constructed at a lower elevation and the fragile areas would be included in the Middle Rock/Toe Jam/Trout Creek Pasture. The grazing treatment for this pasture is more conservative than the treatment for Upper Rock/Toe Jam based on the geology, stream channel type, and natural resiliency. Under this option, as with Option 2a., enclosures along Toe Jam Creek would be included as improvements that would enhance implementation of the outlined grazing system and provide improved riparian habitat.

Under Option 2b., implement the grazing system outlined below in Table 11 on the Squaw Valley Allotment. See Map 6 for location of pastures and proposed range improvements needed to implement this system.

Table 11. *Option 2b. No Riparian Enclosures on Rock Creek in Upper Rock/Toe Jam Pasture -- Proposed Grazing System for the Squaw Valley Allotment.*

PASTURE	Estimated Capacity (AUMs) <sup>1</sup>	YEAR			
		1	2	3	4
Willow Creek Ridge/Ivanhoe	17,896	3/16-11/20 Flexible	3/16-11/20 Flexible	3/16-11/20 Flexible	3/16-11/20 Flexible
Willow Creek Riparian *	617	Limited trailing <sup>2</sup>	Limited trailing <sup>2</sup>	Limited trailing <sup>2</sup>	Limited trailing <sup>2</sup>



PASTURE	Estimated Capacity (AUMs) <sup>1</sup>	YEAR			
		1	2	3	4
Scraper Springs/Soldier Creek	3,150 (4,320 total)	3/16-11/20 Flexible	3/16-11/20 Flexible	3/16-11/20 Flexible	3/16-11/20 Flexible
Frazer Creek *	1,234	off by 5/1	off by 6/1	off by 7/1	off by 5/1
Trout Creek/ Middle Rock and Toe Jam Creek *	4,937	5/3-7/5	6/2-7/15 <sup>3</sup>	Rest	7/2-8/15 <sup>3</sup>
Upper Rock/Toe Jam Creek *	1,852	7/6-8/20	7/16-8/31	Rest	8/16-9/15
Horseshoe Seeding	1,720	3/16-11/20 Flexible	3/16-11/20 Flexible	3/16-11/20 Flexible	3/16-11/20 Flexible
Midas Seeding	777	3/16-11/20 Flexible	3/16-11/20 Flexible	3/16-11/20 Flexible	3/16-11/20 Flexible
Rock Creek Seeding	821	3/16-11/20 Flexible	3/16-11/20 Flexible	3/16-11/20 Flexible	3/16-11/20 Flexible
Sheep use	approx. 4,500	graze/trail in spring and fall	graze/trail in spring and fall	graze/trail in spring and fall	graze/trail in spring and fall

\* Riparian pastures.

<sup>1</sup> Flexibility will be authorized in the use of each pasture provided that target AUMs for each pasture and the total number of AUMs of specified livestock grazing for the allotment is not exceeded. (i.e., the total allotment capacity exceeds the total number of AUMs of specified livestock grazing.) The native pastures would be licensed at 80% public land. The Rock Creek and Horseshoe Seedings would be licensed at 100% public land, the Midas Seeding at 85% public land.

<sup>2</sup> Limited trailing by steers, cow-calf pairs, bulls, or sheep may occur in early and late summer or fall but will not exceed one day at a time for cattle (trailing through, not grazing) and no more than four days total for sheep. Adjustments in the amount of use may be made depending on progress in meeting resource objectives.

<sup>3</sup> This pasture has no flexibility in the off-dates for the years footnoted and shaded. The permittee has flexibility in the on-date of the next pastures.

3. Andrae Allotment  
 Implement the grazing system outlined below in Table 12 on the Andrae Allotment. Refer to Map 3 for location of pastures within the Andrae Allotment.



Table 12. Proposed Grazing System for the Andrae Allotment.

PASTURE	Estimated Capacity/Target (AUMs) <sup>1</sup>	YEAR			
		1	2	3	4
West	3,943	4/1-5/17	4/1-5/17	4/1-5/17	4/1-5/17
East	3,139	4/15-7/10 c 5/1-10/31 h	4/15-7/10 c 5/1-10/31 h	4/15-7/10 c 5/1-10/31 h	4/15-7/10 c 5/1-10/31 h

<sup>1</sup> Flexibility will be authorized in the use of each pasture provided that target AUMs for each pasture and the total number of AUMs of specified livestock grazing for the allotment is not exceeded. (i.e., the total allotment capacity exceeds the total number of AUMs of specified livestock grazing.) These pastures would be licensed at 100% public land.

E. Wild Horses -- Pastures to be Managed for Wild Horses

There are two options for the wild horse herd use area; one option without implementation of the proposed land exchange and another option if the proposed land exchange is completed.

1a. *Manage Wild Horses Within the Burner Hills, Scrapper Springs, and Winters Creek Pastures*

Manage wild horses within the area as shown on Map 7 to allow construction of fences to implement grazing systems as described above. Under this option, wild horse management would be restricted to the Burner Hills, Scrapper Springs, and Winters Creek Pastures.

By changing the area where horses would be managed, fences can be constructed that would control livestock movements and time of use. These new pasture fences would provide for proper management of livestock and allow achievement of multiple use objectives, particularly the improvement of riparian and fisheries conditions in streams designated as Lahontan cutthroat trout habitat in the Recovery Plan. These pastures will support 250 wild horses (with 8,324 AUMs left for domestic livestock). This area provides well-watered summer and winter range to maintain a healthy, sustainable wild horse herd.

Although Winters Creek Pasture will not be managed as a "horse free" area, when periodic gathers are made of wild horses to maintain AML, all horses within the Winters Creek Pasture will be gathered and/or moved to the Burner Hills and/or Scrapper Springs Pastures.

1b. *Manage Wild Horses Within the Burner Hills and Scrapper Springs Pastures*

If the proposed land exchange is implemented, manage wild horses within the Burner Hills and Scrapper Springs Pastures only. Refer to Map 7 for location of this area.

Winters Creek would not be included in the area managed for wild horses under the land exchange proposal since Winters Creek Pasture would become private land. However, AML would remain the same with or without the proposed land exchange. By allocating 3,000 AUMs within the Burner Hills and Scrapper Springs Pastures and allocating only the remaining forage within these pastures to livestock, the area could still support 250 horses, even without including the Winters Creek Pasture. The Burner Hills and Scrapper Springs Pastures provide year-long habitat, including forage and available water, for wild horses. Restriction of wild horses to the Burner Hills and Scrapper Springs area would still provide for wild horses' biological needs.

F. Wild Horses -- Appropriate Management Level (AML)

Set an Appropriate Management Level (AML) of 250 wild horses within the Burner Hills, Scrapper Springs, and Winters Creek Pastures (depending on the land exchange) as outlined in VI. *Technical Recommendations F1. or F2.*

By **proportioning** AUMs to domestic livestock and wild horses within the Rock Creek Herd Area, the AML under different options would be as displayed below. Table 13 shows the percentage of carrying capacity and AUMs allocated to wild horses and the number of wild horses under each of the five options.

Table 13. Percentage of Carrying Capacity and AUMs Allocated to Wild Horses under Various AML Options.

Allotment	Percentage of Carrying Capacity Allocated to Wild Horses Within RMP Herd Area			
	Option 1: Total # of AUMs of Specified Livestock Grazing (RMP)/Initial Herd Size (RMP)	Option 2: Average Actual Use	Option 3: Total # of AUMs of Specified Livestock Grazing/Actual Use by Wild Horses	Option 5: Herd Stability Number
Spanish Ranch	6%	15%	13%	N/A
Squaw Valley	7%	14%	15%	N/A
Total AUMs	1,880	4,194	4,049	3,000
AML (# of Wild Horses)	157	350	337	250

The wild horse population should be maintained at AML of 250 wild horses for the years between the completion date of this allotment evaluation and the completion of a RMP amendment, if one is completed. An RMP amendment would decide whether or not the herd area should be designated as a herd management area.

Management of AML at a maximum of 250 would mean that on a schedule of maintenance gathers every three years and an assumed rate of increase of 22.4% (the

average level of increase for this herd), initial herd size would be 167 horses. At the end of three years the herd size would be expected to be 250.

Maintaining wild horses at the appropriate management level (maximum number) will result in a thriving, natural, ecological balance between horses and other resource values. Continued monitoring within the allotment will show if any adjustment in the AML is needed.

If, through monitoring, an AML of maximum of 250 is shown to prevent attainment of multiple use objectives or is shown to not maintain a thriving ecological balance, then the option of proportioning carrying capacity based on the percentages outlined in the RMP will be implemented. Some indications that the multiple use objectives are not being maintained or that a thriving ecological balance is not being maintained could be: continued downward trend measured at Key Area RC-13, heavy horse pressure on new pasture fences, wild horse use outside of the designated area for management of wild horses, and/or continued wild horse movement out of the herd area in winter.

G. Range Improvements

Displayed below in Table 14 is a summary of range improvements needed to implement the grazing systems outlined above. Some range improvements are essential to implementation. Other range improvements will enhance implementation and are lower in priority.

Table 14. Range Improvements Needed to Implement the Grazing Systems Outlined by Option with a Cost Comparison.

Range Improvement	Estimated Cost	Grazing System Option				
		Spanish Ranch		Squaw Valley		Andrae
		1a.	1b.	2a.	2b.	3.
Range Improvements that are Critical for Implementation of the grazing systems						
Hot Creek Fence	\$ 3,000	✓				
Trout Ck Fence & Cattleguards	\$ 53,500			✓	✓	
Willow Ck Riparian Fence & cattleguard	\$ 42,500			✓	✓	
Riparian fencing in Cottonwood/Sixmile Pasture	\$ 5,000-30,000	✓				
Upper Toe Jam Fence	\$ 46,500			✓	✓	
Exclosures/spot fencing on Rock Ck in Upper Rock & Toe Jam Pasture	\$ 7,500			✓		
Frazer Creek Fence	\$ 24,000			✓	✓	
Total		\$ 8,000-33,000	\$ 0	\$174,000	\$166,500	\$ 0

Range Improvement	Estimated Cost	Grazing System Option				
		Spanish Ranch		Squaw Valley		Andrae
		1a.	1b.	2a.	2b.	3.
Range Improvements to <b>Enhance</b> Implementation of the grazing systems						
Andrae Spg Enclosures & Developments	\$ 24,000					✓
Ellison Spg Pipeline Extension & New Sheep Trough	\$ 6,500			✓	✓	
Skeleton Spg Trough & Pipeline Extension	\$ 7,000			✓	✓	
Exclosures/spot fencing on Toe Jam Ck in Upper Rock & Toe Jam Pasture	\$ 7,500			✓	✓	
Ivanhoe Spg Complex Protection & Development	\$ 20,000			✓	✓	
Guzzlers on Willow Ck Ridge and Ivanhoe area (Livestock portion only)	\$ 6,000			✓	✓	
Horseshoe Sdg Pit Reservoirs	\$ 8,000			✓	✓	
Rock Creek Sdg Sagebrush Reduction	\$ 9,000			✓	✓	
<b>TOTAL</b>		\$ 0	\$ 0	\$ 64,000	\$ 64,000	\$24,000

H. **Additional Improvements**

Within the allotment evaluation, other projects are outlined to enhance wildlife habitat, such as projects to decrease sediment production, facilitate wildlife movements, enhance non-stream riparian areas, rehabilitate crucial mule deer wildlife habitat, increase available water, and increase forage diversity and herbaceous cover.

*Monitoring and Reevaluation*

Continue to conduct necessary monitoring studies and periodically evaluate the effects of grazing to determine if progress is being made in meeting the multiple use objectives. The Spanish Ranch, Squaw Valley, and Andrae Allotments will be reevaluated after one complete grazing cycle of the proposed grazing system to determine progress toward attainment of objectives and to make any necessary adjustments in grazing use. Subsequently, these allotments will be reevaluated in accordance with priorities established in the Elko District Monitoring and Evaluation Schedule. If monitoring studies indicate a need to modify grazing use based on carrying capacity, necessary adjustments will be made. Studies will be conducted in accordance with BLM policy manual guidance as outlined in the Nevada Rangeland Monitoring Handbook.

Objectives have been consolidated or modified as needed to help better evaluate these allotments in the future. The objectives to be used in the next evaluation are listed below:

General Land Use Plan (Elko RMP/ROD) Objectives:

1. Maintain or improve the condition of the public rangelands to enhance productivity for all rangeland values.
2. Conserve and enhance terrestrial, riparian, and aquatic wildlife habitat.
3. Manage wild horse populations and habitat in the established herd areas consistent with other resource uses.

Standards for Rangeland Health Developed for the Northeastern Great Basin Area:

1. Upland Sites: Upland soils exhibit infiltration and permeability rates that are appropriate to soil type, climate, and land form.
2. Riparian and Wetland Sites: Riparian and wetland areas exhibit a properly functioning condition and achieve state water quality criteria.
3. Habitat: Habitats exhibit a healthy, productive, and diverse population of native and/or desirable plant species, appropriate to the site characteristics, to provide suitable feed, water, cover and living space for animal species and maintain ecological processes. Habitat conditions meet the life cycle requirements of threatened and endangered species.
4. Land use plans will recognize cultural resources within the context of multiple use.

Allotment Specific Objectives:

**Spanish Ranch and Squaw Valley Allotments:**

Livestock Grazing:

1. In the long-term, provide forage to sustain the total number of AUMs of specified livestock grazing for the Spanish Ranch and Squaw Valley Allotments.
2. Manage rangelands to achieve or exceed a late seral stage of ecological condition at existing key area monitoring locations (or additional key area monitoring locations selected in consultation with affected interests) where appropriate to site potential, except where Desired Plant Community objectives have been developed to achieve multiple use objectives.

Desired Plant Community Objectives for specific key area monitoring locations are as follows:

**Spanish Ranch Allotment**

Existing Key Areas:

- a. Key Area RC-04: Loamy 12-14" (CDS-T-88-31) Six Mile
  - Allowable perennial grasses 10-15%
  - Allowable perennial forbs 5-10%
  - Allowable shrubs 25-30%



- Maintain satisfactory age and form class of bitterbrush as measured by Cole Browse method  
% canopy cover of shrubs  $\leq$  30%
- b. Key Area RC-12: Claypan 12-16"/Loamy Slope 12-16" (CDW-2-T-02)  
Cornucopia Ridge
- |                             |        |
|-----------------------------|--------|
| Allowable perennial grasses | 5-10%  |
| Allowable perennial forbs   | 5-10%  |
| Allowable shrubs            | 30-35% |
- Maintain satisfactory age and form class of bitterbrush as measured by Cole Browse method  
% canopy cover of shrubs  $\leq$  30%
- c. Key Area RC-13: Loamy 8-10" (AS-T-88-37) Mint Mine
- |                             |        |
|-----------------------------|--------|
| Allowable perennial grasses | 5-10%  |
| Allowable perennial forbs   | 5-10%  |
| Allowable shrubs            | 25-30% |
- Maintain satisfactory age and form class of Wyoming big sagebrush as measured by Cole Browse method  
% canopy cover of shrubs  $\leq$  15%

Proposed New Key Areas:

- a. Soldier Cap (Pronghorn summer habitat)  
to be determined after baseline data are collected
- b. Near Burner Hills within the Rock Creek wild horse herd area (Loamy 8-10")  
to be determined after baseline data are collected

Squaw Valley Allotment

Existing Key Areas:

- a. Key Area RC-05: South Slope 14-18" (CDY-T-88-38) Toe Jam  
allowable percentages of grasses, forbs, and shrubs to be determined after baseline data are collected  
Maintain satisfactory age and form class of snowberry and chokecherry as measured by Cole Browse method  
% canopy cover of shrubs  $\leq$  30%
- b. Key Area RC-07: Claypan 10-12" (DI-T-88-33) Willow Creek Ridge
- |                             |        |
|-----------------------------|--------|
| Allowable perennial grasses | 10-15% |
| Allowable perennial forbs   | 5-10%  |
| Allowable shrubs            | 30-35% |
- Maintain satisfactory age and form class of low sagebrush as measured by Cole Browse method  
% canopy cover of shrubs  $\leq$  20-25%
- c. Key Area RC-09: Loamy 10-12" (pronghorn summer, deer intermediate, sage grouse) Antelope Spring
- |                             |        |
|-----------------------------|--------|
| Allowable perennial grasses | 15-20% |
| Allowable perennial forbs   | 5-10%  |
| Allowable shrubs            | 2-25%  |
- Maintain satisfactory age and form class of Wyoming big sagebrush as measured by Cole Browse method

% canopy cover of shrubs to be determined after baseline data are collected

- d. Key Area RC-10: Loamy 8-10" (CDW-T-88-36) Dinosaur Ridge
  - Allowable perennial grasses 5-10%
  - Allowable perennial forbs 7-12%
  - Allowable shrubs 5-10%
  - Maintain satisfactory age and form class of Wyoming sagebrush and basin big sagebrush as measured by Cole Browse method
  - % canopy cover of shrubs  $\leq$  20%
- e. Key Area RC-11: Claypan 12-16" (CDS-T-88-35) Pole Creek
  - Allowable perennial grasses 25-35%
  - Allowable perennial forbs 3-10%
  - Allowable shrubs 25-30%
  - Maintain satisfactory age and form class of low sagebrush as measured by Cole Browse method
  - % canopy cover of shrubs  $\leq$  20-25%
- f. Key Area RC-14: Loamy 10-12" (DI-T-88-34) Ivanhoe
  - Allowable perennial grasses 10-25%
  - Allowable perennial forbs 1-10%
  - Allowable shrubs 20-30%
  - Maintain satisfactory age and form class of big sagebrush as measured by Cole Browse method

Proposed New Key Area:

- a. Between Big Butte and Hot Creek Spring (Deer intermediate and pronghorn summer)
    - allowable percentages of grasses, forbs, and shrubs to be determined after baseline data are collected
    - Maintain satisfactory age and form class of bitterbrush as measured by Cole Browse method
3. Manage non-native rangelands for a good or excellent forage value condition (greater than or equal to 50% composition by weight of crested wheatgrass) consistent with other resource uses.
4. Manage grazing on native rangelands so as not to exceed utilization objectives for key species as measured at existing key area monitoring locations (or additional key area monitoring locations selected in consultation with affected interests) as follows:

Spanish Ranch Allotment  
Existing Key Areas:

Key Area Location	Utilization Objective
All key areas on native range	Average of 55% of current year's growth on native grass key species, not to exceed 60% in any one year

Key Area Location	Utilization Objective
RC-04 (CDS-T-88-31) RC-12 (CDW-2-T-02)	50% combined use of current year's growth on bitterbrush by livestock and big game (not to exceed 25% by livestock as measured at the end of livestock grazing)

Squaw Valley Allotment  
Existing Key Areas:

Key Area Location	Utilization Objective
All key areas on native range	Average of 55% of current year's growth on native grass key species, not to exceed 60% in any one year
RC-05 (CDS-T-88-38)	50% combined use of current year's growth on snowberry and chokecherry by livestock and big game

Proposed New Key Areas:

Key Area Location	Utilization Objective
Between Big Butte and Hot Spring Creek	50% combined use of current year's growth on bitterbrush by livestock and big game

5. Manage grazing on non-native rangelands so as not to exceed utilization objectives for crested wheatgrass as measured at existing key area monitoring locations (or additional key area monitoring locations selected in consultation with affected interests) as follows:

**Squaw Valley Allotment:**

Key Area Location	Utilization Objective
Horseshoe Seeding (RC-01)	Average of 55%, not to exceed 60% in any one year
Midas (RC-02) and Rock Creek (RC-03) Seedings	Average of 60%, not to exceed 65% in any one year

**Wildlife:**

6. Improve to and/or maintain all seasonal big game habitat to good or excellent condition at existing key area monitoring locations (or additional key area monitoring locations selected in consultation with affected interests), except where Desired Plant

Community objectives have been developed to achieve multiple use objectives, to provide forage and habitat capable of supporting the following reasonable numbers:

- 4,181 Mule deer (5,015 AUMs)
- 56 Pronghorn antelope (101 AUMs)

**Riparian:**

7. Manage grazing on the following streams to achieve short and long-term stream/riparian habitat objectives as outlined below:

**MIDDLE ROCK CREEK (6.0 miles)**

HABITAT PARAMETER	1988 <sup>1</sup>	SHORT-TERM OBJECTIVE (4yrs) <sup>2</sup>	LONG-TERM OBJECTIVE (20yrs)
Riparian Condition Class (% optimum)	39	51	60+
Stream width/depth Ratio	30	21	Maintain or improve
Proper Functioning Condition (PFC)		Show Progress Toward Meeting	Achieve

<sup>1</sup> Based on the most recent data available on public land.  
<sup>2</sup> Based on attainment of "good" condition (defined as 60% of optimum for riparian condition class) or a 30% improvement over baseline values.

**RED COW CREEK (3.5 miles)**

HABITAT PARAMETER	1988 <sup>1</sup>	SHORT-TERM OBJECTIVE (4yrs) <sup>2</sup>	LONG-TERM OBJECTIVE (20yrs)
Riparian Condition Class (% optimum)	42	55	60+
Stream width/depth Ratio	30	21	Maintain or improve
Proper Functioning Condition (PFC)		Show Progress Toward Meeting	Achieve

<sup>1</sup> Based on the most recent data available on public land.  
<sup>2</sup> Based on attainment of "good" condition (defined as 60% of optimum for riparian condition class) or a 30% improvement over baseline values.

TOE JAM CREEK (0.8 miles)

HABITAT PARAMETER	1995 <sup>1</sup>	SHORT-TERM OBJECTIVE (4yrs) <sup>2</sup>	LONG-TERM OBJECTIVE (20yrs)
Riparian Condition Class (% optimum)	51	60+	60+
Stream Width/depth Ratio	21	16	Maintain or improve
Shorewater Depth (in.)	1.2	1.6	Maintain or improve
Bank Undercut (in.)	0.1	1.0	Maintain or improve
Overhanging Woody Bank Cover (in.)	13.6	Maintain or improve	Maintain or improve
Proper Functioning Condition (PFC)		Show Progress Toward Meeting	Achieve

<sup>1</sup> Based on the most recent data available on public land.

<sup>2</sup> Based on attainment of "good" condition (defined as 60% of optimum for riparian condition class) or a 30% improvement over baseline values where appropriate. Otherwise, numbers shown represent reasonable objectives for improvement.

BIG COTTONWOOD CANYON CREEK (2.0 miles)

HABITAT PARAMETER	1977 <sup>1</sup>	SHORT-TERM OBJECTIVE (4yrs) <sup>2</sup>	LONG-TERM OBJECTIVE (20yrs)
Riparian Condition Class (% optimum)	55	60+	60+
Stream Width/depth Ratio	29	20	Maintain or improve
Proper Functioning Condition (PFC)		Show Progress Toward Meeting	Achieve

<sup>1</sup> Based on the most recent data available on public land.

<sup>2</sup> Based on attainment of "good" condition (defined as 60% of optimum for riparian condition class) or a 30% improvement over baseline values.



FOURMILE CREEK (0.5 miles)

HABITAT PARAMETER	1995 <sup>1</sup>	SHORT-TERM OBJECTIVE (4yrs) <sup>2</sup>	LONG-TERM OBJECTIVE (20yrs)
Riparian Condition Class (% optimum)	54	60+	60+
Stream Width/depth Ratio	30	21	Maintain or improve
Proper Functioning Condition (PFC)		Show Progress Toward Meeting	Achieve

<sup>1</sup> Based on the most recent data available on public land.

<sup>2</sup> Based on attainment of "good" condition (defined as 60% of optimum for riparian condition class) or a 30% improvement over baseline values.

FRAZER CREEK (1.4 miles)

HABITAT PARAMETER	1994 <sup>1</sup>	SHORT-TERM OBJECTIVE (4yrs) <sup>2</sup>	LONG-TERM OBJECTIVE (20yrs)
Riparian Condition Class (% optimum)	93	60+	60+
Stream Width/depth Ratio	10	<15	Maintain or improve
Shorewater Depth (in)	1.9	2.0	Maintain or improve
Bank Undercut (in.)	0.7	1.0	Maintain or improve
Overhanging Woody Bank Cover (in.)	3.6	4.7	Maintain or improve
Proper Functioning Condition (PFC)		Show Progress Toward Meeting	Achieve

<sup>1</sup> Based on the most recent data available on public land.

<sup>2</sup> Based on attainment of "good" condition (defined as 60% of optimum for riparian condition class) or a 30% improvement over baseline values. Otherwise, numbers shown represent reasonable objectives for improvement.

UPPER ROCK CREEK (1.0 miles)

HABITAT PARAMETER	1995 <sup>1</sup>	SHORT-TERM OBJECTIVE (4yrs) <sup>2</sup>	LONG-TERM OBJECTIVE (20yrs)
Riparian Condition Class (% optimum)	60	60+	60+
Stream Width/depth Ratio	23	16	Maintain or improve
Shorewater Depth (in)	0.9	1.2	Maintain or improve
Bank Undercut (in.)	0	1.0	Maintain or improve
Overhanging Woody Bank Cover (in.)	10.9	12.0	Maintain or improve
Proper Functioning Condition (PFC)		Show Progress Toward Meeting	Achieve

<sup>1</sup> Based on the most recent data available on public land.

<sup>2</sup> Based on attainment of "good" condition (defined as 60% of optimum for riparian condition class) or a 30% improvement over baseline values. Otherwise, numbers shown represent reasonable objectives for improvement.

UPPER WILLOW CREEK (1.0 miles)

HABITAT PARAMETER	1995 <sup>1</sup>	SHORT-TERM OBJECTIVE (4yrs) <sup>2</sup>	LONG-TERM OBJECTIVE (20yrs)
Riparian Condition Class (% optimum)	33	43	60+
Stream Width/depth Ratio	20	15	Maintain or improve
Shorewater Depth (in)	0	1.0	Maintain or improve
Bank Undercut (in.)	0	1.0	Maintain or improve
Overhanging Woody Bank Cover (in.)	0	2.0	Maintain or improve

HABITAT PARAMETER	1995 <sup>1</sup>	SHORT-TERM OBJECTIVE (4yrs) <sup>2</sup>	LONG-TERM OBJECTIVE (20yrs)
Proper Functioning Condition (PFC)		Show Progress Toward Meeting	Achieve

<sup>1</sup> Based on the most recent data available on public land.

<sup>2</sup> Based on attainment of "good" condition (defined as 60% of optimum for riparian condition class) or a 30% improvement over baseline values. Otherwise, numbers shown represent reasonable objectives for improvement.

WINTERS CREEK (1.7-2.2 miles <sup>3</sup>)

HABITAT PARAMETER	1988 <sup>1</sup>	SHORT-TERM OBJECTIVE (4yrs) <sup>2</sup>	LONG-TERM OBJECTIVE (20yrs)
Riparian Condition Class (% optimum)	58	60+	60+
Stream Width/depth Ratio	22	15	Maintain or improve
Proper Functioning Condition (PFC)		Show Progress Toward Meeting	Achieve

<sup>1</sup> Based on the most recent data available on public land.

<sup>2</sup> Based on attainment of "good" condition (defined as 60% of optimum for riparian condition class) or a 30% improvement over baseline values.

<sup>3</sup> Variation in length of public portion of Winters Creek is based on conflicting land surveys. 0.5 miles are located on "hiatus" acres: lands located within two surveys that overlap. Until the eastern township is resurveyed, precise land status can not be determined.

SIX MILE CREEK (2.4 miles)

HABITAT PARAMETER	1986 <sup>1</sup>	SHORT-TERM OBJECTIVE (4yrs) <sup>2</sup>	LONG-TERM OBJECTIVE (20yrs)
Riparian Condition Class (% optimum)	48	60+	60+
Stream Width/depth Ratio	26	18	Maintain or improve
Proper Functioning Condition (PFC)		Show Progress Toward Meeting	Achieve

<sup>1</sup> Based on the most recent data available on public land.  
<sup>2</sup> Based on attainment of "good" condition (defined as 60% of optimum for riparian condition class) or a 30% improvement over baseline values.

COYOTE CREEK (2.3 miles)

HABITAT PARAMETER	1993 <sup>1</sup>	SHORT-TERM OBJECTIVE (4yrs) <sup>2</sup>	LONG-TERM OBJECTIVE (20yrs)
Bank Cover (%) <sup>3</sup>	38	49	60+
Bank Stability (%)	59	60+	Maintain or improve
Stream Width/depth Ratio	36	25	Maintain or improve
Shorewater Depth (in)	0	1.0	Maintain or improve
Bank Undercut (in.)	0	1.0	Maintain or improve
Proper Functioning Condition (PFC)		Show Progress Toward Meeting	Achieve

<sup>1</sup> Based on the most recent data available on public land.  
<sup>2</sup> Based on attainment of "good" condition (defined as 60% of optimum for riparian condition class) or a 30% improvement over baseline values. Otherwise, numbers shown represent reasonable objectives for improvement.  
<sup>3</sup> Bank cover and bank stability ratings are from NDOW/Forest Service's General Aquatic Wildlife Survey (GAWS) Level III Stream Survey Methodology. Rating scales differ from BLM methodology.

SOLDIER CREEK (7.6 miles)

HABITAT PARAMETER	1993 <sup>1</sup>	SHORT-TERM OBJECTIVE (4yrs) <sup>2</sup>	LONG-TERM OBJECTIVE (20yrs)
Bank Cover (%) <sup>3</sup>	42	49	60+
Bank Stability (%)	63	Maintain or improve	Maintain or improve
Stream Width/depth Ratio	24.7	17	Maintain or improve
Shorewater Depth (in)	0.1	1.0	Maintain or improve
Bank Undercut (in.)	0.2	1.0	Maintain or improve
Proper Functioning Condition (PFC)		Show Progress Toward Meeting	Achieve

- <sup>1</sup> Based on the most recent data available on public land.  
<sup>2</sup> Based on attainment of "good" condition (defined as 60% of optimum for riparian condition class) or a 30% improvement over baseline values. Otherwise, numbers shown represent reasonable objectives for improvement.  
<sup>3</sup> Bank cover and bank stability ratings are from NDOW/Forest Service's General Aquatic Wildlife Survey (GAWS) Level III Stream Survey Methodology. Rating scales differ slightly from BLM methodology.

TROUT CREEK (2.2 miles)

HABITAT PARAMETER	1993 <sup>1</sup>	SHORT-TERM OBJECTIVE (4yrs) <sup>2</sup>	LONG-TERM OBJECTIVE (20yrs)
Bank Cover (%) <sup>3</sup>	49	60+	60+
Bank Stability (%)	76	Maintain or improve	Maintain or improve
Stream width/depth ratio	22.6	15.8	Maintain or improve
Shorewater Depth (in)	0.2	1.0	Maintain or improve
Bank Undercut (in.)	0.3	1.0	Maintain or improve



HABITAT PARAMETER	1993 <sup>1</sup>	SHORT-TERM OBJECTIVE (4yrs) <sup>2</sup>	LONG-TERM OBJECTIVE (20yrs)
Proper Functioning Condition (PFC)		Show Progress Toward Meeting	Achieve

<sup>1</sup> Based on the most recent data available on public land.

<sup>2</sup> Based on attainment of "good" condition (defined as 60% of optimum for riparian condition class) or a 30% improvement over baseline values where appropriate. Otherwise, numbers shown represent reasonable objectives for improvement.

<sup>3</sup> Bank cover and bank stability ratings are from NDOW/Forest Service's General Aquatic Wildlife Survey (GAWS) Level III Stream Survey Methodology. Rating scales differ slightly from BLM methodology.

In addition, short-term objectives for shorewater depth, bank undercut and overhanging woody bank cover will be established for Middle Rock Creek, Red Cow Creek, Big Cottonwood Canyon Creek, and Fourmile Creek as baseline data become available. **Note:** Under Option 1c., baseline values and stream miles may change if privately owned stream segments become public. Also, no objectives would be established for Winters, Fourmile, Big Cottonwood Canyon, and Sixmile Creeks which would be privately owned.

8. Within four years, show progress towards meeting Proper Functioning Condition (PFC) on lentic habitats as monitored at locations within each pasture or grazing treatment area and selected in consultation with affected interests. Over the long-term (20 years from date of implementation of the grazing system), achieve PFC on lentic habitats selected by the process described above.

**Wild Horses:**

9. Manage for a wild horse herd size which will maintain a thriving ecological balance consistent with other multiple uses while remaining within the newly designated wild horse herd area.

**Andrae Allotment:**

**Livestock Grazing:**

1. In the long-term, provide forage to sustain the total number of AUMs of specified livestock grazing for the Andrae Allotment.
2. Manage rangelands to maintain or exceed current mid seral stage of ecological condition at existing key area monitoring locations (or additional key area monitoring locations selected in consultation with affected interests) where appropriate to site potential, except where Desired Plant Community Objectives have been developed to achieve multiple use objectives.

Desired Plant Community Objectives for specific key area monitoring locations are as follows:

- a. Key Area KA-03: Claypan 12-16"/Loamy 10-12" (CDW-2-T-01)
    - Allowable perennial grasses 8-15%
    - Allowable perennial forbs 5-10%
    - Allowable shrubs 30-35%
    - Maintain satisfactory age and form class of bitterbrush as measured by Cole Browse method
    - % canopy cover of shrubs  $\leq$  30%
  - b. Key Area KA-04 (sage grouse)
    - Allowable perennial grasses 5-15%
    - Allowable perennial forbs 8-15%
    - Allowable shrubs 15-25%
    - Maintain satisfactory age and form class of bitterbrush as measured by Cole Browse method
    - % canopy cover of shrubs  $\leq$  30%
3. Manage grazing on native rangelands so as not to exceed utilization objectives for key species as measured at existing key area monitoring locations as follows:

Key Area Location	Utilization Objective
All key areas on native range	Average of 55% on native grass key species, not to exceed 60% in any one year
KA-03	25% on bitterbrush by cattle at the end of the livestock grazing season and 50% combined total use measured following winter use by big game

**Wildlife:**

4. Improve to and/or maintain all seasonal big game habitat to good or excellent condition at existing key area monitoring locations (or additional key area monitoring locations selected in consultation with affected interests), except where Desired Plant Community objectives have been developed to achieve multiple use objectives, to provide forage and habitat capable of supporting the following reasonable numbers:
  - 67 Mule deer (75 AUMs)

**Riparian:**

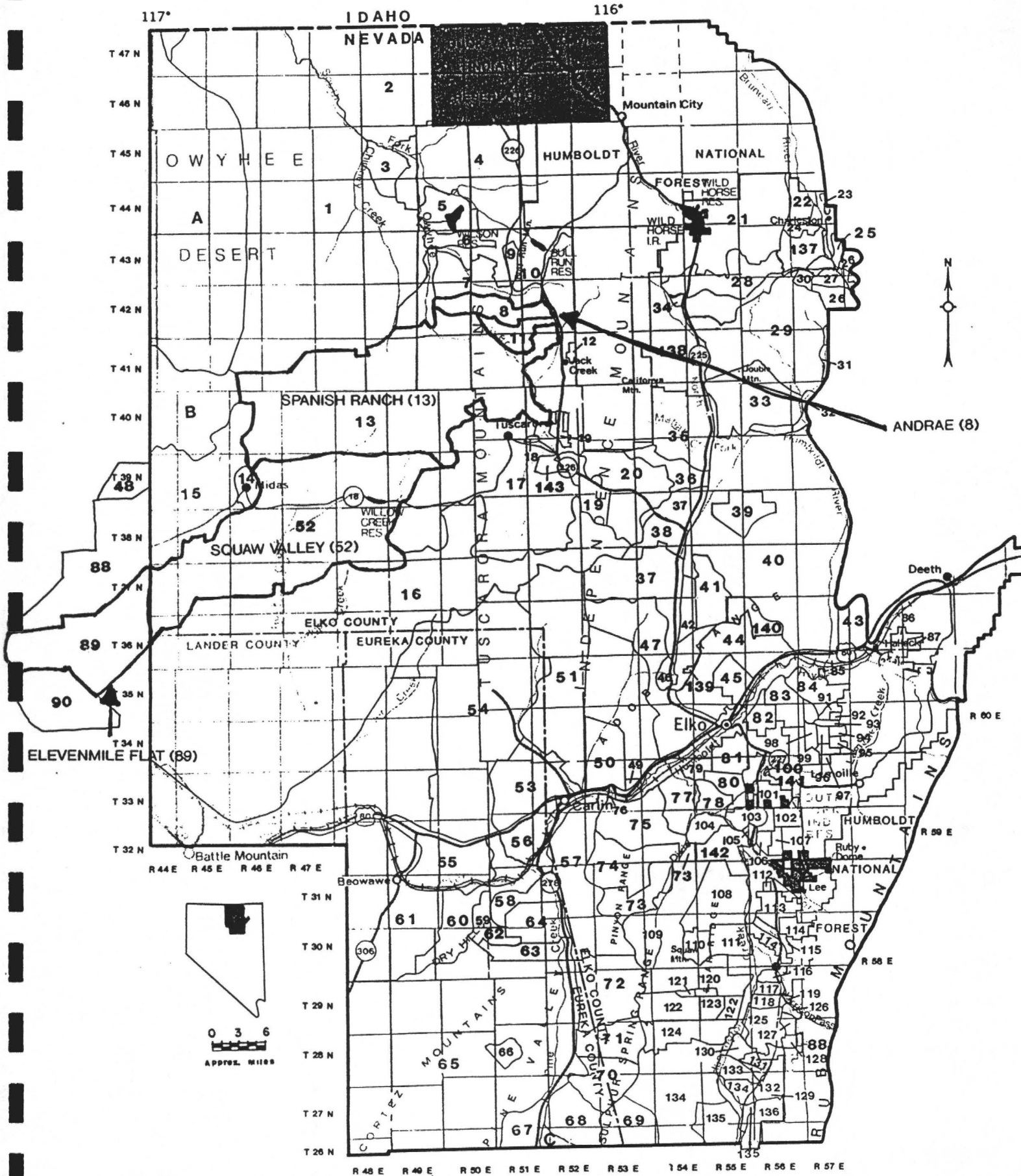
5. Within four years, show progress towards meeting Proper Functioning Condition (PFC) on lentic habitats as monitored at locations within each pasture or grazing treatment area and selected in consultation with affected interests. Over the long-term (20 years from date of implementation of the grazing system), achieve PFC on lentic habitats selected by the progress described above.

MAP 1

GENERAL VICINITY MAP

# ELKO RESOURCE AREA

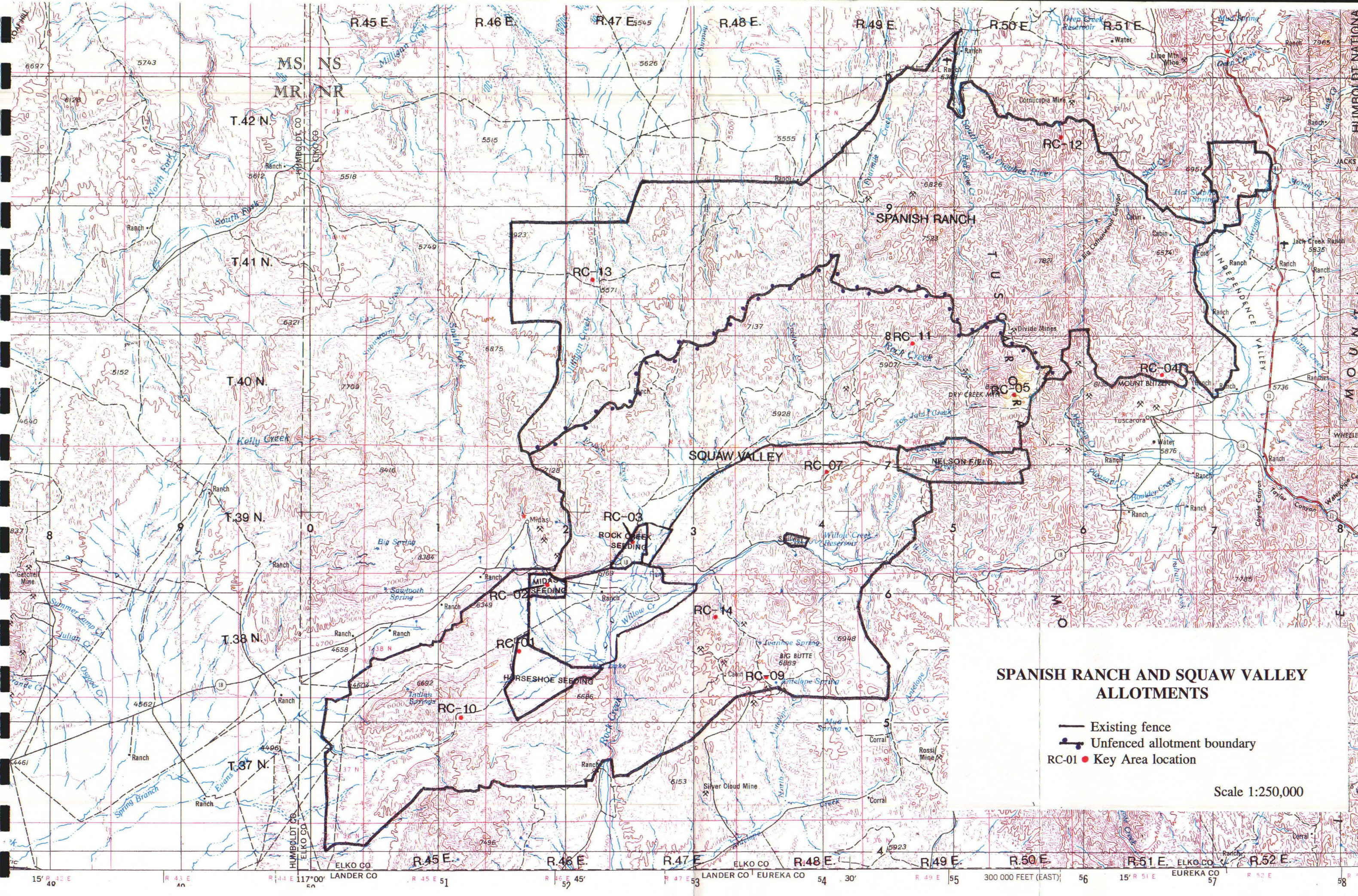
## GRAZING ALLOTMENT BOUNDARIES



MAP 2

SPANISH RANCH AND  
SQUAW VALLEY ALLOTMENTS  
WITH EXISTING FENCES AND  
KEY AREA LOCATIONS





### SPANISH RANCH AND SQUAW VALLEY ALLOTMENTS

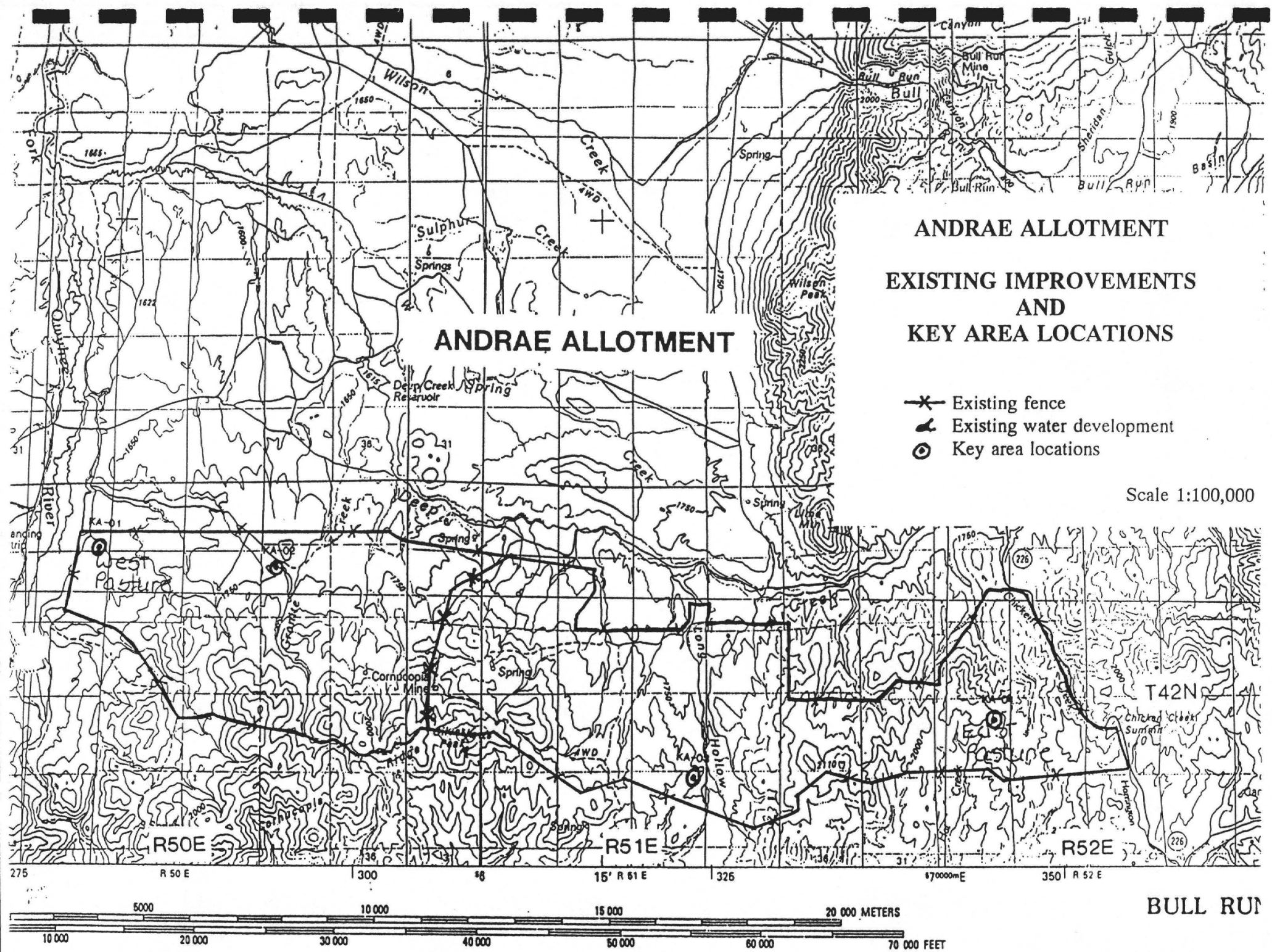
- Existing fence
- Unfenced allotment boundary
- RC-01 • Key Area location

Scale 1:250,000






MAP 3

ANDRAE ALLOTMENT  
WITH EXISTING FENCES AND  
KEY AREA LOCATIONS

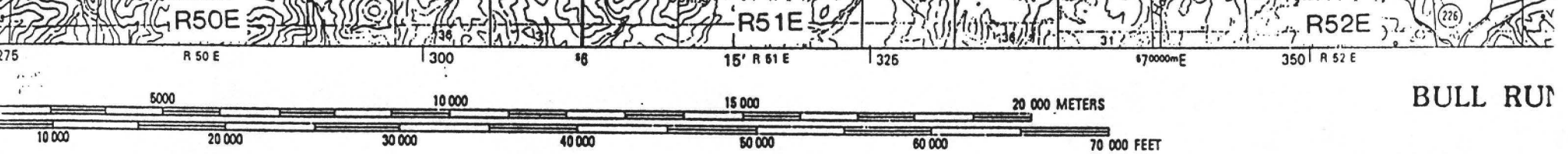


**ANDRAE ALLOTMENT**

**ANDRAE ALLOTMENT  
EXISTING IMPROVEMENTS  
AND  
KEY AREA LOCATIONS**

-  Existing fence
-  Existing water development
-  Key area locations

Scale 1:100,000

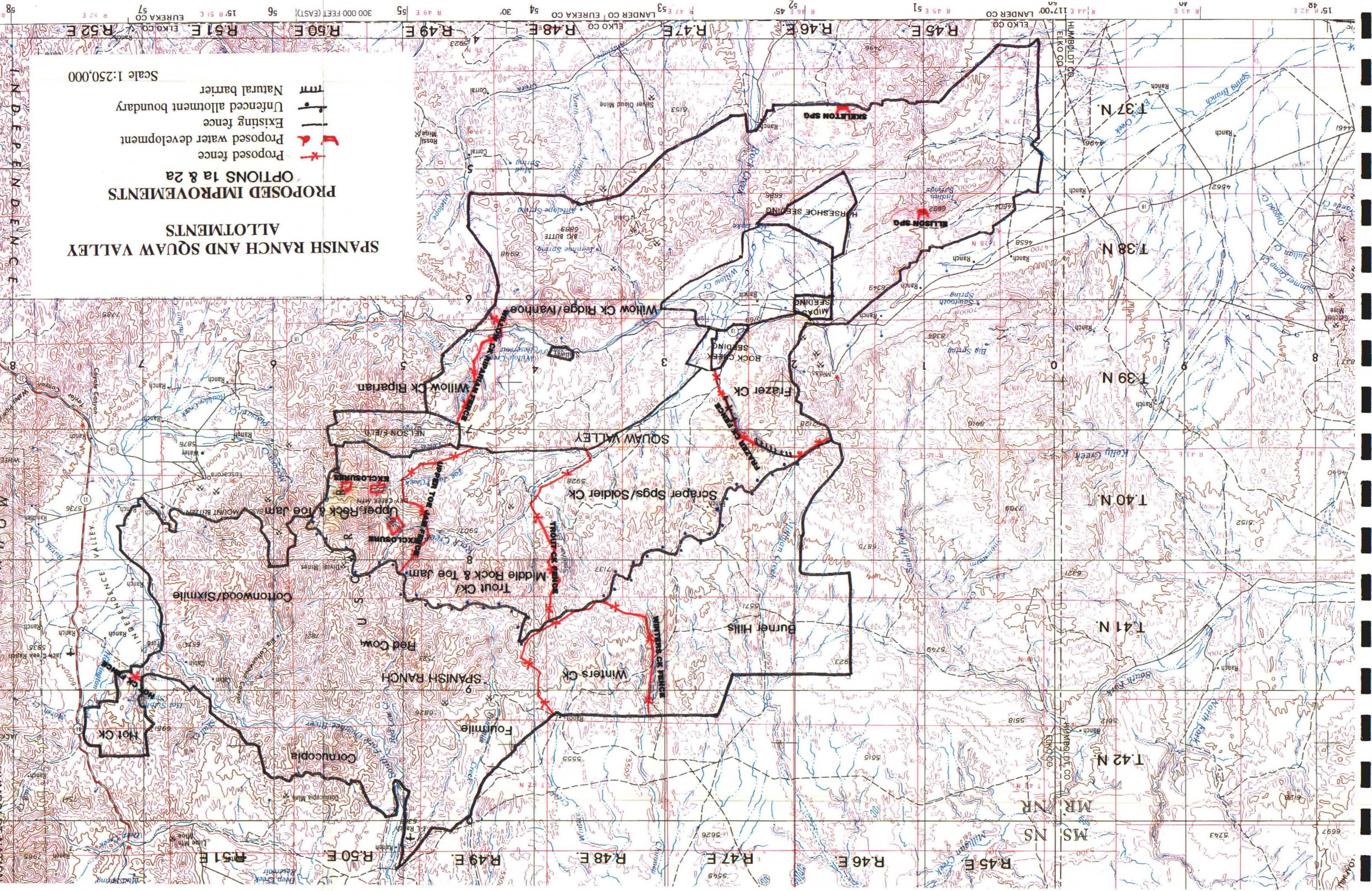


**BULL RUN**

MAP 4

PROPOSED RANGE IMPROVEMENTS  
AND PROPOSED PASTURE LOCATIONS --  
FOR OPTIONS 1a. AND 2a.





### SPANISH RANCH AND SQUAW VALLEY ALLOTMENTS

#### PROPOSED IMPROVEMENTS OPTIONS 1a & 2a

- Proposed fence
- Proposed water development
- Existing fence
- Unfenced allotment boundary
- Natural barrier

Scale 1:250,000

K D E P N D E N C E

M O N

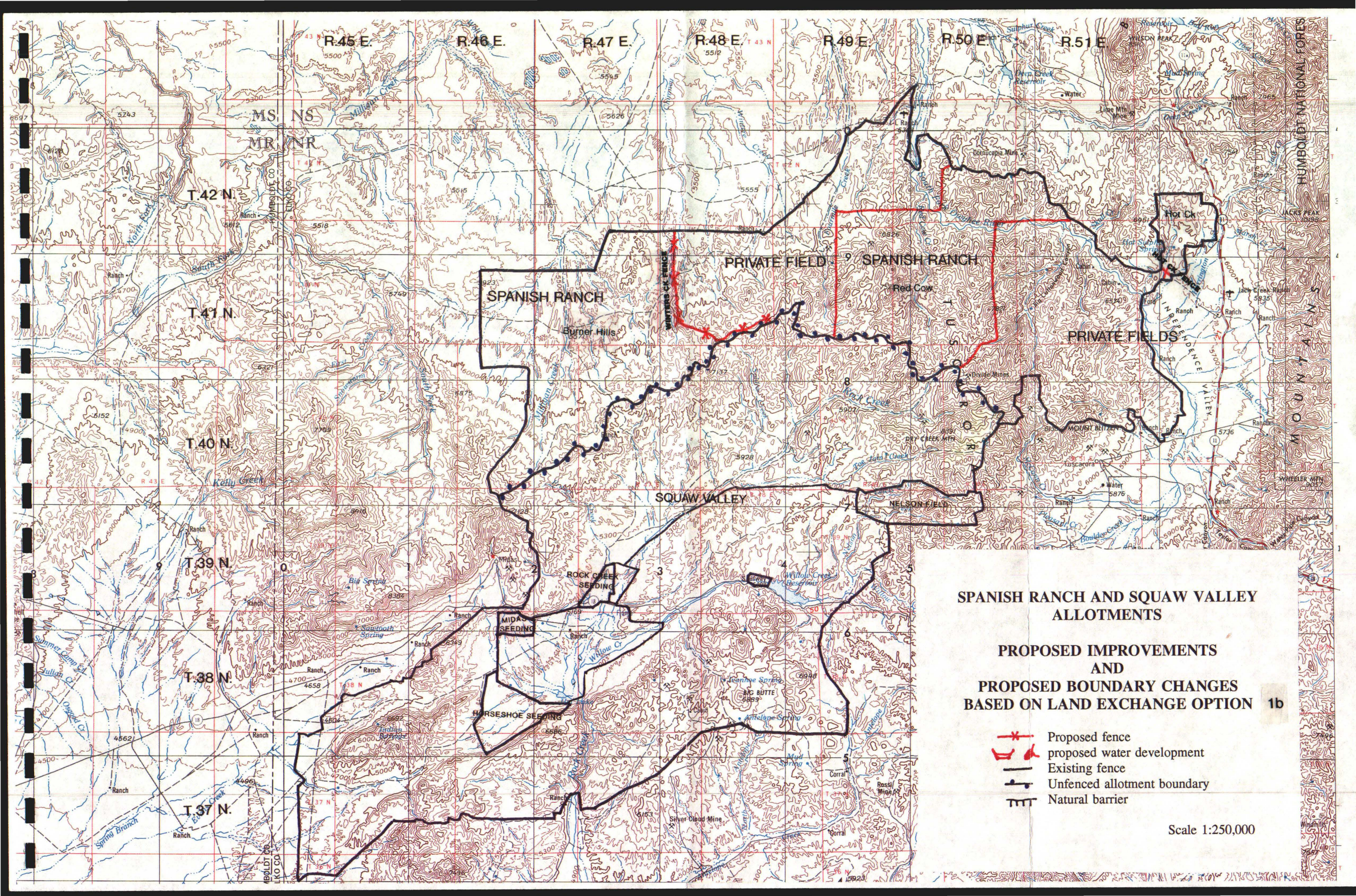
G I A B A L E N T I O N



MAP 5






PROPOSED ALLOTMENT BOUNDARY,  
PASTURE LOCATIONS,  
RANGE IMPROVEMENTS, AND  
APPROXIMATE LAND STATUS FOR  
SPANISH RANCH ALLOTMENT --  
FOR OPTION 1b.





**SPANISH RANCH AND SQUAW VALLEY ALLOTMENTS**

**PROPOSED IMPROVEMENTS AND PROPOSED BOUNDARY CHANGES BASED ON LAND EXCHANGE OPTION 1b**

-  Proposed fence
-  proposed water development
-  Existing fence
-  Unfenced allotment boundary
-  Natural barrier

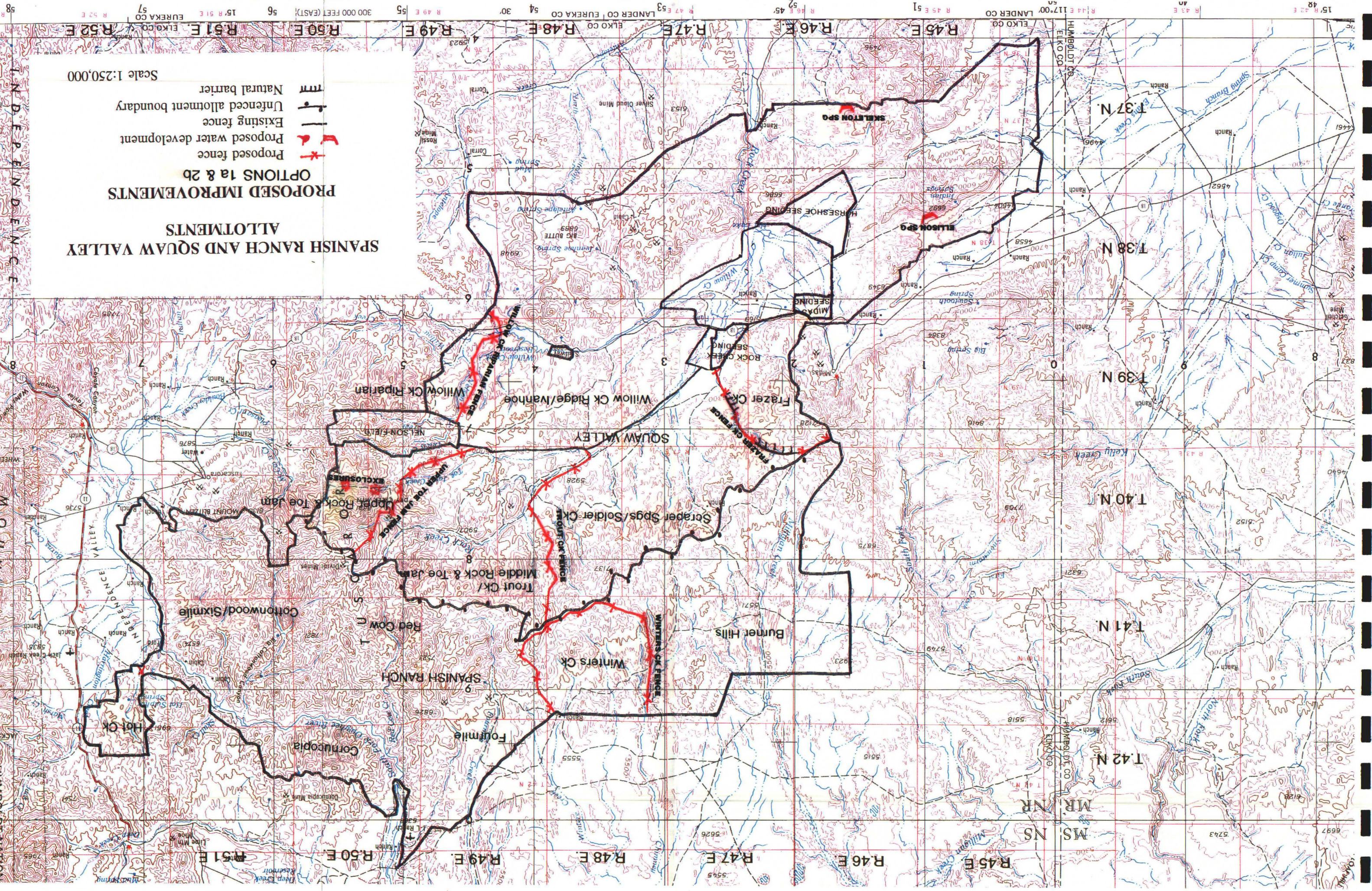
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MAP 6

PROPOSED RANGE IMPROVEMENTS  
AND PROPOSED PASTURE LOCATIONS --  
FOR OPTIONS 1a. AND 2b.





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M O N T A N A

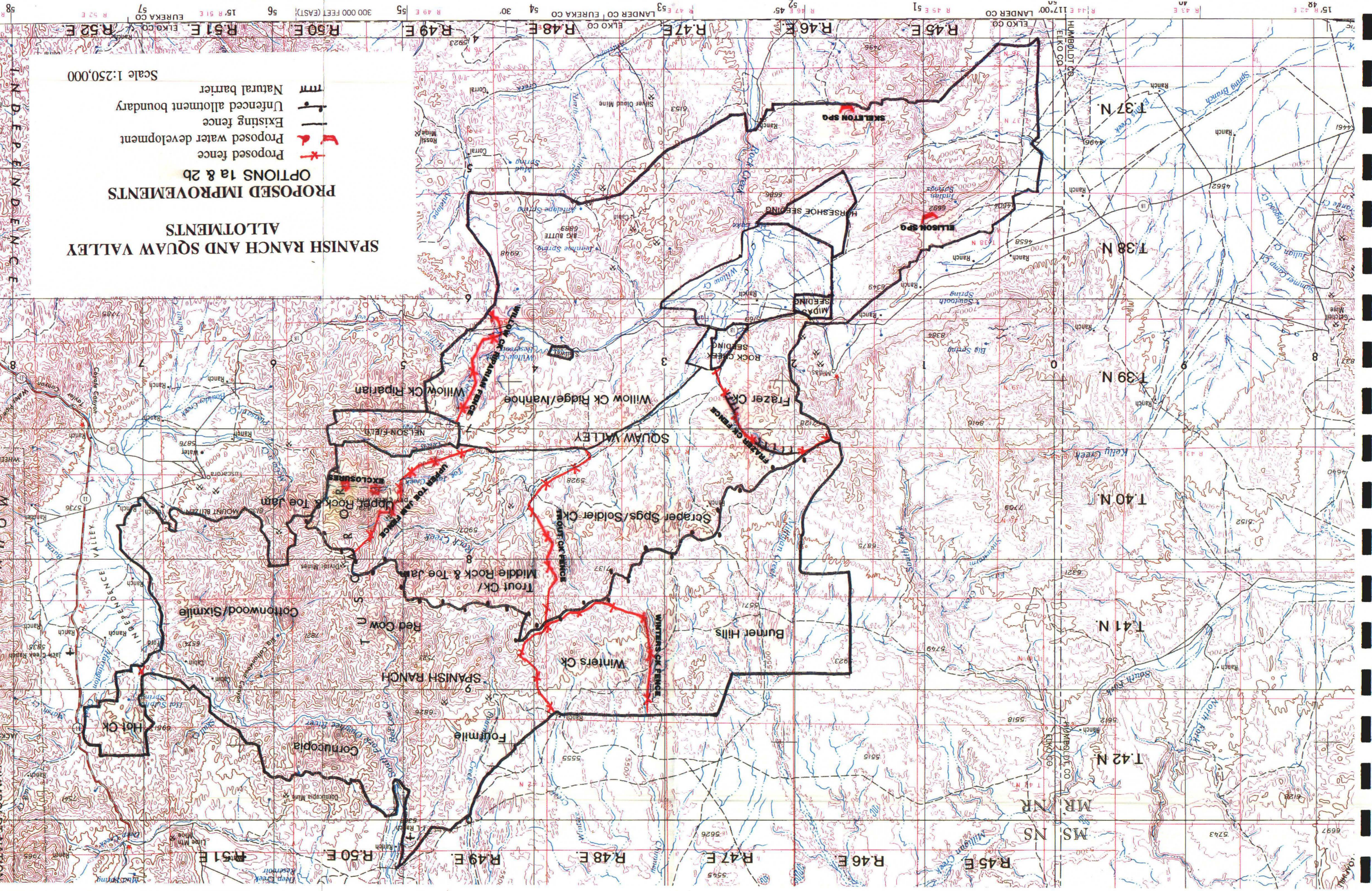
A T M A D A M B L E N T N I T I A N

**SPANISH RANCH AND SQUAW VALLEY ALLOTMENTS**

**PROPOSED IMPROVEMENTS OPTIONS 1a & 2b**

- Proposed fence
- Proposed water development
- Existing fence
- Unfenced allotment boundary
- Natural barrier

Scale 1:250,000



K N D E P N D E N C E

M O N T A N A

A T M A D A M B L E N T N I T I A N

**SPANISH RANCH AND SQUAW VALLEY ALLOTMENTS**

**PROPOSED IMPROVEMENTS OPTIONS 1a & 2b**

- Proposed fence
- Proposed water development
- Existing fence
- Unfenced allotment boundary
- Natural barrier

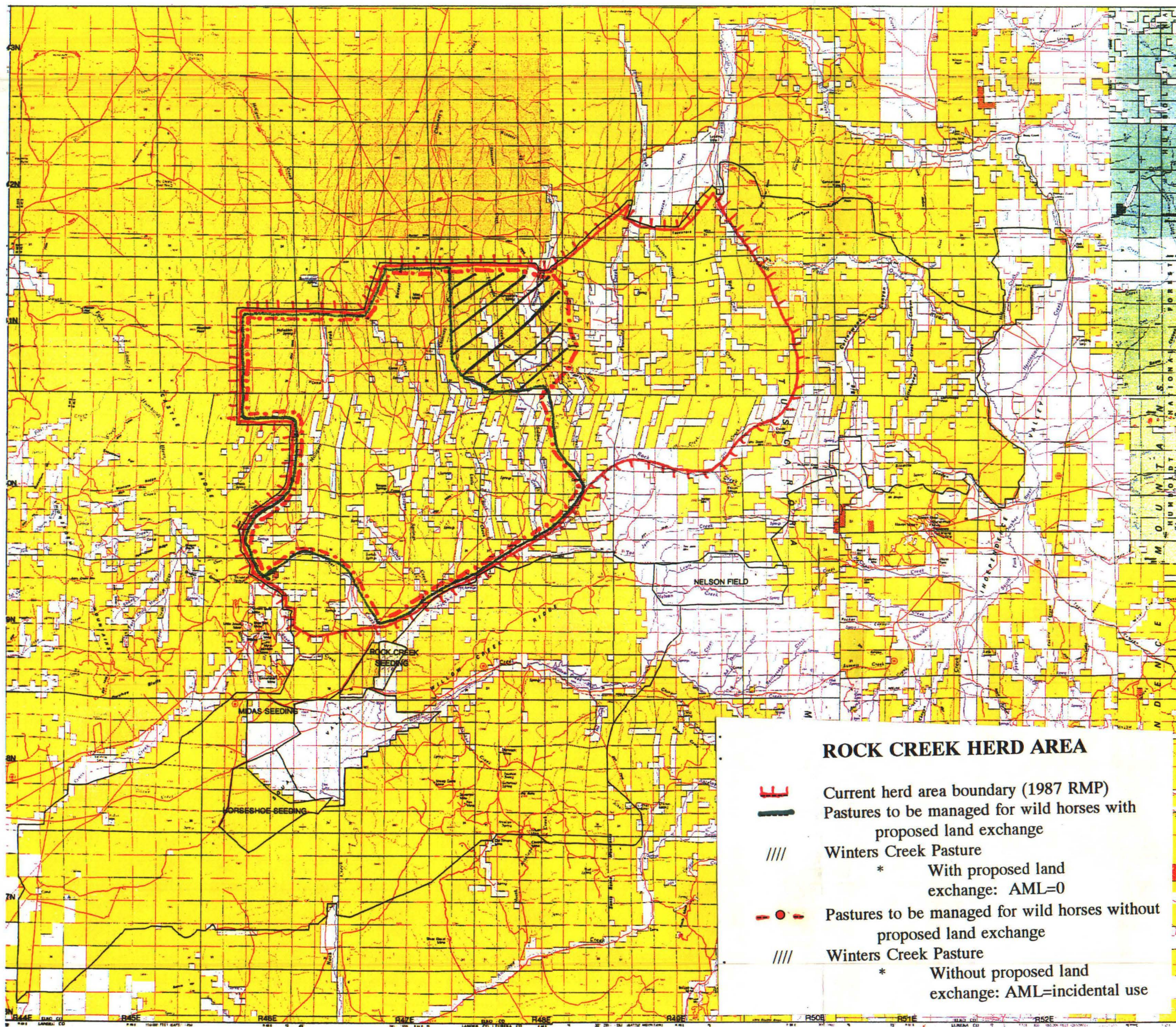
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MAP 7

ROCK CREEK HERD AREA  
WITH CURRENT LAND STATUS  
AND PROPOSED USE AREA  
BOUNDARY CHANGES





**ROCK CREEK HERD AREA**

-  Current herd area boundary (1987 RMP)
-  Pastures to be managed for wild horses with proposed land exchange
-  Winters Creek Pasture
  - \* With proposed land exchange: AML=0
-  Pastures to be managed for wild horses without proposed land exchange
-  Winters Creek Pasture
  - \* Without proposed land exchange: AML=incidental use