

**Committee Members: Commissioner Kiel (Chair),
Commissioner Barnes, Commissioner Rogers, Commissioner
Almberg, Jim Rackley, Jeremy Drew, Charlie Clements,
Josh Vittori, Cory Lytle, Alan Shepherd, Kris Boatner**

**Staff to the Committee: Mike Scott
Alan Jenne
Cody Schroeder**

**Nevada Board of Wildlife Commissioners
Mule Deer Enhancement Program Oversight Committee
Nevada Department of Wildlife
6980 Sierra Center Parkway, Suite 120
Reno, Nevada 89511**

Wednesday, September 21, 2022 / 6:00 p.m.

Meeting also via www.Zoom.us

Minutes

1. Call to Order and Roll Call of Committee Members – Chairman Kiel

The meeting was called to order at 6:00 PM.

In attendance:

Commissioner Kiel, Chair
Commissioner Barnes
Commissioner Rogers
Jim Rackley, Nevada Muleys Association
Charlie Clements, Rangeland Scientist
Cory Lytle, Meadow Valley Wildlife Unlimited
Alan Shepherd, Bureau of Land Management
Kris Boatner, US Forest Service
Mike Scott, Nevada Department of Wildlife
Cody Schroeder, Nevada Department of Wildlife
Mark Freese, Nevada Department of Wildlife
Pat Jackson, Nevada Department of Wildlife
Caleb McAdoo, Nevada Department of Wildlife
Matt Glenn, Nevada Department of Wildlife
Sarah Hale, Nevada Department of Wildlife

Absent:

Commissioner Almberg (retired from Wildlife Commission)
Jeremy Drew, Resource Specialist
Josh Vittori, Nevada Bighorns Unlimited
Alan Jenne, Nevada Department of Wildlife

2. Approval of Agenda – For Possible Action

Chair Commissioner Kiel proposed swapping Agenda Item 5 and Agenda Item 6. No public comment was received.

Chair Kiel motioned to approve the agenda with changes proposed by the Chair.

Committee Member Clements seconded the motion.

The motion passed. Member Vittori and Member Drew absent.

3. Approval of Minutes (June 22, 2022) – Chairman Kiel – For Possible Action

Chair Commissioner Kiel pointed out 3 grammatical edits. No public comment was received.

Committee Member Barnes motioned to approve the June 22, 2022, Minutes with the noted changes by the Chair.

Committee Member Rogers seconded the motion.

The motion passed. Member Vittori and Member Drew absent.

4. Member Announcements and Correspondence – Chairman Kiel – Informational

Chair Commissioner Kiel announced Commissioner Almberg's retirement from the Wildlife Commission and noted for the record that Mr. Almberg would no longer be a member of the Oversight Committee.

Chair Kiel requested the Department provide a status update of projects in place from 2021.

Mule Deer Staff Specialist Schroeder presented a spreadsheet and reviewed the 8 projects submitted in 2021. (Attachment A) Mr. Schroeder stated two of the 2021 projects were either pulled from the approved project list, were either unfunded or funded in a different way, which left six projects remaining. Mr. Schroeder stated there had not been a lot of opportunity to make progress on the 2021 projects because the funding cycle did not start until July 1, 2022. Mr. Schroeder proceeded to update the Oversight Committee on the status of the 2021 projects.

Referring to the same spreadsheet presented by Mule Deer Staff Specialist Schroeder, Habitat Staff Specialist Freese reported on the nine habitat projects approved by the Oversight Committee in 2021.

5. Mule Deer Enhancement Program Project Proposal Scoring – Chairman Kiel – For Possible Action

Game Administrator Scott presented a spreadsheet reviewing the four Mule Deer Enhancement Program (MDEP) predator projects proposed by Subcommittees in 2022. (Attachment C) Mr. Scott proposed the Oversight Committee route the MDEP predator projects through the Wildlife Damage Management Committee (WDMC) for review and approval. Chair Commissioner Kiel agreed, stating it was important the projects meet the standards required by the WDMC.

Committee Member Clements commented he scored all the projects as '90 plus', except the projects that lacked a budget.

Committee Member Barnes stated as a committee member of the WDMC, he would like to see a project recommendation from the Oversight Committee accompany the MDEP predator projects so when a predator project comes from the Oversight Committee to be reviewed by the WDMC, the WDMC has some additional background information on what it is reviewing. Chair Commissioner Kiel agreed, adding the Oversight Committee would like input from Predator Staff Specialist Jackson on the proposed predator projects.

Predator Staff Specialist Jackson echoed Game Administrator Scott's input that the breadth and width of the proposed MDEP predator projects could be addressed within the scope of Predator Project 37, a statewide lion removal project, and Predator Project 38, a statewide coyote removal project. Chair Commissioner Kiel asked Mr. Jackson if the Oversight Committee were to send the proposed MDEP predator projects to the WDMC and the MDEP predator projects were approved by the WDMC, would the MDEP predator projects be under Mr. Jackson's purview? Game Administrator Scott stated the MDEP predator projects could be used within the scope of Predator Project 37 and 38. Mr. Scott stated the proposed MDEP predator projects needed some more detail, which Predator Staff Specialist Jackson would provide, and then the MDEP predator projects would be submitted to the WDMC. Mr. Scott did not see the need for a completely new, separate project to be designated within the Predator Plan.

Chair Commissioner Kiel asked Mr. Scott if the Oversight Committee needed to take action on this agenda item. Mr. Scott did not think the Oversight Committee needed to take action in this case but advised the Oversight Committee to make a recommendation to the WDMC.

No public comment was received.

Committee Member Lytle motioned to progress the MDEP predator projects to the WDMC for final approval and that any changes or adjustments be coordinated between the Subcommittee Department Representative and Predator Staff Specialist Jackson.

Committee Member Rackley seconded the motion.

The motion passed. Member Vittori and Member Drew absent.

The Oversight Committee moved on to the proposed investigations projects. Referring to the same spreadsheet presented by Game Administrator Scott, Mule Deer Staff Specialist Schroeder presented seven investigations projects for 2022. (Attachment C)

Committee Member Clements sought clarification on the proposed Tooth Collection project. Committee Member Lytle commented on the MA 22 project and its funding. Mr. Lytle noted that if the Oversight Committee were to prioritize the proposed investigations projects, the MA 22 project already had \$60,000 in match money. Mr. Lytle stated the application process was to have included matching funds and contributions and the Oversight Committee had previously stated if a project had documentation, it helped in making ranking decisions.

Chair Commissioner Kiel asked the Department where it was with funding the proposed investigations projects. Game Administrator Scott stated the proposed investigations projects needed to be prioritized and if a project was not funded this year, it should move up in priority next year. Mr. Scott asked the Oversight Committee to rank the projects, advising funding opportunities that come up might change the priorities of a project. Mr. Scott advised the Oversight Committee a priority list created by the Oversight Committee may not go exactly as planned due to the vagaries and possibilities of funding opportunities.

Habitat Specialist Freese stated all proposed projects were beholden to federal funding cycles which normally begin on July 1 as well as the funding cycle of the Heritage Committee. The Department suggested it take the Oversight Committee's priority recommendations in hand and work to determine funding. The Oversight Committee discussed the merits and costs of the proposed investigations projects.

Game Administrator Scott suggested the Oversight Committee rank the investigations projects and the Department would provide periodic updates, perhaps prior to a Commission meeting. The Department can also update the Oversight Committee on any changes made to the Oversight Committee's recommendations based on how priorities or sources of funding change.

Chair Commissioner Kiel ranked the proposed investigations projects as follows: 1. Area 8 Tooth Collection; 2. Spring Mountain Camera; 3. Area 1 Collaring; 4. Area 22 Collaring; 5. Area 13 Collaring; 6. Area 12 Collaring; 7. Wild Horse Impacts. The Oversight Committee agreed on this ranking.

No public comment was received.

Chair Commissioner Kiel motioned to approve the prioritization of investigations projects as presented.

Committee Member Barnes seconded the motion.

The motion passed. Member Vittori and Member Drew absent.

The Oversight Committee moved on to the proposed habitat projects. Habitat Staff Specialist Freese offered to provide guidance on the proposed 23 projects. (Attachment C)

Game Administrator Scott drew the attention of the Oversight Committee to the Triple B project. Mr. Scott was unsure in which category the project belonged, so it was put in the habitat category. Habitat Eastern Supervisor McAdoo stated he and Game Eastern Region Supervisor Donham agreed the Triple B project should be in the investigations category. The Oversight Committee discussed the merits of the Triple B project.

Committee Member Barnes stated after reviewing the scores, he felt the list as it stood fell in line with how they were scored with how they are ranked. Mr. Barnes agreed with how the habitat projects were currently scored. Game Administrator Scott directed the Triple B project be moved into investigations and the Oversight Committee discussed where the project would fall in the already ranked investigations list of projects.

Chair Commissioner Kiel noted the Triple B project ranked the lowest of the investigations projects. Game Administrator Scott suggested the Triple B project be set in its own category and the Department would find how to fund it and report back to the Oversight Committee. Mr. Scott stated the challenge, in general, was that collaring projects, which most of the investigations projects were, would come from the Game Division budget. Mr. Scott stated the Game Division would need to negotiate with the Habitat Division on how to get the Triple B project funded. Mr. Scott suggested a new category of habitat investigations projects could be created. Committee Member Shepherd announced the Bureau of Land Management (BLM) was preparing to issue a notice of funding opportunity where a horse-related project like the Triple B project could qualify if submitted

for consideration. Mr. Shepherd stated the funding would be managed through the BLM Nevada for ranking and consideration. If the Department applied for this funding and was successful, then the Triple B project would not have to come out of the Game Division's budget. Habitat Staff Specialist Freese welcomed another funding opportunity to take into consideration and stated the Department would look into applying, although if that did not work out, the Department could still apply to the Heritage Committee.

Chair Commissioner Kiel recommended the Department, with regard to the Triple B Remote Sensing Project, work within the BLM framework proposed by Committee Member Shepherd to apply for funding for the project

The Oversight Committee prioritized the list of habitat projects according to their ranking, from highest to lowest.

No public comment was received.

Chair Commissioner Kiel motioned to approve the prioritization of habitat projects as presented.

Committee Member Clements seconded the motion.

The motion passed. Member Vittori and Member Drew absent.

The Oversight Committee discussed the high costs associated with the Lander County Subcommittee's projects, which span up to 10 years. Staff Biologist Hale explained the Lander County Subcommittee's project costs to the Oversight Committee.

Committee Member Lytle approved the ranking as presented in the spreadsheet. Mr. Lytle noted it was difficult to rank the projects at the meeting knowing now the limitations of the funding cycle.

Game Administrator Scott recommended the Oversight Committee meet again before the November Commission meeting so the Oversight Committee can review the list of projects again and to see what pots of money are available. Mr. Scott expressed concerned about the scale of the projects and that the list of projects did not seem to have consistency across the regions. Habitat Regional Supervisor McAdoo stated he and Game Regional Supervisor Donham met as the eastern region group and submitted their scores to the Oversight Committee. Mr. McAdoo stated in order to provide consistency, the supervisors felt they needed to review the projects themselves and ultimately the projects were considerably downrated. Mr. Scott stated the eastern region doing this consequently negatively reflected those region's projects in comparison to the other regions in that the lower number did not reflect the merit of the proposed project. Mr. Scott stated he would ask the regions to go back and approach the scoring from a better, more consistent basis, giving the Oversight Committee a better starting point for ranking the projects. Mr. Scott stated he had asked for priorities from the regions and the eastern region was able to get to it, but the southern region and western region had not. Mr. Scott stated the Department wanted to build consistency across the scores and that would be the goal to meet before the November Commission meeting.

The Oversight Committee discussed scoring and ranking of the projects. Chair Commissioner Kiel stated his preference to have another meeting. Committee Member Lytle stated the score is important, funding played a role in the decision making, as well as a project's phasing. Mr. Lytle stated every project had merit in some form or fashion and the annual cycle to find additional funding was a concern. Mr. Lytle suggested the Subcommittees fine tune and clarify their projects by the next Oversight Committee meeting, concluding he felt meeting and going over the projects again was a good choice.

Game Administrator Scott stated for the Oversight Committee the merit of the project was the most important factor to consider over the score of the project. Committee Member Barnes agreed with Member Lytle and also stated he would like to see the regions rank the projects in their region. Mr. Barnes wanted to hear more from the field biologists on their take on what was important, too.

Game Administrator Scott and Chair Kiel agreed to set a meeting date prior to the November Commission meeting. Habitat Specialist Freese restated that the goal of the Oversight Committee in meeting again prior to the November Commission meeting was to review regional priorities for the habitat projects. Chair Kiel confirmed he wanted the Department to set priorities by region.

6. Mule Deer Enhancement Program Subcommittee 5-year Plans – Informational

Game Administrator Mike Scott discussed the progress of the 5-year plans submitted by the Subcommittees.
(Attachment B)

7. Public Comment Period

No public comment was received.

Meeting adjourned 7:38 pm.

2021-2022 Mule Deer Enhancement Committee Projects Final Approved

Investigations

MDEP Committee Rank	Team	Primary Contact	Unit Group	Project Description	Type	Cost	Match	Source	Purpose
1	Washoe	J. Ewanyk	012, 015, 033	GPS Mule Deer Collaring	Non-Habitat	\$60,000	\$39,600.00	NBU, MDF, Fed Aid	Data Gathering
2	Elko Area 6	T. Allen	061, 062, 064, 066-068	MA 6 Remote Sensing Modeling	Non-Habitat	\$65,000		Heritage	Data Gathering
3	Elko Area 6 - 065	M. Jeffress	65	Mule Deer Collaring	Non-Habitat	\$30,000		Industrial Development Fund	Data Gathering
4	CC-Douglas-Storey	C. Lackey	192	Public Messaging	Non-Habitat	\$15,000		USFS?	Installation of signage in winter habitat
5	Elko 7-8-9	K. Huebner	81	Tooth Collection	Non-Habitat	\$0	\$1,500.00	Elko NBU (\$1,500)	Age Analysis
6	Elko 7-8-9	K. Huebner	81	GPS Mule Deer Collaring	Non-Habitat	\$49,000	\$20,000.00	Federal Aid, Elko NBU (\$20k)	Habitat Use Assessment
7	Nye-Esmeralda	H. Burkett	161-164	Morey Bench Mule Deer Collaring	Non-Habitat	\$50,000		Federal Aid	Data Gathering
8	Pershing	K. Neill	041, 042	GPS Mule Deer Collaring	Non-Habitat	\$59,000		Federal Aid	Data Gathering
Total						\$328,000	\$61,100		

Predator Project Proposals

MDEP Committee Rank	Team	Unit Group	Project Description	Type	Cost	Match	Source	Purpose
1	Washoe	011-013, 014, 015	Coyote/Lion Removal	Predator Removal	\$120,000	\$5,000	NGO, Predator Fund	Predator Removal
2	White Pine	111-115	Coyote/Lion Removal	Predator Removal	\$75,000		Predator Fund	Predator Removal
3	Lincoln	22, 23, 24	Predator Removal	Predator Removal	\$25,000		Predator Fund	Predator Removal
4	White Pine	121	Bothwick/Gleason Predator Removal	Predator Removal	\$75,000		Predator Fund	Predator Removal
5	Pershing	043-046	Coyote/Lion Removal	Predator Removal	\$30,000		NGO, Predator Fund	Predator Removal
Predator Total					\$295,000			

Habitat Project Proposals

MDEP Committee Rank	NDOW Project	Team	Unit Group	Project Description	Type	Cost	Match	Source	Purpose
1	Hale/WD	Lander	151-156	Strawberry Summit Spring Enclosure	Habitat	\$46,000		Water Development Grant	Protection from Horses
2	Cernoch/WD	Washoe	013, 014, 015	Spring Protection	Habitat	\$75,000		Heritage	Habitat Improvement
3	Burkett/Kipke	Nye	16	Morey Bench Habitat Enhancement	Habitat	\$40,000	\$ 110,000.00	Heritage	PJ Mastication & Overseeding
4	Kolada/Daniel	Lincoln	22	Bullwack Habitat Enhancement	Habitat	\$80,000		Heritage	PJ Thinning
5	Neil/Andrle/BLM Covered?	Pershing	046	Gregg Fire Seeding	Habitat	\$186,000		Heritage, BLM?	Improve Winter Habitat
6	Kolada/Kody	White Pine	111-115	Cooper Canyon PJ	Habitat	\$150,000		Spring Valley Wind Mitigation	PJ Thinning
7	Trimble/Huebner	Elko 7-8-9	071-079, 091	Murdock Mtn Habitat Enhancement	Habitat	\$150,000	\$ 165,000.00	Heritage	PJ Removal
8	Salisbury/Pirkle/Andrle/BLM Covered?	Churchill	183	Draw Fire Reseed	Habitat	\$145,000		Heritage	Seeding
17	Glenn	Elko 10	102-103	Corta Fire Shrub Planting	Habitat	\$75,000		Heritage	Fire Rehab
Total						\$947,000			
Heritage						\$751,000			

Projects "on the bench"

12	Brittany	Elko 7-8-9	071-079, 091	Charleston Fire Rehab	Habitat	\$95,000		Not secured	Shrub Seeding
13	WD/Kolada	Lincoln	22, 23, 24	Spring Enhancement	Habitat	\$100,000		Not secured	Installation of exclusionary fences
14	WD? Already funded?	Nye	212	Palmetto / Montezuma Water Development	Habitat	\$120,000		Not secured	Water Development
15	NO NEPA	White Pine	121	Steptoe Bench PJ Treatment	Habitat	\$50,000		Not secured	PJ Removal
16	NO NEPA	Elko 7-8-9	071-079, 091	Meadow Creek Restoration	Habitat	\$25,000		Not secured	Creating Fuel Break
18	Lackey- More Coordination	CC-Douglas-Storey	192, 194, 195, 196, 291	Spring Enhancement	Habitat	\$150,000		Not secured	Spring Protection
10	REMOVE/BLM covered	Elko 7-8-9	081	Goose Creek Fire Bitterbrush Plant	Habitat	\$26,000		Not secured	Plant Bitterbrush in Fire
11	Salisbury-BLM Covered	Churchill	183	Water Canyon Reseed	Habitat	\$85,000		Not secured	Seeding
9	Roberts	Elko 10	101-109	South Ruby Mtn Enhancement	Habitat	\$100,000		Unsure	PJ Thinning
Total						\$651,000			

9/21/2022 MDEP Habitat Projects Update

MDEP Approved/Supported

Strawberry Spring – A contract was awarded last week with work expected to occur this fall.

Washoe Spring Protection – Indian and Cottonwood Spring contracts have been issued with work occurring this fall. Slings occur for Indian next week. Roland Spring and Horse Spring maintenance bid request will be released this week with work expected to be completed this fall. Additionally, BLM is contracted work at Orange and Mt. View spring with a completion expected this fall winter.

Morey Bench habitat Enhancement – This project was recently expanded from 700 to 3,850 acres, requiring new NEPA, as such the project will be delayed. Although delayed, increasing the project scope will provide a larger positive impact for mule deer and wildlife.

Bullwack Habitat Enhancement – We plan to release the SOW Bid package to remove 1,100 acres of PJ. We will likely award a contract this fall. Work may occur this fall/winter, but more than likely won't occur until next year due to hand crew availability.

Gregg Fire Seeding – BLM contracted the herbicide application for this fall treating ~1,900 acres. BLM and NDOW will evaluate the herbicide effectiveness next spring/summer and hope to implement a seeding project next fall.

Cooper Canyon PJ – 3,000 acres of hand thinning has been completed. We are waiting on FS clearance and an agreement to be completed before we can release a SOW bid package for 500 acres of mastication. The mastication may occur this fall/winter, but likely to occur next fall.

Murdock Mtn Habitat Enhancement – This hand thinning and mastication project is waiting on cultural clearances. Once completed we will release a SOW Bid request and award the contract. Work may occur this fall/winter and may continue through next fall/winter.

Draw Fire Reseed – NDOW purchased imazapic and contracted the application on 4,180 acres. BLM is providing seed and contracting the drilling for this fall. NDOW is supplementing BLM's seed mix and will also be contracting the aerial application of sagebrush and kochia seed.

Corta Fire Shrub Planting – Bitterbrush seed will be delivered to Lucky Peak Nursery. Plants will be grown for and planted next fall.

On the Bench

Charlston Fire Rehab – BLM is putting in an order for seedlings this year with work expected for next fall.

Lincoln County Spring Enhancement – Clearances are completed. NDOW biologist are working on a volunteer day to complete the work this fall.

Palmetto/Montezuma Water Development -

Steptoe Bench PJ Treatment -NDOW is working on developing treatment polygons and will be working with the BLM on clearances.

Meadow creek Restoration – Was a fuel break waiting on the Oniel Basin NEPA/clearances. This area was burned in the 2022 wildcat fire, so we are re-evaluating work that needs to occur in this area.

CC/Douglas/Storey Spring Enhancement – Looking into potential spring enhancement projects.

Goose Creek Fire Bitterbrush Planting – This area is expected to be planted this fall/spring.

Water Canyon Reseed – NDOW sprayed ~2,000 acres last fall. The treatment was very effective. BLM has most of the seed, while waiting on the snowstorm kochia. Once delivered, BLM will contract the seeding.

South Ruby Mtn Enhancement -

Conservation Actions for the Area 1 & 2 Northern Washoe County August 2022

Current NEPA in place by BLM Field Offices

- Programmatic Riparian and Water Development EA- Applegate and Eagle Lake FO (011, 012, 013, 015) (Both field offices would DNA off of these to allow work)
- Programmatic Fuels Reduction and Rangeland Restoration EIS (Great Basin Wide, all of NV)
- Stateline Fence Reconstruction EA- Applegate FO (011, 013, northern 015)

Habitat Restoration

• **Fire Rehabilitation:**

- **Poodle Fire 2020 (014, 015)** – Reapplication of spray in areas where previous treatments were not successful. Seed again, with more drill seeding.
- **Lost Fire 2012 (012, 013)** – This fire burned 67,868 acres and is primarily cheatgrass. Spray with herbicide, fallow, and then seed shrub/grass/forb mixture. Plant bitterbrush and sagebrush seedlings.
- **Rock Fire 2010 (014)** – This fire burned 5,358 acres in prime winter and transitional range, which now has low diversity. Spray ~20,000 acres on the east side across several years, followed by seeding. Seed forb/grass mix into the areas where inter-canopy vegetation is lacking. On the slopes of the granites, seed kochia/brush/forb mixture.

• **Brush Improvements:**

- **Fox Mountain Bitterbrush Pruning** – A future field trip in the fall where volunteers prune branches of bitterbrush to stimulate new growth to improve forage quality.
- **Bitterbrush Seed Collection** – Collection of seeds and then spreading in concentrated pockets may improve our odds of success for bitterbrush establishment. Focus these efforts in transitional range and winter range.
- **Private Land Brush Mastication** – Work with private landowners to allow for the mechanical disturbance of bitterbrush to stimulate new growth.

Conifer Removal:

- **Hays Canyon and 49er Mountain** – Lop and scatter juniper. Prioritizing areas around riparian and high mule deer use. Seed these areas following the cuts.
- **Pah Rabs and Northern Virginia Mountains-** Lop and scatter juniper in areas of high historic mule deer use. Seed these areas following the cuts.

• **Fuel Breaks:**

- **Rock Fire Green Strip** – Seed strips of kochia to act as fuel breaks for protecting the high elevation brush along the east side of Granites.
- **Boulder Flat Fuel Break (013)** – Work with BLM to increase the buffer around CR 34 and Hays Canyon Rd to create a fuel break in the decadent sage flats.

• **Water Development and Enhancement:**

- **Northern Washoe Springs Project (011-015)** – continue fencing 2-5 springs each year for the benefit of multiple species. Following spring fencing projects, seed

mule deer preferred species into the fenced riparian habitat. Use Programmatic Riparian EA.

- **Southern Granites Guzzler (014)**– Conduct DNA off existing NEPA from Winnemucca Field Office to clear a guzzler build in the higher elevation of Granites.
- **NFWF Migration Corridor Spring Enhancement (011-015)**- Fence several springs along mule deer/pronghorn migratory routes or stopovers.

Investigative Projects

- **Collaring:**
 - **Mule Deer Collaring (011-015, 021, 022, 033)** – Deploy, monitor, and maintain up to 75 GPS collars on mule deer does to assess overall health, disease exposure, pregnancy rates, survival rates, causes of mortality.
 - Continue to investigate mortalities within 72 hours of mortality and collect biological samples.
 - Establish a meeting with NDOW to discuss collar retrieval team. Further develop the idea of an MTT
- **Predator Projects:**
 - **Active Lion Removal (014)** – Use project 37 to mitigate impacts of lions on declining prey populations until a new Washoe predator project is in place. Develop and implement a research project with Wildlife Services with the goal of publishing findings within 10 years. Use preliminary data to inform management decisions prior to publication. Potentially add 021, 022 to the active lion removal based on GPS collar data and success of lion removal in 014.
 - **Project 22-01 (011-013)** - Removal of lions for protection of bighorn sheep until the population recovers to objectives.
 - **Passive Lion Removal (011-015, 021, 022)** – When GPS collared deer are killed by lions, it will trigger removal of the offending lion.

Management Area 6 & 065 Five-Year Plan - 2022

Habitat Connectivity & Movements:

- **Fences – Removal and/or Modification**
 - Map fencing in mule deer migratory corridors and critical seasonal ranges, prioritize the removal and/or modification of fences with high impact to mule deer.
- **Delineate Migratory Corridors - Collaring**
 - Continue to delineate corridors for the remaining sub-herds, via telemetry data.
- **Interstate 80 Crossings/Connectivity**
 - **I-80 ROW Fencing** – Work with NDOT to develop exclusionary fencing around I-80 from the Dunphy Rest Area to the Dunphy exit, including necessary jump outs, re-routing portions of ROW fence to better facilitate movement, and including passages under the interstate.
 - **“Passage Bench”** – Work with NDOT to modify infrastructure under the overpass at the Humboldt River crossing to better facilitate mule deer movement.
 - Continue to investigate other I-80 conflicts for movement and potential crossing enhancements.
- **Industry**
 - Maintain & enhance functional mule deer movement corridors through heavy industry. (Ex. Pete Corridor)
 - **Collaring** – Deploy or maintain collars in herds with high potential for industrial development to collect data that will best inform managers during industry design and NEPA processes.
 - **Area 6 MULDD Working Group** – Seek the expansion of the working group to include mining partners outside of NGM who are planning or operating in mule deer habitats (Ex. First Majestic and South Railroad).

Habitat Restoration:

- **Herbicide/Seedlings/Seedling Plantings:**
 - Prioritize projects aimed at reducing the dominance of annual invasive grasses in mule deer habitats while restoring desirable grass, forb, and shrub-communities to the landscape. Including the continued use of forage kochia.
 - Continue to pursue meaningful restoration projects across all crucial mule deer ranges.
 - Work with private landowners and livestock operators to conduct restoration on private lands.
 - Request BLM develop utilization standards on both Snowstorm and Immigrant Forage Kochia that benefit wildlife and livestock.
 - Specifically timing of grazing.
 - Support the BLM in the adoption of Indaziflam for application on BLM administered lands.
 - Continue to explore, experiment, and develop alternative restoration strategies, including new tools, to best inform restoration practices.
 - Soil amendments, drought tolerant novel species, new herbicide chemicals/methodologies, etc.
- **Remote Sensing:**
 - Utilize completed (2023) remote sensing vegetation mapping in conjunction with radio telemetry data to develop a habitat restoration priority map.
 - Expand remote sensing vegetation mapping to other regions if proven effective.
- **Fuel Breaks:**
 - Actively pursue opportunities to introduce and maintain fuel breaks protecting valuable habitats on both public and private lands. Including the use green strips that can not only act as fuel breaks but provide forage to wildlife as well.
- **Livestock Management:**
 - Work with willing livestock operators to utilize grazing as a tool to create desirable vegetation communities for the benefit of wildlife & livestock, allow for rest periods during restoration projects, create/maintain fuel breaks (ex. Eleven-mile Flat pasture), etc.
- **Conservation Easements/Land Acquisitions:**
 - Take advantage of, or seek out, properties in high value mule deer habitats & corridors for either state land purchases or conservation easements.
 - Extend Marsh Creek Bench Conservation Easement
- **NEPA**
 - Pursue watershed level analysis for restoration of crucial mule deer habitats.

Other:

- If Recovering Americas Wildlife Act (RAWA) passes, consider developing a plan specific to Area 6.

DRAFT MDEP 7,8,9 Five Year Plan August 2022

Fences – Minimize and/or Modify

- **Railroad ROW – between Holborn and Fenelon** – 3 miles
1.3 miles private (Monty Pearce and Winecup Gamble Ranch)
- **Railroad ROW – between Moor Exit and Ralph’s Well** – 4 miles
1.5 miles private (Monty Pearce, Winecup Gamble Ranch, and Weinger Family)
- **North Pequops**
22 miles private (Independence Valley Ranch – Winecup Gamble Ranch)
- **Meadow Creek** – 1.5 miles removal in migration corridor

Conservation Easements

- Antelope Peak Ranch – Erik Taylor
- Independence Valley Ranch – Winecup Gamble
- Gibbs Ranch – Wyatt Mesma
- Mary’s River Ranch – Preston Wright
- Memory Ranches – Monty Pearce

Habitat Restoration

- **Seedings:**
 - **Deer Fire** – O’Neil PPA EA Restoration Treatment – 15,776 acres BLM
Bitterbrush and Sagebrush seedling plantings
 - **South Cricket Fire** – O’Neil PPA EA Restoration Treatment – 5349 acres BLM, 6140 private (Pearce) Bitterbrush and Sagebrush seedling plantings
 - **Charleston Fire Shrub Rehabilitation** – Plant sagebrush and bitterbrush seedlings in important stop-over areas that didn’t regenerate after burn.
- **Conifer Removal:**
 - **Payne Basin** – waiting on DNA – 2,200 acres, juniper removal and possible seeding in transition and migration corridor.
 - **Murdock Mountain Mule Deer Habitat Enhancement** – Hand thinning and mechanical mastication of Phase 1 or 2 Juniper in migration corridor and winter range. Partners include USFWS, MDF, and Winecup Gamble Ranch.
 - **Collar and Elbow Basin** – 400 acres of private property owned by Simplot. Phase 1 juniper removal in critical winter range. A Partners for Fish and Wildlife Project
 - **Polygons #16 Deadman, #25 Northeast Pequops** – O’Neil PPA EA
Phase 1 and 2 conifer removal within 3 miles of sage grouse leks, treatments could include – hand thinning, mastication, broadcast and drill seeding, pile burning, greenwood fire cutting, herbicide, and/or temporary fencing.
- **Fuel Breaks:**
Meadow Creek Restoration – Mow 10 miles of a fuel break to protect critical transition and stop-over areas from burning (O’Neil Basin PPA EA)

**Mule Deer Enhancement Program
White Pine County
Management Areas 11 and 12
Five Year Plan
July 2022**

- **Conifer Removal**
 - Complete NEPA for identified projects in Cooper Meadow
 - 1,455 acres identified for hand thinning
 - 301 acres identified for mastication
 - Possibly identify more acres under new NEPA
 - Complete projects in Smith Valley
 - 9,048 acres identified for hand thinning
 - 952 acres identified for mastication
 - NEPA and funding is currently in place
 - Complete treatments with the BLM in the South Spring and Hamlin Watershed EA
 - Pursue NEPA for Steptoe Bench
 - Pursue NEPA for Weaver Creek
 - Pursue NEPA on USFS lands in the North Schell Creek Range
- **Spring Restoration**
 - Complete NEPA with BLM spring package
 - When NEPA is completed, prioritize springs and begin restoration efforts
 - Work with USFS to identify springs and complete NEPA
- **Research**
 - Request that NDOW pursue a research project studying the impacts of wild horses on mule deer
 - Conduct mule deer collaring in MA 12
 - Conduct mule deer collaring in MA 11
 - Coordinate with Great Basin National Park on mountain lion study
- **Energy Development**
 - NDOW will keep the Team informed of energy development(s) that may impact mule deer
 - Energy development may alter priorities for mule deer
- **Water Development**
 - Complete water developments that have been cleared
 - Consider new sites for future water developments

Conservation Actions for the Area 13 Deer Herd August 2022

We hope that an extensive radio-collaring project for MA13 will be approved and initiated in 2023. We are expecting that spatiotemporal movement data from radio-collared deer will further inform us on most impactful locations for effective habitat management efforts. These data are *vital* in the decision making process for future habitat projects and will ultimately greatly benefit the herd.

We aim to keep the subcommittee apprised of any developments both in the management area as well as in the region at large. This includes across agencies as well as industries. This 5-year plan will be revisited annually and adaptive, thereby adjusted and modified as needed.

Water developments – Enhance or Add

- Additional guzzlers through the Golden Gate, Seaman, Irish, and Quinn Canyon Ranges, as well as in Coal Valley, to provide a more extensive network of water resources in drastic drought conditions
 - Central Nevada Water Development Project EA may allow for DNA procedures within the Tonopah Field Office area of responsibility
- Enhancing established springs throughout the Grant/Horse Range by conducting and or expanding PJ removal and deploying horse exclosures and fencing

Habitat Restoration

- **Conifer Removal:**
 - Through Perish Springs and surrounding areas (important migration corridor)
 - White Pine Range to expand the work being conducted by the Forest Service
 - Fawning grounds by Hamilton
 - Expanding work being conducted in the Douglas Hills and Ellison Knobs areas
 - Benches of the Grant Range
- **Seedings:**
 - In the entirety of the management area – recent fires in the area have provided an opportune window
 - Herbicide to reduce infiltration of cheat grass and other invasives

Predator removal

- If radio collar data indicates a particular species as a primary predator causing a significant amount of mortalities and or a particular area where deer are significantly more vulnerable to predation

Conservation Actions for the Area 14 Deer Herd August 2022

Fences – Modify or Add

- Stronger horse enclosures that may require additional NEPA clearances
- Adding wildlife-friendly fencing around springs and or riparian areas

Habitat Restoration

- **Conifer Removal:**
 - 3-bar NEPA clearance
 - Targeting areas that further expand other work being done in the area
 - Monitoring and removal of phase 1 and early phase 2 trees on previously treated areas
 - Conducting PJ removal on surrounding stop over areas (e.g., Mt Hope, Lone Mt.)
 - Various benches and canyons in the Diamonds, as necessary and to piggy-back off work being done by other agencies and groups
 - NEPA is close to being complete
 - Gibellini Mine will conduct future mitigation work with associated NEPA clearances in the coming years
 - PJ removal to expand off of their efforts as well as riparian restoration where appropriate
- **Seedings:**
 - Cortez Range – recent fires in the area have provided an opportune window
 - Upcoming mining activity in Horse Canyon (Gold Rush) may allow utilization off their NEPAs and expanding off related mitigation work
 - Herbicide to reduce infiltration of cheat grass and other invasives
- **Water Development and Riparian Restoration:**
 - Spring restoration in Spring Valley
 - Potential big game guzzler(s) on Lone Mountain
 - Vegetative work to enhance riparian areas

Investigations

- A fawn mortality project to better inform Project 40 and identify a more supported target species

MDEP Management Areas 16, 17, 21, 25 5-Year Plan

Water Development/Mesic Protection

- Butler Basin Meadows Protection – Complete current phase of exclusionary fencing and expand to adjacent meadows.
- Complete BLM Programmatic EA – Place exclusionary fencing around mesic sites on BLM. Several sites include but aren't limited to: Alpine Canyon Spring: 11S 452484.88m 4208820.65m
Jack's Spring: 11S 454393.26m 4207074.62m and 11S 454826.54m 4206954.37m
South Lone Mountain Spring: 11S 456288.87m 4205366.18m
Shovel Spring: 11S 442765.45m 4221610.11m
Peterson Meadows: 11S 446822.11m 4331103.95
Point of Rock Spring: 11S 528927.81m 4237766.26m
Sidehill Spring: 11S 527306.35m 4234227.92m
- Work with the USFS on Mesic Fencing (Sagehen Spring)
- Build the cleared guzzlers under the newly finished EA.

Pinyon and Juniper Treatments

- Complete Morey Bench pinyon and juniper treatments
- Complete the Little Fish Lake Valley treatments cleared on the USFS
- Treat BLM portions of Pine Creek and Pasco
- Treat Meadow Canyon/Andrew's Basin
- Treat NE corner of Shoshones (important MD wintering habitat)
- Complete Indian Valley treatments
- Thin/treat Cloverdale summit
- Antelope Range/Ninemile Peak treatments
- Magruder/Palmettos PJ treatments around water sources
- Kawich Range

Seeding/Herbicide

- Aerial seed and plant seedlings on Carver's Bench PJ treatments
- Antone Canyon Seeding
- Wall Canyon/Pablo herbicide and aerial seeding
- Seedling planting on Morey Bench

**Mule Deer Enhancement Program
Churchill and Mineral County
Management Areas 18 and 20
Five Year Plan
July 2022**

- **Conifer Removal**
 - Complete NEPA for additional projects in Area 18 and 20 areas to focus on include:
 - War Canyon
 - Cedar Mountain
 - Pilot Mountain
 - Powell Mountain
 - Buller Mountain
 - Bald Peaks
 - Smith Creek
 - Topia
 - Truman Meadows
 - Seek clearance to go back into past treatment areas and retreat 5 years post treatment.
- **Spring Restoration**
 - Complete NEPA for spring protection fencing
 - Once NEPA is completed seek funding and contracts to complete projects
 - Work with USFS to identify springs and complete NEPA in Area 20
 - Complete fencing projects on private land to protect spring sources
 - Fence Gilbert Creek pasture as well as Water Canyon in New Pass Range
- **Water Development**
 - Identify future water development sites in Area 18 and 20
 - Consider developing spring sources that promote mule deer use
- **Feral Horses**
 - Encourage the BLM to keep horses and burros at AML
 - When a horse removal is conducted. Follow up with predator removal
- **Fire Rehab**
 - Apply herbicide on past fires and rehab with forage kochia and snowstorm
 - Reseed all pinyon and juniper fires. If money is lacking focus efforts on all north facing slopes

Lincoln County MDEP Subcommittee – 5 Year Plan for Mule Deer Management September 2022

Management Area 22

- Restore/regenerate bitter brush on Jackrabbit Bench and surrounding area
- Pinion/Juniper removal in Fairview Range
- Protection of springs in Fairview Range
- Use GPS data from proposed collar study to target other areas for habitat treatment

Management Area 23

- Increase habitat quality within priority fawning grounds
- Plant bitter brush in high elevation habitat
- Remove pinion/juniper
- Protect springs
- Perform maintenance on Atlanta Road pinion/juniper treatments

Management Area 24

- Focus on improving summer range
- Continue pinion/juniper removals
- Seed bitterbrush to plant in chainings
- Plant bitterbrush seedlings in high use areas
- Construct water developments in Delamar Mountains to increase summer habitat

Clark County MDEP
Areas 26, 27, and 28
Five-Year Management Plan
Autumn 2022

Data Gathering

1. Remote Camera Array- 1 year minimum, can be repeated
 - a. Monitor use of springs in the Spring Mts by mule deer, non-targets, and predators (20 sites, 20-40 cameras). Monitor condition of springs/habitat/vegetation.
 - b. Analyze photo data using AI software; incorporate data into a modified population model/estimate

Habitat Restoration

2. Spring Enhancement- 5-10+ years to completion
 - a. Initiate or continue building/replacing fences around springs in the Spring Mountains and McCullough Range
 - i. Willow Creek for fencing- furthest along on the NEPA process for Spring Mts
 1. Scope of Work completed in 2017, will need to be revised.
 - ii. Mud Spring has an old wire fence that needs to be replaced with pipe rail fencing to allow deer/elk and exclude horses/burros. Sensitive plant area.
 - iii. Buck Spring, Fence Spring, Trough Spring, Sawmill Spring are all currently fenced, so Categorical Exclusions may apply for replacing/maintaining these.
 - b. Other spring restoration projects: Timeline will depend on NEPA. Coordination with USFS and/or BLM is underway for ~15 additional springs. The following spring projects are currently under draft NEPA plans (Piute Eldorado EA):
 - i. Ora Hanna Spring (McCulloughs)- excavate springhead and/or fence for cattle
 - ii. Highland Spring (McCulloughs)- additional drinker, fence for cattle
 - iii. Cow Spring (McCulloughs)- additional drinker, fence for cattle
3. Mullein Removal- 2-3 years.
 - a. Hand-removing mullein (*Verbascum spp*) from the CC Spring Road in Spring Mountains NRA where mastication and other restoration has occurred and replacing it with native seed/seedlings/plantings. No additional NEPA as target areas are restoration/fuels reduction areas. Coordinate with USFS.

Other

4. Horse and Burro Management- Support private citizens and NGOs in their actions to solicit aid and funding to remove feral horses and burros from areas in Clark County where numbers exceed AML.

- a. Clark County MDEP members and private citizens have expressed concerns for the BLM's ability to efficiently remove excess horses and burros without aid, especially funding and have reached out to NGO groups to assist.
- b. NDOW has no jurisdiction over horse and burro management but can provide support as documentation of horse and burro impact on habitat and wildlife.

2022 MDEP Project Proposals

Investigation Projects

Project Name	Subcommittee	Unit Group	Limiting Factor Score	Statewide Priority?	Addresses Limiting Factors?	Crucial or Priority Habitat?	Will Research Improve Knowledge?	Sample Size / Project Scale	Compliment Adjacent Projects?	NEPA, Permission, or Contract in Place?	Urgency?	Likelihood of Success?	Leverage Funding?	Cost Effectiveness?	Amount Requested?	Score	Comments
Management Area 1 Mule Deer Collaring	Washoe	011-015	4.8	10	10	10	10	10	5	5	5	5	10	10	\$75,000	94.8	3
Area 8 Tooth Collection and Age Analysis	Elko Area 7, 8, 9	081	2.6	10	0	10	1	10	5	5	0	3	0	10	\$3,000	56.6	1
Wild Horse Impacts on Mule Deer	White Pine	MA 11 and/or 12	4.9	10	10	5	10	10	5	1	5	3	10	5	N/A	78.9	7
Management Area 12 Mule Deer Collaring	White Pine	MA 12	4.3	10	10	10	10	10	5	5	5	5	10	10	\$96,000	94.3	6
Management Area 13 Mule Deer Collaring	Area 13	MA 13	5	10	10	10	10	10	5	5	5	5	0	10	\$200,000	85	5
Management Area 22 Mule Deer Collaring	Lincoln	221-223	5	10	10	10	10	10	5	5	5	5	0	10	\$323,320	85	4
Spring Mountain Camera Project	Clark	MA 26, 27, & 28	5	10	10	10	5	10	5	5	4	5	10	10	\$8,000	89	2
\$705,320																	

Habitat Projects

Project Name	Subcommittee	Unit Group	Limiting Factor Score	Population Trend	Addresses Limiting Factors?	Restore Crucial or Priority Habitat?	Long-Term?	Project Scale?	Does Project Build Upon Existing Projects?	NEPA, Permission, or Contract in Place?	Urgency?	Likelihood of Success?	Partner Funding?	Cost Effectiveness?	Amount Requested?	Score	Comments
Granite Range Water Developments	Washoe	014	3.8	5	10	10	10	15	5	5	5	5	10	10	\$43,000	93.8	
Spring Restoration in Clark County	Clark	MA 26, 27, & 28	5	3	10	10	10	12	5	3	4	5	10	10	\$100,000	87	
Spring Protection	Nye-Esmeralda	MA 17, 21	5	5	10	5	10	10	5	5	5	5	10	10	N/A	85	
Granite Range Overspray Projects	Washoe	014	3.4	5	10	10	10	15	5	5	5	5	1	10	\$200,000	84.4	
Wildcat Fire Bitterbrush Planting	Elko Area 7, 8, 9	071-079, 091	4.4	3	10	10	10	10	5	5	5	3	10	5	\$117,000	80.4	
Vinini and Henderson Creek Pinyon-Juniper Removal	Area 14	MA 14	5	3	10	5	10	10	5	5	0	5	10	10	\$150,000	78	
Current to Upper Perish Habitat Enhancement:	Area 13	MA 13	4.3	5	10	10	10	15	5	1	0	5	0	10	\$250,000	75.3	
Bald Mountain Pinyon-Juniper Thinning	Lander	151-156	4.3	1	10	10	10	15	5	1	0	5	0	10	\$2,400,000	71.3	5-10 year project costs displayed
East Whisler Mtn Pinyon-Juniper Removal	Area 14	MA 14	5	3	10	5	10	10	5	5	0	5	3	10	\$80,000	71	
Robert's Creek Corridor Pinyon-Juniper Removal	Area 14	MA 14	5	3	10	5	10	10	5	5	0	5	3	10	\$150,000	71	
Corta Fire Seedling Planting Phase II	Elko Area 10	102-103	3.4	3	10	10	10	15	5	1	5	3	0	5	\$75,000	70.4	
Little Fish Lake Valley Pinyon-Juniper Treatment	Nye-Esmeralda	162-163	4.4	5	10	10	10	10	5	1	0	5	0	10	\$150,000	70.4	
Triple B HMA Remote Sensing	Elko Area 10	101-109	4.4	10	10	5	10	10	0	5	0	5	0	10	\$191,000	69.4	Move to Investigations; Other
Milk Ranch Guzzler	Lincoln	222	4	5	10	5	10	10	5	5	0	5	0	10	\$45,000	69	
Izzenhood WMA Winter Range Habitat Restoration	Elko Area 6	068	5	3	10	10	10	10	5	5	0	5	0	5	\$125,000	68	
Toe Jam Mule Deer Corridor Fence Modification	Elko Area 6	067	3.4	3	10	10	10	10	5	5	0	5	0	5	\$144,500	66.4	
Area 7 Fence Removal in Migration Corridor	Elko Area 7, 8, 9	071-079, 091	2.1	3	10	10	10	10	5	5	0	5	1	5	\$25,000	66.1	
Queen Spring Pinyon-Juniper Hand Thinning	White Pine	111-113	4.6	5	10	5	10	10	0	5	0	5	0	10	\$130,000	64.6	
Private Land Snowstorm and Immigrant Kochia Seeding	Elko Area 6	065	4.8	5	10	5	10	10	5	1	0	3	0	10	\$71,000	63.8	
Spring Mountains Mullein Removal	Clark	MA 26, 27, & 28	3	3	5	10	5	6	5	3	2	3	10	5	\$25,000	60	
Fire Creek Cheatgrass Treatment	Lander	151-156	4.3	1	10	5	10	10	5	1	0	3	0	10	\$3,380,000	59.3	5-10 year project costs displayed
Elephant Head Aspen Enclosure Repair	Lander	151-156	5	1	10	5	10	1	5	5	0	5	0	10	\$231,250	57	
Northern Golden Gate Range Guzzler Series	Area 13	MA 13	4.8	5	10	1	10	1	5	1	0	5	0	10	\$120,000	52.8	
\$8,202,750																	

Predator Projects

Project Name	Subcommittee	Unit Group
Coyote Removal During Fawning Period	Humboldt-Pershing	043-046
Antelope Range Mountain Lion Removal	White Pine	111-113
Cherry Creek Range Mountain Lion Removal	White Pine	121
Fawning Ground Coyote Removal	Lincoln	231

(Pulled from Consideration in 2022)

081 Mule Deer Crucial Winter Range Bitterbrush Planting	Elko Area 7, 8, 9	081	4.4	5	10	10	10	10	5	5	5		7	7	\$26,000	78.4	
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MDEP Subcommittee: Washoe County MDEP	Hunt Unit Group: 011-015	
Project Title: Management Area 1 Mule Deer Collaring	Project Location: Management Area 1	
Brief Description of Project: <i>Include any development plans such as capturing, collaring, wildlife health analysis, etc. and include the schedule for obtaining any necessary permits, permission, funding, etc.:</i>	The project would deploy GPS collars on mule deer to identify disease prevalence, sources of mortality, critical habitat, and fawning grounds of collared does. Funding for the project would come from Heritage as well as NGOs.	Score
Limiting Factor Score: <i>Use subcommittee cumulative score from Limiting Factor Score Form</i>	Maximum of 5 points possible	4.8
Has this mule deer management area or hunt unit group been identified as a statewide priority for research or investigations? Yes.	Yes = 10 pts No = 0 pts	10
Does this project directly address identifying factors limiting healthy mule deer populations? (10 points possible) Yes.	Yes = 10 pts No = 0 pts	10
<i>How will project address limiting factors?</i> This project aims to address the uncertainty around causes of mortality for a deer herd that has drastically reduced in population size over a short period of time. Historically little is known regarding disease prevalence in this herd, and sample size is continuously brought up when discussing this deer herd. Supplemental collars will help to address some of these concerns. Predation has been identified as a limiting factor, and investigating mortalities of collared deer should help to identify the primary source of mortality.		
Does this project occur in a crucial or priority habitat for mule deer? (10 points possible) (Score using the highest ranking criteria)	High priority (Critical Mule Deer Seasonal Range or Migration Route) = 10 points Moderate priority (High elev. summer range, PJ encroached shrub community, winter range) = 5 points Low priority (salt desert shrub or low density mule deer habitats) = 1 pt	10
<i>Provide added details:</i> One goal of the project is to deploy collars on deer to better map critical habitat for mule deer, while also identifying key springs to protect through our spring enhancement project. The collaring project will also help to identify fawning areas, seasonal habitats, as well as migrational routes. The collar data from this project will be used to guide our MDEP Team's future habitat projects.		
Will the research or investigation improve knowledge of habitat and restoration of a long-term or permanent nature? Projects of this nature are known to have long-term benefits with demonstrated history of past successes.	10+ years = 10 points 3-10 years = 1 point	10
Is the sample size (# of marked animals) and project scale (distribution across an entire hunt unit or region) adequate to gain meaningful inference or statistical power for interpreting the relative impact of this investigation?	High impact = 10 pts Moderate impact = 5 pts Low impact = 1 point	10
Does the project complement an adjacent project or study, previous project, or help inform future habitat projects?	Yes = 5 points No = 0 pts	5
<i>Describe existing or past projects:</i> There is an ongoing collaring project in Management Areas 1 and 2. This new project will provide supplemental funding to maintain a sufficient sample size of collared deer. The new funding should provide some additional funds for deploying collars in areas where we are currently lacking GPS data. We intend to use these data to guide future habitat projects.		
Needed permitting, authority, and mechanisms are completed or in process and does the project have a high probability of being completed on-time: -NEPA analysis for wilderness permits for capture work -Permission from private landowners or other government agencies (such as USFWS or D.O.D.) -Contract mechanisms to support the work are in place or not needed	Timely completion (12 months) = 5 pts Extended completion (24 months) = 1 pts	5

Investigations Projects

Project narrative: *Be specific to the research needs and issues associated with mule deer and/or habitat and your technical approach to addressing the issue. Identify potential benefits to mule deer and other wildlife. Describe if the project would be conducted on BLM, FS, USFWS, or private land and if any private landowner permissions are necessary. Please describe any NEPA permitting requirements (such as permission to capture animals in wilderness) if on public land and when NEPA completion is expected. Also provide a tentative project schedule of major tasks (ie collar orders, capture dates, data collection period, reporting dates, etc). Please list any collaborators or project funding partners.*

The mule deer herds in Management Area 1 have drastically declined over the past decade. It's suspected that multiple factors are driving the decline of this herd, while also preventing it's rebound. To better identify the factors limiting this herd, we are proposing to add more GPS collars to the on-going collaring project. The addition of these collars will help to identify areas critical to does for fawning, seasonal habitats, and migration corridors. By identifying these crucial habitats, we can target them for future habitat projects and predator removal. The 2022 project would benefit the on-going collaring project by helping to maintain a sufficient sample size. In the initial collaring effort, serology results showed that most of the deer had titers for EHD/Blue Tongue, as well as Adenovirus. Collecting additional samples from the captured deer would help our understanding of disease exposure throughout the rest of Management Area 1.

Funding: We have verbal commitment from two NGO's to pay for the collars. We would be asking the Heritage fund to pay for the cost to capture the animals.

Habitat Projects

MDEP Subcommittee: Washoe County MDEP	Hunt Unit Group: 014					
Project Title: Granites Guzzler	Project Location: Granite Basin on the southern end of the Granites					
Brief Description of Project: <i>Include any development plans such as vegetation removal, planting, seeding, or installation of structures; also include the schedule for obtaining any necessary permits, completing NEPA compliance, etc.:</i>	There is current NEPA in place for building guzzlers in the Winnemucca BLM Office. We would need to work with BLM to add this location to the existing guzzler list in order for them to get archaeological and sensitive plant clearance.					Score
Limiting Factor Score: <i>Use subcommittee cumulative score from Limiting Factor Score Form</i>	<i>Maximum of 5 points possible</i>					3.8
Unit Group 5-Year Published Deer Population Trend:	2017: 900	2018: 850	2019: 650	2020: 550	2021: 250	
	<i>Decreasing = 5 pts</i>		<i>Stable = 3 pts</i>		<i>Increasing = 1 pt</i>	5
Does this project directly address factors limiting healthy mule deer populations?	<i>Yes = 10 pts</i>			<i>No = 0 pts</i>		10
<i>How will project address limiting factors?</i> Yes. Based off of the previous years collar data, mule deer are not returning to the high elevation habitat that is in better shape than the habitat in the lower elevations of 014. One potential explanation for this could be the lack of water in the higher elevations. Many of the springs on the top of the Granites are ephemeral and dry up during the hottest months of the summer during dry years. Building a guzzler would allow the deer to migrate to higher elevations in the summer months, where they would have access to higher quality forage as well as water.						
Does this project protect, maintain or strategically restore statewide priority mule deer habitat, enhance critical habitat or a critical life stage for mule deer? <i>Score using the highest ranking criteria</i>	<i>High priority (Critical Mule Deer Seasonal Range or Migration Route) = 10 points</i> <i>Moderate priority (High elev. summer range, PJ encroached shrub community, winter range) = 5 points</i> <i>Low priority (salt desert shrub or low density mule deer habitats) = 1 pt</i>					10
<i>Provide added details:</i> Yes. This project would expand the amount of usable critical habitat for mule deer in the Granites.						
Is this mule deer habitat restoration or improvement of a long-term nature? <i>Does the project involve habitat trend and condition through restoration and improvement of a long-term or permanent nature? Projects of this nature are known to have long-term benefits with demonstrated history of past successes</i>	<i>10+ years = 10 points</i>			<i>3-10 years = 5 points</i>		10
Project Scale and Implications: <i>Is the size or magnitude of the project, relative to the habitat type or Mule Deer distribution, impactful? Does the project convey a large conservation benefit to important or critical habitat for Mule Deer? For instance, does a riparian project have a meaningful impact across multiple reaches within a watershed or would a seeding project address a large extent or important critical habitat?</i>	<i>High impact = 15 pts</i>		<i>Moderate impact = 10 pts</i>		<i>Low impact = 1 point</i>	15
Does the project build upon existing project work?	<i>Yes = 5 pts</i>			<i>No = 0 pts</i>		5
<i>Describe existing or past projects:</i> Yes. This project would be a utilizing collar data from last year's project to make informed habitat decisions. It is also directly adjacent to the large scale fire rehabilitation project we are proposing for the upcoming year.						

Habitat Projects

<p>Timely Completion: <i>Needed permitting, authority, and mechanisms are completed or in process and does the project have a high probability of being completed on-time:</i> <i>-NEPA analysis or other statutory compliance is completed or not needed</i> <i>-Permits are completed or not needed</i> <i>-Contract mechanisms to support the work are in place or not needed</i></p>	<p>Timely completion (12 months) = 5 pts Extended completion (24 months) = 1 pt</p>	<p>5</p>
<p>Urgency: <i>(Is the project urgent due to a narrow biological window that requires immediate attention and funding to address resource degradation or deterioration?)</i></p>	<p>Yes = 5 pts No = 0 pts</p>	<p>5</p>
<p><i>Provide added details:</i> This project is urgent due to the rapid decline of the mule deer herd in 014. This summer, several of the springs on the southern end of the Granites were dry, which prevented multiple species from utilizing the surrounding habitat. Providing a new water source in the area that holds water year round will immediately provide benefit to the deer of unit 014.</p>		
<p>Likelihood of Success: <i>What is the likelihood of successful completion and successful outcomes? Do the individuals and organizations involved possess the capability, experience, and proven methodology needed for implementation? Is the proposal supported by sound and established scientific or biological principals? Project objectives are realistic, measurable, and achievable with clearly defined methods</i></p>	<p>High likelihood= 5 points Moderate = 3 points Low = 1 point</p>	<p>5</p>
<p><i>Provide added details:</i> This project has a high likelihood for success. NDOW has been building similar big game guzzlers across the state with a high level of success in getting species to utilize them. The location of the proposed guzzler was informed by proximity of collar data, as well as the lack of year-round water sources.</p>		
<p>Partner Funding: <i>Does the project leverage funding or in-kind contributions by external partners and by how much?</i></p>	<p>>3x match = 10 pts 1.5-2.9 match = 7 pts 0.75-1.49 = 3 pts 0.1-.74 = 1 pt</p>	<p>10</p>
<p><i>(List amounts and sources if possible) Does the project have confirmed funding commitment from project partner such as a letter or memo with stated commitment amount?</i></p>	<p>Amount: \$ Volunteer Hours/Miles Source: NGO Amount: \$ TBD Source: NDOW Water Development</p>	<p></p>
<p>Cost Effectiveness: <i>Are the expected results worth the cost of the project?</i></p>	<p>Very cost-effective = 10 pts Moderately cost-effective = 5 pts Minimally cost-effective = 1 pt</p>	<p>10</p>
<p><i>Provide added details:</i> For many years, the guzzler program has been building big game guzzlers across the state of Nevada. NDOW's water development program and Nevada Bighorns Unlimited have developed and implemented the most cost-effective strategies possible for providing animals with as much water possible in one of the driest states. Adding a year-round water source will increase the amount of usable habitat, and thus improve the health of the 014 deer herd.</p>		
<p>Amount Requested:</p>	<p>\$43,000</p>	
<p>Total Project Score (100 possible points)</p>	<p>Sum of Scores 93.8</p>	

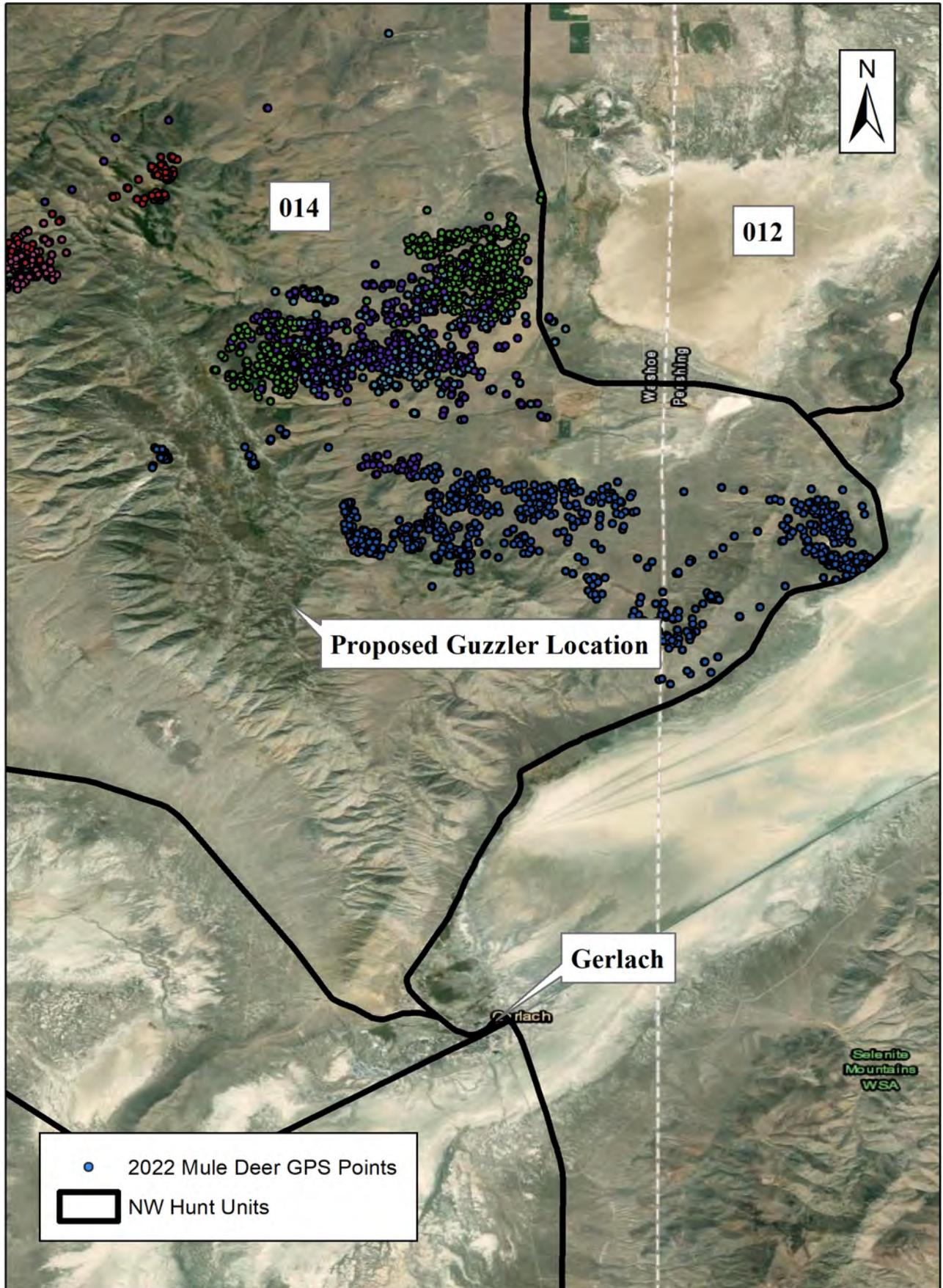
Habitat Projects

Project Narrative: *Be specific to the needs and issues associated with mule deer and/or habitat and your technical approach to addressing the issue. Identify potential benefits to mule deer and other wildlife. Describe if the project is on public or private land and any private landowner permissions. Please describe any NEPA permitting requirements if on public land and when NEPA completion is expected. Also provide a tentative project schedule of major tasks. If your project is associated with water rights (e.g. spring fencing project) please discuss the status of permissions to complete the project with water rights holders.*

Across the past decade, the deer herd in 014 has seen a drastic reduction in population size, with the most recent estimate at one sixth of what it once was. Within this unit, the habitat in the higher elevations is in better condition than the habitat in the lower elevations. This past year, through the MDEP we collared 9 deer in 014 during the fall. One of the most surprising things we learned from the collar data, was that some of the collared deer never migrated off winter range back up into the higher elevations in the summer. One potential explanation for this could be a lack of water sources in the higher elevations, where the habitat looks to be in better condition. During the hottest months of the summer, some of the springs on the south end of the Granites run dry.

The Washoe MDEP would like to propose building a guzzler in the higher elevation to provide a year-round water source for deer. We expect this project to primarily benefit deer, but it should also benefit bighorn sheep, chukar, and other species. The big game guzzler would consist of a 54 foot by 60-foot apron which would feed a 10,000-gallon tank, with a drinker that is fenced in by pipe rail. The apron would be fenced with barbwire, to prevent ambush predators from hiding under it while ungulates utilize the drinker. Since there are no roads to this portion of the Granites, the materials and volunteers would need to be brought to the site via helicopter.

The project would cost approximately \$43,000 with an estimated \$36,000 for materials, and \$7,000 for helicopter slinging. After the completion of a DNA from the Winnemucca BLM, we would complete archaeological surveys and sensitive plant surveys by the end of May. Once complete, the guzzler would be slated for building in the month of June.



Habitat Projects

MDEP Subcommittee: Washoe County	Hunt Unit Group: 014					
Project Title: 014 Rehab - Overspray Projects	Project Location: 014-Granites					
Brief Description of Project: <i>Include any development plans such as vegetation removal, planting, seeding, or installation of structures; also include the schedule for obtaining any necessary permits, completing NEPA compliance, etc.:</i>	This project consists of herbicide application to improve habitat conditions for mule deer. Large amounts of the proposed acreage will be treated solely with an overspray of herbicide to release the existing native vegetation from competition with cheatgrass. Overspray will be followed by seeding as necessary.					Score
Limiting Factor Score: <i>Use subcommittee cumulative score from Limiting Factor Score Form</i>	<i>Maximum of 5 points possible</i>					3.4
Unit Group 5-Year Published Deer Population Trend:	2017: 900	2018: 850	2019: 650	2020: 550	2021: 250	
	<i>Decreasing = 5 pts</i>		<i>Stable = 3 pts</i>		<i>Increasing = 1 pt</i>	5
Does this project directly address factors limiting healthy mule deer populations?	<i>Yes = 10 pts</i>			<i>No = 0 pts</i>		10
Invasive plants causing a decline in habitat quality have been identified as a limiting factor for mule deer in 014. The objective of this project is to reduce invasive plant competition with native species that compose deer forage. When released from competition, these species should increase in size and vigor, providing higher quality forage for mule deer.						
Does this project protect, maintain or strategically restore statewide priority mule deer habitat, enhance critical habitat or a critical life stage for mule deer? <i>Score using the highest ranking criteria</i>	<i>High priority (Critical Mule Deer Seasonal Range or Migration Route) = 10 points</i> <i>Moderate priority (High elev. summer range, PJ encroached shrub community, winter range) = 5 points</i> <i>Low priority (salt desert shrub or low density mule deer habitats) = 1 pt</i>					10
<i>Provide added details:</i> The project area consists of critical winter habitat for mule deer. This project will strategically restore this important habitat. The data from GPS collared mule deer shows them spending a significant amount of time in and adjacent to the proposed treatment area.						
Is this mule deer habitat restoration or improvement of a long-term nature? <i>Does the project involve habitat trend and condition through restoration and improvement of a long-term or permanent nature? Projects of this nature are known to have long-term benefits with demonstrated history of past successes</i>	<i>10+ years = 10 points</i>			<i>3-10 years = 5 points</i>		10
Project Scale and Implications: <i>Is the size or magnitude of the project, relative to the habitat type or Mule Deer distribution, impactful? Does the project convey a large conservation benefit to important or critical habitat for Mule Deer? For instance, does a riparian project have a meaningful impact across multiple reaches within a watershed or would a seeding project address a large extent or important critical habitat?</i>	<i>High impact = 15 pts</i>		<i>Moderate impact = 10 pts</i>		<i>Low impact = 1 point</i>	15
Does the project build upon existing project work?	<i>Yes = 5 pts</i>			<i>No = 0 pts</i>		5
<i>Describe existing or past projects:</i> There are large-scale fire rehab projects going on in 014. This project occurs within the same unit and represents an additive expansion of habitat acres under rehab. This project is a direct product of the mule deer collaring project we started last year through the MDEP. GPS collar data from deer revealed the areas that were critical habitat to deer. It also helped us to identify habitats that were not being utilized by deer, and could likely benefit from habitat improvement projects such as this one.						

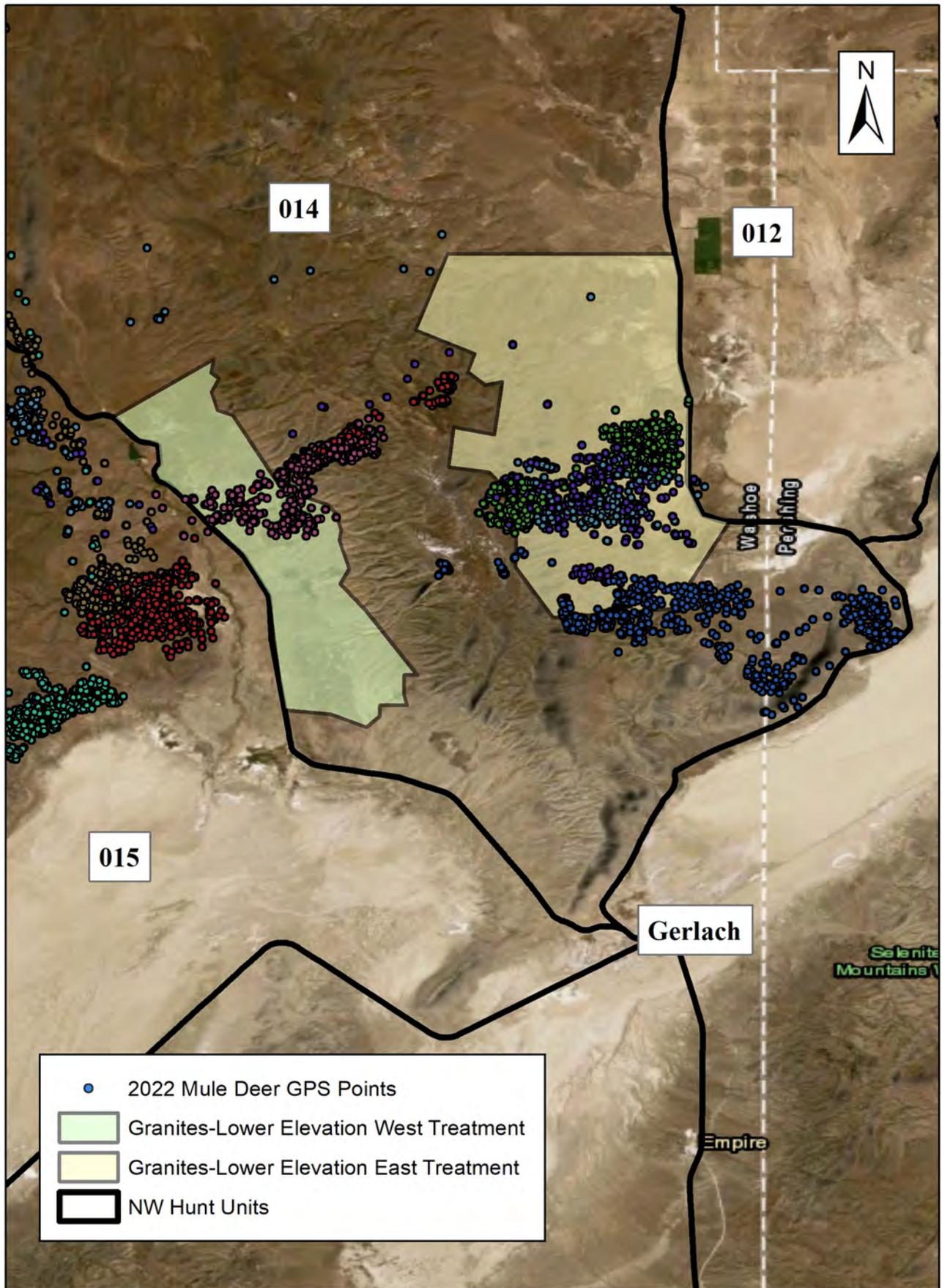
Habitat Projects

<p>Timely Completion: <i>Needed permitting, authority, and mechanisms are completed or in process and does the project have a high probability of being completed on-time:</i> -NEPA analysis or other statutory compliance is completed or not needed -Permits are completed or not needed -Contract mechanisms to support the work are in place or not needed</p>	<p>Timely completion (12 months) = 5 pts Extended completion (24 months) = 1 pt</p>	<p>5</p>
<p>Urgency: <i>(Is the project urgent due to a narrow biological window that requires immediate attention and funding to address resource degradation or deterioration?)</i></p>	<p>Yes = 5 pts No = 0 pts</p>	<p>5</p>
<p><i>Provide added details:</i> The population trajectory of the 014 mule deer herd has been on a sharp decline. The most recent population estimate shows the population at only 17% of what it was just ten years ago. It is imperative that we do all that we can to improve habitat conditions for the remaining mule deer in this mountain range.</p>		
<p>Likelihood of Success: <i>What is the likelihood of successful completion and successful outcomes? Do the individuals and organizations involved possess the capability, experience, and proven methodology needed for implementation? Is the proposal supported by sound and established scientific or biological principals? Project objectives are realistic, measurable, and achievable with clearly defined methods</i></p>	<p>High likelihood= 5 points Moderate = 3 points Low = 1 point</p>	<p>5</p>
<p><i>Provide added details:</i> This project has a high likelihood of successful completion with successful outcomes. Overspray projects have been demonstrated to be very effective and successful in other parts of the state. These projects are able to have a positive impact on large amounts of acreage quickly due to native vegetation being already established. Once the site is sprayed, the native vegetation flourishes after being released from suppression by cheatgrass. NDOW regularly conducts herbicide applications and has expertise and established mechanisms in place to make this project possible.</p>		
<p>Partner Funding: <i>Does the project leverage funding or in-kind contributions by external partners and by how much?</i></p>	<p>>3x match = 10 pts 1.5-2.9 match = 7 pts 0.75-1.49 = 3 pts 0.1-.74 = 1 pt</p>	<p>1</p>
<p><i>(List amounts and sources if possible) Does the project have confirmed funding commitment from project partner such as a letter or memo with stated commitment amount?</i></p>	<p>Amount: \$ TBD (likely 0.1-0.74x) Source: NGO Amount: \$ Source:</p>	<p></p>
<p>Cost Effectiveness: <i>Are the expected results worth the cost of the project?</i></p>	<p>Very cost-effective = 10 pts Moderately cost-effective = 5 pts Minimally cost-effective = 1 pt</p>	<p>10</p>
<p><i>Provide added details:</i> When compared to other spray and seed projects, this project is very cost effective. A described above, only small portions of the total sprayed acreage will need to be reseeded. This represents a significant reduction in cost. Large-scale herbicide application is the most cost-effective way to improve upland habitats.</p>		
<p>Amount Requested:</p>	<p>\$200,000</p>	
<p>Total Project Score (100 possible points)</p>	<p>Sum of Scores 84.4</p>	

Habitat Projects

Project Narrative: *Be specific to the needs and issues associated with mule deer and/or habitat and your technical approach to addressing the issue. Identify potential benefits to mule deer and other wildlife. Describe if the project is on public or private land and any private landowner permissions. Please describe any NEPA permitting requirements if on public land and when NEPA completion is expected. Also provide a tentative project schedule of major tasks. If your project is associated with water rights (e.g. spring fencing project) please discuss the status of permissions to complete the project with water rights holders.*

The proposed treatment area has seen a measurable increase in invasive annual grass cover since the mid-1980s. This has led to a decrease in cover by native perennial grasses and shrubs putting the treatment area in an at-risk state. Reduced cover by perennial grasses creates a greater likelihood of the development of a cheatgrass monoculture. Next, reduced cover by shrubs represents reduced forage availability for mule deer in this critical winter habitat. By conducting this overspray operation, with supplemental seeding as necessary, the treated area should see an increase in cover by perennial grasses and shrubs which will stabilize the site and improve the amount of forage available to mule deer. This project will take place on public lands administered by the Winnemucca District Office (WDO) of the Bureau of Land Management. The WDO has existing NEPA in-place that will allow this project to occur; the office simply needs to complete a Determination of NEPA Adequacy (DNA) document. A DNA is quick and easy to complete; completion is dependent on BLM employees having enough time and documents like these are generally completed in the winter. Coordination with WDO has already begun for this NEPA work. NEPA clearances are expected to be obtained by February of 2023. Then project planning will take place from February 2023-July 2023. Implementation of the herbicide application is expected to be completed in October 2023. After that, the project site will be monitored with future project work dependent on the success of spray. If the herbicide application is successful, it is expected that only small portions of the project will require seeding. Any seeding would be completed during the winter of 2024-2025.



Non-Habitat Project Proposal Form

MDEP Team(s) Submitting Proposal: **Humboldt-Pershing** Hunt Unit Group: **043-046**

Project Title: **Unit 043 & 044 Coyote Removal during fawning period**

1. Limiting Factor Rank Score: **5** Needs Assessment Strategy: **Predation, Coyote & Mtn. Lion removal**

2. Justification: Downward Population Trend 3-yr avg low fawn ratios 3-yr avg low buck ratio
 3-yr avg low harvest numbers Disease detected Anecdotal reports

3. Body performing work: Wildlife Services Private contractor
 NDOW-Wildlife Health Other

4. Predator Plan Project Category: Implementation Experimental Management Experimentation Data Gathering

5. Type of Project: Lethal Non-Lethal
 Capture & test Collaring effort Other

6. Level of Monitoring: Rigorous Intermediate Standard

7. Project Duration: one year two years three years 4+

8. Annual Cost: Under \$10,000 \$10 – \$25,000 \$25 - \$50,000 \$50,000+

9. Funding Source: Heritage Fund NGO Predator Fund NDOW Wildlife Services Other None

10. Is funding source eligible for matching funds? Yes No

11. Will this project benefit additional wildlife species? Yes Probably No

Additional Species Benefit: **ANTELOPE**

12. Access for public hunting? Yes No

13. Are there other predator projects in area? Yes No

14. Will project expand knowledge of the mule deer population, mule deer habitat, or predator-prey relationships?
 Yes Probably No

15. Other MDEP teams involved: **Humboldt-Pershing** **Humboldt-Pershing**

16. Additional projects approved for this team:

17. Measure of success? Upward population trend 3-yr avg increased fawn ratio
 3-yr avg higher observed buck ratio 3-yr avg increased 4-pts in harvest Other

Project Start Date: **5/1/23** Estimated End Date: **7/31/25**

Funding Source(s): Estimated Project Cost: \$

Oversight Committee Use Only

Approved

Not Approved

Priority #

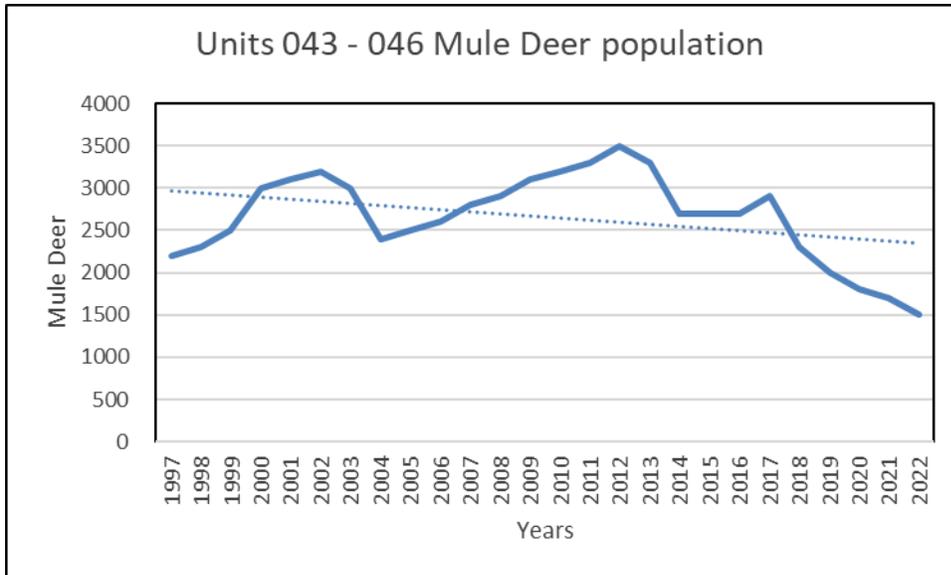
Route Project to:

Comments:

Units 043 -046 Mule Deer
Coyote Removal Project
MDEP Humboldt & Pershing Co.s

Background

Units 043-046's mule deer population has been declining since 2013. The 2012 published estimate was 3,500 mule deer. The 2022 published estimate is 1,500 mule deer indicating a 57% decline. 1998 to 2020 average mule deer population estimate for this herd is 2,750. Various environmental and predation factors are thought to have contributed to this rapid decline.



- Declining fall and spring survey sample sizes. Fall 2012-2018 AVG 717 deer, 2017 fall survey showed 569 deer with a post-hunt buck ratio of 23. In 2019, random polygon methodology was used on the fall survey. All units were surveyed. Results totaled 83 deer 25 bucks: 100 does: 25 fawns. Individual units (Unit 043 = 7 deer 20 bucks: 100 does: 20 fawns, Unit 044 = 45 deer 23 bucks: 100 does: 23 fawns, Unit 045 = 21 deer 39 bucks: 100 does: 23 fawns & Unit 046 = 10 deer 17 bucks: 100 does: 50 fawns). Spring 2013-2020 AVG 446 deer, no surveys or poor survey conditions 2016, 2017 & 2018. 2019 spring sample size was 449 deer with excellent survey conditions. 2020 spring survey sample size 289 deer 26 fawns: 100 does and smallest sample size since 1995. Survey conditions were considered excellent.
- Declining spring fawn ratios; below maintenance 2013-2021
 - 2013 = 781 deer = 21 fawns: 100 adults
 - 2014 = 718 deer = 22 fawns: 100 adults
 - 2015 = No Survey
 - 2016 = poor surveys conditions incomplete survey
 - 2017 = poor survey conditions incomplete survey
 - 2018 = 569 deer = 30 fawns: 100 adults
 - 2019 = 449 deer = 32 fawns: 100 adults
 - 2020 = 289 deer = 26 fawns: 100 adults
 - 2021 = 600 deer = 26 fawns: 100 adults

2019-2021 avg is 28 fawns: 100 adults

Average fawns: 100 adults 2013 to 2021 is 26. Possible coyote predation on fawns, poor body condition of does entering winter and poor winter range.

- Fall Survey totals & ratios. *2019 survey methodology was random polygon all other years were direct search.
 2010 = 661 deer, 24 bucks: 100 does: 50 fawns
 2011 = No Survey
 2012 = 1,201 deer, 44 bucks: does: 32 fawns
 2013 = 805 deer, 32 bucks: 100 does: 34 fawns
 2014 = No Survey
 2015 = No Survey
 2016 = 592 deer, 37 bucks: 100 does: 43 fawns
 2017 = 569 deer, 23 bucks: 100 does: 39 fawns
 2018 = No Survey
 2019* = 83 deer, 25 bucks: 100 does: 25 fawns

Numerous wildfires that occurred in the early 2000s, mostly in the lower elevations that converted brush communities into annual grasslands. Since the declining population trend, a few fires have occurred in the unit group coupled with drought conditions is thought to have continued to hamper mule deer habitat in the lower elevations. The upper elevations of Units 043, 045 & 046 are thought to be in good condition during this timeframe.

Coyote Removal Recommendations

Recommended Units for coyote removal to include 043 and 044. Coyote removal during fawning timeframe May through July for a duration of 3 years.

Unit 043 Humboldt Range, within the attached polygon with specific attention to the following drainages (canyons): Unionville area (Peru Canyon, Congress Canyon, Straight Canyon both forks & Wilson Canyon), Coyote Canyon, Bloody Canyon, Star Canyon & Santa Clara Canyon all located on the east side of the range.

Unit 044 East Range: within the polygon with specific attention to Inskip and Willow Canyons.

Recommended method for coyote removal to include aerial efforts within polygons and ground efforts in the specific canyons listed above. Request removal of mountain lions if they are encountered while performing coyote removal. Effort for removal during May-July timeframe should be at least once a week aerial/ground depending on what the crew is finding.

During the coyote removal project NDOW will conducted annual aerial spring mule deer surveys in all units within 043, 044 & 046 to obtain spring fawn ratios to determine project success.

During coyote control efforts in Units 043 and Unit 044, Unit 046 would be the untreated group. In the past, these units have all showed similar recruitment rates and could suggest if coyote removal has been effective and if coyote removal in Unit 046 is warranted.

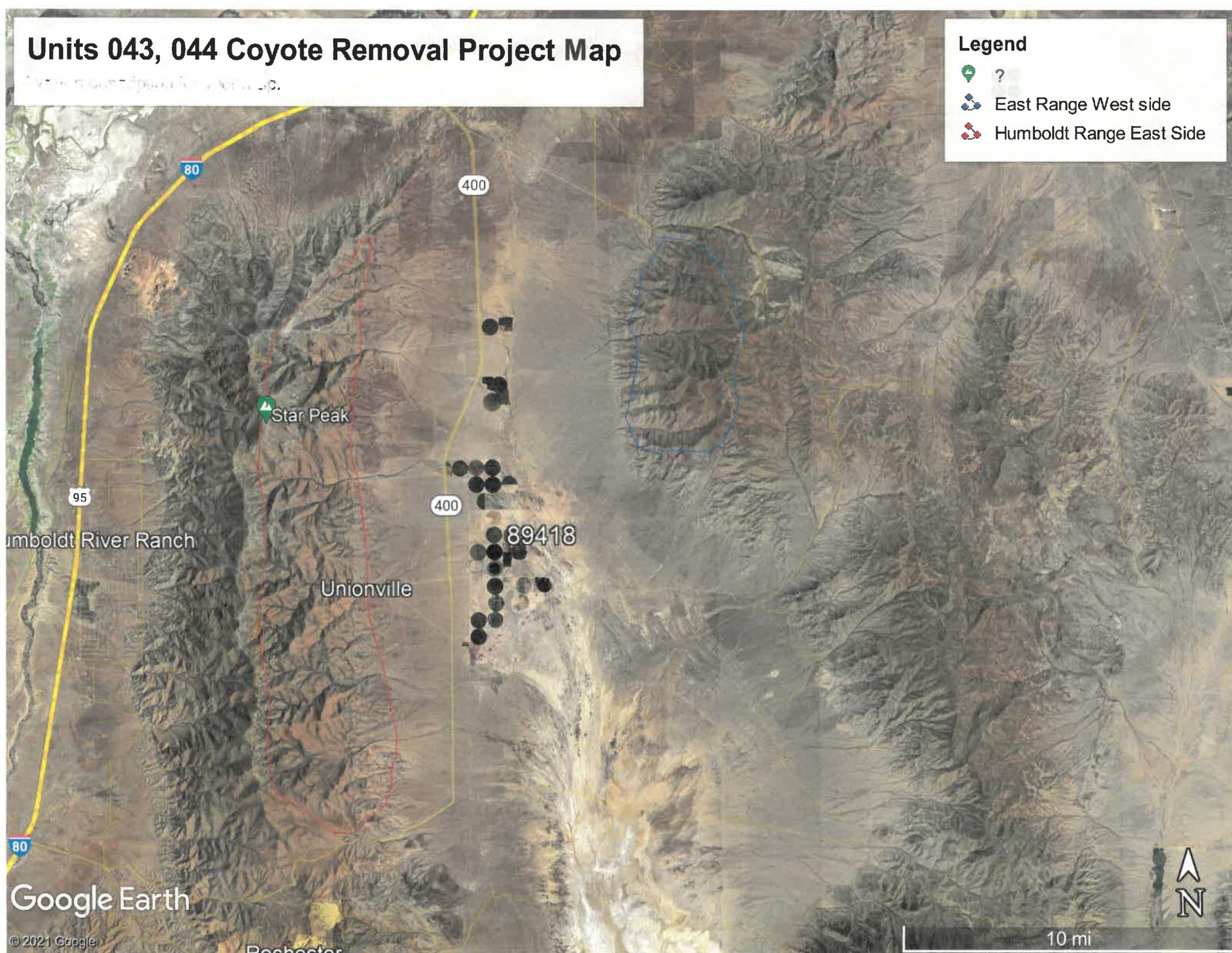
The overall goal is to increase fawn recruitment to a level above maintenance and get this herd's population back to 1998 – 2020 average size of 2,750 mule deer.

Units 043, 044 Coyote Removal Project Map

Map showing the location of Units 043 and 044 for the Coyote Removal Project.

Legend

-  ?
-  East Range West side
-  Humboldt Range East Side



Google Earth

© 2021 Google

10 mi

Habitat Projects

MDEP Subcommittee: Elko County Management Area 6, Unit 065	Hunt Unit Group: 068	
Project Title: Izzenhood WMA Winter Range Habitat Restoration	Project Location: Izzenhood Basin	
Brief Description of Project: <i>Include any development plans such as vegetation removal, planting, seeding, or installation of structures; also include the schedule for obtaining any necessary permits, completing NEPA compliance, etc.:</i>	Restoration of up to, and approximately, 1,000 acres of critical mule deer winter habitat on the Izzenhood Wildlife Management Area with aerial application of Indaziflam in 2023, followed by drought tolerant brush species seedling plantings (ex. desert bitterbrush, desert almond, desert peach, cliffrose, fourwing saltbush, etc..) in 2023 or 2024.	Score
Limiting Factor Score: (Wildland Fire = 5, Invasive or Noxious Weeds = 4.8)	<i>Maximum of 5 points possible</i>	5
Unit Group 5-Year Published Deer Population Trend: <i>Decreasing</i>	2018: 9,100 2019: 8,600 2020: 9,200 2021: 7,300 2022: 8,600	
Stable (within 10%)	<i>Decreasing = 5 pts Stable = 3 pts Increasing = 1 pt</i>	3
Does this project directly address factors limiting healthy mule deer populations? Yes	<i>Yes = 10 pts No = 0 pts</i>	10
<i>How will project address limiting factors?</i> A significant contributor to population decline, limiting factor, is habitat loss/degradation through habitat conversion to invasive annual grasslands and the increased wildfire cycle conversion creates. Of critical importance on mule deer winter range is an abundant, and diverse shrub community with species variety that creates a fire resilient/resistant landscape. Reducing fine fuels through herbicide treatment and the planting of draught tolerant brush species addresses these factors.		
Does this project protect, maintain or strategically restore statewide priority mule deer habitat, enhance critical habitat or a critical life stage for mule deer? High Priority <i>Score using the highest ranking criteria</i>	High priority (Critical Mule Deer Seasonal Range or Migration Route) = 10 points Moderate priority (High elev. summer range, PJ encroached shrub community, winter range) = 5 points Low priority (salt desert shrub or low density mule deer habitats) = 1 pt	10
<i>Provide added details:</i> This restoration will target 1000 acres in the state owned Izzenhood Management Area identified through migration mapping under Secretarial Order 3362 designated as critical Mule Deer Winter Range and Migration Corridors.		
Is this mule deer habitat restoration or improvement of a long-term nature? Yes <i>Does the project involve habitat trend and condition through restoration and improvement of a long-term or permanent nature? Projects of this nature are known to have long-term benefits with demonstrated history of past successes</i>	<i>10+ years = 10 points 3-10 years = 5 points</i>	10
Project Scale and Implications: High Impact <i>Is the size or magnitude of the project, relative to the habitat type or Mule Deer distribution, impactful? Does the project convey a large conservation benefit to important or critical habitat for Mule Deer? For instance, does a riparian project have a meaningful impact across multiple reaches within a watershed or would a seeding project address a large extent or important critical habitat?</i>	High impact = 15 pts Moderate impact = 10 pts Low impact = 1 point	15
Does the project build upon existing project work? Yes	<i>Yes = 5 pts No = 0 pts</i>	5
<i>Describe existing or past projects:</i> Thousands of acres have been treated in the Izzenhood Range, with similar restoration strategies/intent. These acreages were seeded post fire, however, largely lack a shrub component, this project aims to introduce the shrub diversity to the sites and provide several years of reprieve from annual invasive grasses, freeing up nutrients to the desirable grasses/forbes/sub-shrubs in the treatment polygons.		

Habitat Projects

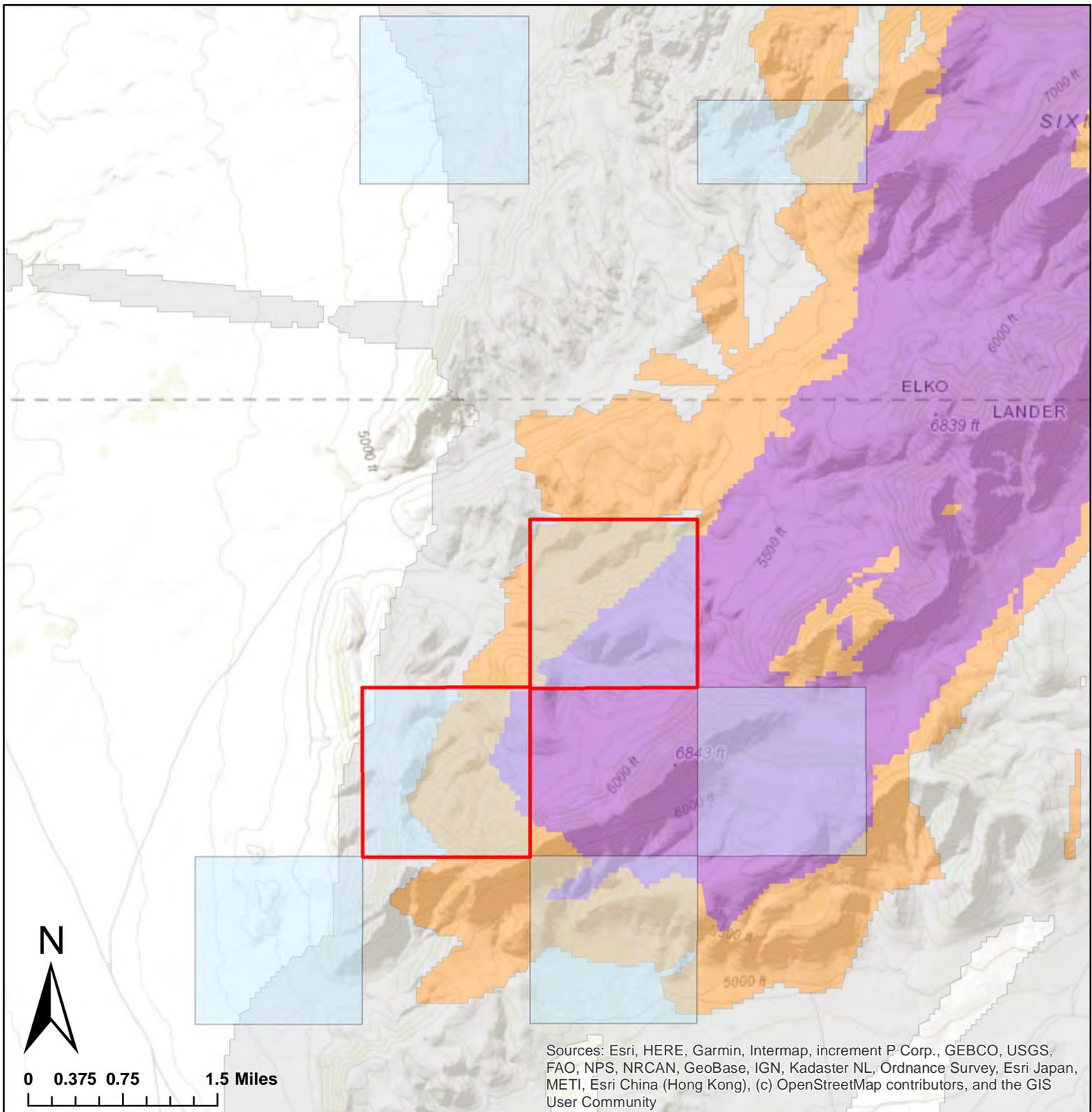
<p>Timely Completion: <i>Needed permitting, authority, and mechanisms are completed or in process and does the project have a high probability of being completed on-time:</i> <i>-NEPA analysis or other statutory compliance is completed or not needed</i> <i>-Permits are completed or not needed</i> <i>-Contract mechanisms to support the work are in place or not needed</i></p>	<p>Timely completion (12 months) = 5 pts Extended completion (24 months) = 1 pt This project has high probability of being "completed on time" as it requires no NEPA, no permitting, is on department owned land, and contract mechanisms are in place. However, restoration work requiring herbicide and seeding by design need greater than 12 months to complete.</p>	<p>5</p>
<p>Urgency: <i>(Is the project urgent due to a narrow biological window that requires immediate attention and funding to address resource degradation or deterioration?)</i></p>	<p>Yes = 5 pts No = 0 pts</p>	<p>5</p>
<p><i>Provide added details:</i> This project is not necessarily urgent in nature. Mule deer in Area 6 are however bound by the carrying capacity of their winter range, primarily by the lack of necessary tall forage and thermal cover. Winter ranges have been significantly compromised by wildfire and invasive annual grasses which has altered the fire regime towards more frequent fires. To slow the decline of winter range carrying capacity, providing additional forage and thermal cover for deer while increasing fire resistance/resilience could be argued urgent in terms of addressing limiting factors.</p>		
<p>Likelihood of Success: <i>What is the likelihood of successful completion and successful outcomes? Do the individuals and organizations involved possess the capability, experience, and proven methodology needed for implementation? Is the proposal supported by sound and established scientific or biological principals? Project objectives are realistic, measurable, and achievable with clearly defined methods</i></p>	<p>High likelihood= 5 points Moderate = 3 points Low = 1 point</p>	<p>3</p>
<p><i>Provide added details:</i> In terms of restoration success seen in the Izenhood Basin, the department has observed favorable outcomes utilizing Indaziflam in adjacent state owned parcels in terms of long-term annual grass control. Seedling plantings often have a higher success rate compared to seeding when attempting to re-establish shrubs to a community. Since shrubs historically found in the basin would have a more difficult time in establishing this long post fire, the selection of novel drought tolerant shrub species is designed to increase the likelihood of success due to their higher tolerance for low precipitation sites and warmer soils.</p>		
<p>Partner Funding: <i>Does the project leverage funding or in-kind contributions by external partners and by how much?</i></p>	<p>>3x match = 10 pts 1.5-2.9 match = 7 pts 0.75-1.49 = 3 pts 0.1-.74 = 1 pt</p>	<p>0</p>
<p><i>(List amounts and sources if possible) Does the project have confirmed funding commitment from project partner such as a letter or memo with stated commitment amount?</i></p>	<p>Amount: \$ Source: Amount: \$ Source:</p>	
<p>Cost Effectiveness: <i>Are the expected results worth the cost of the project?</i></p>	<p>Very cost-effective = 10 pts Moderately cost-effective = 5 pts Minimally cost-effective = 1 pt</p>	<p>5</p>
<p><i>Provide added details:</i> With the freed up resources and real estate the indaziflam herbicide treatment will create, seedling plantings (which are already more effective than aerial seeding in this situation) will be the most cost-effective way to reintroduce and reestablish shrubs to the community.</p>		
<p>Amount Requested:</p>	<p>\$125,000</p>	
<p>Total Project Score (100 possible points)</p>	<p>Sum of Scores 76</p>	

Habitat Projects

Project Narrative: *Be specific to the needs and issues associated with mule deer and/or habitat and your technical approach to addressing the issue. Identify potential benefits to mule deer and other wildlife. Describe if the project is on public or private land and any private landowner permissions. Please describe any NEPA permitting requirements if on public land and when NEPA completion is expected. Also provide a tentative project schedule of major tasks. If your project is associated with water rights (e.g. spring fencing project) please discuss the status of permissions to complete the project with water rights holders.*

A long and catastrophic history of wildfire throughout much of the Izzenhood Range has converted large portions of the region to annual invasive dominated plant communities, which provide little to no beneficial forage or cover during wintering months. As snow loads accumulate on winter range, mule deer are dependent on tall forage and thermal cover (shrub communities) for populations to persist through average, and above average, winters. In addition to the need for adequate shrub communities for forage and cover, is the need to reduce the fire interval created by plant communities with a heavy annual invasive grass understory, cheatgrass in this setting. By controlling cheatgrass, not only does the landscape become less susceptible to fire by reducing fine fuels in the understory, but more resources are freed up within the soil for existing desirable plant uptake and increased productivity, thus becoming more fire resilient. Both these needs would be addressed should this proposal be accepted.

This restoration project aims to treat 1,000 acres, which most recently burned in the 2016 Hot Pot Fire, designated as critical mule deer migration corridor and winter range under Secretarial Order 3362, "Improving Habitat in Winter Big-Game Range and Migration Corridors." All treatment would occur on the state-owned Izzenhood Wildlife Management Area, which would require no NEPA, and be in coordination with the livestock operator for the associated allotment. The tentative treatment strategy and schedule would be as follows: aerially apply Indaziflam herbicide fall of 2023, followed by seedling planting of novel drought tolerant shrub species which have a higher tolerance for establishment in difficult sites such as this that are lower in elevation, receive less precipitation, and generally have higher temperatures. Such shrub species could include desert bitterbrush, desert almond, desert peach, cliffrose, four wing saltbush, etc. This project aims to revert annual invasive compromised regions to a plant community that is more fire resilient/resistant while providing mule deer with the tall forage and thermal cover needed to sustain populations through winters. There is also potential to incorporate volunteer planting for some portion of the treatment polygons.



Legend

- Treatment Sections (1000acres of)
- Izenhood WMA

S.O. 3362 Mule Deer Corridors

- >= 1 animal
- >= 4 animals (10%)
- >= 8 animals (20%)

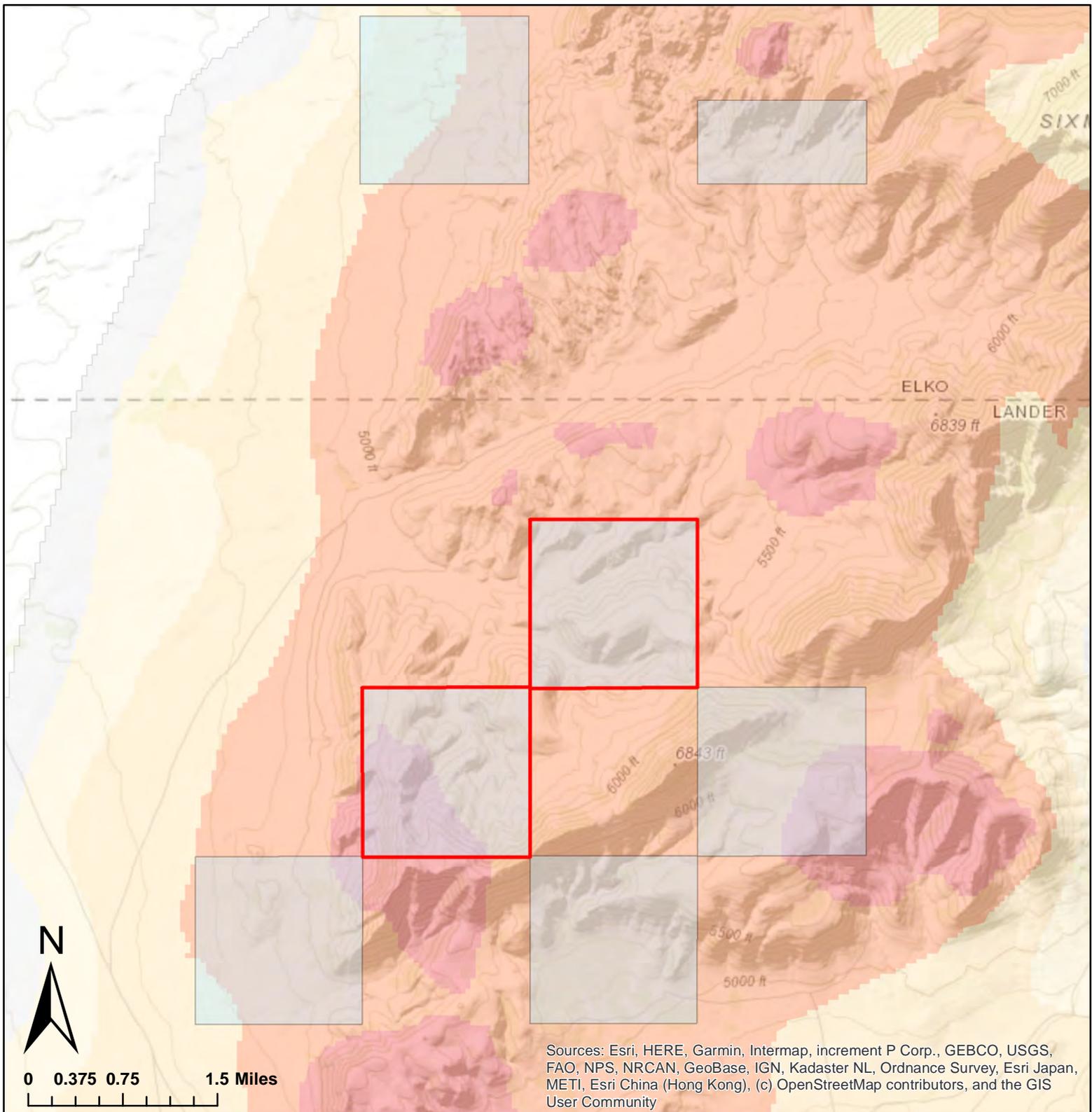


**Area 6 MDEP
Izenhood WMA MUL
Winter Range Habitat Restoration
S.O. 3362 Corridors**

8/8/2022

Projection: UTM Zone 11 North, WGS84
No warranty is made by the Nevada Department of Wildlife as to the accuracy, reliability, or completeness of the data for individual use or aggregate use with other data.





Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Legend

- Treatment Sections (1000acres of)
- Izenhood WMA

Critical Winter Range

- 0.01
- 0.1
- 0.2
- 0.3
- 0.4



**Area 6 MDEP
Izenhood WMA MUL
Winter Range Habitat Restoration
S.O. 3362 Winter Range**

8/8/2022

Projection: UTM Zone 11 North, WGS84
No warranty is made by the Nevada Department of Wildlife as to the accuracy, reliability, or completeness of the data for individual use or aggregate use with other data.



Habitat Projects

MDEP Subcommittee: Elko County Management Area 6, Unit 065	Hunt Unit Group: 067	
Project Title: Toe Jam Mule Deer Corridor Fence Modification	Project Location: Toe Jam Mountain - North Tuscaroras	
Brief Description of Project: <i>Include any development plans such as vegetation removal, planting, seeding, or installation of structures; also include the schedule for obtaining any necessary permits, completing NEPA compliance, etc.:</i>	The modification of pasture boundary range fencing located in critical migration corridor and a large stopover site into a wildlife friendly configuration.	Score
Limiting Factor Score: (Fence = 3.4, Inadequate Migration Corridor = 3.6)	<i>Maximum of 5 points possible</i>	3.4
Unit Group 5-Year Published Deer Population Trend:	2018: 9,100 2019: 8,600 2020: 9,200 2021: 7,300 2022: 8,600	
Stable (within 10%)	<i>Decreasing = 5 pts Stable = 3 pts Increasing = 1 pt</i>	3
Does this project directly address factors limiting healthy mule deer populations?	<i>Yes = 10 pts No = 0 pts</i>	10
<i>How will project address limiting factors?</i> This fence modification will address both the Fence (3.4) and Inadequate Migration Corridor (3.6) limiting factors by creating better connectivity between both daily movements of favorable habitats within a large stopover site and large-scale movements, or migrations, between seasonal ranges.		
Does this project protect, maintain or strategically restore statewide priority mule deer habitat, enhance critical habitat or a critical life stage for mule deer? <i>Score using the highest ranking criteria</i>	High priority (Critical Mule Deer Seasonal Range or Migration Route) = 10 points Moderate priority (High elev. summer range, PJ encroached shrub community, winter range) = 5 points Low priority (salt desert shrub or low density mule deer habitats) = 1 pt	10
<i>Provide added details:</i> This fence is completely perpendicular to mule deer migrations corridors of all traffic designations (high value, mid value, low value) for the Izzenhood sub-herd and portions of the Sheep Creek sub-herd, as delineated by collaring data from S.O. 3362. This also includes the bisection of the second largest designated Stopover Site for the Izzenhood sub-herd. See attached map.		
Is this mule deer habitat restoration or improvement of a long-term nature? <i>Does the project involve habitat trend and condition through restoration and improvement of a long-term or permanent nature? Projects of this nature are known to have long-term benefits with demonstrated history of past successes</i>	<i>10+ years = 10 points 3-10 years = 5 points</i>	10
Project Scale and Implications: <i>Is the size or magnitude of the project, relative to the habitat type or Mule Deer distribution, impactful? Does the project convey a large conservation benefit to important or critical habitat for Mule Deer? For instance, does a riparian project have a meaningful impact across multiple reaches within a watershed or would a seeding project address a large extent or important critical habitat?</i>	High impact = 15 pts Moderate impact = 10 pts Low impact = 1 point	15
Does the project build upon existing project work?	<i>Yes = 5 pts No = 0 pts</i>	5
<i>Describe existing or past projects:</i> There are several habitat restoration polygons adjacent to the fence proposed for modification in various stages of completion, all of which are herbicide treatments and bitterbrush seedling plantings. This fence splits them down the middle. While not an additional habitat restoration project, fence modifications in the immediate vicinity of habitat improvements would reduce energetic expenditures for animals navigating between and benefitting from those restored habitats.		

Habitat Projects

<p>Timely Completion: <i>Needed permitting, authority, and mechanisms are completed or in process and does the project have a high probability of being completed on-time:</i> <i>-NEPA analysis or other statutory compliance is completed or not needed</i> <i>-Permits are completed or not needed</i> <i>-Contract mechanisms to support the work are in place or not needed</i></p>	<p>Timely completion (12 months) = 5 pts Extended completion (24 months) = 1 pt This project needs no NEPA analysis or permitting, the state has contract mechanisms in place to complete this work, and livestock permittee is in support.</p>	<p>5</p>
<p>Urgency: <i>(Is the project urgent due to a narrow biological window that requires immediate attention and funding to address resource degradation or deterioration?)</i></p>	<p>Yes = 5 pts No = 0 pts</p>	<p>0</p>
<p><i>Provide added details:</i> The sooner connectivity fragmenting habitat is addressed the sooner deer benefit, but there is no biological window requiring immediate action.</p>		
<p>Likelihood of Success: <i>What is the likelihood of successful completion and successful outcomes? Do the individuals and organizations involved possess the capability, experience, and proven methodology needed for implementation? Is the proposal supported by sound and established scientific or biological principals? Project objectives are realistic, measurable, and achievable with clearly defined methods</i></p>	<p>High likelihood= 5 points Moderate = 3 points Low = 1 point</p>	<p>5</p>
<p><i>Provide added details:</i> Fence lines in mule deer habitat that are configured to a wildlife friendly configuration have been shown to require a lower energetic demand to navigate when compared to those configurations making crossing challenging. Once the fence is converted, the benefit will be realized.</p>		
<p>Partner Funding: <i>Does the project leverage funding or in-kind contributions by external partners and by how much?</i></p>	<p>>3x match = 10 pts 1.5-2.9 match = 7 pts 0.75-1.49 = 3 pts 0.1-.74 = 1 pt</p>	<p>0</p>
<p><i>(List amounts and sources if possible) Does the project have confirmed funding commitment from project partner such as a letter or memo with stated commitment amount?</i></p>	<p>Amount: \$ Source: Amount: \$ Source:</p>	
<p>Cost Effectiveness: <i>Are the expected results worth the cost of the project?</i></p>	<p>Very cost-effective = 10 pts Moderately cost-effective = 5 pts Minimally cost-effective = 1 pt</p>	<p>5</p>
<p><i>Provide added details:</i> With the almost absolute likelihood of success at decreasing energetic expenditures of migratory deer during stopover and migration, and the long-term nature across generations of deer, modifying to wildlife friendly configuration makes the benefit quite cost-effective, especially when considering the number of deer that encounter this fence.</p>		
<p>Amount Requested:</p>	<p>\$99,500 - \$144,500</p>	
<p>Total Project Score (100 possible points)</p>	<p style="text-align: right;">Sum of Scores 71.4</p>	

Habitat Projects

Project Narrative: *Be specific to the needs and issues associated with mule deer and/or habitat and your technical approach to addressing the issue. Identify potential benefits to mule deer and other wildlife. Describe if the project is on public or private land and any private landowner permissions. Please describe any NEPA permitting requirements if on public land and when NEPA completion is expected. Also provide a tentative project schedule of major tasks. If your project is associated with water rights (e.g. spring fencing project) please discuss the status of permissions to complete the project with water rights holders.*

Fences are essential for managing livestock within Nevada's allotment and pasture system; however, many range fences were constructed long before the concept of wildlife friendly configurations became common practice. Fence lines create barriers to movement and in many cases hazards for both an animal's daily movements and seasonal migrations. Animals are impacted by fences in many ways. Likely the most common impact a fence has on a deer is an energetic expenditure. In Area 6 specifically, winter ranges have been vastly compromised by decades of wildfire and in some places improper livestock management. This lack of favorable winter range has negative impacts on deer body condition during average or above average winters. Under these conditions, a midterm gestational doe migrating to summer range in the worst body condition of the year needs to avoid as many unnecessary additional energetic expenditures as possible to both ensure her survival and maintain her reproductive viability. Every fence line encountered is one more cumulative negative expenditure she must endure during migration. There comes a point when a deer's body condition is compromised enough, they may choose to not to cross and the fence then becomes a barrier to movement. Also, or alternatively, at this point the chance of entanglement also increases significantly. In worst case scenario, fence entanglement can lead to death, but may more commonly result in muscle or tissue damage, broken bones, or loss of hair. The fence proposed by this project for modification is a high priority due to the high number of deer that encounter it, its perpendicular orientation to movement, its location within a large stopover site and along the migratory corridor, and its proximity to ongoing habitat restoration efforts. The Izzenhood sub-herd, of the greater Area 6 deer herd, is the largest sub-herd and has the longest mean migratory length of the three delineated Area 6 sub-herds at 59 miles, with some individuals migrating up to 83 miles between summer and winter ranges. The proposed fence traverses steep terrain, making it even more challenging to navigate, is well above the generally sought after top wire height of 40-42 inch, and has a well below the 16-18inch bottom wire ground clearance standard, in addition to the bottom wire being barbed. As mentioned above, there are currently two habitat restoration projects of approximately 2,400 acres which are immediately adjacent to, and are bisected by, this fence. These treatment polygons are receiving herbicide for annual invasive plant control and bitterbrush seedling plantings. To maximize the benefits of these treatments, a reconfiguration of this fence to wildlife friendly specifications would better facilitate movement throughout the region and reduce energetic expenditures. Under this new configuration, the top wire would not exceed 40-42 inches, with at least a 12-inch distance between the top and second wire, the third wire 22-24-inches above the ground, and the bottom wire, smooth, 16-18-inches off the ground.

This project would require no NEPA, as modifications to existing BLM range fencing does not require such. The fence is on private land, and permission has been granted by the landowner (Nevada Gold Mines) to perform this work. The livestock permittee for this allotment, Humboldt River Ranch, is in support of this wildlife friendly fence reconfiguration. If approved, fence work could be conducted spring-fall 2023 for deer to realize the benefits during the 2023/24 migration season.

NDF Proposed Modification Segment – 4.59 miles (If NDF does not have requirements to proximity to roads, due the remote nature of this fence, all or more of this fence could be completed through them at a reduced cost)

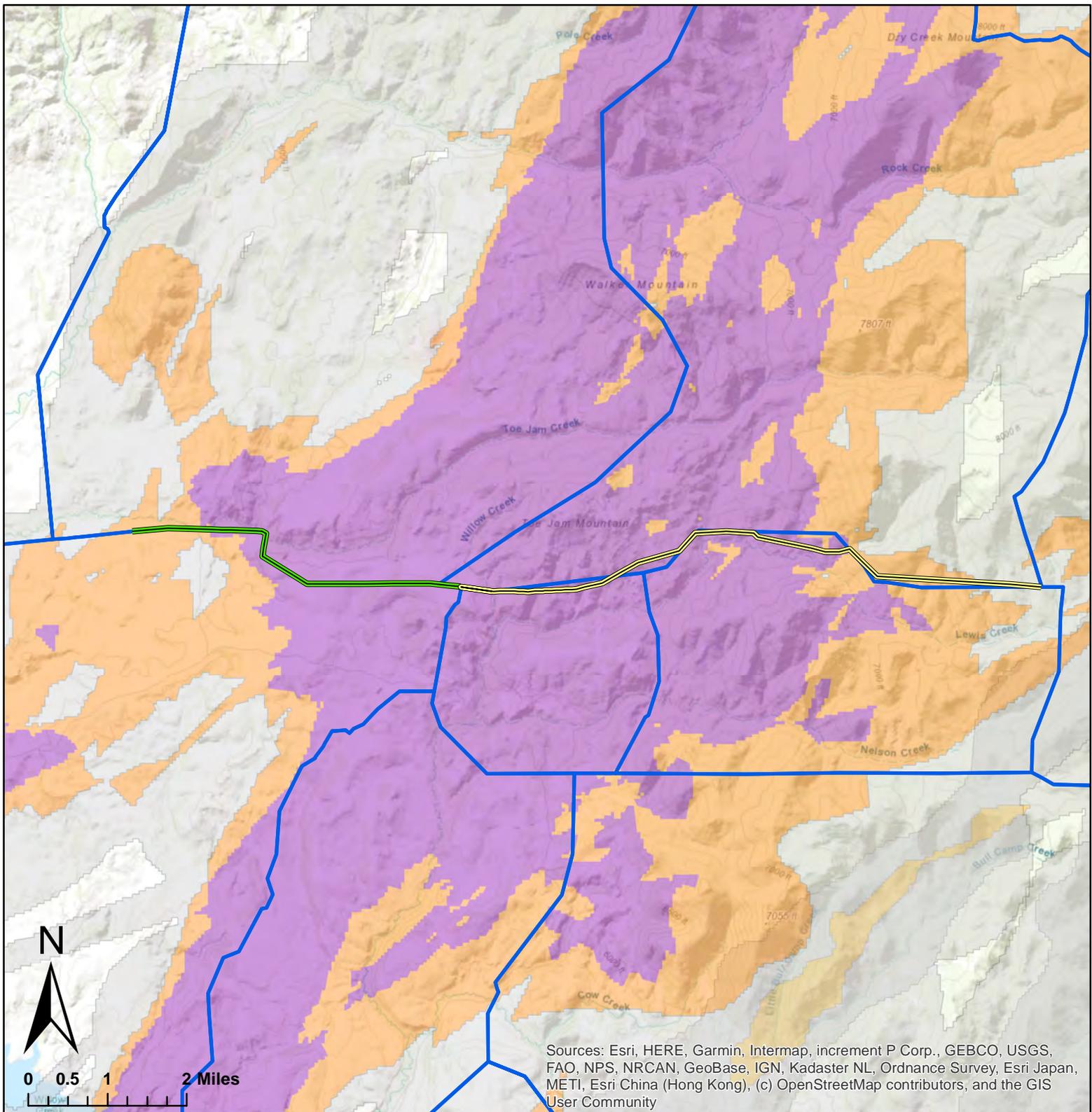
Contractor Proposed Modification Segment – 8.12 miles

Total Fence Length – 12.71

Approximate Total:

$\$7,500 + \$7,000 + (\$85,000 - \$130,000) = \$99,500 - \$144,500$

Wire + NDF + Contractor Estimated Range



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Legend

- Modification by Contractor
- Modification by NDF
- BLM Pastures Fences

S.O. 3362 Mule Deer Corridors

- ≥ 1 animal
- ≥ 4 animals (10%)
- ≥ 8 animals (20%)

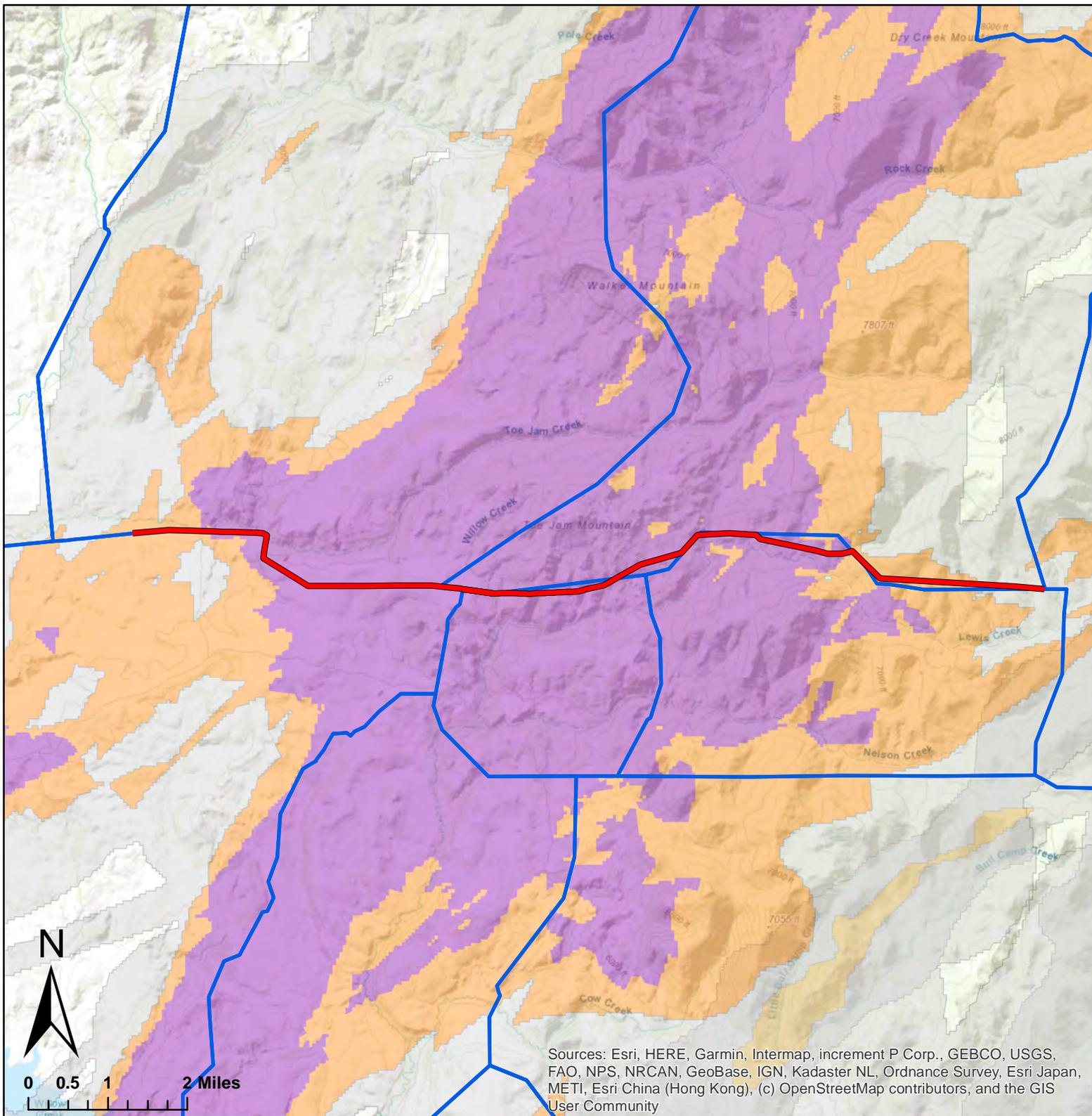


Area 6 MDEP Toe Jam Fence Modification S.O. 3362 Corridors

8/8/2022

Projection: UTM Zone 11 North, WGS84
No warranty is made by the Nevada Department of Wildlife as to the accuracy, reliability, or completeness of the data for individual use or aggregate use with other data.





Legend

- Toe Jam Fence
- BLM Pastures Fences

S.O. 3362 Mule Deer Corridors

- \geq 1 animal
- \geq 4 animals (10%)
- \geq 8 animals (20%)



**Area 6 MDEP
Toe Jam Fence Modification
S.O. 3362 Corridors**

8/8/2022

Projection: UTM Zone 11 North, WGS84
No warranty is made by the Nevada Department of Wildlife as to the accuracy, reliability, or completeness of the data for individual use or aggregate use with other data.



Habitat Projects

MDEP Subcommittee: Area 6, Unit 065	Hunt Unit Group: Unit 065	
Project Title: Private Land Snowstorm and Immigrant Forage Kochia Seeding	Project Location: Mule deer winter range and transition range in Unit 065; Smith Creek Basin, the hills between Dixie Creek and Crane Springs Canyon and/ or Buckskin Mtn to Grindstone Mtn	
Brief Description of Project: <i>Include any development plans such as vegetation removal, planting, seeding, or installation of structures; also include the schedule for obtaining any necessary permits, completing NEPA compliance, etc.:</i>	Team members Jake Reed and Kevin Tomera, in coordination with NDOW personnel, will identify willing landowners that will allow the state to apply herbicide (Imazapic) to compromised winter range, leave fallow for 1-2 years (based on monitoring) then follow up with aerial application of Snowstorm and Immigrant forage kochia. We propose repeating this annually for 5 years.	Score
Limiting Factor Score: 4.8	Maximum of 5 points possible	5
Unit Group 5-Year Published Deer Population Trend:	2017: 800 2018: 800 2019: 800 2020: 800 2021: 650	
Decreasing	Decreasing = 5 pts Stable = 3 pts Increasing = 1 pt	5
Does this project directly address factors limiting healthy mule deer populations? YES	Yes = 10 pts No = 0 pts	10
How will project address limiting factors? The limiting factor ranking sheets indicate wildland fire and invasive/ noxious weeds are believed to be the biggest limiting factor for this herd. Also, during the field tour of Unit 065 this summer, the group identified compromised winter range and weeds as the biggest threats to the long-term viability of this herd. Establishing forage kochia on winter ranges will provide mule deer with desirable forage on compromised lands and will provide a long-term forage species for wintering mule deer on an extremely fire prone landscape (i.e., Forage kochia resprouts after it burns).		
Does this project protect, maintain or strategically restore statewide priority mule deer habitat, enhance critical habitat or a critical life stage for mule deer? Moderate priority	High priority (Critical Mule Deer Seasonal Range or Migration Route) = 10 points Moderate priority (High elev. summer range, PJ encroached shrub community, winter range) = 5 points Low priority (salt desert shrub or low density mule deer habitats) = 1 pt	5
Provide added details: Establishing forage kochia on critical mule deer winter range and transition range will provide mule deer with a desirable forage species that has high nutritional value. Once established forage kochia will persist on the landscape even under drought conditions and will resprout if the site is burned in the future (highly likely).		
Is this mule deer habitat restoration or improvement of a long-term nature? Yes, we propose treating 1,000 acres a year for 5 years. Forage kochia we establish will persist on the landscape for decades.	10+ years = 10 points 3-10 years = 5 points	10
Project Scale and Implications: High impact for the Unit 065 deer herd	High impact = 15 pts Moderate impact = 10 pts Low impact = 1 point	15
Does the project build upon existing project work? Yes	Yes = 5 pts No = 0 pts	5
Describe existing or past projects: A majority of Unit 065 has burned in the past 30 years. NDOW and BLM have a long history of conducting habitat restoration in this unit specifically for mule deer. This project will aim at targeting important habitats that were not treated following fires or were not seeded with forage kochia.		

Habitat Projects

<p>Timely Completion: <i>Since this work is being proposed on private lands, no permits or NEPA will be required.</i></p>	<p>Timely completion (12 months) = 5 pts Extended completion (24 months) = 1 pt</p>	<p>1</p>
<p>Urgency: <i>Yes</i></p>	<p>Yes = 5 pts No = 0 pts</p>	<p>5</p>
<p><i>Provide added details: The quicker we can establish desirable forage on the landscape, the quicker mule deer will realize the benefits of these efforts. Establishing forage kochia on critical winter range and transition ranges will provide a direct benefit to mule deer in the form of forage and will also provide an indirect benefit by competing with weeds. Establishing forage kochia on these lands will provide resiliency to these habitats that are extremely prone to wildland fires.</i></p>		
<p>Likelihood of Success: High likelihood</p>	<p>High likelihood= 5 points Moderate = 3 points Low = 1 point</p>	<p>5</p>
<p><i>Provide added details: Establishing forage kochia on compromised winter range and transition range has been demonstrated to keep deer on the landscape in otherwise compromised habitats. Forage kochia is more drought tolerant than many of the desirable native winter forage species. Forage kochia has been demonstrated to compete with invasive and noxious weeds and has demonstrated a high probability of resprouting after being burned in wildland fires.</i></p>		
<p>Partner Funding: <i>No</i></p>	<p>>3x match = 10 pts 1.5-2.9 match = 7 pts 0.75-1.49 = 3 pts 0.1-.74 = 1 pt</p>	<p>0</p>
<p><i>(List amounts and sources if possible) Does the project have confirmed funding commitment from project partner such as a letter or memo with stated commitment amount? No</i></p>	<p>Amount: \$ Source: Amount: \$ Source:</p>	<p></p>
<p>Cost Effectiveness: <i>Very cost-effective</i></p>	<p>Very cost-effective = 10 pts Moderately cost-effective = 5 pts Minimally cost-effective = 1 pt</p>	<p>10</p>
<p><i>Provide added details: Imazapic is a very cost-effective herbicide and most of our proposed treatment sites can be accomplished using fixed-wing aircraft as opposed to rotary craft.</i></p>		
<p>Amount Requested: <i>Estimated costs are \$16/ acre for herbicide and \$55/ acre for seed and application</i></p>	<p>\$71,000.00</p>	<p></p>
<p>Total Project Score (100 possible points)</p>	<p>Sum of Scores</p>	<p></p>

Habitat Projects

Project Narrative: *Be specific to the needs and issues associated with mule deer and/or habitat and your technical approach to addressing the issue. Identify potential benefits to mule deer and other wildlife. Describe if the project is on public or private land and any private landowner permissions. Please describe any NEPA permitting requirements if on public land and when NEPA completion is expected. Also provide a tentative project schedule of major tasks. If your project is associated with water rights (e.g. spring fencing project) please discuss the status of permissions to complete the project with water rights holders.*

Team members Jake Reed and Kevin Tomera, in coordination with NDOW personnel, will identify willing landowners that will allow the state to apply herbicide (Imazapic) to 1,000 acres of compromised winter range, identified as areas dominated by weeds and lacking winter forage for mule deer. Historical knowledge of key winter ranges as well as telemetry data from recently collared mule deer will guide site selection. We would leave the herbicide treated sites fallow for 1-2 years then follow up with aerial application of Snowstorm and Immigrant forage kochia. We propose repeating this annually for 5 years; treating 1,000 acres of compromised winter range annually with herbicide and following up the next year with aerial seeding of forage kochia.

The limiting factor ranking sheets indicate wildland fire and invasive/ noxious weeds are believed to be the biggest limiting factor for this herd. Also, during the field tour of Unit 065 this summer, the group identified compromised winter range and weeds as the biggest threats to the long-term viability of this herd. Several potential treatment sites were discussed with the idea of targeting private lands that would not require NEPA or other permits. Establishing forage kochia on winter ranges will provide mule deer with desirable forage on compromised lands and will provide a long-term forage species for wintering mule deer on an extremely fire prone landscape. Establishing forage kochia on critical mule deer winter range and transition range will provide mule deer with a desirable forage species that has high nutritional value. Once established forage kochia will persist on the landscape even under drought conditions and will resprout if the site is burned in the future. Forage kochia on these sites will also benefit pronghorn antelope, livestock, and a myriad of non-game species.

A majority of Unit 065 has burned in the past 30 years. NDOW and BLM have a long history of conducting habitat restoration in this unit specifically for mule deer. This project will aim at targeting important habitats that were not treated following fires or were not seeded with forage kochia. The quicker we can establish desirable forage on the landscape, the quicker mule deer will realize the benefits of these efforts. Establishing forage kochia on critical winter range and transition ranges will provide a direct benefit to mule deer in the form of forage and will also provide an indirect benefit by competing with weeds. Establishing forage kochia on these lands will provide resiliency to these areas that are extremely prone to wildland fires.

Establishing forage kochia on compromised winter range and transition range has been demonstrated to keep deer on the landscape in otherwise compromised habitats. Forage kochia is more drought tolerant than many of the desirable native winter forage species lacking on these compromised winter ranges. Forage kochia has been demonstrated to compete with invasive and noxious weeds and has demonstrated a high probability of resprouting after being burned in wildland fires.

Imazapic is a very cost-effective herbicide and most of our proposed treatment sites can be accomplished using fixed-wing aircraft as opposed to rotary craft.

Habitat Projects

MDEP Subcommittee: Area 7, 8, 9	Hunt Unit Group: 071-079,091	
Project Title: Area 7 Fence Removal in Migration Corridor	Project Location: North Pequops	
Brief Description of Project: <i>Include any development plans such as vegetation removal, planting, seeding, or installation of structures; also include the schedule for obtaining any necessary permits, completing NEPA compliance, etc.:</i>	The project would remove up to 22 miles of barbed-wire fence located in crucial mule deer migration corridor and transistion area in the Pequop Mountains north of Interstate 80. The fence is on the private/public boundary and would not require NEPA for removal.	Score
Limiting Factor Score: <i>Use subcommittee cumulative score from Limiting Factor Score Form</i>	Maximum of 5 points possible	2.1
Unit Group 5-Year Published Deer Population Trend: Stable	2018: 8,500 2019: 11,300 2020: 11,400 2021: 11,100 2022: 11,000	
	Decreasing = 5 pts Stable = 3 pts Increasing = 1 pt	3
Does this project directly address factors limiting healthy mule deer populations? Yes	Yes = 10 pts No = 0 pts	10
<i>How will project address limiting factors?</i> Fences in migration corridors add to the energy expenditures that mule deer use during migration. In extreme cases they may prohibit movement, but more often require additional effort to jump the fence. This portion of the mule deer herd is migrating over 100 miles and encounters numerous fences along migration. They often become entangled in fences and in some case may die. Reduction of fences will limit these hazards and reduce the amount of energy these deer expend getting to crucial winter and summer ranges.		
Does this project protect, maintain or strategically restore statewide priority mule deer habitat, enhance critical habitat or a critical life stage for mule deer? Yes, High Prioirty - Migration Route	High priority (Critical Mule Deer Seasonal Range or Migration Route) = 10 points Moderate priority (High elev. summer range, PJ encroached shrub community, winter range) = 5 points Low priority (salt desert shrub or low density mule deer habitats) = 1 pt	10
The fences proposed for removal are in the migration path of a large segment of the Area 7 deer herd. It is estimated that more than 5,000 deer use this portion of the migration corridor. There are wildlife safety crossings that facilitate getting deer into and beyond the north Pequop Mountains. Many of these fences lie perpendicular to the migration path. Some of these deer not only migrate through this area, but will spend several weeks foraging in the area will putting on fat reserves for the winter.		
Is this mule deer habitat restoration or improvement of a long-term nature? Yes	10+ years = 10 points 3-10 years = 5 points	10
Project Scale and Implications: <i>Is the size or magnitude of the project, relative to the habitat type or Mule Deer distribution, impactful? Does the project convey a large conservation benefit to important or critical habitat for Mule Deer? For instance, does a riparian project have a meaningful impact across multiple reaches within a watershed or would a seeding project address a large extent or important critical habitat? Yes</i>	High impact = 15 pts Moderate impact = 10 pts Low impact = 1 point	15
Does the project build upon existing project work? Yes	Yes = 5 pts No = 0 pts	5
Twenty miles of fence have already been either removed or modified in this migration corridor. Nine wildlife crossings have also been built to faciliate this crucial migration corridor across Highway 93 and Interstate 80. Every additional fence removed within the corridor will reduce energy expenditure or potential injury or death.		

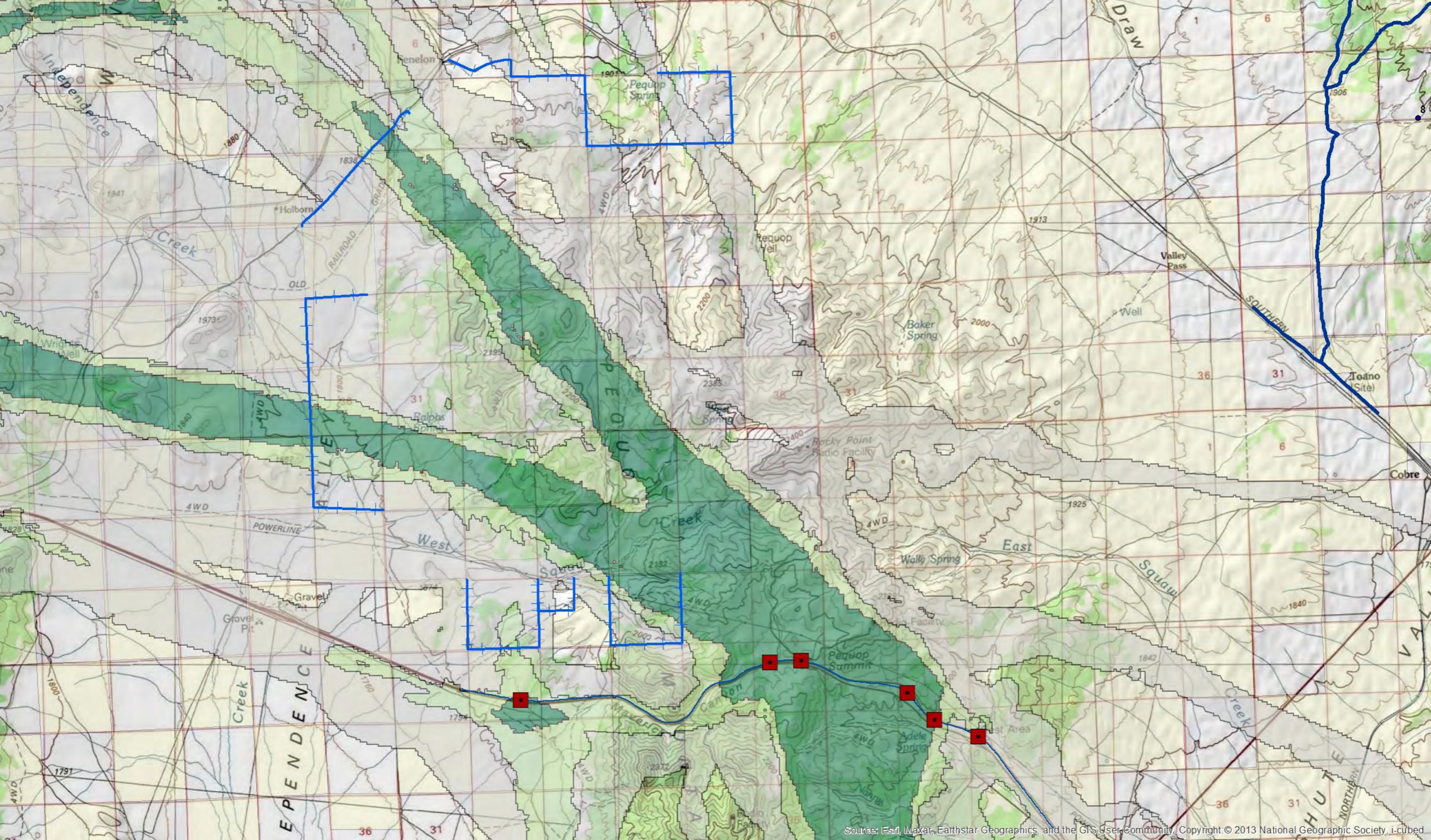
Habitat Projects

<p>Timely Completion: <i>Needed permitting, authority, and mechanisms are completed or in process and does the project have a high probability of being completed on-time:</i> -NEPA analysis or other statutory compliance is completed or not needed Timely - 12 months -Permits are completed or not needed -Contract mechanisms to support the work are in place or not needed</p>	<p>Timely completion (12 months) = 5 pts Extended completion (24 months) = 1 pt</p>	<p>5</p>
<p>Urgency: <i>(Is the project urgent due to a narrow biological window that requires immediate attention and funding to address resource degradation or deterioration?</i> No</p>	<p>Yes = 5 pts No = 0 pts</p>	<p>0</p>
<p>Provide added details:</p>		
<p>Likelihood of Success: <i>What is the likelihood of successful completion and successful outcomes? Do the individuals and organizations involved possess the capability, experience, and proven methodology needed for implementation? Is the proposal supported by sound and established scientific or biological principals? Project objectives are realistic, measurable, and achievable with clearly defined methods</i> High</p>	<p>High likelihood= 5 points Moderate = 3 points Low = 1 point</p>	<p>5</p>
<p>Provide added details: Project will be a straight forward removal of fence by a contractor or volunteers</p>		
<p>Partner Funding: <i>Does the project leverage funding or in-kind contributions by external partners and by how much?</i></p>	<p>>3x match = 10 pts 1.5-2.9 match = 7 pts 0.75-1.49 = 3 pts 0.1-.74 = 1 pt</p>	<p>1</p>
<p><i>(List amounts and sources if possible) Does the project have confirmed funding commitment from project partner such as a letter or memo with stated commitment amount?</i></p>	<p>Amount: \$5,146 Source: Rocky Mtn Elk Foundation Volunteers Amount: \$ Source:</p>	
<p>Cost Effectiveness: <i>Are the expected results worth the cost of the project?</i> Moderate</p>	<p>Very cost-effective = 10 pts Moderately cost-effective = 5 pts Minimally cost-effective = 1 pt</p>	<p>5</p>
<p>Provide added details: The landowner has requested to be able to re-use the t-post and wire so cost may be slightly higher than taking out the fence without salvaging the materials.</p>		
<p>Amount Requested:</p>	<p>\$25,000</p>	
<p>Total Project Score (100 possible points)</p>	<p>Sum of Scores 71.1</p>	

Habitat Projects

Project Narrative: *Be specific to the needs and issues associated with mule deer and/or habitat and your technical approach to addressing the issue. Identify potential benefits to mule deer and other wildlife. Describe if the project is on public or private land and any private landowner permissions. Please describe any NEPA permitting requirements if on public land and when NEPA completion is expected. Also provide a tentative project schedule of major tasks. If your project is associated with water rights (e.g. spring fencing project) please discuss the status of permissions to complete the project with water rights holders.*

The Independence Valley Ranch was recently purchased by the Winecup Gamble Ranch. The ranch manager along with the cow boss highlighted on a map the fences that are no longer necessary for cattle management in the Pequops north of Interstate 80. Their desire is to remove all unnecessary fences on the ranch. The fences are all located on the public/private boundary. BLM has been consulted and there is no NEPA required for the removal of fence, considering the fences are less than 10 years old. Removal of fences will not only benefit migrating mule deer. Pronghorn, elk, moose, and sage grouse are just a few of the other wildlife species that will benefit from less fences on the landscape. The Winecup Gamble has identified additional fences within the Pequop migration corridor they would also liked removed. The MDEP team would like to prioritize and strategically work on removing all of these fences in future years. This year the proposal is to remove up to 22 miles of fence in the north Pequops. The Rocky Mountain Elk Foundation will be partnering in this effort and have volunteers removing about one mile of fence as early as Fall 2022. The remaining fence removal would be through NDOW's exisiting contracts with NDF's Honor Camp program or other approved fencing contractors. The cost estimate is an estimate based on which contract will be used for the removal.



Habitat Projects

MDEP Subcommittee: Area 7-8-9	Hunt Unit Group: 071-079, 091	
Project Title: Mule Deer Migration Corridor Wildcat Fire Bitterbrush Planting	Project Location: Forest Service portion of 2022 Wildcat Fire - SE Jarbidge Mountains	
Brief Description of Project: <i>Include any development plans such as vegetation removal, planting, seeding, or installation of structures; also include the schedule for obtaining any necessary permits, completing NEPA compliance, etc.:</i>	This project aims to plant 67,200 antelope bitterbrush seedlings across 1,000 acres in the migration corridor and stopover areas for mule deer in the burned area of the 2022 Wildcat Fire on Forest Service land. The H-T National Forest Jarbidge Ranger District is supportive of this effort and has committed to completing any NEPA required before time of planting in Fall 2023.	Score
Limiting Factor Score: <i>Use subcommittee cumulative score from Limiting Factor Score Form</i>	<i>Maximum of 5 points possible</i>	4.4
Unit Group 5-Year Published Deer Population Trend: Stable	2018: 8,500 2019: 11,300 2020: 11,400 2021: 11,100 2022: 11,000	
	<i>Decreasing = 5 pts Stable = 3 pts Increasing = 1 pt</i>	3
Does this project directly address factors limiting healthy mule deer populations? Yes	<i>Yes = 10 pts No = 0 pts</i>	10
<i>How will project address limiting factors?</i> Wildland Fire was the highest ranked limiting factor for the Area 7 MDEP Subcommittee partly because of the length of time required post-fire for shrubs to recover in mule deer habitat. The decadent age of the bitterbrush in the burned area before the fire and the drought conditions that have been stressing the plants for the couple years before the burn reduces the likelihood of the shrubs resprouting, so seedling planting has been prioritized to help the bitterbrush community reestablish in this critical area for mule deer. Aerial seeding of sagebrush is planned as part of the post-fire rehab efforts as well to give the sagebrush community a jump start on recovering for mule deer and sage grouse in the area.		
Does this project protect, maintain or strategically restore statewide priority mule deer habitat, enhance critical habitat or a critical life stage for mule deer? High Priority	High priority (Critical Mule Deer Seasonal Range or Migration Route) = 10 points Moderate priority (High elev. summer range, PJ encroached shrub community, winter range) = 5 points Low priority (salt desert shrub or low density mule deer habitats) = 1 pt	10
<i>Provide added details:</i> The 2022 Wildcat Fire burned entirely within the Area 7 mule deer migration corridor, stopover habitat, and summer range where deer rely heavily on the mountain brush community for forage and cover.		
Is this mule deer habitat restoration or improvement of a long-term nature? Yes	<i>10+ years = 10 points 3-10 years = 5 points</i>	10
Project Scale and Implications: <i>Is the size or magnitude of the project, relative to the habitat type or Mule Deer distribution, impactful? Does the project convey a large conservation benefit to important or critical habitat for Mule Deer? For instance, does a riparian project have a meaningful impact across multiple reaches within a watershed or would a seeding project address a large extent or important critical habitat?</i>	High impact = 15 pts Moderate impact = 10 pts Low impact = 1 point	10
Does the project build upon existing project work? Yes	<i>Yes = 5 pts No = 0 pts</i>	5
<i>Describe existing or past projects:</i> The Wildcat Fire burned 21,423 acres total with 17,353 acres occurring on BLM land, 3,075 acres occurring on Forest Service land, and 955 acres on private land. Elko BLM is planning to seed the entire burned area with upland grasses, forbs, and shrubs in fall 2022 and is also planning to plant up to 1 million bitterbrush seedlings throughout burned BLM land in fall 2023. Forest Service is unsure how much funding they will receive to be able to reseed or plant seedlings on their portion of the burn, so NDOW is planning to seed sagebrush on the 3,075 acres of Forest Service land in fall 2022 and the Area 7 MDEP subcommittee is proposing bitterbrush seedling planting for fall 2023 to augment the sagebrush seeding.		

Habitat Projects

<p>Timely Completion: <i>Needed permitting, authority, and mechanisms are completed or in process and does the project have a high probability of being completed on-time:</i> <i>-NEPA analysis or other statutory compliance is completed or not needed</i> Timely - 12 months <i>-Permits are completed or not needed</i> <i>-Contract mechanisms to support the work are in place or not needed</i></p>	<p><u>Timely completion (12 months) = 5 pts</u> Extended completion (24 months) = 1 pt</p>	5
<p>Urgency: <i>(Is the project urgent due to a narrow biological window that requires immediate attention and funding to address resource degradation or deterioration?)</i> Yes, urgent</p>	<p><u>Yes = 5 pts</u> No = 0 pts</p>	5
<p><i>Provide added details:</i> The timeline for seedling planting entails ordering the seedlings with the nursery in December 2022, growout of seedlings in spring and summer of 2023, and delivery of seedlings and planting in fall/winter 2023. The funding amount needs to be known prior to ordering so the total number that can be grown and planted can be calculated and planned for. Planting of bitterbrush in this burned system should happen as soon as possible to reduce the time for invasive winter annual grasses to take over the site and deplete resources before seedlings can establish. Aerial application of pre-emergent herbicide is not approved on Forest Service land, further reducing the window of time to give bitterbrush seedlings the best chance of survival before cheatgrass takes over.</p>		
<p>Likelihood of Success: <i>What is the likelihood of successful completion and successful outcomes? Do the individuals and organizations involved possess the capability, experience, and proven methodology needed for implementation? Is the proposal supported by sound and established scientific or biological principals? Project objectives are realistic, measurable, and achievable with clearly defined methods</i></p>	<p><u>High likelihood= 5 points</u> Moderate = 3 points Low = 1 point</p>	5
<p><i>Provide added details:</i> Seedling planting has proven to be a more successful method of re-establishing shrubs than seeding. This project aims to increase success of bitterbrush establishment by caging seedlings to reduce wildlife predation while seedlings are most susceptible, and the higher precipitation zone of the project area will allow for greater seedling establishment than average. NDOW has an interlocal agreement in place with Lucky Peak Nursery for seedling growout and, through RFQ 3282 the State Contract for Fire and Fuels Reduction, the ability to contract seedling planting services. Biologists at NDOW have experience in planning and implementing seedling planting projects and understand the timelines and intricacies of the contracting process required to get the project done.</p>		
<p>Partner Funding: <i>Does the project leverage funding or in-kind contributions by external partners and by how much?</i></p>	<p>>3x match = 10 pts 1.5-2.9 match = 7 pts 0.75-1.49 = 3 pts 0.1-.74 = 1 pt</p>	7
<p><i>(List amounts and sources if possible) Does the project have confirmed funding commitment from project partner such as a letter or memo with stated commitment amount?</i></p>	<p>Amount: \$ (TBD) Source: US Forest Service - Humboldt-Toiyabe National Forest Amount: \$ Source: SO 3362 Funding - will pursue if available Amount: \$ Source: NGO Donations - will pursue if available</p>	
<p>Cost Effectiveness: <i>Are the expected results worth the cost of the project?</i></p>	<p><u>Very cost-effective = 10 pts</u> Moderately cost-effective = 5 pts Minimally cost-effective = 1 pt</p>	7
<p><i>Provide added details:</i> When wildfire burns decadent shrub stands that have been stressed for years previous to burning, the probability of community recovery without intervention is vastly reduced. Seedling planting yields better results than seeding, especially in the case of antelope bitterbrush since it requires deep burial in seed form. This project aims to increase success of bitterbrush establishment by caging seedlings to reduce wildlife predation while seedlings are most susceptible, and the higher precipitation zone of the project area will allow for greater seedling establishment than average. Plants, materials, and contracting will all be sourced from the most cost-efficient options.</p>		
<p>Amount Requested:</p>	<p>\$117,000.00</p>	
<p>Total Project Score (100 possible points) ***THERE ARE REALLY ONLY 95 POSSIBLE POINTS</p>	<p>Sum of Scores 81.4</p>	

Habitat Projects

Project Narrative: *Be specific to the needs and issues associated with mule deer and/or habitat and your technical approach to addressing the issue. Identify potential benefits to mule deer and other wildlife. Describe if the project is on public or private land and any private landowner permissions. Please describe any NEPA permitting requirements if on public land and when NEPA completion is expected. Also provide a tentative project schedule of major tasks. If your project is associated with water rights (e.g. spring fencing project) please discuss the status of permissions to complete the project with water rights holders.*

The 2022 Wildcat Fire burned in hunt units 072 and 075 through Area 7 mule deer migration corridor, stopover, and summer habitat, Sage-Grouse PHMA, crucial summer and winter elk habitat, crucial summer pronghorn antelope habitat, and Lahontan Cutthroat Trout habitat. It burned 21,423 acres total with 17,353 acres occurring on BLM land, 3,075 acres occurring on Forest Service land, and 955 acres on private land. Elko BLM is planning to seed the entire burned area on BLM land with upland grasses, forbs, and shrubs in fall 2022 and is also planning to plant up to 1 million bitterbrush seedlings throughout burned BLM land in fall 2023. In coordination with the BLM, NDOW will also be contracting the use of a smooth chain over portions of the fire in Fawn Basin that are not fit for drill seeding where an aerial seed mix including bitterbrush is seeded on BLM land. Forest Service is unsure whether they will receive funding to be able to reseed or plant seedlings on their portion of the burn, so in coordination with the Forest Service, NDOW is planning to seed sagebrush on the 3,075 acres of Forest Service land in fall 2022 and the Area 7 MDEP subcommittee is proposing bitterbrush seedling planting for fall 2023 to accommodate the sagebrush seeding. The decadence of the mountain brush community and drought conditions for the few years previous to the fire suggest poor conditions for antelope bitterbrush resprouting post-fire, and with the resistance to drill seeding on Forest Service land and near-zero establishment of bitterbrush from aerial seeding, seedling planting is the best method for giving the bitterbrush community a jump-start on recovery. Seedlings would be ordered at Lucky Peak Nursery in December 2022 with planned planting in fall 2023. NDOW has a standing agreement with Lucky Peak Nursery for purchasing seedlings and RFQ 3282 for contracting seedling planting with caging. Forest Service is supportive of this project and is confident that the archaeological survey can be completed and approved by SHPO with plenty of time before the planting of bitterbrush seedlings in fall 2023. Forest Service is also looking for additional funding to contribute to the project but is currently unsure what amount they can commit. Many species will benefit from sagebrush and bitterbrush reestablishment in the burned area, especially the mule deer that rely heavily on the shrub community in this area during their migration.

Habitat Projects

MDEP Subcommittee: Area 7-8-9	Hunt Unit Group: 081	
Project Title: 081 Mule Deer Crucial Winter Range Bitterbrush Planting	Project Location: Goose Creek Fire (2018) - White Rock Mountain	
<p>Brief Description of Project: <i>Include any development plans such as capturing, collaring, wildlife health analysis, etc. and include the schedule for obtaining any necessary permits, permission, funding, etc.:</i></p>	<p>The 2018 Goose Creek Fire burned more than 125,000 acres, some of which covered crucial mule deer winter range. The White Rock Mountain area of the Goose Creek Fire has been identified as especially important areas for mule deer and is prioritized for bitterbrush seedling planting by the Area 7-8-9 MDEP Subcommittee. This project was proposed by the Area 7-8-9 MDEP Subcommittee in 2021 and planned for completion in Spring 2022, but contractors were unable to access the planting area and seedlings were planted in other burn areas throughout the region. This project aims to plant 28,900 seedlings over 100 acres in crucial mule deer habitat around White Rock Mountain in Fall 2023.</p>	<p align="right">Score</p>
<p>Limiting Factor Score: <i>Use subcommittee cumulative score from Limiting Factor Score Form</i></p>	<p align="center"><i>Maximum of 5 points possible</i></p>	
<p>Unit Group 5-Year Published Deer Population Trend:</p>	<p>2017: 900 2018: 900 2019: 900 2020: 900 2021: 900 [2022: 850]</p>	
	<p align="center"><u>Decreasing = 5 pts</u> Stable = 3 pts Increasing = 1 pt</p>	
<p>Does this project directly address factors limiting healthy mule deer populations?</p>	<p align="center"><u>Yes = 10 pts</u> No = 0 pts</p>	
<p><i>How will project address limiting factors?</i> Wildland Fire was the highest ranked limiting factor for the Area 7 MDEP Subcommittee partly because of the length of time required post-fire for shrubs to recover in mule deer habitat. The White Rock Mountain area of the 2018 Goose Creek Fire is yet to have any bitterbrush reestablish and, due to the high amount of use historically seen by mule deer in 081, has been prioritized for restoration by the Area 7-8-9 MDEP Subcommittee.</p>		
<p>Does this project protect, maintain or strategically restore statewide priority mule deer habitat, enhance critical habitat or a critical life stage for mule deer? <i>Score using the highest ranking criteria</i></p>	<p>High priority (Critical Mule Deer Seasonal Range or Migration Route) = 10 points Moderate priority (High elev. summer range, PJ encroached shrub community, winter range) = 5 points Low priority (salt desert shrub or low density mule deer habitats) = 1 pt</p>	<p align="center">10</p>
<p><i>Provide added details:</i> White Rock Mountain is in critical mule deer winter range for the 081 herd, which historically relied on the the antelope bitterbrush in the area to forage during winter months.</p>		
<p>Is this mule deer habitat restoration or improvement of a long-term nature? <i>Does the project involve habitat trend and condition through restoration and improvement of a long-term or permanent nature? Projects of this nature are known to have long-term benefits with demonstrated history of past successes</i></p>	<p align="center"><u>10+ years = 10 points</u> 3-10 years = 5 points</p>	
<p>Project Scale and Implications: <i>Is the size or magnitude of the project, relative to the habitat type or Mule Deer distribution, impactful? Does the project convey a large conservation benefit to important or critical habitat for Mule Deer? For instance, does a riparian project have a meaningful impact across multiple reaches within a watershed or would a seeding project address a large extent or important critical habitat?</i></p>	<p align="center">High impact = 15 pts <u>Moderate impact = 10 pts</u> Low impact = 1 point</p>	
<p>Does the project build upon existing project work?</p>	<p align="center"><u>Yes = 5 pts</u> No = 0 pts</p>	
<p><i>Describe existing or past projects:</i> Around 23,000 acres of the Nevada portion of the Goose Creek Fire were aerielly seeded by Elko BLM in 2018 and around 6,400 acres of private land were seeded in 2019. Areas were chosen for seeding based on priority wildlife habitat for sage-grouse, mule deer, and elk. The proposed project would occur in one of the areas seeded by BLM in 2018 to further enhance wildlife habitat post-fire.</p>		

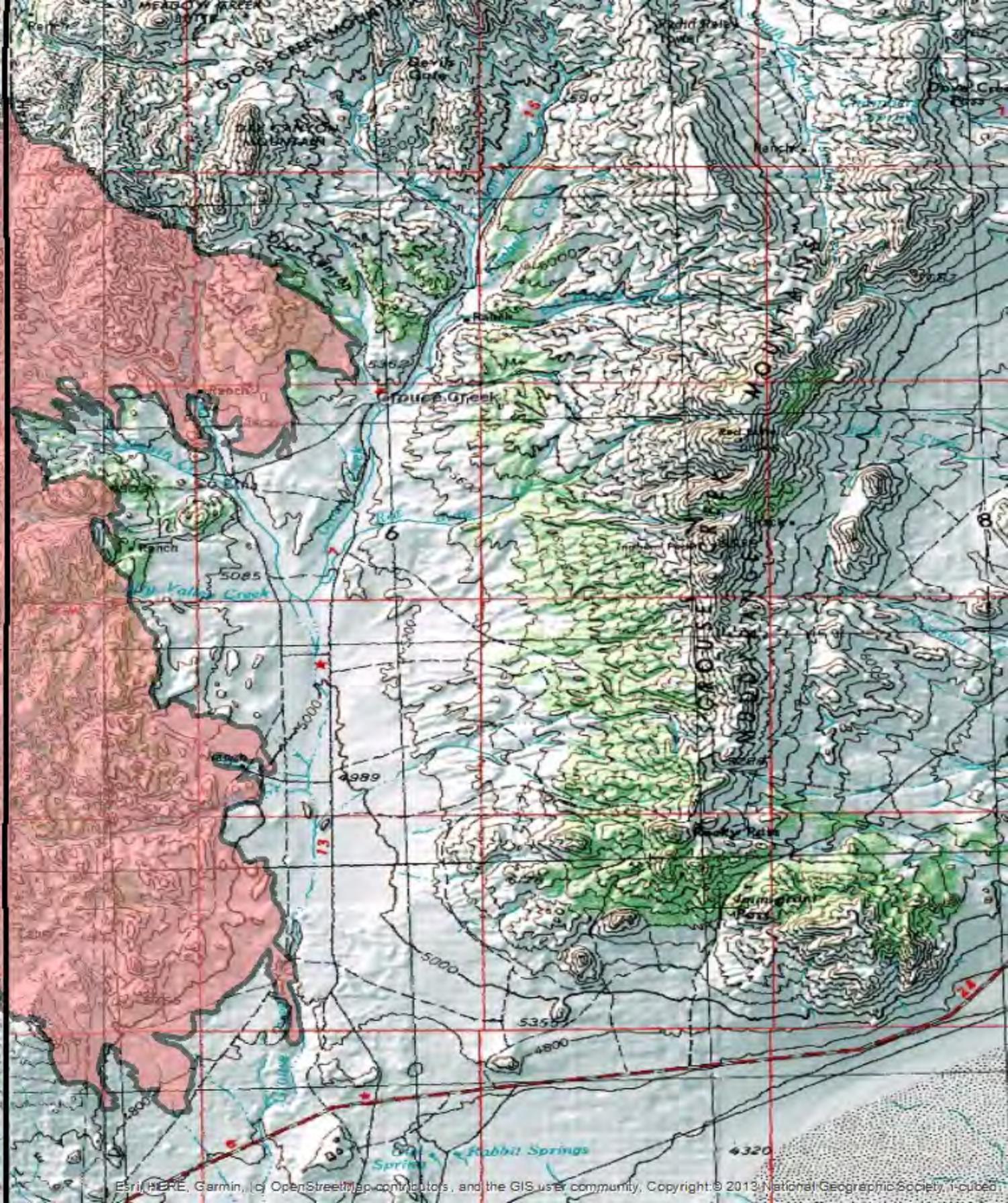
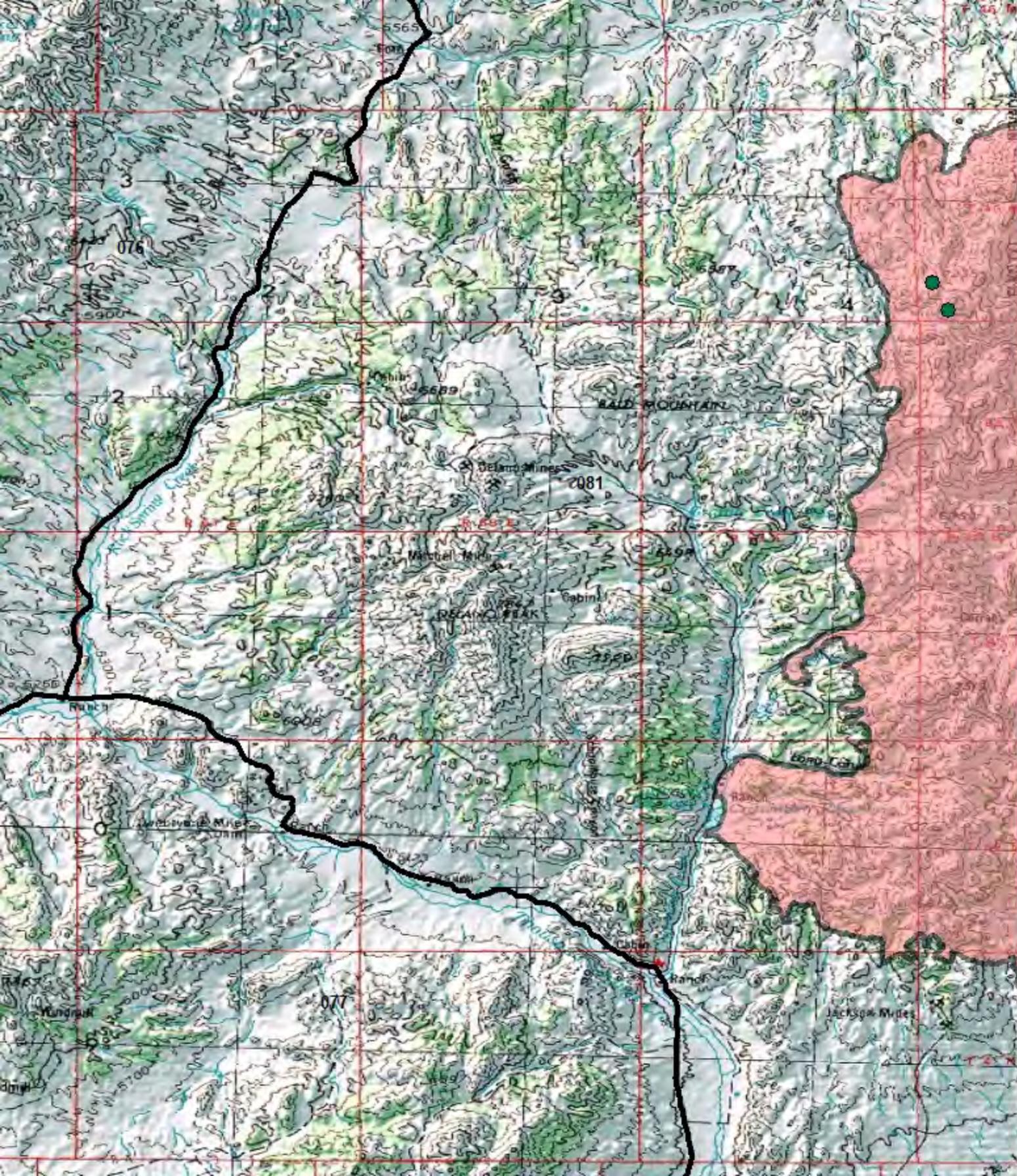
Habitat Projects

<p>Timely Completion: <i>Needed permitting, authority, and mechanisms are completed or in process and does the project have a high probability of being completed on-time:</i> <i>-NEPA analysis or other statutory compliance is completed or not needed</i> <i>-Permits are completed or not needed</i> <i>-Contract mechanisms to support the work are in place or not needed</i></p>	<p><u>Timely completion (12 months) = 5 pts</u> Extended completion (24 months) = 1 pt</p>	<p>5</p>
<p>Urgency: <i>(Is the project urgent due to a narrow biological window that requires immediate attention and funding to address resource degradation or deterioration?)</i></p>	<p><u>Yes = 5 pts</u> No = 0 pts</p>	<p>5</p>
<p><i>Provide added details:</i> The timeline for seedling planting entails ordering the seedlings with the nursery in December 2022, growout of seedlings in spring and summer of 2023, and delivery of seedlings and planting in fall/winter 2023. The funding amount needs to be known prior to ordering so the total number that can be grown and planted can be calculated and planned for.</p>		
<p>Likelihood of Success: <i>What is the likelihood of successful completion and successful outcomes? Do the individuals and organizations involved possess the capability, experience, and proven methodology needed for implementation? Is the proposal supported by sound and established scientific or biological principals? Project objectives are realistic, measurable, and achievable with clearly defined methods</i></p>	<p><u>High likelihood= 5 points</u> Moderate = 3 points Low = 1 point</p>	
<p><i>Provide added details:</i> Seedling planting has proven to be a more successful method of re-establishing shrubs than seeding. The higher precipitation zone of the project area will also allow for greater seedling establishment than average. NDOW has an interlocal agreement in place with Lucky Peak Nursery for seedling growout and, through RFQ 3282 the State Contract for Fire and Fuels Reduction, the ability to contract seedling planting services. Biologists at NDOW have experience in planning and implementing seedling planting projects and understand the timelines and intricacies of the contracting process required to get the project done.</p>		
<p>Partner Funding: <i>Does the project leverage funding or in-kind contributions by external partners and by how much?</i></p>	<p>>3x match = 10 pts 1.5-2.9 match = 7 pts 0.75-1.49 = 3 pts 0.1-.74 = 1 pt</p>	<p>7</p>
<p><i>(List amounts and sources if possible) Does the project have confirmed funding commitment from project partner such as a letter or memo with stated commitment amount?</i></p>	<p>Amount: \$50,000 Source: Elko BLM ESR Amount: \$ Source:</p>	
<p>Cost Effectiveness: <i>Are the expected results worth the cost of the project?</i></p>	<p><u>Very cost-effective = 10 pts</u> Moderately cost-effective = 5 pts Minimally cost-effective = 1 pt</p>	<p>7</p>
<p><i>Provide added details:</i> Seedling planting yields better results than seeding, especially in the case of antelope bitterbrush since it requires deep burial in seed form. The higher precipitation zone of the project area (12-16 inches per year) will also allow for greater seedling establishment than average. Plants, materials, and contracting will all be sourced from the most cost-efficient options. Depending on the total amount of funding received, the plants could be caged at the time of planting to reduce predation when they are most susceptible and increase the chance of survival.</p>		
<p>Amount Requested:</p>	<p>\$26,000.00</p>	
<p>Total Project Score (100 possible points) <u>***THERE ARE REALLY ONLY 95 POSSIBLE POINTS</u></p>	<p>Sum of Scores 78.4</p>	

Habitat Projects

Project Narrative: *Be specific to the needs and issues associated with mule deer and/or habitat and your technical approach to addressing the issue. Identify potential benefits to mule deer and other wildlife. Describe if the project is on public or private land and any private landowner permissions. Please describe any NEPA permitting requirements if on public land and when NEPA completion is expected. Also provide a tentative project schedule of major tasks. If your project is associated with water rights (e.g. spring fencing project) please discuss the status of permissions to complete the project with water rights holders.*

In partnership with the Elko BLM ESR Program, the Area 7-8-9 MDEP Subcommittee is proposing to plant antelope bitterbrush seedlings in critical mule deer winter range on the 2018 Goose Creek Fire in hunt unit 081. This project was proposed by the MDEP Subcommittee in 2021 and ranked 10th overall by the MDEP Oversight Committee in the Habitat Project category. Elko BLM had ordered the seedlings for the project but was unable to access the planting site in spring 2022 and ended up having to plant the seedlings in other burned areas throughout the region. Because the White Rock Mountain area within the burn is such an important area for mule deer during winter months and bitterbrush recovery since the fire is poor, this project is still prioritized. Elko BLM is also seeking funding to contribute to the project but is currently unsure how much funding will be available. Depending on the total amount of funding received, caging may also be incorporated into the planting contract to help protect the bitterbrush seedlings when they're most susceptible and trying to establish. The area receives between 12 and 16 inches of precipitation per year so survivability is expected to be greater than average. Both NDOW and BLM have standing agreements with Lucky Peak Nursery for growing out seedlings as well as standing contracts with vendors to plant seedlings. The ESR NEPA completed by BLM describes bitterbrush planting across 100 acres as a planned project and is still applicable so no further NEPA is required.



Investigations Projects

MDEP Subcommittee: Area 7, 8, 9	Hunt Unit Group: 081	
Project Title: Area 8 Tooth Collection and Age Analysis	Project Location: Unit 081	
Brief Description of Project: <i>Include any development plans such as capturing, collaring, wildlife health analysis, etc. and include the schedule for obtaining any necessary permits, permission, funding, etc.:</i>	The project would collect teeth from successful hunters in Unit 081 to determine average age of harvest, as well as comparing tooth/age data with point and antler length measurements to evaluate possibility of using antler metrics to estimate approximate age in similar manner to what we have done with elk.	Score
Limiting Factor Score: <i>Use subcommittee cumulative score from Limiting Factor Score Form</i>	Maximum of 5 points possible	
Has this mule deer management area or hunt unit group been identified as a statewide priority for research or investigations?	Yes = 10 pts	No = 0 pts 0
Does this project directly address identifying factors limiting healthy mule deer populations? (10 points possible)	Yes = 10 pts	No = 0 pts 0
<i>How will project address limiting factors?</i>		
Does this project occur in a crucial or priority habitat for mule deer? (10 points possible) (Score using the highest ranking criteria)	High priority (Critical Mule Deer Seasonal Range or Migration Route) = 10 points Moderate priority (High elev. summer range, PJ encroached shrub community, winter range) = 5 points Low priority (salt desert shrub or low density mule deer habitats) = 1 pt	10
<i>Provide added details:</i> Project will involve deer from all habitat types in the unit. Most deer harvested in this unit will be on crucial winter range		
Will the research or investigation improve knowledge of habitat and restoration of a long-term or permanent nature? Projects of this nature are known to have long-term benefits with demonstrated history of past successes.	10+ years = 10 points	3-10 years = 1 point 1
Is the sample size (# of marked animals) and project scale (distribution across an entire hunt unit or region) adequate to gain meaningful inference or statistical power for interpreting the relative impact of this investigation?	High impact = 10 pts	Moderate impact = 5 pts Low impact = 1 point 10
Does the project complement an adjacent project or study, previous project, or help inform future habitat projects?	Yes= 5 points	No = 0 pts 5
<i>Describe existing or past projects:</i> Tooth Collection will occur in the Fall 2022 from a previous MDEP project proposal. This proposal will extend the project for two additional hunting seasons.		
Needed permitting, authority, and mechanisms are completed or in process and does the project have a high probability of being completed on-time: -NEPA analysis for wilderness permits for capture work -Permission from private landowners or other government agencies (such as USFWS or D.O.D.) -Contract mechanisms to support the work are in place or not needed	Timely completion (12 months) = 5 pts Extended completion (24 months) = 1 pts	5

Investigations Projects

<p>Is the project urgent due to a narrow biological window that requires immediate investigation and funding to address the problem or lack of knowledge?</p>	<p style="text-align: center;"><i>Yes = 5 points</i> <i>No = 0 pts</i></p>	<p style="text-align: center;">0</p>
<p><i>Provide added details:</i></p>		
<p>What is the likelihood of a successful project? High likelihood means a proposal is supported by sound scientific principles, appropriate sample sizes for statistical inference, and comprehensive study design. Low likelihood means a general lack of clear project objectives, or is not supported by scientific principles, or lacks a robust study design and direct application to wildlife management.</p>	<p style="text-align: center;"><i>High likelihood= 5 points</i> <i>Moderate likelihood = 3 points</i> <i>Low likelihood = 1 point</i></p>	<p style="text-align: center;">3</p>
<p><i>Provide added details:</i> Project success relies on voluntary hunter participation. The expectation is that most hunters will participate.</p>		
<p>Does the project leverage funding or in-kind contributions by external partners and by how much?</p>	<p style="text-align: center;"><i>>3x match = 10 pts</i> <i>1.5-2.9 match = 7 pts</i> <i>0.75-1.49 = 3 pts</i> <i>0.1-.74 = 1 pt</i></p>	<p style="text-align: center;">0</p>
<p><i>(List amounts and sources if possible) Does the project have confirmed funding commitment from project partner such as a letter of support?</i></p>	<p>Amount: \$ Source: Amount: \$ Source:</p>	
<p>Cost Effectiveness: <i>Are the expected results worth the cost of the project?</i></p>	<p style="text-align: center;"><i>Very cost-effective = 10 pts</i> <i>Moderately cost-effective = 5 pts</i> <i>Minimally cost-effective = 1 pt</i></p>	<p style="text-align: center;">10</p>
<p><i>Provide added details:</i></p>		
<p>Amount Requested:</p>	<p style="text-align: right;">\$3,000.00</p>	
<p>Total Project Score (100 possible points)</p>	<p style="text-align: right;">Sum of Scores 44</p>	

Investigations Projects

Project narrative: *Be specific to the research needs and issues associated with mule deer and/or habitat and your technical approach to addressing the issue. Identify potential benefits to mule deer and other wildlife. Describe if the project would be conducted on BLM, FS, USFWS, or private land and if any private landowner permissions are necessary. Please describe any NEPA permitting requirements (such as permission to capture animals in wilderness) if on public land and when NEPA completion is expected. Also provide a tentative project schedule of major tasks (ie collar orders, capture dates, data collection period, reporting dates, etc). Please list any collaborators or project funding partners.*

In 2021 a similar project was submitted. The MDEP team would like to extend the project for two additional hunting seasons in order to increase the sample size. Two weeks before hunting seasons, letters will be sent to eligible hunters requesting their participation. Once teeth have been collected they will be sent to Matson's lab for age analysis. When age results are received, a department employee will compare the age of the deer reported with corresponding antler length measurements and report the results to the MDEP team.

Habitat Projects

MDEP Subcommittee: Area 10 MDEP Team	Hunt Unit Group: 102 and 103	
Project Title: Corta Fire Seedling Planting Phase II	Project Location: Harrison Pass, Ruby Mountains, Nevada	
Brief Description of Project: <i>Include any development plans such as vegetation removal, planting, seeding, or installation of structures; also include the schedule for obtaining any necessary permits, completing NEPA compliance, etc.:</i>	The objective of this project is to further seedling planting efforts within the Corta Fire burn scar as phase II of the 2021 Corta Fire Seedling Planting Project that is currently in progress. Phase II would focus on planting of an additional 75,000-seedlings. Authorization has been given by the US Forest Service for the project and archeological surveys are currently underway.	Score
Limiting Factor Score: <i>Use subcommittee cumulative score from Limiting Factor Score Form</i>	Maximum of 5 points possible	3.4
Unit Group 5-Year Published Deer Population Trend:	2018: 14000 2019: 14800 2020: 14200 2021: 13000 2022: 13500	
	Decreasing = 5 pts Stable = 3 pts Increasing = 1 pt	3
Does this project directly address factors limiting healthy mule deer populations? Yes	Yes = 10 pts No = 0 pts	10
<i>How will project address limiting factors? This project would serve to improve and restore a portion of the area 10 mule deer herds migration corridor, which at present, has not responded well after the 2019 Corta Fire. Much of the area impacted by the fire has been stabilized with perennial grass species, however the brush component exist only in unburnt islands. Implementing seedling planting will help to restore this crucial brush component in one of Nevada's most important areas for mule deer.</i>		
Does this project protect, maintain or strategically restore statewide priority mule deer habitat, enhance critical habitat or a critical life stage for mule deer? <i>Score using the highest ranking criteria</i>	High priority (Critical Mule Deer Seasonal Range or Migration Route) = 10 points Moderate priority (High elev. summer range, PJ encroached shrub community, winter range) = 5 points Low priority (salt desert shrub or low density mule deer habitats) = 1 pt	10
<i>Provide added details: The Corta Fire critically impacted a crucial portion of the area 10 mule deer migration corridor identified in Secretarial Order 3362, as such, this project will help to restore one of Nevada's most important mule deer resources.</i>		
Is this mule deer habitat restoration or improvement of a long-term nature? <i>Does the project involve habitat trend and condition through restoration and improvement of a long-term or permanent nature? Projects of this nature are known to have long-term benefits with demonstrated history of past successes</i>	10+ years = 10 points 3-10 years = 5 points	10
Project Scale and Implications: <i>Is the size or magnitude of the project, relative to the habitat type or Mule Deer distribution, impactful? Does the project convey a large conservation benefit to important or critical habitat for Mule Deer? For instance, does a riparian project have a meaningful impact across multiple reaches within a watershed or would a seeding project address a large extent or important critical habitat?</i>	High impact = 15 pts Moderate impact = 10 pts Low impact = 1 point	15
Does the project build upon existing project work? Yes	Yes = 5 pts No = 0 pts	5
<i>Describe existing or past projects: This project proposal is phase II of the Corta Fire Seedling Planting Project which has been funded and is currently in progress.</i>		

Habitat Projects

<p>Timely Completion: <i>Needed permitting, authority, and mechanisms are completed or in process and does the project have a high probability of being completed on-time:</i> <i>-NEPA analysis or other statutory compliance is completed or not needed</i> <i>-Permits are completed or not needed</i> <i>-Contract mechanisms to support the work are in place or not needed</i></p>	<p>Timely completion (12 months) = 5 pts Extended completion (24 months) = 1 pt</p>	<p>5</p>
<p>Urgency: <i>(Is the project urgent due to a narrow biological window that requires immediate attention and funding to address resource degradation or deterioration?)</i></p>	<p>Yes = 5 pts No = 0 pts</p>	<p>5</p>
<p><i>Provide added details: Permissions have been given to the Nevada Department of Wildlife by the US Forest Service to proceed with both phases of the seedling planting project. Currently the archeological surveys for the project are being completed by the USFS and should be completed for both phases of this project by the fall of 2023.</i></p>		
<p>Likelihood of Success: <i>What is the likelihood of successful completion and successful outcomes? Do the individuals and organizations involved possess the capability, experience, and proven methodology needed for implementation? Is the proposal supported by sound and established scientific or biological principals? Project objectives are realistic, measurable, and achievable with clearly defined methods</i></p>	<p>High likelihood= 5 points Moderate = 3 points Low = 1 point</p>	<p>5</p>
<p><i>Provide added details: Seedling planting can be successful, however climactic conditions and other variables including soil conditions at the time of planting and the skill of the planter are variables that impact seedling success.</i></p>		
<p>Partner Funding: <i>Does the project leverage funding or in-kind contributions by external partners and by how much?</i></p>	<p>>3x match = 10 pts 1.5-2.9 match = 7 pts 0.75-1.49 = 3 pts 0.1-.74 = 1 pt</p>	<p>0</p>
<p><i>(List amounts and sources if possible) Does the project have confirmed funding commitment from project partner such as a letter or memo with stated commitment amount?</i></p>	<p>Amount: \$ Source: Amount: \$ Source:</p>	<p></p>
<p>Cost Effectiveness: <i>Are the expected results worth the cost of the project? Yes</i></p>	<p>Very cost-effective = 10 pts Moderately cost-effective = 5 pts Minimally cost-effective = 1 pt</p>	<p>10</p>
<p><i>Provide added details: Seedling planting can be successful, however climactic conditions and other variables including soil conditions at the time of planting and the skill of the planter are variables that impact seedling success. Recognizing that only a percentage of the seedlings will be successful long term, the idea is to plant in volume and hopefully to get a better price per plant rate.</i></p>		
<p>Amount Requested:</p>	<p>\$</p>	<p></p>
<p>Total Project Score (100 possible points)</p>	<p>Sum of Scores</p>	<p>81.4</p>

Habitat Projects

Project Narrative: *Be specific to the needs and issues associated with mule deer and/or habitat and your technical approach to addressing the issue. Identify potential benefits to mule deer and other wildlife. Describe if the project is on public or private land and any private landowner permissions. Please describe any NEPA permitting requirements if on public land and when NEPA completion is expected. Also provide a tentative project schedule of major tasks. If your project is associated with water rights (e.g. spring fencing project) please discuss the status of permissions to complete the project with water rights holders.*

The 16,000-acre Corta Fire burned a large portion of the Harrison Pass area within Ruby Mountains in 2019, this specific portion of the Ruby Mountains is considered by many to be one of the Nevada's most important resources for mule deer. The post fire vegetation response was largely positive in stabilizing the site with desirable perennial species; however, the brush species response has been limited at best. Most, if not all bitterbrush did not resprout and there has been limited sagebrush response.

The primary objective of this project is to restore the brush component within the burn scar to provide mule deer, sage grouse, and a myriad of other wildlife species the crucial habitat type that presently does not exist. Left without active restoration efforts and relying solely upon natural response could potentially translate into decades of little to limited utility for one of Nevada's largest mule deer herds.

The Harrison Pass area of the Ruby Mountains is of special significance as it provides 5,000-10,000 mule deer a critically important stop-over site in the herds migration to and from winter range, all while supporting a year around resident mule deer population. In most years thousands of mule deer will transition through this area relying heavily on the historically robust brush component to provide much needed high value forage as they migrate south for the winter. In more recent years, while experiencing milder winter conditions mule deer have been observed selecting to remain in the Harrison Pass area throughout the winter only making the area that much more important.

The treatment prescription necessary to restore brush species at this site just requires a single step in planting brush species seedlings. In this project approximately 75,000 sagebrush seedlings would be grown out from seed at a nursery for 1-2 years, transported to the site, then planted by both contract and volunteer labor. Seed would be provided by the Nevada Department of Wildlife to the nursery in the fall of 2023 to be grown out for approximately one calendar year, seedlings will then either be planted in fall of 2024 or cold stored and planted in spring of 2025. Due to the high use of this area by migrating deer, seedlings will require protective mesh to protect the young plants and allow time to mature sufficiently to handle herbivory.

A desktop analysis of the site has been completed to determine species composition and soil profiles to help increase likeliness of success of the project. Sagebrush composition is largely low and mountain sage with antelope bitterbush as a higher density component of the composition. When considering the logistics of the nursery grow out process, and the time it takes to grow out low sage (in most cases two-years), antelope bitterbrush and mountain sage stand out as the best candidates for our purposes. Timing of the planting portion of the project is planned for fall, after the soil at the site has likely received some moisture and the young plants can take advantage the higher soil moisture throughout the winter and spring months.

Project Timeline:

Fall 2023- Seed purchased and delivered to nursery for grow out

Fall 2024- Seedlings picked up and delivered to site for planting by contract and volunteer labor

Spring 2025- Any seedlings not planted in fall of 2023 will be planted

Permissions have been given to the Nevada Department of Wildlife by the US Forest Service to proceed with both phases of the seedling planting project. Currently the archeological surveys for the project are being completed by the USFS and should be completed for both phases of this project by the fall of 2023.

Investigations Projects

MDEP Subcommittee: Area 10, Elko County	Hunt Unit Group: 101-109	
Project Title: Triple B HMA Remote Sensing	Project Location: Triple B HMA, White Pine County, Hunt Units 104, 108, 121	
Brief Description of Project: <i>Include any development plans such as capturing, collaring, wildlife health analysis, etc. and include the schedule for obtaining any necessary permits, permission, funding, etc.:</i>	Historical analysis of major vegetative classes on primary winter ranges used by the Area 10 mule deer herd. The project will track vegetative changes between 1984-2022 and will incorporate a thorough analysis of land uses and environmental conditions during the same time frame.	Score
Limiting Factor Score: <i>Use subcommittee cumulative score from Limiting Factor Score Form</i>	Maximum of 5 points possible	
Has this mule deer management area or hunt unit group been identified as a statewide priority for research or investigations?	Yes = 10 pts	No = 0 pts 10
Does this project directly address identifying factors limiting healthy mule deer populations? (10 points possible)	Yes = 10 pts	No = 0 pts 10
<i>How will project address limiting factors? It will identify changes in desirable vegetative classes and will seek to identify those land uses that are most detrimental. The analysis will seek to guide land use decisions and will provide sound scientific data to more effectively manage feral horses within the Triple B HMA.</i>		
Does this project occur in a crucial or priority habitat for mule deer? (10 points possible) (Score using the highest ranking criteria)	High priority (Critical Mule Deer Seasonal Range or Migration Route) = 10 points Moderate priority (High elev. summer range, PJ encroached shrub community, winter range) = 5 points Low priority (salt desert shrub or low density mule deer habitats) = 1 pt	10
<i>Provide added details: The Triple B HMA covers much of the Crucial Winter Range and much of the Migratory Corridor for much of the Area 10 mule deer herd.</i>		
Will the research or investigation improve knowledge of habitat and restoration of a long-term or permanent nature? Projects of this nature are known to have long-term benefits with demonstrated history of past successes.	10+ years = 10 points	3-10 years = 1 point 10
Is the sample size (# of marked animals) and project scale (distribution across an entire hunt unit or region) adequate to gain meaningful inference or statistical power for interpreting the relative impact of this investigation?	High impact = 10 pts	Moderate impact = 5 pts Low impact = 1 point 10
Does the project complement an adjacent project or study, previous project, or help inform future habitat projects?	Yes= 5 points	No = 0 pts 5
<i>Describe existing or past projects: The project area will overlay much of the Ruby and Long Valley Watershed Assessment project area that is in the implementation phase, as well as the Newark and Huntington Valley Watershed Assessment project area that has been in the implementation phase for several years.</i>		
Needed permitting, authority, and mechanisms are completed or in process and does the project have a high probability of being completed on-time: -NEPA analysis for wilderness permits for capture work -Permission from private landowners or other government agencies (such as USFWS or D.O.D.) -Contract mechanisms to support the work are in place or not needed	Timely completion (12 months) = 5 pts	Extended completion (24 months) = 1 pts 5

Investigations Projects

<p>Is the project urgent due to a narrow biological window that requires immediate investigation and funding to address the problem or lack of knowledge?</p>	<p style="text-align: center;">Yes = 5 points No = 0 pts</p>	5
<p><i>Provide added details: The continued degradation of critical winter range by excessive horse populations severely limits the productivity and capacity of all primary winter ranges used by the Area 10 mule deer herd. The current populations of horses continues to jeopardize many of the recent enhancement projects due to continued overuse.</i></p>		
<p>What is the likelihood of a successful project? High likelihood means a proposal is supported by sound scientific principles, appropriate sample sizes for statistical inference, and comprehensive study design. Low likelihood means a general lack of clear project objectives, or is not supported by scientific principles, or lacks a robust study design and direct application to wildlife management.</p>	<p style="text-align: center;">High likelihood= 5 points Moderate likelihood = 3 points Low likelihood = 1 point</p>	5
<p><i>Provide added details: The remote sensing product will be grounded in the best available science and the most comprehensive study design that funding will allow for. The proposed process is novel, so the list of potential applications of the data will evolve as more land use datasets (HMA pop estimates, permitted AUMs, precipitation, sage grouse population trend, etc) are incorporated in the analysis.</i></p>		
<p>Does the project leverage funding or in-kind contributions by external partners and by how much?</p>	<p style="text-align: center;">>3x match = 10 pts 1.5-2.9 match = 7 pts 0.75-1.49 = 3 pts 0.1-.74 = 1 pt</p>	
<p><i>(List amounts and sources if possible) Does the project have confirmed funding commitment from project partner such as a letter of intent?</i></p>	<p>Amount: \$ Source: Amount: \$ Source:</p>	
<p>Cost Effectiveness: Are the expected results worth the cost of the project?</p>	<p style="text-align: center;">Very cost-effective = 10 pts Moderately cost-effective = 5 pts Minimally cost-effective = 1 pt</p>	5
<p><i>Provide added details: This is a novel process so the model formulation and the ground truthing effort will be expensive.</i></p>		
<p>Amount Requested:</p>	<p>\$</p>	
<p>Total Project Score (100 possible points)</p>	<p>Sum of Scores</p>	79.4

Investigations Projects

Project narrative: *Be specific to the research needs and issues associated with mule deer and/or habitat and your technical approach to addressing the issue. Identify potential benefits to mule deer and other wildlife. Describe if the project would be conducted on BLM, FS, USFWS, or private land and if any private landowner permissions are necessary. Please describe any NEPA permitting requirements (such as permission to capture animals in wilderness) if on public land and when NEPA completion is expected. Also provide a tentative project schedule of major tasks (ie collar orders, capture dates, data collection period, reporting dates, etc). Please list any collaborators or project funding partners.*

The primary objective of this project is to gain a greater understanding of the winter range ecology that has supported roughly two-thirds of the Area 10 mule deer herd during its historical peak in the 1980's to present. Recognizing that several variables have likely contributed towards what might now be described as compromised winter range, having a clear picture of the ecology during the herds population height will provide a better path forward in restoration planning, and potentially identify what causal factors that have led to this compromised state.

This project will employ a thorough remote sensing effort to identify changes in key vegetation classes over a 39-year period, with particular attention on departure from desirable to undesirable states. The remote sensing effort will track changes in pinyon-juniper cover, annual grasses, perennial grasses, shrub cover, winterfat cover, halogeton cover, and bare ground. It will also track changes in riparian areas, identifying vegetation conversions as well as differences in surface water availability. The deliverable will include 39 individual data sets that include raster files representing the relative cover of each of the vegetative classes identified above. The analysis will use 30-meter resolution imagery starting in 1985 to 2022, and both a 1m & 30 m imagery data sets for 1984 and 2023. This design utilizing 30m resolution for 37 of the 39 years will help to cut down on costs while still generating a meaningful product.

In the analysis period, the wild horse population within the Triple B Horse Management Area (HMA) have fluctuated in response to gathers but have generally been grossly overpopulated relative to Appropriate Management Levels (AML) set by the BLM. The AML for the Triple B HMA is 250-518 horses, however in many years the conservative estimate of this population has numbered in the thousands. The elevated horse population has put increased pressure on the limited resources available on crucial winter ranges utilized by Area 10 mule deer, as well as a suite of other native wildlife species. Year-round use by horses has lowered the productivity potential of much of the winter range, as well as put increasing strain on the limited water sources in the HMA. Tracking vegetative composition and trend during the span of the identified analysis period should provide greater insight to those impacts relative to the known population estimates of wild horses within the project area.

This effort will be the first of two proposals, with a probable 2024 proposal that would seek funding for a contractor to use the remote sensing product, to then integrate numerous land use datasets including but not limited to livestock actual use reports, horse population estimates, precipitation, temperature, deer population estimates, elk population estimates, and other potentially pertinent factors. The resulting report will offer a scientific basis for future land use decisions and is expected to generate a comprehensive document that can be used to prioritize proper management on the crucial mule deer winter range that the Triple B HMA represents.

Investigations Projects

MDEP Subcommittee: White Pine County MA 11-12	Hunt Unit Group: MA 11 and/or 12	
Project Title: Wild Horse Impacts on Mule Deer	Project Location: MA 11 and/or 12	
Brief Description of Project: <i>Include any development plans such as capturing, collaring, wildlife health analysis, etc. and include the schedule for obtaining any necessary permits, permission, funding, etc.:</i>	Study the impacts of wild horses on habitat and displacement of mule deer from quality habitat by wild horses.	Score
Limiting Factor Score: <i>Use subcommittee cumulative score from Limiting Factor Score Form</i>	Maximum of 5 points possible	
Has this mule deer management area or hunt unit group been identified as a statewide priority for research or investigations?	Yes = 10 pts	No = 0 pts
Does this project directly address identifying factors limiting healthy mule deer populations? (10 points possible)	Yes = 10 pts	No = 0 pts
<i>How will project address limiting factors? Improper grazing by wild horses was ranked at 4.9. NDOW does not control the management of wild horses, but NDOW can provide data to federal land agencies that can influence wild horse management. This project would specifically study the impacts of wild horse on mule deer and may provide future influence on wild horse management.</i>		
Does this project occur in a crucial or priority habitat for mule deer? (10 points possible) (Score using the highest ranking criteria)	High priority (Critical Mule Deer Seasonal Range or Migration Route) = 10 points Moderate priority (High elev. summer range, PJ encroached shrub community, winter range) = 5 points Low priority (salt desert shrub or low density mule deer habitats) = 1 pt	
<i>Provide added details: Most wild horse areas do not overlap with crucial mule deer habitat in these areas. Wild horses do overlap with thousand of acres of quality mule deer habitat that have large scale impacts.</i>		
Will the research or investigation improve knowledge of habitat and restoration of a long-term or permanent nature? Projects of this nature are known to have long-term benefits with demonstrated history of past successes.	10+ years = 10 points	
Is the sample size (# of marked animals) and project scale (distribution across an entire hunt unit or region) adequate to gain meaningful inference or statistical power for interpreting the relative impact of this investigation?	3-10 years = 1 point	
Does the project complement an adjacent project or study, previous project, or help inform future habitat projects?	High impact = 10 pts	
<i>Describe existing or past projects: There has been past research on impacts of wild horses on wildlife and this research would expand on that. It would help to inform future research and management due to the lack of specific research on mule deer habitat and displacement. This project could also be combined with the MA 12 Mule Deer Collaring project proposal.</i>	Moderate impact = 5 pts	
Needed permitting, authority, and mechanisms are completed or in process and does the project have a high probability of being completed on-time: -NEPA analysis for wilderness permits for capture work -Permission from private landowners or other government agencies (such as USFWS or D.O.D.) -Contract mechanisms to support the work are in place or not needed	Yes = 5 points	
	No = 0 pts	
	Timely completion (12 months) = 5 pts	
	Extended completion (24 months) = 1 pts	
	1	

Investigations Projects

<p>Is the project urgent due to a narrow biological window that requires immediate investigation and funding to address the problem or lack of knowledge?</p>	<p style="text-align: center;"><i>Yes = 5 points</i> <i>No = 0 pts</i></p>	<p style="text-align: center;">5</p>
<p><i>Provide added details:</i> The BLM in White Pine County has been and continues to gather wild horses. There would be a sense of urgency to start this project by collecting baseline habitat data and mule deer use data while horse numbers are low. Having that baseline data would help to compare to changes as horse numbers continue to increase in the future.</p>		
<p>What is the likelihood of a successful project? High likelihood means a proposal is supported by sound scientific principles, appropriate sample sizes for statistical inference, and comprehensive study design. Low likelihood means a general lack of clear project objectives, or is not supported by scientific principles, or lacks a robust study design and direct application to wildlife management.</p>	<p style="text-align: center;"><i>High likelihood= 5 points</i> <i>Moderate likelihood = 3 points</i> <i>Low likelihood = 1 point</i></p>	<p style="text-align: center;">3</p>
<p><i>Provide added details:</i> There would be a high likelihood of success. Specific study designs have not been completed. Coordination with a university would have to occur to facilitate the development of this project.</p>		
<p>Does the project leverage funding or in-kind contributions by external partners and by how much?</p>	<p style="text-align: center;"><i>>3x match = 10 pts</i> <i>1.5-2.9 match = 7 pts</i> <i>0.75-1.49 = 3 pts</i> <i>0.1-.74 = 1 pt</i></p>	<p style="text-align: center;">10</p>
<p><i>(List amounts and sources if possible) Does the project have confirmed funding commitment from project partner such as a letter of intent?</i></p>	<p>Amount: \$ TBD Source: Unknown at this time. Amount: \$ Source:</p>	
<p>Cost Effectiveness: <i>Are the expected results worth the cost of the project?</i></p>	<p style="text-align: center;"><i>Very cost-effective = 10 pts</i> <i>Moderately cost-effective = 5 pts</i> <i>Minimally cost-effective = 1 pt</i></p>	<p style="text-align: center;">5</p>
<p><i>Provide added details:</i> This would likely be an expensive research project. Wild horses have extensive overlap and impacts with mule deer statewide. Studying wild horse impacts may help to change the trajectory of mule deer and would be worth the cost.</p>		
<p>Amount Requested:</p>	<p>\$ Unknown at this time.</p>	
<p>Total Project Score (100 possible points)</p>	<p style="text-align: right;">Sum of Scores 78.9</p>	

Investigations Projects

Project narrative: *Be specific to the research needs and issues associated with mule deer and/or habitat and your technical approach to addressing the issue. Identify potential benefits to mule deer and other wildlife. Describe if the project would be conducted on BLM, FS, USFWS, or private land and if any private landowner permissions are necessary. Please describe any NEPA permitting requirements (such as permission to capture animals in wilderness) if on public land and when NEPA completion is expected. Also provide a tentative project schedule of major tasks (ie collar orders, capture dates, data collection period, reporting dates, etc). Please list any collaborators or project funding partners.*

The White Pine County MDEP Subcommittee has requested that NDOW pursue a research project exploring the impacts and competition that wild horses have on mule deer. Research has been conducted on wild horse impacts to pronghorn, desert bighorn, sage grouse, and a variety of other non-game species, as well as vegetative and riparian impacts caused by wild horses. Some research has been conducted on competition for water between wild horses and mule deer. However, there seems to be a lack of research on habitat impacts and displacement of mule deer from quality habitat due to wild horses. This subcommittee would like to see specific research in this area.

White Pine County MA 11-12 Project Proposal- Wild Horse Research Attachment

Cell A5: Has this mule deer management area or hunt unit group been identified as a statewide priority for research or investigations? **Yes**

Cell A6: Does this project directly address identifying factors limiting healthy mule deer populations? (10 points possible) **Yes**

Cell A8: Does this project occur in a crucial or priority habitat for mule deer? (10 points possible) (Score using the highest ranking criteria) **This project would occur in Moderate priority habitat.**

Cell A10: Will the research or investigation improve knowledge of habitat and restoration of a long-term or permanent nature? Projects of this nature are known to have long-term benefits with demonstrated history of past successes. **Yes**

Cell A11: Is the sample size (# of marked animals) and project scale (distribution across an entire hunt unit or region) adequate to gain meaningful inference or statistical power for interpreting the relative impact of this investigation? **Yes**

Cell A12: Does the project complement an adjacent project or study, previous project, or help inform future habitat projects? **Yes**

Cell A14: Needed permitting, authority, and mechanisms are completed or in process and does the project have a high probability of being completed on-time:

-NEPA analysis for wilderness permits for capture work

-Permission from private landowners or other government agencies (such as USFWS or D.O.D.)

-Contract mechanisms to support the work are in place or not needed

No. Permitting, research design, and researchers are not in place. This study would take over 1 year to complete.

Cell A15: Is the project urgent due to a narrow biological window that requires immediate investigation and funding to address the problem or lack of knowledge? **Yes**

Cell A17: What is the likelihood of a successful project? High likelihood means a proposal is supported by sound scientific principles, appropriate sample sizes for statistical inference, and comprehensive study design. Low likelihood means a general lack of clear project objectives, or is not supported by scientific principles, or lacks a robust study design and direct application to wildlife management. There is high likelihood of success with this project, but long-term impacts may be moderate due to federal regulations that direct wild horse management.

Cell A19: Does the project leverage funding or in-kind contributions by external partners and by how much? **Yes**

Cell A21: Cost Effectiveness: *Are the expected results worth the cost of the project?* **Moderate cost-effective**

Habitat Projects

MDEP Subcommittee: White Pine County MA 11-12	Hunt Unit Group: 111-113	
Project Title: Queen Spring Pinyon-Juniper (PJ) Hand Thinning	Project Location: Hunt Unit 111, USFS Lands in the north Schell Creek Range	
Brief Description of Project: <i>Include any development plans such as vegetation removal, planting, seeding, or installation of structures; also include the schedule for obtaining any necessary permits, completing NEPA compliance, etc.:</i>	This project would consist of hand thinning PJ trees in the Queen Springs area of the Schell Creek Range on USFS lands.	Score
Limiting Factor Score: <i>Use subcommittee cumulative score from Limiting Factor Score Form</i>	Maximum of 5 points possible	4.6
Unit Group 5-Year Published Deer Population Trend: Decreasing	2017: 5200 2018: 5000 2019: 4500 2020: 4200 2021: 3600	
	Decreasing = 5 pts Stable = 3 pts Increasing = 1 pt	5
Does this project directly address factors limiting healthy mule deer populations?	Yes = 10 pts No = 0 pts	10
<i>How will project address limiting factors?</i> This project will address PJ invasion that has a limiting factor score of 4.6. It will also address the limited water distribution by removing trees from isolated springs to improve spring flow. Limited water distribution has a score of 3.0.		
Does this project protect, maintain or strategically restore statewide priority mule deer habitat, enhance critical habitat or a critical life stage for mule deer? <i>Score using the highest ranking criteria</i>	High priority (Critical Mule Deer Seasonal Range or Migration Route) = 10 points Moderate priority (High elev. summer range, PJ encroached shrub community, winter range) = 5 points Low priority (salt desert shrub or low density mule deer habitats) = 1 pt	5
<i>Provide added details:</i> This project will improve habitat in high elevation summer range and transition range by reducing PJ invasion into mountain shrub communities. This will maintain and improve mule deer habitat.		
Is this mule deer habitat restoration or improvement of a long-term nature? <i>Does the project involve habitat trend and condition through restoration and improvement of a long-term or permanent nature? Projects of this nature are known to have long-term benefits with demonstrated history of past successes</i>	10+ years = 10 points 3-10 years = 5 points	10
Project Scale and Implications: <i>Is the size or magnitude of the project, relative to the habitat type or Mule Deer distribution, impactful? Does the project convey a large conservation benefit to important or critical habitat for Mule Deer? For instance, does a riparian project have a meaningful impact across multiple reaches within a watershed or would a seeding project address a large extent or important critical habitat?</i>	High impact = 15 pts Moderate impact = 10 pts Low impact = 1 point	15
Does the project build upon existing project work?	Yes = 5 pts No = 0 pts	0
<i>Describe existing or past projects:</i> This project does not build upon any existing projects. This is the initial project in this area, but the subcommittee plans to propose more projects in future years in this area including the potential use of hand thinning, mastication, and prescribed fire. Future projects will connect treatments between Queen Springs and Kinsey Canyon on the west side of the Schell Creek Range. NDOW and the USFS supports this project and future projects in this area.		

Habitat Projects

<p>Timely Completion: <i>Needed permitting, authority, and mechanisms are completed or in process and does the project have a high probability of being completed on-time:</i> <i>-NEPA analysis or other statutory compliance is completed or not needed</i> <i>-Permits are completed or not needed</i> <i>-Contract mechanisms to support the work are in place or not needed</i></p>	<p>Timely completion (12 months) = 5 pts Extended completion (24 months) = 1 pt</p>	<p>5</p>
<p>Urgency: <i>(Is the project urgent due to a narrow biological window that requires immediate attention and funding to address resource degradation or deterioration?)</i></p>	<p>Yes = 5 pts No = 0 pts</p>	<p>0</p>
<p><i>Provide added details:</i> This project is not urgent in the biological sense. Habitat quality slowly diminishes as PJ invasion slowly invades on mule deer habitat. If action is not taken, this area will lose its ability to provide mule deer habitat in the next 10-20 years.</p>		
<p>Likelihood of Success: <i>What is the likelihood of successful completion and successful outcomes? Do the individuals and organizations involved possess the capability, experience, and proven methodology needed for implementation? Is the proposal supported by sound and established scientific or biological principals? Project objectives are realistic, measurable, and achievable with clearly defined methods</i></p>	<p>High likelihood= 5 points Moderate = 3 points Low = 1 point</p>	<p>5</p>
<p><i>Provide added details:</i> This project has a high likelihood of success by removing PJ from mule deer habitat. It will help to maintain and improve mountain shrub communities.</p>		
<p>Partner Funding: <i>Does the project leverage funding or in-kind contributions by external partners and by how much?</i></p>	<p>>3x match = 10 pts 1.5-2.9 match = 7 pts 0.75-1.49 = 3 pts 0.1-.74 = 1 pt</p>	<p></p>
<p><i>(List amounts and sources if possible) Does the project have confirmed funding commitment from project partner such as a letter or memo with stated commitment amount?</i></p>	<p>Amount: \$ 130,000 Source: TBD. Fund is not available until winter/spring time. Amount: \$ Source:</p>	<p></p>
<p>Cost Effectiveness: <i>Are the expected results worth the cost of the project?</i></p>	<p>Very cost-effective = 10 pts Moderately cost-effective = 5 pts Minimally cost-effective = 1 pt</p>	<p>10</p>
<p><i>Provide added details:</i> Hand cutting PJ is the most cost effective way to remove trees and maintain/improve existing habitat.</p>		
<p>Amount Requested:</p>	<p>130,000.00</p>	
<p>Total Project Score (100 possible points)</p>	<p>Sum of Scores 69.6</p>	

Habitat Projects

Project Narrative: *Be specific to the needs and issues associated with mule deer and/or habitat and your technical approach to addressing the issue. Identify potential benefits to mule deer and other wildlife. Describe if the project is on public or private land and any private landowner permissions. Please describe any NEPA permitting requirements if on public land and when NEPA completion is expected. Also provide a tentative project schedule of major tasks. If your project is associated with water rights (e.g. spring fencing project) please discuss the status of permissions to complete the project with water rights holders.*

NDOW in conjunction with the USFS will identify 500-1,000 acres of Phase 1 Pinyon-Juniper (PJ) trees to be removed by hand cutting in the Queen Springs area in the Schell Creek Range. There is quality mule deer habitat in this area, but PJ encroachment is reducing habitat and spring quality. Hand cutting trees would maintain and improve habitat and spring quality. This would likely be the first of many projects in this portion of the Schell Creek Range. Future habitat work would include more hand cutting, mastication, and potentially prescribe fire. The USFS has completed NEPA in this area. Potential funding sources could include Heritage, Rocky Mountain Elk Foundation, Dream Tag, HCF, and USFS.

White Pine County MA 11-12 Project Proposal- MA 11 PJ Removal Attachment

Cell A7: Does this project directly address factors limiting healthy mule deer populations? **Yes**

Cell A9: Does this project protect, maintain or strategically restore statewide priority mule deer habitat, enhance critical habitat or a critical life stage for mule deer? *Score using the highest ranking criteria* **No**

Cell A11: Is this mule deer habitat restoration or improvement of a long-term nature? *Does the project involve habitat trend and condition through restoration and improvement of a long-term or permanent nature? Projects of this nature are known to have long-term benefits with demonstrated history of past successes* **Yes. Removing PJ will help to maintain mountain shrub communities for 30+ years.**

Cell A12: **Project Scale and Implications:** *Is the size or magnitude of the project, relative to the habitat type or Mule Deer distribution, impactful? Does the project convey a large conservation benefit to important or critical habitat for Mule Deer? For instance, does a riparian project have a meaningful impact across multiple reaches within a watershed or would a seeding project address a large extent or important critical habitat?* **Yes. This project is the initial project in this area. Future projects will be proposed, expanding treatments in the greater area. Several thousand acres of PJ will be treated in coming years in this greater area.**

Cell A13: Does the project build upon existing project work? **No**

Cell A14: **Timely Completion:** *Needed permitting, authority, and mechanisms are completed or in process and does the project have a high probability of being completed on-time:*

-NEPA analysis or other statutory compliance is completed or not needed

-Permits are completed or not needed

-Contract mechanisms to support the work are in place or not needed

Yes. NEPA is in place. Once funding is obtained and a contract is submitted, this project would be completed within 12 months.

Cell A15: **Urgency:** *(Is the project urgent due to a narrow biological window that requires immediate attention and funding to address resource degradation or deterioration?)* **No**

Cell A18: **Likelihood of Success:** *What is the likelihood of successful completion and successful outcomes? Do the individuals and organizations involved possess the capability, experience, and proven methodology needed for implementation? Is the proposal supported by sound and established scientific or biological principals? Project objectives are realistic, measurable, and achievable with clearly defined methods* **There is a high likelihood of success. Several team members have experience in this type of projects.**

Cell A20: **Partner Funding:** *Does the project leverage funding or in-kind contributions by external partners and by how much?* **This question was not scored because partner funding has not been pursued. Current internal guidance does not allow for individual biologist to pursue partner funding.**

Cell A22: **Cost Effectiveness:** *Are the expected results worth the cost of the project?* **This project is very cost-effective**

Non-Habitat Project Proposal Form	
MDEP Team(s) Submitting Proposal: White Pine Area 11-12	Hunt Unit Group: 111-113
Project Title: Antelope Range Mountain Lion Removal	
1. Limiting Factor Rank Score: 4.1	Needs Assessment Strategy: Mountain Lion Removal 4.3
2. Justification: Downward Population Trend <input checked="" type="checkbox"/> 3-yr avg low fawn ratios <input checked="" type="checkbox"/> 3-yr avg low buck ratio <input type="checkbox"/> 3-yr avg low harvest numbers <input checked="" type="checkbox"/> Disease detected <input type="checkbox"/> Anecdotal reports <input type="checkbox"/>	
3. Body performing work: Wildlife Services <input checked="" type="checkbox"/> Private contractor <input checked="" type="checkbox"/> NDOW-Wildlife Health <input type="checkbox"/> Other <input type="checkbox"/>	
4. Predator Plan Project Category: Implementation <input checked="" type="checkbox"/> Experimental Management <input type="checkbox"/> Experimentation <input type="checkbox"/> Data Gathering <input type="checkbox"/>	
5. Type of Project: Lethal <input checked="" type="checkbox"/> Non-Lethal <input checked="" type="checkbox"/> Capture & test <input type="checkbox"/> Collaring effort <input type="checkbox"/> Other <input type="checkbox"/>	
6. Level of Monitoring: Rigorous <input type="checkbox"/> Intermediate <input checked="" type="checkbox"/> Standard <input type="checkbox"/>	
7. Project Duration: one year <input type="checkbox"/> two years <input type="checkbox"/> three years <input checked="" type="checkbox"/> 4+ <input type="checkbox"/>	
8. Annual Cost: Under \$10,000 <input type="checkbox"/> \$10 – \$25,000 <input checked="" type="checkbox"/> \$25 - \$50,000 <input type="checkbox"/> \$50,000+ <input type="checkbox"/>	
9. Funding Source: Heritage Fund <input type="checkbox"/> NGO <input type="checkbox"/> Predator Fund <input checked="" type="checkbox"/> NDOW <input type="checkbox"/> Wildlife Services <input type="checkbox"/> Other <input type="checkbox"/> None <input type="checkbox"/>	
10. Is funding source eligible for matching funds? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
11. Will this project benefit additional wildlife species? Yes <input checked="" type="checkbox"/> Probably <input type="checkbox"/> No <input type="checkbox"/> Additional Species Benefit:	
12. Access for public hunting? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
13. Are there other predator projects in area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
14. Will project expand knowledge of the mule deer population, mule deer habitat, or predator-prey relationships? Yes <input type="checkbox"/> Probably <input checked="" type="checkbox"/> No <input type="checkbox"/>	
15. Other MDEP teams involved: White Pine Area 11-12 White Pine Area 11-12	
16. Additional projects approved for this team: None	
17. Measure of success? Upward population trend <input checked="" type="checkbox"/> 3-yr avg increased fawn ratio <input checked="" type="checkbox"/> 3-yr avg higher observed buck ratio <input checked="" type="checkbox"/> 3-yr avg increased 4-pts in harvest <input type="checkbox"/> Other <input checked="" type="checkbox"/>	
Project Start Date: 12/1/23	Estimated End Date: 3/31/26
Funding Source(s): Predator Fund	Estimated Project Cost: \$ \$75,000
<i>Oversight Committee Use Only</i>	
Approved <input type="checkbox"/>	Not Approved <input type="checkbox"/>
Priority #	
Route Project to:	
Comments: See Attached.	

Antelope Range Mountain Lion Removal

The Antelope Range, Hunt Unit 112, is a relatively small, isolated mountain range with a declining mule deer population. In 2016, NDOW surveyed 287 mule deer on the east side of the Antelope Range on spring mule deer surveys. In 2022, NDOW surveyed 35 mule deer in the same area, under similar survey conditions and effort expended. The decline in mule deer population in this area is primarily drought related. However, with the current low mule deer numbers, mountain lions may be suppressing this population. Due to the supplemental prey sources of feral horses and domestic sheep in this area mountain lion populations may not have mimicked the mule deer decline. Due to the remote nature of this area, sport harvest on mountain lions is low. Removing 3-5 mountain lions per year for three years will provide relief to mule deer and allow for faster recovery of mule deer when and if drought and habitat conditions improve. Removal would be targeted on the east side of the Antelope Range between Red Rocks and Stockade Spring, where most mule deer winter in this area. After three years of mountain lion removal, this project would be reevaluated to determine success and/or continuation of the project. Success criteria for this project may include an assessment of drought and habitat conditions over the timeframe, change in mule deer numbers, and change in mountain lion demographics (sex and age of removed mountain lions). To further monitor mountain lion numbers in this area, up to 25 trail cameras would be placed on isolated water sources throughout the mountain range.

Non-Habitat Project Proposal Form	
MDEP Team(s) Submitting Proposal: White Pine Area 11-12	Hunt Unit Group: 121
Project Title: Cherry Creek Range Mountain Lion Removal	
1. Limiting Factor Rank Score: 4.1	Needs Assessment Strategy: Mountain Lion Removal 4.3
2. Justification: Downward Population Trend <input checked="" type="checkbox"/> 3-yr avg low fawn ratios <input checked="" type="checkbox"/> 3-yr avg low buck ratio <input checked="" type="checkbox"/> 3-yr avg low harvest numbers <input checked="" type="checkbox"/> Disease detected <input type="checkbox"/> Anecdotal reports <input type="checkbox"/>	
3. Body performing work: Wildlife Services <input checked="" type="checkbox"/> Private contractor <input checked="" type="checkbox"/> NDOW-Wildlife Health <input type="checkbox"/> Other <input type="checkbox"/>	
4. Predator Plan Project Category: Implementation <input checked="" type="checkbox"/> Experimental Management <input type="checkbox"/> Experimentation <input type="checkbox"/> Data Gathering <input type="checkbox"/>	
5. Type of Project: Lethal <input checked="" type="checkbox"/> Non-Lethal <input type="checkbox"/> Capture & test <input type="checkbox"/> Collaring effort <input type="checkbox"/> Other <input type="checkbox"/>	
6. Level of Monitoring: Rigorous <input type="checkbox"/> Intermediate <input checked="" type="checkbox"/> Standard <input type="checkbox"/>	
7. Project Duration: one year <input type="checkbox"/> two years <input type="checkbox"/> three years <input checked="" type="checkbox"/> 4+ <input type="checkbox"/>	
8. Annual Cost: Under \$10,000 <input type="checkbox"/> \$10 – \$25,000 <input checked="" type="checkbox"/> \$25 - \$50,000 <input type="checkbox"/> \$50,000+ <input type="checkbox"/>	
9. Funding Source: Heritage Fund <input type="checkbox"/> NGO <input type="checkbox"/> Predator Fund <input checked="" type="checkbox"/> NDOW <input type="checkbox"/> Wildlife Services <input type="checkbox"/> Other <input type="checkbox"/> None <input type="checkbox"/>	
10. Is funding source eligible for matching funds? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
11. Will this project benefit additional wildlife species? Yes <input checked="" type="checkbox"/> Probably <input type="checkbox"/> No <input type="checkbox"/> Additional Species Benefit:	
12. Access for public hunting? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
13. Are there other predator projects in area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
14. Will project expand knowledge of the mule deer population, mule deer habitat, or predator-prey relationships? Yes <input type="checkbox"/> Probably <input checked="" type="checkbox"/> No <input type="checkbox"/>	
15. Other MDEP teams involved: White Pine Area 11-12 White Pine Area 11-12	
16. Additional projects approved for this team: None	
17. Measure of success? Upward population trend <input checked="" type="checkbox"/> 3-yr avg increased fawn ratio <input checked="" type="checkbox"/> 3-yr avg higher observed buck ratio <input checked="" type="checkbox"/> 3-yr avg increased 4-pts in harvest <input type="checkbox"/> Other <input checked="" type="checkbox"/>	
Project Start Date: 12/1/23	Estimated End Date: 3/31/26
Funding Source(s): Predator Fund	Estimated Project Cost: \$ \$75,000
<i>Oversight Committee Use Only</i>	
Approved <input type="checkbox"/>	Not Approved <input type="checkbox"/>
Priority #	
Route Project to:	
Comments: See Attached.	

Cherry Creek Range Mountain Lion Removal

The north end of the Cherry Creek Range has typically had lower mule deer density than southern portions of Hunt Unit 121. In recent years, mule deer density has drastically declined in this portion of the unit. In the fall of 2016, NDOW surveyed 150 mule deer on post-season surveys from the McDermid Creek area north. In 2020, NDOW surveyed 76 mule deer in the same area. Survey conditions were similar, except slightly better snow cover in 2016. Survey effort and coverage was far better in 2020 with 2 hours and 47 minutes being expended on survey compared to 1 hour and 12 minutes in 2016. Increased survey effort and fewer observed deer is evidence of a declining population. The decline in mule deer population is primarily drought related. However, with the current low mule deer numbers, mountain lions may be suppressing this population. Due to the supplemental prey sources of feral horses and domestic sheep in this area mountain lion populations may not have mimicked the mule deer decline. Removing 3-5 mountain lions per year for three years will provide relief to mule deer and allow for faster recovery of mule deer when and if drought and habitat conditions improve. Removal would be targeted on the areas north of McDermid Creek and Snow Creek. After three years of mountain lion removal, this project would be reevaluated to determine success and/or continuation of the project. Success criteria for this project may include an assessment of drought and habitat conditions over the timeframe, change in mule deer numbers, and change in mountain lion demographics (sex and age of removed mountain lions).

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.

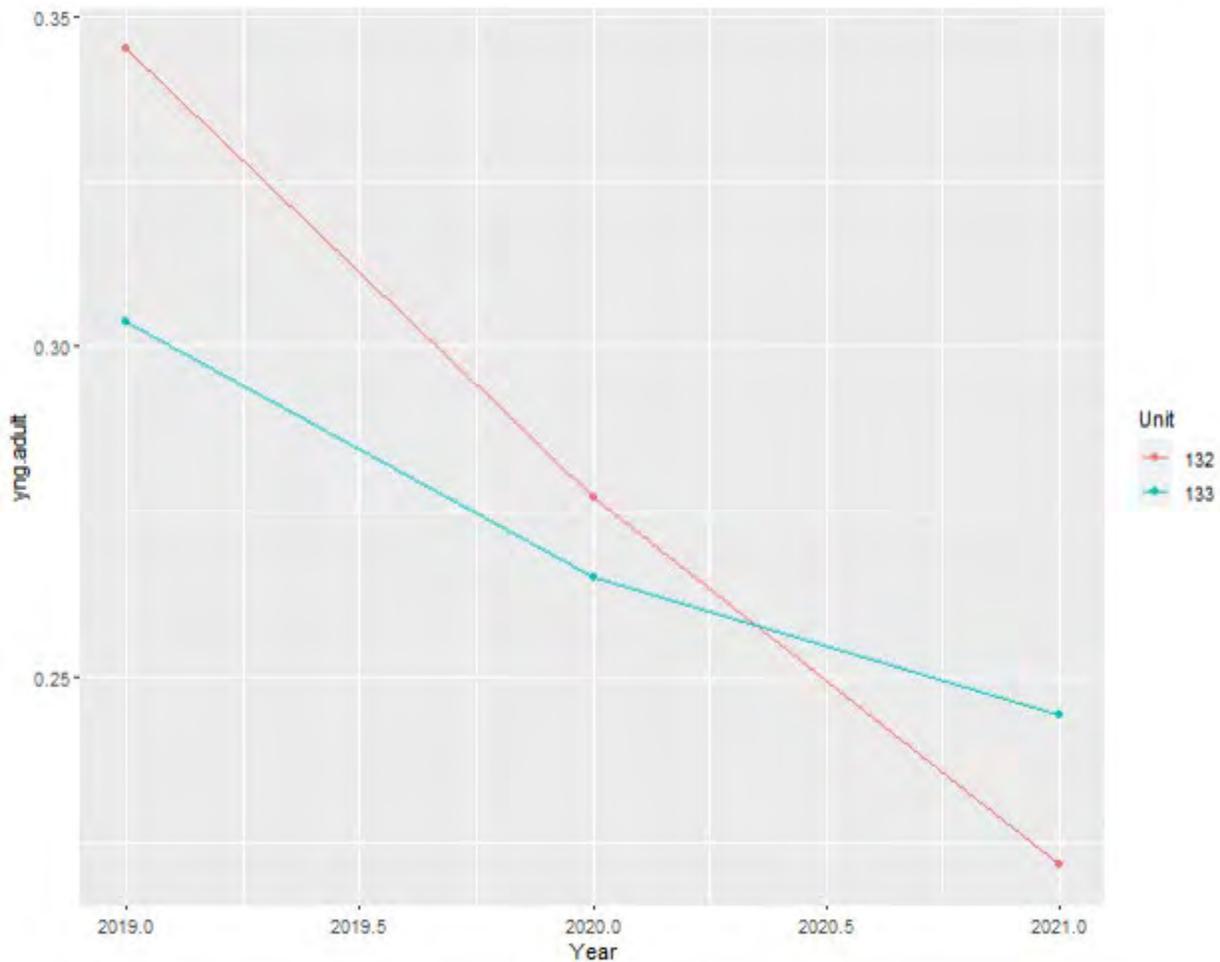


Fig. 1. Observed fawn:doe ratios (number of fawns per 100 does) from 2019-2021 in hunt units 132 and 133. Units 132 and 133 are the focus of our project proposals due to the poor habitat quality and the theorized migration path of deer in those areas, as well as the knowledge of many ongoing Forest Service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

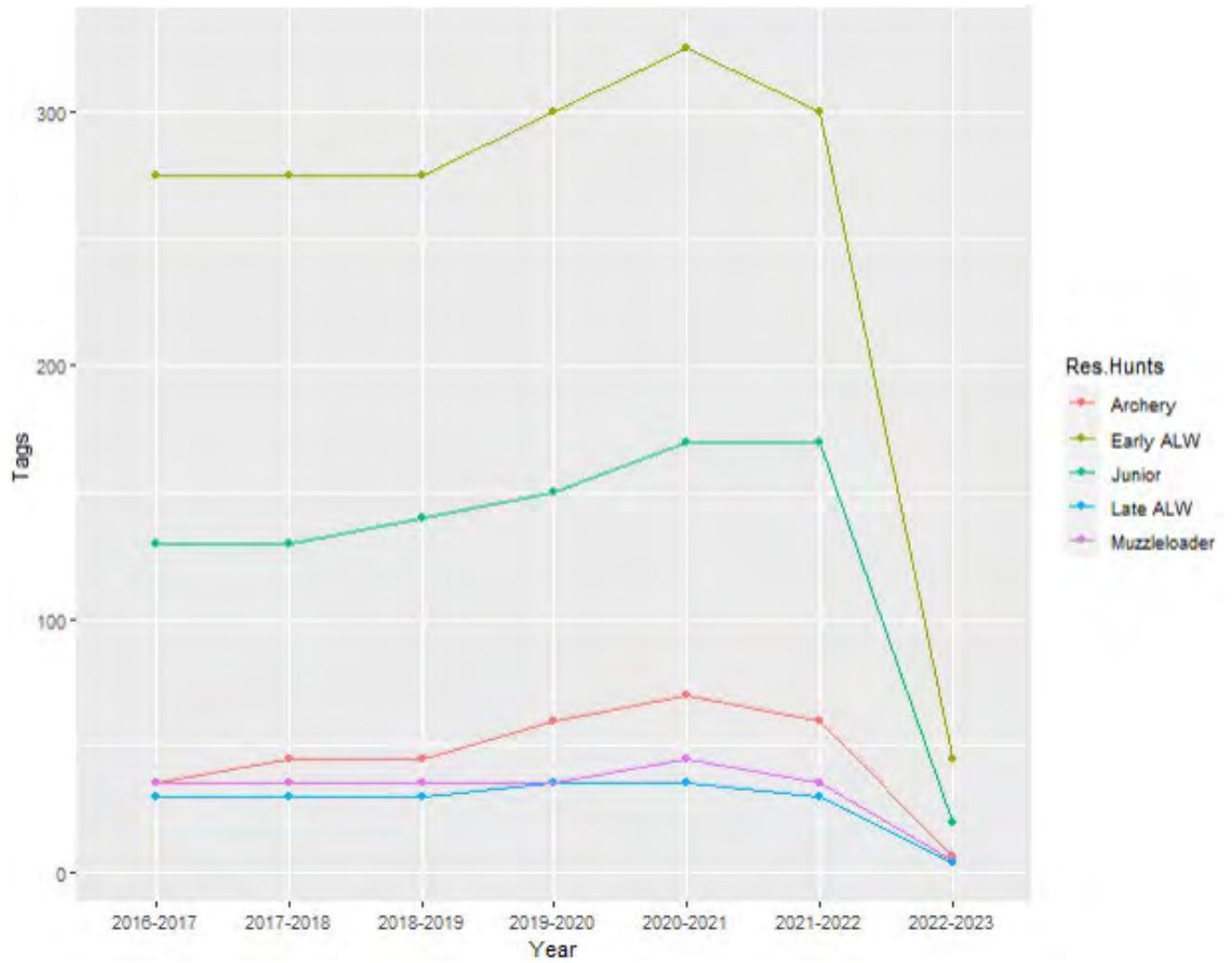


Fig. 2. Resident hunt tags distributed to Nevadans from the 2016-2017 hunt season to the 2022-2023 hunt season in MA13.

Habitat Projects

MDEP Subcommittee: White Pine	Hunt Unit Group: MA13	
Project Title: NORTHERN GOLDEN GATES RANGE GUZZLER SERIES	Project Location: (38.26028, -115.28390) and (38.20569, -115.25740)	
Brief Description of Project: <i>Include any development plans such as vegetation removal, planting, seeding, or installation of structures; also include the schedule for obtaining any necessary permits, completing NEPA compliance, etc.:</i>	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.	Score
Limiting Factor Score: <i>Use subcommittee cumulative score from Limiting Factor Score Form</i>	Maximum of 5 points possible	4.8
Unit Group 5-Year Published Deer Population Trend:	2018: 5,000 2019: 5,000 2020: 4,500 2021: 4,300 2022: 2,200	
	Decreasing = 5 pts Stable = 3 pts Increasing = 1 pt	5
Does this project directly address factors limiting healthy mule deer populations?	Yes = 10 pts No = 0 pts	10
<i>How will project address limiting factors? 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., springs, 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.</i>		
Does this project protect, maintain or strategically restore statewide priority mule deer habitat, enhance critical habitat or a critical life stage for mule deer? <i>Score using the highest ranking criteria</i>	High priority (Critical Mule Deer Seasonal Range or Migration Route) = 10 points Moderate priority (High elev. summer range, PJ encroached shrub community, winter range) = 5 points Low priority (salt desert shrub or low density mule deer habitats) = 1 pt	10
<i>Provide added details: These guzzler locations are within the deer migration route and will provide crucial water resources to pregnant deer in post-overwintering conditions before they migrate to their summer range, as well as to fawns migrating across the dry summer landscape and better prepare them in surviving winter.</i>		
Is this mule deer habitat restoration or improvement of a long-term nature? <i>Does the project involve habitat trend and condition through restoration and improvement of a long-term or permanent nature? Projects of this nature are known to have long-term benefits with demonstrated history of past successes</i>	10+ years = 10 points 3-10 years = 5 points	10
Project Scale and Implications: <i>Is the size or magnitude of the project, relative to the habitat type or Mule Deer distribution, impactful? Does the project convey a large conservation benefit to important or critical habitat for Mule Deer? For instance, does a riparian project have a meaningful impact across multiple reaches within a watershed or would a seeding project address a large extent or important critical habitat?</i>	High impact = 15 pts Moderate impact = 10 pts Low impact = 1 point	15
Does the project build upon existing project work?	Yes = 5 pts No = 0 pts	5
<i>Describe existing or past projects: There are currently no springs or guzzlers in this area. However, there are guzzlers and springs nearby, therefore these guzzlers will further connect a network of water resources along the migration route.</i>		

Habitat Projects

<p>Timely Completion: <i>Needed permitting, authority, and mechanisms are completed or in process and does the project have a high probability of being completed on-time: -NEPA analysis or other statutory compliance is completed or not needed. -Permits are completed or not needed. -Contract mechanisms to support the work are in place or not needed .</i></p>	<p>Timely completion (12 months) = 5 pts Extended completion (24 months) = 1 pt</p>	<p>1</p>
<p>Urgency: <i>(Is the project urgent due to a narrow biological window that requires immediate attention and funding to address resource degradation or deterioration?)</i></p>	<p>Yes = 5 pts No = 0 pts</p>	<p>5</p>
<p><i>Provide added details: 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, 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.</i></p>		
<p>Likelihood of Success: <i>What is the likelihood of successful completion and successful outcomes? Do the individuals and organizations involved possess the capability, experience, and proven methodology needed for implementation? Is the proposal supported by sound and established scientific or biological principals? Project objectives are realistic, measurable, and achievable with clearly defined methods</i></p>	<p>High likelihood= 5 points Moderate = 3 points Low = 1 point</p>	<p>5</p>
<p><i>Provide added details: Guzzler builds are standardized and implemented with minimal negative outcomes.</i></p>		
<p>Partner Funding: <i>Does the project leverage funding or in-kind contributions by external partners and by how much?</i></p>	<p>>3x match = 10 pts 1.5-2.9 match = 7 pts 0.75-1.49 = 3 pts 0.1-.74 = 1 pt</p>	<p>NA</p>
<p><i>(List amounts and sources if possible) Does the project have confirmed funding commitment from project partner such as a letter or memo with stated commitment amount?</i></p>	<p>Amount: \$ Source: Amount: \$ Source:</p>	<p></p>
<p>Cost Effectiveness: <i>Are the expected results worth the cost of the project?</i></p>	<p>Very cost-effective = 10 pts Moderately cost-effective = 5 pts Minimally cost-effective = 1 pt</p>	<p>10</p>
<p><i>Provide added details: Guzzlers have been proven to be beneficial to wildlife populations.</i></p>		
<p>Amount Requested:</p>	<p>\$120,000</p>	
<p>Total Project Score (100 possible points)</p>	<p>Sum of Scores 89.8</p>	

Habitat Projects

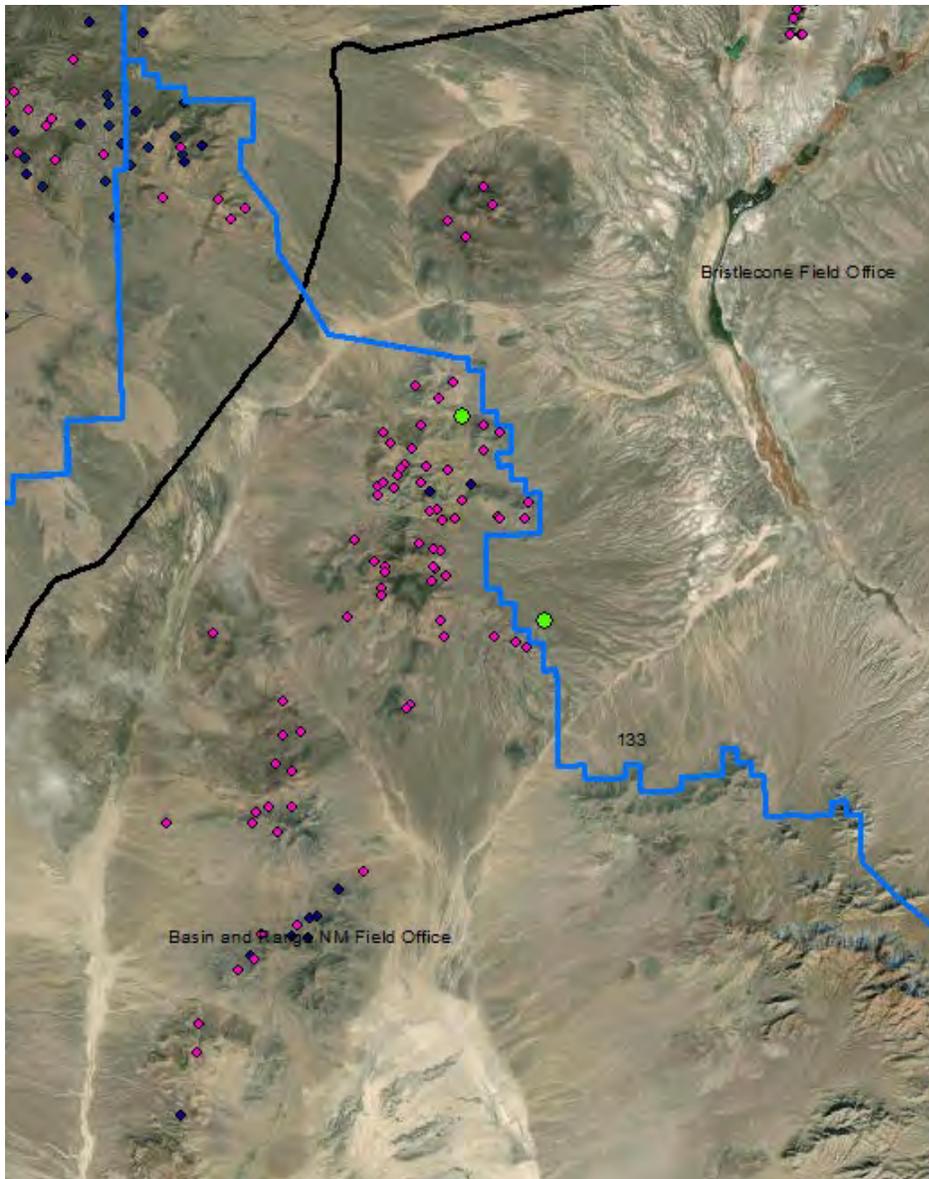
Project Narrative: *Be specific to the needs and issues associated with mule deer and/or habitat and your technical approach to addressing the issue. Identify potential benefits to mule deer and other wildlife. Describe if the project is on public or private land and any private landowner permissions. Please describe any NEPA permitting requirements if on public land and when NEPA completion is expected. Also provide a tentative project schedule of major tasks. If your project is associated with water rights (e.g. spring fencing project) please discuss the status of permissions to complete the project with water rights holders.*

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., springs, 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 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. 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. Water development in the area will have benefits to other wildlife populations in the ecosystem.

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.

Investigations Projects

MDEP Subcommittee: White Pine	Hunt Unit Group: MA13	
Project Title: UNDERSTANDING MULE DEER SEASONAL SPACE USE AND SURVIVAL, IDENTIFYING MIGRATION CORRIDORS, AND QUANTIFYING IMPACTS OF WILD HORSES	Project Location: Deployment of collars throughout the area to detect variability in migration routes and space use	
Brief Description of Project: <i>Include any development plans such as capturing, collaring, wildlife health analysis, etc. and include the schedule for obtaining any necessary permits, permission, funding, etc.:</i>	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	Score
Limiting Factor Score: <i>Use subcommittee cumulative score from Limiting Factor Score Form</i>	Maximum of 5 points possible	5
Has this mule deer management area or hunt unit group been identified as a statewide priority for research or investigations?	Yes = 10 pts No = 0 pts	10
Does this project directly address identifying factors limiting healthy mule deer populations? (10 points possible)	Yes = 10 pts No = 0 pts	10
<i>How will project address limiting factors? Fawn:doe ratios in MA13 are one of the lowest in the state and population size has been steadily decreasing in MA13 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.</i>		
Does this project occur in a crucial or priority habitat for mule deer? (10 points possible) (Score using the highest ranking criteria)	High priority (Critical Mule Deer Seasonal Range or Migration Route) = 10 points Moderate priority (High elev. summer range, PJ encroached shrub community, winter range) = 5 points Low priority (salt desert shrub or low density mule deer habitats) = 1 pt	10
<i>Provide added details: 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. Mule deer will be captured throughout the winter range of MA13 in order to encompass potential variation in large scale movements.</i>		
Will the research or investigation improve knowledge of habitat and restoration of a long-term or permanent nature? Projects of this nature are known to have long-term benefits with demonstrated history of past successes.	10+ years = 10 points 3-10 years = 1 point	10
Is the sample size (# of marked animals) and project scale (distribution across an entire hunt unit or region) adequate to gain meaningful inference or statistical power for interpreting the relative impact of this investigation?	High impact = 10 pts Moderate impact = 5 pts Low impact = 1 point	10
Does the project complement an adjacent project or study, previous project, or help inform future habitat projects?	Yes = 5 points No = 0 pts	5
<i>Describe existing or past projects: There have been limited past projects and currently there are no existing projects. That is what makes this effort so crucial to future endeavors.</i>		
Needed permitting, authority, and mechanisms are completed or in process and does the project have a high probability of being completed on-time: -NEPA analysis for wilderness permits for capture work, -Permission from private landowners or other government agencies (such as USFWS or D.O.D.), -Contract mechanisms to support the work are in place or not needed	Timely completion (12 months) = 5 pts Extended completion (24 months) = 1 pts	5

Investigations Projects

<p>Is the project urgent due to a narrow biological window that requires immediate investigation and funding to address the problem or lack of knowledge?</p>	<p style="text-align: center;">Yes = 5 points No = 0 pts</p>	<p style="text-align: center;">5</p>
<p><i>Provide added details: 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.</i></p>		
<p>What is the likelihood of a successful project? High likelihood means a proposal is supported by sound scientific principles, appropriate sample sizes for statistical inference, and comprehensive study design. Low likelihood means a general lack of clear project objectives, or is not supported by scientific principles, or lacks a robust study design and direct application to wildlife management.</p>	<p style="text-align: center;">High likelihood= 5 points Moderate likelihood = 3 points Low likelihood = 1 point</p>	<p style="text-align: center;">5</p>
<p><i>Provide added details: I, Samantha Fino, am one of the few game biologists capable of conducting appropriate and proper analyses of data. I know how to estimate home range size, conduct known-fate survival incorporating exposure metrics, and analyze movement and space use data through resource and step selection functions. Further, I can code and interpret this information, which is vital in prioritizing future management efforts. I have demonstrated this through my graduate degrees, as well as in analyzing data from past and other game biologists. This effort will not fall on the staff specialist and can be done in a timely manner.</i></p>		
<p>Does the project leverage funding or in-kind contributions by external partners and by how much?</p>	<p style="text-align: center;">>3x match = 10 pts 1.5-2.9 match = 7 pts 0.75-1.49 = 3 pts 0.1-.74 = 1 pt</p>	<p style="text-align: center;">NA</p>
<p><i>(List amounts and sources if possible) Does the project have confirmed funding commitment from project partner such as a letter or memo with stated commitment amount? No funding sources have been allocated at this point in time.</i></p>	<p>Amount: \$ Source: Amount: \$ Source:</p>	
<p>Cost Effectiveness: <i>Are the expected results worth the cost of the project?</i></p>	<p style="text-align: center;">Very cost-effective = 10 pts Moderately cost-effective = 5 pts Minimally cost-effective = 1 pt</p>	<p style="text-align: center;">10</p>
<p><i>Provide added details: GPS spatiotemporal data is invaluable. 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). In order to achieve a sample size between 50-100 individuals, we estimate a project cost of between \$100,000-\$200,000.</i></p>		
<p>Amount Requested:</p>	<p style="text-align: center;">\$100,000-\$200,000</p>	
<p>Total Project Score (100 possible points)</p>	<p style="text-align: right;">Sum of Scores</p>	<p style="text-align: center;">90</p>

Investigations Projects

Project narrative: *Be specific to the research needs and issues associated with mule deer and/or habitat and your technical approach to addressing the issue. Identify potential benefits to mule deer and other wildlife. Describe if the project would be conducted on BLM, FS, USFWS, or private land and if any private landowner permissions are necessary. Please describe any NEPA permitting requirements (such as permission to capture animals in wilderness) if on public land and when NEPA completion is expected. Also provide a tentative project schedule of major tasks (ie collar orders, capture dates, data collection period, reporting dates, etc). Please list any collaborators or project funding partners.*

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. We are expecting that spatiotemporal movement data from radio-collared deer will further inform us on most impactful locations for effective habitat management efforts. These data are vital in the decision making process for future habitat projects and will ultimately greatly benefit the herd.

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

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

Habitat Projects

MDEP Subcommittee: White Pine	Hunt Unit Group: MA13	
Project Title: CRUCIAL MIGRATION CORRIDOR HABITAT ENHANCEMENT: CURRANT TO UPPER PERISH	Project Location: S131 and N132	
Brief Description of Project: <i>Include any development plans such as vegetation removal, planting, seeding, or installation of structures; also include the schedule for obtaining any necessary permits, completing NEPA compliance, etc.:</i>	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.	Score
Limiting Factor Score: <i>Use subcommittee cumulative score from Limiting Factor Score Form</i>	Maximum of 5 points possible	4.3
Unit Group 5-Year Published Deer Population Trend:	2018: 5,000 2019: 5,000 2020: 4,500 2021: 4,300 2022: 2,200	
	Decreasing = 5 pts Stable = 3 pts Increasing = 1 pt	5
Does this project directly address factors limiting healthy mule deer populations?	Yes = 10 pts No = 0 pts	10
<i>How will project address limiting factors? 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.</i>		
Does this project protect, maintain or strategically restore statewide priority mule deer habitat, enhance critical habitat or a critical life stage for mule deer? <i>Score using the highest ranking criteria</i>	High priority (Critical Mule Deer Seasonal Range or Migration Route) = 10 points Moderate priority (High elev. summer range, PJ encroached shrub community, winter range) = 5 points Low priority (salt desert shrub or low density mule deer habitats) = 1 pt	10
<i>Provide added details: 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 Jun 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.</i>		
Is this mule deer habitat restoration or improvement of a long-term nature? <i>Does the project involve habitat trend and condition through restoration and improvement of a long-term or permanent nature? Projects of this nature are known to have long-term benefits with demonstrated history of past successes</i>	10+ years = 10 points 3-10 years = 5 points	10
Project Scale and Implications: <i>Is the size or magnitude of the project, relative to the habitat type or Mule Deer distribution, impactful? Does the project convey a large conservation benefit to important or critical habitat for Mule Deer? For instance, does a riparian project have a meaningful impact across multiple reaches within a watershed or would a seeding project address a large extent or important critical habitat?</i>	High impact = 15 pts Moderate impact = 10 pts Low impact = 1 point	15
Does the project build upon existing project work?	Yes = 5 pts No = 0 pts	5
<i>Describe existing or past projects: 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.</i>		

Habitat Projects

<p>Timely Completion: <i>Needed permitting, authority, and mechanisms are completed or in process and does the project have a high probability of being completed on-time: -NEPA analysis or other statutory compliance is completed or not needed. -Permits are completed or not needed. -Contract mechanisms to support the work are in place or not needed</i></p>	<p>Timely completion (12 months) = 5 pts Extended completion (24 months) = 1 pt</p>	<p>5</p>
<p>Urgency: <i>(Is the project urgent due to a narrow biological window that requires immediate attention and funding to address resource degradation or deterioration?)</i></p>	<p>Yes = 5 pts No = 0 pts</p>	<p>5</p>
<p><i>Provide added details: 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.</i></p>		
<p>Likelihood of Success: <i>What is the likelihood of successful completion and successful outcomes? Do the individuals and organizations involved possess the capability, experience, and proven methodology needed for implementation? Is the proposal supported by sound and established scientific or biological principals? Project objectives are realistic, measurable, and achievable with clearly defined methods</i></p>	<p>High likelihood= 5 points Moderate = 3 points Low = 1 point</p>	<p>5</p>
<p><i>Provide added details: PJ removal treatments have been proven to be beneficial to wildlife by allowing for increased water flow and native flora.</i></p>		
<p>Partner Funding: <i>Does the project leverage funding or in-kind contributions by external partners and by how much?</i></p>	<p>>3x match = 10 pts 1.5-2.9 match = 7 pts 0.75-1.49 = 3 pts 0.1-.74 = 1 pt</p>	<p>NA</p>
<p><i>(List amounts and sources if possible) Does the project have confirmed funding commitment from project partner such as a letter or memo with stated commitment amount?</i></p>	<p>Amount: \$ Source: Amount: \$ Source:</p>	<p></p>
<p>Cost Effectiveness: <i>Are the expected results worth the cost of the project?</i></p>	<p>Very cost-effective = 10 pts Moderately cost-effective = 5 pts Minimally cost-effective = 1 pt</p>	<p>10</p>
<p><i>Provide added details: PJ removal treatments have been proven to be beneficial to wildlife by allowing for increased water flow and native flora.</i></p>		
<p>Amount Requested:</p>	<p>\$250,000</p>	
<p>Total Project Score (100 possible points)</p>	<p>Sum of Scores 89.3</p>	

Habitat Projects

Project Narrative: *Be specific to the needs and issues associated with mule deer and/or habitat and your technical approach to addressing the issue. Identify potential benefits to mule deer and other wildlife. Describe if the project is on public or private land and any private landowner permissions. Please describe any NEPA permitting requirements if on public land and when NEPA completion is expected. Also provide a tentative project schedule of major tasks. If your project is associated with water rights (e.g. spring fencing project) please discuss the status of permissions to complete the project with water rights holders.*

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. 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. All patches, 4,320 acres, \$259,200 - \$345,600. Patches: 4-7, 9776 acres, \$46,560 - \$62,080. Patch 3, 97 acres, \$5,820 - \$7,760. Patches 8 & 10, 766 acres, \$45,960 - \$61,280. Patches: 0-2, 2,680 acres, \$160,800 - \$214,400.

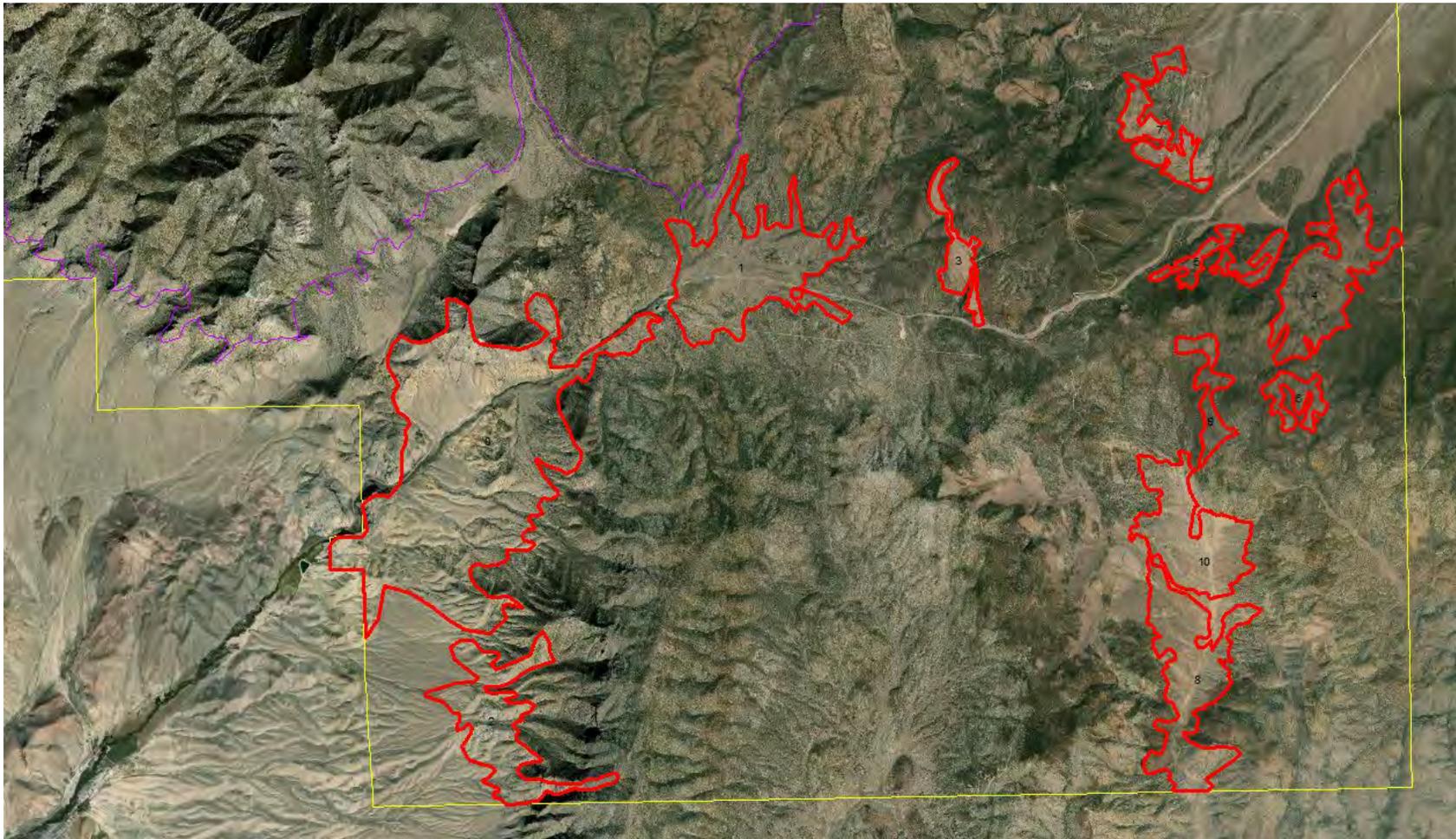
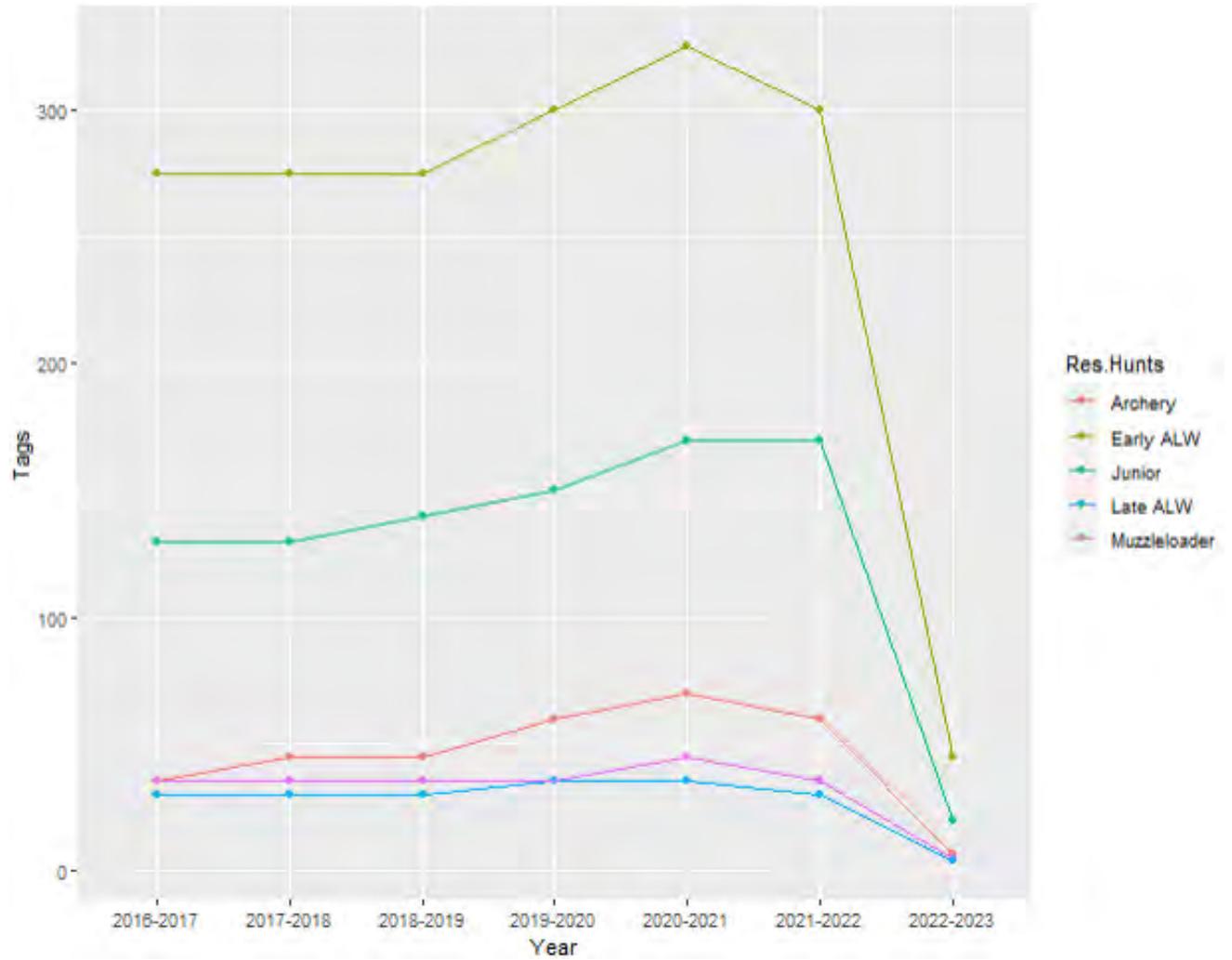


Fig 1. Red polygons highlight target areas for pinyon-juniper removal and are all within the yellow boundary which encompasses areas under NEPA clearances. The purple boundaries are wilderness areas. Total acreage is 4,320, with polygons ranging from 72 to 1,755 acres. This is the year 1 goal of this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

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



EUREKA COUNTY MA14 MULE DEER ENHANCEMENT SUBCOMMITTEE

Re: Mule Deer Enhancement Program Eureka County – Management Area 14; Limiting Factor Rankings and Project Proposals

Dear Mule Deer Enhancement Oversight Committee Members,

The Eureka County MA14 Mule Deer Enhancement Subcommittee is please to submit three project proposals for consideration. These projects were selected by the subcommittee because members identified (1) Pinyon-Juniper (Conifer) Invasion, (2) Improper grazing - Wild horses, (3) Climate/Weather, and (4) Limited Water Distribution as the top limiting factors affecting the MA14 mule deer herd. Because of completed NEPA and associated clearances of the 3 Bars Ecosystem and Landscape Restoration Project (attached PDF), as well as proximity to nearby habitat projects already completed on private lands and BLM-managed lands, the projects proposed focus within the 3 Bars Project boundary.

There has been much research done documenting the negative ecological impacts related to expansion and infill of pinyon-juniper outside of proper ecological state and function. In addition to impacts to sagebrush habitats, it is known that pinyon-juniper encroachment and infill greatly impedes water resource availability on the landscape, as well as for the ability of water developments (e.g., springs, guzzlers) and natural riparian areas (e.g., creeks) to accumulate water. We are proposing pinyon-juniper removal (lop and scatter) in three locations heavily utilized by and important to mule deer and other wildlife (sage grouse), all which supplement and or expand work on BLM-managed lands as well as work on private lands all accomplished through a variety of agency and private partnerships. We want to focus our efforts (1) on the east side of Whistler Mountain in watershed feeding various springs, (2) in the Robert's Creek Corridor up through the headwater watershed branches of Robert's Creek, and (3) in the Vinini and Henderson Creek Corridor to connect the patchwork of previous treatments on both BLM-managed land and private land. The MDEP subcommittee will work with the landowners and ranchers who have the water rights on the springs to improve the water developments, ensure the longevity of these habitat management projects, and maximize positive relationships and support with the public and other multiple land uses/users. All PJ removal projects will have a \$45-150/acre cost estimate depending on phase, accessibility, and slope of terrain. Associated fencing ranges from \$4-5/foot with installation and \$2-3/foot for materials. Water development work is expected to consist of piping water away from the spring area to troughs (mining tire troughs) at a cost of \$1500 to \$2500 per water development depending on the length of pipe and labor needed. We have identified partners willing to work with us on these projects to provide cash, in-kind, and labor match. These partners include at this time the ranchers with the grazing permits and water rights, Eureka Conservation District, Eureka County Department of Natural Resources, N-6 Grazing Board, and Eureka County Advisory Board to Manage Wildlife.

Budget summary of projects

	<i>East Whistler Mountain</i>	<i>Robert's Creek Corridor</i>	<i>Vinini and Henderson Creek Corridor</i>
PJ removal	\$19,035 - \$63,450	\$66,465 - \$221,550	\$80,010 - \$266,700
Fencing (~200-500ft)	\$1,200 - \$4,000	\$1,200 - \$4,000	\$1,200 - \$4,000
Piping	\$7,500 - \$12,500	NA	NA
Total	\$27,735 - \$79,950	\$67,665 - \$225,550	\$81,210 - \$270,700

Please see attached supplementary project information describing the benefits to mule deer for each project. While the population is currently stable at about 4,400 individuals, habitat management projects to enhance habitat quality are necessary to maintain this population at its healthy level. 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: Anthony Miller, Bill Hicks, Jake Tibbitts, Jayme Halpin, Trent Gordon
Department Representatives: Samantha Fino and Madi Stout

Habitat Projects

MDEP Subcommittee: Eureka	Hunt Unit Group: MA14	
Project Title: PINYON-JUNIPER REMOVAL AND ASSOCIATED LOCAL HABITAT MANAGEMENT	Project Location: East Whistler Mountain	
<p>Brief Description of Project: <i>Include any development plans such as vegetation removal, planting, seeding, or installation of structures; also include the schedule for obtaining any necessary permits, completing NEPA compliance, etc.:</i></p>	<p>There has been much research done documenting the negative ecological impacts related to expansion and infill of pinyon-juniper outside of proper ecological state and function. In addition to impacts to sagebrush habitats, it is known that pinyon-juniper encroachment and infill greatly impedes water resource availability on the landscape, as well as for the ability of water developments (e.g., springs, guzzlers) and natural riparian areas (e.g., creeks) to accumulate water. We are proposing pinyon-juniper removal (lop and scatter) in three locations heavily utilized by and important to mule deer and other wildlife (sage grouse), all which supplement and or expand work on BLM-managed lands as well as work on private lands all accomplished through a variety of agency and private partnerships.</p>	Score
Limiting Factor Score: <i>Use subcommittee cumulative score from Limiting Factor Score Form</i>	<i>Maximum of 5 points possible</i>	5
Unit Group 5-Year Published Deer Population Trend:	2018: 4,800 2019: 4,500 2020: 4,100 2021: 3,900 2022: 4,400	
	<i>Decreasing = 5 pts Stable = 3 pts Increasing = 1 pt</i>	3
Does this project directly address factors limiting healthy mule deer populations?	<i>Yes = 10 pts No = 0 pts</i>	10
<p><i>How will project address limiting factors? Water is a limiting factor on Whistler Mountain. The five springs (Stinking, Hash, Railroad, Trap Corral, and No Name) along the east bench of Whistler Mountain provide a valuable water resource to mule deer and other wildlife. Mule deer often use Whistler Mountain as a stop over when migrating to/from their summer range of Robert's Creek Mountain Range.</i></p>		
<p>Does this project protect, maintain or strategically restore statewide priority mule deer habitat, enhance critical habitat or a critical life stage for mule deer? <i>Score using the highest ranking criteria</i></p>	<p>High priority <i>(Critical Mule Deer Seasonal Range or Migration Route) = 10 points</i> Moderate priority <i>(High elev. summer range, PJ encroached shrub community, winter range) = 5 points</i> Low priority <i>(salt desert shrub or low density mule deer habitats) = 1 pt</i></p>	5
<p><i>Provide added details: The BLM is planning and will be conducting limited lop and scatter PJ removal immediately around these springs. To further benefit and leverage these projects, we would like to expand that lop and scatter PJ removal up the respective canyons from those springs to optimize water flow and accumulation from the watershed feeding each spring. A large PJ treatment block is available under the 3 Bars Project to expand on BLM's efforts around these springs. Within this treatment block, we propose to remove up to an additional 100 acres of trees around and in the watershed above each spring for a total of 500 acres on Whistler Mountain. The exact treatment boundaries within the larger 3 Bars Project treatment block will be developed through on-the-ground surveys and in coordination with BLM. Additional treatment acres would be expected to occur in future years and future projects as follow-on projects. Wildlife-friendly fencing (i.e., jack rail pipe) is proposed to be built, maintained, or reconstructed to surround the spring source for protection with water piped outside to serve water rights and other uses. In some cases, such as at Stinking Spring, fencing around the spring exists but is in disrepair. We will ensure appropriate authorization from BLM (e.g., NEPA, cultural clearance) before any fencing is constructed. Lastly, the MDEP subcommittee will work with the local ranchers who have the water rights (John Colby, Jim and Bill Baumann) to improve the existing water developments (i.e., pipe and trough) in a way to benefit wildlife and water right uses.</i></p>		
<p>Is this mule deer habitat restoration or improvement of a long-term nature? <i>Does the project involve habitat trend and condition through restoration and improvement of a long-term or permanent nature? Projects of this nature are known to have long-term benefits with demonstrated history of past successes</i></p>	10+ years = 10 points 3-10 years = 5 points	10
<p>Project Scale and Implications: <i>Is the size or magnitude of the project, relative to the habitat type or Mule Deer distribution, impactful? Does the project convey a large conservation benefit to important or critical habitat for Mule Deer? For instance, does a riparian project have a meaningful impact across multiple reaches within a watershed or would a seeding project address a large extent or important critical habitat?</i></p>	High impact = 15 pts Moderate impact = 10 pts Low impact = 1 point	15

Habitat Projects

<p>Does the project build upon existing project work?</p>	<p>Yes = 5 pts No = 0 pts</p>	<p>5</p>
<p><i>Describe existing or past projects: The BLM is planning and will be conducting limited lop and scatter PJ removal immediately around these springs within the 3 Bars Project (NEPA already secured).</i></p>		
<p>Timely Completion: <i>Needed permitting, authority, and mechanisms are completed or in process and does the project have a high probability of being completed on-time:</i> <i>-NEPA analysis or other statutory compliance is completed or not needed</i> <i>-Permits are completed or not needed</i> <i>-Contract mechanisms to support the work are in place or not needed</i></p>	<p>Timely completion (12 months) = 5 pts Extended completion (24 months) = 1 pt</p>	<p>5</p>
<p>Urgency: <i>(Is the project urgent due to a narrow biological window that requires immediate attention and funding to address resource degradation or deterioration?)</i></p>	<p>Yes = 5 pts No = 0 pts</p>	<p>5</p>
<p><i>Provide added details: These springs are currently dry and hold minimal water due to PJ encroachment.</i></p>		
<p>Likelihood of Success: <i>What is the likelihood of successful completion and successful outcomes? Do the individuals and organizations involved possess the capability, experience, and proven methodology needed for implementation? Is the proposal supported by sound and established scientific or biological principals? Project objectives are realistic, measurable, and achievable with clearly defined methods</i></p>	<p>High likelihood= 5 points Moderate = 3 points Low = 1 point</p>	<p>5</p>
<p><i>Provide added details: PJ removal treatments have been proven to be beneficial to wildlife by allowing for increased water flow and native flora.</i></p>		
<p>Partner Funding: <i>Does the project leverage funding or in-kind contributions by external partners and by how much?</i></p>	<p>>3x match = 10 pts 1.5-2.9 match = 7 pts 0.75-1.49 = 3 pts 0.1-.74 = 1 pt</p>	<p>3</p>
<p><i>(List amounts and sources if possible) Does the project have confirmed funding commitment from project partner such as a letter or memo with stated commitment amount?</i></p>	<p>Amount: \$ 10,000 Source: Eureka Conservation District Amount: \$ 5,000 Source: Eureka County Weed District Amount: \$ 5,000 Source: Department of Natural Resources **as well as additional in-kind contributions through Eureka County personnel</p>	<p></p>
<p>Cost Effectiveness: <i>Are the expected results worth the cost of the project?</i></p>	<p>Very cost-effective = 10 pts Moderately cost-effective = 5 pts Minimally cost-effective = 1 pt</p>	<p>10</p>
<p><i>Provide added details: PJ removal treatments have been proven to be beneficial to wildlife by allowing for increased water flow and native flora.</i></p>		
<p>Amount Requested:</p>	<p>\$30,000-\$80,000</p>	<p></p>
<p>Total Project Score (100 possible points)</p>	<p>Sum of Scores</p>	<p>91</p>

Habitat Projects

Project Narrative: *Be specific to the needs and issues associated with mule deer and/or habitat and your technical approach to addressing the issue. Identify potential benefits to mule deer and other wildlife. Describe if the project is on public or private land and any private landowner permissions. Please describe any NEPA permitting requirements if on public land and when NEPA completion is expected. Also provide a tentative project schedule of major tasks. If your project is associated with water rights (e.g. spring fencing project) please discuss the status of permissions to complete the project with water rights holders.*

Water is a limiting factor on Whistler Mountain. The five springs (Stinking, Hash, Railroad, Trap Corral, and No Name) along the east bench of Whistler Mountain provide a valuable water resource to mule deer and other wildlife. Mule deer often use Whistler Mountain as a stop over when migrating to/from their summer range of Robert's Creek Mountain Range. The BLM is planning and will be conducting limited lop and scatter PJ removal immediately around these springs. To further benefit and leverage these projects, we would like to expand that lop and scatter PJ removal up the respective canyons from those springs to optimize water flow and accumulation from the watershed feeding each spring. A large PJ treatment block is available under the 3 Bars Project to expand on BLM's efforts around these springs. Within this treatment block, we propose to remove additional acres of trees around and in the watershed above each spring for a total of 500 acres on Whistler Mountain. Preliminary treatment areas have been identified using aerial imagery and on-ground knowledge of the area. The exact treatment boundaries are expected to be very close to the same as these preliminary treatment areas within the larger 3 Bars Project treatment block but may need to be adjusted after more thorough on-the-ground surveys, including cultural surveys, and in coordination with BLM. Additional treatment acres would be expected to occur in future years and future projects as follow-on projects. Wildlife-friendly fencing (i.e., jack rail pipe, piperail, or drill stem) is proposed to be built, maintained, or reconstructed to surround the spring source for protection with water piped outside to serve water rights and other uses. In some cases, such as at Stinking Spring, fencing around the spring exists but is in disrepair. We will ensure appropriate authorization from BLM (e.g., NEPA, cultural clearance) before any fencing is constructed. Lastly, the MDEP subcommittee will work with the local ranchers who have the water rights (John Colby, Jim and Bill Baumann) to improve the existing water developments (i.e., pipe and trough) in a way to benefit wildlife and water right uses. A post-PJ treatment weed monitoring and treatment effort is committed through Eureka County Weed District.

PINYON-JUNIPER REMOVAL AND ASSOCIATED LOCAL HABITAT MANAGEMENT

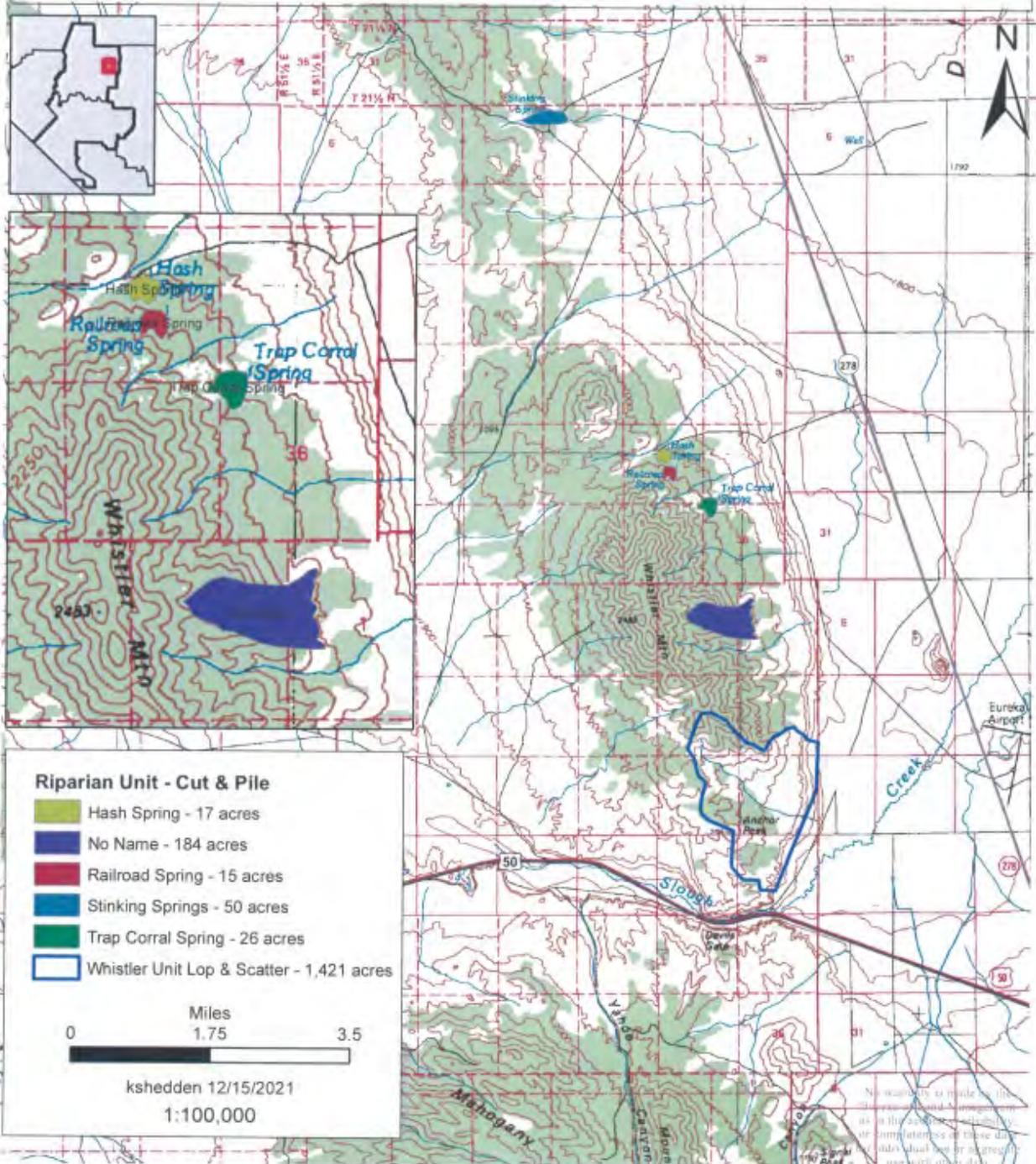
East Whistler Mountain

Water is a limiting factor on Whistler Mountain. The five springs (Stinking, Hash, Railroad, Trap Corral, and No Name) along the east bench of Whistler Mountain provide a valuable water resource to mule deer and other wildlife. Mule deer often use Whistler Mountain as a stop over when migrating to/from their summer range of Robert's Creek Mountain Range. The BLM is planning and will be conducting limited lop and scatter PJ removal immediately around these springs. To further benefit and leverage these projects, we would like to expand that lop and scatter PJ removal up the respective canyons from those springs to optimize water flow and accumulation from the watershed feeding each spring. A large PJ treatment block is available under the 3 Bars Project to expand on BLM's efforts around these springs. Within this treatment block, we propose to remove additional acres of trees around and in the watershed above each spring for a total of 500 acres on Whistler Mountain. Preliminary treatment areas have been identified using aerial imagery and on-ground knowledge of the area. The exact treatment boundaries are expected to be very close to the same as these preliminary treatment areas within the larger 3 Bars Project treatment block but may need to be adjusted after more thorough on-the-ground surveys, including cultural surveys, and in coordination with BLM. Additional treatment acres would be expected to occur in future years and future projects as follow-on projects. Wildlife-friendly fencing (i.e., jack rail pipe, piperail, or drill stem) is proposed to be built, maintained, or reconstructed to surround the spring source for protection with water piped outside into mine tire troughs to serve water rights and other uses. In some cases, such as at Stinking Spring, fencing around the spring exists but is in disrepair. We will ensure appropriate authorization from BLM (e.g., NEPA, cultural clearance) before any fencing is constructed. Lastly, the MDEP subcommittee will work with the local ranchers who have the water rights (John Colby, Jim and Bill Baumann) to improve the existing water developments (i.e., pipe and trough) in a way to benefit wildlife and water right uses.



NDOW Partner Project Whistler L&S/Riparian Units C&P

U.S. Department of the Interior
Bureau of Land Management
Battle Mountain District
Fuels Management Program



No warranty is made by the U.S. Department of the Interior as to the accuracy, reliability, or completeness of these data. Data should not be used for any purpose without proper use with other data.

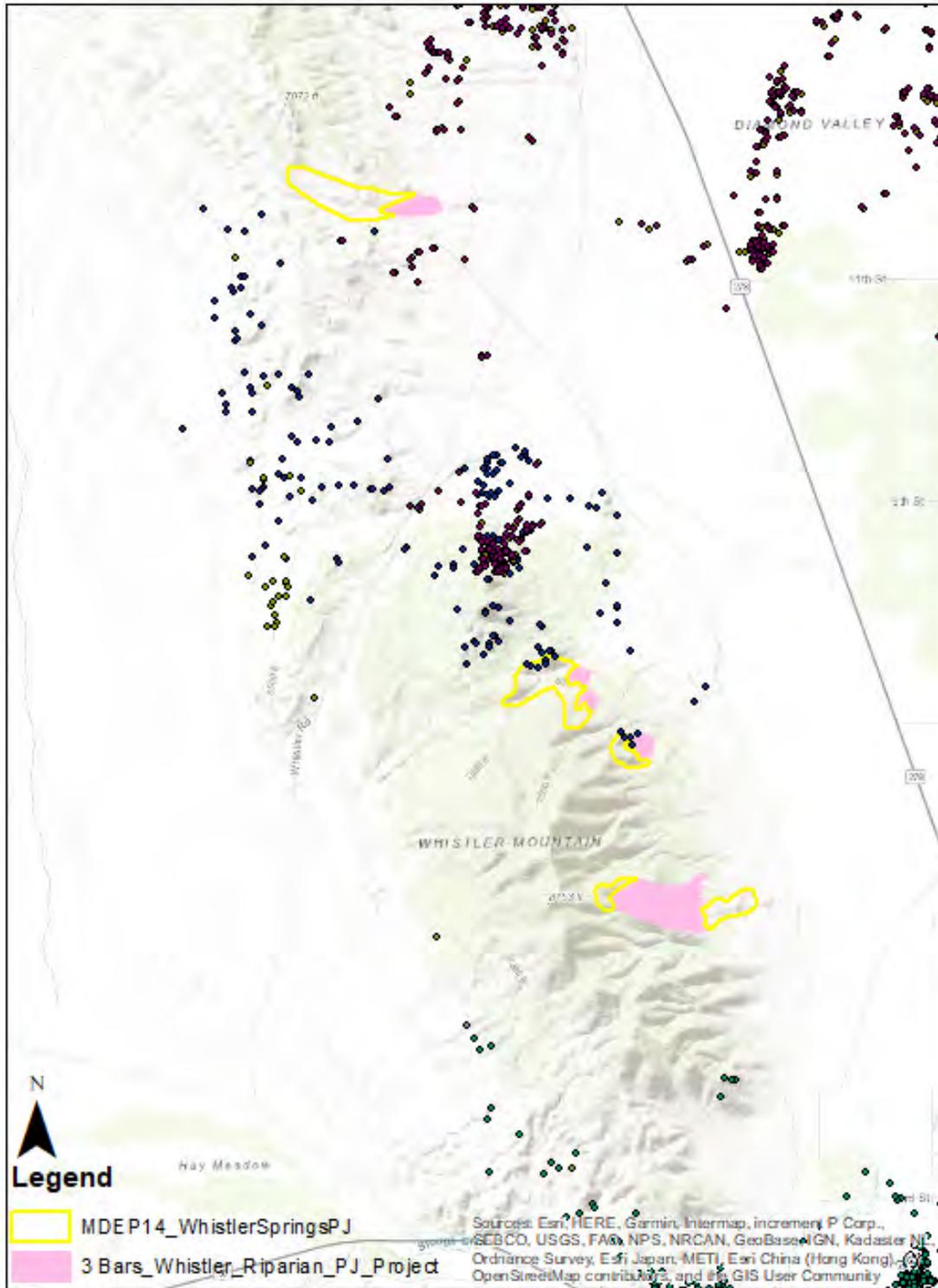


Fig. 1. Proposed treatment area (423 acres) with prioritization to the north and moving southbound. During the previous collaring effort in MA14, four individuals were documented using Whistler Mountain. We believe that improvement of this area may increase use by migrating deer.

Habitat Projects

MDEP Subcommittee: Eureka	Hunt Unit Group: MA14	
Project Title: PINYON-JUNIPER REMOVAL AND ASSOCIATED LOCAL HABITAT MANAGEMENT	Project Location: Robert's Creek Corridor	
<p>Brief Description of Project: <i>Include any development plans such as vegetation removal, planting, seeding, or installation of structures; also include the schedule for obtaining any necessary permits, completing NEPA compliance, etc.:</i></p>	<p>There has been much research done documenting the negative ecological impacts related to expansion and infill of pinyon-juniper outside of proper ecological state and function. In addition to impacts to sagebrush habitats, it is known that pinyon-juniper encroachment and infill greatly impedes water resource availability on the landscape, as well as for the ability of water developments (e.g., springs, guzzlers) and natural riparian areas (e.g., creeks) to accumulate water. We are proposing pinyon-juniper removal (lop and scatter) in three locations heavily utilized by and important to mule deer and other wildlife (sage grouse), all which supplement and or expand work on BLM-managed lands as well as work on private lands all accomplished through a variety of agency and private partnerships.</p>	Score
Limiting Factor Score: <i>Use subcommittee cumulative score from Limiting Factor Score Form</i>	<i>Maximum of 5 points possible</i>	5
Unit Group 5-Year Published Deer Population Trend:	2018: 4,800 2019: 4,500 2020: 4,100 2021: 3,900 2022: 4,400	
	<i>Decreasing = 5 pts Stable = 3 pts Increasing = 1 pt</i>	3
Does this project directly address factors limiting healthy mule deer populations?	Yes = 10 pts No = 0 pts	10
<p><i>How will project address limiting factors? We documented 22 deer utilizing Roberts Creek Mountain for their summer range. Specifically, the Upper Robert's Creek (headwaters) in the Robert's Creek Corridor is important for summering deer (and during the fawning season). The 3 Bars Project EIS contains a PJ treatment unit as well as a riparian treatment unit in this area (see figures). We would like to implement lop and scatter PJ removal of phase 1 and early phase 2 trees around and above the local springs (which serve as the headwaters to Robert's Creek) up through the watershed above where all the tributary streams converge into the main stem of Robert's Creek.</i></p>		
<p>Does this project protect, maintain or strategically restore statewide priority mule deer habitat, enhance critical habitat or a critical life stage for mule deer? <i>Score using the highest ranking criteria</i></p>	<p>High priority (Critical Mule Deer Seasonal Range or Migration Route) = 10 points Moderate priority (High elev. summer range, PJ encroached shrub community, winter range) = 5 points Low priority (salt desert shrub or low density mule deer habitats) = 1 pt</p>	10
<p><i>Provide added details: For this project, we propose up 1000 acres of PJ treatments within the 3 Bars Project treatment block. The exact treatment boundaries within the larger 3 Bars Project treatment block will be developed through on-the-ground surveys and in coordination with BLM. Additional treatment acres would be expected to occur in future years and future projects as follow-on projects. We will use the local coarse woody debris from the PJ removal to stabilize streams and stringer meadows with headcuts (i.e., beaver dam analogs, check dams, woody rip rap) and surround water sources with wildlife-friendly fencing (jack rail pipe). We will ensure appropriate authorization from BLM (e.g., NEPA, cultural clearance) before any fencing is constructed. Lastly, the MDEP subcommittee will work with the local ranchers who have the water rights on the springs and Robert's Creek (Roberts Creek Ranch - Etcheverry Family - Diamond Cattle Company) to project springs and riparian function for wildlife while improving water developments for water rights uses.</i></p>		
<p>Is this mule deer habitat restoration or improvement of a long-term nature? <i>Does the project involve habitat trend and condition through restoration and improvement of a long-term or permanent nature? Projects of this nature are known to have long-term benefits with demonstrated history of past successes</i></p>	10+ years = 10 points 3-10 years = 5 points	10
<p>Project Scale and Implications: <i>Is the size or magnitude of the project, relative to the habitat type or Mule Deer distribution, impactful? Does the project convey a large conservation benefit to important or critical habitat for Mule Deer? For instance, does a riparian project have a meaningful impact across multiple reaches within a watershed or would a seeding project address a large extent or important critical habitat?</i></p>	High impact = 15 pts Moderate impact = 10 pts Low impact = 1 point	15

Habitat Projects

Does the project build upon existing project work?	<p style="text-align: center;">Yes = 5 pts No = 0 pts</p>	<p style="text-align: center;">5</p>
<i>Describe existing or past projects: The BLM is planning and will be conducting limited lop and scatter PJ removal immediately around these riparian areas within the 3 Bars Project (NEPA already secured).</i>		
Timely Completion: <i>Needed permitting, authority, and mechanisms are completed or in process and does the project have a high probability of being completed on-time: -NEPA analysis or other statutory compliance is completed or not needed -Permits are completed or not needed -Contract mechanisms to support the work are in place or not needed</i>	<p style="text-align: center;">Timely completion (12 months) = 5 pts Extended completion (24 months) = 1 pt</p>	<p style="text-align: center;">5</p>
Urgency: <i>(Is the project urgent due to a narrow biological window that requires immediate attention and funding to address resource degradation or deterioration?)</i>	<p style="text-align: center;">Yes = 5 pts No = 0 pts</p>	<p style="text-align: center;">5</p>
<i>Provide added details: These riparian areas are currently dry and hold minimal water due to PJ encroachment.</i>		
Likelihood of Success: <i>What is the likelihood of successful completion and successful outcomes? Do the individuals and organizations involved possess the capability, experience, and proven methodology needed for implementation? Is the proposal supported by sound and established scientific or biological principals? Project objectives are realistic, measurable, and achievable with clearly defined methods</i>	<p style="text-align: center;">High likelihood= 5 points Moderate = 3 points Low = 1 point</p>	<p style="text-align: center;">5</p>
<i>Provide added details: PJ removal treatments have been proven to be beneficial to wildlife by allowing for increased water flow and native flora.</i>		
Partner Funding: <i>Does the project leverage funding or in-kind contributions by external partners and by how much?</i>	<p style="text-align: center;">>3x match = 10 pts 1.5-2.9 match = 7 pts 0.75-1.49 = 3 pts 0.1-.74 = 1 pt</p>	<p style="text-align: center;">3</p>
<i>(List amounts and sources if possible) Does the project have confirmed funding commitment from project partner such as a letter or memo with stated commitment amount?</i>	<p style="text-align: center;"> Amount: \$ 10,000 Source: Eureka Conservation District Amount: \$ 5,000 Source: Eureka County Weed District Amount: \$ 5,000 Source: Department of Natural Resources **as well as additional in-kind contributions through Eureka County personnel </p>	
Cost Effectiveness: <i>Are the expected results worth the cost of the project?</i>	<p style="text-align: center;">Very cost-effective = 10 pts Moderately cost-effective = 5 pts Minimally cost-effective = 1 pt</p>	<p style="text-align: center;">10</p>
<i>Provide added details: PJ removal treatments have been proven to be beneficial to wildlife by allowing for increased water flow and native flora.</i>		
Amount Requested:	<p style="text-align: center;">\$45,000-\$150,000</p>	
Total Project Score (100 possible points)	<p style="text-align: right;">Sum of Scores</p>	<p style="text-align: center;">91</p>

Habitat Projects

Project Narrative: *Be specific to the needs and issues associated with mule deer and/or habitat and your technical approach to addressing the issue. Identify potential benefits to mule deer and other wildlife. Describe if the project is on public or private land and any private landowner permissions. Please describe any NEPA permitting requirements if on public land and when NEPA completion is expected. Also provide a tentative project schedule of major tasks. If your project is associated with water rights (e.g. spring fencing project) please discuss the status of permissions to complete the project with water rights holders.*

We documented 22 deer utilizing Roberts Creek Mountain for their summer range. Specifically, the Upper Robert's Creek (headwaters) in the Robert's Creek Corridor is important for summering deer (and during the fawning season). The 3 Bars Project EIS contains a PJ treatment unit as well as a riparian treatment unit in this area (see figure below). We would like to implement lop and scatter PJ removal of phase 1 and early phase 2 trees around and above the local springs (which serve as the headwaters to Robert's Creek) up through the watershed above where all the tributary streams converge into the main stem of Robert's Creek. For this project, we propose up to 1000 acres of PJ treatments within the 3 Bars Project treatment block. Preliminary treatment areas have been identified using aerial imagery and on-ground knowledge of the area. The exact treatment boundaries are expected to be very close to the same as these preliminary treatment areas within the larger 3 Bars Project treatment block but may need to be adjusted after more thorough on-the-ground surveys, including cultural surveys, and in coordination with BLM. Additional treatment acres would be expected to occur in future years and future projects as follow-on projects. We will use the local coarse woody debris from the PJ removal to stabilize streams and stringer meadows with headcuts (i.e., beaver dam analogs, check dams, woody rip rap) and surround water sources with wildlife-friendly fencing (i.e., jack rail pipe, piperail, or drill stem). We will ensure appropriate authorization from BLM (e.g., NEPA, cultural clearance) before any fencing is constructed. Lastly, the MDEP subcommittee will work with the local ranchers who have the water rights on the springs and Robert's Creek (Roberts Creek Ranch - Etcheverry Family - Diamond Cattle Company) to protect springs and riparian function for wildlife while improving water developments for water rights uses. A post-PJ treatment weed monitoring and treatment effort is committed through Eureka County Weed District.

Robert's Creek Corridor

We documented 22 deer utilizing Roberts Creek Mountain for their summer range. Specifically, the Upper Robert's Creek (headwaters) in the Robert's Creek Corridor is important for summering deer (and during the fawning season). The 3 Bars Project EIS contains a PJ treatment unit as well as a riparian treatment unit in this area (see figure below). We would like to implement lop and scatter PJ removal of phase 1 and early phase 2 trees around and above the local springs (which serve as the headwaters to Robert's Creek) up through the watershed above where all the tributary streams converge into the main stem of Robert's Creek in order to protect and enhance this resource. For this project, we propose up to 1000 acres of PJ treatments within the 3 Bars Project treatment block. Preliminary treatment areas have been identified using aerial imagery and on-ground knowledge of the area. The exact treatment boundaries are expected to be very close to the same as these preliminary treatment areas within the larger 3 Bars Project treatment block but may need to be adjusted after more thorough on-the-ground surveys, including cultural surveys, and in coordination with BLM. Additional treatment acres would be expected to occur in future years and future projects as follow-on projects. We will use the local coarse woody debris from the PJ removal to stabilize streams and stringer meadows with headcuts (i.e., beaver dam analogs, check dams, woody rip rap) and surround water sources with wildlife-friendly fencing (i.e., jack rail pipe, piperail, or drill stem). We will ensure appropriate authorization from BLM (e.g., NEPA, cultural clearance) before any fencing is constructed. Lastly, the MDEP subcommittee will work with the local ranchers who have the water rights on the springs and Robert's Creek (Roberts Creek Ranch - Etcheverry Family - Diamond Cattle Company) to protect springs and riparian function for wildlife while improving water developments for water rights uses.

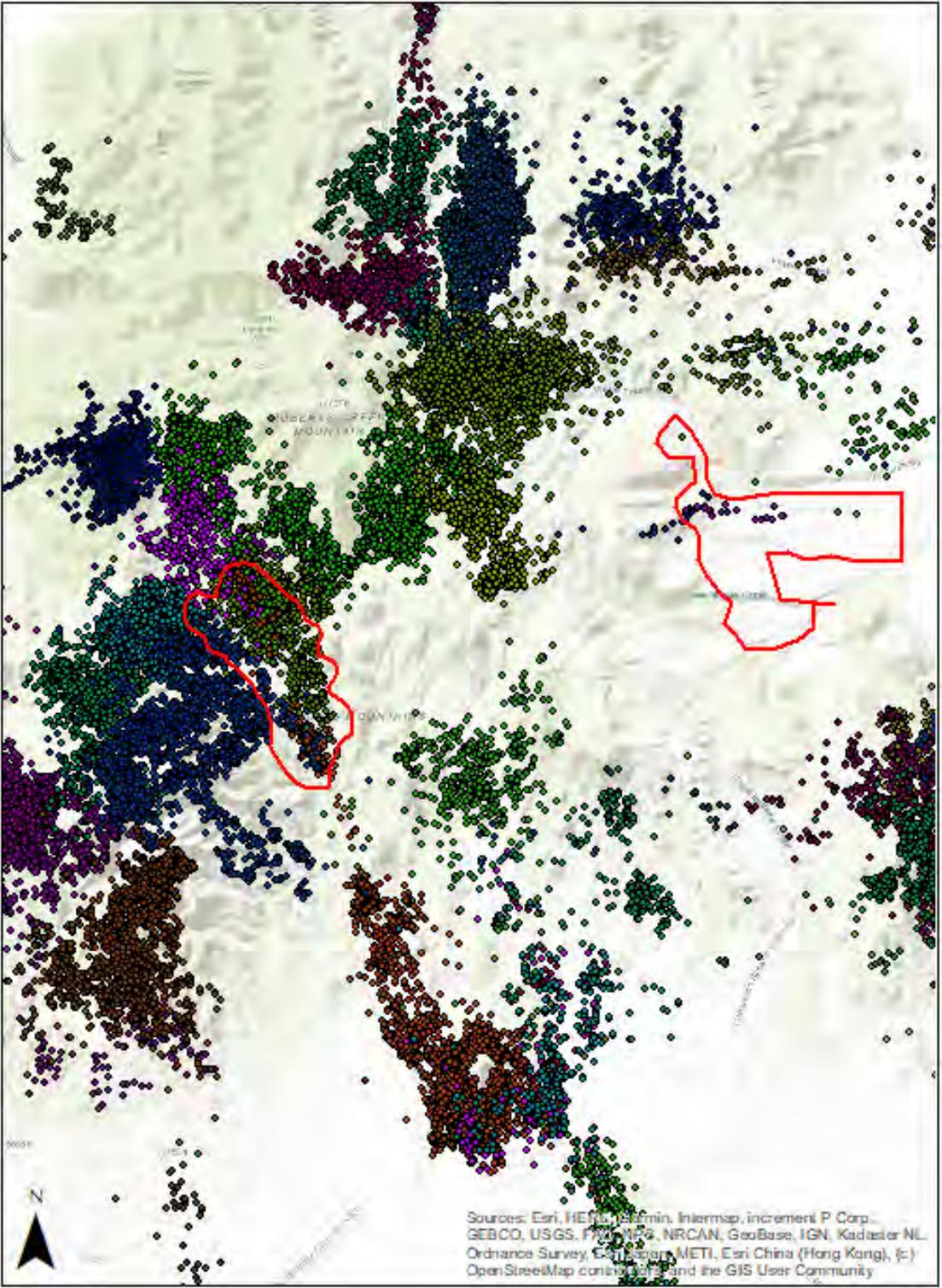
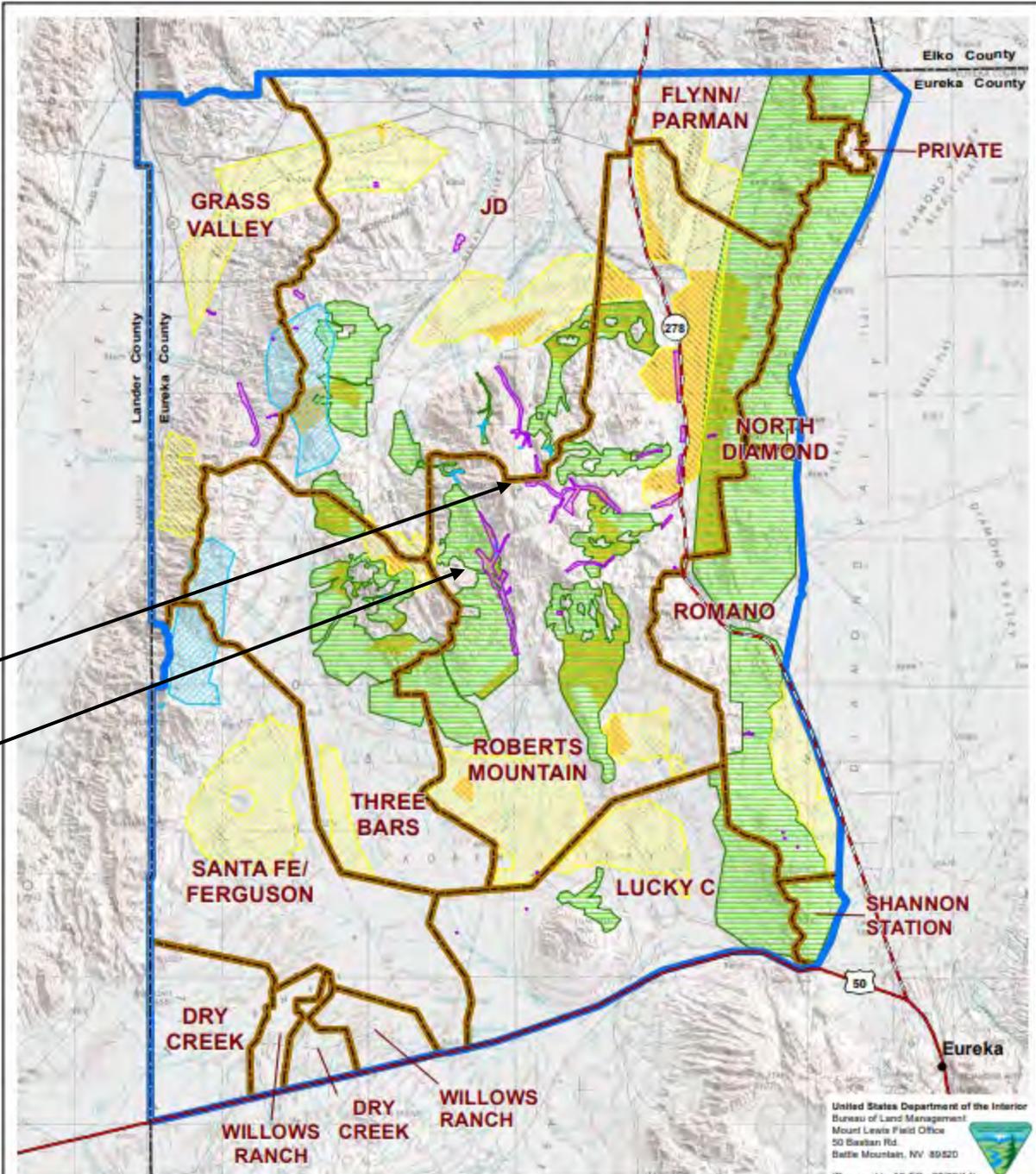


Fig. 2. GPS locations of radio-collared deer utilizing Robert Creek Mountain. Red polygons designate where we propose to conduct PJ removal in relation to the BLM's Riparian Treatment Areas. The Robert's Creek Corridor includes 1477 acres and the Vinini/Henderson Creek Corridor includes 1778 acres.



United States Department of the Interior
 Bureau of Land Management
 Mount Lewis Field Office
 50 Sycamore Rd.
 Battle Mountain, NV 89520
 [Prepared by MLFC - 05/08/14]



Legend

Moderate to Severe Range Use	Pinyon-juniper Treatment Area
Allotment Boundary	Sage Treatment Area
3 Bars Project Area	Aspen Treatment Area
	Riparian Treatment Area

3 Bars Ecosystem and Landscape Restoration Project

Figure 3-44

Range Use and Treatment Areas

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed through digital means and may be updated without notice.

Habitat Projects

MDEP Subcommittee: Eureka	Hunt Unit Group: MA14	
Project Title: PINYON-JUNIPER REMOVAL AND ASSOCIATED LOCAL HABITAT MANAGEMENT	Project Location: Vinini and Henderson Creek Corridor	
<p>Brief Description of Project: <i>Include any development plans such as vegetation removal, planting, seeding, or installation of structures; also include the schedule for obtaining any necessary permits, completing NEPA compliance, etc.:</i></p>	<p>There has been much research done documenting the negative ecological impacts related to expansion and infill of pinyon-juniper outside of proper ecological state and function. In addition to impacts to sagebrush habitats, it is known that pinyon-juniper encroachment and infill greatly impedes water resource availability on the landscape, as well as for the ability of water developments (e.g., springs, guzzlers) and natural riparian areas (e.g., creeks) to accumulate water. We are proposing pinyon-juniper removal (lop and scatter) in three locations heavily utilized by and important to mule deer and other wildlife (sage grouse), all which supplement and or expand work on BLM-managed lands as well as work on private lands all accomplished through a variety of agency and private partnerships.</p>	<p align="right">Score</p>
<p>Limiting Factor Score: <i>Use subcommittee cumulative score from Limiting Factor Score Form</i></p>	<p align="center"><i>Maximum of 5 points possible</i></p>	<p align="right">5</p>
<p>Unit Group 5-Year Published Deer Population Trend:</p>	<p>2018: 4,800 2019: 4,500 2020: 4,100 2021: 3,900 2022: 4,400</p>	
	<p align="center"><i>Decreasing = 5 pts Stable = 3 pts Increasing = 1 pt</i></p>	<p align="right">3</p>
<p>Does this project directly address factors limiting healthy mule deer populations?</p>	<p align="center"><i>Yes = 10 pts No = 0 pts</i></p>	<p align="right">10</p>
<p><i>How will project address limiting factors? We documented 22 deer utilizing Roberts Creek Mountain for their summer range. The Vinini and Henderson Creek Corridor is another important area for summering deer (and during the fawning season). We would like to connect the PJ removal lop and scatter efforts done on BLM-managed land and private land so that habitat management efforts are contiguous with synergy instead of patch-work. A large PJ treatment block is available under the 3 Bars Project in this corridor.</i></p>		
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<p><i>Provide added details: Within this treatment block, we propose to remove up to 1000 acres of trees in this corridor. PJ removal will extend into phase 1 and early phase 2 areas. The exact treatment boundaries within the larger 3 Bars Project treatment block will be developed through on-the-ground surveys and in coordination with BLM. Additional treatment acres would be expected to occur in future years and future projects as follow-on projects. There are 6 sage grouse leks in this immediate area, most of which are considered active or pending active status: Upper Roberts Creek 1, Upper Vinini Creek 1-3, and Upper Henderson Creek 1-2. These habitat management efforts in Robert's and Vinini and Henderson Creek Corridors would also benefit nesting and brood-rearing sage grouse in the local area.</i></p>		
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Habitat Projects

<p>Timely Completion: <i>Needed permitting, authority, and mechanisms are completed or in process and does the project have a high probability of being completed on-time:</i> -NEPA analysis or other statutory compliance is completed or not needed -Permits are completed or not needed -Contract mechanisms to support the work are in place or not needed</p>	<p>Timely completion (12 months) = 5 pts Extended completion (24 months) = 1 pt</p>	<p>5</p>
<p>Urgency: <i>(Is the project urgent due to a narrow biological window that requires immediate attention and funding to address resource degradation or deterioration?)</i></p>	<p>Yes = 5 pts No = 0 pts</p>	<p>5</p>
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<p><i>Provide added details: PJ removal treatments have been proven to be beneficial to wildlife by allowing for increased water flow and native flora.</i></p>		
<p>Partner Funding: <i>Does the project leverage funding or in-kind contributions by external partners and by how much?</i></p>	<p>>3x match = 10 pts 1.5-2.9 match = 7 pts 0.75-1.49 = 3 pts 0.1-.74 = 1 pt</p>	<p>3</p>
<p><i>(List amounts and sources if possible) Does the project have confirmed funding commitment from project partner such as a letter or memo with stated commitment amount?</i></p>	<p>Amount: \$ 10,000 Source: Eureka Conservation District Amount: \$ 5,000 Source: Eureka County Weed District Amount: \$ 5,000 Source: Department of Natural Resources **as well as additional in-kind contributions through Eureka County personnel</p>	<p></p>
<p>Cost Effectiveness: <i>Are the expected results worth the cost of the project?</i></p>	<p>Very cost-effective = 10 pts Moderately cost-effective = 5 pts Minimally cost-effective = 1 pt</p>	<p>10</p>
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<p>Amount Requested:</p>	<p>\$45,000-\$150,000</p>	<p></p>
<p>Total Project Score (100 possible points)</p>	<p>Sum of Scores</p>	<p>91</p>

Habitat Projects

Project Narrative: *Be specific to the needs and issues associated with mule deer and/or habitat and your technical approach to addressing the issue. Identify potential benefits to mule deer and other wildlife. Describe if the project is on public or private land and any private landowner permissions. Please describe any NEPA permitting requirements if on public land and when NEPA completion is expected. Also provide a tentative project schedule of major tasks. If your project is associated with water rights (e.g. spring fencing project) please discuss the status of permissions to complete the project with water rights holders.*

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Vinini and Henderson Creek Corridor

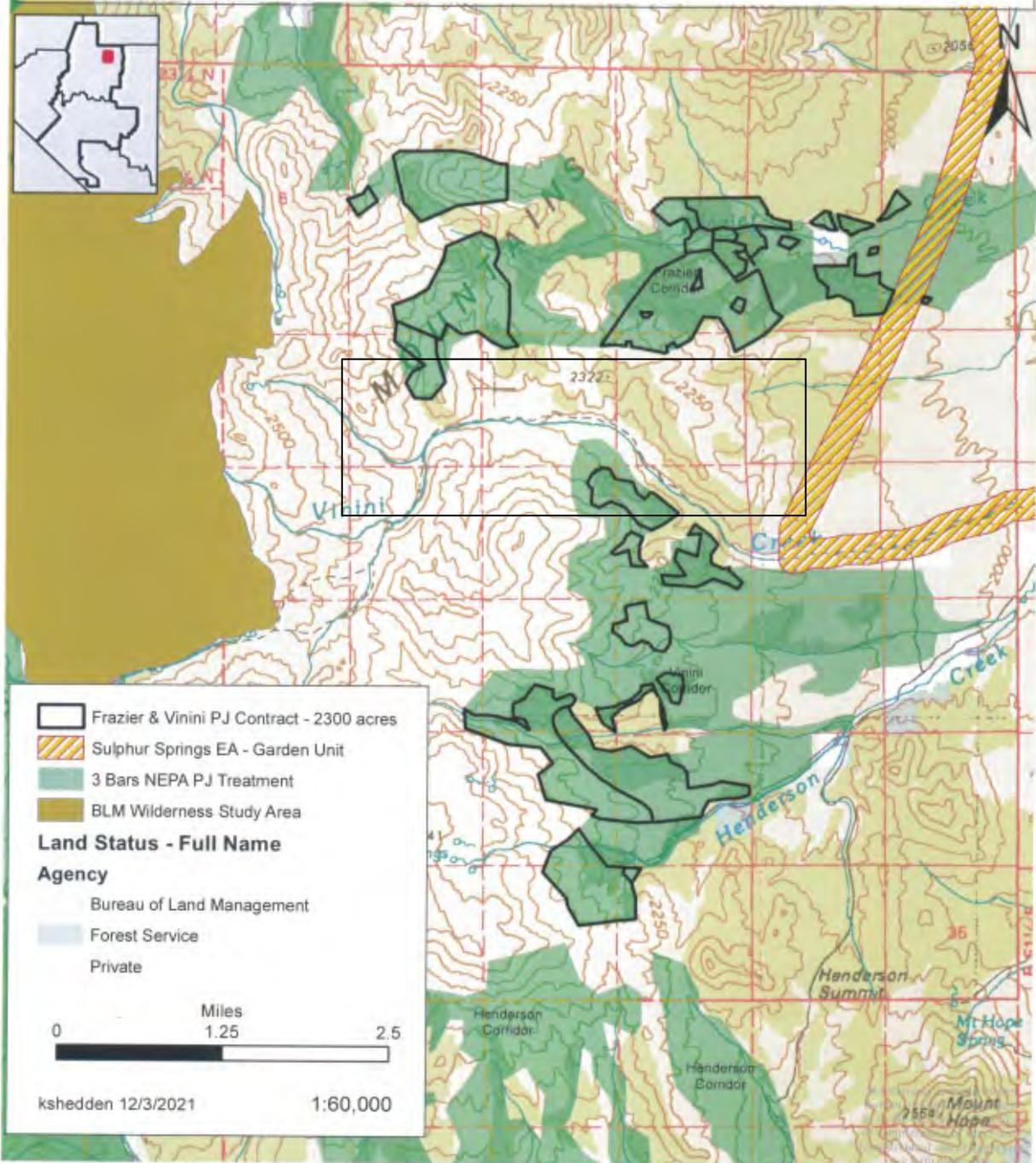
The Vinini and Henderson Creek Corridor is another important area for summering deer (and during the fawning season). We would like to connect the PJ removal lop and scatter efforts done on BLM-managed land and private land so that habitat management efforts are contiguous with synergy instead of patch-work. A large PJ treatment block is available under the 3 Bars Project in this corridor. Within this treatment block, we propose to remove up to 1000 acres of trees in this corridor. PJ removal will extend into phase 1 and early phase 2 areas. Preliminary treatment areas have been identified using aerial imagery and on-ground knowledge of the area. The exact treatment boundaries are expected to be very close to the same as these preliminary treatment areas within the larger 3 Bars Project treatment block but may need to be adjusted after more thorough on-the-ground surveys, including cultural surveys, and in coordination with BLM. Additional treatment acres would be expected to occur in future years and future projects as follow-on projects. There are 6 sage grouse leks in this immediate area, most of which are considered active or pending active status: Upper Roberts Creek 1, Upper Vinini Creek 1-3, and Upper Henderson Creek 1-2. These habitat management efforts in Robert's and Vinini and Henderson Creek Corridors would also benefit nesting and brood-rearing sage grouse in the local area.

Fig. 2. GPS locations of radio-collared deer utilizing Robert Creek Mountain. Red polygons designate where we propose to conduct PJ removal in relation to the BLM's Riparian Treatment Areas. The Robert's Creek Corridor includes 1477 acres and the Vinini/Henderson Creek Corridor includes 1778 acres.

3 Bars Restoration Project Frazier & Vinini PJ Contract FY22



U.S. Department of the Interior
Bureau of Land Management
Battle Mountain District
Fuels Management Program



Habitat Projects

MDEP Subcommittee: Area 15	Hunt Unit Group: 151-156	
Project Title: Bald Mountain Pinyon-Juniper Thinning	Project Location: Bald Mountain, Toiyabe Range, NE portion of Hunt Unit 154	
Brief Description of Project: <i>Include any development plans such as vegetation removal, planting, seeding, or installation of structures; also include the schedule for obtaining any necessary permits, completing NEPA compliance, etc.:</i>	Thin up to 11,000 acres of pinyon-juniper in year round and crucial winter mule deer habitat over several years. Install up to 12 spring exclosures over several years. PJ treatment is NEPA approved already, and spring exclosure NEPA approval is expected to take up to 1 year.	Score
Limiting Factor Score: <i>Use subcommittee cumulative score from Limiting Factor Score Form</i>	Maximum of 5 points possible	
Unit Group 5-Year Published Deer Population Trend:	2017: 2200 2018: 2200 2019: 2000 2020: 2000 2021: 2500	
	Decreasing = 5 pts Stable = 3 pts Increasing = 1 pt	
Does this project directly address factors limiting healthy mule deer populations? Yes	Yes = 10 pts No = 0 pts	
<i>How will project address limiting factors?</i> The Area 15 Mule Deer Enhancement Program Subcommittee identified wildland fire and invasive/noxious weeds as the second and third highest limiting factors for mule deer in our area, with an average ranking of 4.3 each. This project aims to reduce the likelihood of these factors occurring in important wildlife habitat.		
Does this project protect, maintain or strategically restore statewide priority mule deer habitat, enhance critical habitat or a critical life stage for mule deer? <i>Score using the highest ranking criteria</i>	High priority (Critical Mule Deer Seasonal Range or Migration Route) = 10 points Moderate priority (High elev. summer range, PJ encroached shrub community, winter range) = 5 points Low priority (salt desert shrub or low density mule deer habitats) = 1 pt	
<i>Provide added details:</i> This project aims to restore, enhance, and protect year-round and crucial winter mule deer habitat and important riparian resources.		
Is this mule deer habitat restoration or improvement of a long-term nature? <i>Does the project involve habitat trend and condition through restoration and improvement of a long-term or permanent nature? Projects of this nature are known to have long-term benefits with demonstrated history of past successes</i>	10+ years = 10 points 3-10 years = 5 points	
Project Scale and Implications: <i>Is the size or magnitude of the project, relative to the habitat type or Mule Deer distribution, impactful? Does the project convey a large conservation benefit to important or critical habitat for Mule Deer? For instance, does a riparian project have a meaningful impact across multiple reaches within a watershed or would a seeding project address a large extent or important critical habitat?</i>	High impact = 15 pts Moderate impact = 10 pts Low impact = 1 point	
Does the project build upon existing project work? Yes	Yes = 5 pts No = 0 pts	
<i>Describe existing or past projects:</i> Several PJ thinning projects have taken place in the immediate vicinity of our proposed treatment area, such as the Toiyabe Fingers Project approximately 2.5 miles to the north, which treated approximately 800 acres. This proposed project will further contribute to landscape-level restoration of crucial winter mule deer habiat.		

Habitat Projects

<p>Timely Completion: <i>Needed permitting, authority, and mechanisms are completed or in process and does the project have a high probability of being completed on-time:</i> -NEPA analysis or other statutory compliance is completed or not needed -Permits are completed or not needed -Contract mechanisms to support the work are in place or not needed</p>	<p>Timely completion (12 months) = 5 pts Extended completion (24 months) = 1 pt</p>	<p>5</p>
<p>Urgency: <i>(Is the project urgent due to a narrow biological window that requires immediate attention and funding to address resource degradation or deterioration?)</i></p>	<p>Yes = 5 pts No = 0 pts</p>	<p>5</p>
<p><i>Provide added details: Thinning PJ in this area is important to carry out in a timely manner before tree stands outcompete native vegetation and convert the area to a dense PJ woodland.</i></p>		
<p>Likelihood of Success: <i>What is the likelihood of successful completion and successful outcomes? Do the individuals and organizations involved possess the capability, experience, and proven methodology needed for implementation? Is the proposal supported by sound and established scientific or biological principals? Project objectives are realistic, measurable, and achievable with clearly defined methods</i></p>	<p>High likelihood= 5 points Moderate = 3 points Low = 1 point</p>	<p>5</p>
<p><i>Provide added details: PJ thinning and spring exclosures are common practices carried out by involved parties and are supported by scientific principals, so the project is likely to successfully be implemented. Due to the large scale of the project, implementation is planned to be spread over several years to keep objectives realistic and attainable.</i></p>		
<p>Partner Funding: <i>Does the project leverage funding or in-kind contributions by external partners and by how much? BLM has expressed willingness to contribute funding or to build upon treatment sections.</i></p>	<p>>3x match = 10 pts 1.5-2.9 match = 7 pts 0.75-1.49 = 3 pts 0.1-.74 = 1 pt</p>	<p>3</p>
<p><i>(List amounts and sources if possible) Does the project have confirmed funding commitment from project partner such as a letter or memo with stated commitment amount?</i></p>	<p>Amount: \$ Source: Amount: \$ Source:</p>	<p></p>
<p>Cost Effectiveness: <i>Are the expected results worth the cost of the project?</i></p>	<p>Very cost-effective = 10 pts Moderately cost-effective = 5 pts Minimally cost-effective = 1 pt</p>	<p>10</p>
<p><i>Provide added details: The biological benefits to mule deer and other species inhabiting the sagebrush ecosystem will be well worth the monetary cost of this project. Project work will also be put out for bid so that the lowest bidder may be awarded the contract.</i></p>		
<p>Amount Requested:</p>	<p>\$2,400,000</p>	
<p>Total Project Score (100 possible points)</p>	<p>Sum of Scores 85.3</p>	

Habitat Projects

Project Narrative: *Be specific to the needs and issues associated with mule deer and/or habitat and your technical approach to addressing the issue. Identify potential benefits to mule deer and other wildlife. Describe if the project is on public or private land and any private landowner permissions. Please describe any NEPA permitting requirements if on public land and when NEPA completion is expected. Also provide a tentative project schedule of major tasks. If your project is associated with water rights (e.g. spring fencing project) please discuss the status of permissions to complete the project with water rights holders.*

Woody encroachment is a widespread phenomenon affecting rangelands worldwide, and The Great Basin is no exception to this. In many areas, altered disturbance regimes have allowed pinyon pine and juniper (hereafter PJ) to encroach into previously unoccupied areas, and to increase density of existing stands. PJ has the capacity to outcompete native vegetation, and during periods of drought dense stands of PJ can act as fuel to propagate catastrophic wildfire. As native vegetation struggles to recover after high-intensity fires, a window of opportunity is created for cheatgrass to establish and dominate the landscape. One area that we would like to prevent this from happening in is Bald Mountain of the Toiyabe Range, in the northeastern portion of Hunt Unit 154. Bald Mountain supports a variety of mountain-shrub species, but PJ is currently encroaching into the area. This area falls within both year-round and crucial winter mule deer habitat, and deer have frequently been documented using the area (via aerial surveys and collar data). We would like to thin PJ over a total of 11,000 acres in this area to enhance wildlife habitat and to reduce the potential of losing native vegetation to competition or wildfire. Additionally, we would like to hire a contractor to install welded drill-stem fencing around 12 sensitive springs in this area so that important riparian resources may be protected from large nonnative ungulates such as feral horses and cattle. Due to the large scale of this project, implementation will occur incrementally over several years to keep objectives manageable. The total budget for this project is estimated to be \$2.4 million, but we will seek funding in smaller increments from various sources over several years.

PJ thinning in the proposed project area is authorized on public land, so no further NEPA analysis is required. Proposed spring enclosures will take up to 1 year to receive NEPA clearance, and access to water by the water-rights holder will be maintained.

Tentative Schedule for FY24:

- January - March 2023: Apply for project funding (Heritage, Habitat Conservation, BLM?)
- May 2023: Have SOW's and bid application documents completed and ready for submission
- July 2023: Solicit bids from contractors and award contracts to lowest bidder
- October 2023 - March 2024: Window for fence installation and PJ thinning by contractor(s)

Habitat Projects

MDEP Subcommittee: Area 15	Hunt Unit Group: 151-156					
Project Title: Elephant Head Aspen Exclosure Repair	Project Location: Cottonwood Basin, Shoshone Range					
Brief Description of Project: <i>Include any development plans such as vegetation removal, planting, seeding, or installation of structures; also include the schedule for obtaining any necessary permits, completing NEPA compliance, etc.:</i>	Hire contractor to replace non-functional fencing around several aspen exclosures (that were installed in 2002) with welded drill-steel fencing to protect important riparian areas from cattle and feral horses. NEPA clearance expected to take between 90 days - 1 year per exclosure.					Score
Limiting Factor Score: <i>Use subcommittee cumulative score from Limiting Factor Score Form</i>	<i>Maximum of 5 points possible</i>					5
Unit Group 5-Year Published Deer Population Trend:	2017: 2200	2018: 2200	2019: 2000	2020: 2000	2021: 2500	
	<i>Decreasing = 5 pts</i>		<i>Stable = 3 pts</i>		<i>Increasing = 1 pt</i>	3
Does this project directly address factors limiting healthy mule deer populations? Yes	<i>Yes = 10 pts</i>			<i>No = 0 pts</i>		10
<i>How will project address limiting factors?</i> The Area 15 Mule Deer Enhancement Program Subcommittee identified feral horses as the greatest limiting factor for mule deer in our area, with an average ranking of 5. This project aims to exclude feral horses from riparian resources that are important to mule deer and a variety of other wildlife species.						
Does this project protect, maintain or strategically restore statewide priority mule deer habitat, enhance critical habitat or a critical life stage for mule deer? <i>Score using the highest ranking criteria</i>	<i>High priority (Critical Mule Deer Seasonal Range or Migration Route) = 10 points</i> <i>Moderate priority (High elev. summer range, PJ encroached shrub community, winter range) = 5 points</i> <i>Low priority (salt desert shrub or low density mule deer habitats) = 1 pt</i>					5
<i>Provide added details:</i> This project aims to protect and restore resources within high-elevation summer range for mule deer.						
Is this mule deer habitat restoration or improvement of a long-term nature? <i>Does the project involve habitat trend and condition through restoration and improvement of a long-term or permanent nature? Projects of this nature are known to have long-term benefits with demonstrated history of past successes</i>	<i>10+ years = 10 points</i>			<i>3-10 years = 5 points</i>		10
Project Scale and Implications: <i>Is the size or magnitude of the project, relative to the habitat type or Mule Deer distribution, impactful? Does the project convey a large conservation benefit to important or critical habitat for Mule Deer? For instance, does a riparian project have a meaningful impact across multiple reaches within a watershed or would a seeding project address a large extent or important critical habitat?</i>	<i>High impact = 15 pts</i>		<i>Moderate impact = 10 pts</i>		<i>Low impact = 1 point</i>	15
Does the project build upon existing project work? Yes	<i>Yes = 5 pts</i>			<i>No = 0 pts</i>		5
<i>Describe existing or past projects:</i> This project will replace and improve previously installed exclosures.						

Habitat Projects

<p>Timely Completion: <i>Needed permitting, authority, and mechanisms are completed or in process and does the project have a high probability of being completed on-time:</i> <i>-NEPA analysis or other statutory compliance is completed or not needed</i> <i>-Permits are completed or not needed</i> <i>-Contract mechanisms to support the work are in place or not needed</i></p>	<p>Timely completion (12 months) = 5 pts Extended completion (24 months) = 1 pt</p>	<p>5</p>
<p>Urgency: <i>(Is the project urgent due to a narrow biological window that requires immediate attention and funding to address resource degradation or deterioration?)</i></p>	<p>Yes = 5 pts No = 0 pts</p>	<p>5</p>
<p><i>Provide added details:</i> With rapidly increasing feral horse populations, this area is likely to experience irreparable degradation if riparian resources are not protected. This HMA is currently estimated to be at %1400 of AML.</p>		
<p>Likelihood of Success: <i>What is the likelihood of successful completion and successful outcomes? Do the individuals and organizations involved possess the capability, experience, and proven methodology needed for implementation? Is the proposal supported by sound and established scientific or biological principals? Project objectives are realistic, measurable, and achievable with clearly defined methods</i></p>	<p>High likelihood= 5 points Moderate = 3 points Low = 1 point</p>	<p>5</p>
<p><i>Provide added details:</i> Spring exclosures are common practices carried out by involved parties and are supported by scientific principals, so the project is likely to successfully be implemented. Implementation is planned to be spread over several years to keep project costs and objectives realistic and attainable.</p>		
<p>Partner Funding: <i>Does the project leverage funding or in-kind contributions by external partners and by how much? BLM has expressed willingness to contribute funding or to build upon treatments.</i></p>	<p>>3x match = 10 pts 1.5-2.9 match = 7 pts 0.75-1.49 = 3 pts 0.1-.74 = 1 pt</p>	<p>3</p>
<p><i>(List amounts and sources if possible) Does the project have confirmed funding commitment from project partner such as a letter or memo with stated commitment amount?</i></p>	<p>Amount: \$ Source: Amount: \$ Source:</p>	<p></p>
<p>Cost Effectiveness: <i>Are the expected results worth the cost of the project?</i></p>	<p>Very cost-effective = 10 pts Moderately cost-effective = 5 pts Minimally cost-effective = 1 pt</p>	<p>10</p>
<p><i>Provide added details:</i> The biological benefits to mule deer and other species inhabiting the sagebrush ecosystem will be well worth the monetary cost of this project. Project work will also be put out for bid so that the lowest bidder may be awarded the contract.</p>		
<p>Amount Requested:</p>	<p>\$231,250</p>	
<p>Total Project Score (100 possible points)</p>	<p>Sum of Scores 81</p>	

Habitat Projects

Project Narrative: *Be specific to the needs and issues associated with mule deer and/or habitat and your technical approach to addressing the issue. Identify potential benefits to mule deer and other wildlife. Describe if the project is on public or private land and any private landowner permissions. Please describe any NEPA permitting requirements if on public land and when NEPA completion is expected. Also provide a tentative project schedule of major tasks. If your project is associated with water rights (e.g. spring fencing project) please discuss the status of permissions to complete the project with water rights holders.*

Historically, the Great Basin hosted vast, intact, and interconnected vegetative communities that provided continuous wildlife habitat to a variety of species, including mule deer. However, the combination of climate change, development, prolonged drought, wildfires, and invasive species of flora and fauna has led to severe degradation of the range. In some areas, this has resulted in the creation of 'sky islands', where high quality mule deer habitat is isolated at higher elevations by the vastly different and degraded conditions at lower elevations. One such 'sky island' occurs on and around Elephant Head of the Shoshone Range in the southern tip of Hunt Unit 152. This area acts as important high-elevation summer habitat for mule deer (and a suite of other game and non-game species), and mule deer may occupy the area year-round when winters are mild. The continuous growth of wild horse populations in Area 15 has caused horses to encroach into previously unoccupied high elevations as they exhaust lowland resources. One area where this is currently taking place is in the basins surrounding Elephant Head. In 2002, several aspen/riparian restoration exclosures were installed in Cottonwood Basin of Elephant Head to protect aspen/riparian meadows from nonnative ungulates. Currently, these exclosures are in a state of disrepair and are allowing nonnative ungulates unlimited access to these important riparian resources, which have become severely degraded as a result. We would like to hire a contractor to replace the damaged barbed-wire fencing with welded drill-stem fencing to limit feral horse access so that these areas may recover. We plan to begin with one exclosure for FY 24 that has a perimeter of 1850 feet, and protects approximately 5 acres of aspen/riparian area. This proposed project would be simple in execution, yet high in impact to the wildlife resource, as allowing these aspen/riparian zones to recover will greatly improve the quantity and quality of resources available to wildlife and will help ensure the future of the Area 15 mule deer herd.

The Area 15 Mule Deer Enhancement Program Subcommittee identified feral horses as the greatest limiting factor for mule deer in our area, with an average ranking of 5. This project aims to exclude feral horses from riparian resources that are important to mule deer and a variety of other wildlife species.

NEPA authorization is expected to take as little as 90 days for certain exclosures, but may take up to one year depending on the circumstances. It is not anticipated that NEPA clearance will delay implementation of this project within the proposed window.

Tentative Schedule:

- January-March 2023: Apply for project funding (water development?)
- May 2023: Have SOW and bid application documents completed and ready for submission
- July 2023: Solicit bids from contractors and award contract to lowest bidder
- September 2023-June 2024: Window for fence installation by contractor

Habitat Projects

MDEP Subcommittee: Area 15	Hunt Unit Group: 151-156	
Project Title: Fire Creek Cheatgrass Treatment	Project Location: Shoshone Range, Lander County, NE portion of Hunt Unit 152	
Brief Description of Project: <i>Include any development plans such as vegetation removal, planting, seeding, or installation of structures; also include the schedule for obtaining any necessary permits, completing NEPA compliance, etc.:</i>	Herbicide treatment and reseeding of up to 26,000 acres of cheatgrass to restore mule deer winter range on public land. Already covered under existing NEPA, so this project can be considered shovel-ready.	Score
Limiting Factor Score: <i>Use subcommittee cumulative score from Limiting Factor Score Form</i>	Maximum of 5 points possible	
Unit Group 5-Year Published Deer Population Trend:	2017: 2200 2018: 2200 2019: 2000 2020: 2000 2021: 2500	
	Decreasing = 5 pts Stable = 3 pts Increasing = 1 pt	
Does this project directly address factors limiting healthy mule deer populations? Yes	Yes = 10 pts No = 0 pts	
<i>How will project address limiting factors?</i> The Area 15 Mule Deer Enhancement Program Subcommittee identified wildland fire and invasive/noxious weeds as the second and third highest limiting factors for mule deer in our area, with an average ranking of 4.3 each. This project seeks to rehabilitate an area that has experienced wildfire and subsequent conversion from a sagebrush ecosystem to a cheatgrass dominated system.		
Does this project protect, maintain or strategically restore statewide priority mule deer habitat, enhance critical habitat or a critical life stage for mule deer? <i>Score using the highest ranking criteria</i>	High priority (Critical Mule Deer Seasonal Range or Migration Route) = 10 points Moderate priority (High elev. summer range, PJ encroached shrub community, winter range) = 5 points Low priority (salt desert shrub or low density mule deer habitats) = 1 pt	
<i>Provide added details:</i> Prior to conversion, this area acted as low-elevation mule deer winter range, which has become increasingly rare throughout Area 15.		
Is this mule deer habitat restoration or improvement of a long-term nature? <i>Does the project involve habitat trend and condition through restoration and improvement of a long-term or permanent nature? Projects of this nature are known to have long-term benefits with demonstrated history of past successes</i>	10+ years = 10 points 3-10 years = 5 points	
Project Scale and Implications: <i>Is the size or magnitude of the project, relative to the habitat type or Mule Deer distribution, impactful? Does the project convey a large conservation benefit to important or critical habitat for Mule Deer? For instance, does a riparian project have a meaningful impact across multiple reaches within a watershed or would a seeding project address a large extent or important critical habitat?</i>	High impact = 15 pts Moderate impact = 10 pts Low impact = 1 point	
Does the project build upon existing project work? Yes	Yes = 5 pts No = 0 pts	
<i>Describe existing or past projects:</i> Herbicide treatments and reseeding are currently being implemented approximately 8 miles to the north of this project, so this project will contribute to large-scale restoration of winter range on the landscape.		

Habitat Projects

<p>Timely Completion: <i>Needed permitting, authority, and mechanisms are completed or in process and does the project have a high probability of being completed on-time:</i> <i>-NEPA analysis or other statutory compliance is completed or not needed</i> <i>-Permits are completed or not needed</i> <i>-Contract mechanisms to support the work are in place or not needed</i></p>	<p>Timely completion (12 months) = 5 pts Extended completion (24 months) = 1 pt</p>	<p>5</p>
<p>Urgency: <i>(Is the project urgent due to a narrow biological window that requires immediate attention and funding to address resource degradation or deterioration?)</i></p>	<p>Yes = 5 pts No = 0 pts</p>	<p>5</p>
<p><i>Provide added details:</i> Removal of cheatgrass from the landscape is imperative to preventing further propagation in the cheatgrass-wildfire cycle, which has been exacerbated by drought.</p>		
<p>Likelihood of Success: <i>What is the likelihood of successful completion and successful outcomes? Do the individuals and organizations involved possess the capability, experience, and proven methodology needed for implementation? Is the proposal supported by sound and established scientific or biological principals? Project objectives are realistic, measurable, and achievable with clearly defined methods</i></p>	<p>High likelihood= 5 points Moderate = 3 points Low = 1 point</p>	<p>5</p>
<p><i>Provide added details:</i> Herbicide treatment and reseedling are common practices carried out by involved parties and are supported by scientific principals, so the project is likely to successfully be implemented. Due to the large scale of the project, implementation is planned to be spread over several years to keep objectives realistic and attainable.</p>		
<p>Partner Funding: <i>Does the project leverage funding or in-kind contributions by external partners and by how much? BLM has expressed willingness to contribute funding or to build upon treatment sections.</i></p>	<p>>3x match = 10 pts 1.5-2.9 match = 7 pts 0.75-1.49 = 3 pts 0.1-.74 = 1 pt</p>	<p>3</p>
<p><i>(List amounts and sources if possible) Does the project have confirmed funding commitment from project partner such as a letter or memo with stated commitment amount?</i></p>	<p>Amount: \$ Source: Amount: \$ Source:</p>	<p></p>
<p>Cost Effectiveness: <i>Are the expected results worth the cost of the project?</i></p>	<p>Very cost-effective = 10 pts Moderately cost-effective = 5 pts Minimally cost-effective = 1 pt</p>	<p>10</p>
<p><i>Provide added details:</i> The biological benefits to mule deer and other species inhabiting the sagebrush ecosystem will be well worth the monetary cost of this project. Project work will also be put out for bid so that the lowest bidder may be awarded the contract.</p>		
<p>Amount Requested:</p>	<p>\$3,380,000</p>	
<p>Total Project Score (100 possible points)</p>	<p>Sum of Scores 80.3</p>	

Habitat Projects

Project Narrative: *Be specific to the needs and issues associated with mule deer and/or habitat and your technical approach to addressing the issue. Identify potential benefits to mule deer and other wildlife. Describe if the project is on public or private land and any private landowner permissions. Please describe any NEPA permitting requirements if on public land and when NEPA completion is expected. Also provide a tentative project schedule of major tasks. If your project is associated with water rights (e.g. spring fencing project) please discuss the status of permissions to complete the project with water rights holders.*

A combination of factors has led to widespread conversion of the Great Basin's sagebrush ecosystem to an annual cheatgrass system. A major driver of this conversion has been extreme drought paired with increased wildfire frequency, which has allowed many areas to succumb to the cheatgrass-wildfire cycle (where cheatgrass fuels wildfire, wildfire facilitates cheatgrass invasion, and so-on). This has many detrimental effects on an ecosystem, ranging from a significant loss of net carbon storage potential to the loss of wildlife habitat, including crucial mule deer habitat. Area 15 has experienced conversion of its sagebrush system to cheatgrass/exotic annuals in many areas, one of which is the Fire Creek area in the northeastern portion of Hunt Unit 152. Prior to its conversion, this area acted as low-elevation mule deer winter range, which has become increasingly rare throughout Area 15. We would like to treat up to 26,000 acres of this area with herbicide (imazapic), then re-seed with an appropriate BLM/NDOW approved seed mix. We aim to rehabilitate severely degraded winter mule deer habitat and restore ecological function to the landscape, which will benefit a variety of game and non-game species in addition to mule deer.

Because of the large scale of this project, we will seek funding and implement treatment incrementally over several years to keep the budget and objectives manageable. Due to the nature of this project, each work cycle will span two fiscal years because re-seeding cannot take place until the year following herbicide treatment. Treated areas will need to be rested from grazing, and potentially fenced-off temporarily; however, we will work with BLM and grazing permittees to ensure that livestock production is not affected. This project is authorized on public land under an existing EIS, so no further NEPA analysis is required.

The Area 15 Mule Deer Enhancement Program Subcommittee identified wildland fire and invasive/noxious weeds as the second and third highest limiting factors for mule deer in our area, with an average ranking of 4.3 each.

Tentative Schedule for year 1 of project:

- January-March 2023: Apply for project funding (Heritage, Habitat Restoration, BLM)
- September 2023: Aerially apply imazapic to 5,000 acres of project area
- September 2024-January 2025: re-seed 5,000 acres of project area with BLM and NDOW approved seed-mix

Habitat Projects

MDEP Subcommittee: Nye-Esmeralda	Hunt Unit Group: 162, 163	
Project Title: Little Fish Lake Valley PJ Treatment	Project Location: Nye-Esmeralda	
Brief Description of Project: <i>Include any development plans such as vegetation removal, planting, seeding, or installation of structures; also include the schedule for obtaining any necessary permits, completing NEPA compliance, etc.:</i>	This project is a continuation of pinyon and juniper removal in Little Fish Lake Valley in hunt unit 162. This area is greatly important for mule deer as a transition area and provides refuge for overwintering mule deer. There are six historic leks in the area and one active lek. Sage-grouse use adjacent areas for nesting and brood rearing habitat. Pinyon and juniper treatments will reduce available perching sites for corvids. It will relieve competition on native bunchgrasses and browse species.	Score
Limiting Factor Score: <i>Use subcommittee cumulative score from Limiting Factor Score Form</i>	<i>Maximum of 5 points possible</i>	4.4
Unit Group 5-Year Published Deer Population Trend:	2017: 4300 2018: 4100 2019: 4000 2020: 3600 2021: 2100	
	<i>Decreasing = 5 pts Stable = 3 pts Increasing = 1 pt</i>	5
Does this project directly address factors limiting healthy mule deer populations?	<i>Yes = 10 pts No = 0 pts</i>	10
<i>How will project address limiting factors? This project will treat pinyon and juniper that have encroached upon the sagebrush steppe within little fish lake valley. The Nye-Esmeralda MDEP subcommittee identified pinyon and juniper invasion as a limiting factor in management area 16. The subcommittee ranked this limiting factor at an average of 4.4 out of 5.</i>		
Does this project protect, maintain or strategically restore statewide priority mule deer habitat, enhance critical habitat or a critical life stage for mule deer? <i>Score using the highest ranking criteria</i>	<i>High priority (Critical Mule Deer Seasonal Range or Migration Route) = 10 points Moderate priority (High elev. summer range, PJ encroached shrub community, winter range) = 5 points Low priority (salt desert shrub or low density mule deer habitats) = 1 pt</i>	10
<i>Provide added details: Anecdotally, mule deer will use this area as a stopover area on their seasonal migration to Morey bench. Mule deer will also winter in this area. The encroachment of pinyon and juniper has reduced the available forage for mule deer in Little Fish Lake Valley.</i>		
Is this mule deer habitat restoration or improvement of a long-term nature? <i>Does the project involve habitat trend and condition through restoration and improvement of a long-term or permanent nature? Projects of this nature are known to have long-term benefits with demonstrated history of past successes</i>	<i>10+ years = 10 points 3-10 years = 5 points</i>	10
Project Scale and Implications: <i>Is the size or magnitude of the project, relative to the habitat type or Mule Deer distribution, impactful? Does the project convey a large conservation benefit to important or critical habitat for Mule Deer? For instance, does a riparian project have a meaningful impact across multiple reaches within a watershed or would a seeding project address a large extent or important critical habitat?</i>	<i>High impact = 15 pts Moderate impact = 10 pts Low impact = 1 point</i>	10
Does the project build upon existing project work?	<i>Yes = 5 pts No = 0 pts</i>	5
<i>Describe existing or past projects: In 2017, about 700 acres of pinyon and juniper were removed near Clear Creek. In 2018, 500 acres of pinyon and juniper were removed near Danville Creek. Horse Canyon had approximately 2,000 acres south of Danville Canyon treated via lop and scatter techniques. The removal of these trees will allow the herbaceous understory to regenerate providing good forage and habitat for mule deer at certain times of the year.</i>		

Habitat Projects

<p>Timely Completion: <i>Needed permitting, authority, and mechanisms are completed or in process and does the project have a high probability of being completed on-time:</i> <i>-NEPA analysis or other statutory compliance is completed or not needed</i> <i>-Permits are completed or not needed</i> <i>-Contract mechanisms to support the work are in place or not needed</i></p>	<p>Timely completion (12 months) = 5 pts Extended completion (24 months) = 1 pt</p>	<p>1</p>
<p>Urgency: <i>(Is the project urgent due to a narrow biological window that requires immediate attention and funding to address resource degradation or deterioration?)</i></p>	<p>Yes = 5 pts No = 0 pts</p>	<p>0</p>
<p><i>Provide added details: There is a large biological window with this project. Although, this mule deer herd had been rapidly declining in recent years and any beneficial habitat projects could slow their decline if drought conditions persist. Pinyon and juniper encroachment is very slow, but if not addressed, recovery to back to a sagebrush sea is expensive.</i></p>		
<p>Likelihood of Success: <i>What is the likelihood of successful completion and successful outcomes? Do the individuals and organizations involved possess the capability, experience, and proven methodology needed for implementation? Is the proposal supported by sound and established scientific or biological principals? Project objectives are realistic, measurable, and achievable with clearly defined methods</i></p>	<p>High likelihood= 5 points Moderate = 3 points Low = 1 point</p>	<p>5</p>
<p><i>Provide added details:</i></p>		
<p>Partner Funding: <i>Does the project leverage funding or in-kind contributions by external partners and by how much?</i></p>	<p>>3x match = 10 pts 1.5-2.9 match = 7 pts 0.75-1.49 = 3 pts 0.1-.74 = 1 pt</p>	<p>0</p>
<p><i>(List amounts and sources if possible) Does the project have confirmed funding commitment from project partner such as a letter or memo with stated commitment amount?</i></p>	<p>Amount: \$ Source: Amount: \$ Source:</p>	<p></p>
<p>Cost Effectiveness: <i>Are the expected results worth the cost of the project?</i></p>	<p>Very cost-effective = 10 pts Moderately cost-effective = 5 pts Minimally cost-effective = 1 pt</p>	<p>10</p>
<p><i>Provide added details: The implementation process will be conducted by NDOW personnel. Pinyon and juniper treatments have been successfully completed by both wildlife biologists in the Tonopah office. Treatment location and whether thinning or removal of pinyon and juniper will be decided with diversity species in mind. We will mitigate impacts on pinyon jay communities and other single leaf pinyon pine reliant species.</i></p>		
<p>Amount Requested:</p>	<p>\$150,000</p>	
<p>Total Project Score (100 possible points)</p>	<p>Sum of Scores 70.4</p>	

Habitat Projects

Project Narrative: *Be specific to the needs and issues associated with mule deer and/or habitat and your technical approach to addressing the issue. Identify potential benefits to mule deer and other wildlife. Describe if the project is on public or private land and any private landowner permissions. Please describe any NEPA permitting requirements if on public land and when NEPA completion is expected. Also provide a tentative project schedule of major tasks. If your project is associated with water rights (e.g. spring fencing project) please discuss the status of permissions to complete the project with water rights holders.*

Little Fish Lake Valley Pinyon and Juniper Treatment

The Nye-Esmeralda subcommittee identified Pinyon-Juniper invasion as a significant limiting factor for the Management Area 16 mule deer herd. Little Fish Lake Valley resides within both hunt units 162 and 163. The areas planned for treatment are within hunt unit 162. Mule deer have historically wintered in Little Fish Lake Valley. Pinyon and juniper continue to encroach upon the sagebrush, bunchgrasses, and other preferred forage that mule deer rely on to make it through the winter. Although pinyon and juniper are important for escape and thermal cover for mule deer, thinning and treating certain areas can promote growth young browse. A mosaic of shrubland and pinyon and juniper woodlands provide the best winter habitat for mule deer. This treatment will create a great plant diversity for mule deer and give them the nutrients required to survive through the winter. Sage-grouse will also benefit from the treatment areas as there are many active and historical leks within Little Fish Lake Valley. The area has already been cleared by a categorical exclusion and State Historic Preservation Office concurrences have been met.

Little Fish Lake Valley Pinyon and Juniper Treatment

The Nye-Esmeralda subcommittee identified Pinyon-Juniper invasion as a significant limiting factor for the Management Area 16 mule deer herd. Little Fish Lake Valley resides within both hunt units 162 and 163. The areas planned for treatment are within hunt unit 162. Mule deer have historically wintered in Little Fish Lake Valley. Pinyon and juniper continue to encroach upon the sagebrush, bunchgrasses, and other preferred forage that mule deer rely on to make it through the winter. Although pinyon and juniper are important for escape and thermal cover for mule deer, thinning and treating certain areas can promote growth young browse. A mosaic of shrubland and pinyon and juniper woodlands provide the best winter habitat for mule deer. This treatment will create a great plant diversity for mule deer and give them the nutrients required to survive through the winter. Sage-grouse will also benefit from the treatment areas as there are many active and historical leks within Little Fish Lake Valley. The area has already been cleared by a categorical exclusion and State Historic Preservation Office concurrences have been met.

Habitat Projects

MDEP Subcommittee: Nye-Esmeralda	Hunt Unit Group: 17, 21	
Project Title: Nye-Esmeralda County Spring Protection	Project Location: Nye-Esmeralda	
Brief Description of Project: <i>Include any development plans such as vegetation removal, planting, seeding, or installation of structures; also include the schedule for obtaining any necessary permits, completing NEPA compliance, etc.:</i>	Several springs have been identified in central Nevada that need exclusionary fencing. Feral equid and poor cattle grazing had led to depleted mesic conditions. Buck n' rail fencing will be provided by the BLM that is already purchased and has been used on previous fencing projects in central Nevada. The Tonopah BLM field office is completing the NEPA clearances necessary to fence these springs. The southern region guzzler crew and volunteers will be used to build these fences.	Score
Limiting Factor Score: <i>Use subcommittee cumulative score from Limiting Factor Score Form</i>	<i>Maximum of 5 points possible</i>	5
Unit Group 5-Year Published Deer Population Trend:	2017: 4200 2018: 4000 2019: 3700 2020: 3400 2021: 3100	
	<i>Decreasing = 5 pts Stable = 3 pts Increasing = 1 pt</i>	5
Does this project directly address factors limiting healthy mule deer populations?	<i>Yes = 10 pts No = 0 pts</i>	10
<i>How will project address limiting factors? Improper grazing by wild horses in management area 17 for the Nye-Esmeralda County MDEP subcommittee averaged a rank of 4.4 out of 5. For management area 21, improper grazing by wild horses averaged a rank of 5. Limited water distribution in management area 21 averaged at 4.6. Mesic sites in central Nevada are greatly impacted by overgrazing. This overgrazing reduces the riparian vegetation and mesic sites hold less surface water.</i>		
Does this project protect, maintain or strategically restore statewide priority mule deer habitat, enhance critical habitat or a critical life stage for mule deer? <i>Score using the highest ranking criteria</i>	High priority (Critical Mule Deer Seasonal Range or Migration Route) = 10 points Moderate priority (High elev. summer range, PJ encroached shrub community, winter range) = 5 points Low priority (salt desert shrub or low density mule deer habitats) = 1 pt	5
<i>Provide added details: These springs sites are spread from high quality to low quality mule deer habitats.</i>		
Is this mule deer habitat restoration or improvement of a long-term nature? <i>Does the project involve habitat trend and condition through restoration and improvement of a long-term or permanent nature? Projects of this nature are known to have long-term benefits with demonstrated history of past successes</i>	<i>10+ years = 10 points 3-10 years = 5 points</i>	10
Project Scale and Implications: <i>Is the size or magnitude of the project, relative to the habitat type or Mule Deer distribution, impactful? Does the project convey a large conservation benefit to important or critical habitat for Mule Deer? For instance, does a riparian project have a meaningful impact across multiple reaches within a watershed or would a seeding project address a large extent or important critical habitat?</i>	High impact = 15 pts Moderate impact = 10 pts Low impact = 1 point	10
Does the project build upon existing project work?	<i>Yes = 5 pts No = 0 pts</i>	5
<i>Describe existing or past projects: Exclusionary fences were built around several spring locations in central Nevada during the summer of 2022. These springs were located in Lone Valley, Little fish Lake Valley, and Stone Cabin Valley. We plan to continue to enhance and repair these highly impacted mesic sites in central Nevada.</i>		

Habitat Projects

<p>Timely Completion: <i>Needed permitting, authority, and mechanisms are completed or in process and does the project have a high probability of being completed on-time:</i> <i>-NEPA analysis or other statutory compliance is completed or not needed</i> <i>-Permits are completed or not needed</i> <i>-Contract mechanisms to support the work are in place or not needed</i></p>	<p>Timely completion (12 months) = 5 pts Extended completion (24 months) = 1 pt</p>	<p>5</p>
<p>Urgency: <i>(Is the project urgent due to a narrow biological window that requires immediate attention and funding to address resource degradation or deterioration?)</i></p>	<p>Yes = 5 pts No = 0 pts</p>	<p>5</p>
<p><i>Provide added details: Several springs in central Nevada have been drying up in recent years. Springs within the Montezuma Range have completely gone dry. To keep the remain springs we have, they must be protected and restored. Nonnative species must be better managed around these vital wildlife resources.</i></p>		
<p>Likelihood of Success: <i>What is the likelihood of successful completion and successful outcomes? Do the individuals and organizations involved possess the capability, experience, and proven methodology needed for implementation? Is the proposal supported by sound and established scientific or biological principals? Project objectives are realistic, measurable, and achievable with clearly defined methods</i></p>	<p>High likelihood= 5 points Moderate = 3 points Low = 1 point</p>	<p>5</p>
<p><i>Provide added details: The guzzler crew has now become familiar with exclusionary fence building and the BLM is confident that the proper NEPA will be completed before next spring.</i></p>		
<p>Partner Funding: <i>Does the project leverage funding or in-kind contributions by external partners and by how much?</i></p>	<p>>3x match = 10 pts 1.5-2.9 match = 7 pts 0.75-1.49 = 3 pts 0.1-.74 = 1 pt</p>	<p>10</p>
<p><i>(List amounts and sources if possible) Does the project have confirmed funding commitment from project partner such as a letter or memo with stated commitment amount?</i></p>	<p>Amount: \$ 10,000 Source: BLM Amount: \$ Source:</p>	<p></p>
<p>Cost Effectiveness: <i>Are the expected results worth the cost of the project?</i></p>	<p>Very cost-effective = 10 pts Moderately cost-effective = 5 pts Minimally cost-effective = 1 pt</p>	<p>10</p>
<p><i>Provide added details: The department will only be expected to contribute their time to this project. All fencing materials will be funded by the BLM.</i></p>		
<p>Amount Requested:</p>	<p>Department time towards the building of the fences.</p>	
<p>Total Project Score (100 possible points)</p>	<p>Sum of Scores</p>	
		<p>85</p>

Habitat Projects

Project Narrative: *Be specific to the needs and issues associated with mule deer and/or habitat and your technical approach to addressing the issue. Identify potential benefits to mule deer and other wildlife. Describe if the project is on public or private land and any private landowner permissions. Please describe any NEPA permitting requirements if on public land and when NEPA completion is expected. Also provide a tentative project schedule of major tasks. If your project is associated with water rights (e.g. spring fencing project) please discuss the status of permissions to complete the project with water rights holders.*

Nye-Esmeralda County Spring Protection

The Nye-Esmeralda Mule Deer Enhancement program subcommittee identified limited water distribution and improper grazing by feral equids to be limiting factors in management areas 16, 17, 21 and 25. Overgrazing by wild horses and extended periods of drought have reduced the available water at spring sources as well as impacted riparian habitat. Central Nevada typifies a xeric landscape often receiving between 5-8 inches of annual precipitation. A categorical exclusion is currently being written to put in place fence enclosures around mesic habitat. These proposed exclusionary fences will benefit a multitude of species from ungulates to birds of prey to rodents. These fences will sit on top of the ground, minimizing disturbance, and keep out nonnative species. By resting these areas, riparian vegetation will return and create an area with more available surface water. During years of drought, these areas will be vital in retaining wildlife on the landscape. The BLM Tonopah Field office has spare buck n' rail fencing that has been donated to be used in this proposed project.

Nye-Esmeralda County Spring Protection

The Nye-Esmeralda Mule Deer Enhancement program subcommittee identified limited water distribution and improper grazing by feral equids to be limiting factors in management areas 16, 17, 21 and 25. Overgrazing by wild horses and extended periods of drought have reduced the available water at spring sources as well as impacted riparian habitat. Central Nevada typifies a xeric landscape often receiving between 5-8 inches of annual precipitation. A categorical exclusion is currently being written to put in place fence enclosures around mesic habitat. These proposed exclusionary fences will benefit a multitude of species from ungulates to birds of prey to rodents. These fences will sit on top of the ground, minimizing disturbance, and keep out nonnative species. By resting these areas, riparian vegetation will return and create an area with more available surface water. During years of drought, these areas will be vital in retaining wildlife on the landscape. The BLM Tonopah Field office has spare buck n' rail fencing that has been donated to be used in this proposed project.

Investigations Projects

MDEP Subcommittee: Lincoln County	Hunt Unit Group: 221-223	
Project Title: GPS Collaring Effort in Area 22	Project Location: Critical summer and winter range and migration routes throughout Area 22	
Brief Description of Project: <i>Include any development plans such as capturing, collaring, wildlife health analysis, etc. and include the schedule for obtaining any necessary permits, permission, funding, etc.:</i>	We would capture approximately 30 adult does, 30 adult bucks, and 50 six-month old fawns and fit them with GPS radio collars. Data from the collars would be used to obtain migration routes, seasonal home ranges, and survival estimates. During capture we would collect samples for disease detection and obtain measurements of body condition. A proposal for this project has been circulated internally within NDOW. Once permission for the project is granted funding will be secured. Multiple sportsmen organizations have expressed interest in funding the project, however no formal commitments have been made at this time.	Score
Limiting Factor Score: <i>Use subcommittee cumulative score from Limiting Factor Score Form</i>	Maximum of 5 points possible	5
Has this mule deer management area or hunt unit group been identified as a statewide priority for research or investigations?	Yes = 10 pts No = 0 pts	10
Does this project directly address identifying factors limiting healthy mule deer populations? (10 points possible)	Yes = 10 pts No = 0 pts	10
<i>How will project address limiting factors?: This population has experienced a steep decline over the past several years. Severe drought, habitat degradation due to fire, conversion to pinion/juniper, and excessive feral horse use are some reasons for the decline. However, no knowledge of adult survival, disease prevalence, or level of predation is known. This project would provide data on the gaps in our knowledge and assist in planning future management actions, including additional habitat treatments.</i>		
Does this project occur in a crucial or priority habitat for mule deer? (10 points possible) (Score using the highest ranking criteria)	High priority (Critical Mule Deer Seasonal Range or Migration Route) = 10 points Moderate priority (High elev. summer range, PJ encroached shrub community, winter range) = 5 points Low priority (salt desert shrub or low density mule deer habitats) = 1 pt	10
<i>Provide added details: This project will allow us to identify critical mule deer seasonal range and migration routes. Important wintering and summering areas are generally known through direct observation of mule deer; however we have no knowledge of migration corridors. Further, we do not know the connectivity between multiple wintering areas and summering areas within the unit. Knowledge from this project will provide us with concrete knowledge of priority habitat that we can work to improve and protect.</i>		
Will the research or investigation improve knowledge of habitat and restoration of a long-term or permanent nature? Projects of this nature are known to have long-term benefits with demonstrated history of past successes.	10+ years = 10 points 3-10 years = 1 point	10
Is the sample size (# of marked animals) and project scale (distribution across an entire hunt unit or region) adequate to gain meaningful inference or statistical power for interpreting the relative impact of this investigation?	High impact = 10 pts Moderate impact = 5 pts Low impact = 1 point	10
Does the project complement an adjacent project or study, previous project, or help inform future habitat projects?	Yes= 5 points No = 0 pts	5
<i>Describe existing or past projects:A collaring effort of 15 adult mule deer was conducted in 2003. These collars provided six locations for each deer over the course of one year, which provided a very coarse resolution of summer and winter areas. Numerous habitat treatments have taken place throughout the unit. Data from GPS collars would expand on the past collaring effort and show how mule deer have responded to habitat treatments within the area.</i>		

Project narrative: *Be specific to the research needs and issues associated with mule deer and/or habitat and your technical approach to addressing the issue. Identify potential benefits to mule deer and other wildlife. Describe if the project would be conducted on BLM, FS, USFWS, or private land and if any private landowner permissions are necessary. Please describe any NEPA permitting requirements (such as permission to capture animals in wilderness) if on public land and when NEPA completion is expected. Also provide a tentative project schedule of major tasks (ie collar orders, capture dates, data collection period, reporting dates, etc). Please list any collaborators or project funding partners.*

Given the recent decline in population, gaps in basic knowledge of herd movement, and lack of collaring efforts in Management Area 22, we recommend initiating a collaring project with the goal of providing information to assist in management of the deer herd. It is apparent that knowledge gaps exist for Management Area 22 and that the mule deer population has undergone a significant decline over the last five years. There are several distinct summer and winter ranges throughout the area, but movement between these ranges has not been identified. We plan on collaring a sufficient number of mule deer to obtain reliable survival estimates and identify multiple unique migration corridors throughout the unit. We will use multiple spatial analyses, including Brownian Bridge Movement Modeling and Kernel Density Estimators, to identify migration corridors and critical habitats throughout the unit. We will also determine cause-specific mortality for each mule deer in the study, which will provide data to inform our population model and potentially identify factors limiting population growth. For example, we may be able to determine if nutritional carrying capacity is limiting if body condition metrics were poor or, conversely, if body condition metrics are high and predation is a leading cause of mortality, we may have evidence of predation limiting population growth. We will also determine pregnancy status of females during capture and obtain samples for disease monitoring.

There are multiple benefits to mule deer that will be obtained from this project. We will be able to determine if past habitat projects are being used and where future projects would have the most benefit. Identifying areas of critical use and migration corridors will allow us to protect these areas from development from future mineral or energy projects. Obtaining information on cause-specific mortality and survival rates will also inform our population models and increase our ability to properly manage the herd. Further, obtaining body condition metrics will allow us to gauge where the population is at relative to carrying capacity and assess the success of past habitat treatments. Finally, obtaining information on pregnancy rates and disease prevalence may be informative as well. Throughout the state, pregnancy rates of mule deer have been consistently high. Similarly, EHD and Bluetongue have been located throughout the state but have not had an overwhelmingly negative effect on population levels. While pregnancy and disease prevalence will likely be standard in Area 22, a significant departure from normal conditions may explain the large population contraction that has been observed in recent years.

Animals would be captured on BLM land, but not in a wilderness area so no NEPA permitting would be required. Collared mule deer would reside on BLM wilderness areas, FS, and private land, but permission would not be required as captures would not take place in these areas. The earliest this project would take place would be in FY 24. Collars would likely be ordered in late summer 2023 and captures would take place in late 2023 or early 2024. Battery life on the collars would last for at least 2.5 years, which would allow data collection to run through mid-2026. A yearly report would be compiled each year of data collection outlining timing of events (i.e. collaring, mortalities, etc.), important findings, and preliminary results. Final analysis would begin in mid-2026.

No outside funding has been formally pledged or accepted, but Meadow Valley Wildlife Unlimited has expressed an interest in assisting with funding. Wildlife and Habitat Improvement of Nevada would also likely contribute to the project, as in the past they have expressed a desire to assist with a collaring effort in the area.

Habitat Projects

MDEP Subcommittee: Lincoln County	Hunt Unit Group: 22	
Project Title: Milk Ranch Guzzler	Project Location: GET LOCATION FROM GROUP	
Brief Description of Project: <i>Include any development plans such as vegetation removal, planting, seeding, or installation of structures; also include the schedule for obtaining any necessary permits, completing NEPA compliance, etc.:</i>	Instillation of a big game guzzler in Cave Valley for the benefit of mule deer, elk, pronghorn, and sage grouse.	Score
Limiting Factor Score: <i>Use subcommittee cumulative score from Limiting Factor Score Form</i>	<i>Maximum of 5 points possible</i>	4
Unit Group 5-Year Published Deer Population Trend:	2017: 4,150 2018: 4,300 2019: 4,000 2020: 3,300 2021: 3,300	
	<i>Decreasing = 5 pts Stable = 3 pts Increasing = 1 pt</i>	5
Does this project directly address factors limiting healthy mule deer populations?	<i>Yes = 10 pts No = 0 pts</i>	10
<i>How will project address limiting factors? This project will create a permanent water source in a dry area. The Lincoln County MDEP subcommittee ranked water availability as one of the highest limiting factors affecting the deer herd in Area 22. Water availability likely limits use of nearby habitat treatments and expansion of the deer herd in transitional habitat.</i>		
Does this project protect, maintain or strategically restore statewide priority mule deer habitat, enhance critical habitat or a critical life stage for mule deer? <i>Score using the highest ranking criteria</i>	<p>High priority (Critical Mule Deer Seasonal Range or Migration Route) = 10 points</p> <p>Moderate priority (High elev. summer range, PJ encroached shrub community, winter range) = 5 points</p> <p>Low priority (salt desert shrub or low density mule deer habitats) = 1 pt</p>	5
<i>Provide added details: This project would enhance mule deer habitat in a shrub community that has been encroached by pinion/juniper over the last 50 years. Several years ago, a large chaining was conducted in this area to restore the native shrub community. The guzzler location will be along a migration corridor and important winter range habitat.</i>		
Is this mule deer habitat restoration or improvement of a long-term nature? <i>Does the project involve habitat trend and condition through restoration and improvement of a long-term or permanent nature? Projects of this nature are known to have long-term benefits with demonstrated history of past successes</i>	<i>10+ years = 10 points 3-10 years = 5 points</i>	10
Project Scale and Implications: <i>Is the size or magnitude of the project, relative to the habitat type or Mule Deer distribution, impactful? Does the project convey a large conservation benefit to important or critical habitat for Mule Deer? For instance, does a riparian project have a meaningful impact across multiple reaches within a watershed or would a seeding project address a large extent or important critical habitat?</i>	<i>High impact = 15 pts Moderate impact = 10 pts Low impact = 1 point</i>	10
Does the project build upon existing project work?	<i>Yes = 5 pts No = 0 pts</i>	5
<i>Describe existing or past projects: Multiple chaining and other pinion/juniper removal work has been conducted in the area around the proposed guzzler site. This guzzler would add a needed water source to the restored area and allow higher use by mule deer.</i>		

Habitat Projects

<p>Timely Completion: <i>Needed permitting, authority, and mechanisms are completed or in process and does the project have a high probability of being completed on-time:</i> <i>-NEPA analysis or other statutory compliance is completed or not needed</i> <i>-Permits are completed or not needed</i> <i>-Contract mechanisms to support the work are in place or not needed</i></p>	<p>Timely completion (12 months) = 5 pts Extended completion (24 months) = 1 pt</p>	<p>5</p>
<p>Urgency: <i>(Is the project urgent due to a narrow biological window that requires immediate attention and funding to address resource degradation or deterioration?)</i></p>	<p>Yes = 5 pts No = 0 pts</p>	<p>0</p>
<p><i>Provide added details: This project would add a permanent water source to an area that has historically had little or no water available throughout the year.</i></p>		
<p>Likelihood of Success: <i>What is the likelihood of successful completion and successful outcomes? Do the individuals and organizations involved possess the capability, experience, and proven methodology needed for implementation? Is the proposal supported by sound and established scientific or biological principals? Project objectives are realistic, measurable, and achievable with clearly defined methods</i></p>	<p>High likelihood= 5 points Moderate = 3 points Low = 1 point</p>	<p>5</p>
<p><i>Provide added details: NDOW has a highly experienced guzzler crew that will ensure the project is completed in an efficient manner with no structural defects. The area receives an adequate amount of precipitation to fill the guzzler and limit the likelihood of the guzzler going dry.</i></p>		
<p>Partner Funding: <i>Does the project leverage funding or in-kind contributions by external partners and by how much?</i></p>	<p>>3x match = 10 pts 1.5-2.9 match = 7 pts 0.75-1.49 = 3 pts 0.1-.74 = 1 pt</p>	
<p><i>(List amounts and sources if possible) Does the project have confirmed funding commitment from project partner such as a letter or memo with stated commitment amount?</i></p>	<p>Amount: \$ Source: Amount: \$ Source:</p>	
<p>Cost Effectiveness: <i>Are the expected results worth the cost of the project?</i></p>	<p>Very cost-effective = 10 pts Moderately cost-effective = 5 pts Minimally cost-effective = 1 pt</p>	<p>10</p>
<p><i>Provide added details: Guzzlers are expensive projects that require a large amount of funding and manpower to install. However, they create permanent water sources that require little maintenance over the long term. There are very few other methods for creating permanent water sources in areas without any permanent springs or cattle troughs.</i></p>		
<p>Amount Requested:</p>	<p>\$45,00</p>	
<p>Total Project Score (100 possible points)</p>	<p style="text-align: right;">Sum of Scores</p>	

Habitat Projects

Project Narrative: *Be specific to the needs and issues associated with mule deer and/or habitat and your technical approach to addressing the issue. Identify potential benefits to mule deer and other wildlife. Describe if the project is on public or private land and any private landowner permissions. Please describe any NEPA permitting requirements if on public land and when NEPA completion is expected. Also provide a tentative project schedule of major tasks. If your project is associated with water rights (e.g. spring fencing project) please discuss the status of permissions to complete the project with water rights holders.*

Mule deer habitat in Area 22 has been degraded through fire, pinion/juniper encroachment, and drought over the past several years. In an effort to restore habitat, several habitat treatments (e.g. chaining, hand thinning, seeding, etc.) have been conducted. Several areas where habitat treatments have been conducted have little or no permanent water, limiting the amount of use those restored areas can receive by wildlife. In an effort to create a permanent water source in a habitat treatment, we propose constructing water development in Cave Valley. This project will allow mule deer to increase use of transitional habitat and winter range. Other species, including pronghorn antelope, rocky mountain elk, and greater sage grouse will also benefit from the proposed water development. The build site is located on private land in a recent chaining. NEPA permitting will be required and is not yet completed. In fall of 2022 we will approach the BLM to initiate the NEPA process. The level of NEPA required will possibly be an EA or DNA, as indicated by a staff of the Caliente Field Office. The Caliente Field Office has verbally stated the NEPA process for this project should take a year, allowing construction to begin in summer of 2023.

Non-Habitat Project Proposal Form			
MDEP Team(s) Submitting Proposal: Lincoln		Hunt Unit Group: MA 23	
Project Title: Predator Removal in Priority Fawning Grounds			
1. Limiting Factor Rank Score: 4		Needs Assessment Strategy: Coyote Removal	
2. Justification: Downward Population Trend <input type="checkbox"/> 3-yr avg low fawn ratios <input checked="" type="checkbox"/> 3-yr avg low buck ratio <input type="checkbox"/> 3-yr avg low harvest numbers <input type="checkbox"/> Disease detected <input type="checkbox"/> Anecdotal reports <input checked="" type="checkbox"/>			
3. Body performing work: Wildlife Services <input checked="" type="checkbox"/> Private contractor <input type="checkbox"/> NDOW-Wildlife Health <input type="checkbox"/> Other <input type="checkbox"/>			
4. Predator Plan Project Category: Implementation <input checked="" type="checkbox"/> Experimental Management <input type="checkbox"/> Experimentation <input type="checkbox"/> Data Gathering <input type="checkbox"/>			
5. Type of Project: Lethal <input checked="" type="checkbox"/> Non-Lethal <input type="checkbox"/> Capture & test <input type="checkbox"/> Collaring effort <input type="checkbox"/> Other <input type="checkbox"/>			
6. Level of Monitoring: Rigorous <input type="checkbox"/> Intermediate <input type="checkbox"/> Standard <input checked="" type="checkbox"/>			
7. Project Duration: one year <input type="checkbox"/> two years <input type="checkbox"/> three years <input checked="" type="checkbox"/> 4+ <input type="checkbox"/>			
8. Annual Cost: Under \$10,000 <input type="checkbox"/> \$10 – \$25,000 <input type="checkbox"/> \$25 - \$50,000 <input checked="" type="checkbox"/> \$50,000+ <input type="checkbox"/>			
9. Funding Source: Heritage Fund <input type="checkbox"/> NGO <input type="checkbox"/> Predator Fund <input checked="" type="checkbox"/> NDOW <input type="checkbox"/> Wildlife Services <input type="checkbox"/> Other <input checked="" type="checkbox"/> None <input type="checkbox"/>			
10. Is funding source eligible for matching funds? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
11. Will this project benefit additional wildlife species? Yes <input checked="" type="checkbox"/> Probably <input type="checkbox"/> No <input type="checkbox"/> Additional Species Benefit:			
12. Access for public hunting? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
13. Are there other predator projects in area? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
14. Will project expand knowledge of the mule deer population, mule deer habitat, or predator-prey relationships? Yes <input checked="" type="checkbox"/> Probably <input type="checkbox"/> No <input type="checkbox"/>			
15. Other MDEP teams involved: Lincoln		Lincoln	
16. Additional projects approved for this team: No Projects Approved			
17. Measure of success? Upward population trend <input checked="" type="checkbox"/> 3-yr avg increased fawn ratio <input checked="" type="checkbox"/> 3-yr avg higher observed buck ratio <input type="checkbox"/> 3-yr avg increased 4-pts in harvest <input type="checkbox"/> Other <input type="checkbox"/>			
Project Start Date: 1/1/23		Estimated End Date: 12/31/26	
Funding Source(s): Predator, MVWU		Estimated Project Cost: \$ 50,000/year	
<i>Oversight Committee Use Only</i>			
Approved <input type="checkbox"/>		Not Approved <input type="checkbox"/>	
Priority #			
Route Project to:			
Comments:			

Lincoln County Mule Deer Enhancement Subcommittee Non-Habitat Project Proposal Supplement Predator Removal in Priority Fawning Grounds

The Lincoln County Mule Deer Enhancement Subcommittee (Subcommittee) provides this supplement to the Predator Removal in Priority Fawning Grounds proposal outlined on the Non-Habitat Project Proposal Form. For the three project proposals submitted to the Oversight Committee addressing Management Areas (MAs) in Lincoln County, we prioritized projects based on timing to implementation and the period foreseen for achieving benefits to mule deer and associated wildlife. The *Predator Removal in Priority Fawning Grounds* project is ranked top priority as it will be implemented in Spring 2023 providing immediate benefit to the wildlife resource.

Predator removal would focus on coyotes frequenting priority fawning grounds in MAs 23. Removals will occur in early spring when coyotes are establishing mating pairs and ground conditions are ideal for locating coyotes. Studies indicate coyotes increase energetic demands when rearing young and are more likely to take larger prey such as mule deer fawns (Sacks et al. 1999, Siedler et al. 2014, Till and Knowlton 1983). Among the fawning areas selected, those where habitat improvement projects were previously implemented will be emphasized. Targeting coyotes in fawning areas immediately preceding and during the fawning season has the highest potential to yield desired results (Brown and Conover 2011, Watine and Giuliano 2016). Project duration will be over three to four consecutive years for optimizing benefit to mule deer and other wildlife species.

The Subcommittee will prepare and provide polygons identifying coyote removal areas along with supporting information to NDOW's Predator Staff Biologist for methods and logistics finalization. In doing so, we are open to using any method available necessary for effective coyote removal, including both aerial gunning and on-the-ground trapping. Trapping efforts may not be available and have a higher cost/benefit ratio to consider. If trapping is used, the subcommittee would work closely with the trapper to ensure our objectives are being met. If aerial gunning is used, we will provide the gunning crew with detailed maps of priority areas and ensure efforts take place when conditions are ideal for success. The subcommittee will apply for funding through the Predator Fund. Meadow Valley Wildlife Unlimited has also stated they may have funds available to assist with project funding. We estimate the project will cost between approximately \$50,000 per year for adequate implementation over the projected three years.

Top priority ranking of this project is attributable to several population considerations including mule deer population size, the three-year fawn to adult ratio, and harvest success. Mule deer populations have decreased significantly in MA 23 – population size has declined from a high of 3,500 in 2017 to 2,200 in 2022. The three-year average spring fawn:adult ratios in MA 23 is 22 fawns:100 adults, which is well below the management objective of 30 fawns:adult. Harvest for has also dropped from a high of 253 bucks to 171 in 2021. Due to notable reductions in total population size, fawning ratios, and harvest numbers in MA 23, the

Subcommittee proposes predator removal as an appropriate management tool as part of the overall effort to increase mule deer populations.

References

- Brown, D.E. and Conover, M.R. (2011). Effects of large-scale removal of coyotes on pronghorn and mule deer productivity and abundance. *The Journal of Wildlife Management*, 75: 876-882. <https://doi.org/10.1002/jwmg.126>
- Sacks, B. N., Jaeger, M. M., Jennifer C. C. Neale, & McCullough, D. R. (1999). Territoriality and Breeding Status of Coyotes Relative to Sheep Predation. *The Journal of Wildlife Management*, 63(2), 593–605. <https://doi.org/10.2307/3802648>
- Seidler, R.G., Gese, E.M., & Conner, M.M. (2014). Using sterilization to change predation rates of wild coyotes: A test case involving pronghorn fawns. *Applied Animal Behaviour Science*, 154, 83-92.
- Till, J. A., and Knowlton, F. F. (1983). Efficacy of Denning in Alleviating Coyote Depredations upon Domestic Sheep. *The Journal of Wildlife Management*, 47(4), 1018–1025. <https://doi.org/10.2307/3808160>
- Watine, L. and Giuliano, W. (2016). Coyote Predation Effects on White-Tailed Deer Fawns. *Natural Resources*, 7, 628-643. doi: 10.4236/nr.2016.711050.

Habitat Projects

MDEP Subcommittee: Clark County	Hunt Unit Group: MA 26, 27, & 28					
Project Title: Clark County Spring Restoration	Project Location: Primarily the Spring Mountains and McCullough Range in southern Nevada (Area 26, units 262 and 263)					
Brief Description of Project: <i>Include any development plans such as vegetation removal, planting, seeding, or installation of structures; also include the schedule for obtaining any necessary permits, completing NEPA compliance, etc.:</i>	Establish, maintain, or replace fencing around water sources in mule deer habitat in Area 26. We will focus on areas of designated Mule Deer Habitat and Crucial Summer Range in the Spring Mountains and the McCullough Range. Many of the springs and water sources in these areas have been heavily impacted by feral hoofstock.					Score
Limiting Factor Score: <i>Use subcommittee cumulative score from Limiting Factor Score Form</i>	Maximum of 5 points possible					5
Unit Group 5-Year Published Deer Population Trend: Area 26 has no surveys and population trends are inferred through hunter harvest only.	2017: 500	2018: 500	2019: 500	2020: 500	2021: 500	
	Decreasing = 5 pts		Stable = 3 pts		Increasing = 1 pt	3
Does this project directly address factors limiting healthy mule deer populations? Yes	Yes = 10 pts			No = 0 pts		10
<i>How will project address limiting factors?</i> The Subcommittee has identified free water availability and the impact of feral horses, burros, and cattle as major factors limiting mule deer persistence in Clark County. Feral hoofstock degrade springs and other water sources by denuding vegetation, compacting the soils, and depleting water. Many water sources in the Spring Mountains and McCullough Range are already fenced to exclude feral hoofstock from springheads and riparian zones while allowing access to wildlife such as mule deer. Water is especially critical in the current drought conditions.						
Does this project protect, maintain or strategically restore statewide priority mule deer habitat, enhance critical habitat or a critical life stage for mule deer? <i>Score using the highest ranking criteria</i>	High priority (Critical Mule Deer Seasonal Range or Migration Route) = 10 points Moderate priority (High elev. summer range, PJ encroached shrub community, winter range) = 5 points Low priority (salt desert shrub or low density mule deer habitats) = 1 pt					10
<i>Provide added details:</i> The Spring Mountains and the McCullough Range contain some of the largest patches of designated mule deer habitat and the only section of Crucial Summer Range in Clark County. Protecting springs and water sources from the impacts of feral hoofstock will improve access to critical resources for mule deer and other wildlife and improve riparian habitat.						
Is this mule deer habitat restoration or improvement of a long-term nature? <i>Does the project involve habitat trend and condition through restoration and improvement of a long-term or permanent nature? Projects of this nature are known to have long-term benefits with demonstrated history of past successes</i>	10+ years = 10 points			3-10 years = 5 points		10
Project Scale and Implications: <i>Is the size or magnitude of the project, relative to the habitat type or Mule Deer distribution, impactful? Does the project convey a large conservation benefit to important or critical habitat for Mule Deer? For instance, does a riparian project have a meaningful impact across multiple reaches within a watershed or would a seeding project address a large extent or important critical habitat?</i>	High impact = 15 pts		Moderate impact = 10 pts		Low impact = 1 point	12
Does the project build upon existing project work? Yes, see project summary.	Yes = 5 pts			No = 0 pts		5
<i>Describe existing or past projects:</i> Most of the identified springs are already fenced and either under completed NEPA, draft NEPA, or Categorical Exclusion. For the Willow Creek fencing project, a Scope of Work was completed in 2017 detailing the concept, rough timeline, and estimated expenditures. This Scope of Work may be updated for current materials cost, but the location, concept, and timeline will be relevant.						

Habitat Projects

<p>Timely Completion: <i>Needed permitting, authority, and mechanisms are completed or in process and does the project have a high probability of being completed on-time:</i> <i>-NEPA analysis or other statutory compliance is completed or not needed</i> <i>-Permits are completed or not needed</i> <i>-Contract mechanisms to support the work are in place or not needed</i></p>	<p>Timely completion (12 months) = 5 pts Extended completion (24 months) = 1 pt</p>	<p>3</p>
<p>Urgency: <i>(Is the project urgent due to a narrow biological window that requires immediate attention and funding to address resource degradation or deterioration?)</i></p>	<p>Yes = 5 pts No = 0 pts</p>	<p>4</p>
<p><i>Provide added details:</i> Swift action is recommended to remedy the impacts of feral hoofstock on water sources in Clark County, especially as the populations of horses and burros grow. As drought conditions worsen, horses and burros become reliant and aggressively guard dwindling water sources that are critical for native wildlife. The fencing that is currently in place in some areas is insufficient to exclude hoofstock and, in the case of barbed wire or cable, pose a hazard to native wildlife.</p>		
<p>Likelihood of Success: <i>What is the likelihood of successful completion and successful outcomes? Do the individuals and organizations involved possess the capability, experience, and proven methodology needed for implementation? Is the proposal supported by sound and established scientific or biological principals? Project objectives are realistic, measurable, and achievable with clearly defined methods</i></p>	<p>High likelihood= 5 points Moderate = 3 points Low = 1 point</p>	<p>5</p>
<p><i>Provide added details:</i> There is a high likelihood of success with this project as it builds on previously established work. The interagency partnerships are in place, and the Habitat division is currently working with other agencies to perform maintenance on existing fencing and spring development.</p>		
<p>Partner Funding: <i>Does the project leverage funding or in-kind contributions by external partners and by how much? The project will utilize volunteer labor, which can be matched 3:1 with federal aid dollars.</i></p>	<p>>3x match = 10 pts 1.5-2.9 match = 7 pts 0.75-1.49 = 3 pts 0.1-.74 = 1 pt</p>	<p>10</p>
<p><i>(List amounts and sources if possible) Does the project have confirmed funding commitment from project partner such as a letter or memo with stated commitment amount?</i></p>	<p>Amount: \$ Source: Amount: \$ Source:</p>	<p></p>
<p>Cost Effectiveness: <i>Are the expected results worth the cost of the project?</i></p>	<p>Very cost-effective = 10 pts Moderately cost-effective = 5 pts Minimally cost-effective = 1 pt</p>	<p>10</p>
<p><i>Provide added details:</i> The initial cost of materials and labor will be the majority of the expense for the lifetime of the project (10+ years), with minimal annual costs for monitoring and maintenance.</p>		
<p>Amount Requested:</p>	<p>\$</p>	<p></p>
<p>Total Project Score (100 possible points)</p>	<p>Sum of Scores</p>	<p>87</p>

Habitat Projects

Project Narrative: *Be specific to the needs and issues associated with mule deer and/or habitat and your technical approach to addressing the issue. Identify potential benefits to mule deer and other wildlife. Describe if the project is on public or private land and any private landowner permissions. Please describe any NEPA permitting requirements if on public land and when NEPA completion is expected. Also provide a tentative project schedule of major tasks. If your project is associated with water rights (e.g. spring fencing project) please discuss the status of permissions to complete the project with water rights holders.*

The purpose of this project is to protect critical resources for wildlife by establishing, maintaining, or replacing fencing around water sources in wildlife habitat in Area 26. We will focus on areas of designated Mule Deer Habitat and Crucial Summer Range in the Spring Mountains and the McCullough Range. Many of the springs and water sources in these areas have been heavily impacted by feral horses, burros, and cattle, and those without fencing have been degraded to the point of losing ecological function. The deployment of wildlife-friendly pipe-rail fencing to exclude feral hoofstock allows for natural regeneration of vegetation while allowing wildlife to access water. In designated Herd Areas (HA) Herd Management Areas (HMA) and Wild Horse and Burro Territories (WHBT), a trough will be available outside of the fenced area to provide water to horses and burros as per the Wild and Free-Roaming Horses and Burros Act of 1971.

The duration of the project will vary depending on the need for National Environmental Protection Act (NEPA) action. Springs of special interest include those that have the NEPA process initiated or completed or those that have been designated as having limited impact as Categorical Exclusions. In the Spring Mountains, Willow Creek, Mud Spring, Buck Spring, Fence Spring, Trough Spring, and Sawmill Spring are currently fenced and in need of repair or replacement of fencing. The Willow Creek project had a scope of work completed in 2017 and coordination with the US Forest Service is ongoing to complete the NEPA process. In the McCullough Range, three springs have been identified as priorities for restoration or fencing and fall under current draft NEPA plans. The estimated cost for a given spring fencing project ranges between \$5000 and \$30,000 to erect new fencing. The Willow Creek project is expected to be the largest undertaking with the greatest cost, estimated at over \$50,000 to remove the old fencing and install new pipe-rail fencing at two sites. Fence repair projects will incur a much lower cost and could be initiated as soon as materials and labor are secured. The Subcommittee will seek funding through Wildlife Heritage grants and federal aid (i.e., Pittman Robertson), and volunteer labor will be utilized to match 3:1.

Clark County Spring Restoration

The purpose of this project is to protect critical resources for wildlife by establishing, maintaining, or replacing fencing around water sources in wildlife habitat in Area 26. We will focus on areas of designated Mule Deer Habitat and Crucial Summer Range in the Spring Mountains and the McCullough Range. Many of the springs and water sources in these areas have been heavily impacted by feral horses, burros, and cattle, and those without fencing have been degraded to the point of losing ecological function. The deployment of wildlife-friendly pipe-rail fencing to exclude feral hoofstock allows for natural regeneration of vegetation while allowing wildlife to access water. In designated Herd Areas (HA) Herd Management Areas (HMA) and Wild Horse and Burro Territories (WHBT), a trough will be available outside of the fenced area to provide water to horses and burros as per the *Wild and Free-Roaming Horses and Burros Act of 1971*.

The duration of the project will vary depending on the need for National Environmental Protection Act (NEPA) action. Springs of special interest include those that have the NEPA process initiated or completed or those that have been designated as having limited impact as Categorical Exclusions. In the Spring Mountains, Willow Creek, Mud Spring, Buck Spring, Fence Spring, Trough Spring, and Sawmill Spring are currently fenced and in need of repair or replacement of fencing. The Willow Creek project had a scope of work completed in 2017 and coordination with the US Forest Service is ongoing to complete the NEPA process. In the McCullough Range, three springs have been identified as priorities for restoration or fencing and fall under current draft NEPA plans. The estimated cost for a given spring fencing project ranges between \$5000 and \$30,000 to erect new fencing. The Willow Creek project is expected to be the largest undertaking with the greatest cost, estimated at over \$50,000 to remove the old fencing and install new pipe-rail fencing at two sites. Fence repair projects will incur a much lower cost and could be initiated as soon as materials and labor are secured. The Subcommittee will seek funding through Wildlife Heritage grants and federal aid (i.e., Pittman Robertson), and volunteer labor will be utilized to match 3:1.

CLARK COUNTY MULE DEER ENHANCEMENT SUBCOMMITTEE
Mule Deer Enhancement Program Clark County – Management Areas 26, 27, and 28
Limiting Factor Rankings and Project Proposals

To the Mule Deer Enhancement Oversight Committee Members:

The Clark County Mule Deer Enhancement Subcommittee is pleased to submit the attached project proposals for your consideration. Accompanying the project proposal forms, we offer key findings from our needs assessment and limiting factor ranking results supporting our proposed projects.

The Clark County Mule Deer Enhancement Subcommittee have identified improper grazing by feral hoofstock, climate effects on habitat, and free water availability as three major factors limiting mule deer persistence in southern Nevada. Horses and burros have a significant impact on the habitat shared with other wildlife, limiting the available forage, degrading water sources, and causing lasting damage to ecosystem function. In addition to the effects of feral hoofstock, the landscape in southern Nevada has experienced exceptional drought in the last several years, and it is unknown to what extent the habitat can recover without management action. Suitable habitat for mule deer in Clark County is already limited to patches, and mule deer density is generally very low except a few key areas.

We also acknowledge significant gaps in the data regarding the demography of mule deer in Areas 26, 27, and 28. No aerial surveys for mule deer are conducted in these Areas, and population metrics are derived from hunter harvest surveys in Areas 26 and 27 only. Density of mule deer is estimated to be very low in most of Area 27 and 28, but the Spring Mountains in Area 26 sustain a population at higher density due to cooler temperatures, greater annual rainfall, the presence of vegetation communities associated with mule deer occupancy, and access to free water from natural seeps, springs, and wildlife water developments. The Spring Mountains represent the largest contiguous portion of designated Mule Deer Habitat and contain the only area in southern Nevada designated as Crucial Summer Range. Given the distribution of mule deer in Clark County, it is the opinion of the Subcommittee to focus our restoration and management efforts in Area 26 at this time.

We propose to deploy trail cameras on important water sources in Mule Deer Habitat in the Spring Mountains to monitor the use of these resources by mule deer and other species. This project will address gaps in the data available about mule deer distribution and demography in this area and will supplement the harvest data collected. Camera data will also provide insight into habitat conditions at important water sources and the impacts of feral hoofstock on these resources. In addition, we propose improving springs and water sources by replacing or maintaining existing fencing or adding fencing to impacted areas in the Spring Mountains. Many of these springs have been identified by the US Forest Service (USFS) and Bureau of Land Management (BLM) as high-priority projects and either have undergone the National Environmental Protection Act (NEPA) process for action or fall under Categorical Exclusion as maintenance projects. Fencing springs and maintaining fences will exclude horses and burros

from sensitive riparian areas and minimize the chance of wildlife becoming entangled in derelict fencing.

We also propose habitat restoration efforts by removing invasive plants, namely mullein, from restoration areas and reseeding with native species. Mullein is a rapid-colonizing plant that is not palatable to mule deer, and which out-competes early successional native plants in disturbed areas such as the fuel-reduction treatments in the Spring Mountain National Recreation Area. Finally, we propose to support the efforts of the non-government organization (NGO) community in soliciting aid and funding from their members to assist the USFS and BLM with feral horse and burro management efforts. The Nevada Department of Wildlife has no jurisdiction over the management of feral horses and burros, though their impact on Nevada's wildlife and habitat is significant. The Environmental Assessment process for the Spring Mountains Wild Horse and Burro Complex Project was completed in May 2022, establishing appropriate management levels (AML) for horses and burros in the Spring Mountains. All AMLs are greatly exceeded, spurring action by the BLM to reduce horse and burro numbers.

We believe these projects as proposed will address impacts on mule deer populations in Clark County with both short-term and long-term effects. Gathering more robust data to better inform management decisions, protecting critical water resources for mule deer and other wildlife, enhancing native vegetation in restoration areas, and supporting the efforts to reduce horse and burro impacts are all critical to the conservation of mule deer. These proactive measures should increase our knowledge of mule deer populations and improve management practices in Clark County. Please see the attached supplementary project information describing benefits to mule deer for each project. We look forward to feedback from the Oversight Committee and working together to enhance mule deer populations and their habitat.

Respectfully Submitted,

Subcommittee Members: Adam Kearny, Brian Patterson, Dan Gilbert, Jelindo Tiberti II, Matt Blackburn, Ron Stoker, Dave Talaga, Nick Gulli, John Hiatt, Mark Transoon

Department Representatives: Erin Wood, Anthony Miller

Habitat Projects

MDEP Subcommittee: Clark County	Hunt Unit Group: MA 26, 27, & 28					
Project Title: Spring Mountains Mullein Removal	Project Location: The fuels reduction and restoration areas along Lovell Canyon Road in the Spring Mountains National Recreation Area (SMRNA)					
Brief Description of Project: <i>Include any development plans such as vegetation removal, planting, seeding, or installation of structures; also include the schedule for obtaining any necessary permits, completing NEPA compliance, etc.:</i>	Hand-pull noxious mullein plants from restoration areas within the SMRNA and re-plant with native seed or seedlings. This will require annual repetition for up to 3 years.					Score
Limiting Factor Score: <i>Use subcommittee cumulative score from Limiting Factor Score Form</i>	Maximum of 5 points possible					3
Unit Group 5-Year Published Deer Population Trend: Area 26 has no surveys and population trends are inferred through hunter havrest only.	2017: 500	2018: 500	2019: 500	2020: 500	2021: 500	
	Decreasing = 5 pts		Stable = 3 pts		Increasing = 1 pt	3
Does this project directly address factors limiting healthy mule deer populations?	Yes = 10 pts			No = 0 pts		5
<i>How will project address limiting factors?</i> Mullein (<i>Verbascum</i> spp) is an noxious plant that quickly establishes on disturbed areas, outcompetes native vegetation, and can create monocultures that deplete nutrients in the soil. It is not palatable to native ungulates and provides no useful overstory or understory for native wildlife. In post-fire restoration projects, mullein can quickly spread as the same equipment is used over large areas. replacing mullein with native seeds/plantings will help restore native vegetation before mullein monocultures can establish.						
Does this project protect, maintain or strategically restore statewide priority mule deer habitat, enhance critical habitat or a critical life stage for mule deer? <i>Score using the highest ranking criteria</i>	High priority (Critical Mule Deer Seasonal Range or Migration Route) = 10 points Moderate priority (High elev. summer range, PJ encroached shrub community, winter range) = 5 points Low priority (salt desert shrub or low density mule deer habitats) = 1 pt					10
<i>Provide added details:</i> The project will take place in designated Crucial Summer Range for mule deer in the Spring Mountains. It will focus on areas already under habitat restoration efforts by the US Forest Service, Bureau of Land Management, and/or Nevada Department of Wildlife.						
Is this mule deer habitat restoration or improvement of a long-term nature? <i>Does the project involve habitat trend and condition through restoration and improvement of a long-term or permanent nature? Projects of this nature are known to have long-term benefits with demonstrated history of past successes</i>	10+ years = 10 points			3-10 years = 5 points		5
Project Scale and Implications: <i>Is the size or magnitude of the project, relative to the habitat type or Mule Deer distribution, impactful? Does the project convey a large conservation benefit to important or critical habitat for Mule Deer? For instance, does a riparian project have a meaningful impact across multiple reaches within a watershed or would a seeding project address a large extent or important critical habitat?</i>	High impact = 15 pts		Moderate impact = 10 pts		Low impact = 1 point	6
Does the project build upon existing project work?	Yes = 5 pts			No = 0 pts		5
<i>Describe existing or past projects:</i> The project will focus on areas already under habitat restoration by the US Forest Service as part of their fuels amangement and post-fire restoration.						

Habitat Projects

<p>Timely Completion: <i>Needed permitting, authority, and mechanisms are completed or in process and does the project have a high probability of being completed on-time:</i> <i>-NEPA analysis or other statutory compliance is completed or not needed</i> <i>-Permits are completed or not needed</i> <i>-Contract mechanisms to support the work are in place or not needed</i></p>	<p>Timely completion (12 months) = 5 pts Extended completion (24 months) = 1 pt</p>	<p>3</p>
<p>Urgency: <i>(Is the project urgent due to a narrow biological window that requires immediate attention and funding to address resource degradation or deterioration?)</i></p>	<p>Yes = 5 pts No = 0 pts</p>	<p>2</p>
<p><i>Provide added details:</i> There is no urgent biological window, however, efforts put forth early will have greater impact than after noxious mullein has established in disturbed areas.</p>		
<p>Likelihood of Success: <i>What is the likelihood of successful completion and successful outcomes? Do the individuals and organizations involved possess the capability, experience, and proven methodology needed for implementation? Is the proposal supported by sound and established scientific or biological principals? Project objectives are realistic, measurable, and achievable with clearly defined methods</i></p>	<p>High likelihood= 5 points Moderate = 3 points Low = 1 point</p>	<p>3</p>
<p><i>Provide added details:</i> Mullein is very easy to identify and remove by hand, so there is no specific expertise or equipment required. The targeted removal of mullein and reseeding with native plants should provide better forage for mule deer and better ecosystem function in the identified restoration areas. Long-term success will be dependant on repeated visits to monitor progress and additional annual or semi-annual removal efforts due to the persistent nature of mullein. Long-term success will also depend on climate conditions (e.g. predicted rainfall, fire, etc).</p>		
<p>Partner Funding: <i>Does the project leverage funding or in-kind contributions by external partners and by how much? The project will utilize volunteer labor, which can be matched 3:1 with federal aid dollars.</i></p>	<p>>3x match = 10 pts 1.5-2.9 match = 7 pts 0.75-1.49 = 3 pts 0.1-.74 = 1 pt</p>	<p>10</p>
<p><i>(List amounts and sources if possible) Does the project have confirmed funding commitment from project partner such as a letter or memo with stated commitment amount?</i></p>	<p>Amount: \$ Source: Amount: \$ Source:</p>	
<p>Cost Effectiveness: <i>Are the expected results worth the cost of the project?</i></p>	<p>Very cost-effective = 10 pts Moderately cost-effective = 5 pts Minimally cost-effective = 1 pt</p>	<p>5</p>
<p><i>Provide added details:</i> The scope of the project is somewhat limited due to focusing on a single target for removal (due to ease of identification and removal) and in restoration areas only, but the cost will be very low due to relying heavily on volunteer labor and not requiring special equipment.</p>		
<p>Amount Requested:</p>	<p>\$</p>	
<p>Total Project Score (100 possible points)</p>	<p>Sum of Scores</p>	<p>60</p>

Habitat Projects

Project Narrative: *Be specific to the needs and issues associated with mule deer and/or habitat and your technical approach to addressing the issue. Identify potential benefits to mule deer and other wildlife. Describe if the project is on public or private land and any private landowner permissions. Please describe any NEPA permitting requirements if on public land and when NEPA completion is expected. Also provide a tentative project schedule of major tasks. If your project is associated with water rights (e.g. spring fencing project) please discuss the status of permissions to complete the project with water rights holders.*

Mullein (*Verbascum* spp) is an introduced plant that acts as an invasive or noxious weed. It can quickly colonize disturbed areas, such as roadsides, burns, or thinned areas. Mullein is unpalatable to native wildlife and can outcompete native ground cover used as important forage for mule deer. Quick to grow and take advantages in canopy breaks, mullein takes up nutrients and water that become unavailable for native vegetation later in the growing season. Mullein is also very prolific, generating huge seed banks that can persist in the environment for decades. This project seeks to document the occurrence of mullein along the Lovell Canyon Road in the Spring Mountains National Recreation Area, hand-remove mullein plants, and either re-seed with native vegetation or allow natural regeneration to occur. The project will focus on roadside areas and where mastication and fuels reduction (i.e., thinning) have occurred and created disturbances and canopy breaks. The US Forest Service has conducted or contracted the restoration efforts and provided maps for treatment areas.

Since mullein is very easy to identify and easy to remove by hand, there is no expertise or specialized equipment required to complete the removal process. Therefore, volunteer labor can be utilized and matched 3:1 with federal aid dollars. Mullein is a biennial plant, meaning it flowers every other year, so at least two removal trips will be ideal to document occurrence and effectively remove large areas. If hand re-seeding or planting is to occur afterward, we can collect native seed and use existing partnerships with local nurseries to propagate plantings. This project can be conducted at any time, though early spring is best as to pre-empt the flowering season and minimize mullein seed release.

Spring Mountains Mullein Removal

Mullein (*Verbascum* spp) is an introduced plant that acts as an invasive or noxious weed. It can quickly colonize disturbed areas, such as roadsides, burns, or thinned areas. Mullein is unpalatable to native wildlife and can outcompete native ground cover used as important forage for mule deer. Quick to grow and take advantages in canopy breaks, mullein takes up nutrients and water that become unavailable for native vegetation later in the growing season. Mullein is also very prolific, generating huge seed banks that can persist in the environment for decades. This project seeks to document the occurrence of mullein along the Lovell Canyon Road in the Spring Mountains National Recreation Area, hand-remove mullein plants, and either re-seed with native vegetation or allow natural regeneration to occur. The project will focus on roadside areas and where mastication and fuels reduction (i.e., thinning) have occurred and created disturbances and canopy breaks. The US Forest Service has conducted or contracted the restoration efforts and provided maps for treatment areas.

Since mullein is very easy to identify and easy to remove by hand, there is no expertise or specialized equipment required to complete the removal process. Therefore, volunteer labor can be utilized and matched 3:1 with federal aid dollars. Mullein is a biennial plant, meaning it flowers every other year, so at least two removal trips will be ideal to document occurrence and effectively remove large areas. If hand re-seeding or planting is to occur afterward, we can collect native seed and use existing partnerships with local nurseries to propagate plantings. This project can be conducted at any time, though early spring is best as to pre-empt the flowering season and minimize mullein seed release.

Investigations Projects

<p>MDEP Subcommittee: Southern Region, Clark County</p>	<p>Hunt Unit Group: MA 26, 27, & 28</p>	
<p>Project Title: Spring Mountains Camera Project</p>	<p>Project Location: Primarily the Spring Mountains of southern Nevada in Area 26, Unit 262</p>	
<p>Brief Description of Project: <i>Include any development plans such as capturing, collaring, wildlife health analysis, etc. and include the schedule for obtaining any necessary permits, permission, funding, etc.:</i></p>	<p>Establishing camera traps at important water sources and/or other use areas (e.g. corridors) to monitor use by mule deer and other species, infer demographics of mule deer, and document impacts of feral livestock. Up to 40 cameras will be at 20 sites between Jan 01 and July 31.</p>	Score
<p>Limiting Factor Score: <i>Use subcommittee cumulative score from Limiting Factor Score Form</i></p>	Maximum of 5 points possible	5
<p>Has this mule deer management area or hunt unit group been identified as a statewide priority for research or investigations? The project area overlaps Crucial Summer Range for mule deer.</p>	<p style="text-align: center;">Yes = 10 pts No = 0 pts</p>	10
<p>Does this project directly address identifying factors limiting healthy mule deer populations? (10 points possible) Yes</p>	<p style="text-align: center;">Yes = 10 pts No = 0 pts</p>	10
<p><i>How will project address limiting factors?</i> Improper grazing by feral hoofstock, climate impacts on habitat quality, and water distribution have all been identified by this subcommittee as top factors limiting mule deer persistence in Clark County. This camera project may act as a pilot study for intensive monitoring of springs and other important resources used by mule deer and sympatric wildlife (e.g. elk, burros) that may act as competitors or predators.</p>		
<p>Does this project occur in a crucial or priority habitat for mule deer? (10 points possible) (Score using the highest ranking criteria) Yes, Crucial Summer Range in the Spring Mountains.</p>	<p>High priority (Critical Mule Deer Seasonal Range or Migration Route) = 10 points Moderate priority (High elev. summer range, PJ encroached shrub community, winter range) = 5 points Low priority (salt desert shrub or low density mule deer habitats) = 1 pt</p>	10
<p><i>Provide added details:</i> This project will focus in the Spring Mountains, where adequate density of mule deer populations is met. Within the Spring Mountains is an area of Crucial Summer Range for mule deer and is the only area of Crucial Range in Clark County.</p>		
<p>Will the research or investigation improve knowledge of habitat and restoration of a long-term or permanent nature? Projects of this nature are known to have long-term benefits with demonstrated history of past successes. Yes, and longer if cameras are redeployed for several years.</p>	<p style="text-align: center;">10+ years = 10 points 3-10 years = 1 point</p>	5
<p>Is the sample size (# of marked animals) and project scale (distribution across an entire hunt unit or region) adequate to gain meaningful inference or statistical power for interpreting the relative impact of this investigation? Yes</p>	<p style="text-align: center;">High impact = 10 pts Moderate impact = 5 pts Low impact = 1 point</p>	10
<p>Does the project complement an adjacent project or study, previous project, or help inform future habitat projects? Yes, see below.</p>	<p style="text-align: center;">Yes = 5 points No = 0 pts</p>	5
<p><i>Describe existing or past projects:</i> The data collected from this project can inform future habitat projects, especially those concerning water source protection and monitoring. Another project proposed by this subcommittee is the protection and enhancement of springs and water sources in the Spring Mountains, focusing on those that have been impacted by feral hoofstock or are of particular importance to mule deer.</p>		
<p>Needed permitting, authority, and mechanisms are completed or in process and does the project have a high probability of being completed on-time: Yes -NEPA analysis for wilderness permits for capture work -Permission from private landowners or other government agencies (such as USFWS or D.O.D.) -Contract mechanisms to support the work are in place or not needed</p>	<p style="text-align: center;">Timely completion (12 months) = 5 pts Extended completion (24 months) = 1 pts</p>	5

Investigations Projects

<p>Is the project urgent due to a narrow biological window that requires immediate investigation and funding to address the problem or lack of knowledge?</p>	<p style="text-align: center;">Yes = 5 points No = 0 pts</p>	<p style="text-align: right;">4</p>
<p><i>Provide added details:</i> While there is not an urgent biological window (e.g. fawning season) that would dictate the absolute implementation of the project, the time frame we have selected (Jan 1 - July 31) allows for maximum monitoring time during the legal trail camera placement window for Nevada. We will be relying on volunteer labor to place, maintain, and collect the cameras and SD cards during this time, and many of our volunteers are sportspeople and could conceivably benefit from the data collected. The start and end dates were chosen so as to dispel any perception of unfair advantage to those volunteers who would be collecting SD cards. Volunteers will not be processing the photo data collected from the cards.</p>		
<p>What is the likelihood of a successful project? High likelihood means a proposal is supported by sound scientific principles, appropriate sample sizes for statistical inference, and comprehensive study design. Low likelihood means a general lack of clear project objectives, or is not supported by scientific principles, or lacks a robust study design and direct application to wildlife management.</p>	<p style="text-align: center;">High likelihood= 5 points Moderate likelihood = 3 points Low likelihood = 1 point</p>	<p style="text-align: right;">5</p>
<p><i>Provide added details:</i> The placement of cameras on water sources and other high-use areas should give good distribution throughout the designated Mule Deer Habitat and Crucial Summer Range used by mule deer (target species) while also maximizing the likelihood of detection for both target and non-target species. Non-target species include feral hoofstock, elk, and predators (e.g. mountain lion), all of which are expected to use the same water sources and high-use areas. If population/demographic estimates are to be inferred, cameras can be placed to minimize inclusion of multiple camera sites within a single home range (based on average size of home range among mule deer in southern Nevada) to reduce instances of double-counting the same individual/group.</p>		
<p>Does the project leverage funding or in-kind contributions by external partners and by how much? Yes, 3:1 match will apply to volunteer hours.</p>	<p style="text-align: center;">>3x match = 10 pts 1.5-2.9 match = 7 pts 0.75-1.49 = 3 pts 0.1-.74 = 1 pt</p>	<p style="text-align: right;">10</p>
<p><i>(List amounts and sources if possible) Does the project have confirmed funding commitment from project partner such as a letter or memo with stated commitment amount? Commitments have been made by Wildlife and Habitat Improvement of Nevada (WHIN) and Las Vegas Woods and Waters Club for funding and labor.</i></p>	<p>Amount: \$ as needed Source: WHIN Amount: \$ as needed Source: Las Vegas Woods and Waters Club</p>	
<p>Cost Effectiveness: <i>Are the expected results worth the cost of the project? Absolutely.</i></p>	<p style="text-align: center;">Very cost-effective = 10 pts Moderately cost-effective = 5 pts Minimally cost-effective = 1 pt</p>	<p style="text-align: right;">10</p>
<p><i>Provide added details:</i> The initial purchase of the equipment is expected to cost between \$5000 and \$8000 dollars. The field labor (setup, maintenance, removal) will rely heavily on volunteers, which can be matched 3:1. Equipment may be procured at a discount through NGO partnerships. Data analysis and reporting will be performed by NDOW staff. The cost to run the project for subsequent years will be minimal while adding robustness to the dataset.</p>		
<p>Amount Requested:</p>	<p>\$</p>	
<p>Total Project Score (100 possible points)</p>	<p style="text-align: right;">Sum of Scores</p>	<p style="text-align: right;">89</p>

Project narrative: *Be specific to the research needs and issues associated with mule deer and/or habitat and your technical approach to addressing the issue. Identify potential benefits to mule deer and other wildlife. Describe if the project would be conducted on BLM, FS, USFWS, or private land and if any private landowner permissions are necessary. Please describe any NEPA permitting requirements (such as permission to capture animals in wilderness) if on public land and when NEPA completion is expected. Also provide a tentative project schedule of major tasks (ie collar orders, capture dates, data collection period, reporting dates, etc). Please list any collaborators or project funding partners.*

The goal of this project is to increase the data available about species occupancy, demography, and resource use in Area 26, focusing on mule deer in the Spring Mountains. We propose deploying up to 40 trail cameras at 20 sites that have frequent visitation by mule deer. Placing cameras at water sources will maximize the likelihood of visitation and will increase the rate of detection, and some of these water sources will require more than one camera to cover the area. Important corridors or other high-use areas will also be considered for camera placement. Our three major objectives are to 1) monitor the use of water sources and other high-use areas by mule deer, 2) monitor the use of important mule deer resources by non-target species such as feral hoofstock, native competitors, and predators, and 3) monitor the condition of important resources (e.g., the vegetation around a spring). The project addresses the need for data on the populations of mule deer in Clark County, a factor identified by the Subcommittee as limiting the scope of current and future management practices. No aerial or ground surveys are conducted for mule deer in Areas 26-28, and population metrics are derived from hunter harvest surveys in Areas 26 and 27 only. This project will provide supplementary data to the hunter harvest metrics collected from Area 26 by documenting distribution and age- and sex ratios of mule deer visiting water sources in the Area with the highest estimated mule deer density. It will also provide information about the daily and seasonal patterns of use by mule deer and other species and give insight into possible impacts they have on critical resources.

Most of the land for the proposed project is administered by the US Forest Service (USFS) and the Bureau of Land Management (BLM). Areas of focus will be springs, seeps, and other water sources or high-use areas within the Spring Mountains National Recreation Area (SMNRA; USFS) and other parts of the Humboldt-Toiyabe National Forest (USFS) and the Red Rock Canyon National Conservation Area (BLM). Areas of wilderness include The Mt. Charleston Wilderness and the Mt. Stirling Wilderness Study Area, for which the placement of cameras will be covered under Categorical Exclusion or under completed Environmental Assessment.

The cameras will be placed in metal lock boxes and secured to existing structures such as trees or fenceposts or to t-posts as needed to discourage theft. The cameras, lock boxes, and other equipment may be procured through non-government organizations (NGOs) at a discounted cost, and the labor to deploy, maintain, and remove the cameras will largely be completed by NGO/volunteer groups. The cost of the equipment is estimated between \$5000 and \$8000, depending on the number of cameras needed and availability of materials, and can be covered by a Wildlife Heritage Fund grant. The cost of volunteer labor can be matched 3:1 via federal aid (i.e., Pittman-Robertson). Wildlife and Habitat Improvement of Nevada (WHIN) and Las Vegas Woods and Waters Club have made soft commitments for securing funding and providing volunteer labor. The cameras will be deployed and collecting data between January 1 and July 31. This time frame will allow for adequate data collection over seasonal changes while complying with the Nevada regulation for trail camera placement. Because volunteers will be used for camera deployment and maintenance (i.e., battery and SD card changes), we want to minimize the perception of an unfair advantage given to project volunteers who may benefit from the data. All data processing will be completed by NDOW staff.

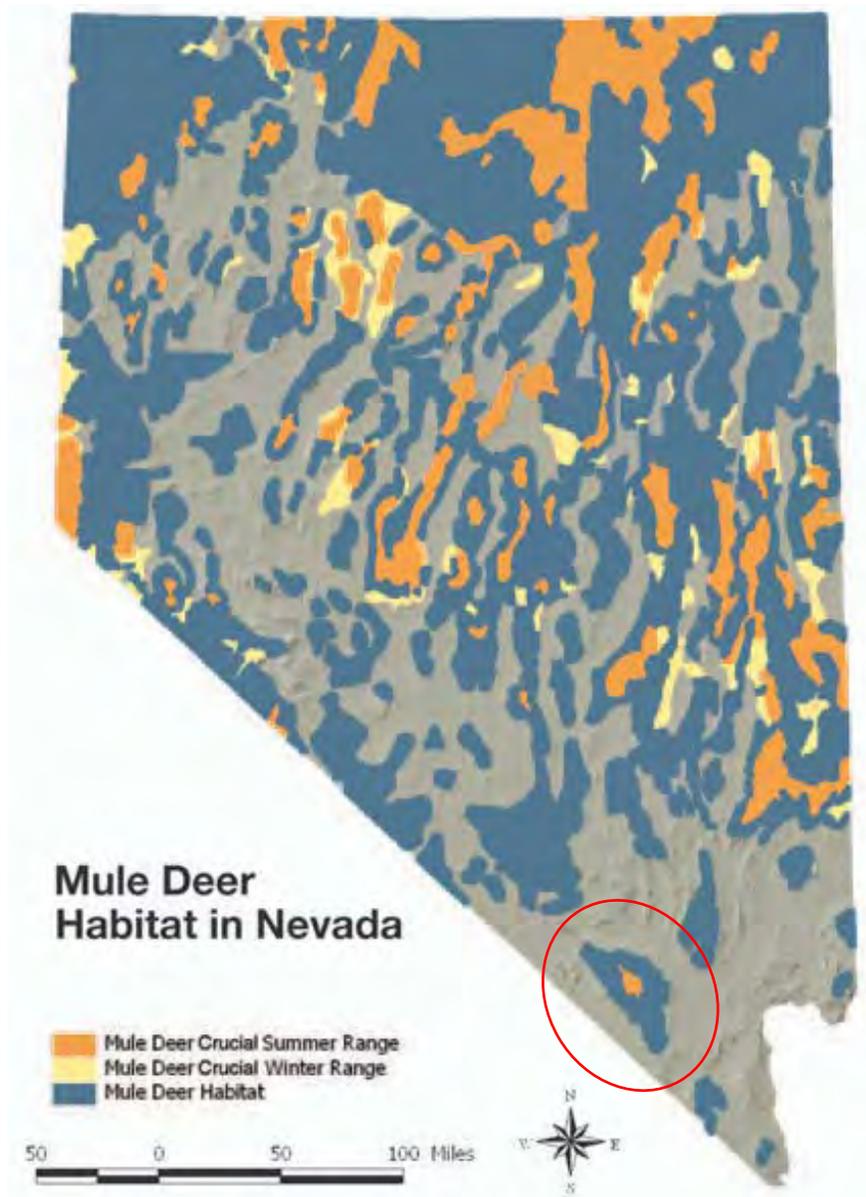
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Map depicting designated Crucial Summer Range (orange), Crucial Winter Range (yellow), and Mule Deer Habitat (blue) in Nevada, USA. The red circle highlights the Spring Mountains containing the only Crucial Summer Range in Clark County.