

# PRIORITIZATION OF WILDLIFE-VEHICLE CONFLICT IN NEVADA

By: **Lindsey Costello**

## Key Points:

**Project Number:**

604-16-8036

**Start Date:**

TBD

**Duration:**

15 Months

**Project Cost:**

\$100,000

**Primary**

**Investigator:**

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**Senior Ecologist:**

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**GIS Analyst:**

Christopher

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## PROBLEM

Wildlife-vehicle conflicts (WVC) occurs in all areas where wildlife is present and motorists move over the landscape. These conflicts often result in collisions with wild animals, which are usually fatal to the individual animal, and dangerous to motorists. In Nevada there are hundreds reported crashes per year with wild animals. A state-wide understanding of the WVC areas of highest priority is needed for NDOT to best enact mitigation alternatives to reduce these collisions. Ecologically, it is also important to proactively find alternatives to move wildlife beneath and above the roads in places where mule deer, elk, and other large animals, including horse and cow are known to cross major highway, not just where carcasses have been recorded.

## OBJECTIVE

Nevada needs a single document on the degree of the problem of WVC across all major highways, and a plan for how to best proceed to reduce these collisions. The proposed research would develop a Nevada state-wide wildlife mitigation plan for transportation. It would bring together existing data and create a methodology to prioritize areas for WVC mitigation. In turn, Nevada could more effectively make roads safer for motorists, and create additional cost-effective wildlife mitigation alternatives that would help wildlife populations move across roads and persist.

## METHODOLOGY

Doctor Cramer and her team will be utilizing previously developed research methods and technologies to achieve the multiple tasks set before them before delivering their final report. Their main tasks are to:

- Summarize current statistics related to wildlife vehicle collisions in relation to other crashes in Nevada, and literature review
- Bring together data from NDOT and NDOW related to wildlife vehicle collisions and large ungulate movements to identify areas of motoring public safety concern on large roads within Nevada



## Contact Information:

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- Develop a prioritization plan that identifies the needs and sets priorities associated with interaction of roadway infrastructure and wildlife movements along Nevada's major roads
- Summarize with examples a cost-benefit analysis of past and upcoming wildlife mitigation projects.
- Create a usable GIS file that highlights problem areas that NDOT and NDOW staff can access during early transportation planning
- Prepare a framework with standard measures that Nevada should use as benchmarks to trigger the need for wildlife road crossing mitigation presently and in the future
- Describe potential sources of funding for wildlife crossing measures from federal, state, county, and other sources
- Develop a detailed implementation plan for NDOT
- With the above tasks accomplished, create a statewide wildlife mitigation plan that brings together existing wildlife and transportation data and the products of this research into a draft final report
- Deliver final report

## IMPLEMENTATION POTENTIAL

The details that will be provided in the report will help NDOT create the most cost-effective structures and other alternatives because personnel will have a better understanding of what measures work with specific species of wildlife, and how to build just enough to what is needed rather than more than necessary. These cost-savings can amount to millions of dollars.

Nevada highways will become safer for the motoring public. This can be valued as mentioned above, in the minimum value of \$10,067 per PDO collision. When reduced human injuries and deaths are factored in, the savings would be in the millions of dollars. Nevada's wildlife populations, especially mule deer, elk, and bighorn sheep could become more numerous, with more stability, thereby an increasing the intrinsic value of the animals and hunter dollars generated from future animals that would have otherwise been killed on Nevada's roads.

