

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

Game Branch / HPC Project Number:	12-509
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PROJECT INFORMATION

Project Title: Black Ranch (Bonita Grasslands Restoration Phase 3)

Region and Game Management Unit: 32

Local Habitat Partnership Committee (LHPC):

- Safford

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[] → **Funded HPC Project #(s):**

Project Type: Mesquite Grubbing: Landscape Scale Grasslands Restoration Project

Brief Project Summary:

This overall project (**Bonita Grasslands Restoration**) is in the third phase of a 20,000 acre landscape scale grassland restoration project in the Bonita area within GMU 31 and 32 which will involve using several grants from the Natural Resources Conservation Service (NRCS), Arizona Department of Agriculture (ADA) and Arizona Game and Fish Department (AGFD). During the initial planning stages of this project, it was foreseen to require up to 10-15 years to complete the entire proposed project area dependant upon available funding sources and cooperating landowners and lessees.

This particular project (**Black Ranch**) will reclaim 610 acres of historic semi-desert grassland through the use of mechanical grubbing and piling of mesquite, which entails piling carcasses and breaking them down into piles no taller than 4-6 feet and no closer than 200 yards from each other. Depending upon the density of piles per acre, most of the piles will be burned and the remaining piles will remain to decay over time and provide additional habitat for ground nesting birds such as scaled quail and other small mammals and reptiles. The removal of the mesquite carcasses after grubbing is important in relation to pronghorn antelope's "visibility" within their habitat. Ideal pronghorn habitat would consist of open grasslands with a mixture grasses, forbs and low shrubs averaging between 10 and 18 inches in height. Canopy cover and shrubs above 30 inches should be considerably less than 20% of total cover for the area. Leaving mesquite carcasses lay in the project area could seriously jeopardize the visibility level and hinder pronghorn antelope's use of these areas. This is why there is a heavy emphasis on removing the carcasses during the project.

The grubbing work is preferred to be done by means of an excavator as opposed to a bull dozer due to the more efficiency of this machine and its minimal ground disturbance. Piling or removing of the carcasses will be done with a front-end loader or small bull dozer

Following the grubbing operation, the lessee will be required to rest the treated area for a minimum of 2 growing seasons and a CRM (Coordinated Resource Management) Plan is encouraged to be developed for the ranch with the Natural Resource Conservation Service (NRCS).

The removal or significant reduction in mesquites within the treated area and improved range management will overall result in improved range conditions. This will go along way toward restoring the grassland ecosystem benefiting all grassland associated wildlife species.

Big Game Wildlife Species to Benefit: Pronghorn Antelope, Scaled Quail, Mule Deer

Implementation Schedule (Month/Day/Year): <u>Project Start Date:</u> December 2012 <u>Project End Date:</u> December 2013		Environmental Compliance: NEPA Completed: Yes[X] No[] N/A[] Projected Completion Date: 2011 State Historic Preservation Office - Archaeological Clearance: Yes[X] No[] N/A[] Projected Completion Date: 2011 Arizona Game and Fish Department EA Checklist: N/A[X] To be Completed by: _____ Projected Completion Date: _____	
PROJECT FUNDING			
Special Big Game License Tag Funds Requested:		\$ 30,000.00	
Cost Share or Matching Funds:		\$ 140,190.00	
Total Project Costs:		\$ 170,190.00	
PARTICIPANT INFORMATION			
Applicant (please print): John Bacorn		Address: AZ Game and Fish Dept 555 N. Greasewood Road Tucson, AZ 85705	
Telephone: 520-591-1485		E-mail: jbacorn@azgfd.gov	
		Date: June 25, 2012	
AGFD Contact and Phone No. (If applicant is not AGFD personnel):			
Project has been coordinated with: Natural Resource Conservation Service (NRCS) Wilma Jenkins, Landowner/lessee Mark Michaels.			

NEED STATEMENT – PROBLEM ANALYSIS:

Brief Project Summary:

“The antelope were once very abundant throughout the entire Sulphur Springs Valley, but now inhabit the grassland north of Willcox, east of the Galiuro and Winchester Mountains and west of the Pinalenos. A portion of the population also ranges on Allen Flat to the southwest of the Winchester Mountains. Raymond Wildlife Area-Chavez Pass antelope were released here (22 in 1943, 6 in 1944, 40 in 1945)” from Region V Pronghorn Antelope Management Plan.

In the early to mid 1990's over 100 antelope were observed during AGFD aerial surveys within the Bonita area. Starting in the year 2000 the number of animals observed decreased to lows of 25 in 2004 and 2005. Also during this time period fawn to doe ratios dipped to lows of 9, 5 and 0 fawns per 100 does. In 2006, 2007 and 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. In the two years since the aerial coyote control, observation numbers have been 63 and 59 and fawn to doe ratios have been 25 and 27 fawns per 100 does.

This particular project area is located along the east side of Fort Grant road just south of Bonita. Fort Grant road is the Game Management Unit boundary between GMU 31 and 32. This area is also the last

remaining open antelope corridor between GMU 31 and 32; the grassland link/corridor between the Bonita herd and southern Greasewoods herd.

Land that was historically semi-desert grassland is being encroached upon by mesquite trees. Therefore, the historic grassland blocks are declining in size and connections between them are being lost. Grassland associated wildlife are being impacted by this loss due to habitat degradation and fragmentation. Pronghorn antelope is definitely one of the key species being negatively impacted these changes in grasslands habitat.

Mesquite invasion in grasslands alters the entire grassland ecosystem; it alters the water infiltration, changes the vegetation composition such as grasses, forbs, shrubs and subshrub (browse) species. This change in vegetation results in changes in wildlife species composition normally associated with grasslands.

PROJECT OBJECTIVES:

- 1) Improve/restore desert grassland ecosystem.
- 2) Improve range conditions for all grassland associated wildlife species and livestock.

PROJECT DESCRIPTION AND STRATEGIES:

- 1) Remove/reduce mesquite densities within project area.
- 2) Remove mesquite carcasses by piling and burning.
- 3) Possibly reseeding rangeland with grass/forbs seed mixture.
- 4) Defer grazing in project for 2 growing seasons.
- 5) Implement CRM (Coordinated Resource Management) plan to improve range conditions.

PROJECT LOCATION:



LAND OWNERSHIP AT THE PROJECT SITE(S):

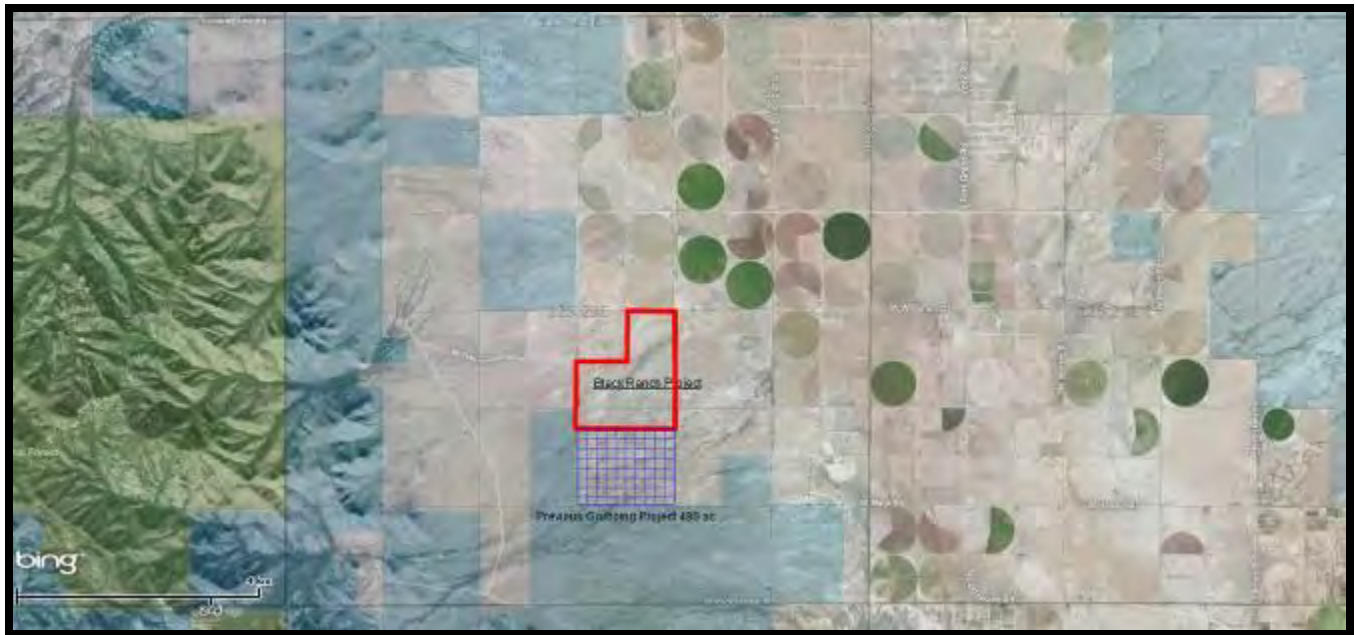
(if the project area is private property, please state specifically and provide the landowner's name)

- Project site is on Private Property

IF PRIVATE PROPERTY, IS THERE A COOPERATIVE BIG GAME STEWARDSHIP or LANDOWNER AGREEMENT BETWEEN THE LANDOWNER AND THE DEPARTMENT?

YES[] NO[X] N/A[]

No formal access agreement but the department has entered into other stewardship agreements with this landowner (Mark Michaels).



The AGFD has worked with this landowner on numerous occasions. In 2000 or 20001, as a new Ranch Owner, Michaels planned to replace old fences with new on the Triangle M Ranch. An agreement was reached between the AGFD and landowner in which the AGFD provided smooth wire and in exchange Michaels installed his new fence to AGFD Wildlife Standards.

In 2010 and 2012, the AGFD has partnered with NRCS and Mr. Michaels through Stewardship Agreements on similar mesquite grubbing operations. Mr. Michaels has not entered into a formal landowner/access agreement but limited access is granted by permission only.

In 2010, Mr. Michaels completed a similar grubbing project on 490 acres just south and adjacent to this current proposed grubbing project. The objectives of the first project were a little different and consequently because of excessive water runoff, erosion and greater slope in the terrain, the mesquite carcasses were left in place and not removed from the project.

HABITAT DESCRIPTION:

Remnant semi-desert grassland with heavy invasion of mesquite shrub dominance community at around 4300 feet.

PROJECTED PROJECT COSTS:

Prescription Objective	Unit Price	Quantity	Total Costs
Mesquite Grubbing	\$204.00/ac	610 acres	\$124,440.00
Obstruction Removal (piling & burning)	\$75.00/ac	610 acres	\$45,750.00
			\$170,190.00

ITEMIZED USE OF FUNDS:

Funds	Item	Unit Price	Quantity	Total Cost
NRCS	Grubbing (heavy density)	\$204.00/ac	610 acres	\$124,440.00
HPC	Obstruction Removal	\$49.18/ac	610 acres	\$30,000.00
Rancher	Obstruction Removal	\$25.82/ac	610 acres	\$15,750.00
				\$170,190.00

Special Big Game License Tag Funds
\$30,000.00

Cost Share or Matching Funds (for volunteer labor rates please refer to the worksheet below)
\$140,190.00

LIST COOPERATORS AND DESCRIBE POTENTIAL PARTICIPATION:

Natural Resource Conservation Service (NRCS): Matching funds and CRM (Coordinated Resource Management Planning) and monitoring.

Arizona Game and Fish Department (AGFD): Planning and monitoring.

Land Owner (Mark Michaels): Conduct grubbing and obstruction removal operations and matching funds.

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

YES[X] NO[] N/A[]

This is private land and access is limited and by permission only, but these types of projects are assisting in maintaining the relationship and trust between the landowner and the Arizona Game and Fish Department.

PROJECT MONITORING PLAN:

Project completion and success will be monitored by NRCS and AGFD.

PROJECT MAINTENANCE:

The project area will be monitored annually by NRCS, landowner and/or AGFD. It is anticipated that there will not be 100% mesquite mortality and there may be some re-sprouting of mesquite in subsequent years. This has been discussed between all parties involved. Maintenance may require application of herbicide of individual plants every few years to maintain the open grassland habitat type desired.

PROJECT COMPLETION REPORT TO BE FILED BY:

John Bacorn (AGFD)

WATER DEVELOPMENT PROJECTS (*please use the worksheet below*):

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

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

PROJECT TITLE: Black Ranch (Bonita Grasslands Restoration Phase 3)

1) What is the estimated acreage of the project?

610 acres

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

Mechanically Grubbed with an excavator, then piled and later burned

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

NRCS classifications are heavy (>150 per ac), medium (75-150 per ac) and light (<75 per ac). NRCS classified all acres within this project as heavy (>150 trees or brush per ac).

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

Mesquite tree will be the selected target species. Various diameter and multi-stemmed trees will be removed, diameters will range from 1 inch up to around 35 inches, most trees above 35 inch diameter will be left for shade and thermo-regulation.

5) Describe terrain (slope, soil type, rocks)

Uplands, sandy loam type soil with less than 30% slope.

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

Private land, owner is Mark Michaels

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:

This is private land and permission to access is required.