

Nevada Department of Wildlife Predator Management Status Report Fiscal Year 2018



NRS 502.253 (predator fee)

- ~\$700,000 generated annually
- \$14,000 admin support Dept of Agriculture
- Predator plan projects
- Staff salary
- Reserve remains available for future years

NRS 502.253

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

Budget Summary

- \$595,631 revenues from FY 2016
- $\$595,631 \times 0.8 = \$476,505$ (80% mandate)
- \$641,331 spent on lethal removal (108%)
- \$1,253,900 spent total

Levels of Monitoring

1. Standard
2. Intermediate
3. Rigorous



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)

- 2,381 common ravens removed by Wildlife Services

Area	Ravens Removed
MA 3	585
MA 6	101
MA 7	217
MA 8	86
MA 10	29
MA 11	39
MA 14	214
MA 15	354
MA 20	93
MA 22	291
MA 23	372
Total Ravens	2,381

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

- Lethal raven removal imperative to maintain and improve Greater sage-grouse populations
- Continue Project 21 while common ravens are believed to be limiting factor of Greater sage-grouse

\$3 Planned Expenditures	P-R Planned Expenditures	Wildlife Services Expenditures	NDOW Lethal Expenditures	NDOW Non-Lethal Expenditures	NDOW Salary, Travel, and Office	Total
\$100,000	N/A	\$39,151	\$0	\$5,848	\$12,816	\$57,815

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



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

- 108 common ravens removed
- Due to an unexpected fire, NDOW supports continuing project through FY2020

\$3 Planned Expenditures	P-R Planned Expenditures	Wildlife Services Expenditures	NDOW Lethal Expenditures	NDOW Non-Lethal Expenditures	NDOW Salary, Travel, and Office	Total
\$25,000	N/A	\$16,695	\$0	\$0	\$12,816	\$29,511

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

- Bighorn sheep populations in Units 011 and 013 under performing
- Wildlife Services and private contractors used to remove mountain lions in proximity to bighorn sheep populations
- 5 GPS collars for bighorn sheep deployed in both 011 and 013

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

- Wildlife Services removed 7 mountain lions in 011 and 3 in 013
- Contractor removed 3 mountain lions in 011
- No mountain lion predation on marked sheep
- 4 GPS collars online in 011, 5 in 013
- NDOW supports project until population viability is reached

\$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	\$95,341	\$27,800	\$0	\$12,816	\$135,957

Project 22-074: Monitor Rocky Mountain Bighorn Sheep for Mountain Lion Protection

- Wildlife Services did not conduct work
- No work from private contractors
- Population estimated at 25-30 animals, no known predation events since FY 2016
- 5 bighorn sheep captured and collared

Project 22-074: Monitor Rocky Mountain Bighorn Sheep for Mountain Lion Protection

- NDOW supports Project 22-074 until population reaches viability as defined in the annual Predator Plan

\$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	\$0	\$0	\$4,900	\$12,816	\$17,716

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

- Project ending
- NDOW technicians collected kill site data for 6 lion (192 sites)
- WCS provided final report (in appendix)
- NDOW recommends replacing this project

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

- Visited 126 kill sites in FY 2018
- 35,000+ GPS locations from 10 lions
- 60,000+ GPS locations from 30 bears
- 600+ predation events
- Other data in appendix

\$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	\$80,274	\$12,816	\$93,090

Project 37 Big Game Protection- Mountain Lions

- Area game biologists are contacted about potential mountain lion issues in their areas
- Contractors and Wildlife Services are deployed to remove mountain lions

Project 37 Big Game Protection- Mountain Lions

- WS removed 3 mountain lions in Unit 252 and 1 on Unit 041
- Private contractor removed 5 mountain lions in the Snowstorms
- Private contractor removed 1 mountain lion in the Jackson Mountains, 2 in the Delamar Range

Project 37 Big Game Protection- Mountain Lions

- 5 GPS collar purchased, 6 deployed in the Delamar mountains
- NDOW supports continuing this project that allows for removal of mountain lions in quick response to identified needs

\$3 Planned Expenditures	P-R Planned Expenditures	Wildlife Services Expenditures	NDOW Lethal Expenditures	NDOW Non-Lethal Expenditures	NDOW Salary, Travel, and Office	Total
\$175,000	N/A	\$40,932	\$134,285	\$21,627	\$12,816	\$209,660

Project 38 Big Game Protection- Coyotes

- Area biologists identified underperforming pronghorn herds
- Wildlife Services uses aerial and ground effort to reduce local coyote populations

Project 38 Big Game Protection- Coyotes

- 239 coyotes removed
- NDOW supports continuing this project that allows for removal of coyotes in quick response to identified needs

Area	Coyotes Removed
MA 7	74
MA 10	18
MA 16	54
MA 20	17
MA 22	5
MA 23	71
Total	239

\$3 Planned Expenditures	P-R Planned Expenditures	Wildlife Services Expenditures	NDOW Lethal Expenditures	NDOW Non-Lethal Expenditures	NDOW Salary, Travel, and Office	Total
\$125,000	N/A	\$133,720	\$0	\$0	\$12,816	\$146,536

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

- Underperforming mule deer herd in Area 14
- 13 mule deer does collared since January 2017 (3 in FY 2018), 7 killed by mountain lions

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

- Wildlife Services conducts coyote removal to benefit mule deer
- 319 coyotes, 5 mountain lions removed

\$3 Planned Expenditures	P-R Planned Expenditures	Wildlife Services Expenditures	NDOW Lethal Expenditures	NDOW Non-Lethal Expenditures	NDOW Salary, Travel, and Office	Total
\$100,000	N/A	\$110,960	\$0	\$20,343	\$12,816	\$144,119

Project 41: Increasing Understanding of Common Raven Densities and Space Use in Nevada

- 36 ARGOS transmitters deployed
- 63 nests monitored to detect fledging
- NDOW technicians conducted 390 miles of transmission line surveys, counted 25 nests
- NDOW technicians conducted 978 raven and raptor point count surveys

Project 41: Increasing Understanding of Common Raven Densities and Space Use in Nevada

Raven Population Modeling

- Model built using > 15,000 point counts
- Raven occurrence > 80% Great Basin
- O'Neil et al. (2018) Broad-scale occurrence of a subsidized avian predator: reducing impacts of ravens on sage-grouse and other sensitive prey

Project 41: Increasing Understanding of Common Raven Densities and Space Use in Nevada

Raven Density Estimation

- Distance sampling done across 41 sites
- Densities often exceeded ~ 0.4 raven km^2
- Raven effect at 0.48 km^2
- Coates et al. (*Submitted to Condor: Ornithological Applications*) Estimating Common Raven densities in a semi-arid ecosystem: implications for conservation of sage-grouse and other sensitive prey species.

Project 41: Increasing Understanding of Common Raven Densities and Space Use in Nevada

- NDOW supports continuing project 41

\$3 Planned Expenditures	P-R Planned Expenditures	Wildlife Services Expenditures	NDOW Lethal Expenditures	NDOW Non-Lethal Expenditures	NDOW Salary, Travel, and Office	Total
\$100,000	\$300,000	\$0	\$0	\$351,417	\$12,816	\$364,233

Project 43: Mesopredator Removal to Protect Waterfowl, Turkeys, and Pheasants on Wildlife Management Areas

- Primarily waterfowl and turkeys underperforming on some WMAs
- Wildlife Services deployed ground efforts to remove mesopredators
- NDOW supports continuing project 43 pending funding availability

Project 43: Mesopredator Removal to Protect Waterfowl, Turkeys, and Pheasants on Wildlife Management Areas

Species	Mason Valley	Overtone
Badger	0	1
Coyote	23	19
Feral Cat	0	2
Mink	1	0
Kit Fox	0	1
Raccoon	4	5
Spotted Stunk	0	1

\$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	\$28,447	\$0	\$0	\$12,816	\$41,263

Overall Budget

	FY 2016 Actual (revised)	FY 2017 Actual (revised)	FY 2018 Actual (revised)	FY 2019 Projected
Beginning balance	\$732,094	\$778,844	\$592,122	\$412,582
Revenues	\$595,107	\$653,835	\$677,186	\$677,186
Plan Budget	\$556,000	\$839,500	\$961,500	\$691,500
Expenditures	\$548,357	\$840,557	\$856,726	\$691,500
Ending balance	\$778,844	\$592,122	\$412,582	\$398,268

Questions?

