

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

PROJECT INFORMATION

Project Title: Buckhorn Habitat Restoration Project

Project No. 07-216

Region/GMU: 6A

HPC: Flagstaff

Project Type: hand thinning, water improvement, revegetation, resource protection/recreation access

Project Description: This project seeks to compliment and complete HPC-funded projects #03-2-040 and #03-2-041 which restored native grasslands by mechanically removing encroaching junipers in the Indian Flat, Painted Tanks, Boulder and Bald Hill pastures of the Buckhorn grazing Allotment. There are 3 aspects to the remaining work: hand crews to remove 280 acres of encroaching P-J in areas which were inaccessible to agra-axe tree shears due to steep terrain and/or prevalence of archaeological sites, renovation of a dirt tank (Bessie Tank) within the areas treated and identified by wildlife managers during the previous work assessment, and installation of cattle guards to ensure protection of the resources while still allowing recreational access. The project area is on the Buckhorn Allotment in the southern portion of Unit 6A north and adjacent to West Clear Creek.

Though pinyon-juniper woodlands are considered a climax community, in much of the area there is increasing canopy cover leading to a decrease in under-story diversity and forage value and some invasion of existing interior chaparral communities. While climax adapted species suffer no shortage of pinyon/juniper woodland habitats, many big game species requiring the diversity supplied by disturbance (retrogression) are facing a decrease in habitat quality and diversity.

All project areas have been included in previous NEPA, archaeological and TES surveys and mappings. All appropriate clearances have been issued by the Red Rock Ranger District, Coconino National Forest.

Wildlife Species to Benefit: Elk , deer , antelope

Possible Funding Partners:

Implementation Schedule:

Beginning: summer 2008

Completed: summer 2009

NEPA Compliance: (if applicable)

Completed: Yes No

Projected Completion Date:

PROJECT FUNDING

SBG Funds Requested: \$ 25,200.00

Cost Share Funds: \$ 23,000.00

Total Project Costs: \$ 48,200.00

PARTICIPANT INFORMATION

<p>Co-Applicants: Dan Caputo, Wildlife Manager (please print) Telephone: 928-606-6822 Margaret E. Ingham, Managing Member Telephone : 928-202-1730</p>	<p>Address: Arizona Game and Fish Department Region II 3500 S. Lake Mary Road Flagstaff, AZ 86001 Address: M-Diamond Ranch 9501 East AW Tillinghast Rd. Scottsdale, AZ 85262</p>
<p>AGFD Contact and Phone No. (If applicant is not AGFD personnel)</p>	
<p>Coordinated with: Gary Hase, Red Rock Ranger District, Coconino National Forest</p>	<p>Date: ongoing</p>
<p>Applicant's signature:</p>	<p>Date:</p>

SEND COMPLETED APPLICATIONS TO:

Game Branch
2221 W. Greenway Rd.
Phoenix, AZ 85023
mdisney@azgfd.gov

WAS PROJECT PRESENTED TO THE LOCAL HPC? YES NO

The original projects were submitted to the Flagstaff HPC Feb, 10, 2003

HAS PROJECT BEEN SUBMITTED IN PREVIOUS YEARS? IF SO WAS IT FUNDED? The original projects were: Indian Flat/Painted Tanks Habitat Restoration (#03-2-040) and Boulder/Bald Hill Habitat Restoration (03-2-041).

NEED STATEMENT/PROBLEM ANALYSIS:

Pinyon/juniper invasion of grassland/interior chaparral communities in much of Arizona has contributed to a decrease in forage production and habitat quality. Climax pinyon/juniper communities often lack the retrogression (for a variety of land management reasons) caused by disturbance that lead to the maintenance of important understory browse plants and the maximization of edge effect and diversity. Big game species such as elk, mule deer and white tail deer tend to benefit from habitats where vegetation types were numerous and well interspersed creating maximized edge between habitat types. Pronghorn tend to be more selected to a climax grassland community yet utilize pine/oak woodlands and pinyon/juniper woodlands in Unit 6A with great frequency.

Though pinyon/juniper woodlands are considered a climax community in much of the area there is an increasing canopy cover leading to a decrease in under-story diversity and forage value and some invasion of existing interior chaparral/grassland communities. While climax adapted species suffer no shortage of pinyon/juniper woodland habitats, many big game species requiring the diversity supplied by disturbance (retrogression) are facing decrease in habitat quality and diversity.

Game/Development Branch

The Indian Flat/Painted Tanks and Boulder/Bald Hill Habitat Improvement Projects mechanically removed pinyon/juniper with an Arizona Game and Fish contract agra-axe. The treatment effort was directed toward the creation of numerous contour openings in the pinyon/juniper woodland while maintaining species such as cliffrose, mountain mahogany, skunkbush and oak. The [rojects did not attempt to achieve type con version. The goal was to retreat some previously treated areas and to cause limited retrogression in a pinyon/juniper community to optimize habitat value for livestock and wildlife.

During these projects, additional needs were identified: hand crews to remove pinyon/juniper in areas where steep terrain and/or concentrated archaeological sites prevented use of the agra-axe, renovation of a dirt tank to improve water capability, and installation of cattle guards to protect resources at locations where pasture fence gates are often left open by recreationists.

PROJECT OBJECTIVES:

- a) **Improve forage quality and quantity on elk, deer and antelope winter range**
- b) **Improve water availability on elk, deer and antelope winter range**

PROJECT STRATEGIES:

- a) **Use hand crews to thin junipers on 280 acres of winter range.**

Buckhorn Pasture: Approximately 150 acres of maintenance in areas previously treated with fuelwood harvest activities. This will retain a savanna aspect with scattered mature alligator juniper and intervening areas of juniper cover on rockier soils. Soil scientists from the Coconino National Forest described the soils here as being Mollisols, having relatively high organic matter as a result of developing in conjunction with grassland or grassland savanna; productivity is high. See attached map, Area 20.

Indian Flat Pasture: Lop and scatter 12 acres that were treated with the AGF/HPC tree shear but crew time ran out before completion. In addition, treat included portion that could not be treated with tree shear due to archaeological sites or tree con figuration (multiple stems at base). Extend treated area to the south an additional 20-25 acres where past fuelwood harvest has opened the canopy and soils are very productive. This portion will be returning the area to a savanna aspect with scattered large trees. In addition treat 10-20 acres on west end of pasture that were planned but could not be treated with tree shear due to archaeological sites. See attached map, Areas 11, 12, 13.

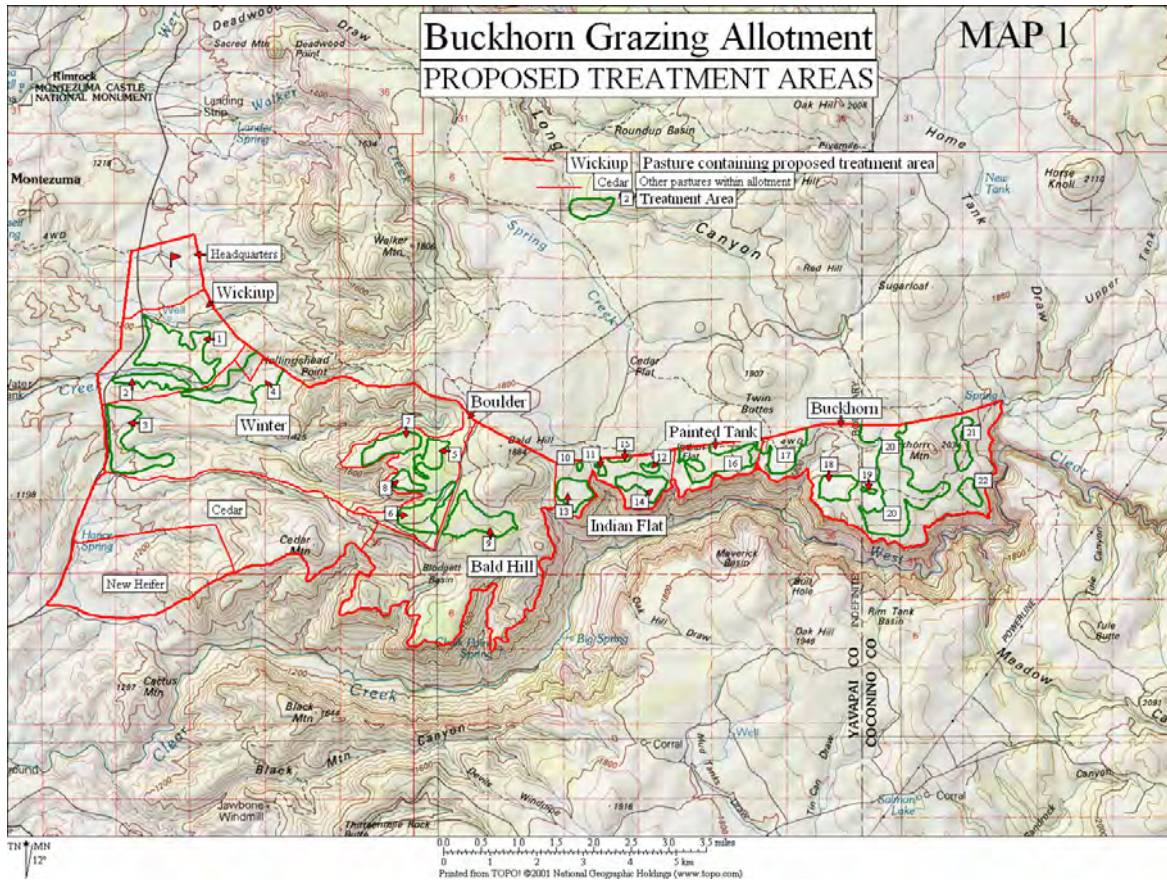
Bald Hill Pasture: Maintenance of 25 acres of past fuelwood treatment areas to maintain savanna aspect. See attached map Area 9.

Boulder Pasture: Maintenance of 50 acres of past fuelwood treatments to maintain savanna aspect. See attached map Areas 7, 8.

- a) **Install cattle guards in Painted Tanks pasture fences to protect resources. Two cattle guards to be installed on FS Road 214.1, one between Painted Tanks Pasture and the neighboring allotment (V Bar V) and one between Painted Tanks Pasture and Buckhorn Pasture. See attached map**

b) Painted Tanks pasture: Clean and deepen Bessie Tank in the northwest corner of this pasture to improve water holding capacity. This was a recommendation of FS and AGF wildlife managers when they were conducting assessments for the previous agra-axe work. See attached map Area 16.

PROJECT LOCATION: The proposed project is located in Yavapai and Coconino Counties in the Coconino National Forest on the Buckhorn Allotment. The pasture sites are: T.14N, R6e, Sec 25,26,27,28,29 and 36. T14 R7E Sec 29,30,31,32 . T13N, R7E, Sec 6. T13N R8E, Sec 19, 20 29, 30 31. Area landmarks include Buckhorn Mountain, Bald Hill and Blodgett Basin. The project area is in the transition between Cedar Flat and West Clear Creek Canyon. **SEE ATTACHED MAP.**



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

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

HABITAT DESCRIPTION:

The Buckhorn Allotment is located in the southern portion of Game Unit 6A. It is situated along the length of the canyon formed by West Clear Creek. The area is well known to Arizona sportsmen because the diverse habitat provides cover and forage to an abundance of big game species, and the Allotment contains some of the best riparian habitat in Arizona. Because of geography, elevation, etc the allotment also happens to be situated in the intersection of Pine/Oak woodland, Grassland desert-scrub, pinyon/juniper woodland, interior chaparral and Sonoran desert scrub communities. Elevations range from approximately 6600 feet above sea level at Buckhorn Mountain to approximately 3800 feet above sea level in the bottom of West Clear Creek Canyon.

The Buckhorn, Boulder, Bald Hill, Indian Flat and Painted Tank pastures are situated in the middle of the allotment.

ITEMIZED USE OF FUNDS:

SBG

Contract Hand Crews, such as Coconino Rural Environmental Corps 6-8 person saw crew, 4 weeks @ \$6,000/wk	\$24,000.00
Contract cleaning of Dirt Tank Equipment rental \$300x3days; Operator \$100/dayx3 days	1,200.00
Cost Share Cooperators AGF Landowner Respect Program Provide and contract installation of 2 cattle guards	6,000.00
M-Diamond Ranch Provide access and facilitate Hand Crews and Tank cleaning Revegetate treated areas where feasible	3,000.00
USFS Clearances (ALREADY COMPLETE: funded by ADEQ-WQIP)	14,000.00

BUDGET SUMMARY

Requested	\$25,200.00
Cost Share	23,000.00
TOTAL	\$48,200.00

LIST COOPERATORS AND DESCRIBE POTENTIAL PARTICIPATION: see above in budget Cost Share Cooperators

PROJECT MONITORING PLAN: The treatment areas would be included in future wildlife survey efforts by wildlife managers. Treatment areas will be photographed before and after treatments and may be available for viewing on the M-Diamond web site as information/education outreach and a monitoring opportunity.

PROJECT MAINTENANCE : N/A

PROJECT COMPLETION REPORT TO BE FILED BY: Co Applicants

WATER DEVELOPMENT PROJECTS (see attached worksheet): N/A

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