



INVESTING IN THE FUTURE OF WYOMING'S MULE DEER HERDS

Better data. Better management.



FOUR GENERATIONS OF ALEX'S FAMILY HAVE HARVESTED mule deer on his ranch in eastern Wyoming. They've seen how CWD has changed the number of mature bucks and are ready to do something. But there's a problem. Without knowing how many deer are in the herd, and how many bucks are out there, it's hard to tell whether management actions have an effect. This is true across the state. It influences public support for management tools and applies to nearly all issues facing our mule deer herds.

CHALLENGE



SOLUTION

We propose a 5 yr, state of the art **monitoring program**, delivering robust population information, transparent assessments of future harvest opportunities, and a clear ability to evaluate the results of our management actions. In the last 5 years mule deer have brought >\$45 M to the Department. We have a chance to invest some of that in their future.



OUTCOMES

Mule deer management is controversial. But good data and communication can help. This program will enhance mule deer conservation statewide by providing:

- Actionable data to drive management decisions
- Increased transparency
- Public buy-in for new management tools
- Robust techniques to measure progress
- Stronger credibility



Cutting-edge information on harvest and public values



Robust data on herd composition + trends



Disease + nutrition assessments



Updated abundance estimates



Current data that's accurate + immediately available



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State of the art program focused on 6 areas critical to management



ABUNDANCE

Track several herds each year to determine the size of the herd (aka abundance). Wyoming's landscapes are complex, so it is difficult to count every deer. Abundance surveys deliver reliable information on how many deer are in a herd. Currently, the Department conducts an abundance survey in one herd per year. This proposal will allow managers to collect the same high-quality information in multiple herds across the state.



COMPOSITION

Update the Department's approach to measuring the number of males, females and juveniles in a herd. Use trail cameras, ground surveys and aerial counts to get finer scale information on herd composition.



SURVIVAL

Monitor female, male and juvenile survival across 5 focal herds using GPS collars. Herds will be located in different parts of the state to capture important differences in habitat, disease and predators. Studying focal herds will help managers better understand the key factors that influence how many deer we have in Wyoming. Managers will use the information they collect to measure herd performance, assess causes of mortality, evaluate harvest strategies, update maps of seasonal ranges and more.



HERD HEALTH + GROWTH

DISEASE

Continue with ongoing CWD monitoring. Managers will also collect blood and other relevant samples from deer captured as part of the focal herd program (see SURVIVAL).

NUTRITION + BODY CONDITION

Use existing data and monitoring information from this proposal to better understand the relationships between nutrition, body condition and population growth.



HARVEST MANAGEMENT + PUBLIC ENGAGEMENT

Continue to collect information on hunter effort, recreation days and harvest success. Explore the effectiveness of different elk management strategies that may benefit deer. Work with experts to improve how the Department communicates with the public about deer management.



DATA MANAGEMENT

Provide managers with seamless access to current monitoring data. Improve the Department's data storage and data management systems. Partner with University of Wyoming scientists (Dr. Merkle and Dr. Monteith) to support agency work on mule deer. The University of Wyoming has agreed to provide partial funding to support this component of the proposal.



Leveraging investments

The Department, landowners, sportspeople and NGOs make substantial investments in Wyoming's deer herds every year. The information collected through this program will help managers accomplish several long-term goals, including strategies outlined in the Mule Deer Initiative, and the Department's strategic plan.



WYOMING COOPERATIVE
FISH & WILDLIFE RESEARCH UNIT

UNIVERSITY OF WYOMING



HAUB SCHOOL OF ENVIRONMENT
AND NATURAL RESOURCES



\$2.4 million startup
\$842k annual costs
\$5.7 million in total