

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

Game Ranch/ HPC Project Number:	16-211
Possible Funding Partners:	

PROJECT INFORMATION

Project Title: Bar T Bar Quayle Hill Browse Release and Grassland Restoration	
Region and Game Management Unit: 5B & 5A	
Local Habitat Partnership Committee (LHPC): • Forage Resource Study Group	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[]	
Project Type: Removal of invading juniper through grinding, agra axe, and prescribed fire	
Brief Project Summary: This project is part of a larger landscape level approach to improve and restore grassland habitat on the BarT Bar allotment of the Coconino National Forest. The BarT Bar Ranch has removed encroaching juniper encompassing over 30,000 acres of grasslands using a variety of methods such as mechanical chaining, mechanical pushes, prescribed fire, direct source fire (tera-torch) and grinding, however much of that area is being re-invaded by juniper. To address the invasion, the USFS has planned a multi-phased effort to maintain the grassland and improve forb and browse availability. Phase 1 (HPC 10-203) attempted to restore approximately 10,000 acres through prescribed fire. Phase 2 (13-204) treated approximately 4700 acres using prescribed fire, grinding/ agra-axe and hand thinning. Phase 3 proposes to treat, maintain and improve the herbaceous and browse communities through grinding/ agra-axe and prescribed fire within large stands of Juniper totaling near 3,000 acres.	
Big Game Wildlife Species to Benefit: Elk 40%, Mule Deer 30%, Pronghorn 20% and Black Bear 10%	
Implementation Schedule (Month/Day/Year): Project Start Date: October 2016 Project End Date: June 30, 2019	Environmental Compliance: NEPA Completed: YES[X] No[] N/A[] Projected Completion Date: 2005 _____ State Historic Preservation Office -Archaeological Clearance: YES[X] No[] N/A[] Projected Completion Date: 03/18/2011 _____ Arizona Game and Fish Department EA Checklist: NIA[X] To be Completed by: _____ Projected Completion Date: _____

PROJECT FUNDING

Special Big Game License Tag Funds Requested:	\$31,920.00
Cost Share or Matchine Funds:	\$48,650.00
Total Project Costs:	\$80,640.00

PARTICIPANT INFORMATION

Applicant (please print): JeffThumrn	Address: 8738 Ranger Road	E-mail: jthumm@fs.fed.us
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Telephone: (928) 477-5037	Happy Jack, AZ 86024	Date: July 12, 2016
AGFD Contact and Phone No.(If applicant is not AGFD personnel): Co-applicant Luke Apfel (928) 220-5717		
Project has been coordinated with: USFS, Bob and Judy Prosser (BarT Bar allotment), AZGFD, AES, ADA, AAF, NRCS		

NEED STATEMENT-PROBLEM ANALYSIS:Juniper invasion of historic grasslands in Arizona has greatly diminished the diversity and production of herbaceous perennial cover. This has resulted in a near monoculture of Juniper, which is low quality habitat for many wildlife species and livestock, which has reduced the carrying capacity. Besides reducing carrying capacity, juniper invasion has reduced travel corridors and reduced visibility, which likely contributes to a greater vulnerability to predation for species such as pronghorn, mule deer, and elk. Another impact from juniper invasion has been erosion from down cutting. By reducing juniper and increasing ground cover, the local watershed should become healthier and allow for a quicker recovery. Habitat diversity and grassland maintenance is critical for recovery of the Anderson Mesa Pronghorn herd, and this project will compliment many other projects conducted within this population's habitat.

PROJECT OBJECTIVES:

- Remove large encroaching junipers via grinding, Agra-axe, and Terra-torch
- Remove small invasive junipers through prescribed fire
- Increase herbaceous/ browse diversity and viability through broadcast prescribed fire
- Broadcast burn and remove encroaching junipers via grinding Agra-axe and Terra-torch up to 3,000 acres over the two years

PROJECT DESCRIPTION AND STRATEGIES:

This project is part of a larger landscape level approach to improve and restore grassland habitat on the BarT Bar allotment of the Coconino National Forest. The BarT Bar Ranch has removed encroaching juniper encompassing over 30,000 acres of grasslands using a variety of methods such as mechanical chaining, mechanical pushes, prescribed fire, direct source fire (tera-torch) and grinding, however much of that area is being re-invaded by juniper. To address the invasion, the USFS has planned a multi-phased effort to maintain the grassland and improve forb and browse availability. Phase I (HPC 10-203) attempted to restore approximately 10,000 acres utilizing primarily prescribed fire due to mechanical methods becoming cost prohibitive on a large scale. However it was quickly realized due to the high risk of summer wildfires, prescribed fire at the needed time was not attainable, so a mixture of prescribed fire and mechanical methods was utilized. Phase 2 (HPC 13-204) treated approximately 5,000 acres using prescribed fire, 700 acres using agra-axe and 250 acres were thinned using chainsaws for a total of approximately 4700 acres treated. Phase 3 proposes to continue maintenance of grasslands and improve the herbaceous and browse communities through grinding!agra-axe of large stands of Juniper over 3,000 acres. Slash will be scattered and allowed to dry for follow-up prescribed fire. Prescribed fire of the grassland community would follow after a drying period to stimulate forb and browse diversity and growth. Burning of the slash piles will also reduce visibility obstacles for wildlife such as pronghorn.

PROJECT LOCATION: The general project area is split between areas in Game Management Units (GMU) SA and SB. The project area for GMU SB includes the area between Jaycox Mountain and the Sawmill Hills on either side of FR 82 and in the area of Johnny Tank. The other location in GMU SB includes the area just north of Long Lake in the Broomy Valley vicinity. The boundary for this area generally follows old pushes and fuel wood sales from the 60's-70's and is on east and west side of FR 123A and the north side of FR 82. The project area within GMU SA includes that area adjacent to the forest boundary and just east of Highway 87. The proposed project area borders restored grasslands on the Clear Creek ranch that was funded through several different funding avenues including HPC. See attached map.

LAND OWNERSHIP AT PROJECT SITE (Please state specifically if PRIVATE PROPERTY and provide landowner's name): US Forest Service, Coconino National Forest, Mogollon Rim District

IF PRIVATE PROPERTY, IS THERE A STEWARDSHIP or LANDOWNER AGREEMENT BETWEEN THE LANDOWNER AND THE DEPARTMENT?
YES NO

HABITAT DESCRIPTION: Grasslands that have been invaded by Pinion Juniper stands. Primary plant species include blue grama, squirrel tail, winterfat, bigelow sage, cliffrose, fern bush, Algerita, pinion, and shaggy bark juniper. Elevation is approximately 6500 feet receiving moderate precipitation.

ITEMIZED USE OF FUNDS: See Page 6 for budget spreadsheet.

Special Big Game License Tag Funds

Approximately 40% of total project cost to treat 3,000+ acres = \$31,920.00.

Cost Share or Matching Funds

From USDA, Forest Service approximately 60% of total project cost to treat 3,000+ acres = \$48,640.00.

LIST COOPERATORS AND DESCRIBE POTENTIAL PARTICIPATION:

US Forest Service Coconino National Forest Mogollon Rim District, AZ Game & Fish Dept, Bob & Judy Prosser (Bar T Bar Ranch)

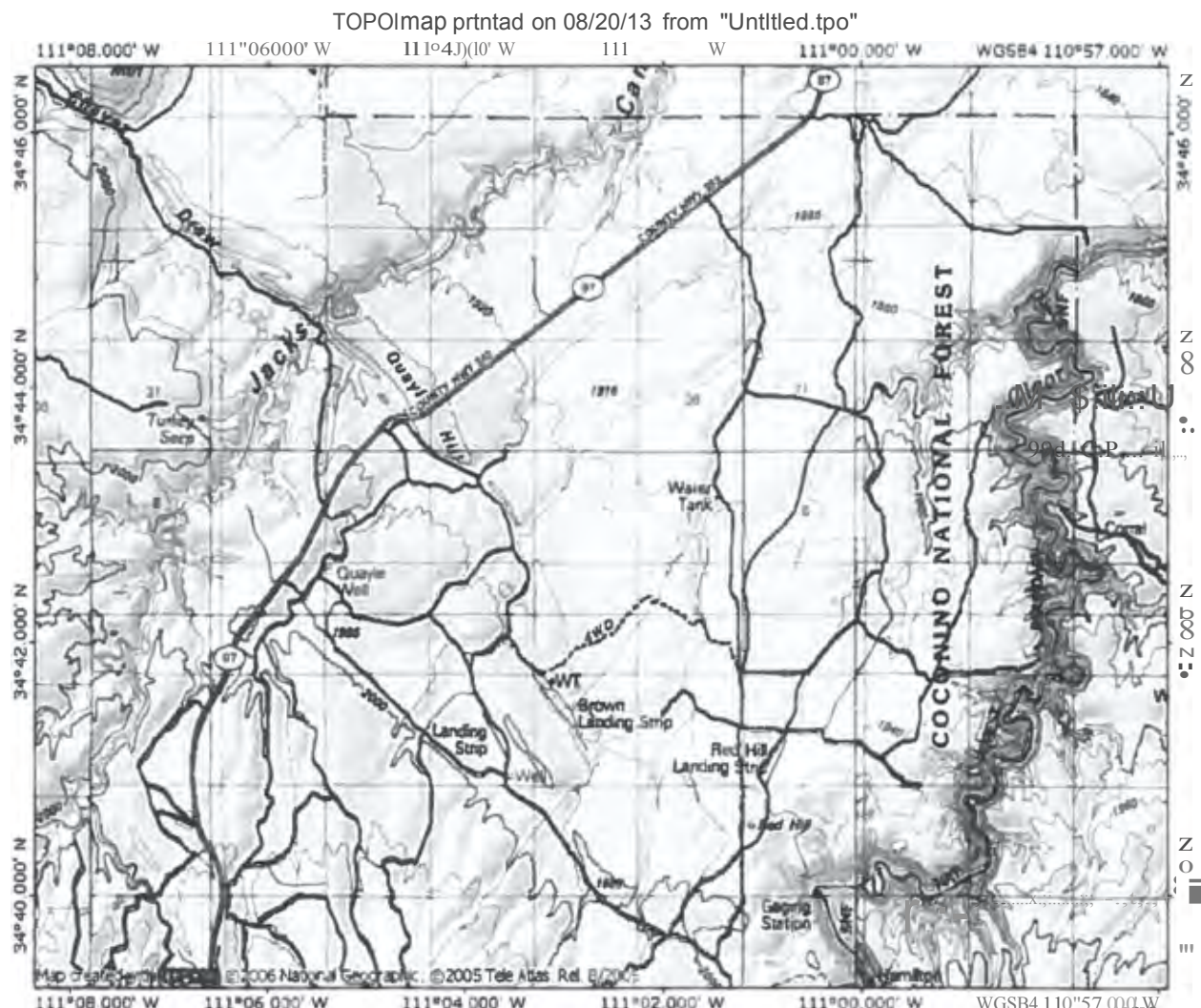
PROJECT MONITORING PLAN: USFS will monitor project implementation and ensure compliance. USFS will monitor plant community prior and post treatment. USFS will complete HPC completion report.

PROJECT MAINTENANCE: USFS and BarT Bar Ranch in cooperation as allowed through the AOI.

PROJECT COMPLETION REPORT TO BE FILED BY: USFS

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

Proposed Project Area



NATIONAL
GEOGRAPHIC

00 05 10 15 20 25 30 35 miles

0 1 2 3 4 5 km

110°

ARIZONA GAME AND FISH DEPARTMENT
TREE SHEARING WORKSHEET

PROJECT TITLE: Bar T Bar Quayle Hill Browse Release and Grassland Restoration

- 1) What is the estimated acreage of the project? Approximately to 3,000 being treated through these funds. Overall, including this proposal (Phase III) and the two previous phases ,project acreage is 30,000.
2) How are the trees going to be cleared? (agra axe, chain saw, push): Grinding from a Bobcat machine, Agra axe from a Bobcat machine, and tera torch.
3) What is the estimated number of trees per acre? The number of trees per acres varies widely, but within the Quayle Hill area trees per acre average 30-40, while in the Johnny Tanlc and Broomy Valley area trees per acre is in the 100-200 range
4) Describe trees to be cleared (species, estimated diameter, single stem, multi-stem): Juniper will be the primary species cut with estimated diameter of less than 12" and they vary from a single stem to multiple stems. Also in the Quayle Hill area there is a large amount of Algerita that is multi-stemmed and needs treated.
S) Describe terrain (slope, soil type, rocks) Terrain is relatively flat with molisal soils and varies from extremely rocky to rock free.
6) Please list any special land management status for the project site (e.g. Wilderness, National Park, National Monument). If private land, list landowner. NIA.
7) Please provide the following information about access to the proposed site: Type of access (mark one): [X]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? YES[] NO[X] Is the site relatively accessible for tree shearing equipment? YES[X] NO[] Please describe any restrictions to public access:

ITEMIZED USE OF FUNDS:

HPC +Funds				
Personnel	Daily Rate	Days	Total	
Operator 1	\$285.00	112	\$31,920.00	
Total			\$31,920.00	
Cost Per Acre 500 acres clipped and thinned				\$63.84
USDA, Forest Service Funds		Daily Rate	Days	Total
	Fuel (2 BOBCATs)	\$60.00	112	\$6,720.00
	Operator 2	\$300.00	60	18,000
	2-Vehicles	\$60.00	112	\$6,720.00
	Daily Rate Specialist (Fuels)	\$300.00	5	\$1,500.00
	Daily Rate Specialist (Range)	\$270.00	5	\$1,350.00
	Daily Rate Specialist (Heritage)	\$395.00	5	\$1,975.00
	Daily Rate Specialist (Wildlife)	\$375.00	5	\$1,875.00
	RX Cost/Day	\$1,500	7	\$10,500.00
Total				\$48,640
Combined Total				\$80,640
Combined cost Per acre 3,000 acres total clipped, thinned and Rx burned				\$26.88

RX Costs include: Personnel, Supplies and Equipment (5 personnel)

