

FY2023 Predator Management Status Report Appendix

Annual Predator Management Project Reporting Form

Please fill out this form to the best of your ability. If you have questions please contact Predator Management Staff Specialist Pat Jackson at Pjackson@ndow.org or 775-688-1676. If necessary please use additional pages in your responses.

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1. Fiscal Year Reporting: 7/1/2022-6/30/2023
2. Date Report Submitted: 8/24/2023
3. Name of Contractor (include name of submitter if different): Brian Jansen
4. Address of Contractor: PO Box 2219, Camp Verde, AZ 86322
5. Phone Number of Contractor: 928-925-8189
6. Email of Contractor: bighorns101@yahoo.com
7. Contract Number: 72DOW-S1271
8. Dates of Contract: 12/2021 - 11/2025
9. Dates Worked: 86 days total

Jackson Mts: 11/18-21/2022

Calico Mts: 7/6-10/2022, 8/4/2022, 6/19-24/2023

Snowstorm Mts: 10/26-31, 12/12-13/2022, 1/7, 4/27-5/2/2023

Delamar/Clover Mts: 7/6-11/2022, 1/10-18, 5/29-6/4/2023

Massacre Rim: 9/16-20, 12/7-11/2022

Volcanic Hills: 11/12-17/2022

Sheldon NWR: 5/27/23

10. Assessment of Habitat Conditions of Project Area (if applicable): The lower parts of Jacksons seem very poor for forage. Seems like a combination of drought and too many cattle given the annual precipitation the last year or 2. Delamars are continued to be hammered by horses and maverick cattle, except in the dry wilderness area Calicos seem stable in forage with horse numbers being fewer and little cattle grazing of the higher areas. Deer seem to be concentrated in the alfalfa fields and very few away from Ag. Snowstorms seems to be stable in forage conditions.
11. Briefly describe work conducted: Lethal removal of mountain lions within distribution of select bighorn sheep populations. GPS/Satellite collar deployment on mountain lions in conjunction with a predation study of horses by mountain lions in Delamar and Clover Mts. Collar Deployment on Sheldon NWR.

12. List number and species of predators removed.

Mountain lion = 9 total (7 Lethal, 2 Collar)

- Snowstorm Mts. = 6 (1M, 5F) Lethally Removed
- Calico Mts = 1 (1M) Lethally Removed
- Delamar / Clover Mts. = 2 (2F) GPS Collars Deployed

13. Provide an overall assessment of project. In your opinion should the project continue?

Ungulates reproduce slowly, especially bighorn sheep. It takes multiple years of sustained predation control to create observable changes in bighorn populations. Most of the ranges worked are small in physical size and bighorn population size; small numbers of mountain lions can negatively impact these populations and continued removal of only a few animals annually will result in observable changes to population sizes. I encourage all of the project work sites to continue until at such time population objectives for bighorn sheep have been reached. I would also encourage the project areas to collar ungulates and include me on the mortality alerts. It is far more effective if we have collars informing us of lion-caused mortality along with direct hunting for lions. However, collars are useless for catching predators if I am not informed immediately of a mortality and that mortality is not investigated immediately. There are only 3 nights that a lion will be feeding on an adult deer, bighorn, or pronghorn and the first is needed to detect the mortality. Thus, mortality alerts need to be responded to immediately not just by myself, but by anyone available to determine cause of death. Waiting 2 nights after an alert will not be useful. I am willing to respond immediately but help is appreciated and adding my contact to the alert notice would be very effectively.

This past year, NDOW has done a much better job of informing me of ungulate mortalities immediately. I very much appreciate the change in efforts and it has been helpful in a number of instances that we might not have been successful otherwise. I think the ungulate projects benefit from these efforts.

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1. **Fiscal Year Reporting:** 2022-2023
2. **Date Report Submitted:** 8-28-2023
3. **Name of Contractor (include name of submitter if different):** University of Montana
4. **Address of Contractor:** 32 Campus Dr Missoula, MT, 59812

5. **Phone Number of Contractor:** 406-243-4989
6. **Email of Contractor:** joshua.millsbaugh@mso.umt.edu
7. **Contract Number:** SG22-03
8. **Dates of Contract:** 7-1-2022 thru 6/30/2023
9. **Dates Worked:** 7-1-2022 thru 6/30/2023
10. **Assessment of Habitat Conditions of Project Area (if applicable):** NA
11. **Briefly describe work conducted:** Project 46 aims to use remote data collection technologies (i.e., camera traps and weather stations) to study mule deer, mountain lion, feral horse populations in northwest Nevada, to better understand mule deer abundance and population regulation in the region. We are also continuing black bear research initiated in 2018. Work in 2023 focused on checking camera-traps and weather stations that were installed in late 2020 through early 2021, and beginning analysis of data collected in early 2023. During 2022-23 we finalized the analysis of black bear data collected from 2018-2020 and published findings in the Journal of Wildlife Management. A second manuscript quantifying topographic effects on wildlife detection on cameras was accepted for publication in the journal Wildlife Biology. Two additional manuscripts are currently under revision for publication, one quantifying the distribution of female black bears with cubs across their Nevada range and one documenting western gray squirrel expansion into pinyon-juniper woodland. Three presentations were delivered to the Nevada Board of Wildlife Commissioners during this fiscal year.
12. **List number and species of predators removed (if applicable):** NA
13. **Provide an overall assessment of project.** In your opinion should the project continue? Project 46 continues to run as expected, with camera traps installed and continuously collecting data at 208 sites across northwestern Nevada, and weather stations collecting temperature and precipitation data at 35 of these locations. Cameras and weather stations were checked in early summer 2023, providing an additional year of data to incorporate into statistical models. The most recently collected photo data is still being processed but for target species, we have detected mule deer at least 545 times at 90 sites, feral horses at least 147 times at 68 sites, and mountain lions at least 41 times at 20 sites. These target-species detections will enable us to evaluate our objective to quantify habitat use overlap between these species and the potential role of these species to mule deer decline. In addition to target species, our cameras have collected photos of elk and black bears outside their known Nevada distribution (far northwest Nevada), highlighting the value of cameras for monitoring changes in the distribution of large mammal species.

Our preliminary runs of the time-to-event model used to estimate deer abundance for the study area are promising, yielding estimates that were similar to those produced by NDOW flight surveys. A key part of this analysis was obtaining a movement rate for this mule deer population at a fine temporal scale, which we worked with staff specialists at NDOW to achieve by increasing the fix rate of collared deer. Although we anticipate beginning to meet project deliverables with the data collected thus far this fiscal year (2023-24), cameras and

weather stations are still operating in the field and will need to be checked again or collected in early summer 2024. Thus, we recommend that the project continue at least through the next fiscal year (2023-24) to finish field activities, and preferably through the end of 2024 so that manuscripts can be prepared for peer review with data collected in summer 2024.