

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

PROJECT INFORMATION

Project Title: Hayhook Water Development		Project No. 10-515
Region/GMU: 5/36C	HPC: Tucson	
Project Type: Water development, solar application of current well		
<p>Project Description: This proposal will provide permanent long-term wildlife water in a major portion of Whitetail deer habitat in northern GMU 36C. The Coyote Mtns are some of the best Whiteail deer and javelina habitat in the unit. Water, however, is extremely scarce throughout the area and is only present in earthen stock tanks after a heavy monsoon period and during the winter and early spring months and seldom lasts into May. The project would be completed using Pima County Parks as a free contractor and materials comprised of a storage tank, spray fiberglass, solar panels and a pump. A wildlife friendly fence will be installed around the development to exclude livestock. Providing water throughout the range also may potentially increase both deer and javelina populations which will increase hunter opportunity. As stated by Marshal et al. (2006), (water) developments may reduce the need for seasonal movements, make a greater proportion of the range and its forage available to deer, reduce competition for forage in exploited range, decrease risks associated with long-distance movements (e.g., Nicholson et al. 1997, Bleich and Pierce 2001) and, thereby, increase deer abundance (Krausman and Czech 1998).</p>		
Wildlife Species to Benefit: Whitetail, Mule deer, javelina, small game and non-game species		
Possible Funding Partners:		
Implementation Schedule: Beginning: September 1, 2010 Completed: June 30, 2012	NEPA Compliance: (if applicable) N/A Completed: Yes ____ No ____ Projected Completion Date:	

PROJECT FUNDING

SBG Funds Requested: \$7,000.00
Cost Share Funds: \$2,600.00
Total Project Costs: \$9,600.00

PARTICIPANT INFORMATION

Applicant: Mark Frieberg Telephone: (520) 762-8172	Address: Arizona Game and Fish Department 555 N. Greasewood Road Tucson, AZ 85745
AGFD Contact and Phone No. (If applicant is not AGFD personnel) N/A	
Coordinated with: Kerry Baldwin and Joe Kellner (Pima County)	Date: 3-16-10
Applicant's signature:	Date:

**SEND COMPLETED APPLICATIONS TO:
AZ Game and Fish Department
Attn: Game Branch
5000 W. Carefree Highway**

Phoenix, AZ 85086
rgregory@azgfd.gov

WAS PROJECT PRESENTED TO THE LOCAL HPC? YES NO

HAS PROJECT BEEN SUBMITTED IN PREVIOUS YEARS? IF SO WAS IT FUNDED?

No

NEED STATEMENT/PROBLEM ANALYSIS:

Water developments in southern Arizona that offer year round water for wildlife are extremely important to overall populations, and reproductive success. In 2009 Pima County bought the old Hayhook Ranch property in GMU 36C and would like to redevelop various sites on the ranch including constructing solar equipment on a well for wildlife. The proposed plan, if funded, would be to install a solar system including panels, a pump, a new storage tank, a water line, and sealing the inside of an old metal drinker with fiberglass. This plan would ensure that wildlife would have a dependable year round source of water. Water is a critical component of any deer habitat, and this area turns into seasonal use by Whitetail, Mule deer, javelina and other species, only when water is present due to ranch operations.

PROJECT OBJECTIVES:

- To increase deer and javelina populations by providing dependable, long term, self-sustaining, quality water sources and by increasing the use of otherwise unavailable forage resources
- To increase hunter opportunity
- To install a system that does not require supplemental water hauling or major maintenance except in rare or exceptional circumstances
- To install a system that has minimal visual impacts and blend in with surrounding landscape
- To monitor the use of this water source using remote digital game cameras

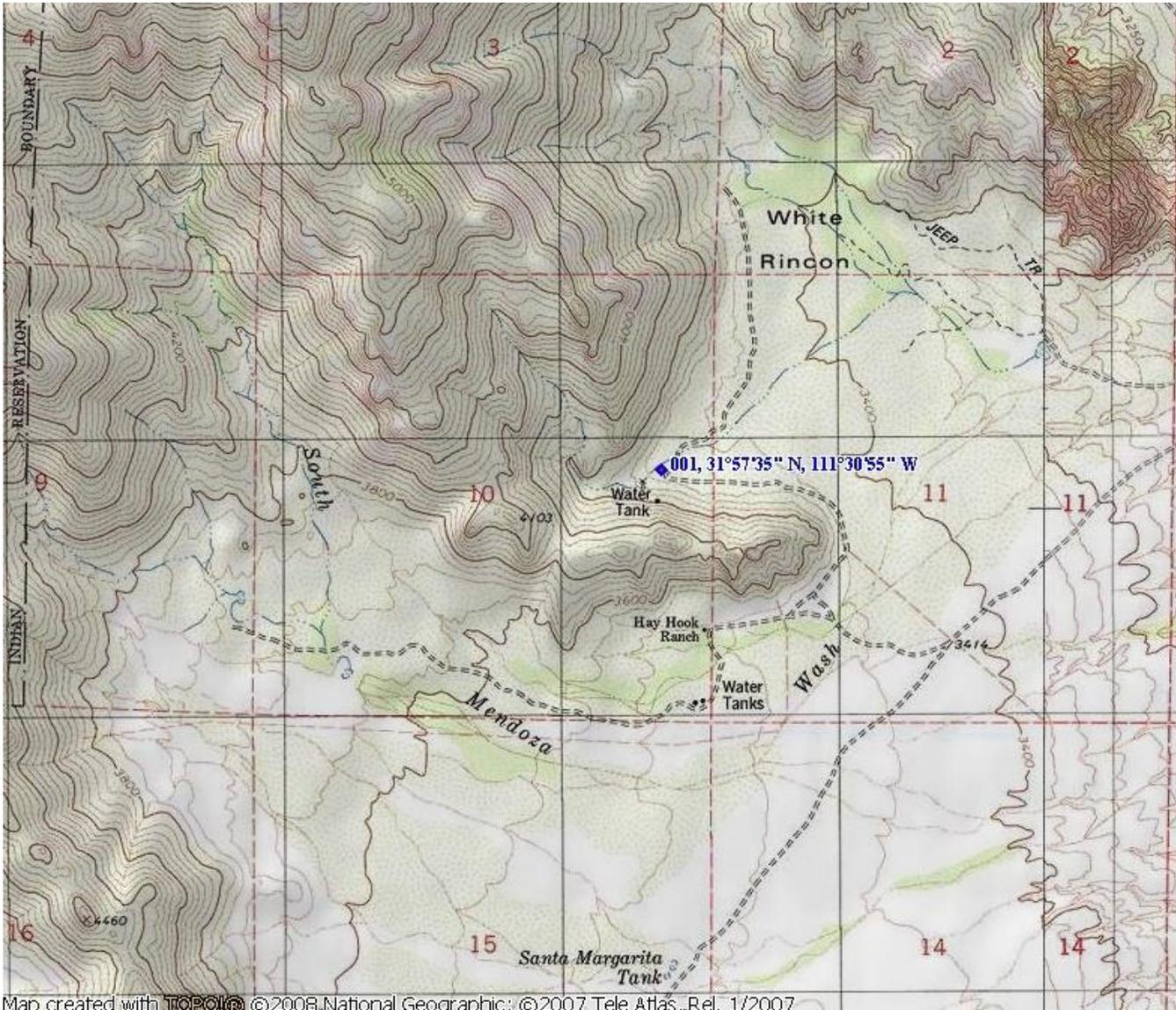
PROJECT STRATEGIES:

Each project will be completed in one of three ways:

1. Utilize big game special tag funds, personnel from the Arizona Game and Fish Department and Pima County employees to install this system.
2. Utilize big game special tag funds for the purchase of the system components. Pima County would be responsible for transporting the required supplies and specialized equipment to the site and installing the materials and equipment.

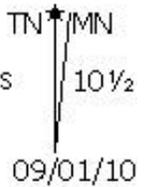
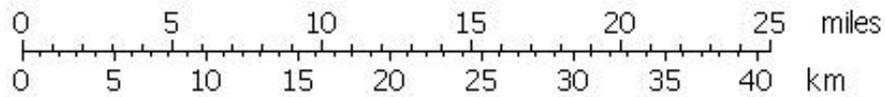
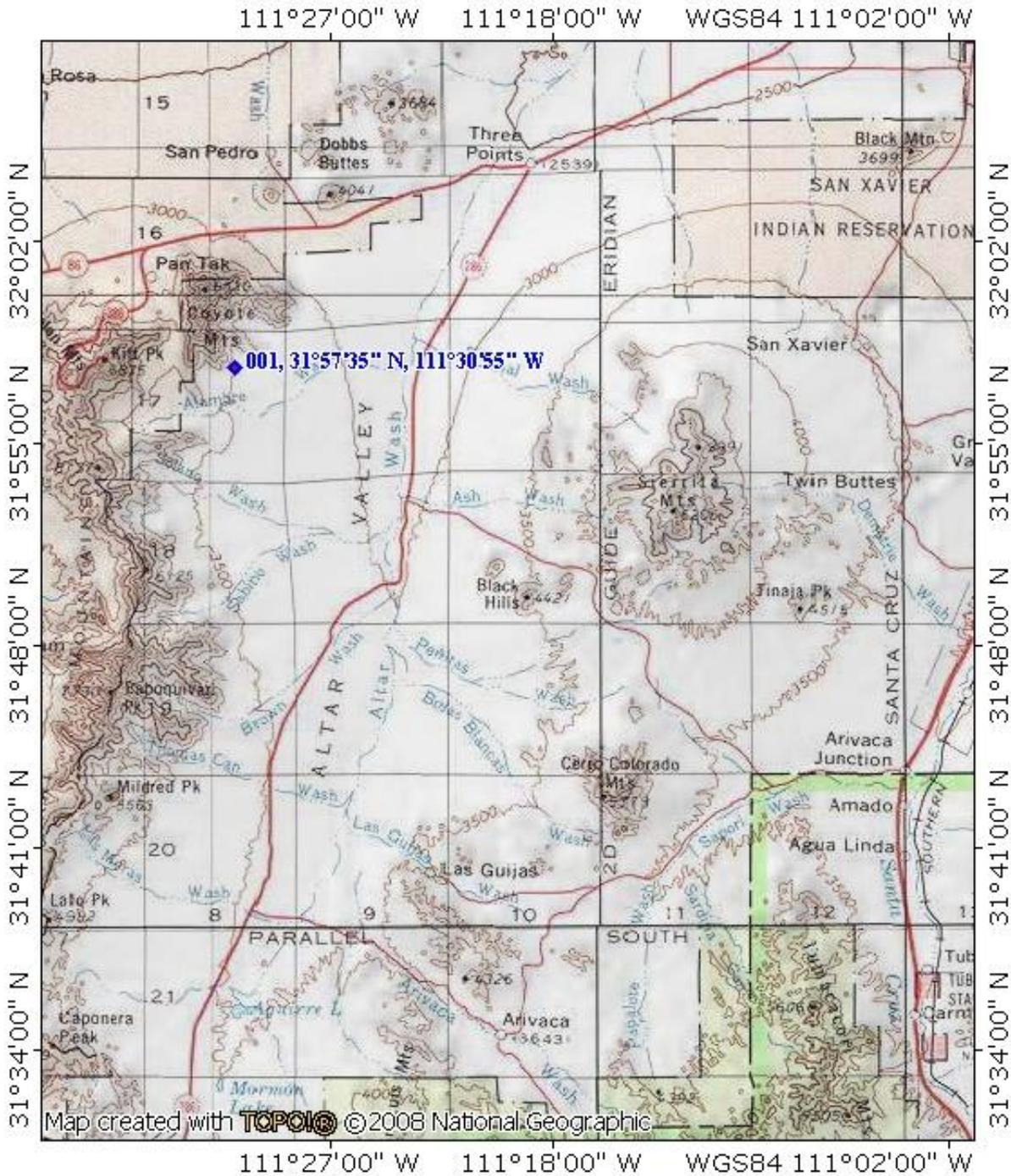
PROJECT LOCATION:

The Coyote well site is located in northern GMU 36C on the old Hayhook Ranch, now owned by Pima County. See below maps.



Map created with TOPOIC ©2008 National Geographic; ©2007 Tele Atlas. Rel. 1/2007

TOPO! map printed on 09/01/10 from "Untitled.tpo"



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

Pima County owns the property at the site.

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

N/A

HABITAT DESCRIPTION:

The main biotic community type and the site and in the vicinity is Semi-desert Grassland. Common vegetation includes various types of grama grasses (*Bouteloua spp.*), lovegrass (*Eragrostis spp.*) mesquite (*Prosopis spp.*) and fairy feather duster (*Calliandra eriophylla*). Average rainfall is approximately 10-12" and the elevation is 3470'.

ITEMIZED USE OF FUNDS:

Item	Cost	Labor Cost Share	Funds Needed
Solar Panels and Pump	\$2,600		\$2,600
Poly storage tank	\$1,500		\$1,500
Wildlife "friendly" livestock enclosure fence	\$1,500		\$1,500
Spray fiberglass on old drinker	\$500		\$500
Digital Monitoring Camera	\$500		\$500
Replace water line to existing trough	\$200		\$200
Shoring trough and adding escape ramps	\$200		\$200
Labor- Pima County Employees	\$2,600	\$2,600	
Total	\$9,600	\$2,600	\$7,000

LIST COOPERATORS AND DESCRIBE POTENTIAL PARTICIPATION:

- Below is an all inclusive list of potential cooperators.
 - Pima County: acquire the materials and provide equipment for construction.
 - Arizona Deer Association – volunteer labor and equipment
 - Mule Deer Foundation – volunteer labor and equipment
 - Coues Whitetail.com chat room inquiries – volunteer labor and equipment
 - Tucson HPC: coordinate project funding opportunities

PROJECT MONITORING PLAN:

Remote digital cameras will be used to monitor density and frequency of wildlife water use during the months of May-July if cameras are available. Water levels will be monitored at least twice per year with emphasis during the warmer drier months by the Wildlife Manager and Pima County. Additional monitoring will be conducted as needed. Maintenance will be conducted by Pima County.

PROJECT MAINTENANCE:

The maintenance of the catchment will continue to be the responsibility of Pima County.

PROJECT COMPLETION REPORT TO BE FILED BY:

Joe Kellner or Mark Frieberg

WATER DEVELOPMENT PROJECTS (see attached worksheet):

ARIZONA GAME AND FISH DEPARTMENT

WATER DEVELOPMENT WORKSHEET

PROJECT NAME: Hayhook Water Development

- 1) **Is the water development listed as a priority in the most recent "Wildlife Water Development Annual Implementation Schedule?"** Yes
- 2) **Please list the Development Branch personnel and date coordinated with for this project.**
None, this is a Pima County project, and will not be implemented by Development
- 3) **What is the estimated annual inches of precipitation for the area? (mark one)**
 2-4 4-6 6-8 8-10 10-12 12-14 14-16 >16
- 4) **Is there a perennial water source available to big game within four miles of this project?**
 YES (please complete #5 below) NO (skip #5 below)
- 5) **For the accessible, perennial water source nearest this project:**
Name of water source:
Type of water source (catchment, spring, dirt tank, etc.):
Ownership of water source:
Distance in miles from project:
- 6) **Is the target wildlife species a result of transplant efforts?** YES NO
- 7) **Please list any special land management status for the project site (i.e. Wilderness, National Park, National Monument, etc). If private land, list landowner. None**
- 8) **Please provide the following information about access to the proposed site:**
Type of access (mark one): 2x4 vehicles 4x4 only foot only**
**If foot access only: Distance in miles: Approx. hiking time:

-- Does access to this site require crossing private or tribal lands? YES NO

-- Please describe any restrictions to public access: It is access by crossing the Kings Anvil Ranch, which the AZGFD has a current access agreement across the Ranch.
- 9) **Please list below (or on a separate sheet) the material type and dimensions of each component proposed to be added, modified, or repaired. See Above**
- 10) **Was a site visit completed?** Yes No
If Yes, please list personnel that attended and date.
Joe Kellnor (Pima County) 3-16-10