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

PROJECT INFORMATION

Project Title: Digital Trail Cameras	**Project No. 09-404**
Region/GMU: REG IV (SDNM) Sonoran Desert National Monument	**HPC: Southwest**

Project Type: Equipment

Project Description: Purchase 25 (Infrared ready) digital trail cameras (Covert II) to be placed at all SDNM Game and Fish waters during critical summer months to document wildlife use and collect survey data. Infrared technology is recommended to avoid stressing wildlife at night and avoid attracting unwanted attention to the cameras by illegal traffickers crossing the SDNM.

Wildlife Species to Benefit: Bighorn Sheep and Mule Deer (50-50%)

Possible Funding Partners: The Phoenix Zoo, BLM, ADBSS, AZ Deer Assoc., and Mule Deer Foundation.

Implementation Schedule:
Beginning: May 2010
Completed: September 2010

PROJECT FUNDING

SBG Funds Requested: Desert Bighorn Sheep Tag Fund, AZ Deer Assoc., Mule Deer Foundation, ---- $7040.00

Cost Share Funds: ----------$ 0

Total Project Costs: ----------$7354.00

PARTICIPANT INFORMATION

Applicant: WM Daniel Urquidez **Telephone: 928-454-2402**	**Address:** **9140 E. 28th St.** **Yuma, AZ 85365**

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

Coordinated with:	**Date:**
Applicant's signature:	**Date: 8/31/09**

NEED STATEMENT/PROBLEM ANALYSIS:

Aerial surveys of javelina, bighorn sheep, and both whitetail and mule deer have indicated a rapid decline in these ungulate populations' in GMUs 39 E & 40A over the past years. Many biologists have identified the drought as a major factor in decreasing forage quantity, palatability, diversity, and nutrition. Catchment waters have always been available over this declining period throughout the game management units, GMUs. The question it raises regarding bighorn sheep is if they are not using the catchments than why not. An ongoing disease study in GMU 40A has proven that sheep have already been exposed to blue tongue and hemophagic diseases.

In the past, several lions have been photographed by game trail cameras or observed through out the SDNM. The current population of ungulates is very low; lions could have a more direct impact in extirpating bighorn sheep from the SDNM.

This year all cattle south of Interstate 8 on SDNM were to be removed by March 2009. All grazing lease agreements south of I8 were terminated indefinitely based on the SDNM Proclamation of 1998. In the years to come biologists may see an increase of wildlife on the monument south of I8, because the removal will reduce the amount of potential exposure to livestock diseases and competition for available forage.

Currently, the district wildlife manager (WM) has been able to borrow cameras from the Phoenix Zoo and from other department projects. The previous year, the district WM was only able to cover the North Maricopa Mountains at one time. This year the WM has placed cameras throughout the North and South Maricopa Mountains. Although borrowing cameras started out as a great opportunity, it has not been a reliable proposition. This year several wildlife study projects were negatively impacted as cameras were redirected to the SDNM project. Therefore, if the SDNM project is to continue monitoring the declining progression of ungulates within the SDNM, cameras need to be purchased and dedicated to the SDNM project. Meanwhile, AZGFD will continue exploring limiting factors such as diseases, predation, water accessibility, and forage availability.

Placing trail cameras at low elevation water catchments during the critical summer months would provide valuable research on water use as well as survey data. The resulting survey data would be reliable, cost effective and can be collected with minimal bias. Cameras will enable us to document the general appearance, sex, and age of bighorn sheep.

PROJECT OBJECTIVES:

1. **Collect survey and water use data at low elevation waters during summer months in GMU 39E & 40A.**
2. **Document whether sheep are using these low elevations waters or is there a need for high elevation water.**
3. **Document the frequency of lion use.**
4. **Monitor the general appearance of ungulates using the waters potentially as an early detection of poor health.**

PROJECT STRATEGIES:

Place trail cameras at low elevation waters starting late May and remove cameras about mid September. GMU 39W has 14 and GMU 40A has 10 low elevation waters that need to be monitored during this period. Anti-theft boxes would be used for cameras placed at catchments with high human visitation. The district Wildlife Manager and Regional Wildlife Specialist would examine the resulting photos to determine a minimum population estimate and herd composition. Also, we would be able to

document whether sheep are using low elevation waters, where high elevation waters either do not exist or are far away.

The district wildlife manager has been monitoring catchment use with cameras for the past two years. The manager has experienced bighorn use is sporadic and may occur once a month or weekly at known bighorn sheep watering holes. Therefore, the request to monitor all of the SDNM catchments at the same time is to ensure any bighorn use throughout the summer months.

PROJECT LOCATION:
The SDNM study area is located in GMUs 39E & 40A. 24 water catchments are within the SDNM boundaries and one immediately adjacent to it, 706. The land management agency is the Phoenix Field Office of the Bureau of Land Management. See attached map for water catchment locations. The catchments are located at elevations ranging from 899 to 2578 feet. The average elevation is 1678 feet.

HABITAT DESCRIPTION:
The vegetation varies significantly throughout the Sonoran Desert National Monument of the Lower Gila River Valley. The northern half is made of primarily creosote-bursage communities while the southern half consists of primarily Saguaro–Paloverde communities. The major topographic features of the study area are the N. and S. Maricopa, Sand Tank, and Tabletop Mountains.

ITEMIZED USE OF FUNDS:

Equipment:

Covert II Assassin- 5.0 megapixel trail camera x 25 @ $250	**= $ 6250**
2GB SanDisk SD Card x 40 @ $20	**= $ 800**
Anti –theft boxes x 12 @ $20	**= $240**
AA batteries box of 24 x 16 @ $4	**= $ 64**
Total	**= $ 7354**

LIST COOPERATORS AND DESCRIBE POTENTIAL PARTICIPATION:
Arizona Desert Bighorn Sheep Society has expressed an interest in the collapsed sheep population. The AZ Deer Association has express an interest in the declining deer population within the SDNM, possibly the Mule Deer Foundation. In the past two years the Phoenix Zoo has been a major contributor in loaning cameras.

PROJECT MONITORING PLAN:
WM will 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 constraints.

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

PROJECT COMPLETION REPORT TO BE FILED BY:
Daniel Urquidez