

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

**PROJECT INFORMATION**

<b>Project Title:</b> Bennett and Reppy Dams Water Development/Road Improvement	<b>Project No.</b> 11-506
<b>Region/GMU:</b> Region 5/ Unit 30 B	<b>HPC:</b> SEAZ-HPC
<b>Project Type:</b> Water Development/Access: Repair existing water catchment, pipeline, storage and drinker system and improved road access.	
<p><b>Project Description:</b> This project is designed to re-develop and improve two existing concrete dams which will supply water to wildlife and livestock and to improve public access into the southern end of the Dragoons. The dams are located at the mouths of two canyons on the southwest flank of the Dragoon Mountains in steep, rough drainages that are difficult for wildlife to access. These dams were originally developed approximately 30 years ago with the intent of collecting water through a sandpoint (perforated pipe) for a pipeline and drinker system. The dams are both approximately 20 – 30 feet wide and four feet deep. Both dams are still fully functional; however, neither has any significant storage capacity for any length of time. They also do not have a drinker system associated with them. No maintenance has been done on the dams since their construction. By re-sealing the base of the dams with epoxy and connecting ¼ mile pipelines to 5,000 gallon storages with drinkers, we will be able to provide yearlong water to approximately 2,500 acres of rangeland and wildlife habitat that is currently dry for much of the year. The drinkers will be wildlife accessible, as well as have escape ramps. They will have float mechanisms protected by float covers to prevent vandalism or damage by wildlife. By providing water storage and drinkers away from the dams we will improve access to the water and reduce trampling around the dams.</p> <p>In 2010, the ranch entered into an access stewardship with AGFD and is currently cooperating in the installation of solar system to provide year-long wildlife water at another location. This area has long been lacking habitat management, and any development of permanent water will be a significant improvement over current conditions.</p> <p>Due to the private land access issues on several areas of the Dragoon Mountains, areas with open access receive significant public use each year. The ranch has always been open to the public, making it an excellent candidate for wildlife habitat improvement. However, the road into this area has three water crossings which are frequently washed out making it difficult for the public to access. The badly eroded portions of the road are also contributing to excessive soil and vegetative cover loss. By providing maintenance on the road and hardened crossings for those washes we will be able to secure long-term vehicular access for the public and make it possible to get the tanks and required equipment to the proposed work sites.</p>	
<b>Wildlife Species to Benefit:</b> Coues' whitetail deer, desert mule deer	
<b>Possible Funding Partners:</b> Arizona Deer Association, Mule Deer Foundation, SCI-Tucson	
<b>Implementation Schedule:</b> <b>Beginning:</b> Spring 2012 <b>Completed:</b> Winter 2012	<b>NEPA Compliance: (if applicable)</b> <b>Completed:</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> <b>Projected Completion Date:</b>

**PROJECT FUNDING**

<b>SBG Funds Requested:</b>	\$14,650
<b>Cost Share Funds:</b>	\$20,140
<b>Total Project Costs:</b>	\$34,790

<b>PARTICIPANT INFORMATION</b>	
<b>Applicant:</b> U.S. Forest Service, Coronado NF, Douglas RD Attn: Joseph Harris <b>Telephone:</b> (520) 364-3468	<b>Address:</b> 1192 W. Saddleview Rd. Douglas, AZ 85607
<b>AGFD Contact and Phone No.</b> Jon McClard, WM Unit 30B – (520) 858-6479 (If applicant is not AGFD personnel)	
<b>Coordinated with:</b> Permittee; Bennett family, Slash TL, LLC, (Bennett Ranch)	<b>Date:</b> August 19, 2011
<b>Applicant's signature:</b> Joseph Harris	<b>Date:</b> August 31, 2011

**SEND COMPLETED APPLICATIONS TO:**  
**AZ Game and Fish Department**  
**Attn: Game Branch**  
**5000 W. Carefree Highway**  
**Phoenix, AZ 85086**  
[@azgfd.](mailto:azgfd@azgfd.com)

**WAS PROJECT PRESENTED TO THE LOCAL HPC? YES X NO**

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

**NEED STATEMENT/PROBLEM ANALYSIS:**

Water sources in the southern end of the Dragoons are not available through much of the year for wildlife or livestock. Currently the only water source is an AZGF trick tank in Henry Canyon which is approximately ¾ of a mile from one of these sites and 1.5 miles from the other site in rough terrain (see map). In addition the area is frequently inaccessible due to washouts on the main access road (FR 4396). The area is a popular hunting and recreation destination around Tombstone.

**PROJECT OBJECTIVES:**

Re-develop the Bennett and Reppy dam structures, provide additional water storage capacity as well as yearlong wildlife accessible drinkers. Also complete heavy maintenance on approximately 4 miles of road and install three hard water crossings to the access road into the area, providing public access to over 2,500 acres of US Forest land.

**PROJECT STRATEGIES:**

Using Forest Service funding, AZG&F cooperation, and HPC funding, permanent water will be made available across a larger area and access will be improved for the public. Two existing concrete dams which are equipped with sand points will be cleaned by hand down to the rock surface and resealed with an epoxy coating to repair small cracks in the concrete. A new 1 ¼” polyethylene pipe, thermally fused at the joints, will be installed for approximately ¼ of a mile down the canyon to a polyethylene storage system (5,000 gallons at each location, 10,000 gallons total) and a trough with wildlife escape ramps located on a flat adjacent to each storage location. The long term maintenance will be performed by the grazing permittee (Bennett family). The grazing allotment, which is permitted to allow grazing throughout the year, is used only lightly due to the fact that it is unfenced from

the more intensively used private and AZ state lands adjacent. This will effectively service approximately 2,500 acres of currently un-watered rangeland and wildlife habitat. In addition maintenance of an existing Forest Service Road into the area and improvements to three wash crossings on that road will make the access into the area safer and more reliable. The three wash crossings will be improved by installing Jersey Barriers along the downstream edge and then filling in behind them with rip rap. The long-term maintenance of the road will be performed by the US Forest Service on an as-needed basis.

**PROJECT LOCATION:**

The project is located in the NE ¼ Sec.36, T18S, R23E (Reppy Dam) and E ½ Sec 31, T18S, R24E (Bennett Dam). The road in this project is Forest Road # 4396 which runs from FR 345 (Middlemarch Road) SE across portions of T18S in R23 and R24 E for a distance of 4 miles. The project is on the Reppy allotment, Douglas Ranger District, Coronado N.F. Map attached.

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

The project area is on USFS property and the point of use of the water is on USFS property.

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

Not applicable for direct project area, but the ranch entered into a access stewardship with AGFD in 2010.

**HABITAT DESCRIPTION:**

The area surrounding the project ranges in elevation from around 5,000 feet to 7,000 feet at a high point within a mile of the project. The slopes are predominantly on a southwest aspect along this side of the Dragoons. A significant portion of the affected acreage falls within pinon/juniper and pine oak vegetation types, mostly on steep mountain faces and rocky, rugged terrain to the north and east. The plant community in the area to the southwest is a desert scrub and includes acacia species, mountain mahogany, desert ceanothus, catclaw mimosa, beargrass, prickly pear cactus, sotol, hairy and sideoats grama, Canes beardgrass, Plains and Lehman Lovegrass.

**ITEMIZED USE OF FUNDS:**

**Bennett/Reppy dams Project Proposal – Itemized Use of Funds**

<b><u>Total Project Cost:</u></b>	<b>34,790.00</b>
<b>Cost Share Funds</b>	<b>20,140.00</b>
<b>SBG Funds</b>	<b>14,650.00</b>
<b><u>NGO Volunteer and Permittee Contribution</u></b>	
Miscellaneous Labor for 3 days	250.00
<b>Total:</b>	<b>250.00</b>
<b><u>Forest Service Contribution</u></b>	

Jersey barriers and rip rap for crossings( half share)	6,800.00
Labor for three people for 3 days	2,100.00
Labor and Equip. Road Crew USFS	8,000.00
Archeological Survey	650.00
Wildlife Biologist (1 day)	390.00
NEPA	1,200.00
Cement mixer & concrete	600.00
Generator	100.00
Wildlife ramps	50.00
<b>Total:</b>	<b>19,890.00</b>

**HPC Contribution:**

2 – 5,000 gallon PE storage tanks	4,000.00
2- water troughs	1,500.00
2– Galvanized culvert float box	150.00
2 – 21’ 1 ¼” Galvanized Steel Pipe	40.00
2 – 1 ¼” Float valves w/ PE Balls	180.00
1 ¼” Steel Ebows, Street Ells, Unions, Misc. Fittings	80.00
Epoxy sealant for face of dams (4 gallons)	600.00
Approximately 0.5 miles 1 1/4" PE pipe	1,300.00
Jersey barriers and riprap for crossings (half share)	6,800.00
<b>Total:</b>	<b>14,650.00</b>

---

**LIST COOPERATORS AND DESCRIBE POTENTIAL PARTICIPATION:**

- USFS: Planning, implementation and supplying materials; NEPA compliance, labor
- AZGFD: Support for project and funding through their habitat improvement funds and special tag funds through various programs, Labor and planning
- Various Non-Government Organizations
- Permittee

**PROJECT MONITORING PLAN:**

For monitoring specific to this project, photographs will be taken before and after installation. Ecological condition data will also be gathered by the Forest Service through an Allotment Management Plan (AMP) and Annual Operating Instructions (AOI). The Forest Service monitors both effectiveness and implementation monitoring. Yearly, implementation monitoring is conducted to evaluate the amount of utilization and distribution the livestock permitted on the allotment achieved, as well as the maintenance/construction of improvements outlined in the AOI. Approximately every 5 years, effectiveness monitoring is conducted to evaluate the vegetation and soil condition trends, and make management decisions accordingly.

**PROJECT MAINTENANCE:**

The maintenance of the project will be the responsibility of the Bennett Ranch (Slash TL, LLC), permittee on the Reppy allotment. It will be ensured that water will be made available year-round to wildlife. Road maintenance will be provided by the USFS.

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

U.S. Forest Service – Joseph Harris, Range and Watershed Staff

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

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

N/A

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

**PROJECT NAME: Bennett and Reppy Dams Water Development/Road Improvement**

- 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.**
- 3) **What is the estimated annual inches of precipitation for the area? (mark one)**  
\_\_\_2-4 \_\_\_4-6 \_\_\_6-8 \_\_\_8-10 \_\_\_10-12 X12-14 \_\_\_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: Henry Canyon Trick Tank, AZGF  
Type of water source (catchment, spring, dirt tank, etc.): concrete watershed w/ water storage and drinker  
Ownership of water source: USFS  
Distance in miles from project: 3/4 mile from Reppy dam to trick tank and 1.5 miles from Bennet dam to trick tank in rough terrain
- 6) **Is the target wildlife species a result of transplant efforts?** \_\_\_YES XNO
- 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.**  
Forest Service administered land
- 8) **Please provide the following information about access to the proposed site:**  
Type of access (mark one): \_\_\_2x4 vehicles X4x4 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 XNO  
  
-- Please describe any restrictions to public access: The primary restriction to public access is the poor Condition of the road and three wash crossings that are routinely impassible.

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

2 - 5000 gal. HDPE storage tanks, 8' wide x 12' high

.5 mile 1 ¼" 200 psi PE pipeline, thermally fused joints

2 – 11' heavy equipment tire trough drinker with concrete bottom

2 – 24" galvanized culvert float box with lockable lid

2 – 20' joints 1 ¼" Galvanized steel pipe

Various galvanized fittings and brass float valves for trough and tank plumbing

Float guards over float mechanisms and anywhere else that there might be a threat

Freeze guard insulation on all exposed fittings and connections

Wildlife access and escape ramps in each open water source

**10) Was a site visit completed? \_\_\_ Yes X No**

If Yes, please list personnel that attended and date.

Forest Service personnel and AZGFD Field Supervisor; Brad Fulk have both been to the site.

**Bennett Water Catchment (4 photos)**





# Reppy Water Development

The Reppy allotment falls within the southern end of the Dagoon Mountains on the Douglas Ranger District of the Coronado National Forest. There are currently few reliable water sources in the area. The proposed action involves running pipelines from the base of the Reppy and the Bennett dams each to 5,000 gallon storages and troughs. With these two systems in place, approximately 2,500 acres of rangeland and wildlife habitat will be watered within one mile of the new improvements.

The Forest Service makes no expressed or implied warranty with respect to the character, function, or capabilities of the data or their appropriateness for any user's purposes; represented features may not be in an accurate geographic location. The Forest Service reserves the right to correct, update, modify, or replace this geospatial information without notification. Map created 8/17/2011 by Joseph Harris.

-  Dam
-  Storage Proposed
-  Trough Proposed
-  Pipeline Proposed
-  One Mile Buffer

