

**ARIZONA GAME AND FISH DEPARTMENT  
HABITAT PARTNERSHIP COMMITTEE  
HABITAT ENHANCEMENT AND WILDLIFE MANAGEMENT PROPOSAL**

Game Branch / HPC Project Number: 12-303

**PROJECT INFORMATION**

**Project Title:** GMU 10 Predator Density Reduction

**Region and Game Management Unit:** Region III: GMU 10

**Local Habitat Partnership Committee (LHPC):**

**Was the project presented to the LHPC?**  
YES[] NO[]

**Has this project been submitted in previous years?** YES[X] NO[]

**If Yes, was it funded?** YES[X] NO[] → **Funded HPC Project #(s):** 09-704

**Project Type:** Increased Fawn Survival through Predation Management

**Brief Project Summary:**

This project will fund coyote removal efforts in the spring of 2013 in GMU 10. HPC Project #09-704 was funded as a three year project with an option to fund the fourth year based on the first three year's results. The pronghorn fawn: doe ratio has increased from a pre project 2009 average of 15 fawns:100 does to a post project 2012 average of 35 fawns:100 does. The 2013 effort will continue to increase the GMU 10 pronghorn population through increased fawn survival as a result of springtime coyote removal.

**Big Game Wildlife Species to Benefit:** Pronghorn antelope, mule deer, and bighorn sheep

**Implementation Schedule** (Month/Day/Year):

Project Start Date: March 1, 2013

Project End Date: May 31, 2013

**Environmental Compliance:**

NEPA Completed: Yes[] No[] N/A[]

Projected Completion Date: \_\_\_\_\_

State Historic Preservation Office - Archaeological Clearance:

Yes[] No[] N/A[]

Projected Completion Date: \_\_\_\_\_

Arizona Game and Fish Department EA Checklist: N/A[]

To be Completed by: R Day

Projected Completion Date: \_\_\_\_\_

**PROJECT FUNDING**

**Special Big Game License Tag Funds Requested:**

\$ 9,289 from Antelope

\$ 9,289 from Mule Deer

**Cost Share or Matching Funds:**

**\$ 18,578 Total Request**

Additional authorization to spend remaining balance of \$ 31,422 remaining in HPC 09-704.

**Total Project Costs:**

**\$ 18,578**

**PARTICIPANT INFORMATION**

**Applicant** (please print):

Ron Day

**Address:**

5000 W. Carefree Highway

Phoenix, Arizona 85024

**E-mail:**

rday@azgfd.gov

**Telephone:** (623) 236-7352

**Date:** August 29, 2012

**AGFD Contact and Phone No.** (If applicant is not AGFD personnel): N/A

**Project has been coordinated with:** Arizona Antelope Foundation, Arizona Deer Association, Arizona Desert Bighorn Sheep Society

**NEED STATEMENT – PROBLEM ANALYSIS:** HPC Project 09-704 funded antelope fawn enhancement activities in the months of March, April and May in game management unit 10 from 2010 through 2012. As a direct result of this project 226 coyotes were removed from the Aubrey Valley and 443 coyotes were taken off the Plains for a total of 669 coyotes removed. The surveyed fawn to doe ratio responded positively and increased from 15:100 in 2009, the year prior to the project, to 35:100 in 2012. This fawn:doe ratio is a bit misleading in that the number of pronghorn surveyed in GMU 10 increased from 157 total pronghorn observed in the 2009 survey to 626 total pronghorn, including 133 fawns, observed in 2012. If funded, the 2013 effort will continue to increase the GMU 10 pronghorn population through increased fawn survival as a result of springtime coyote removal.

The fawn:doe ratio increased to higher levels during this project than in previous efforts where only aerial gunning was used. This is most likely attributed to the combination of trapping and aerial gunning as the methods used to remove coyotes. This combination of methods has been effective with 300 coyotes removed in 2010, 194 coyotes removed in 2011, and 175 coyotes removed in 2012 for a total of 669 coyotes removed from occupied pronghorn habitat in the last three springs. The surveyed fawn:doe ratio for this unit has increased from 15:100 in 2009, to 31:100 in 2010, 53:100 in 2011 and 35:100 in 2012. The 2011 fawn:doe ratio was the highest recorded in Unit 10 since 1970.

Summary of Pronghorn Survey Data in Unit 10, 2006-2012

Unit	Year	Bucks	Does	Fawns	Uncl	Total	Bucks/ 100 Does	Fawns/ 100 Does	No. Coyotes Removed
10	2006	126	324	56	0	506	39	17	0
	2007	44	89	10	0	143	49	11	0
Pre-treat Average (no removal)							41	16	
	2008	35	117	25	0	177	30	21	96
	2009	41	101	15	0	157	41	15	74
Pre-treat Average (aerial only)							35	18	
	2010	12	93	29	0	135	13	31	300
	2011	32	137	73	0	242	23	53	194
	2012	116	377	133	0	626	31	35	175
Post-treat Average (aerial and trapping)							26	39	

**PROJECT OBJECTIVES:** Obtain a surveyed pronghorn fawn: doe ratio in excess of 50 fawns:100 does in 2013 by reducing the coyote population in March, April, and May through a combination of trapping and aerial gunning.

## **PROJECT DESCRIPTION AND STRATEGIES:**

### Methods

- 1) **Trapping.** Trapping has been a historic method to control coyotes for many years and has several advantages over aerial gunning. Trapping may be used in areas where tree density prevents the safe or effective use of aerial gunning. In addition, trapping is not negatively impacted by wind or low visibility as is aerial gunning.

The land status in GMU 10 is typical of many Arizona antelope herds. There are large amounts of private land interspersed with state trust lands. Private lands are exempt from the restrictions imposed by ARS 17-301D and the use of foot hold traps to control coyotes are allowed.

This project proposes to use the services of two individuals contracted to trap those private lands in Unit 10 where permission is granted in each project year during the months of March, April, and May. The contractors will be expected to use their own equipment including their vehicle, camp equipment, and foot hold traps meeting the standards set in R12-4-307. The total area to be trapped will be divided into six sub units. Each contractor will be expected to run a trap line of no less than 60 traps for 10 days in each subunit.

It will be the trapper's responsibility to ensure they are trapping on those private lands where permission has been obtained for this project.

All non-target wildlife will be released immediately. No portion of any coyote taken as part of this project may be possessed unless specifically permitted or desired by the Department.

- 2) **Aerial Gunning.** Currently the only form of coyote control used by the Department to increase antelope fawn survival, this method is very effective under the right circumstances but has several drawbacks. A) The first drawback is expense. The current cost of aerial coyote control is approximately \$9,000.00 per GMU/year. This amounts to about 6 days of actual flying per unit costing roughly \$ 1,500.00/ day. This cost is prohibitive and does not allow for the intense removal necessary to remove an adequate number of coyotes over a large number of units. B) Timing of control effort. Due to scheduling conflicts or delays caused by high winds the removal effort may in certain years occur too late and a large number of fawns are already lost to predation.

The advantage to aerial gunning is that it is effective and can be done on state trust lands found in Unit 10. The aerial gunning efforts will concentrate on those areas where foot hold traps cannot be used or where it appears from the presence of sign that there are still a large number of coyotes remaining after the trapping effort.

- 3) **Hunting.** Though the least successful method, coyotes will be removed by predator calling, sitting waterholes, as well as opportunistically. This will be done by Department personnel, sportsman groups and other volunteers from the general public.

**PROJECT LOCATION:**

Private lands in Game management unit 10, which includes the Aubrey Valley and the northern portion of game management unit 10 known as the Plains. These locations are the same as HPC project #09-704.

**LAND OWNERSHIP AT THE PROJECT SITE(S):** Same as HPC 09-704. Prior to any active control work coordination will occur between the landowners and the Department.  
(if the project area is private property, please state specifically and provide the landowner's name)

*IF PRIVATE PROPERTY, IS THERE A COOPERATIVE BIG GAME STEWARDSHIP or LANDOWNER AGREEMENT BETWEEN THE LANDOWNER AND THE DEPARTMENT?*  
YES[] NO[] N/A[X]

**HABITAT DESCRIPTION:**

All pronghorn antelope habitat in GMU 10.

**ITEMIZED USE OF FUNDS:** Special Big Game License Tag Funds

	Project Balance	Funding Request	Trapper 1	Trapper 2	Aerial Gunning	Projected 2013 Expenses
Antelope	\$ 1,999	\$ 9,289	\$ 5,288	0	\$ 6,000	\$ 11,288
BHS	\$ 10,000	0	0	0	\$ 10,000	\$ 10,000
Mule Deer	\$ 19,423	\$ 9,289	\$ 8,712	\$ 14,000	\$ 6,000	\$ 28,712
Total	\$ 31,422	\$ 18,578	\$ 14,000	\$ 14,000	\$ 22,000	\$ 50,000

Cost Share or Matching Funds (for volunteer labor rates please refer to the worksheet below)

**LIST COOPERATORS AND DESCRIBE POTENTIAL PARTICIPATION:**

**WOULD IMPLEMENTATION OF THIS PROJECT ASSIST IN PROVIDING, MAINTAINING, OR FACILITATING RECREATIONAL ACCESS?**

YES[] NO[] N/A[X]

**PROJECT MONITORING PLAN:**

**PROJECT MAINTENANCE:**

**PROJECT COMPLETION REPORT TO BE FILED BY:**

R. Day Game Branch AZGFD