

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

Game Branch / HPC Project Number:	11-405
Possible Funding Partners:	

**PROJECT INFORMATION**

**Project Title:** Redevelopment of Arch Pothole GMU 42 (Big Horn Wilderness)

**Region and Game Management Unit:** Region IV, GMU 42

**Local Habitat Partnership Committee (LHPC):**  
 • Southwest Arizona

**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[] → **HPC Project #:**

**Project Type:** Repair of existing water development

**Brief Project Summary:**

Arch pothole is a natural pothole in the Big Horn Mountains of Game Management Unit 42 that has a serious leak that limits the capacity of the pothole to less than 50%. The proposed project will seal the pothole and reduce the need to haul water to the site by helicopter.

**Big Game Wildlife Species to Benefit:** Desert Bighorn Sheep

**Implementation Schedule** (Month/Day/Year):

Project Start Date:  
Feb 1, 2013

Project End Date:  
May 30, 2013

**Environmental Compliance:**

NEPA Completed: YES[X] No[] N/A[]

Projected Completion Date: \_\_\_\_\_

State Historic Preservation Office - Archaeological Clearance:

YES[X] No[] N/A[]

Projected Completion Date: \_\_\_\_\_

Arizona Game and Fish Department EA Checklist: N/A[]

To be Completed by: \_\_\_\_\_

Projected Completion Date: \_\_\_\_\_

**PROJECT FUNDING**

**Special Big Game License Tag Funds Requested:** \$ 13,402

**Cost Share or Matching Funds:** \$ 1,200

**Total Project Costs:** \$ 14,602

**PARTICIPANT INFORMATION**

**Applicant** (please print):  
Craig Heath

**Address:**  
9140 E. Street  
Yuma, AZ 85365

**E-mail:**  
cheath@azgfd.gov

**Telephone:** 928-856-0764

**Date:** 8/17/11

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

**Project has been coordinated with:**  
Bureau of Land Management – Hassayampa Field Office

**NEED STATEMENT – PROBLEM ANALYSIS:**

The Big Horn Mountains in Game Management Unit 42 contained a remnant herd of desert bighorn sheep. This herd has received several supplemental transplants in recent years (2005, 2007, and 2010) and reliable water sources are an important aspect of the habitat.

Arch pothole was a natural pothole that was improved in 1982. In 2004 the pothole was improved again to increase the capacity. In 2005 it was determined that the pothole was leaking and the pothole was not holding water over the 50% level. The current drought conditions have caused this pothole to require several water hauling requests over the years. Due to the remote location of the pothole these water hauls require the use of a helicopter.

**PROJECT OBJECTIVES:**

Increase the capacity and reliability of this important water source by sealing the inside of the pothole with a Thoroseal lining.

**PROJECT DESCRIPTION AND STRATEGIES:**

Use a helicopter to transport materials and volunteers to the project site from a staging area 2 miles south of the site (outside wilderness). Use a gasoline generator to power hand tools to remove any debris and clean the inside of the pothole. The pothole will then be sealed with a lining of Thoroseal mixture.

**PROJECT LOCATION:**

Big Horn Mountains, Maricopa County, GMU 42 (T.3N, R.9W, Sec. 11) (33° 37.136' 113° 9.299')

**LAND OWNERSHIP AT PROJECT SITE**

**Bureau of Land Management – Hassayampa Field Office**

**HABITAT DESCRIPTION:**

The Big Horn and Belmont Mountains have elevations ranging from 1600' near the base to 3480' at Big Horn Peak. The topography ranges from gentle bajadas and rolling hills to high benches, rugged cliffs, and ridges. There are 224 square miles of bighorn habitat in the Big Horn and Belmont complex. Both the Upper and Lower Sonoran desert scrub plant communities are represented in the proposal area.

**ITEMIZED USE OF FUNDS:**

**Special Big Game License Tag Funds**

**Helicopter Services:**

1 "L" ship, 3 days,			
	12 hours @ \$925/hr	=	\$11,100
Ferry -	3 hours @ \$650/hr	=	\$1,950

**Materials:**

Thoroseal \$24.30 / 50# bag x 10 + tax	=	\$265
Acryl 60 \$79.65 / 5 gal + tax	=	\$87

**Total Materials/Equipment Costs = \$13,402**

**Cost Share or Matching Funds**

Volunteer Labor (5 people x 24 hours @ \$10/hour) = \$1,200

**LIST COOPERATORS AND DESCRIBE POTENTIAL PARTICIPATION:**

AGFD Region IV in conjunction with Habitat Branch and BLM personnel will complete the needed environmental and cultural clearances for project completion. AGFD Region IV will provide construction coordination including transport of necessary tools and material to and from the staging area. The ADBSS will provide volunteer labor and equipment.

**PROJECT MONITORING PLAN:**

AGFD Region IV will monitor water levels according to the Regional water development protocol.

**PROJECT MAINTENANCE:**

AGFD Development Branch and Region IV personnel will conduct any needed maintenance.

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

Craig Heath, AGFD Region IV

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

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

**PROJECT NAME:** Redevelopment of Arch Pothole

- 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.**  
Ed Jahrke and Joseph Currie 8/9/2011
- 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: Catchment 946 (mule deer water)  
Type of water source (catchment, spring, dirt tank): Catchment – tin apron w/ steel ring tank  
Ownership of water source: BLM  
Distance in miles from project: 1.7 miles
- 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).**  
  
Project is inside the Big Horn Mountain Wilderness Area
- 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: 2 Approximate hiking time: 1 hour  
  
-- Does access to this site require crossing private or tribal lands? YES NO
- 9) **Please list below (or on a separate sheet) the material type and dimensions of each component proposed to be added, modified, or repaired.**  
Coat the inside surface of this irregular shaped pothole (photo attached) with a Thoroseal and Acryl 60 product. Approximately three coats of sealant will be applied.
- 10) **Was a site visit completed?** Yes No  
If Yes, please list personnel that attended and date.  
Dave Conrad, AGFD Region IV July 7, 2011  
Craig Heath, AGFD Region IV July 7, 2011



Arch Pothole.

