

Subcommittee Members: Steve Marquez, Shane Boren,
Trent Gordon, Jake Rosevear, Gracian Uhalde, Jr.,
Justin Rozich, Cody Coombs, Matt Rajala

Department Representative: Samantha Fino
Madi Stout

**Nevada Board of Wildlife Commissioners
Mule Deer Enhancement Oversight Committee
Mule Deer Enhancement Program Subcommittee
White Pine County; Management Area 13
Nevada Department of Wildlife
1218 Alpha Street
Ely, Nevada 89301**

Tuesday, July 26, 2022 / 6:00 p.m.

DRAFT Minutes

1. Call to Order – Department Representative

The meeting was called to order at 6:09 p.m.

In Attendance:

Shane Boren, Subcommittee Member
Trent Gordon, Subcommittee Member
Jake Rosevear, Subcommittee Member
Sam Fino, Department Representative
Madi Stout, Department Representative
Tom Donham, Department Representative
Justin Rozich, US Forest Service

2. Approval of Agenda – For Possible Action

Subcommittee Member Shane Boren motioned to approve the agenda.

Subcommittee Member Sam Fino seconded the motion.

The motion passed.

3. Approval of Minutes (June 6, 2022) – Department Representative – For Possible Action

Subcommittee Member Jake Rosevear motioned to approve the minutes.

Subcommittee Member Shane Boren seconded the motion.

The motion passed.

4. Member Announcements and Correspondence – Informational

Justin Rozich joined the Subcommittee. Member Boren will develop and provide a tentative polygon to provide to the BLM for NEPA clearances in order to continue PJ removal throughout the crucial migration corridor. Department Representative Fino relayed information from NDOT personnel on deer crossing signage.

5. Area 13 Mule Deer Limiting Factor Ranking Sheet – Department Representative – For Possible Action

The averaged top limiting factors affecting mule deer in Area 13 were as follows: (1) Improper grazing - Wild horses, (2) Climate/Weather, (3) a tie between Pinyon-Juniper (Conifer) Invasion and Limited Water Distribution. (Attachment A).

Subcommittee Member Trent Gordon motioned to approve the top limiting factors.

Subcommittee Member Shane Boren seconded the motion.

The motion passed.

6. Area 13 Project Proposals – Department Representative – For Possible Action

The process of submitting 3 projects to the oversight committee and allocating funding were discussed. Members Rozich and Coombs provided details on projects federal entities have either completed, are in the process of completing, or plan to complete in the near future to provide a better idea of where NEPAs and cultural clearances are already in place. The 3 projects selected to move onto the written proposal process are the following, in no particular order (Attachment B):

(1) a pair of guzzlers in the Golden Gates Range, there is currently no water developments in this area and they are greatly necessary along the migration path.

(2) PJ removal in the southern White Pine Range around Currant Mtn to expand the work the FS will be conducting (see map) and extending this PJ removal down into Upper Perish (BLM). This area serves as a main corridor and pinch point for migrating deer. The thought is to improve habitat quality so that deer hold up in that area longer, thereby allowing the deer to distribute along the migration path more evenly and not deplete food resources.

(3) Radio collaring a sample of the deer herd. This has not yet been done extensively in MA13, and would provide data on migration corridors, stop overs, hot spots, fawning grounds, and rates/causes of mortality. Further, in 2022, a horse gather was conducted by the BLM in the Pancake Range (HU 131) where 2,030 horses were removed from the area. Radio collar data would allow the subcommittee to better understand how deer respond to the presence/absence and different densities of horses over time.

Subcommittee Member Shane Boren motioned to approve the proposed projects.

Subcommittee Member Trent Gordon seconded the motion.

The motion passed.

Discussion on how to prioritize patches of PJ removal in the crucial migration corridor habitat enhancement project resulted in an improvement to the proposal.

7. Public Comment

No public comment was received.

8. Future Subcommittee Meetings – For possible Action

The Subcommittee will meet to review and discuss the project proposals in the format of the forms developed by the oversight committee once those forms are distributed. We also discussed a desire to have a fall field trip in order to consider future MDEP projects. Date TBD.

Meeting adjourned at 6:46 PM

Mule Deer Limiting Factor Ranking Sheet

County: White Pine Area 13		Mule Deer Unit Group
Potential Limiting Factor	Rate (0 - 5)	131-134
Habitat	Wildland Fire	2
	Invasive or Noxious Weeds	2.5
	Pinyon-Juniper (Conifer) Invasion	4.3
	Shrub senescence	3.5
	Improper grazing - Wild horses	5
	Improper grazing - Livestock	2.3
	Climate/Weather	4.8
	Limited Water Distribution	4.3
	Inadequate Migration Corridor	3.5
Habitat or Population	Human Impacts – Direct	
	- Collisions with vehicles	1.8
	- Shed antler hunting	2
	- Off-road vehicle use	2.3
	- Fences	1.3
	- Powerlines	1.3
	- Urban Development	0.8
	- Industrial Development (Renewable Energy)	1.5
	- Heavy Industry	2.8
- Other (List):		
Population	Human-caused mortality (hunting & poaching)	1.8
	Predation	2.8
	Disease	2.3
Other	Conflicts with Laws/Policies/Regulations**	2
	Other (List): Wild Horse and Burro Act	5

**NEPA, Wilderness, ESA, Wild Horse and Burro Act, BLM Fire Plan/Policy, lawsuits, NDOW policies, etc.

WHITE PINE COUNTY MA13 MULE DEER ENHANCEMENT SUBCOMMITTEE

Re: Mule Deer Enhancement Program White Pine County – Management Area 13; Limiting Factor Rankings and Project Proposals

Dear Mule Deer Enhancement Oversight Committee Members,

The White Pine County MA13 Mule Deer Enhancement Subcommittee is please to submit three project proposals for consideration. These projects were selected by the subcommittee because members identified (1) Improper grazing - Wild horses, (2) Climate/Weather, (3) Pinyon-Juniper (Conifer) Invasion, and (4) Limited Water Distribution as the top limiting factors affecting the MA13 mule deer herd. Additionally, subcommittee members recognized the lack of information and knowledge on MA13 mule deer movements, space use, and resource selection, and obtaining these data would allow for more effective habitat and wildlife management in the region. We believe the projects in these proposals address the above inter-related limiting factors.

A water development series project involving the establishment of two big game guzzlers in the Golden Gates Range would provide water access during the long migration. Without accessible and available water resources, deer have to travel far and additional distances which put them in poorer condition to survive the winter. Pinyon-Juniper encroachment also impedes water resource availability on the landscape. Improving the habitat quality of an important migration corridor and pinch point will facilitate successful movement to and from summer and winter ranges, as well as allow for deer to hold up in these areas for longer periods of time, resulting in a staggering of movements across the migration path. Thus, food resources will persist throughout the migration season versus getting depleted in a short time frame. Lastly, understanding mule deer movements will aid the subcommittee in identifying future habitat projects through the MDEP. Radio-collaring mule deer will provide data on MA13 mule deer movements, space use, and resource selection in relation to their migration, as well as survival rates. Further, this project would be in conjunction with the Pancake HMA 2022 horse gather conducted by the BLM; this unique opportunity will allow for inference on how changes in horse densities over time influence mule deer behavior on the greater landscape.

Please see attached supplementary project information describing the benefits to mule deer for each project. Each project will improve Nevada ecosystems for multiple species, and benefit populations to increase opportunity for the public. We look forward to feedback from the Oversight Committee and working together in maintaining and enhancing healthy mule deer populations and their habitats.

Respectfully,

Subcommittee Members: Steve Marquez, Shane Boren, Trent Gordon, Jake Rosevear, Gracian Uhalde, Jr.

Department Representatives: Samantha Fino and Madi Stout

The MA13 deer herd

Fawn:doe ratios in MA13 are one of the lowest in the state and population size has been steadily decreasing over the last few years. During the 2021 post-season aerial survey, number of adults observed in units 132 and 133 (327.75 ± 61.98 and 266.33 ± 91.20 , respectively), as well as number of fawns observed in all MA13 units, were all significantly below the 5 year average (131: 29.5 ± 4.86 , 132: 104.5 ± 25.87 , 133: 74.33 ± 27.30). The fawn:adult ratio in units 131 and 132 were statistically below the 5 year average (0.36 ± 0.03 and 0.31 ± 0.03), and the fawn:adult ratio observed in unit 133 was within the 5 year average (0.27 ± 0.08), however, a very small sample size compared to previous years was observed. Deer are experiencing additional pressure resulting from harsh environmental conditions the last few years (i.e., drought = reduced food resource quality and availability), resulting in low recruitment rates. As a result, quotas and tags have also declined, limiting hunt opportunities to the public.

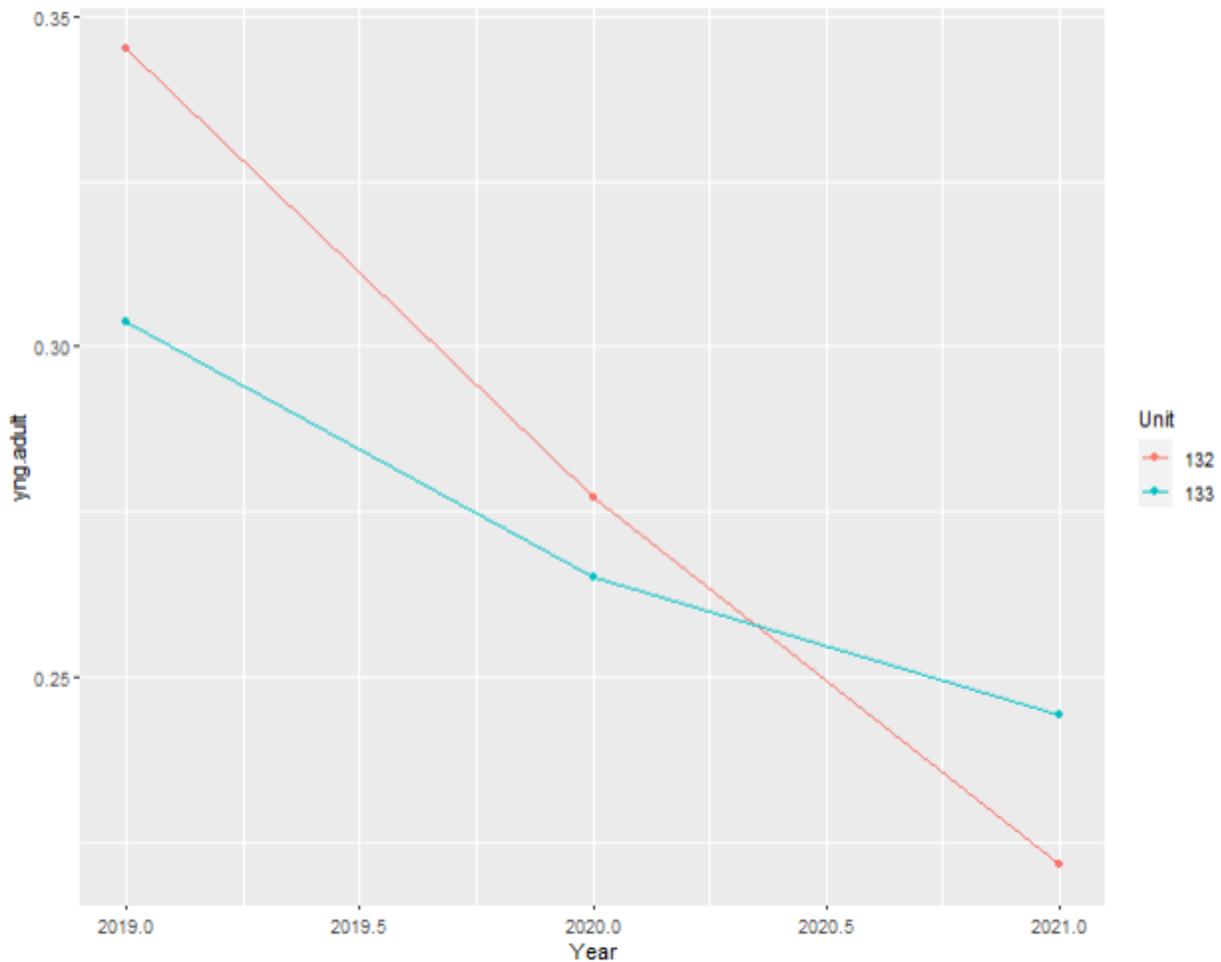


Fig. 1. Observed fawn:doe ratios (number of fawns per 100 does) from 2019-2021 in hunt units 132 and 133. Units 132 and 133 are the focus of our project proposals due to the poor habitat quality and the theorized migration path of deer in those areas, as well as the knowledge of many ongoing Forest Service projects in 131.

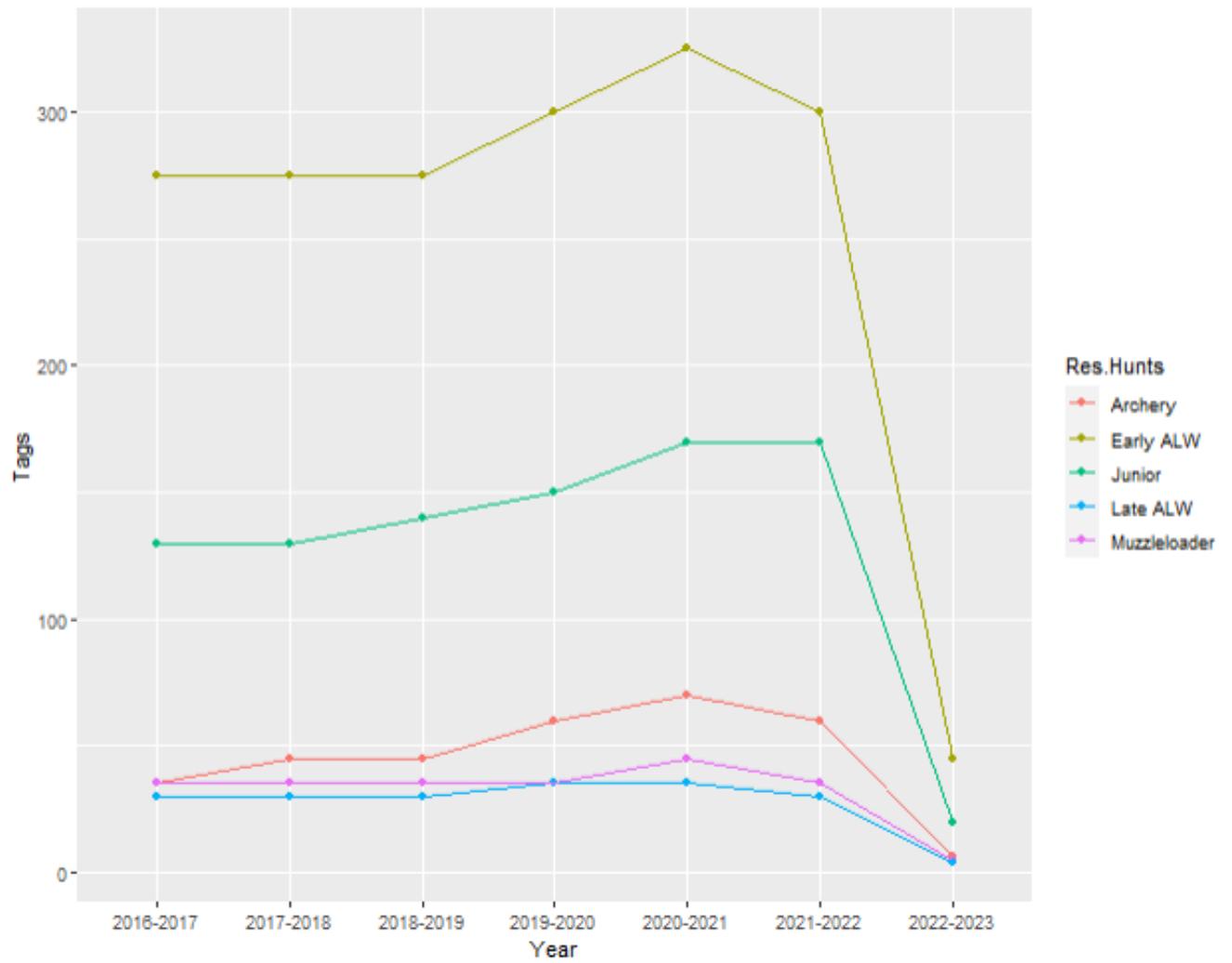
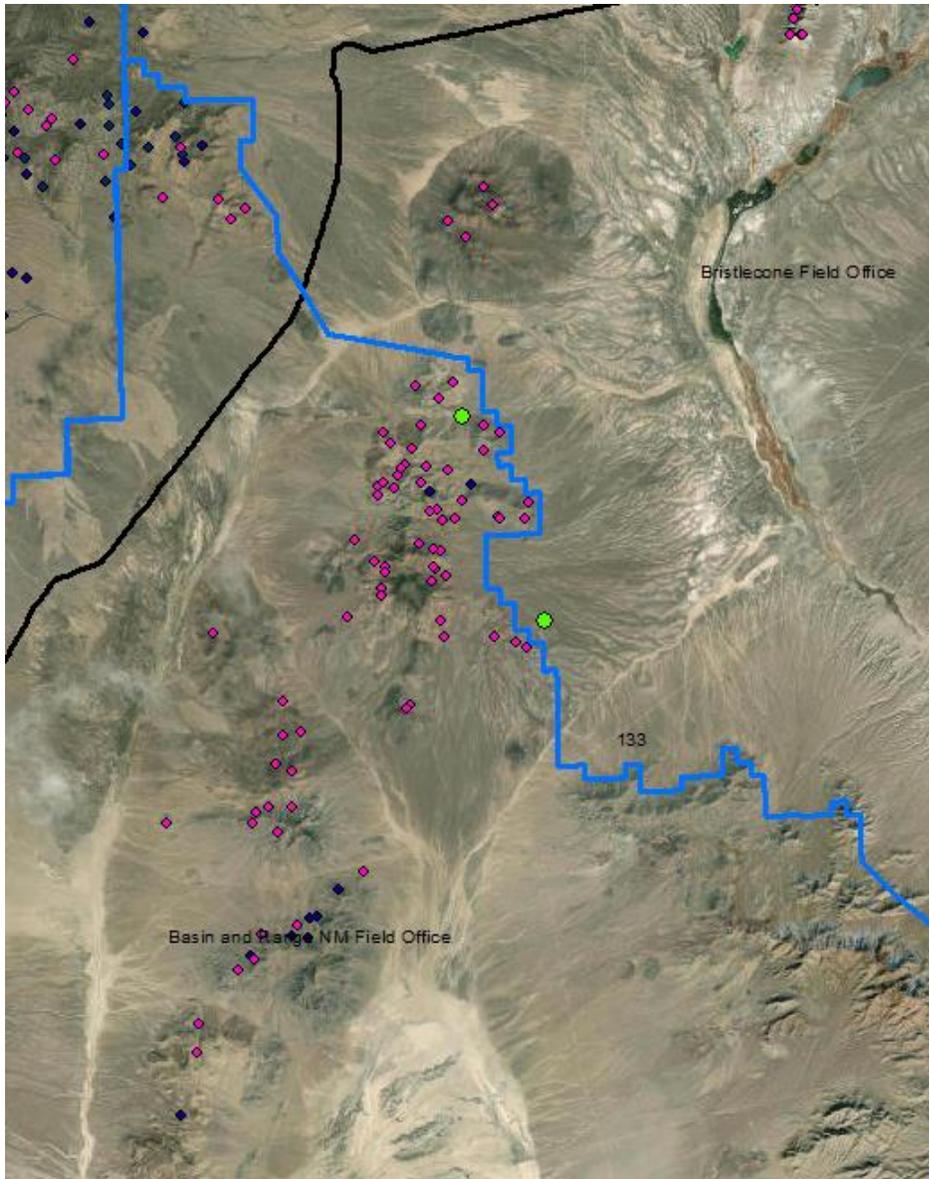


Fig. 2. Resident hunt tags distributed to Nevadans from the 2016-2017 hunt season to the 2022-2023 hunt season in MA13.

NORTHERN GOLDEN GATES RANGE GUZZLER SERIES

Hunt units in MA13 have experienced Extreme to Exceptional (D3-D4) drought intensities over the last few years (U.S. Drought Monitor), the worst climate conditions in the state. As a result, there is little to no available surface water on the landscape. Water is a necessity for survival for all organisms, and even more important for those migrating long distances. Currently, there are no water developments (e.g., guzzlers) in the northern Golden Gates Range, requiring mule deer to travel *at least* 6-10 miles in order to reach the *nearest* water resources in the Grants Range. Traveling far and additional distances (deviation from their migration path) without a water resource only puts deer in poorer condition to survive the winter, especially fawns. A water development series project involving the establishment of two big game guzzlers (each with 6 tanks) surrounded by wild horse exclosures in the northern Golden Gates Range would provide an increased network of water resources along the migration path. As a result, these two guzzlers would greatly reduce the risk of poor body condition and migration (energy-expenditure) related mortality events.





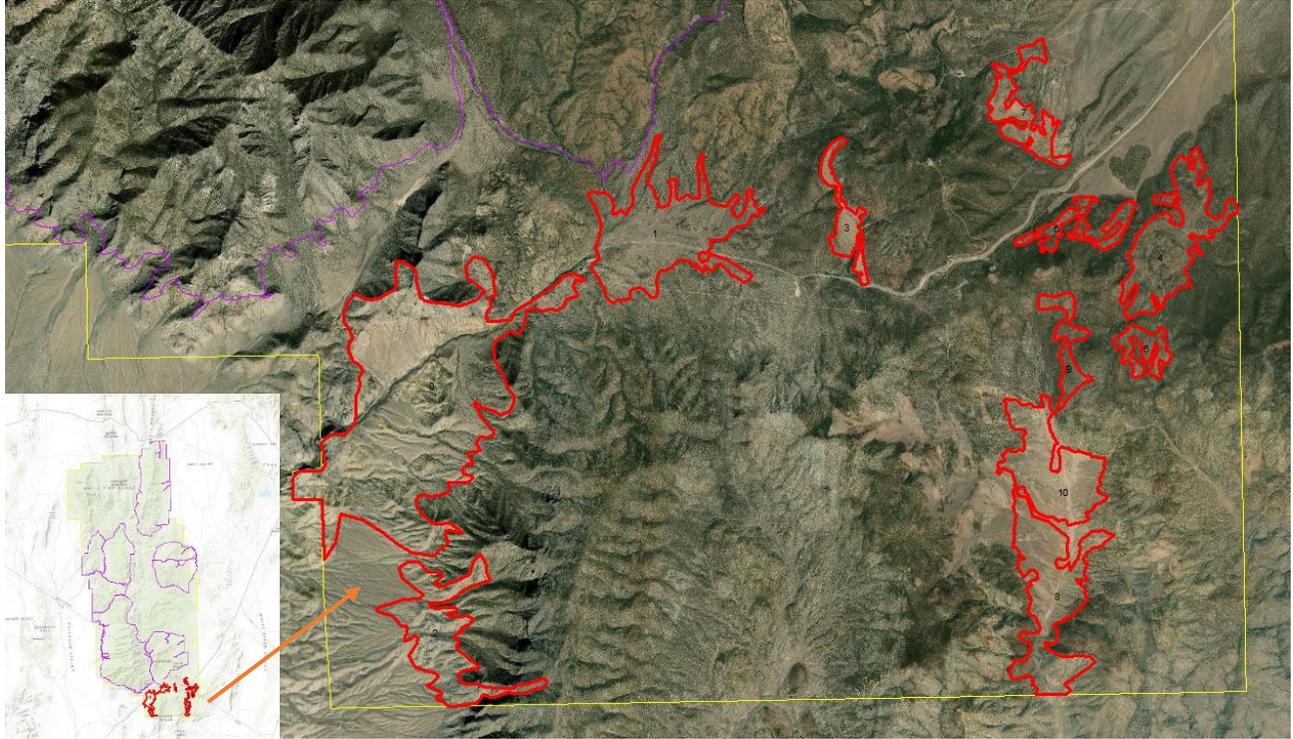
Map 1. Location data for detected groups of deer during spring (pink) and fall (navy) aerial surveys in the Golden Gates Range. The green points are tentative locations for proposed guzzlers.

We estimate the cost of this endeavor will approximately be \$120,000 for materials and labor of two 6-tank systems, funded out of Water Development Grant. Once funding is allocated from potential sources, we hope to make guzzler installation a volunteer event with involvement from the public. Public participation will help spread the message of the importance of habitat management and create more positive associations of NDOW within the community. With MA13 experiencing the worst environmental conditions in the state (D3-D4 drought intensities, U.S. Drought Monitor), water development in the area will have benefits to other wildlife populations in the ecosystem.

CRUCIAL MIGRATION CORRIDOR HABITAT ENHANCEMENT: CURRANT TO UPPER PERISH

Pinyon-Juniper encroachment impedes water resource availability on the landscape. Improving the habitat quality of an important migration corridor and pinch point will facilitate successful movement to and from summer and winter ranges in MA13. Further, pinyon-juniper treatments that increase habitat quality would allow for deer to hold up in these areas for longer periods of time, resulting in a staggering of movements across the migration path. Thus, food resources will be more likely to persist and remain available throughout the migration season versus getting depleted in a short time frame. Migration has a high energy requirement, especially for fawns, thereby increasing food resources across a larger area will greatly reduce the risk of poor body condition and migration (energy-expenditure) related mortality events.

NEPA procedures for the polygons in the map below have already been completed by the Forest Service through the Currant-Ellison Environmental Analysis (2016). The Forest Service has SNPLMA money to treat pinyon-juniper within White Pine County. We would like to expand this pinyon-juniper removal work into Nye County so that the greater landscape is improved and there is maximized benefit for the mule deer herd. Conducting pinyon-juniper removal (lop and scatter) in surrounding and nearby areas will require minimal clearances and likely proceed to the implementation steps in a short period of time once funding is secured. More specifically, these desired areas would undergo a class 1 survey for archaeology, which involves a literature search of the records to see if any archaeological surveys have been completed in the past in the designated project areas. If past surveys had been completed and unevaluated or eligible archaeological sites were found, these sites would be completely avoided of PJ treatments. If no surveys were conducted in the past, and no unevaluated or eligible archaeological sites were found, hand cutting of PJ with chainsaws will proceed. In the future, we would like to further expand the pinyon-juniper removal (lop and scatter) effort down through the Horse Range (where deemed necessary) and to Upper Perish Springs (a primary corridor in most need of habitat management). Additional NEPA clearances will need to be submitted as efforts progress southbound and onto BLM land. Areas with lower densities of trees will be targeted (if density is too high, coarse woody debris would impede deer movements through those patches) and slashed at 32 inches starting on June 30 (end of sage grouse nesting season) – Oct 31, creating a landscape-wide mosaic of cleared and forested areas, thus still providing opportunities of cover and potential food or resting resources for wildlife. Due to the large size of this target area, this project will likely span a few years and be submitted as an annual project proposal. At costs of approximately \$60-80/acre (personal communication, J. Rozich, Forest Service), we estimate that project costs would be about \$250,000 annually until completed.



Map 2. Red polygons highlight target areas for pinyon-juniper removal and are all within the yellow boundary which encompasses areas under NEPA clearances. The purple boundaries are wilderness areas. Total acreage is 4,320, with polygons ranging from 72 to 1,755 acres. This is the year 1 goal of this project. These proposed patches exclude any known archaeological sites.

Table 1. Treatment by segments if funding for all requested patches is not allocated in one year. These patches are prioritized sequentially and these patches are additive.

Scenario	Acreage	Cost
All patches	4,320	\$259,200 - \$345,600
Patches: 4-7, 9	776	\$46,560 - \$62,080
Patch 3	97	\$5,820 - \$7,760
Patches 8 & 10	766	\$45,960 - \$61,280
Patches: 0-2	2,680	\$160,800 - \$214,400

UNDERSTANDING MULE DEER SEASONAL SPACE USE AND SURVIVAL, IDENTIFYING MIGRATION CORRIDORS, AND QUANTIFYING IMPACTS OF WILD HORSES

Understanding mule deer movements will aid the subcommittee in identifying future habitat projects through the MDEP. Radio-collaring mule deer will provide data on MA13 mule deer movements, space use, and resource selection in relation to their migration. We will also be able to quantify survival rates and identify causes of mortality. Lastly, concurrent habitat monitoring (i.e., vegetation surveys) will be incorporated into analyses to better understand how changing landscape characteristics influence movements. A large enough sample size of radio-collars to properly analyze data has never been done in this management unit. Most importantly, however, this project would be in conjunction with the Pancake HMA 2022 horse gather conducted by the BLM (<https://www.blm.gov/programs/wild-horse-and-burro/herd-management/gathers-and-removals/nevada/2022-pancake-complex-wild>). In 2021, the Pancake Complex was estimated to be approximately 3,244 wild horses, 450%+ over the Appropriate Management Level of 361-638 wild horses. In February 2022, 2,054 wild horses were gathered by the BLM. The current wild horse population is estimated to be at about 700 individuals, which is still over the AML, but the density has been significantly reduced. The negative influence of wild horse overpopulation on mule deer populations and the greater habitat (water and food resource availability) is well known, and after a gather, the population is sure to increase over time without regular and frequent gathers. This presents a unique opportunity that will allow for inference on how changes in horse densities over time influence mule deer behavior on the greater landscape. Taking advantage of this scenario surrounding horse-deer interspecific interactions may also assist in management of mule deer in other areas of the state where wild horse populations are over the AML. Mule deer will be captured throughout the winter range of MA13 in order to encompass potential variation in large scale movements.

Satellite GPS radio-collars cost ~\$1,500 each, and can have a battery life of >5 years. The greater the sample size, the more precise analysis of the spatiotemporal data will be. Helicopter capture and slinging effort is anywhere from ~\$400 - \$500 per animal (personal communication, C. Schroeder).

<https://atstrack.com/tracking-products/transmitters/G5D-Iridium-GPS-Collar.aspx>

Sample size:	N=10	N=20	N=50	N=100
Collar Cost	\$15,000	\$30,000	\$75,000	\$150,000
Capture Cost	\$5,000	\$10,000	\$25,000	\$50,000