

# **Nevada Department of Wildlife Predator Management Plan 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

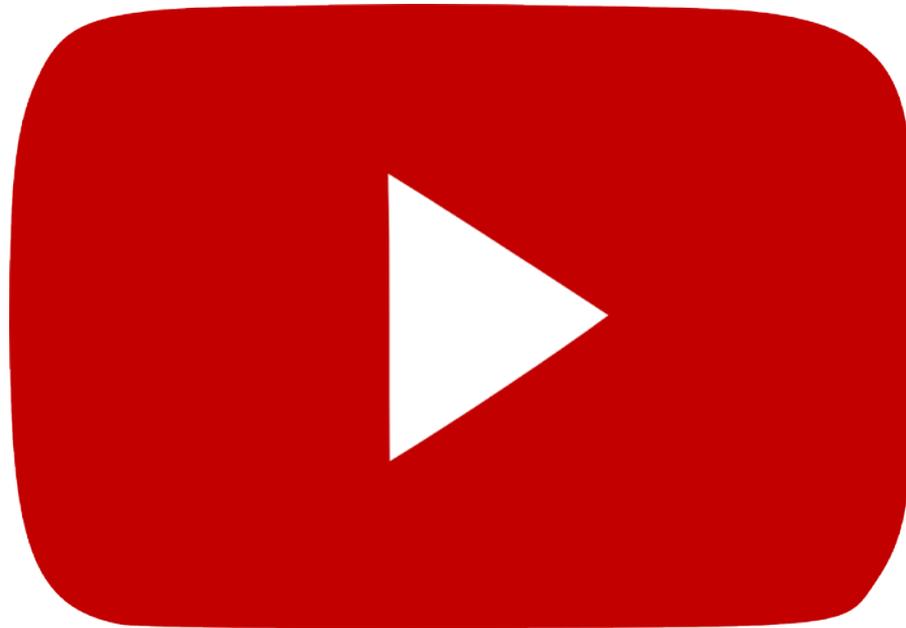
# AB 78

- Mandates that 80% of revenues from most recent fiscal year from which we have complete accounting to be spent on lethal removal
- Includes monitoring of effects from lethal removal efforts

# Budget Summary

- \$574,312 revenues from FY 2015
- $\$574,312 \times 0.8 = \$459,449.60$  (80% mandate)
- \$697,000 allocated to lethal removal in plan

# Project Recommended for Continuation



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

Project Type: Implementation and Experimental Management



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

- Protect greater sage-grouse populations
- Lethally remove common ravens
- Determine what level of raven control is  
needed

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

**Budget:\$78,000**

- Wildlife Services administers corvicide (DCR-1339)
- 11 eggs gone=1 removed common raven
- Surveys to determine common raven densities across Nevada



# Monitoring

## Response Variable

- Point counts before, during, and after to determine changes in raven densities

## Level of Monitoring

- Standard to intermediate



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

Project Type: Implementation and Experimental  
Management



# Subproject 21-02: Common Raven Removal and Greater Sage-Grouse Nest Success

**Budget: \$25,000**

- Document effect of raven removal
- Wildlife Services conducts avicide application
- USGS has conducted telemetry, camera, and lek surveys



# Monitoring

## Response Variable

- Sage grouse nest success
- Brood survival

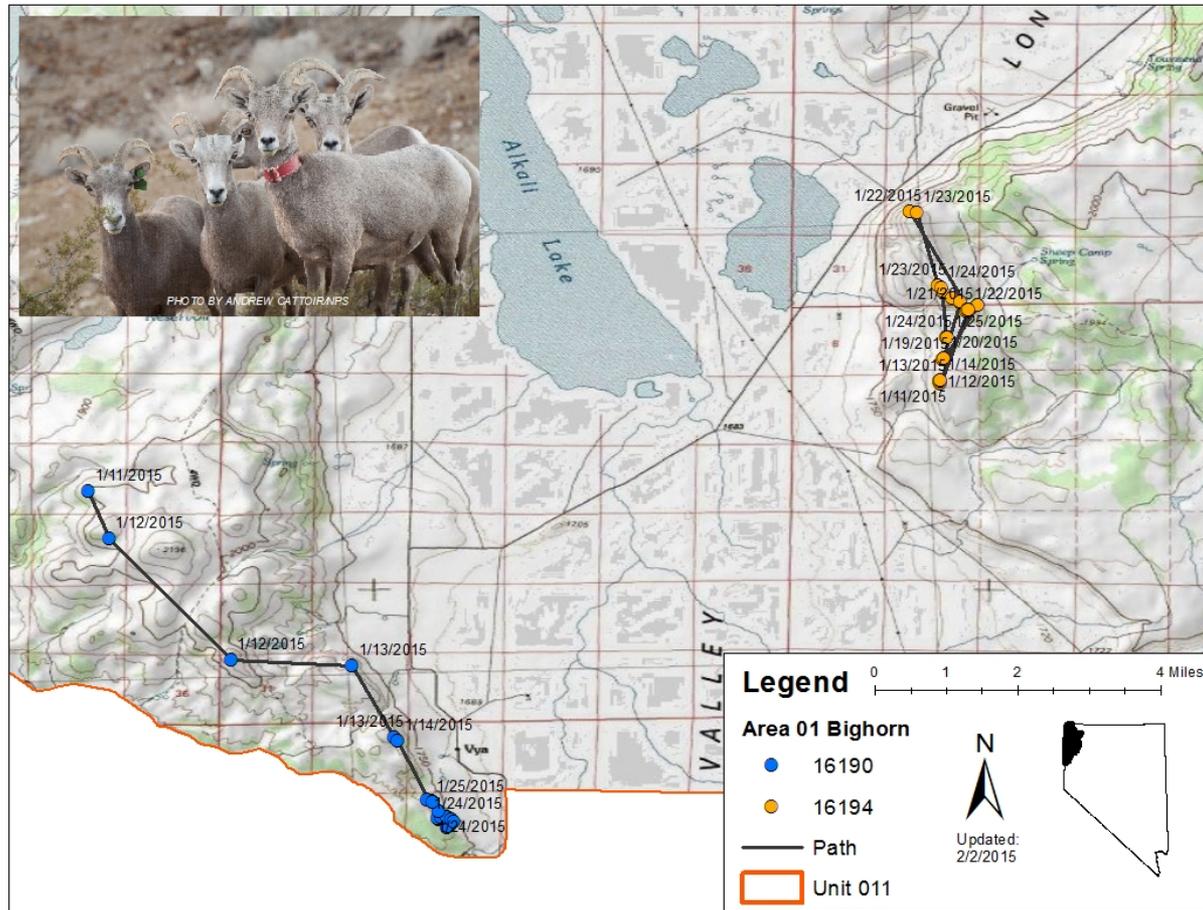
## Level of Monitoring

- Intermediate (funding not from predator fee)



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

Project Type: Implementation



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

**Budget: \$90,000**

- Establish self-sustaining population of bighorn sheep, subset of population is currently collared
- Wildlife Services is proactively removing lions entering area
- Wildlife Services or others may respond reactively with dogs after a sheep mortality

# Monitoring

## Response Variable

- Number of collared bighorn sheep killed by mountain lions

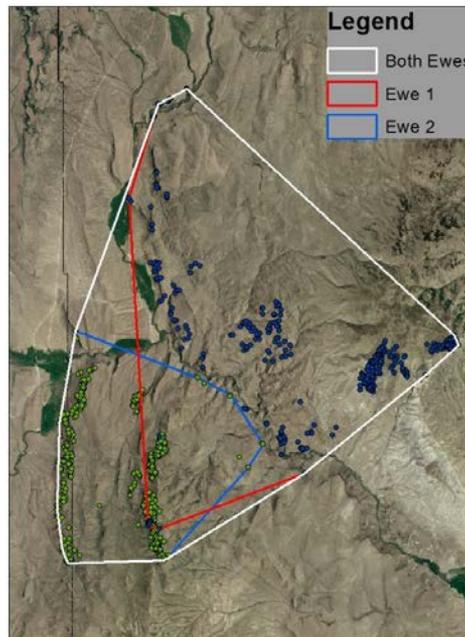
## Level of Monitoring

- Standard to intermediate\*



# Subproject 22-074: Mountain Lion Removal for the Protection of Rocky Mountain Bighorn Sheep

Project Type: Implementation and Experimental  
Management



# Population Dynamics

- Populations estimated at 35-40 individuals in both 011 and 013

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<b>Action</b>	<b>Bighorn Sheep Population</b>
Monitor bighorn population, conduct removal on case by case basis	> 80
Remove lions that consume bighorn sheep*	60 - 80
Remove all lions in area	< 60

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# Subproject 22-074: Monitor Rocky Mountain Bighorn Sheep for Mountain Lion Predation

**Budget: \$90,000**

- Establish self-sustaining population of bighorn sheep
- Monitor bighorn sheep populations with GPS collars
- Remove mountain lions consuming bighorn sheep

# Monitoring

## Response Variable

- Number of collared bighorn sheep killed by mountain lions

## Level of Monitoring

- Standard to intermediate\*



# Population Dynamics

- The population estimate is approximately 15 individuals in area 074

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<b>Action</b>	<b>Bighorn Sheep Population</b>
Monitor bighorn population, conduct removal on case by case basis	> 15
Remove lions that consume bighorn sheep*	10 - 15
Remove all lions in area	< 10

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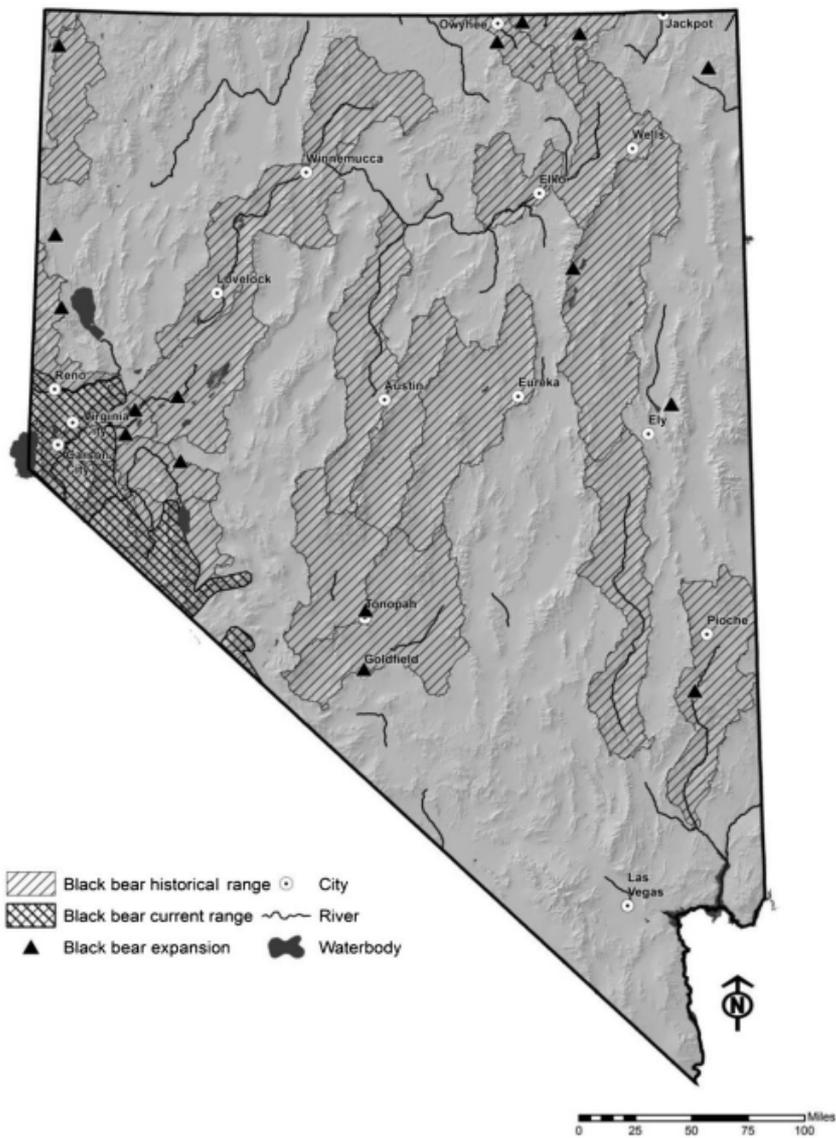
# Project 32: Mountain Lion, Black Bear, and Mule Deer Interactions

Project Type: Experimentation



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

- Increase understanding of black bear and mountain lion interactions
- Determine if mountain lions kill more deer in areas occupied by black bears
- Determine if mountain lion conflicts increase where black bears are present



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

**Budget: \$160,000 (40k from \$3 predator fee)**

- Mark 18 black bears, 18 mountain lions, and 60 mule deer with GPS collars
- Monitor kill sites of mountain lions, determine if bears take over kill sites
- Monitor movements of mountain lions, black bears, and mule deer in close proximity

# Monitoring

## Response Variable

- None, this is an experimental project

## Level of Monitoring

- Rigorous



# Project 37: Big Game Protection- Mountain Lions

Project Type: Implementation



# Predator Removal Indices

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<b>Species</b>	<b>Annual Adult Survival Rates</b>	<b>Fall Young: Female Ratios</b>	<b>Spring Young: Female Ratios</b>	<b>Adult Female Annual Survival Rates</b>
California Bighorn Sheep	< 90%	< 40:100	--	--
Rocky Mountain Bighorn Sheep	< 90%	< 40:100	--	--
Desert Bighorn Sheep	< 90%	< 30:100	--	--
Mule Deer	--	--	< 35:100	< 80%
Pronghorn	< 90%	< 40:100	--	--

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# Project 37: Big Game Protection- Mountain Lions

**Budget: \$100,000**

- Addressing mountain lion predation that has a negative influence on game populations
- Work will be conducted by Wildlife Services, private houndsmen, and/or private trappers
- Problematic mountain lions will be identified through GPS collar locations, trail cameras, and kill sites

# Monitoring

## **Response Variable**

- Reduction of mountain lion induced mortalities
- Reduction of mountain lion densities or sign
- Removal of known offending individual
- Response variable may not be collected

## **Level of Monitoring**

- Standard to intermediate

# Project 38: Big Game Protection- Coyotes

Project Type: Implementation



# Project 38: Big Game Protection- Coyotes

**Budget: \$100,000**

- Addressing coyote predation that has a negative influence on game populations
- Removal of coyotes in winter range and fawning areas in certain situations
- Work will be conducted by Wildlife Services and private contractors

# Monitoring

## **Response Variable**

- Reduction of coyote induced mortalities
- Removal of offending individuals
- Reduction in coyote sign
- Response variable may not be collected

## **Level of Monitoring**

- Standard to intermediate

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

Project Type: Implementation



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

**Budget: \$100,000**

- Coyote removal will complement previously conducted feral horse removal, habitat improvement, and past predator removal efforts

# Monitoring

## Response Variable

- Fawn to doe ratios in the Diamonds and/or in Unit 144

## Level of Monitoring

- Standard



# FY 2017 NEWLY PROPOSED PROJECTS



# Project 41: Common Raven Management and Experimentation

Project Type: Experimentation



# Project 41: Common Raven Management and Experimentation

**Budget: \$400,000 (100k from \$3 predator fee)**

- Develop a protocol to estimate common raven populations
- Increase the understanding of common raven density and distribution
- Increase the understanding of how human subsidies affect common raven movements and space use

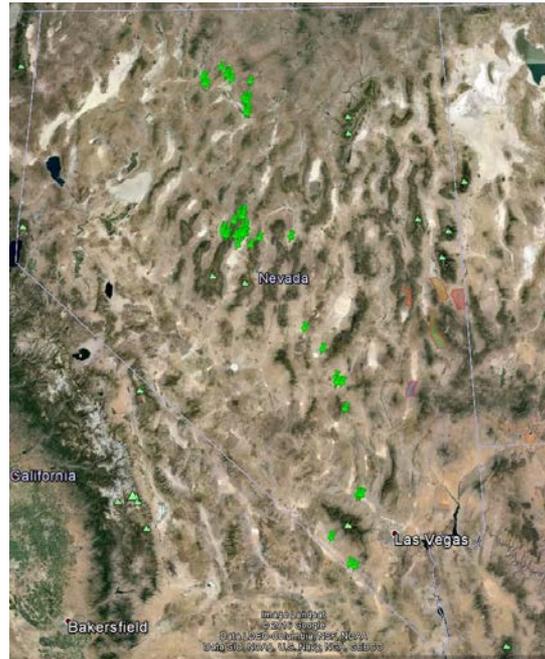
# Monitoring

## Response Variable

- None, this is an experimental project

## Level of Monitoring

- Rigorous



# Project 42: Assessing Mountain Lion Harvest in Nevada

Project Type: Experimentation



# Project 42: Assessing Mountain Lion Harvest in Nevada

**Budget: \$10,000 (2,500k from \$3 predator fee)**

- Develop a model that predicts the number of lions that must be removed
- Identify gaps in data
- Determine what data is necessary to increase NDOWs understanding of mountain lions statewide

# Monitoring

## Response Variable

- None, this is an experimental project

## Level of Monitoring

- Rigorous



# Project 43: Mesopredator removal to protect waterfowl, turkeys, and pheasants on Wildlife Management Areas

Project Type: Implementation



# Project 43: Mesopredator removal to protect waterfowl, turkeys, and pheasants on Wildlife Management Areas

**Budget: \$50,000**

- To occur on Overton and Mason Valley WMAs
- Coyotes, striped skunks, and raccoons will be lethally removed

# Monitoring

## Response Variable

- Number of females with clutches
- Number of young per clutch

## Level of Monitoring

- Standard



# PROJECTS RECOMMENDED FOR DISCONTINUATION



# Project 22: Mule Deer-Game Enhancement

Project Type: Implementation and Experimental  
Management



# Subproject 22-16 Monitoring of Predator and Prey Populations Prior to a Lethal Treatment of Predators

Project Type: Experimental Management  
Implementation (Future Years)



# Project 35: Using Genetic Testing to Identify Origin of Red Fox

Project Type: Experimentation



# Project 39: Predator Education



# Questions?

