

Nevada Department of Wildlife Predator Management Status Report Fiscal Year 2016



NRS 502.253 (predator fee)

- ~\$550,000 generated annually
- \$14,000 admin support Dept of Agriculture
- Predator plan projects
- Staff salary
- Reserve remains available for future years

Changes in uses of NRS 502.253

1. Management of predatory wildlife
2. Research on lethal control techniques of predatory wildlife
3. Protection of sensitive species

Budget Summary

- \$570,368 revenues from FY 2014
- $\$570,368 \times 0.8 = \$456,294$ (80% mandate)
- \$312,175 spent on lethal removal (54.7%)
- \$675,525 spent total, \$169,400 from Federal Aid

Project 21: Greater Sage-Grouse Protection (Common Raven Removal)

- Protect greater sage-grouse populations
- Lethally remove common ravens



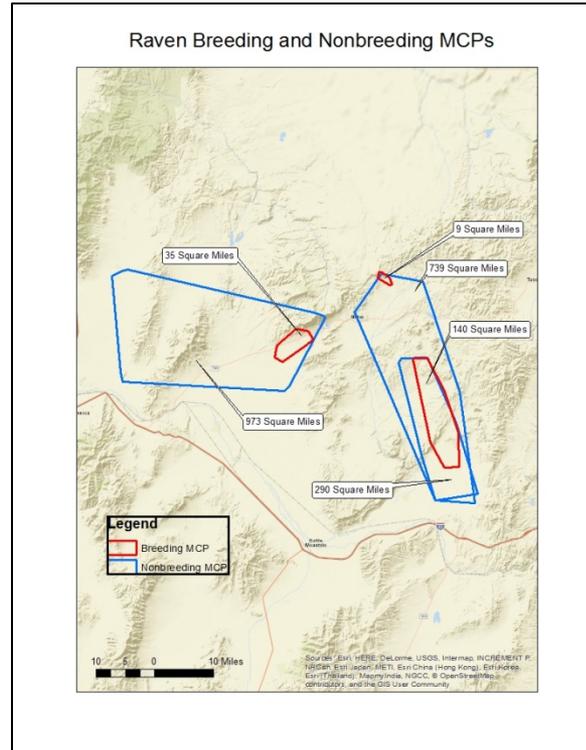
Project 21: Greater Sage-Grouse Protection (Common Raven Removal)

- 2,319 common ravens removed by Wildlife Services

Area	Ravens Removed
MA 3	456
MA 6	69
MA 7	367
MA 8	45
MA 10	87
MA 11	275
MA 14	32
MA 15	165
MA 20	42
MA 22	194
MA 23	587
Total Ravens	2,319

Project 21: Greater Sage-Grouse Protection (Common Raven Removal)

- 5 ARGOS and 2 GSM transmitters deployed



Project 21: Greater Sage-Grouse Protection (Common Raven Removal)

- Exclosure finished at Midas transfer station



Project 21: Greater Sage-Grouse Protection (Common Raven Removal)

\$3 Planned Expenditures	P-R Planned Expenditures	Wildlife Services Expenditures	NDOW Lethal Expenditures	NDOW Non-Lethal Expenditures	NDOW Salary, Travel, and Office	Total
\$78,000	N/A	\$51,815	\$0	\$44,304	\$10,091	\$106,211

Project 21-02: Common Raven Removal to Enhance Greater Sage- Grouse Nest Success



USGS Work

Not \$3 predator fee work

- Marked 13 sage grouse, followed an additional 37
- Watched 15 nests, 4 failed
- Monitored broods and habitat
- Conducted common raven and raptor surveys

USGS Work

\$3 predator fee work

“This information is preliminary and is subject to revision. It is being provided to meet the need for timely best science. The information is provided on the condition that neither the U.S. Geological Survey nor the U.S. Government may be held liable for any damages resulting from the authorized or unauthorized use of the information.”

- Drafted an initial data summary on raven populations in the Virginia Mountains

Project 21-02: Common Raven Removal to Enhance Greater Sage- Grouse Nest Success

- 181 common ravens removed

\$3 Planned Expenditures	P-R Planned Expenditures	Wildlife Services Expenditures	NDOW Lethal Expenditures	NDOW Non-Lethal Expenditures	NDOW Salary, Travel, and Office	Total
\$50,000	N/A	\$20,895	\$0	\$24,211	\$10,091	\$55,197

Project 22 Mule Deer-Game Enhancement

Updated in Predator Report

\$3 Planned Expenditures	P-R Planned Expenditures	Wildlife Services Expenditures	NDOW Lethal Expenditures	NDOW Non-Lethal Expenditures	NDOW Salary, Travel, and Office	Total
Project 22	N/A	\$8,264	\$0	\$0	\$10,091	\$18,355

Project 22-01: Mountain Lion Removal to Protect California Bighorn Sheep

- Wildlife Services removed 6 mountain lions in 011, 5 in 013
- No mountain lion predation on marked sheep
- One known coyote predation event on a young ram

\$3 Planned Expenditures	P-R Planned Expenditures	Wildlife Services Expenditures	NDOW Lethal Expenditures	NDOW Non-Lethal Expenditures	NDOW Salary, Travel, and Office	Total
\$45,000	N/A	\$54,094	\$0	\$0	\$10,091	\$64,185

Project 22-074: Mountain Lion Removal and Diet Analysis to Protect California Bighorn Sheep

- Wildlife Services did not conduct work
- Private contractor performed work, no mountain lions removed
- Population estimated at less than 15 animals, no known predation events in FY2016

Project 22-074: Mountain Lion Removal and Diet Analysis to Protect California Bighorn Sheep

- Wildlife Services collected hair, blood, tissue, and whisker samples from 3 mountain lions in FY2015
- Samples processed, differences in diet exist
- No stable isotopes collected on prey base

\$3 Planned Expenditures	P-R Planned Expenditures	Wildlife Services Expenditures	NDOW Lethal Expenditures	NDOW Non-Lethal Expenditures	NDOW Salary, Travel, and Office	Total
\$45,000	N/A	\$4,240	\$25,000	\$575	\$10,091	\$39,907

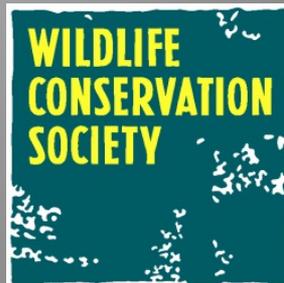
Project 22-16 Coyote Den Density Effects on Mule Deer Fawns and Other Wildlife Species

- 120 trail cameras purchased
- 37 deployed before project was cancelled

\$3 Planned Expenditures	P-R Planned Expenditures	Wildlife Services Expenditures	NDOW Lethal Expenditures	NDOW Non-Lethal Expenditures	NDOW Salary, Travel, and Office	Total
\$40,000	\$120,000	\$0	\$0	\$68,844	\$10,091	\$78,935

Project 32: Questions Addressed

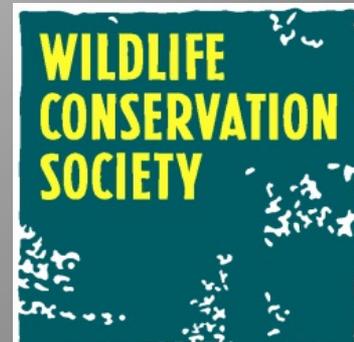
- Increase understanding of black bear and mountain lion interactions, especially in areas where bears are expanding their range into historical areas they have been absent >80 yrs.
- Determine if mountain lion kill rates differ in areas occupied by black bears and if this changes over time with bear expansion into historical ranges.
- Determine if mountain lion conflicts increase where black bears are present.
- Do food subsidies gained by the dominant carnivore (e.g., bears) usurped from subordinate species (e.g., mountain lions) ultimately aide in population expansion into unoccupied ranges?



This on-going project is a unique study combining the efforts of two long-term studies being conducted by WCS and NDOW on 1) black bears (1997-present) and 2) mountain lions (2008-present) in the Great Basin of Nevada where black bears are naturally re-colonizing historic ranges.

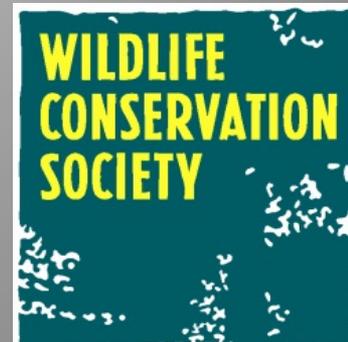


Black bear scavenging from kill made by collared mountain lion in Nevada.



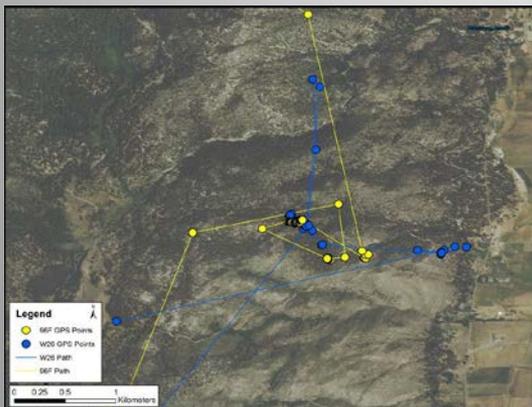
Fieldwork update: Captures and proximity collars

During the past year, we have collared five female mountain lions and one male lion with GPS PLUS Proximity collars; four lions in the Carson Range and two in Great Basin ranges. Additional mountain lion captures will occur during the coming winter. We also deployed GPS PLUS Proximity collars on 11 additional bears captured during 2016. Of those 11 bears, their capture locations were split approximately evenly between the Carson Range and Great Basin ranges. All bears overlap at least one of the collared lions' home range.

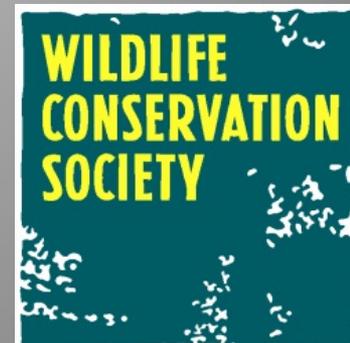
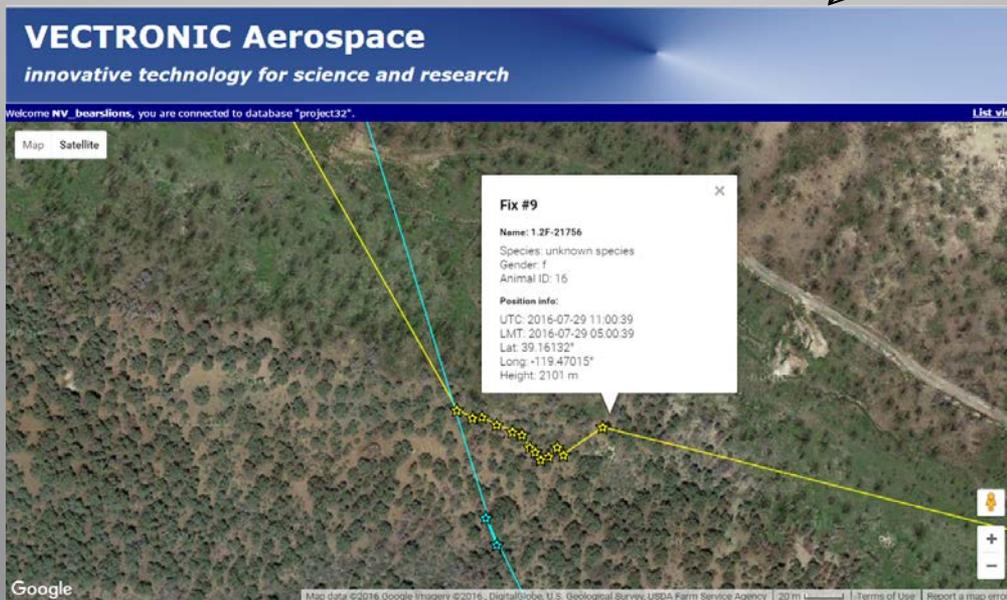


Fieldwork update: Captures and proximity collars

During the past year, the GPS PLUS Proximity collars continued to be successful in acquiring data on black bear-mountain lion interactions, linked successfully and functioned as planned when animals were within 200 meters generating these data important to addressing the questions in this project



Examples of the Vectronics GPS PLUS Proximity collars functioning properly and collecting interaction data (i.e. simultaneous points every 15 seconds for both animals).

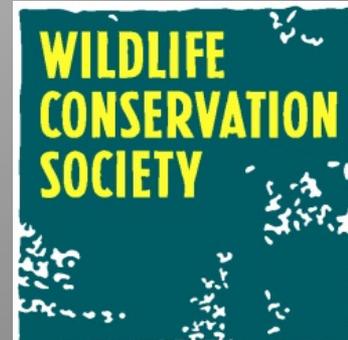
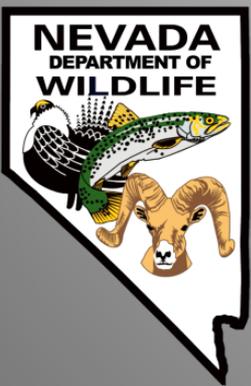


Fieldwork update: Kill site and diet data

To-date for this project, we have collected mountain lion diet data from over 1,000 documented predation events.

During 2016 field crews from NDOW and WCS collected direct field data from approximately 150 new kill sites.

These data continue to be used to estimate kill rates, prey species and level of bear-lion interactions across varying levels of bear densities in the study area.



Project 32 Mountain Lion, Black Bear, and Mule Deer Interactions

\$3 Planned Expenditures	P-R Planned Expenditures	Wildlife Services Expenditures	NDOW Lethal Expenditures	NDOW Non-Lethal Expenditures	NDOW Salary, Travel, and Office	Total
\$40,000	\$120,000	\$0	\$0	\$90,806	\$10,091	\$100,897

Project 35 Using Genetic Testing to Identify Origin of Red Fox

- 241 high elevation scats collected, 52 tissue samples from lower elevation collected
- Final report submitted
- No genetically pure red fox in Nevada
- Final grand report incorporating other states and funding sources will be available
~February 2017

\$3 Planned Expenditures	P-R Planned Expenditures	Wildlife Services Expenditures	NDOW Lethal Expenditures	NDOW Non-Lethal Expenditures	NDOW Salary, Travel, and Office	Total
\$2,500	\$7,500	\$0	\$0	\$9,750	\$0	\$9,750

Project 37 Big Game Protection- Mountain Lions

- Two mountain lions were removed by a contractor in the Snowstorm Mountains
- Two mountain lions were removed by Wildlife Services in Unit 115

\$3 Planned Expenditures	P-R Planned Expenditures	Wildlife Services Expenditures	NDOW Lethal Expenditures	NDOW Non-Lethal Expenditures	NDOW Salary, Travel, and Office	Total
\$90,000	N/A	\$8,570	\$18,100	\$0	\$10,091	\$36,761

Project 38 Big Game Protection- Coyotes

- Area biologists identified underperforming pronghorn herds
- Wildlife Services conducted aerial removal and removed 417 coyotes to benefit pronghorn

\$3 Planned Expenditures	P-R Planned Expenditures	Wildlife Services Expenditures	NDOW Lethal Expenditures	NDOW Non-Lethal Expenditures	NDOW Salary, Travel, and Office	Total
\$90,000	N/A	\$97,794	\$0	\$0	\$10,091	\$107,885

Project 39 Predator Education

- Assembly Bill 78 precluded education as an acceptable expenditure
- No funds spend on project

\$3 Planned Expenditures	P-R Planned Expenditures	Wildlife Services Expenditures	NDOW Lethal Expenditures	NDOW Non-Lethal Expenditures	NDOW Salary, Travel, and Office	Total
\$1,500	\$4,500	\$0	\$0	\$0	\$0	\$0

Project 40 Coyote Removal to Complement Multi-faceted Management in Eureka County

- Wildlife Services conducts coyote removal to benefit mule deer
- 516 coyotes, 1 badger removed
- Mule deer fawn:adult ratios have been improving since 2009

\$3 Planned Expenditures	P-R Planned Expenditures	Wildlife Services Expenditures	NDOW Lethal Expenditures	NDOW Non-Lethal Expenditures	NDOW Salary, Travel, and Office	Total
\$1,500	\$4,500	\$0	\$0	\$0	\$0	\$0

Questions?

