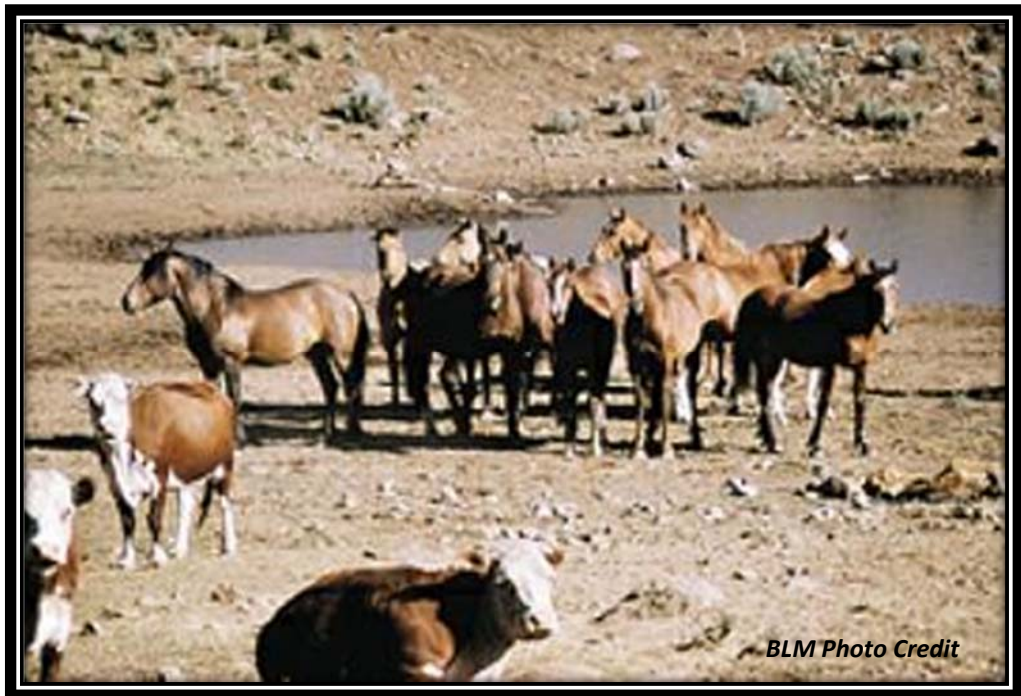


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WILD HORSE & BURRO MANAGEMENT IN THE ELY BLM DISTRICT

A 2017 Assessment of Economic Effects Specific to Livestock Grazing



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Key Assessment Findings

- Representing a crucial business sector in rural eastern Nevada, public land grazing has substantially declined in the BLM Ely District (EDO) from a historic perspective. The downward trend in permitted livestock grazing continues today and results in a corresponding decline in economic activity in rural eastern Nevada communities.
- The original BLM livestock permit adjudication process did not include or consider other large ungulate animal numbers or substantial forage consumption as was introduced by the 1971 Wild and Free-Roaming Horse and Burro Act. As a result, existing and available forage resources in the BLM Ely District were fully allocated to permitted livestock grazing as is currently defined by active and suspended grazing preferences.
- Based on 2017 pre-foal season numbers, the BLM Ely District estimated current wild horse numbers at 9,382 horses. This current agency estimate exceeds the Appropriate Management Level (AML) established in the 2008 BLM Ely District Resource Management Plan (RMP) by 7,687 horses or 434 percent. The horse numbers exceeding AML result in an added grazing pressure of 119,917 animal unit months (AUMs) in the BLM Ely District.
- Based on documented recruitment rates, wild horse herd numbers double every four to six years (NAS 2013).
- If the current wild horse numbers above AML were deducted from the existing permitted livestock grazing on the EDO to address deteriorating resource conditions, a loss of \$15.2 million in permit value and \$10 million in annual production would be realized by the impacted ranchers. Reduced ranch income would result in a secondary loss of economic activity in the regional economy at an estimated level of \$3.5 million annually. Included in this projection would be the loss in annual labor earnings of \$766,269 and 71 jobs.

Introduction

The Ely District (EDO) contains all the federal lands administered by the Bureau of Land Management (BLM) in White Pine and Lincoln Counties as well as portions of Eureka and Nye Counties. The renewable forage resources located in the Ely District were fully allocated and have been for several decades. This region was settled under a setting of unregulated common public lands or open range prior to the existence of the U.S. Forest Service or BLM. During settlement,

¹ Some information used in this analysis may be dated. However, extreme care was taken to utilize the most current and scientifically-defensible information in this analysis. The source and date of the information used in this analysis is either footnoted or can be found in the Referenced Information section at the conclusion of this report.

private land homesteads were established while private investments were made and vested property rights were secured on the adjoining public lands to support a growing range livestock industry. By the turn of the 20th century these unregulated public rangelands were recognized as being over-stocked and moving toward deteriorating conditions. To bring improved resource management and stability for livestock producers, Congress created the Forest Service in 1905 and the BLM in 1934 to administer the respective public land resources under a principle of sustained yield for multiple uses, including livestock grazing (Gates 1968).

With their formation, each respective federal agency initiated a program to regulate and control livestock grazing on the former open rangelands. While differing in their authorities and approach, common features found in both agency programs included: 1) limiting unauthorized grazing use; 2) issuing grazing permits to qualified individuals in designated areas called allotments; and, 3) developing agency regulations to renew and adjust permitted livestock use to achieve sustainable forage use and improved resource conditions. Based on the agency methods and procedures employed during this grazing allocation process, a strong case can be made that the forage resources located in the BLM Ely District were fully allocated and obligated to permitted livestock grazing. The EDO was formally established on November 3, 1936 (BLM 2007).

There were approximately 720,000 animal unit months (AUMs) permitted to livestock grazing in the Ely District upon completion of the allotment adjudication process in the mid-1960s (RCI 1998 & 2001). The final environmental impact statement for the Ely District Resource Management Plan (RMP) disclosed there were 545,267 AUMs permitted on the District, presumably in 2006 (BLM 2007). This documented downward trend provides a direct measure of the effects that have resulted from past grazing permit reductions implemented in the EDO.

A component of permitted livestock grazing under the BLM program is actual use or licensed grazing use. The 2008 RMP disclosed that during the period of 1998 to 2006 there was an average 220,168 AUMs of licensed grazing use in the Ely District (BLM 2007).

Based on the regulatory requirement that the agency grazing permits would be renewed and reissued to the previous permittee who maintained their qualifications, the resulting federal grazing permits developed a monetary commercial value that are sold through a private exchange prior to a permit transfer. Based on recent BLM permit transactions, this market value is currently estimated to approach \$127 per AUM in the EDO².

Also based on the stability and certainty afforded by the federal livestock permitting programs, the range livestock industry continued to develop and flourish in the Ely District. The economic activity and contributions made by this industry continues to represent a crucial sector in the regional economy. From a total ranch production perspective, the most recent research completed by Dr. Thomas Harris at the UNR Center for Economic Development indicates that every AUM utilized under a BLM permit in the BLM Ely District equates to an annual production

² Thomas R. Harris, PhD. 2017. Personal communication. Professor, Center of Economic Development, Univ. of Nevada Reno. June 6, 2017.

income of \$84 to the rancher². This rancher income in-turn circulates in the economy through business purchases and family expenditures resulting in secondary contributions to the regional economy in the amount of an additional \$29.32 per AUM. This regional economic activity further includes labor earnings of \$6.39 per AUM and one full-time job for every 1,695 AUMs permitted in the BLM Ely District (e.g., 0.00059 jobs per AUM).

When these values are applied to the average licensed grazing use documented in the 2008 RMP the estimated economic contributions associated with the range livestock business sector become evident as summarized in Table 1.

Table 1
Estimated Economic Contributions from Licensed Grazing Use in the BLM Ely District

Economic Variables	Unit Value	Units	Licensed Grazing Use (1998-2006 Average)	Estimated Value
Permit Value	\$127.00	AUMs	220, 168	\$27,961,336.00
Production Value	\$84.00	AUMs	220, 168	\$18,494,112.00
Regional Effects	\$29.32	AUMs	220, 168	\$6,455,325.76
Labor Earnings	\$6.39	AUMs	220, 168	\$1,406,873.52
Employment Jobs	0.00059	AUMs	220, 168	130

BLM Wild Horse Management

Superimposed on the existing BLM livestock permitting program is the more recent introduction of other large grazing ungulates in the Ely BLM District, including wild horses through enactment of the 1971 Wild and Free-Roaming Horse and Burro Act (WHB Act) and Rocky Mountain elk under the management of the Nevada Department of Wildlife (NDOW). This point becomes particularly important when it is recognized the original livestock grazing adjudication process did not consider or include large numbers or substantial forage consumption by these ungulate species. Based on this limitation the only option to accommodate large populations of these new forage consumers is to reduce the forage capacity and vested rights built into the existing livestock grazing permits administered by the BLM. The proportional relationship between livestock grazing and increasing forage demands from other large ungulate species can be utilized to at least partially explain the previously described decline in permitted livestock grazing that has been observed on the BLM Ely District over the past several decades.

The magnitude of this grazing conversion can be realized by simply following the documented growth in wild horse numbers. Shortly following passage of the WHB Act a comprehensive inventory was conducted in the BLM Ely District. Through this field inventory, approximately 700 horses were located in 29 separate areas (BLM 2007). Previous to the recently completed RMP, the BLM Ely District managed 24 horse herd management areas (HMAs) that encompassed a combined area of 5.5 million acres or about 45 percent of the District (BLM 2007). Through past range studies and agency decisions, these horse HMAs were managed at an Appropriate Management Level (AML) ranging from 1,986 to 2,141 horses. While not tabulated here, the number of grazing

allotments affected by these previous horse designations exceeded 100, as evidenced in the attached mapping (RCI 2013).

For the purpose of consolidating and providing more effective horse management, the record of decision for the Ely District RMP reduced the area and number of areas managed for horses to six HMA complexes comprising a total acreage of 3.7 million areas with an AML ranging from 810 to 1,695 horses (BLM 2008). In this agency decision, the historic horse use areas not included in the HMA designations, comprising nearly 1.8 million acres, were re-classified as herd areas (HAs) and the AML was reduced to zero horses.

The location and extent of these new HMA designations continues to affect 32 percent of public lands administered by the BLM Ely District. Recent HMA designations also include portions of 73 grazing allotments that were established and permitted in advance of the 1971 WHB Act. See the attached mapping.

Potential Economic Effects Resulting from Absence of Wild Horse Management

Based on pre-foaling horse census records, dated March 1, 2017, Table 2 shows that the BLM Ely District continues to fail to achieve horse AMLs adopted under the 2008 RMP (BLM 2007).

The cited Ely BLM District records were nearly identical to the current WHB numbers reported on the national website found at [BLM wild horse program data](#). Due to slight discrepancies between the two datasets, this report and analysis relied on the current WHB census records provided by the BLM Ely District (BLM 2017) since this information source was viewed as being closer to the ground and likely had a higher probability for accuracy.

This analysis shows that estimated horse numbers within the confines of the six HMAs exceeded the high AMLs established by the BLM Ely District by the amount of 5,455 horses. Further review of the agency census records indicated there were an additional 2,232 horses located in 13 HAs that were eliminated from horse use in the 2008 RMP. Combining these additional horses with the HMA exceedance of 5,455 horses, produces a combined total of 7,687 horses, as of March 1, 2017, that exceed the high AML designated in the BLM Ely District. These estimates indicated that the current estimated horse numbers, *excluding the recruitment provided during the 2017 spring foaling period*, exceeded the designated high AML number by a district-wide average of 454 percent.

The National Academy of Sciences (NAS) recently confirmed that most free-ranging horse populations grow at the rate of 15 to 20 percent per year (NAS 2013). This documented horse recruitment level indicates existing herd numbers can double every four to six years without management intervention. Since the horse estimated reported here represent pre-foal numbers, it is a given that the current horse population levels on the EDO exceed the horse numbers reported here by an added amount of 15 to 20 percent and these horse numbers will continue to grow at a compounded rate.

WILD HORSE & BURRO MANAGEMENT IN THE BLM ELY DISTRICT, NEVADA:
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Table 2
Appropriate Management Level (AML) and FY 2017 BLM Estimate of Horse Numbers
for Herd Areas/Herd Management Areas Located in the BLM Ely District³

Herd Code	Name	HMA/HA Status	Acres	Number of Horses				
				Appropriate Mgmt. Level		BLM Census Records ⁴	Difference from High AML	
				Low	High		Number	Percent (%)
NV401	Antelope	HMA	331,000	150	324	1,033	709	219
NV412	Diamond Hills South	HMA	19,000	10	22	150	128	582
NV414	Eagle	HMA	670,000	100	210	1,549	1,339	638
NV415	Pancake	HMA	855,000	240	493	1,800	1,307	265
NV416	Silver King	HMA	606,000	60	128	916	788	616
NV417	Triple B	HMA	1,225,000	250	518	1,702	1,184	229
HMA Subtotals			3,706,000	810	1,695	7,150	5,455	322
NV406	Cherry Creek	HA	27,448	0	0	46	46	-----
NV408	Jakes Wash	HA	153,663	0	0	179	179	-----
NV409	White River	HA	116,060	0	0	269	269	-----
NV411	Seaman	HA	358,834	0	0	35	35	-----
NV413	Moriah	HA	53,312	0	0	250	250	-----
NV512	Mormon Mtns.	HA	175,423	0	0	0	0	-----
NV513	Meadow Valley Mtns.	HA	94,521	0	0	240	240	-----
NV514	Blue Nose Pk.	HA	84,622	0	0	68	68	-----
NV515	Delamar Mtns.	HA	183,558	0	0	445	445	-----
NV516	Clover Mtns.	HA	167,998	0	0	373	373	-----
NV517	Clover Creek	HA	33,056	0	0	106	106	-----
NV518	Applewhite	HA	30,297	0	0	17	17	-----
NV519	Little Mountain	HA	53,035	0	0	26	26	-----
NV520	Miller Flat	HA	89,382	0	0	178	178	-----
NV522	Highland Peak	HA	136,071	0	0	0	0	-----
NV523	Rattlesnake	HA	71,433	0	0	0	0	-----
HA Subtotals			1,828,713	0	0	2,232	2,232	-----
BLM Ely District Totals			5,534,713	810	1,695	9,382	7,687	454

³ Unless otherwise noted, all information included in this table was derived from BLM (2008).

⁴ Source is BLM (2017).

For the purpose of directly comparing the identified current level of horse use in the EDO to permitted livestock grazing, the value of 7,687 horses can be converted to common denominator of AUMs by multiplying this number by an animal unit equivalency factor of 1.3 (Ensminger 1978) and then taking this sum and multiplying it by 12 months in a year to obtain a total of 119,917 AUMs. This converted number, 119,917 AUMs, represents the amount of animal use (or forage consumption) that can be directly attributed to grazing 7,687 free-roaming horses on a yearlong basis.

The application of the previously presented economic variables can be applied to this estimate to demonstrate the economic effects that would result if this excess horse use was subtracted from the existing BLM livestock grazing permitting program. The results from this analysis are shown in Table 3.

This analysis indicated that a reduction in licensed grazing use for livestock, in the amount of 119,917 AUMs, would produce a loss of \$15.2 million in permit value and \$10 million in annual production value for the impacted ranchers. Since the impacted ranchers would have less cattle and disposable income, there would be a tendency to spend less money in the local economy. This reduced ranch expenditure would result in a loss of activity in the regional economy that is estimated to approach an annual amount of \$3.5 million. Included in this projection would be a loss in annual labor earnings of \$766,269 and 71 jobs.

Table 3
Estimated Economic Effects from Reducing Licensed Grazing Use for Livestock
in the BLM Ely District by 119,917 AUMs

Economic Variables	Unit Value	Units	Licensed Grazing Use for Livestock	Estimated Value
Permit Value	\$127.00	AUMs	-119,917	-\$15,229,459.00
Production Value	\$84.00	AUMs	-119,917	-\$10,073,028.00
Regional Effects	\$29.32	AUMs	-119,917	-\$3,515,966.44
Labor Earnings	\$6.39	AUMs	-119,917	-\$766,269.63
Employment Jobs	0.00059	AUMs	-119,917	-71 Jobs

Conclusions

Based on the past track record of 45 plus years of administrating the WHB Act, and the continued failure by the agency to effectively gather and dispose of excess animals, it remains highly improbable that the BLM will achieve and maintain horse numbers at established AMLs. Attainment and maintenance of horse levels at AML has yet to be achieved in this federal program, and based on the politics and funding issues that are at play, there is little reason to believe that this program status will change substantially anytime in the near future.

Lacking alternative options, and in consideration of the continued agency requirement to manage public lands for a thriving ecological balance, it also remains highly probable, if not a certainty, that the added forage consumption from excess wild horses will continue to increase and adversely affect livestock grazing levels currently permitted by the BLM Ely District.

This analysis shows that the agency action of converting existing permitted livestock grazing to wild horse use has a significant economic effect on the impacted ranchers and the residents and businesses located in the Ely District.

All indications are this same threat is occurring throughout Nevada and the West in areas inhabited by wild horses. The continued mismanagement of wild horse populations is detrimental to rangelands and stream zones, including wildlife populations, and can certainly be expected to lead to significant economic impacts to public land ranchers through pending administrative cuts in permitted public land grazing. These potential economic effects will further reach a point where it adversely affects the cultural heritage and the quality of life for area residents located in dependent rural western communities.

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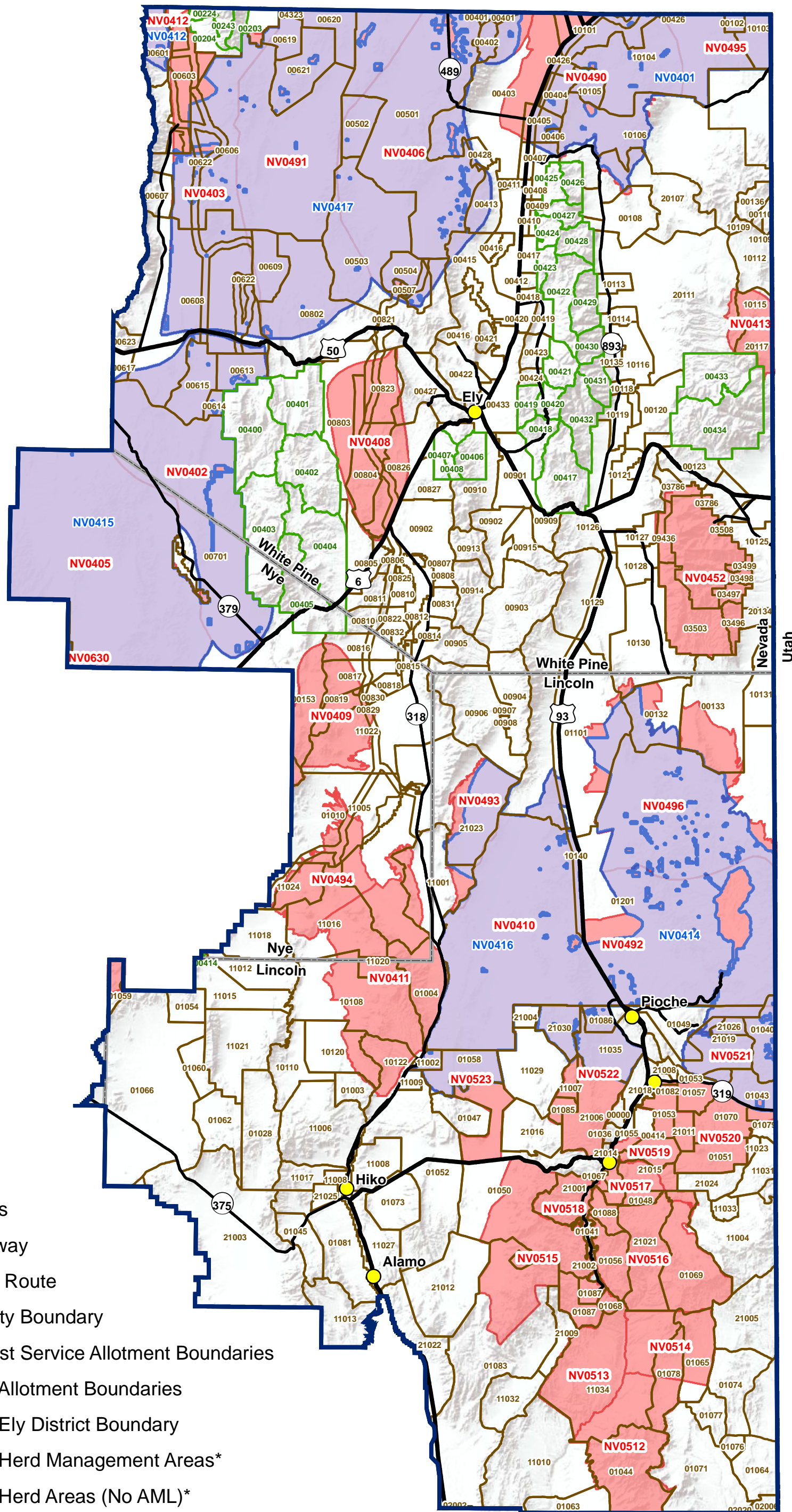
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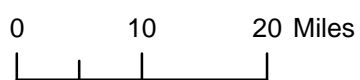
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Legend

- Towns
- Highway
- State Route
- County Boundary
- Forrest Service Allotment Boundaries
- BLM Allotment Boundaries
- BLM Ely District Boundary
- BLM Herd Management Areas*
- BLM Herd Areas (No AML)*



**Herd Management Areas,
Herd Areas & Allotments
Within the Ely BLM District**

Date: 8/22/2013



*Source: Ely District Approved RMP (BLM 2008)