

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

Game Branch / HPC Project Number:	16-608
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PROJECT INFORMATION

Project Title: Agua Fria Grasslands Improvement Project – Mesquite Herbicide Treatment Phase II
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Region and Game Management Unit: Region 6 GMU 21

Local Habitat Partnership Committee (LHPC): • Yavapai Regional	Was the project presented to the LHPC? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
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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: Herbicide mesquite and acacia treatment
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Brief Project Summary: The Agua Fria Grasslands Improvement Project Environmental Assessment (2015, Figure 1), is a 98,000 acre landscape restoration project with 89,000 acres authorized for prescribed fire, about 9300 acres of mechanical/hand thinning of junipers, and about 600 acres of herbicide treatment of mesquite and acacia shrubs. The Mesquite Herbicide Treatment Phase II project is a 225 acre herbicide treatment within the semi-desert grassland vegetation type of the restoration project area (Figure 2, 3). A main objective of the project is to improve the condition of the vegetation/wildlife habitat for pronghorn and mule deer and restore grassland departed conditions in both vegetation structure and fire regime to desired conditions. Project implementation benefits include reducing the canopy cover within the grassland to less than 10 percent, increased grassland vegetative cover and vigor, more resilient stands of grasslands, and maintaining fire return intervals. Phase I of the project is scheduled to treat 123 acres in the Fall 2016. Project implementation for Phase II would be scheduled for Fall 2017 to Spring 2018 (FY 2018).

Big Game Wildlife Species to Benefit: Pronghorn (75%), Mule Deer (25%). Both species would benefit from increased forage to cover ratio and improved grass, forb, and browse forage quality.

Implementation Schedule (Month/Day/Year): <u>Project Start Date:</u> October 1, 2017 <u>Project End Date:</u> September 30, 2018	Environmental Compliance: NEPA Completed: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Projected Completion Date: <u>September 2015</u> State Historic Preservation Office - Archaeological Clearance: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Projected Completion Date: <u>January 2016</u> 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:	\$ 19,625
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Cost Share or Matching Funds:	\$ 17,000
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Total Project Costs:	\$ 36,625 for 225 acres
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PARTICIPANT INFORMATION

Applicant (please print): Albert Sillas	Address: Prescott National Forest	E-mail: asillas@fs.fed.us
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Telephone: 928-567-1124	Verde Ranger District 300 E. HWY 260 Camp Verde, AZ 86322	Date: August 30th, 2016
AGFD Contact and Phone No. (If applicant is not AGFD personnel): Kelly Wolff-Krauter (R6 Habitat, Evaluation and Lands Program Manager) Phone #: 480-324-3550, Dana Warnecke (R6 Habitat Specialist) Phone #: 480-324-3547, and Micah White (WM Unit 21 North) Phone #: 928-821-6057.		
Project has been coordinated with: Todd Willard (Verde District Ranger), Kelli Spleiss (Range Specialist), Central Arizona Grasslands Implementation Team.		

NEED STATEMENT – PROBLEM ANALYSIS:

Drought and lack of fire within the Agua Fria grasslands have led to a departure from the desired vegetation structure and fire regime and a decline in the quality of wildlife habitat and watershed functionality. These changes include encroachment by trees and shrubs, loss of perennial grass cover, and an increase in exposed soil surface. The Forest Service proposes to maintain or improve watershed function, vegetation conditions, and natural fire regime to move the landscape toward desired conditions described in the *2014 Land and Resource Management Plan for the Prescott National Forest* and improve wildlife habitat for pronghorn antelope, threatened or endangered fish species, yellow billed cuckoo, and migratory birds.

Currently, about 40 percent of the Semi-Desert Grasslands within the project area have greater than 10 percent canopy cover from trees or shrubs; the desired condition is that in 100 percent of the PNVT, woody canopy cover is less than 10 percent. This allows for the growth and retention of the fine fuels that provide for and maintain the desired fire regime. Fire historically occurred every 2 to 10 years in the Semi-Desert Grassland PNVT.

PROJECT OBJECTIVES:

The project objectives would be to reduce mesquite and catclaw shrubs where it is determined to be adversely affecting the grassland plant community and to improve pronghorn habitat and connectivity. The herbicide treatment would reduce mesquite and catclaw shrub occurrence so that it fits within canopy values (<10 percent) described by the TEUI 370 potential and the desired conditions in the Forest Plan (DC-Veg-21).

The project proposal would support an upward trend towards Forest Plan desired conditions for ecosystem resilience (DC-Ecosystem Resilience- 1), vegetation (DC-Veg- 1, 3 to 8, -11, -12, & -21), wildlife (DC-Wildlife- 1 & -2, DC-Aquatic- 1 to 3), watersheds (DC-Watershed- 1 to 4, & -5), and airsheds (DC-Airsheds- 1) in the Forest Plan. This project will carry out direction supplied in objectives for vegetation (Obj- 1, - 3, & - 4), watersheds (Obj- 21 & 23), and wildlife (Obj- 26), and will comply with the appropriate standards and guidelines detailed in chapter 4 of the Forest Plan.

PROJECT DESCRIPTION AND STRATEGIES:

In the Semi-Desert Grassland PNVT, high shrub density can outcompete herbaceous vegetation for water and nutrients, resulting in greatly reduced protective soil cover, increased surface runoff and erosion. The loss of herbaceous grasses and the closure of the open canopy conditions contribute to a degradation in the quality of the habitat for pronghorn and other types of wildlife within the grasslands.

Mesquite typically doesn't respond well to mechanical or fire control methods due to its deep, extensive root system and a budding zone in the roots which lies six inches below ground. These characteristics allow mesquite to re-sprout after cutting or burning.

The goal of the herbicide treatment would be to reduce mesquite and acacia shrub occurrence so that it fits within canopy values (<10 percent) described by the TEUI 370 potential and the desired conditions in the Forest Plan (DC-Veg-21). Treatment methods would use the herbicide triclopyr with the surfactant of vegetable oil in a cut-stem application to stumps to prevent sprouting. Triclopyr is absorbed through the cambium layer of the stems and cut stumps and trans-located to the root system within the soil. There is very little risk to the general public from application of triclopyr to cut mesquite stumps; the primary risk of human exposure is from workers handling the herbicide and conducting the application. This risk can be minimized through the establishment of proper herbicide handling and application protocols.

There are a total of 834 acres of TEUI 370 identified for the project area, however, it is expected that the number of acres treated will be less due to exclusion areas. These would include any identified Stream Management Zones (SMZs) within or adjacent to the proposed treatment area. The herbicide treatment area is 572 acres which will be implemented in three phases. Phase I is 123 acres and the Phase II and III treatment areas will be about 225 acres each.

PROJECT LOCATION: The proposed project parallels Interstate 17 near the Dugas/Orme Interchange, Verde Ranger District, Prescott National Forest (Township 12N, Range 3 East, Sections 16-17, 20-21, 29, and 32).

Figure 1. Agua Fria Grassland Improvement Project Map, Prescott National Forest.

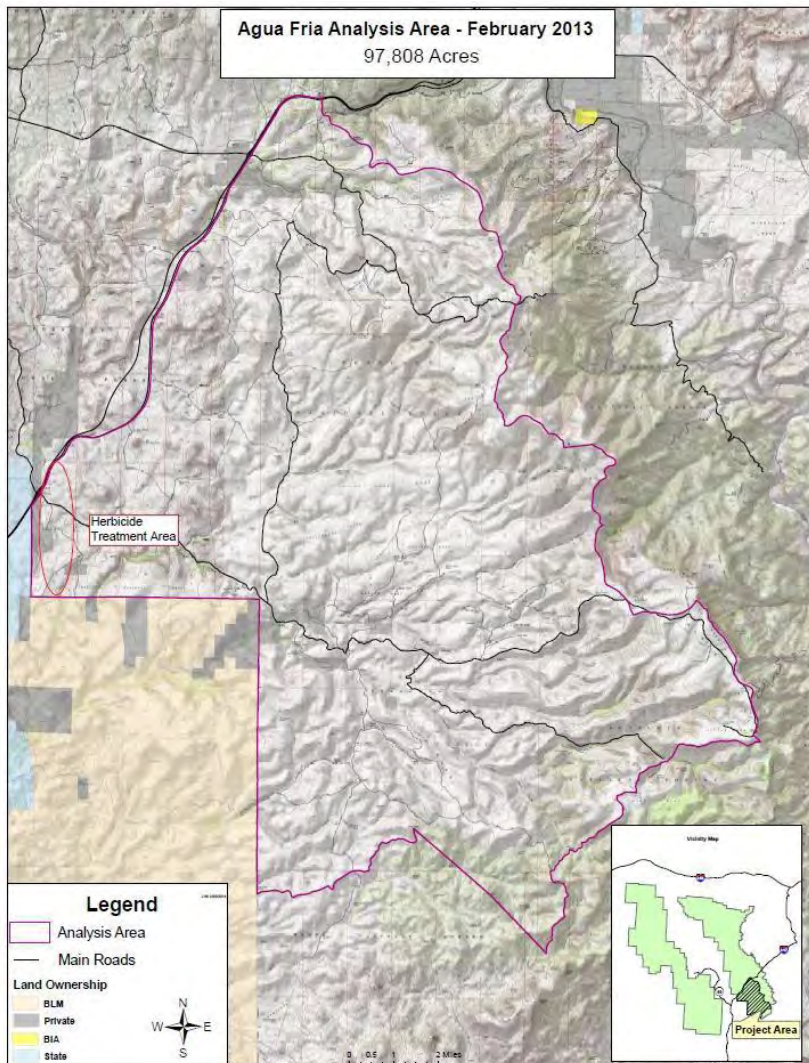
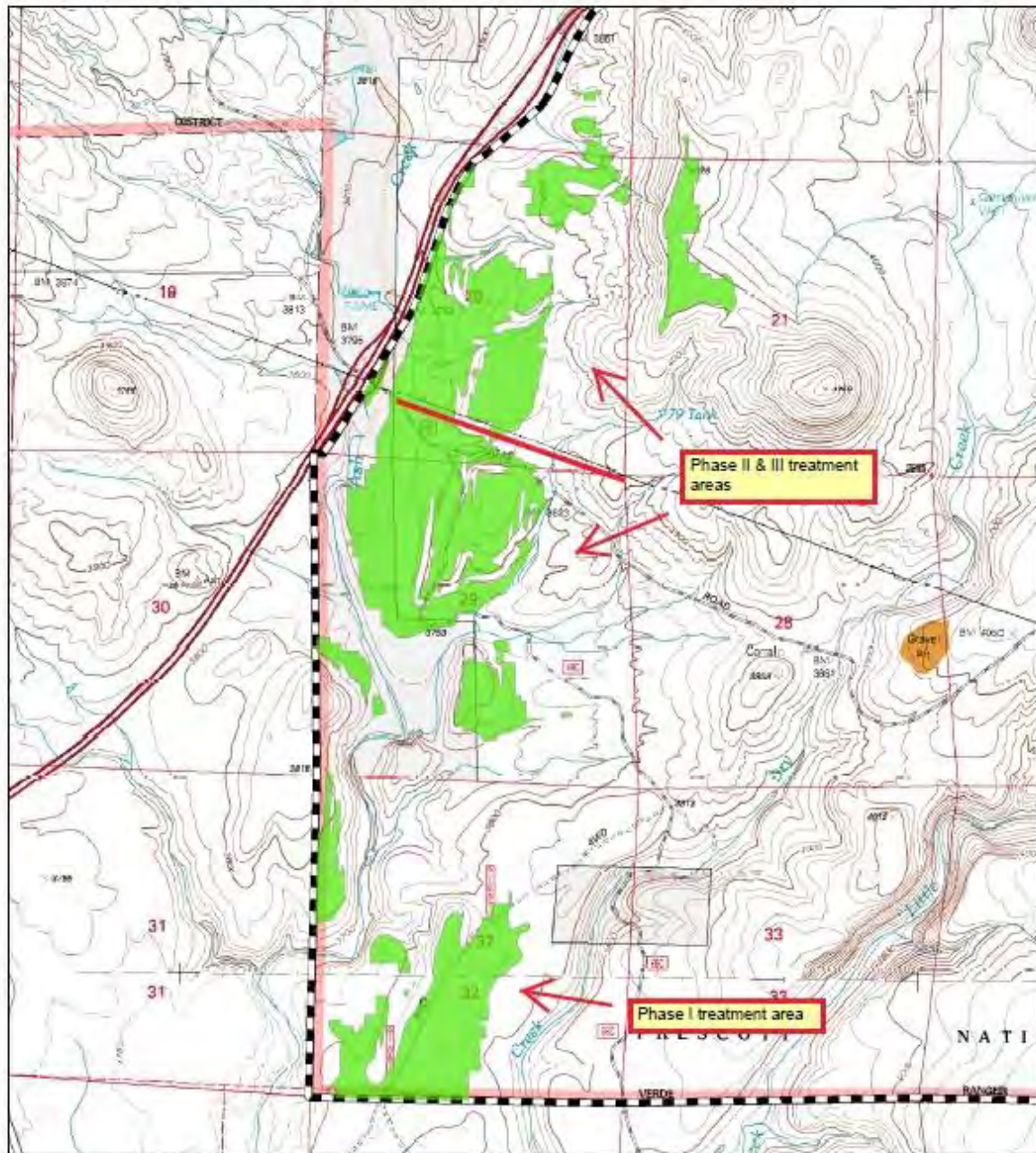


Figure 2. Herbicide Treatment Phase II Project Area Map

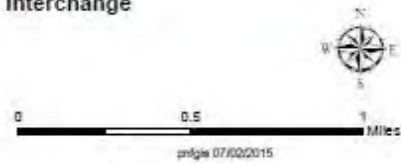


Agua Fria Grassland Project Area
TEU 370 Canopy Cover Gt 10% -- Dugas Interchange

572 ACRES

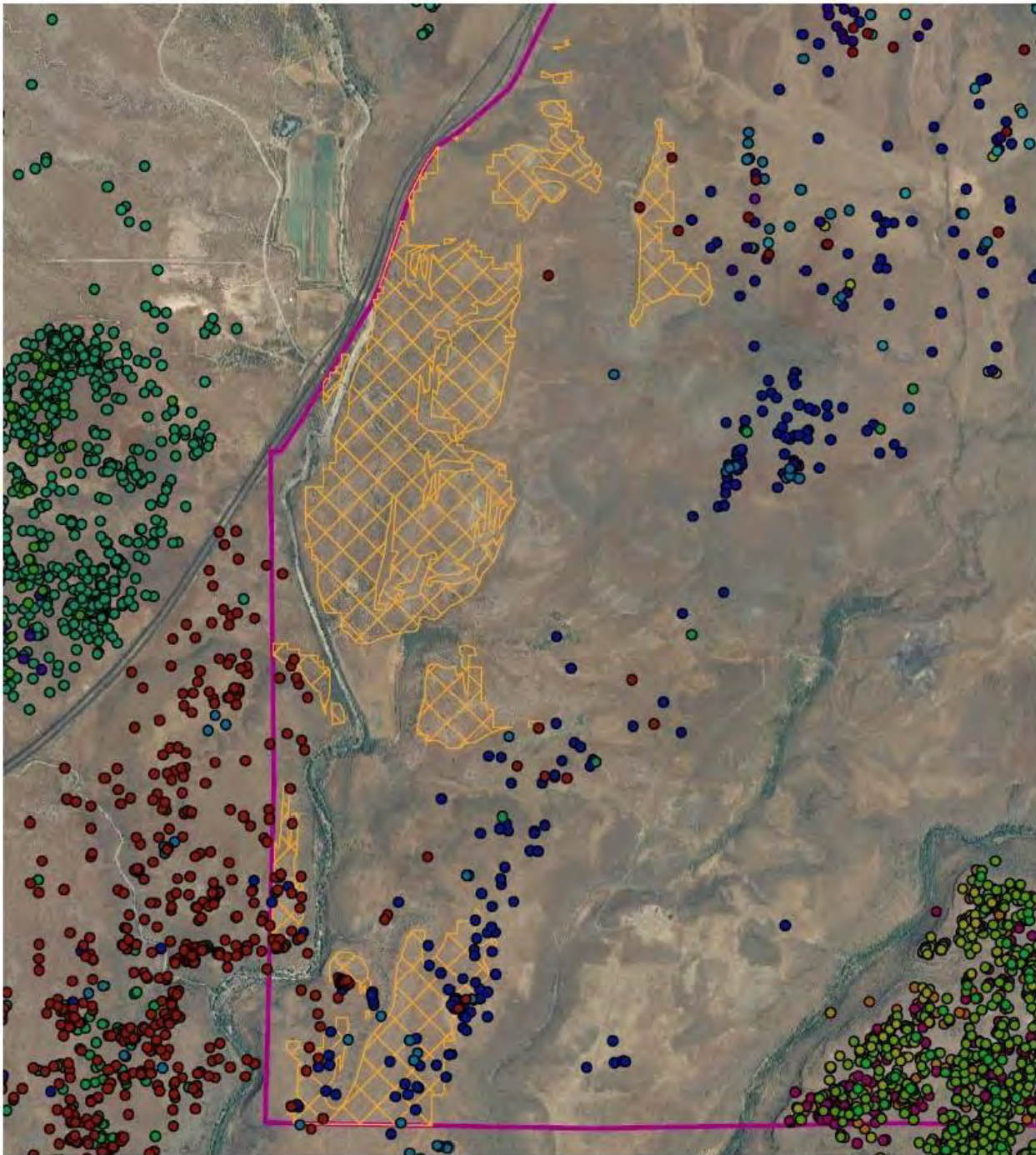
TEU 370 Canopy Cover gt 10% -- Dugas Interchange 572 ACRES

Project Boundary



prjgja 07/02/2015

Figure 3. Herbicide treatment area with pronghorn telemetry locations (AGFD 2010-2012).



LAND OWNERSHIP AT THE PROJECT SITE(S):

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

- Prescott National Forest

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

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

HABITAT DESCRIPTION:

The project area is in a semi-desert grassland community type at elevations of 3800 to 4100 feet. There is good water availability in the area from stocktanks and troughs. The area seems to be used as a travel corridor for pronghorn to migrate north to the East Pasture/Hooker Basin area on the Prescott NF.

ITEMIZED USE OF FUNDS:

Special Big Game License Tag Funds

Cooperator and Project Component	Cost-Share Dollars Available	HPC Funds Requested
Implementation of Herbicide Treatment @ \$125/acre	\$8,500	\$19,625
Project Administration	\$7,000	
Herbicides and supplies	\$1,500	
Total	\$17,000	\$19,625
Total Project Cost = \$36,625		
Cost Share Ratio HPC:PNF = 1:1		

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

LIST COOPERATORS AND DESCRIBE POTENTIAL PARTICIPATION:

The Prescott NF will coordinate project implementation with the Arizona Conservation Corps (AZCC). This organization is focused on employing youth, young adults, and recent military veterans with conservation service work projects on public lands. A master agreement is in place with the Forest and AZCC for work on the forest.

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

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

PROJECT MONITORING PLAN:

In order to meet monitoring objectives the forest will initiate its Level 1 monitoring plan.

Level 1- General Landscape and Environment Monitoring

This level provides managers with a quick general photo of an area or landscape to demonstrate a change in conditions on a broad scale. Analysis is limited to ocular estimates and subjective assessments usually by qualified fire effects monitors or fuels technicians. These photo plots may or may not have permanent markers to indicate the location of the photos; however the location of the plot center (latitude and longitude), the camera, and the direction of photo should be noted. If change over time is an objective, photos should be taken at established and recorded locations to allow for return visits.

PROJECT MAINTENANCE:

As this area shifts toward the desired condition, natural disturbances such as wildfire can be better utilized and managed easier to maintain the project area. The interpolation of on-site post treatment monitoring data will be utilized to indicate the need for maintenance in the project area. If the monitoring data indicates a change, re-entry with herbicides, prescribed fire or other management tools will be identified and implemented when feasible.

PROJECT COMPLETION REPORT TO BE FILED BY:

A project completion report will be filed by the Project leads: Albert Sillas, Fisheries & Wildlife Biologist. Project lead will maintain contact with AGFD personnel through the project to provide informal and formal status updates.

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

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

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

PROJECT TITLE: _____

- 1) **Is the water development listed as a priority in the most recent “Wildlife Water Development Annual Implementation Schedule?”**
- 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 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:
Type of water source (catchment, spring, dirt tank):
Ownership of water source:
Distance in miles from project:
- 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.**
- 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:
- 9) **Please list below (or on a separate sheet) the material type and dimensions of each component proposed to be added, modified, or repaired.**
- 10) **Was a site visit completed? Yes No**
If Yes, please list personnel that attended and date.

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.az.gov/HR_Professional/Class_Comp/PDF/alphacovered.pdf

\$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				