

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

PROJECT INFORMATION

Project Title: Hackberry Wash Water Development	Project No.
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Region/GMU: 5/37B	HPC: Tucson
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Project Type: Water Development and Redevelopment

Project Description:

This is a cooperative two phased project with the livestock operator, Rick Bader, the BLM and the AGFD. Phase one involves the redevelopment of catchment 764, Hackberry seep, which has been nonfunctional for many years. Catchment 764 is a 3-hole horizontal well which seeps water into existing pipes and eventually into an old steel storage tank. The tank must be over half full to overflow into the old rusted out wildlife drinker. The horizontal holes (3 at an estimated depth of 80-100 feet) need to be redrilled and a spring box installed. Approximately 1500 feet of 160 psi pipe will then be installed to pipe water to two separate storage tanks; the existing tank if it can be repaired for livestock use and a new 10,000 PVC storage tank system approximately 600 feet across and down stream away from the corral for wildlife use. An eight foot drinker will be installed for livestock in the corral and a 30" fiberglass drinker will be installed for wildlife. The wildlife drinker and storage tank will exclude livestock using a pipe rail fence. NEPA and Arch clearances have already been completed at the site. Phase two involves the development of an existing old windmill and underground storage vault. Approximately 3 miles of 160 psi pipe will be installed due north. Two 10,000 gallon storage tanks and two wildlife/livestock drinkers will be installed along the pipe approximately one mile apart from each other. There is currently an old concrete drinker at the windmill site which will be repaired if needed for a third water in this system. Rick Bader has offered to redrill the horizontal well and install all of phase two of the project. He will also install all livestock related items in phase one and supply heavy equipment for the AGFD and volunteers to install the wildlife drinker and storage tanks at catchment 764. The BLM has also offered to contribute approximately \$8,100 in match.

Wildlife Species to Benefit: mule deer, Coues' deer, javelina, small game and non game species

Possible Funding Partners:

Implementation Schedule: Beginning: September 1, 2008 Completed: June 30, 2010	NEPA Compliance: (if applicable) Completed: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Projected Completion Date:
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PROJECT FUNDING

SBG Funds Requested: \$19,550 (Phase 1)

Cost Share Funds: \$50,770

Total Project Costs: \$89,926

PARTICIPANT INFORMATION	
Applicant: Ben Brochu Telephone: (520) 229-3222	Address: Arizona Game and Fish Department 555 N. Greasewood Road Tucson, AZ 85745
AGFD Contact and Phone No. (If applicant is not AGFD personnel)	
Coordinated with: Joe Currie (AGFD), Darrell Tersey (BLM) and Rick Bader (livestock operator)	Date: 8-6-07, 2-26-07
Applicant's signature:	Date:

SEND COMPLETED APPLICATIONS TO:
Game Branch
2221 W. Greenway Rd.
Phoenix, AZ 85023
rothompson@azgfd.gov

WAS PROJECT PRESENTED TO THE LOCAL HPC? YES X NO

HAS PROJECT BEEN SUBMITTED IN PREVIOUS YEARS? IF SO WAS IT FUNDED?
 No

NEED STATEMENT/PROBLEM ANALYSIS:

Catchments 764 (Hackberry Seep) was constructed in 1970. It is a horizontal well spring seep that was developed cooperatively with the rancher and the BLM. The wildlife drinker, which was located along an existing corral, only received water when the ranchers steel storage tank was more than half full. The drinker has been rusted out for at least 5 years and the stock water has been nonfunctional for the same period of time. The horizontal holes (3 at an estimated depth of 80-100 feet) need to be redrilled and a spring box installed.

This catchment should be redeveloped with higher capacity system to ensure water is available during critical dry months of the year especially during prolonged periods of drought. Also, redevelopment is necessary to provide a valuable and dependable perennial source of water for mule deer, Coues' deer and javelina. In providing a permanent water source for wildlife, local populations of deer and javelina may increase thereby potentially increasing hunter opportunity. The **NEPA** and **Arch clearances** have been completed (see the attached email form Darrell Tersey (BLM)).

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 systems that have a long lifespan (40-50 years for storage and collection systems, 25 years for drinking troughs)
- To install systems that do not require supplemental hauling except in rare or exceptional circumstances
- To install systems that have minimal visual impacts and blend in with surrounding landscape
- To install systems that are accessible and that requires minimal routine maintenance
- To monitor catchment use using a remote digital game camera

PROJECT STRATEGIES:

The two phase project will be completed in the following way:

- **Phases** –
 - **2009** – Redrill the horizontal well and install a spring box. Approximately 1500 feet of 160 psi pipe will then be installed to pipe water to two separate storage tanks; the existing tank if it can be repaired for livestock use and a new 10,000 PVC storage tank system approximately 600 feet across and down stream away from the corral for wildlife use. An eight foot drinker will be installed for livestock in the corral and a 30” fiberglass drinker will be installed for wildlife. The wildlife drinker and storage tank will exclude livestock using a pipe rail fence.
 - **2010** – Repair and develop the existing windmill and storage vault. Approximately 3 miles of 160 psi pipe will be installed due north. Two 10,000 gallon storage tanks and two wildlife/livestock drinkers will be installed along the pipe approximately one mile apart from each other. There is currently an old concrete drinker at the windmill site which will be repaired if needed for a third water in this system.
- **Components** - Utilize big game special tag funds and rancher funds to purchase the project components.
- **Rick Bader** - Has offered to redrill the horizontal well and install all of phase two of the project. He will also install all livestock related items in phase one and supply heavy equipment for the AGFD and volunteers to install the wildlife drinker and storage tanks at catchment 764.
- **Development Branch Involvement** – Very little, if any, involvement from Development Branch is expected.
- **Volunteers** – Local sportsmen may be solicited to help with some phases of the project such as installing the wildlife drinkers and pipe rail fencing.
- **Safari Club International** – SCI has expressed interest in providing volunteers to work on projects in the southern part of the state. They are a likely source for project volunteers as well.
- **NEPA** – complete for phase one and due to be completed by February 2009 for phase two
- **Arch Clearances** – complete

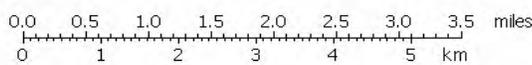
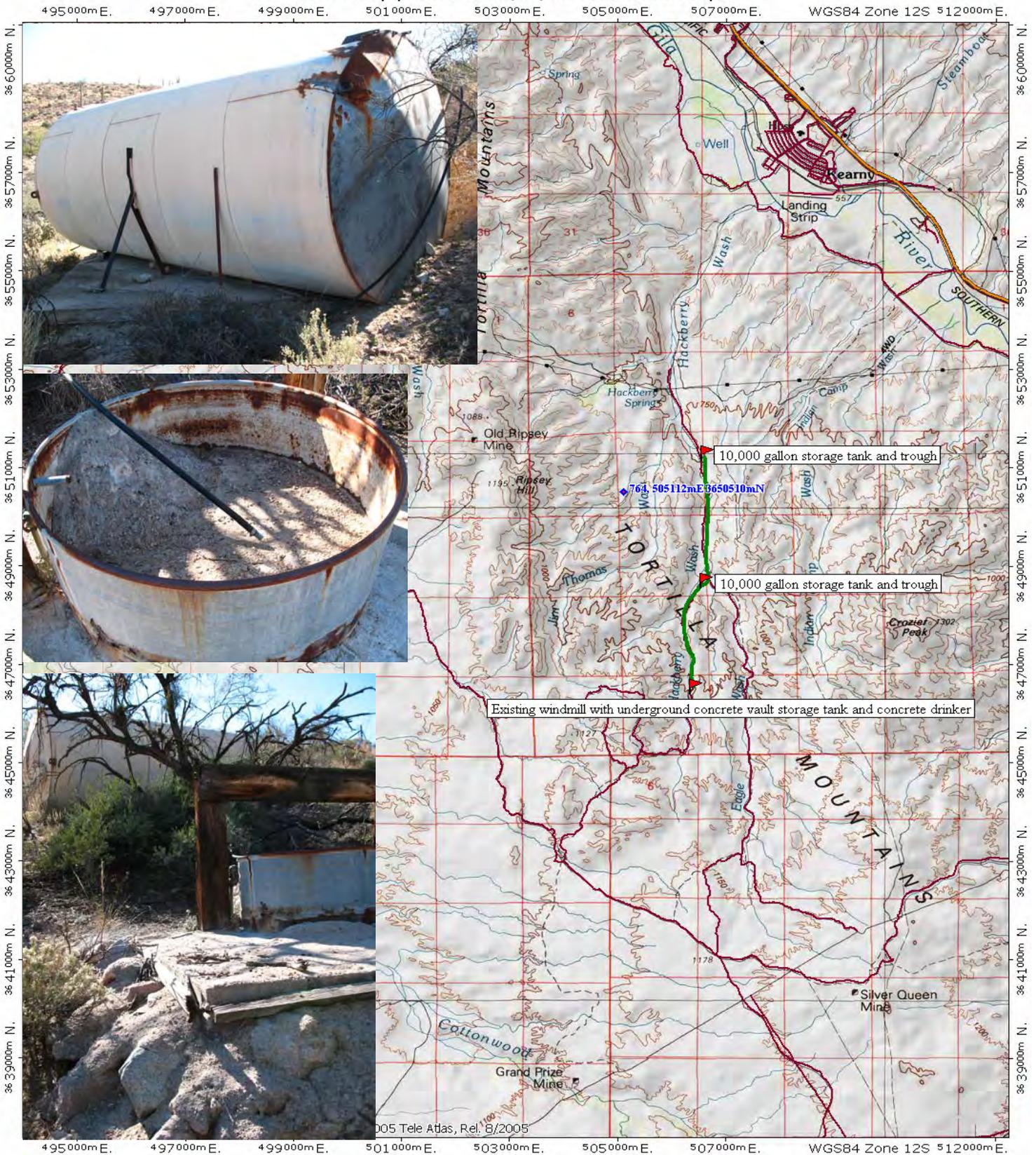
PROJECT LOCATION:

Game Management Unit 37B south of Kearny

Catchment 764 is located at UTM Coordinates: 505112mE, 3650510mN

See map on next page

TOPO! map printed on 08/29/08 from "Untitled.tpo"



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

The project site is on land administered by the Bureau of Land Management, Tucson Field Office, 12661 E. Broadway, Tucson, AZ 85748, (520) 258-6300.

The project site is on land administered by the Arizona State Land Department, Tucson Field Office, 4455 S. Park Avenue Suite 101 Tucson, Arizona 85714 (520) 628-5480.

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

This project is not on private property. It is located on State and BLM land. A stewardship agreement will be completed once funding has been secured.

HABITAT DESCRIPTION:

Game management unit 37B is located in Pinal County, Arizona, southeast of Phoenix. Two main biotic community types, Sonoran Desertscrub and Semidesert Grassland, comprise the bulk of the habitat in 37B. Catchment #764 is located within the Jojoba-Mixed Scrub Series of the Arizona Upland Subdivision of the Sonoran Desertscrub community. Common vegetation includes jojoba (*Simmondsia chinensis*), foothill palo verde (*Cercidium microphyllum*), mesquite (*Prosopis spp.*), and desert hackberry (*Celtis pallida*). Average rainfall is approximately 13" and elevation is approximately 2700'.

ITEMIZED USE OF FUNDS:

Item	Quantity	Est. Cost/Item	Total Est. Cost	Rick Bader Installation Estimates	Total Rick Bader Cost Share	BLM Cost Share	AGFD
Redevelop Horizontal Well - 3 holes @ 100' deep	1	\$10,000	\$10,000	10,000	\$10,000		\$0
160 psi pipe	17350 ft	\$1.73/foot installed	\$30,016	.60/foot = \$10,410	\$10,410	\$8,100	\$11,506
Troughs	3000 gal	\$1.32/gallon	\$3,960	3@\$300ea = \$900	\$3,960		
Storage Tanks	20000 gal	\$1.32/gallon	\$26,400	2@\$1500ea = \$3000	\$18,300		\$8,100
PVC Storage Tanks - 10,000 gallon	(4)24"x100'	\$3,700	\$14,800				\$14,800
30" Fiberglass Drinker for PVC system (long version)	1	\$750	\$750				\$750
Pipe rail fence - 150'x150'	1	\$2,500	\$2,500				\$2,500
Plumbing		\$1,000	\$1,000				\$1,000
Remote Digital Monitoring Camera	1	\$500	\$500				\$500
Total			\$89,926		\$42,670	\$8,100	\$39,156

AGFD Estimated Costs Per Phase	
Phase 1	\$19,550
Phase 2	\$19,606
Total	\$39,156

LIST COOPERATORS AND DESCRIBE POTENTIAL PARTICIPATION:

- **BLM** – Expedite the processing of the remaining NEPA compliance documents and provide approximately \$8,100 in match funds
- **Rick Bader** – Redrill the horizontal well and install nearly all of the project components and supply all heavy equipment needed to do this. The pipelines will be installed in the middle of existing two-track roadway down the wash to minimize disturbance to vegetation and avoid creating additional OHV travel routes. This will be completed using a dozer.
- **AGFD** – Cost share the project where possible and install the wildlife storage tanks, drinker, and exclusion fence for catchment 764.
- **Volunteers** – Local sportsmen may be used to install the wildlife drinkers, PVC storage tanks, and pipe rail fencing.
- **Safari Club International** – SCI has expressed interest in providing volunteers to work on projects in the southern part of the state. They are a likely source for project volunteers as well.
- **ASLD** – Expedite the processing of the ASLD compliance documents.

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. This will enable the Wildlife Manager to make better informed decisions for the management of wildlife within GMU 37B.

Water levels will be monitored at least twice per year with emphasis during the warmer drier months by the Wildlife Manager. Additional monitoring will be conducted as needed. Minor maintenance will also be conducted as needed by the Wildlife Manager. The AGFD Development Branch will be responsible for major maintenance issues.

PROJECT MAINTENANCE:

The maintenance of each catchment will continue to be the responsibility of the AGFD. The Wildlife Manager will be responsible for coordinating this.

PROJECT COMPLETION REPORT TO BE FILED BY:

Ed Jahrke, Joe Currie or Ben Brochu

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: Hackberry Wash 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.**

Joe Currie on 9-11-08

3) **What is the estimated annual inches of precipitation for the area? (mark one)**

 2-4 4-6 6-8 8-10 10-12 X_12-14 14-16 >16

4) **Is there a perennial water source available to big game within four miles of this project?**

 X_YES (please complete #5 below) NO (skip #5 below)

5) **For the accessible, perennial water source nearest this project:**

Name of water source: Catchment #752

Type of water source (catchment, spring, dirt tank, etc.): Catchment

Ownership of water source: AGFD

Distance in miles from project: 1.42

*Note – Catchments 748 and 749 are also within 4 miles of the project site, however they are not perennial water sources and are in need of redevelopment.

6) **Is the target wildlife species a result of transplant efforts? YES X_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.**

N/A

8) **Please provide the following information about access to the proposed site:**

Type of access (mark one): 2x4 vehicles X_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? X_YES NO

-- Please describe any restrictions to public access: none

9) **Please list below (or on a separate sheet) the material type and dimensions of each component proposed to be added, modified, or repaired.**

Item	Quantity	Est. Cost/Item	Total Est. Cost	Rick Bader Installation Estimates	Total Rick Bader Cost Share	BLM Cost Share	AGFD
Redevelop Horizontal Well - 3 holes @ 100' deep	1	\$10,000	\$10,000	10,000	\$10,000		\$0
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Total			\$89,926		\$42,670	\$8,100	\$39,156

AGFD Estimated Costs Per Phase	
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Phase 2	\$19,606
Total	\$39,156

10) Was a site visit completed? Yes No

A site visit was completed on September 11, 2008

From: Darrell_Tersey@blm.gov [mailto:Darrell_Tersey@blm.gov]
 Sent: Tuesday, February 12, 2008 11:44 AM
 To: Ben Brochu
 Cc: John Windes
 Subject: Re: Tortilla Mountains Water Catchments - #748, 749, and 764

Hi Ben,
 Sorry to take so long to reply to you. I did check on the NEPA documentation for the projects. All of the projects were covered by the Middle Gila HMP, which is a cooperative plan between the BLM and the AG&F Dept. Part of the plan was an EA covering all of the projects which at the time were either new proposals or redevelopments. The development up hackberry wash is actually a horizontal well development and I have all of the project files, including as-built drawings. I would think that either the Tucson office or the Phoenix office would have a copy of the HMP as it was signed by Bud Bristow when he was director of the department. If you can't find one, I could probably copy the EA out of this one for your records.

Darrell Tersey
 Natural Resource Specialist
 Ironwood Forest National Monument
 (520) 258-7218
 Darrell_Tersey@blm.gov

ARIZONA GAME AND FISH DEPARTMENT
TREE SHEARING WORKSHEET

PROJECT NAME: _____

- 1) **What is the estimated acreage of the project?**

- 2) **How are the trees going to be cleared? (agra axe, chain saw, push):**

- 3) **What is the estimated number of trees per acre?**

- 4) **Describe trees to be cleared (species, estimated diameter, single stem, multi-stem):**

- 5) **Describe terrain (slope, soil type, rocks, etc.)**

- 6) **Please list any special land management status for the project site (i.e. Wilderness, National Park, National Monument, etc). If private land, list landowner.**

- 7) **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

Is the site relatively accessible for tree shearing equipment? YES NO

Please describe any restrictions to public access:

PROJECT COMPLETION REPORT

(Please complete the report and forward to Game Branch
within 30 days of the completion of the project. THANK YOU!)

Project Title: _____

Project number: _____

GMU: _____

Project Coordinator (IF NOT APPLICANT): _____

Agency: _____

Address: _____

Phone: _____

Email: _____

Project Completion Date _____

COOPERATING AGENCIES AND/OR CONSERVATION GROUPS, LANDOWNERS, ETC.:

PROJECT ACCOMPLISHMENTS:

PROJECT RESULT ACTIONS:

(List practices implemented as a result of project, i.e. area rested from grazing for 2 yrs., season recommendations revised based on new distributions, data received from project, etc.)

COMMENTS ABOUT THE PROJECT:

(Please list updates, reports, concerns, suggestions)

MAINTENANCE/MONITORING SCHEDULE (from this point on): WHO and WHEN?

PHOTO: (Please attach)

MAIL COMPLETED PROJECT COMPLETION FORM TO:

**Game Branch
Arizona Game and Fish Department
2221 W. Greenway Road
Phoenix, AZ 85023
rothompson@azgfd.gov**