

# McNeel-Ryegrass Grazing Plan

## Management Objectives

The goal of this plan is to implement a rotational grazing system that balances grazing 600 cow/calf pairs from no earlier than June 1 to no later than September 15 while building growing-season rest for preferred vegetation species into the ecological system. It is believed that the following resource objectives can be maintained/achieved via plan implementation:

1. Provide adequate growing season rest for preferred vegetation species (namely cool season bunch grass species).
2. Promote sagebrush recruitment in order to maintain or improve mule deer winter range and seasonal sage grouse habitat in the portion of the brodie burn (1999) that is inside the Brodie Draw Allotment.
3. Reduce livestock mortality due to muddy conditions in poorly functioning livestock water pits.
4. Reduce livestock grazing pressure in about one third of the East Aspen Ridge allotment, thus allocating grass forage for either grouse nesting cover or wild ungulate use.
5. Improve sage grouse brood rearing habitat by restoring hydrologic function within several wet meadow areas in the East Aspen Ridge allotment (Figures 3 & 5).
6. Maintain or improve site-specific sage grouse populations.
7. Maintain or improve riparian condition in Brodie Draw.
8. Maintain the Wyoming Standards for Rangeland Health

## Project Area Description

Figure 1 is a project area map.

**Land Ownership:** The project encompasses a total of 11,730 acres of which 920 are privately owned, 40 are managed by the state and the remaining 10,770 are managed by the BLM (numbers derived from BLM corporate GIS layers) Pinedale Field Office (PFO). There are three federal grazing allotments involved: East Aspen Ridge, Brodie Draw, and Jewett-Rye Grass. The grazing preference for these allotments is currently held by the Robert L. McNeel Living Trust, Eva D. Kelly Trustee.

**Climate:** The climate is typical of western Wyoming with long, cold winters and short, cool summers. The frost-free period is about 45 days. Annual precipitation is generally 10-13 inches with the bulk arriving as snow.

**Riparian Resources:** There were no stream reaches identified or evaluated during the 1994-1999 PFO proper functioning condition (PFC) surveys. However, there are several areas within the project that may warrant PFC evaluation (namely Brodie Draw and possibly Ryegrass Draw) and certainly need some monitoring plan to evaluate whether improvement in wet-meadow conditions occur as a result of proposed management changes.

**Upland Vegetation Resources:** The project area is typical of semi-arid, high elevation sagebrush steppe ecosystems in southwestern Wyoming. The dominant vegetation species is Wyoming big sage brush with the expected associated bunchgrass-forb understory. Black sage brush/bare ground tends to dominate windswept ridge tops that have shallower soils.

### **Wildlife Resources:**

**Sage grouse:** The allotments contain suitable yearlong habitat for sage-grouse, including breeding sites (18 known leks within 2 miles of project area), nesting and brood rearing areas, and winter habitat.

Lek count data indicates a relatively stable trend in population on leks associated with these allotments. However, long term trends for sage-grouse in the Upper Green River Basin (and throughout their range) show a decline in population.

*BLM Sensitive Species (excluding sage grouse):* Other sensitive species that potentially occur within these allotments include pygmy rabbits, white tailed prairie dogs, ferruginous hawk, long-billed curlew, burrowing owl, sage thrasher, loggerhead shrike, Brewer's sparrow, and sage sparrow.

*Big game species:* The allotments lie within crucial winter range and migration routes for mule deer and some areas provide crucial winter range for moose. Pronghorn migrate through the area in the spring and fall with some summer use. Mule deer using the allotments are generally from the Sublette Mule Deer Herd. While pronghorn and moose are part of the Sublette Pronghorn Herd and the Sublette Moose Herd, respectively. Current data from the Wyoming Game and Fish Department indicates the Sublette Mule Deer herd is below objective, although the herd is relatively stable. Without increased forage in the winter range habitat, it is likely that the population will not show substantial increases. Pronghorn in the herd are above objective but recent efforts have been made to bring the population down to more sustainable levels. Moose have generally been declining in the Sublette Herd, however the trend has recently stabilized.

*Other wildlife species:* Suitable habitat exists for a variety of small mammals, migratory songbirds, raptors, and other nongame species. There is currently very little trend data associated with many of these species.

**Livestock Grazing:** Cattle grazing has been a part of this landscape for at least 120 years. However, it was the passage of the Taylor Grazing Act in 1934 that implemented some form of managed grazing under an allotment-permittee system. The original forage allocation for the entire project area was about 2,000 animal unit months (AUM's). In the middle sixties this number was reduced by about 20% to its' current allocation of 1,670 AUM's. The traditional livestock use of these lands has been as a transition area between the home ranch where cattle are fed hay during the winter months and summer range on US Forest Service lands. As such, these allotments have been grazed annually during the spring (or growing season).

### **Range Improvements**

- Brodie Draw well water system: The Brodie Draw Well has been drilled but not completed. This project would complete the well and attach two separate water pipelines in order to bring water to the Brodie Draw and West Aspen Ridge grazing allotments. This would improve livestock distribution in both allotments and increase livestock use of the Brodie Burn area in Brodie Draw allotment. The Brodie Burn occurred in 1999 and shrub recruitment has been very slow. If grazing pressure on competitive grasses can be increased then the pace of shrub recruitment should also increase, thus improving winter mule deer habitat as well as seasonal habitat for sage grouse. (Figure 2)
- Boulder Lake Reservoir retirement: This water pit occurs in an area of the East Aspen Ridge allotment characterized by sage brush and cool season bunch grasses. The section of the allotment tends to be very dry and does not produce high amounts of forage, compared to other portions of the allotment. The reservoir lies at the toe of a wet meadow area, rarely fills with water, and empties quickly. It is very shallow and muddy and the livestock operator loses several adult cows and calves every year (four cows and one calf in 2008). The operator and range specialist feel the best course of action is to retire this reservoir. This should reduce grazing pressure in this portion of the allotment, effectively allocating grass for either grouse

nesting cover or wild ungulate use. This should also return the area to its original hydrologic function, improving sage grouse brood rearing conditions. (Figure 3 and Figure 4)

- Redesign Ryegrass Reservoir #3: This water pit occurs at the head of a wet meadow riparian complex, is wide and shallow, and fed by a small spring and snow melt. The operator often loses one to two cattle in this reservoir every year. We would like to shift the reservoir location to create a smaller, deeper reservoir and retire the original dam. This should return the area to its original hydrologic function, improving sage grouse brood rearing conditions while reducing livestock mortality. (Figure 5)

### Grazing Practices

**Livestock Numbers & Season of Use:** Livestock turn-out date will be no earlier than June 1 and take-off date will be no later than September 15. Use in each grazing allotment is initially limited to the following:

- Jewett Rye Grass cannot exceed 440 Animal Unit Months (AUM's)
- Brodie Draw cannot exceed 385 AUM's
- East Aspen Ridge cannot exceed 846 AUM's

The permitted livestock number will not exceed 600 cow/calf pairs or equivalent.

Table 1 summarizes the maximum use allowed in each allotment when the livestock number reaches the objective of 600 cow/calf pairs or equivalent. Number of days in each allotment can be increased when livestock numbers are lower as long as total permitted AUM's are not exceeded. Livestock will be managed as one herd rotated through allotments and not split into multiple herd groups.

**Table 1 – Maximum number of permitted days when livestock number reaches objective of 600 Cow/Calf pairs or equivalent**

<i>Allotment</i>	<i>AUM's</i>	<i>Cow/Calf Pairs or Equivalent</i>	<i>Maximum Grazing Days</i>
East Aspen Ridge	846 (+ 93 Private)	600	47
Brodie Draw	385	600	19
Jewett Rye Grass	440	600	21
<b>Totals</b>	<b>1764</b>		<b>87</b>

**Planned Grazing:** Initially, growing-season use of grasses in the upland burned area in the Brodie Draw allotment is important in order to shift the competitive advantage from grasses to shrubs and promote shrub recruitment. Therefore, for at least the first two years of plan implementation (once the water infrastructure is in place) livestock will turn out first into Brodie Draw and then rotate through the other two allotments. After the first two years an annual grazing schedule will be developed between the permittee and BLM range specialist. The general guidelines of the plan need to incorporate the following components:

- A deferred rotation paradigm such that each allotment receives one growing season of rest at least every third year
- The “rest” allotment should be used as the third allotment during its’ growing season rest year and as the first allotment the year after its’ rest year
- Livestock spend 2-7 days in Jewett Rye Grass at the end of every grazing season in order to facilitate gathering and trailing home.

Table 2 illustrates an example grazing rotation that includes several years of concentrated spring cattle use on the Brodie burn followed by a three-year deferred rotation grazing system.

<b>Table 2 – Example grazing rotation including concentrated use on Brodie burn followed by three-year deferred rotation grazing system</b>										
	<b>Brodie Draw</b>			<b>East Aspen Ridge</b>			<b>Jewett Rye Grass</b>			<b>Comments</b>
<b>Year</b>	<b>On Date</b>	<b>Off Date</b>	<b># Days</b>	<b>On Date</b>	<b>Off Date</b>	<b># Days</b>	<b>On Date</b>	<b>Off Date</b>	<b># Days</b>	
<b>1</b>	1-Jun	26-Jun	25	27-Jun	22-Aug	56	23-Aug	15-Sep	23	Concentrate use on Brodie burn upland areas
<b>2</b>	1-Jun	26-Jun	25	22-Jul	9-Sep	49	27-Jun	21-Jul	24	
							10-Sep	15-Sep	5	
<b>3</b>	1-Jun	26-Jun	25	27-Jun	22-Aug	56	23-Aug	15-Sep	23	Begin three-year grazing rotation
<b>4</b>	26-Jun	21-Jul	25	22-Jul	9-Sep	49	1-Jun	25-Jun	24	
							10-Sep	15-Sep	5	
<b>5</b>	22-Aug	9-Sep	18	1-Jun	27-Jul	56	28-Jul	21-Aug	24	
							10-Sep	15-Sep	5	

Assumptions: running 450 cattle, spend 5 days in Jewett rye Grass at the end of every season

### Flexibility

- Unless otherwise arranged, the grazing plan in Table 2 will be followed for the first five years after implementation and then years 3-5 will be repeated until this plan is updated
- Changes can be made on an annual basis via consultation between the permittee and BLM rangeland management specialist
- Changes should be documented using the Courtesy Grazing Application (form 4130-3a)
- Animal numbers can fluctuate annually but cannot exceed 600 cow/calf pairs or equivalent
- Turn-out and take-off dates can fluctuate annually but turn-out cannot occur earlier than June 1 and take-off cannot occur later than September 15 except in accordance with 43 CFR 4130.4.
- Livestock must be managed according to a deferred rotation grazing system such that livestock move as a group, rotating through each allotment within the system. Livestock cannot use more than one allotment at a time within the rotation for any protracted period of time.
- The number of days in each allotment can exceed those outlined in Table 1 as long as total permitted AUM's are not exceeded.

### Monitoring

In order to appropriately measure success in meeting management objectives an adequate monitoring plan must include a realistic monitoring schedule, the measuring of meaningful indicators, and timely data analysis. Below is a recap of management objectives followed by the specific indicators to be measured in order to determine success or needed changes in management. Unless otherwise stated, all vegetation monitoring techniques are adopted from the Wyoming Rangeland Monitoring Guide, 2001 along with guidance from the Pinedale RMP. All indicators will be monitored during summer 2009 to establish a pseudo-baseline; key areas will be established in cooperation with the grazing permittee, the BLM rangeland management specialist, and the BLM wildlife biologist prior to any monitoring. The assumption associated with this pseudo-baseline is that the rotational grazing plan will be implemented

starting in June 2009 but the entire grazing plan, including range improvements, cannot be implemented until all range improvements have been completed (the target completion date is June 2010).

1. **Objective:** Provide adequate growing season rest for preferred vegetation species (namely cool season bunch grass species).  
**Indicator:** A neutral or positive Grazing Response Index rating in key areas.  
**Monitoring Technique:** Grazing Response Index.  
**Frequency Measured:** Annually.
2. **Objective:** Promote sagebrush recruitment in order to maintain or improve mule deer winter range and seasonal sage grouse habitat in the portion of the brodie burn (1989) that is inside the Brodie Draw Allotment.  
**Indicator:** Increase in relative cover of immature sagebrush plants in key areas.  
**Monitoring Technique:** Cover by Life Form (separate sagebrush into immature, mature, and decadent).  
**Frequency Measured:** Every 3 to 5 years.
3. **Objective:** Reduce livestock mortality due to muddy conditions in poorly functioning livestock water pits.  
**Indicator:** Decrease in the number of animals found dead in either the Boulder Lake reservoir or Rye Grass Reservoir #3 after modifications are completed.  
**Monitoring Technique:** Field observations or communications with livestock operator.  
**Frequency Measured:** Annually or until all cooperators feel the objective has been achieved.
4. **Objective:** Reduce livestock grazing pressure in about one third of the East Aspen Ridge allotment, thus allocating grass forage for grouse nesting cover and/or wild ungulate use.  
**Indicator:** Decrease in percent forage utilization in key areas.  
**Monitoring Technique:** Landscape Appearance Method.  
**Frequency Measured:** Annually for the first 3 years then every 3 to 5 years or until all cooperators feel the objective has been achieved.
4. **Objective:** Improve sage grouse brood rearing habitat by restoring hydrologic function within several wet meadow areas in the East Aspen Ridge allotment (Figures 3 & 5).  
**Indicator:** A neutral or positive Grazing Response Index rating in key areas.  
**Monitoring Technique:** Grazing Response Index.  
**Frequency Measured:** Annually.
5. **Objective:** Maintain or improve site-specific sage grouse populations.  
**Indicator:** Declining trend in the number of males and/or females at established lek sites  
**Monitoring Technique:** Lek counts.  
**Frequency Measured:** Annually.
6. **Objective:** Maintain or improve riparian condition in Brodie Draw.  
**Indicator 1:** Maintain or achieve Proper Functioning Condition (PFC).  
**Monitoring Technique:** PFC.  
**Frequency Measured:** Conduct initial survey in summer 2009. Re-survey every 5-10 years.

**Indicator 2:** A neutral or positive Grazing Response Index rating in key areas.

**Monitoring Technique:** Grazing Response Index.

**Frequency Measured:** Annually.

**Indicator 3:** Maintain or improve greenline stability on PFC-monitored reaches within the project area.

**Monitoring Technique:** Greenline Stability on those reaches determined to be most used by livestock.

**Frequency Measured:** every 3-5 years per reach.

**7. Objective:** Maintain the Wyoming Standards for Rangeland Health

**Indicator:** Rangeland health standards continue to be met in all areas of all three allotments.

**Monitoring Technique:** Rangeland health assessment according to Technical Reference 1734-6 Volume 4, 2005.

**Frequency Measured:** A new rangeland health standards assessment will be performed in summer 2009 or 2010 and further monitoring needs will be developed by the interdisciplinary team and permittee at that time.

### **Evaluation**

This grazing plan will be evaluated at least every three years. At a minimum the grazing permittee and BLM rangeland management specialist will conduct the evaluation. The factors to be considered during evaluation include but are not limited to:

- Are objectives being met?
- Is the grazing system appropriate to meet objectives?
- Are additional range improvements or vegetation treatments required to meet plan objectives?
- Are plan objectives realistic or do they need modification?

### **Authorities**

- The Pinedale Field Office Resource Management Plan, 2008
- 43 CFR 4120, 4130, and 4180



Figure 1

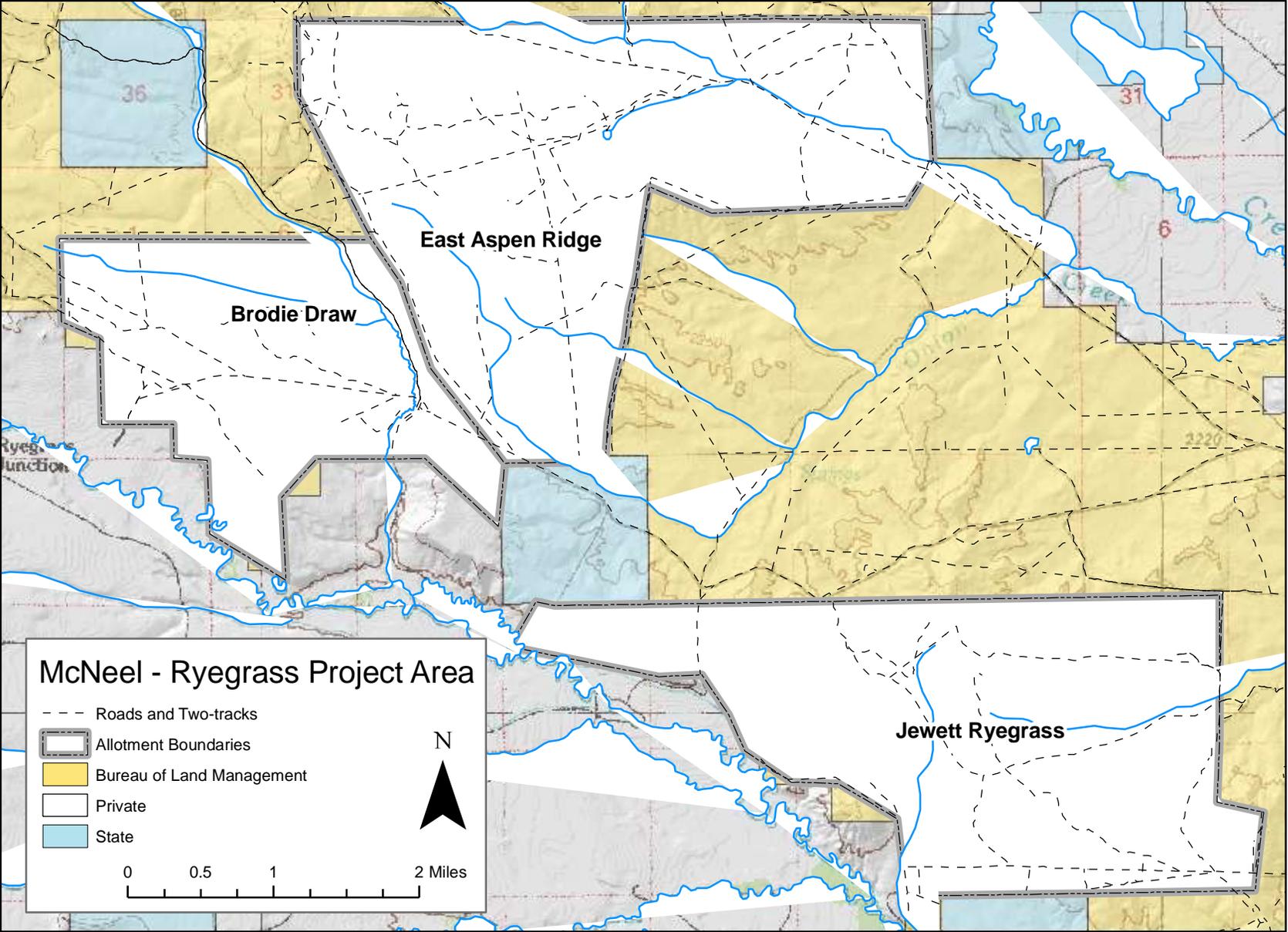


Figure 2

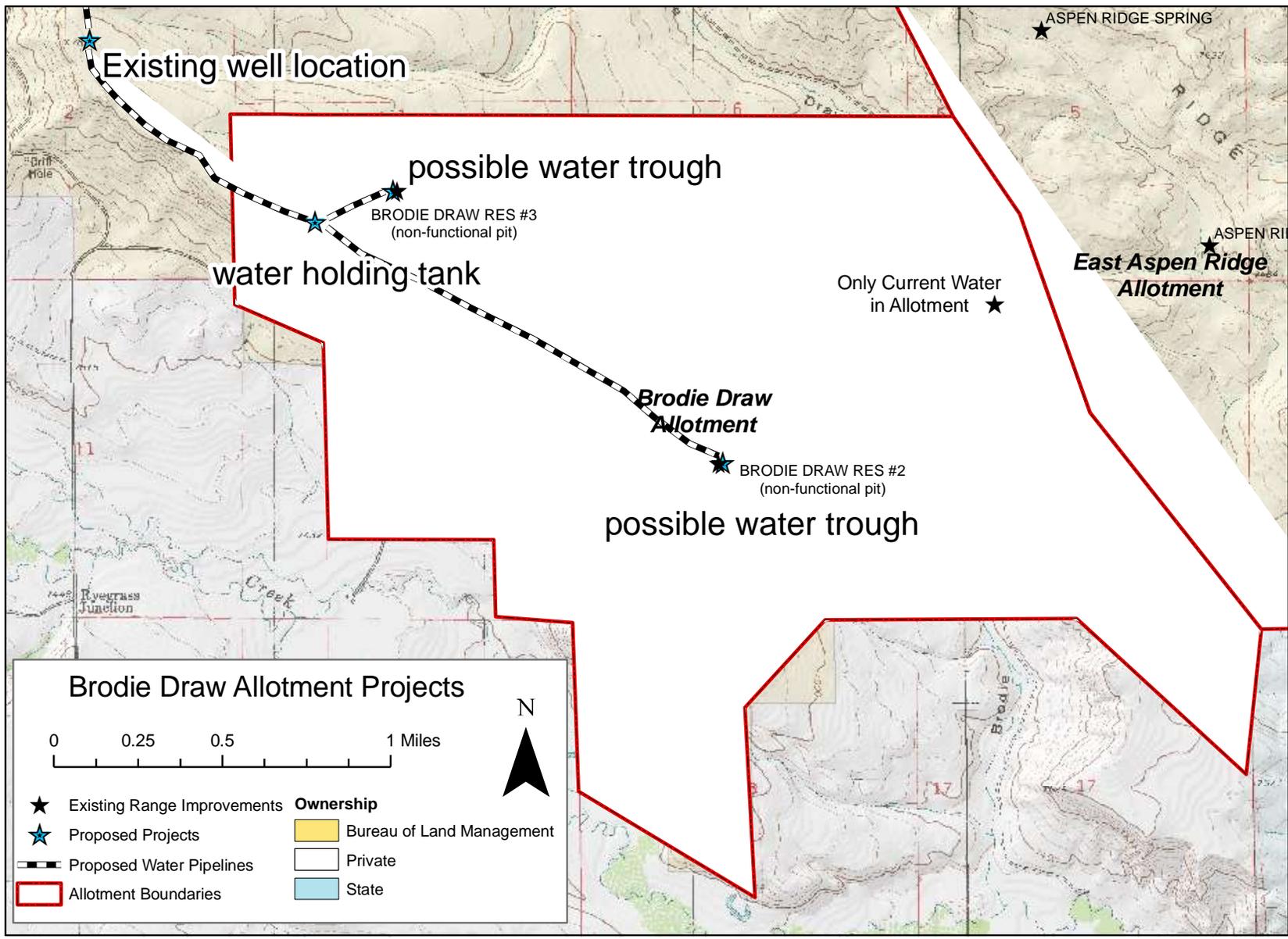


Figure 3

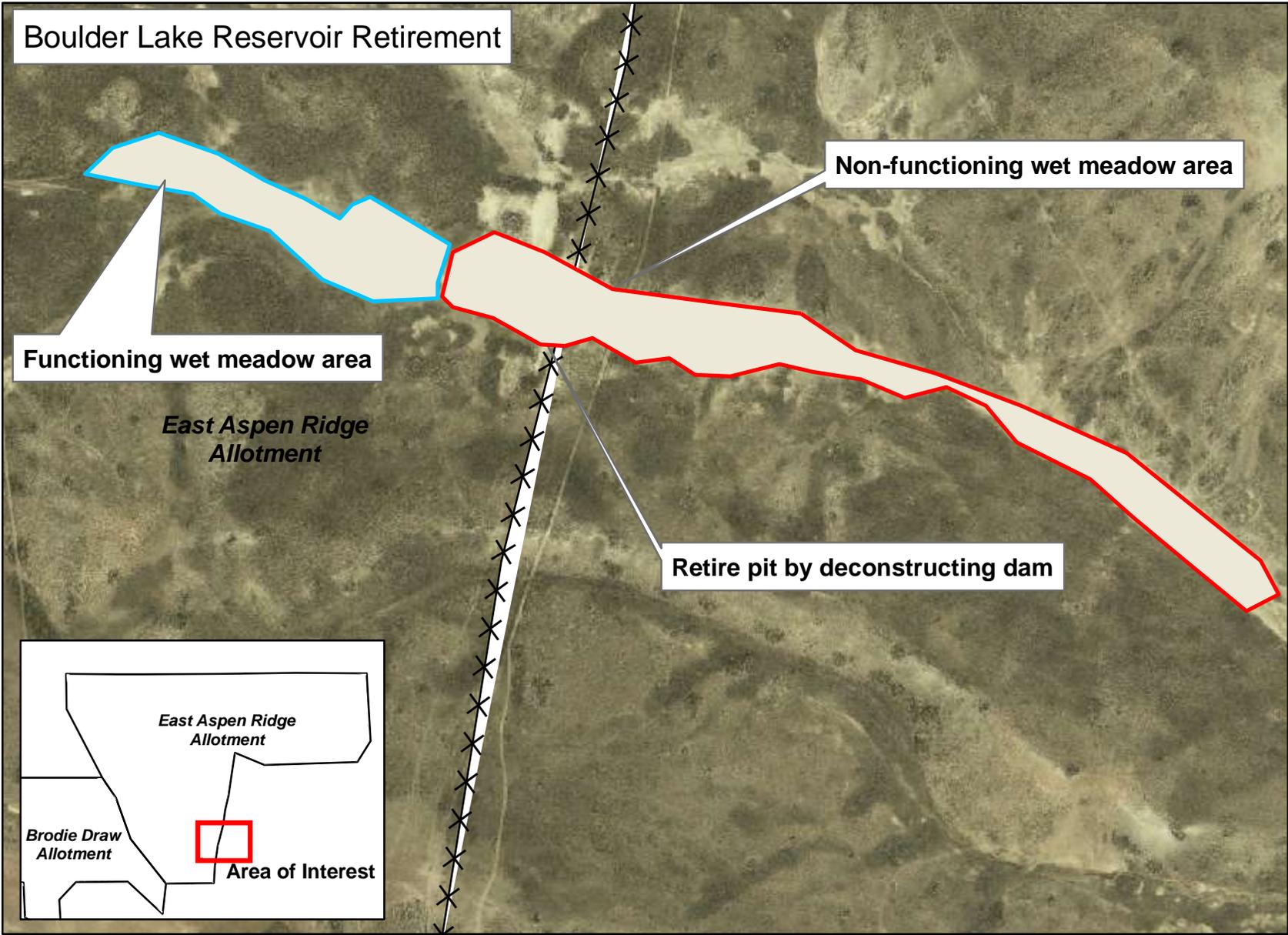


Figure 4

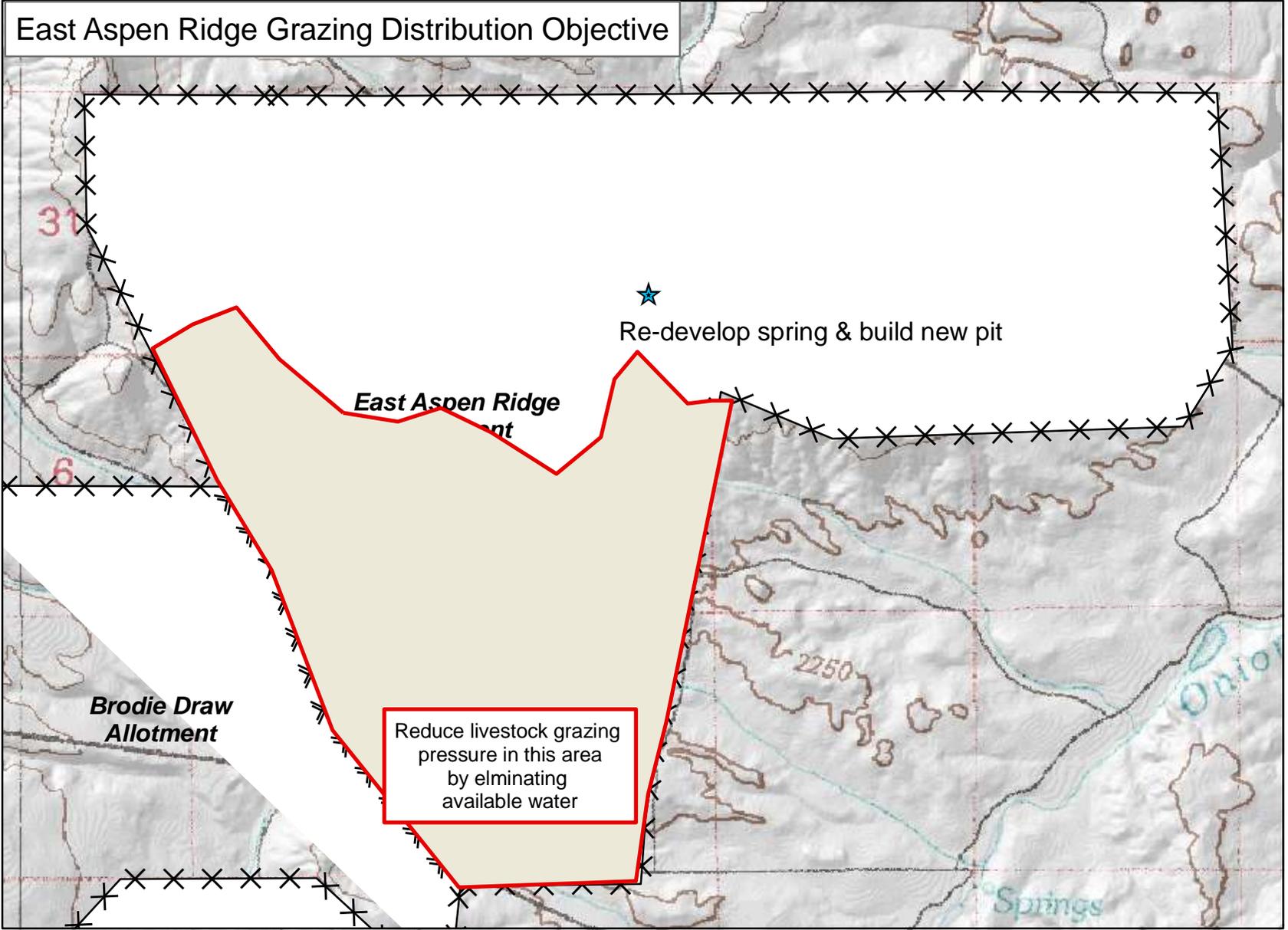


Figure 5

