

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

Game Branch / HPC Project Number:	16-518
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PROJECT INFORMATION

Project Title: M Triangle Ranch Water Development	
Region and Game Management Unit: Region 5, GMU 32	
Local Habitat Partnership Committee (LHPC): • Safford	Was the project presented to the LHPC? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
Has this project been submitted in previous years? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> If Yes, was it funded? YES <input type="checkbox"/> NO <input type="checkbox"/> → Funded HPC Project #(s):	
Project Type: Water Development	
Brief Project Summary: Construct a yearlong water source from an existing solar well northwest approximately .84 miles via an underground pipeline which will supply a 3,000-gallon poly storage tank and wildlife friendly trough, including wildlife ramps. Project is initiated on private land, with pipeline running across State Land terminating at State Land/Private boundary. Trough will furnish pastures on both sides of boundary fence, with storage tank located on private property. (see attached photos 1 and 2)	
Big Game Wildlife Species to Benefit (% benefit per species) : Pronghorn (50%), Mule Deer (50%)	

Implementation Schedule (Month/Day/Year): <u>Project Start Date:</u> April 2017 <u>Project End Date:</u> December 2017	Environmental Compliance: NEPA Completed: Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Projected Completion Date: _____ State Historic Preservation Office - Archaeological Clearance: <i>(Provide Attachment)</i> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Projected Completion Date: _____ State Land permit submitted by Landowner. State Land expects clearance complete by early 2017. Arch. Clearance on private property completed by NRCS during grubbing project Arizona Game and Fish Department EA Checklist: N/A <input type="checkbox"/> To be Completed by: _____ Projected Completion Date: _____
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PROJECT FUNDING

Special Big Game License Tag Funds Requested:	\$ 5,915.00
Cost Share or Matching Funds:	\$ 21,282.00
Total Project Costs:	\$ 27,197.00

PARTICIPANT INFORMATION

Applicant (please print): Shelley and Mark Michaels	Address: 19099 South Wells Road Willcox. AZ 85643	E-mail: smichaels@vtc.net
Telephone: 520-975-4337		Date: August 22, 2016

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

John Bacorn – Wildlife Manager, GMU 32 520-591-1485

Project has been coordinated with:

Shelley and Mark Michaels – M Triangle Ranch Owners

John Bacorn – Wildlife Manager, GMU 32

Cody Hatfield – State Land Department

Chase Skaarer – NRCS Range Management Specialist, Willcox

Duane Aubuchon – AZGFD Field Supervisor, Region 5

Safford HPC

Arizona Antelope Foundation – Glen Dickens, Vice President

Mule Deer Foundation – Terry Herndon, Regional Director and Clyde Weakley, MDF project coordinator for SE Arizona

NEED STATEMENT – PROBLEM ANALYSIS:

In 2010, the Bonita Grassland Restoration Project was initiated within GMUs 31 and 32. The goal of the project is to restore 20,000 acres from a mesquite infested scrubland to its historical grassland dominated landscape. This large scale landscape project was foreseen to require up to 10-15 years to complete. To date over 13,500 acres have been treated. Currently, \$300,000 has been spent through the use of National Fish and Wildlife Foundation grant funds and Arizona Antelope Foundation/Mule Deer Foundation Special Big Game License Tag funds. Additional funding partners have been Natural Resources Conservation Service (NRCS), Arizona Department of Agriculture (ADA), US Fish and Wildlife Service (USFWS), Arizona Game and Fish Department (AGFD), and private landowners.

The primary goal of this landscape scale project was to restore grassland habitat and reduce erosion to enhance habitat quality and distribution for Pronghorn, Mule Deer, and livestock. During the early to mid-1990's over 100 pronghorn were observed during AGFD aerial surveys within the Bonita area. Beginning around 2000 the number of animals observed began declining and during the 2004 and 2005 surveys, only 25 animals were observed. During this time period fawn to doe ratios declined. From 1999 to 2004, the average fawn to doe ratio was 5:100. In 2006-2008, AGFD contracted with Wildlife Services to fly aerial coyote control within the Bonita area, observation numbers increased to 49, 84 and 58 animals and fawn ratios were 35, 75 and 21 fawns per 100 does during the three years of aerial coyote control. This data equates to an average population of 64 animals, and an average fawn survival of 44.7:100 does. From 2009-2015 the average fawn survival declined to 19.6:100 does, while the overall population averaged 54 animals indicating a 16% decline. Currently, AGFD has reinitiated this contract with Wildlife Services for the 2016-2018 period. Survey results following the 2016 control effort indicates a fawn ration of of 44:100 which is the highest since 2007. Since the inception of the grasslands restoration efforts in 2011, the pronghorn observations have steadily increased from 38 to 75 animals. Winter survey data indicates that the mule deer population has shown a slight increase since 2013. (**information provided by John Bacorn, GMU 32 Wildlife Manager**) Landowners have also commented that the number of mule deer observed throughout the project area have increased.

Due to the large scale grassland restoration that has provided habitat connectivity to the Bonita area, it is important to develop permeability through the development of yearlong waters, fence modification, and periodic predator control during pre and post Pronghorn fawning periods.

This project will enhance water availability and distribution throughout the nearly 14,000 acres that have been restored. The M Triangle Ranch has been an active partner since the inception of the Bonita Grassland

Restoration Project. The Ranch has completed grassland restoration projects on over 1,300 acres with assistance from NRCS; has installed and modified approximately 8 miles of wildlife friendly smooth wire fencing; purchased and installed over 2 miles of pipeline, storage tanks and troughs; and drilled a new well with assistance from NRCS. In 2015, the Ranch partnered with the Arizona Antelope Foundation (AAF) to modify 4 miles of fenceline by raising the bottom smooth wire to a height of 16” along the High Creek Road right-of-way fence. In September 2016, the AAF and partners have been approved to modify an additional one-half mile of boundary fence between the M Triangle and Sierra Bonita Ranches, along with 3 miles on the adjoining Sierra Bonita fenceline. These improvements have resulted in over 5,120 acres of habitat enhancement and connectivity on the M Triangle Ranch alone.

Upon the completion of this water development along with 5 other waters that have been developed on the Ranch, water distribution on over 8 sections of privately owned land will be enhanced so at least one yearlong available water will be located every one mile.

Not only does the M Triangle Ranch provide important habitat for both Pronghorn and Mule Deer, it offers connectivity to additional prime habitat to the south, and allows local mule deer to have unobstructed travel to available habitat along the northern end of the Winchester Mountains.

PROJECT OBJECTIVES:

Improve yearlong water availability for antelope and mule deer on critical habitat.

Improve forage quality and quantity for pronghorn and mule deer through enhancing water availability and distribution which will allow the M Triangle Ranch to distribute livestock grazing in a more efficient manner.

Improve antelope and mule deer fawn survival by providing improved range condition and fawning cover.

Provide unobstructed connectivity between habitats which enhances Pronghorn and Mule Deer distribution.

PROJECT DESCRIPTION AND STRATEGIES:

(How will you implement project)

An archaeological survey of the private property within this project site has been completed by NRCS personnel during an earlier grubbing operation. The owners are awaiting approval of their submitted State Land Permit application for this project. Conversations with Cody Hatfield, State Land Department, indicates that upon permit approval, archaeological clearances will be completed and SHPO approval submitted. Upon clearance and HPC funding approval, the landowners (Shelley and Mark Michaels) will dig a shallow trench along the cleared line and bury approximately 4,500 feet of 1 ¼” of Black poly pipe. The Michaels, through cost share, will also complete the plumbing from the existing solar well to the 3,000gallon poly storage tank and trough.

Future maintenance of the well and water development will be the responsibility of the M Triangle Ranch (Shelley and Mark Michaels – owners).

PROJECT LOCATION

(Please provide lat/long of project area and datum. If project is larger than one point, please add multiple lat/long points or an existing shapefile of the project area)

Well: 32.561530 110.123669

Storage tank and trough: 32.572257 110.129956

Datum WGS 84

See Attached Map of project

LAND OWNERSHIP AT THE PROJECT SITE(S):

(If the project area is private property, please state specifically and provide the landowner's name)

- The water project will be initiated at the solar well on private land owned by the M Triangle Ranch. This well was drilled and solar equipped in 2014 through private funding and assistance from NRCS. An underground waterline will run north west across state land and will terminate at an interior cross fence which is the boundary of state land to the south and private land to the north, owned by the M Triangle Ranch. The storage tank will be placed on private property while the trough will provide yearlong water to both pastures.
- M Triangle Ranch owned and operated by Shelley and Mark Michaels

IF PRIVATE PROPERTY, IS THERE A COOPERATIVE BIG GAME STEWARDSHIP or LANDOWNER AGREEMENT BETWEEN THE LANDOWNER AND THE DEPARTMENT?
YES[] NO[X] N/A[]

HABITAT DESCRIPTION:

According to the NRCS Soil map website, the two dominant ecological sites are Sandy Loam and Clay Upland. The area is comprised of a semi-desert grassland made up primarily of tobosa, sideoats gramma, vine mesquite, curly mesquite, Rothrock grama, yucca, cacti (sp.) and sparsely scattered mesquite.

Elevation is between 4400-4500 feet.

ITEMIZED USE OF FUNDS:

Project materials:

4,500 feet 1 ¼" black poly pipe, 160 psi. @ .67/foot	\$3,015.00
1-3,000 gallon poly storage tank	\$2,000.00
1-10 foot galvanized trough	\$650.00
Fittings and miscellaneous supplies	\$250.00

TOTAL	\$5,915.00
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Special Big Game License Tag Funds

Arizona Antelope Foundation	\$2,957.50
Mule Deer Foundation	\$2,957.50
TOTAL	\$5,915.00

Cost Share or Matching Funds (for volunteer labor rates please refer to the worksheet below)

Drilling, Plumbing and Solar install on existing well: \$21,000.00

Burying, laying waterline and plumbing by M Triangle Ranch: 40 hrs labor @ \$14.14/hr - \$565.60

Total: \$21,565.60

LIST COOPERATORS AND DESCRIBE POTENTIAL PARTICIPATION:

Mark Michaels – Provide labor to dig and bury pipeline from solar well to storage tank and trough. Plumb waterline, storage tank and trough. M Triangle Ranch will provide yearly checks and maintenance, as needed on well and water source.

WOULD IMPLEMENTATION OF THIS PROJECT ASSIST IN PROVIDING, MAINTAINING, OR FACILITATING RECREATIONAL ACCESS?

YES NO N/A

The M Triangle Ranch provides restricted access only by prior approval. The Ranch is located near public lands where the existing Pronghorn and Mule Deer populations travel due to efforts to enhance habitat connectivity and permeability.

PROJECT MONITORING PLAN:

M Triangle Ranch will provide yearly checks and maintenance of water line, as needed, and will provide yearlong water for wildlife.

PROJECT MAINTENANCE:

Any required maintenance on solar well and water system will be provided by M Triangle Ranch.

PROJECT COMPLETION REPORT TO BE FILED BY:

John Millican
Arizona Antelope Foundation, Project Manager
520-508-4272

WATER DEVELOPMENT PROJECTS (please use the worksheet below):

TREE CLEARING/REMOVAL PROJECTS (please use the worksheet below):

ATTACHMENTS:

(Please provide cultural clearance documentation from land management agency, e.g., FONSI, Inventory Standards, etc. Also attach any project pictures)

ARIZONA GAME AND FISH DEPARTMENT WATER DEVELOPMENT WORKSHEET

PROJECT TITLE: M Triangle Ranch 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.**
Joseph Currie 08/30/16
- 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: No Name
Type of water source (catchment, spring, dirt tank): Water Trough
Ownership of water source: Private
Distance in miles from project: 1.2 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). If private land, list landowner.**
Private: Shelley and Mark Michaels

- 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: _____ Approximate hiking time: _____

-- Does access to this site require crossing private or tribal lands? YES NO

-- Please describe any restrictions to public access: By prior permission only

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

3,000 poly storage tank

Approx. .84 miles of 1 ¼” poly pipe laid underground

Metal Trough – approx.. 6’x10’

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

If Yes, please list personnel that attended and date. August 12, 2016

John Millican – AAF Project Manager

Clyde Weakley – MDF SE AZ Project Manager
Mark Michaels – Landowner

ARIZONA GAME AND FISH DEPARTMENT **TREE CLEARING/REMOVAL WORKSHEET**

PROJECT TITLE: _____

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

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

- 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)**

- 6) **Please list any special land management status for the project site (e.g. Wilderness, National Park, National Monument). 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 removal equipment? YES[] NO[]

Please describe any restrictions to public access:

ARIZONA GAME AND FISH DEPARTMENT VOLUNTEER HOURLY RATES AND CLASSIFICATIONS WORKSHEET

PROJECT TITLE: _____

The value of volunteer labor should be calculated at the hourly rate of an employee doing similar work, or using hourly rates from the Arizona Department of Administration's Human Resource web site, plus a standard ERE rate of 35%. http://www.hr.state.az.us/ClassComp/CC_Job_Titles_with_Ranges.asp

\$0.445/mile should be the calculation used for mileage.

Water Development	Volunteer Hours	Volunteer Miles	Hourly Rate	Estimated Value
			\$14.14	
Habitat Restoration and Clean Up	Volunteer Hours	Volunteer Miles	Hourly Rate	Estimated Value
			\$14.14	
Fisheries	Volunteer Hours	Volunteer Miles	Hourly Rate	Estimated Value
			\$14.14	
Nongame Branch Project	Volunteer Hours	Volunteer Miles	Hourly Rate	Estimated Value
			\$14.14	
Misc/office work	Volunteer Hours	Volunteer Miles	Hourly Rate	Estimated Value
			varies	
Community Services	Volunteer Hours	Volunteer Miles	Hourly Rate	Estimated Value
			\$7.44	
Events and Other	Volunteer Hours	Volunteer Miles	Hourly Rate	Estimated Value
			\$14.14	
Research Branch	Volunteer Hours	Volunteer Miles	Hourly Rate	Estimated Value
			\$14.14	
Wildlife Area Hosts	Volunteer Hours	Volunteer Miles	Hourly Rate	Estimated Value
			\$17.44	
Education Programs	Volunteer Hours	Volunteer Miles	Hourly Rate	Estimated Value
			\$16.07	
Totals				