

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

Game Branch / HPC Project Number:	14-513
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PROJECT INFORMATION

Project Title: Bighorn and Deer Mineral Supplement in 31, 32 and 37B	
Region and Game Management Unit: Region 5/ Units 31, 32, and 37B	
Local Habitat Partnership Committee (LHPC): • Tucson	Was the project presented to the LHPC? YES[X] NO[]
Has this project been submitted in previous years? YES[] NO[X] If Yes, was it funded? YES[] NO[] → Funded HPC Project #(s):	
Project Type: Misc. Wildlife Management	
Brief Project Summary: This project will allow the Department to better manage the bighorn herds in Game Management Units (units) 31 and 32 and the mule deer herd in unit 37B by providing supplemental minerals to these species to determine what degree they are used and whether or not they have any effect on reproduction and recruitment. Nearly two years ago, we began placing trace mineral salt blocks in bighorn habitat in units 31 and 32 and at water sites in unit 37B and camera trap data shows that they are used heavy seasonally by mule deer does and fawns and also by bighorn ewe and lamb groups. Initial review these supplements leads agency personnel to believe that they are having a positive impact on reproductive health and recruitment for these species. This will additionally assist the Department in gathering supplemental survey data throughout several areas of Units 31 and 32 near Aravaipa Canyon.	
Big Game Wildlife Species to Benefit: Bighorn sheep, mule deer, javelina	

Implementation Schedule (Month/Day/Year): <u>Project Start Date:</u> Immediately <u>Project End Date:</u> 2016	Environmental Compliance: NEPA Completed: Yes[] No[] N/A[X] Projected Completion Date: _____ State Historic Preservation Office - Archaeological Clearance: Yes[] No[] N/A[X] Projected Completion Date: _____ Arizona Game and Fish Department EA Checklist: N/A[X] To be Completed by: _____ Projected Completion Date: _____
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PROJECT FUNDING

Special Big Game License Tag Funds Requested:	\$ 1,240 (two pallets of Selenium 90 trace mineral blocks at \$620 each)
Cost Share or Matching Funds:	\$ 0
Total Project Costs:	\$ 1,240

PARTICIPANT INFORMATION

Applicant (please print): Ben Brochu	Address: 555 N. Greasewood Road Tucson, AZ 85745	E-mail: bbrochu@azgfd.gov
Telephone: 520-591-7636	Date: September 1, 2014	

AGFD Contact and Phone No. (If applicant is not AGFD personnel):

Project has been coordinated with:

NEED STATEMENT – PROBLEM ANALYSIS:

Selenium is a trace mineral found in the soil. Research has shown that selenium is an important mineral which is necessary for proper bone metabolism, iodine metabolism, immune function, reproductive success, and recruitment. Low selenium levels can hinder an animal's ability to fight off disease, reproduce and in extreme deficiencies could lead to a condition called white muscle disease a degenerative muscle condition also known as nutritional myopathy. Donald et al. (1993) provided selenium supplements to domestic ewes and found increased survival of newborn domestic lambs. Black-tailed deer fawns born of selenium supplemented does had higher survivability rates that averaged 2.6 times higher than unsupplemented controls (Flueck 1989).

Mineral supplements containing selenium may improve reproductive health and fitness in both deer and bighorn especially where immune systems are compromised by past exposure to viruses. The cost associated with placing mineral supplements is negligible and we would like to see whether or not we detect any measurable difference in recruitment in these areas. The high seasonal use of these supplements which we have observed also offers an ability for us to use camera traps and gather supplemental survey information on these species in these areas.

PROJECT OBJECTIVES:

Deliver selenium 90 trace mineral blocks to specific water cater catchments and camera trap sites within each respective unit and evaluate the effect of those supplements on the bighorn sheep and mule deer recruitment within these areas. Additionally, gather the best data possible about these herds through comprehensive survey efforts.

PROJECT DESCRIPTION AND STRATEGIES:

Backpack salt into specified areas.

PROJECT LOCATION:

Water catchment sites within 37B and camera trap sites around Aravaipa Creek in units 31 and 32.

LAND OWNERSHIP AT THE PROJECT SITE(S): ASLD and BLM lands

(if the project area is private property, please state specifically and provide the landowner's name)

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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:

The project sites are located southeast of Phoenix. Two main biotic community types, Sonoran Desertscrub and Semidesert Grassland, comprise the bulk of the habitat. Average rainfall is approximately 12-15" and elevation ranges from approximately 2300' to 3500'.

ITEMIZED USE OF FUNDS:

Special Big Game License Tag Funds

\$1240 – To purchase two pallets of selenium 90 trace mineral blocks.

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

N/A

LIST COOPERATORS AND DESCRIBE POTENTIAL PARTICIPATION:

Arizona Desert Bighorn Sheep Society (assisting in camera trap surveys and providing trail cameras in some areas), Arizona Deer Association and Mule Deer Foundation (provide trail cameras for monitoring on some catchments).

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

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

PROJECT MONITORING PLAN:

The local Wildlife Manager will evaluate use at least annually to determine if more mineral blocks need to be placed at the established locations. Additionally, through annual deer and sheep surveys we will be able to determine the annual lamb recruitment. Game cameras will also be placed on a number of the different mineral salts to determine the extent of use as well.

PROJECT MAINTENANCE:

Mineral blocks will be replaced as needed.

PROJECT COMPLETION REPORT TO BE FILED BY:

Updates will be given out annually by the local wildlife manager.

WATER DEVELOPMENT PROJECTS (please use the worksheet below):

TREE CLEARING/REMOVAL PROJECTS (please use the worksheet below):