

Determination of Public Land (Rangeland) Health for 65060 BOTTOMLESS RANCH

The Record of Decision (ROD) for the New Mexico Standards for Public Land Health and Guidelines for Livestock Grazing Management (dated January 2001) adopted three Standards for Public Land Health. These are (1) Upland Sites Standard, (2) Biotic Communities, including Native, Threatened, Endangered, and Special Status Species Standard and (3) Riparian Sites Standard.

The ROD also established a process for the BLM Field Offices for the implementation. Through a public participation process, the Roswell Field Office developed and adopted indicators to use in conjunction with existing monitoring data to assess these standards.

Field assessment worksheets and other available data that evaluate the local indicators were completed for this allotment. Based on the assessments, it is my determination that the public land within the Bottomless Ranch allotment #65060 meets the Upland Sites standard and (2) Biotic Communities, including Native, Threatened, Endangered and Special Status Species standard. There are no public land Riparian areas on this allotment, therefore this standard was not addressed.

/s/ T. R. KREAGER
Assistant Field Manager

08/10/2004
Date

Standards of Public Land Health

Evaluation of 65060 BOTTOMLESS RANCH

Allotment

[06/16/2004]

The Roswell Field Office conducted rangeland health assessments at one (1) study sites within the Bottomless Ranch allotment #65060. The assessments looked at the Soil/Site Stability, Hydrologic Function and Biotic Integrity indicators within the vicinity of each study site. Existing monitoring data was incorporated into and in support of the field assessment. The summary of each assessment is attached and shown in the following table.

Study Area or Assessment Area	UPLAND			BIOTIC			RIPARIAN		
	Meets	Monitor an Indicator	Does Not Meet	Meets	Monitor an Indicator	Does Not Meet	Meets	Monitor an Indicator	Does Not Meet
65060- HW104-C052	X			X			N/A		

Twenty-two indicators for Rangeland Health were evaluated for the public land on the Bottomless Ranch allotment #65060. Ten of these assessed soil site stability, 11 hydrologic function and 13 biotic integrity. These qualitative assessments in conjunction with quantitative information gathered from previous data collected on one location were utilized to assess the rangeland health of the public land within the allotment. This allotment is in the "C" (custodial) due to the small amount of public land present.

The allotment evaluated is adjacent to the Bottomless Lakes State Park and has been impacted by the continuing drought. The ecological site is SD-3 Salty Bottomland on 221 acres/100 hectares. The soil phase is a Holloman-Gypsum land complex with 0-3 percent slopes occurring on uplands west of the Pecos River and is nearly barren. The last year of data collection for this site, the HW-104 pasture was in 1979.

The majority of indicators assessed rated None to Slight to Slight to Moderate. Water flow patterns are mostly influenced from the overflow waters from Lea Lakes and impact the low-lying areas. Bareground areas are now barren due to flooding and these areas are expected to be void of vegetation. The only litter movement is when flood events tend to deposit this material through the area. The functional/structural groups indicate most of the plant groups intact with the exception of just a few with some slight shifts in dominance from alkali sacaton (*Sporobolus airoides*) to inland saltgrass (*Distichlis spicata*) and gyp dropseed (*Sporobolus nealleyi*). Annual production rates Moderate with about 1/3 of the potential for the ESD and 1/2 of the production in the last double-sampling collection. Although this collection was in 1979, the site should not change that much due to its location and nature. There are some saltcedar (*Tamarix ramossisima*)

trees present but are observed only at the far fringes of the pasture. The livestock are not present at the time of assessment, but are rotated through the allotment to prudently distribute use between the upland and bottomland, (as per conversation with allottee). All other indicators rated None to Slight to Slight to Moderate with only slight departures from the ESD.

Wildlife - Evaluation of the integrity of the biotic community considered several indicators as attribute indices for the area of interest. Biotic indicators are interrelated with several other indicators, including soil/site stability, hydrologic function, and vegetation. Several indicators are singularly biotic and address the vegetative aspect of the ecological site description, such as Functional/Structural Groups and Plant Mortality & Decadence, as discussed above. In addition to the standard worksheet biotic factors, four specific wildlife indicators and descriptors are included in this evaluation.

The area of interest falls within the boundary of the Overflow Wetlands Area of Critical Environmental Concern. Access is limited due to a parcel of private land which includes the access route to the public land on the allotment. The area is also adjacent to the Bottomless Lakes State Park.

Specifically, only one biotic indicator fell within the Moderate rating; annual production. Considering present climate regimes, this indicator can be expected to fall within the normal range of variability. As the area of interest falls within the Pecos River corridor, it is expected that the area would experience subirrigation of the grasslands. Production appears to be somewhat limited, including the lack of shrubs and forbs in the vegetative community that would contribute to annual production. It should be noted that those areas of inundation, estimated to be about 20 percent of the area, would produce less vegetation due to the salt buildup as standing water evaporates. The range site has the potential to improve with more favorable climatic conditions and wetter periods coupled with proper livestock grazing to promote shrub and forb production.

With respect to Special Status Species, none are known to occur in the area of interest at this time and the Habitat and Population indicators are, therefore, rated None to Slight.

Hydrology - Pasture HW104 - The rills, water flow patterns, pedestals and/or terracettes, bare ground, gullies, wind scoured, blowouts, and or deposition areas, litter movement, soil surface resistance to erosion, soil surface loss or degradation, plant community composition and distribution relative to infiltration and runoff, compaction layer, litter amount, and physical/chemical/biological crusts indicators have rated as none to slight or slight to moderate. Gypsum and dolomite deposits of the Yates Formation outcrop in the area. Gypsum, mudstone, and dolomite deposits of the Seven Rivers Formation outcrop in the area.

It is the professional opinion of the Assessment Team that the public land within the Bottomless Lakes allotment meets the Upland and Biotic standards. There are no Riparian issues present, therefore this standard was not evaluated. See site notes and recommendations for additional information regarding this assessment.

Recommendations: Continued prudent rotational schemes by the allottee should be the practice. A more recent quantitative observation should be performed to update the database and assist to keep the current management intact.

RFOs Upland and Biotic Standard Assessment Summary Worksheet

SITE 65060-HW104-C052

Legal Land Desc	NESE 33 0110S 0260E Meridian 23	Acreage	221
Ecosite	042CY033NM SALTY BOTTOMLAND S	Photo Taken	Y
Watershed	13060007010 GOPHER		
Observers	NAVARRO/BAGGAO	Observation Date	06/16/2004
County Soil Survey	NM666 CHAVES SOUTH	Soil Var/Taxad	
Soil Map Unit	Hp	Soil Taxon Name	HOLLOMAN
Texture Class	NM666 L	Soil Phase	HOLLOMAN- GYPSUM LAND
Texture Modifier	NM666 LOAM		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	6.47	NOAA Growing Season Precipitation	4.39
NOAA Avg Annual Precipitation	12.22	NOAA Avg Growing Season Precipitation	10.15
Disturbances and Animal Use:			

Part 2. Attributes and Indicators

Attribute	Indicators	Departure from Ecological Site Description/Ecological Reference Areas				
		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S H	Rills					X
Comments :						
S H	Water Flow Patterns				X	
Comments :	Overflow water from Lea lake- low lying areas.					
S H	Pedestals and/or Terracettes				X	

Comments :						
S H	Bare Ground				X	
Comments :	Now-barren areas with flooding.					
S H	Gullies					X
Comments :						
S	Wind-scoured, Blowouts, and/or Deposition Areas					X
Comments :						
H	Litter Movement					X
Comments :	Tends to move in flood areas.					
S H B	Soil Surface Resistance to Erosion				X	
Comments :	Slow melting with soil site stability test.					
S H B	Soil Surface Loss or Degradation				X	
Comments :						
H	Plant Community Composition and Distribution Relative to Infiltration and Runoff				X	
Comments :	Infrequent flooding-blue sunflower.					
S H B	Compaction Layer					X
Comments :	0-5%					
B	Functional/Structural Groups				X	
Comments :	Now-giant sacaton.					
B	Plant Mortality/Decadence				X	
Comments :	Droughty conditions.					
H B	Litter Amount				X	

Comments :	Falls within the range.					
B	Annual Production			X		
Comments :	Approximately 1/2 of potential currently exists.					
B	Invasive Plants				X	
Comments :	Saltcedar and iodinebush. Individual clumps.					
B	Reproductive Capability of Perennial Plants					X
Comments :	On bottoms-may be limited.					
S	Physical/Chemical/Biological Crusts				X	
Comments :	Some breaks in continuity of physical crusts.					
B	Wildlife Habitat				X	
Comments :	A bottomland grassland habitat type with scattered saltcedar and areas of infrequent flooding. Shrub and forb vegetative components for habitat diversity are missing. Unundated areas provide seasonal habitat for a variety of shorebirds and aquatic invertebrates. The source of surface water is Lea Lake at Bottomless Lakes State Park when water tables rise, primarily during the winter months when valley irrigation subsides..					
B	Wildlife Populations					X
Comments :	No specific wildlife population data at this time. Avifaunal diversity would be expected to be high as the area of interest is adjacent to wetland habitat and along flyways associated with the Pecos Valley.					
B	Special Status Species Habitat					X
Comments :	None known to occur.					
B	Special Status Species Populations					X
Comments :	None known to occur.					

Part 3. Summary

A. Indicator Summary - Each of the indicators are associated with one or more of the attributes below. An indicator is placed in a category (columns) above and summed for each of the Standard Attributes.

Standard Attribute		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S	Soil	0	0	0	6	4
H	Hydrologic	0	0	0	7	4
B	Biotic	0	0	1	7	5

B. Attribute Summary. In this table, the Extreme and Extreme to Moderate columns in the table above are merged for the *Does not Meet* column, Moderate becomes *May Need More Info*, and Slight to Moderate and None to Slight merge to form the *Meets* columns. Values from the table are summarized below. Space is provided for rationale of the determination. This space should most certainly be used when the determination by the ID team conflicts with the summarized values. Provide the sources of information that lead to the determination. X out the appropriate box for each attribute to denote final agreed upon determination by the ID team.

Attribute	Rationale	Does Not Meet	May Need More Info	Meets
Soil		0	0	10
Hydrologic		0	0	11
Biotic		0	1	12

Site Notes: This site is proximal to habitat for waterfowl and shorebirds. Site was GPS'd and location plotted. No pronghorn (*Antilocapra americana*) were observed and probably will not utilize this site. Photographs were taken. The dry conditions have had a significant impact on this allotment. Salts have precipitated to the top but cannot be considered chemical crusts.

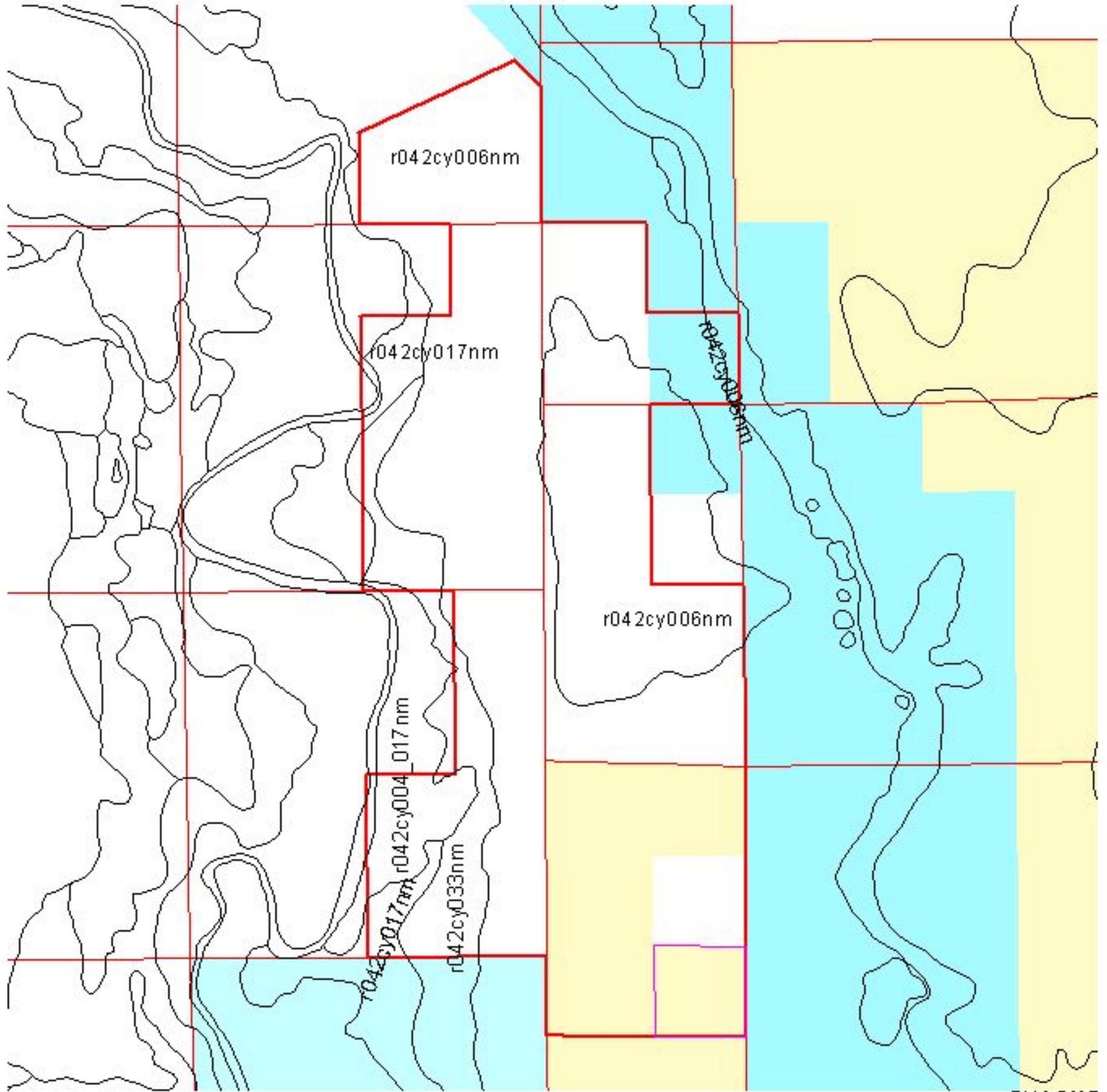


Rangeland Health Assessment Ecological Sites



Allotment 65060

T11S.R25E



0.5 0 0.5 Miles

T11S.R26E



Public



Study Plots



State



Private



Study Locations



Ecological Site Boundary



Allotment Boundary

Produced by the Roswell Field Office
GIS Intern on July 9, 2003.

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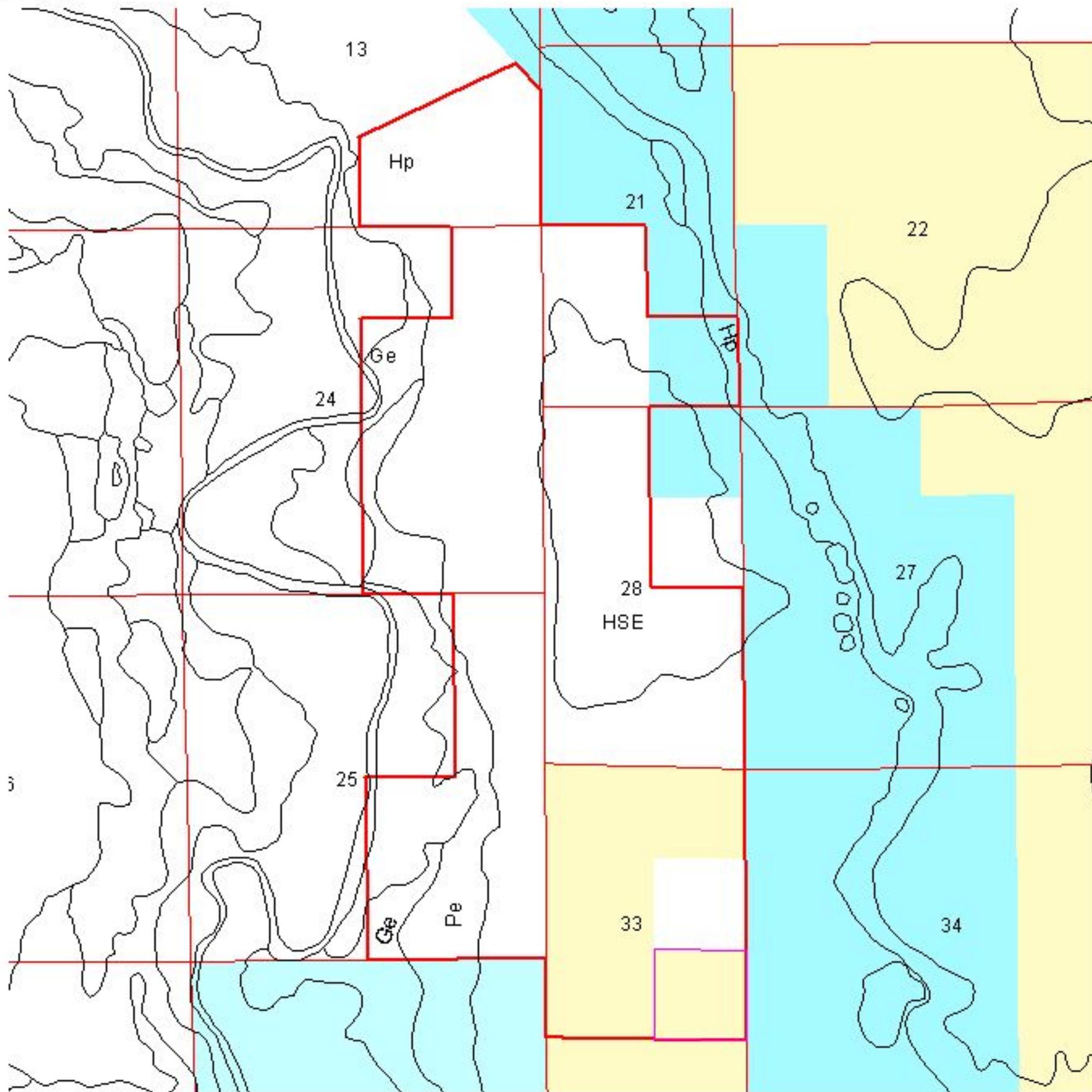


Rangeland Health Assessment Soil Mapping Units



Allotment 65060

T11S.R25E



0.5 0 0.5 Miles

T11S.R26E



Public



Study Plots



State



Private



Study Locations



Soil Mapping Boundary



Allotment Boundary

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