

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

PROJECT INFORMATION

Project Title: Evaluation of drug capture techniques on Rocky Mountain bighorn sheep

Project No.07-718

Region/GMU: Region 1 and 5, Unit 27-28

HPC:

Project Type: Capture evaluation

Project Description:

The use of immobilizing drugs to capture bighorn sheep within areas where helicopters and net guns is important. In about 2003, the Department tried to capture Rocky Mountain bighorn sheep on the Phelps Dodge mine property in Clifton-Morenci with net guns from vehicles because the sheep appeared approachable and helicopters could not be used on the mine because of safety issues (too many power lines). The net guns were difficult to deploy, and a full day resulted in the capture of 2 sheep. Subsequently, an experimental drug was used to immobilize bighorn sheep in 3 separate capture events in 2004, 2006, and 2007. The experimental drug (A3080) has been used in a cocktail with sedating drugs, which seemed to lead to some mortality due to aspiration of rumen fluids. Eliminating the sedating drug seems to have lead to deaths from increased stress and capture myopathy. In 2004, 16 sheep were captured and 2 died from drug capture complications. In 2006, deaths from drug capture complications were 3 from 16. In 2007, it increased to 5 deaths from 18 captures. Although aspiration of rumen fluid as a cause of death seems to have been eliminated, other mortality factors seem to be greater.

This project is proposed to test drug application, drug combination, and handling procedures to determine which approach is best for handling Rocky Mountain bighorn sheep. Ten bighorn sheep will be captured by a small team (<10 individuals) experienced in captures on the Phelps Dodge mine property, administered one of three drug combinations as directed by veterinarians experienced in bighorn sheep capture, fitted with radiotelemetry collars, and recovery monitored to determine best immobilization techniques. At least 2 veterinarians will be on this team. Implementation is planned for April 9-11, 2008.

Wildlife Species to Benefit: Rocky Mountain bighorn sheep

Possible Funding Partners:

Implementation Schedule:

Beginning: April 9, 2008

Completed: April 11, 2008

PROJECT FUNDING

SBG Funds Requested: \$8000.00

Cost Share Funds: \$8000.00 (primarily in kind match of labor)

Total Project Costs: \$16,000

PARTICIPANT INFORMATION

Applicant: Brian Wakeling
(please print)

Telephone: 623-236-7385

Address:

5000 West Carefree Highway
Phoenix, AZ 85086

AGFD Contact and Phone No. (If applicant is not AGFD personnel)	
Coordinated with: Ole Alcumbrac, Lisa Shender, Rick Langley	Date: January 14, 2008
Applicant's signature: 	Date: January 16, 2008

SEND COMPLETED APPLICATIONS TO:
Game Branch
2221 W. Greenway Rd.
Phoenix, AZ 85023
mdisney@azgfd.gov

NEED STATEMENT/PROBLEM ANALYSIS:

The use of immobilizing drugs to capture bighorn sheep within areas where helicopters and net guns is important. In about 2003, the Department tried to capture Rocky Mountain bighorn sheep on the Phelps Dodge mine property in Clifton-Morenci with net guns from vehicles because the sheep appeared approachable and helicopters could not be used on the mine because of safety issues (too many power lines). The net guns were difficult to deploy, and a full day resulted in the capture of 2 sheep. Subsequently, an experimental drug was used to immobilize bighorn sheep in 3 separate capture events in 2004, 2006, and 2007. The experimental drug (A3080) has been used in a cocktail with sedating drugs, which seemed to lead to some mortality due to aspiration of rumen fluids. Eliminating the sedating drug seems to have lead to deaths from increased stress and capture myopathy. In 2004, 16 sheep were captured and 2 died from drug capture complications. In 2006, deaths from drug capture complications were 3 from 16. In 2007, it increased to 5 deaths from 18 captures. Although aspiration of rumen fluid as a cause of death seems to have been eliminated, other mortality factors seem to be greater.

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PROJECT OBJECTIVES:

Reduce drug related capture mortalities in future Rocky Mountain bighorn sheep captures and translocation efforts.

Radiotelemetry will also assist in evaluating the degree of immigration between bighorn sheep on the Phelps Dodge property and adjacent habitat in Eagle Creek.

PROJECT LOCATION:

Primarily on the Phelps Dodge mine property near Clifton-Morenci.

LAND OWNERSHIP AT PROJECT SITE (Please state specifically if PRIVATE PROPERTY and provide landowner's name):

Phelps Dodge (Freeport).

IF PRIVATE PROPERTY, IS THERE A STEWARDSHIP AGREEMENT BETWEEN THE LANDOWNER AND THE DEPARTMENT?

No.

HABITAT DESCRIPTION:

Primarily lower elevation bighorn sheep habitats with steep terrain. Active mining operations on much of the area.

ITEMIZED USE OF FUNDS:

- \$3000.00 for purchase of up to 10 vhf radiotelemetry collars**
- \$5000.00 for purchase of drugs used to immobilize and treat 10 Rocky Mountain bighorn sheep**

LIST COOPERATORS AND DESCRIBE POTENTIAL PARTICIPATION:

**Phelps Dodge (Freeport) mine
Arizona Game and Fish Department
Wildlife Health Services**

PROJECT MONITORING PLAN:

Primary monitoring will be complete within 3 days.

PROJECT MAINTENANCE:

N/A

PROJECT COMPLETION REPORT TO BE FILED BY:

Rick Langley will provide completion report in annual performance reports. Shender and Alcumbrac may prepare manuscripts for publication.