

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

PROJECT INFORMATION	
Project Title: Digital Trail Cameras	Project No. 09-407
Region/GMU: Region 4 (Statewide application)	HPC: Southwest
Project Type: Equipment	
Project Description: Purchase 25 digital trail cameras to place at bighorn sheep waters during critical summer months to determine water use and collect survey data.	
Wildlife Species to Benefit: Bighorn Sheep 100%	
Possible Funding Partners:	
Implementation Schedule: Beginning: May 2010 Completed: August 2012	
PROJECT FUNDING	
SBG Funds Requested: Desert Bighorn Sheep Tag Fund----\$3,500.00	
Cost Share Funds: -----\$ 0	
Total Project Costs: -----\$3,500.00	
PARTICIPANT INFORMATION	
Applicant: Dave Conrad Telephone: 623-393-9034	Address: 9140 E. 28 th St. Yuma, AZ 85365
AGFD Contact and Phone No. (If applicant is not AGFD personnel)	
Coordinated with: ADBSS, SW HPC	Date: 8-28-09
Applicant's signature:	Date: 9-13-09

NEED STATEMENT/PROBLEM ANALYSIS:

Aerial bighorn sheep surveys are flown once every three years, thus leaving two of the three years without unit wide, reliable survey data. Bighorn sheep waters located in west-central Arizona provide a permanent water source during the dry hot summer months where there is no other free water available. Bighorn sheep rely on these water sources and routinely visit during the hottest, driest months of summer. Placing trail cameras at bighorn sheep water catchments during the critical summer months would provide valuable research on water use as well as survey (herd composition) data during non-survey years. Digital trail cameras also provide a reliable, repeatable and cost effective survey technique to test aerial survey methodologies for detecting population demographics and associated population estimates. The technology of today's digital trail cameras has the potential to revolutionize survey techniques much the same as simple-to-use and cost effective GPS technology has revolutionized wildlife research.

This proposal comes on the heels of the success from the digital trail camera surveys for GMU 44A during the summer of 2009. With the results from six digital trail cameras, purchased with funds awarded by the HPC program, the determination has been made that the cost effective digital trail cameras in GMU 44A may replace expensive aerial helicopter surveys. Alternatively, the funds saved from not surveying this unit may be utilized to more thoroughly survey other units that, due to budget restraints, have not been effectively covered or surveyed as frequently as desired.

PROJECT OBJECTIVES:

1. Collect survey and water use data at desert bighorn sheep waters during summer months in GMU's 42, 43A, 44A, and 44B.
2. Compare water catchment survey data with aerial helicopter survey data for consistency.
3. Provide foundation to re-evaluate aerial survey rotations to more effectively cover non-surveyed or under-surveyed bighorn sheep habitat or to increase frequency of surveys for critical locations.

PROJECT STRATEGIES:

Place trail cameras at desert bighorn sheep waters starting in June and remove cameras prior to mid July for monsoon season. The district Wildlife Manager and Regional Wildlife Specialist would examine the resulting photos to determine a minimum population estimate and herd composition data. Over time, trail camera population estimates will be compared with aerial survey population estimates of the same time (within 3 months) and location (GMU unit) to determine the sensitivity and effectiveness of photographic and aerial survey methodologies in detecting changes in populations.

PROJECT LOCATION:

The study area is located in west-central Arizona encompassing GMU's 42, 43A, 44A, and 44B. The Bureau of Land Management and US Fish and Wildlife make up the majority of land management and ownership. Arizona Game and Fish wildlife water developments located throughout the GMU's listed above will serve as the specific survey sites.

HABITAT DESCRIPTION:

The vegetation is Sonoran Desert-scrub of the Lower Colorado River Valley, primarily creosote, white bursage, ironwood, and foothill paloverde associations.

ITEMIZED USE OF FUNDS:

Equipment:

Moultrie-Game Spy 4.0 megapixel trail camera x 25 @ \$100 = \$2500	
4GB SanDisk SD Card x 25 @ \$35	= \$875
Batteries/Rebar/shipping/tax	= \$125
Total	= \$3,500.

LIST COOPERATORS AND DESCRIBE POTENTIAL PARTICIPATION:

Arizona Desert Bighorn Sheep Society could endorse the use of tag funds and or contribute their own monies to create a match amount.

PROJECT MONITORING PLAN:

Compare aerial survey results with water catchment results. If water catchment counts prove to be a reliable survey methodology money could be saved by reducing helicopter surveys or helicopter surveys could be expanded to areas within known sheep habitat that have not been surveyed due to budget restraints.

PROJECT MAINTENANCE:

The district Wildlife Manager would be responsible for all standard maintenance.

PROJECT COMPLETION REPORT TO BE FILED BY:

Dave Conrad