

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

**PROJECT INFORMATION**

**Project Title:** Southwest Whetstone Mountains Water Development Phase 2

**Project No.** 11-510

**Region/GMU:** V / 34B

**HPC:** Sierra Vista/Douglas

**Project Type:** Water Development

**Project Description:**

The entire Whetstone Mountain Range is lacking dependable water. For the most part, springs water most of the range, with a small number of dirt tanks and wells providing supplemental water. With drought, came the realization that the springs cannot be depended on yearlong to water wildlife. The few springs that can hang on yearlong receive a fair amount of livestock use. Although this use is managed at a sustainable level, some degradation of some sites has occurred, especially when it's the primary water in the pasture. One in particular is the riparian area around Simpson Spring. To alleviate the dependency on the springs, the Southwest Whetstone Mountains Water Development was planned for implementation in two phases.

Phase 1 of this project was funded by the U.S. Forest Service and the State of Arizona's Livestock Crop and Conservation Grant Program (LCCGP). The partnership funded the construction of two large trick tanks on the Coal Mine Allotment. LCCGP paid \$52,000 dollars to fund the trick tanks and the USFS paid \$20,000 dollars for both the clearances and helicopter time to fly in all materials for the project. The two trick tanks watered 3,139 acres.

Phase 2 of the project would establish 5 permanent upland waters that would water an additional 3,050 acres, and build a fence around Simpson Spring to manage and enhance the riparian area. The only waters in this area are springs, and all but one are ephemeral. The one perennial spring is Simpson Spring. The area around this spring is a true riparian area, which is uncommon in the Whetstones. Since this area is a reliable source of water, it receives a fair amount of livestock use. With the development of 5 additional water sources as proposed, livestock will be able to water outside of the riparian area thereby improving conditions for wildlife.

This project is beneficial to wildlife in several ways. It would provide permanent water to approximately 6,000 acres of prime Coues white-tail deer and javelina habitat. These acres include U.S. Forest Service Land, Pima County Land, and State Trust land, all of which is open and accessible to the public for hunting. Another benefit to wildlife is the improvement/enhancement of the Simpson Spring area due to the creation of nearby supplemental water sources.

Phase 2 of the project would consist of equipping the Copper Sands Well with a submersible pump, installing 5.0 miles of surface pipeline, four 3,000 gallon storages, three 5,000 gallon storages, five troughs, and construction of .75 miles of fence for Simpson Spring. Each trough will have a float cover and wildlife escape ramp.

The Copper Sands Well has been scoped, and the results were very favorable. The well is strong and can handle the demand of this proposed system. With the use of 3,000 gallon storages at each trough, we can isolate troughs from the entire system. This will allow the system to be more resistant to vandalism, and periodic maintenance needs of a well and water line as well as reduce dependence on the main 15,000 gallon storage.

<p>The funds requested would provide the labor to fence livestock out Simpson Spring and provide the four 3,000 gallon storages to be located on troughs throughout the system.</p> <p><b>Wildlife Species to Benefit:</b> Coues deer (70%), Javelina (20%), Mule deer (10%), dove, and non-game species, including bats.</p>	
<p><b>Possible Funding Partners:</b></p>	
<p><b>Implementation Schedule:</b>  <b>Beginning: July 2012</b>  <b>Completed: July 2013</b></p>	
<p><b>PROJECT FUNDING</b></p>	
<p><b>SBG Funds Requested: \$18,000.00</b></p> <p><b>Cost Share Funds: \$43,638.82 (71% Cost Share)</b></p> <p><b>Total Project Costs: \$61,638.82</b></p>	
<p><b>PARTICIPANT INFORMATION</b></p>	
<p><b>Applicant: Aaron Miller AGFD</b>                  (please print)  <b>Telephone: 520-591-5960</b></p>	<p><b>Address: 555 Greasewood Rd, Tucson, AZ 85745</b></p>
<p><b>AGFD Contact and Phone No. Aaron Miller 520-591-5960</b>                  (If applicant is not AGFD personnel)</p>	
<p><b>Coordinated with:</b> James Heiholt (USFS); Aaron Miller (AGFD); John Millican (Sierra Vista-Douglas HPC Chairperson); Marylyn Harris (Sands Ranch); Doc Clyne (Clyne Ranch); Dan Taylor (Bat Conservation International)</p>	<p><b>Date: 8/20/2011</b></p>
<p><b>Applicant's signature:</b></p>	<p><b>Date:</b></p>

**NEED STATEMENT/PROBLEM ANALYSIS:**

Water in the project area is limited, sporadic and poorly distributed. Most tanks and springs run dry by early summer save one perennial spring, Simpson Spring. The well will relieve the dependence on Simpson Spring from both cattle and wildlife. This will improve the riparian conditions in and around the spring which will make it more favorable for game and non game use.

**PROJECT OBJECTIVES:** Supply dependable, perennial water to approximately 6,000+ acres of land along the southwest face and foothills of the Whetstone Mountains. The permanent water would relieve the dependence on intermittent springs in the area, and allow for better management of Simpson spring.

**PROJECT STRATEGIES:**

NEPA was completed in 2009 for the Mescal and Coal Mine Allotments. Cultural and biological clearances will need to be completed for the pipeline portion of the project. These will be done by the U.S. Forest Service. The remainder of the project was cleared through the 2009 NEPA. Implementation would take place in the spring/summer of 2012.

HPC grant would:

1. Fund the labor to fence Simpson Spring to exclude livestock.
2. Place one 3,000 gallon storage tank at every trough to aid in a tamper proof water system for yearlong water. This will total four 3,000 gallon storage tanks.

Forest Service shall provide:

1. 4.1 miles of pipe, four troughs, three 5,000 gallon storages, and .75 miles of fence materials
2. Fly all materials in by helicopter

Grazing Permittees shall provide:

1. Fund the purchase of the pump for the well.
2. Fund all labor for install.
3. Provide maintenance for the life of the improvement.

Bat Conservation International

1. Fund 5000 feet of pipe.
2. Fund one 10 foot trough.

**PROJECT LOCATION:**

Location is in the south central portion of Unit 34B approximately 3.5 miles north of State Highway 82 in Pima County. Legal location is:

T.19S.,R.18E. Sec's 1, 11, 12, 13, 14, 24

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

The entire project is located on National Forest System lands.

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

**HABITAT DESCRIPTION:**

Elevations of the project area range from 5,200 to 5,900 ft. The area is located on the southwest side of the Whetstone Mountains. The project consists of desert grasslands and oak woodlands. The vegetation consists mainly of Emory oak, juniper sp., Mearn's Sumac, and a variety of native perennial grasses. The lower elevations are dominated heavily by Lehmann lovegrass.

**ITEMIZED USE OF FUNDS:**

The attached tables summarize the estimated costs for the project and the amount requested from HPC. The Forest Service, Grazing Permittee, and Bat Conservation International matching funds are displayed on the same table.

**LIST COOPERATORS AND DESCRIBE POTENTIAL PARTICIPATION:**

**U.S. Forest Service:** The Forest Service has completed NEPA and will complete the required biological, archaeological clearances, and will provide project oversight. The forest will also contribute 4.10 miles of 1.25” HDPE pipe, miscellaneous plumbing parts, four 8ft poly troughs, three 5,000 gallon storages, fly all material into project area, and general labor throughout the project.

**Bat Conservation International:** To provide one 10’ round trough for a bat friendly watering source and 5000 feet of pipe.

**Sands and Clyne Ranches:** Purchase the pump for the Copper Sands Well. Provide all labor for the installation of the project. The ranch will also provide maintenance year-round for the project.

**PROJECT MONITORING PLAN:**

Completion of tasks by agreed upon timelines and quality of work will be monitored by Sierra Vista Ranger District Range Management Specialists and administered through permit modifications.

**PROJECT MAINTENANCE:**

The improvements will be added to Part 3 of the rancher’s Term Grazing Permit with the permittee assuming maintenance responsibility with regulatory enforcement and oversight by the Forest Service.

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

James Heitholt, USFS, Sierra Vista Ranger Station

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

**PROJECT NAME:** Southwest Whetstone Mountains Water Development

- 1) **Is the water development listed as a priority in the most recent “Wildlife Water Development Annual Implementation Schedule?”** No
- 2) **Please list the Development Branch personnel and date coordinated with for this project.**  
N/A
- 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: No restrictions; private property is owned by Pima County with open 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.**

See attached Cost sheet

- 10) **Was a site visit completed?**  Yes  No

If Yes, please list personnel that attended and date.

James Heitholt (USFS), Aaron Miller (AGFD), Doc Clyne (Clyne Ranch), Marilyn Harris (Sands Ranch), Travis Nevins (Sands Ranch Manager), Doug Ruppel (Sands Consultant) 4/23/2010

James Heitholt (USFS), Glenn Frederick (USFS), and Dan Taylor (Bat Conservation Int) 7/29/2010

**Southwest Whetstone Mountains Water Development**

<b>HPC Contribution</b>			
Item	Number	Cost per Unit	Cost for Project
Labor to install Simpson Spring Fence	4000 ft	\$3.00	\$12,000.00
3,000 gallon Storages	4	\$1,500.00	\$6,000.00
<b>Total</b>			<b>\$18,000</b>

<b>Bat Conservation International</b>			
Item	Number	Cost per Unit	Cost for Project
1.25" diameter NuMex HDPE DR-9 Pipe	5000	\$0.45	\$2,250.00
10 foot trough	1	\$250.00	\$250.00
<b>Total</b>			<b>\$2,500</b>

<b>Grazing Permittees - Sands and Clyne Ranch Contribution</b>			
Item	Number	Cost per Unit	Cost for Project
Grundfos 7S15-26 submersible pump (5.25 gpm @ 600' head)	1	\$1,440.00	\$1,440.00
Misc. labor to Install system (hourly for 4 people)	80	\$80.00	\$6,400.00
1 1/4" Schedule 80 PVC Drop pipe	200	\$1.80	\$360.00
#12-3 w/ground flat jacketed submersible pump cable	200	\$1.60	\$320.00
Taxes	1	\$140.00	\$140.00
Install Pump (hourly)	7	\$100.00	\$700.00
<b>Total</b>			<b>\$9,360</b>

<b>Forest Service Match</b>			
Item	Number	Cost per Unit	Cost for Project
Archaeological & biological surveys & clearances	6	\$300.00	\$1,800.00
Project oversight (days):	5	\$265.00	\$1,325.00
Write Permit Modification, including specifications			
Inspect project during construction & at completion			
File reports with HPC			
Misc. Labor to Deliver materials and Project Work (days)	6	\$265.00	\$1,590.00
1.25" NuMex Transitions	18	\$35.00	\$630.00
1.25" Galvanized Nipple 3 inch	18	\$2.99	\$53.82
1.25" Galvanized Union	18	\$9.00	\$162.00
1.25" Ball Valve	6	\$23.00	\$138.00
1.25" Elbow	14	\$6.50	\$91.00
1.25" Nipple 6"	6	\$4.00	\$24.00
1.25" to 1" Coupler	5	\$4.00	\$20.00
1" Nipple 26"	5	\$13.00	\$65.00
1" Nipple 4"	10	\$5.00	\$50.00
1" Elbow	10	\$4.50	\$45.00
1" Float Valve, rod, ball	5	\$74.00	\$370.00
Escape Ramp - Expanded Metal	5	\$35.00	\$175.00
Valve box plastic	6	\$15.00	\$90.00
Flight Time to Fly Material (light Helicopter)	3	\$1,100.00	\$3,300.00

Fence material for Simpson Spring (.75 miles)	1	\$3,000.00	\$3,000.00
Trough 8ft x 2ft round poly	4	\$250.00	\$1,000.00
5,000 gallon Poly Storages	3	\$2,200.00	\$6,600.00
1.25" diameter NuMex HDPE DR-9 Pipe	22,500	\$0.50	\$11,250.00
		<b>Total</b>	<b>\$31,778.82</b>

<b>Total Estimated Project Costs for Phase 2</b>		<b>\$61,638.82</b>
<b>Cost Share</b>	<b>71%</b>	<b>\$43,638.82</b>
<b>Requested from HPC</b>	<b>29%</b>	<b>\$18,000.00</b>

