

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

<b>PROJECT INFORMATION</b>	
<b>Project Title:</b> Engesser Tank	<b>Project No.</b> 07-417
<b>Region/GMU:</b> 45B	<b>HPC:</b> Southwest Arizona HPC
<b>Project Type:</b> Water Development, Kofa National Wildlife Refuge, 45B	
<b>Project Description:</b>  Construct a new water for bighorn sheep using 24 inch PVC pipe as a storage system, a 30-inch walk in trough and a natural watershed collection system.	
<b>Wildlife Species to Benefit:</b> Bighorn sheep, Mule deer	
<b>Possible Funding Partners:</b> ADBSS	
<b>Implementation Schedule:</b> <b>Beginning:</b> January 1, 2008 <b>Completed:</b> December 31, 2010	
<b>PROJECT FUNDING</b>	
<b>SBG Funds Requested:</b> \$20,000	
<b>Cost Share Funds:</b> \$5,631.30	
<b>Total Project Costs:</b> \$25,631.30	
<b>PARTICIPANT INFORMATION</b>	
<b>Applicant:</b> John Hervert (please print) <b>Telephone:</b>	<b>Address:</b> 9140 E. 28 <sup>th</sup> Street, Yuma AZ. 85365
<b>AGFD Contact and Phone No.</b> (If applicant is not AGFD personnel)	
<b>Coordinated with:</b> Joe Currie	<b>Date:</b> 8-27-07
<b>Applicant's signature:</b>	<b>Date:</b>

**SEND COMPLETED APPLICATIONS TO:**

**Game Branch  
2221 W. Greenway Rd.  
Phoenix, AZ 85023  
mdisney@azgfd.gov**

**NEED STATEMENT/PROBLEM ANALYSIS:**

Engesser Pass does not contain a water source for wildlife. The proposed tank will be important to bighorn sheep and other water dependant species. The nearest water to this area is Frenchman Tank, located 6 miles to the south. This water source will benefit bighorn sheep by providing a reliable source of water during periods of extended drought. This project was identified in "Investigative Report and Recommendations for the Kofa Bighorn Sheep Herd" January 2007.

**PROJECT OBJECTIVES:**

Develop Engesser Tank using industry standard materials and volunteer labor. The project will incorporate the "Criteria For Success" outlined in "Water Development Team 2002". This project will not result in additional water hauling on the Kofa. Mule deer, and bighorn sheep will benefit from the reliability of this project. This catchment has gone dry during the summer on more than one occasion in the past. We will aid in the recovery of the Kofa bighorn herd by establishing a more reliable system of water developments throughout the refuge. Engesser Tank will be a good start towards achieving this objective.

**PROJECT STRATEGIES:**

Develop Engesser Tank using industry standard materials and volunteer labor. This project will consist of burying 24 inch PVC pipe to serve as a storage system (10,000-gallons), connecting it to a 30-inch deep walk-in drinker and collecting water from a large natural watershed. The level of evaporation will be reduced given the underground storage tanks and water collection will be enhanced through the use of diversion dams on large watersheds.

**PROJECT LOCATION:** T2S R15W, Sec. 30 NE ¼. Elevation 1700 feet

**LAND OWNERSHIP AT PROJECT SITE (Please state specifically if PRIVATE PROPERTY and provide landowner's name):** USFWS, Kofa Refuge.

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

**HABITAT DESCRIPTION:**

Sonoran Desertscrub, Arizona Upland Subdivision.

**ITEMIZED USE OF FUNDS:**

**24 inch PVC pipe (24) = \$14,640**

**PVC caps (3 + 3), 24 inch = \$2196**

**30 inch trough, 4 inch and 6 inch PVC pipe from diversion dam = \$2,864**

**Misc. plumbing components (flex hose, PVC joints) = \$300**

**Total cost of materials = \$20,000**

**Equipment cost = \$1,400 (backhoe rental).**

**Volunteer labor (ADBSS or Yuma Valley Rod and Gun Club, 20 members, @ \$14.94 per hour for 16 hours, and 40.5 cents per mile, 10 vehicles, 210miles) = \$5,631.30 minimum.**



**LIST COOPERATORS AND DESCRIBE POTENTIAL PARTICIPATION:**

ADBSS volunteers will be asked to provide the labor for this project. YVR&GC will be offered the project if ADBSS cannot commit to it.

**PROJECT MONITORING PLAN:**

The project will be monitored following the Region IV maintenance protocol. This system will be checked one or more times during the cool season (Nov. through March) and on a monthly basis thereafter. A Trail Master camera system will be used to document use on the new system.

**PROJECT MAINTENANCE:**

This system will require minimal maintenance once completed. We expect water hauling not to be needed after the system fills with rainwater. The collection point above the dam will be cleared of sand as required, usually once or twice a year by a wildlife manager or refuge personnel.

**PROJECT COMPLETION REPORT TO BE FILED BY:** John Hervert

**WATER DEVELOPMENT PROJECTS (see attached worksheet):**

**TREE SHEARING (AGRA-AXE, PUSH) PROJECTS (see attached worksheet):**

## **ARIZONA GAME AND FISH DEPARTMENT** **WATER DEVELOPMENT WORKSHEET**

**PROJECT NAME:** Engesser Tank

- 1) **Is the water development listed as a priority in the most recent “Wildlife Water Development Annual Implementation Schedule?”** No. The recent 39 % decline in the Kofa bighorn population has created an urgency to fix the problem as soon as possible. Refuge waters are not the direct responsibility of the Department and may not appear on our list of priorities. Nonetheless, these waters are important to wildlife and it is within our mission to assist with the redevelopment of refuge waters.
  
- 2) **Please list the Development Branch personnel and date coordinated with for this project.**  
**Joseph Currie, 8-27-07.**
  
- 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. Nonwilderness, Refuge.**
  
- 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:
  
- 9) **Please list below (or on a separate sheet) the material type and dimensions of each component proposed to be added, modified, or repaired.**  
24 inch PVC, 30-inch trough.
  
- 10) **Was a site visit completed?**  Yes  No  
If Yes, please list personnel that attended and date.

Susanna Henry USFWS and John Hervert. 4-16-07.