

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

PROJECT INFORMATION

Project Title: Hidden Hills PJ Removal – Unit 13B 2010		Project No. 09-208
Region/GMU: Region II/GMU 13B	HPC: Fredonia	
Project Type: Pinyon-Juniper Removal and Chaining Maintenance Utilizing Grinder and Agro - Axe		
Project Description: This project will provide funding for thinning of pinyon-juniper utilizing an agro-axe and/or bullhog/grinder on ~1140 acres of State Lands located in the Hidden Hills area of 13B. Approximately 500 acres of previously chained areas will be maintained using an agro-axe, and an additional 640 acres will be thinned using a combination of a grinder and agro-axe. This project has been partially funded through NRCS for chaining maintenance on 500 acres and thinning on an additional 640. Funding for this project will provide the additional funds necessary to bridge the funding gap and complete the project.		
Wildlife Species to Benefit: Mule Deer		
Possible Funding Partners:		
Implementation Schedule: 2010-2011 Beginning: Spring 2010 Completed: Summer 2011	NEPA Compliance: (if applicable) *State Land Review only Completed: Yes ___ No <u>X</u> Projected Completion Date: November 2009	
PROJECT FUNDING		
SBG Funds Requested: \$ 44800.00 Cost Share Funds: \$ 146,000.00 Total Project Costs: \$ 190800.00		
PARTICIPANT INFORMATION		
Applicant: Luke Thompson Telephone: 435-574-2978	Address: 3500 S Lake Mary Road Flagstaff, AZ 86001	
AGFD Contact and Phone No. (If applicant is not AGFD personnel)		
Coordinated with: Kyle Spencer – NRCS; Kline Esplin – Livestock Permittee		Date: Ongoing 2009
Applicant's signature:		Date: September 1, 2009

SEND COMPLETED APPLICATIONS TO:

**Game Branch
 AZ Game and Fish Dept.
 5000 W. Carefree Highway
 Phoenix, AZ 85086**

WAS PROJECT PRESENTED TO THE LOCAL HPC? YES _____ NO X

The Fredonia HPC did not meet in 2009, however this project has been discussed with board members of the Arizona Deer Association, and members of the HPC including the NRCS and the livestock operator Kline Esplin.

HAS PROJECT BEEN SUBMITTED IN PREVIOUS YEARS? IF SO WAS IT FUNDED?

This project has not been submitted or funded in previous years.

NEED STATEMENT/PROBLEM ANALYSIS:

In 2007/2008 NRCS developed a fully funded cost-share agreement with the livestock permittee on the Hidden Hills allotment of 13B and thinned 400 acres of dense pinyon-juniper trees. In 2009 this project was expanded to an additional 1140 acres: 500 acres of chaining maintenance, and 640 acres of new pinyon-juniper thinning using an agro-axe. This new phase received funding of approximately \$146,000.00.

However, utilizing an agro-axe on the 640 acres of pinyon-juniper thinning is not the most effective tool for the site. A bullhog/grinder will be more effective at meeting objectives outlined below. The funding received through NRCS for thinning the 640 acres is inadequate to utilize a grinder. The Game and Fish Department would like to cover the gap in treatment methods of the agro-axe vs. bullhog grinder in order to fully meet objectives for wildlife in these 640 acres.

The Hidden Hills area has received extensive vegetative manipulation including ~3000 acres of pinyon-juniper thinning completed on BLM and State Lands adjacent to this project. These sites have produced an abundance of valuable browse, forb, and grass species available to wildlife when directly compared to the adjacent pinyon-juniper sites that have not been treated.

The existing pinyon-juniper forest proposed for thinning is dominated by pinyon-juniper species. Stand estimates currently suggest that there are 30-40 stems per acre of trees throughout the 640 acres. The under story in the area consists of valuable browse species such as gambels oak, cliffrose, and bitterbrush. There is also a healthy component of native grass species such as blue grama, side-oats grama, and indian rice grass through the area. All of these species provide valuable forage to mule deer.

However, because of the closed canopy created by the thick pinyon-juniper tress, these species cannot thrive and meet the potential for the site. Much of the cliffrose in the under story is decadent, and oak is sparse. In addition, soil erosion does occur in the Hidden Draw from this upland site.

Thinning the pinyon-juniper will allow these existing under story species to increase. Because of the number and size of the trees, simply cutting them with the agro-axe will keep the existing horizontal visual obtrusion in place, and will not allow the existing understory to fully meet the site potential. It is also expected that the soil erosion characteristics will decrease as soil moisture and plant biomass will increase with the treatment. The existing

treated areas immediately adjacent to this proposed project area are very representative of what can be expected from this treatment.

The 500 acres proposed for chaining maintenance can effectively be completed using an agro-axe. This area has generally received re-establishment of pinyon-juniper into the previously treated spots. The existing funding through NRCS is adequate for this section and no HPC funds are requested to complete this maintenance.

PROJECT OBJECTIVES:

1. Thin the existing dense stand of pinyon-juniper on 640 acres of State Lands utilizing a mosaic pattern to maximize edge effect, and to maintain areas of cover for hiding/fawning of mule deer.
2. Increase under story vegetation diversity and abundance particularly browse species for mule deer.
3. Reduce soil erosion potential by increasing plant productivity and improving soil stability in the area.

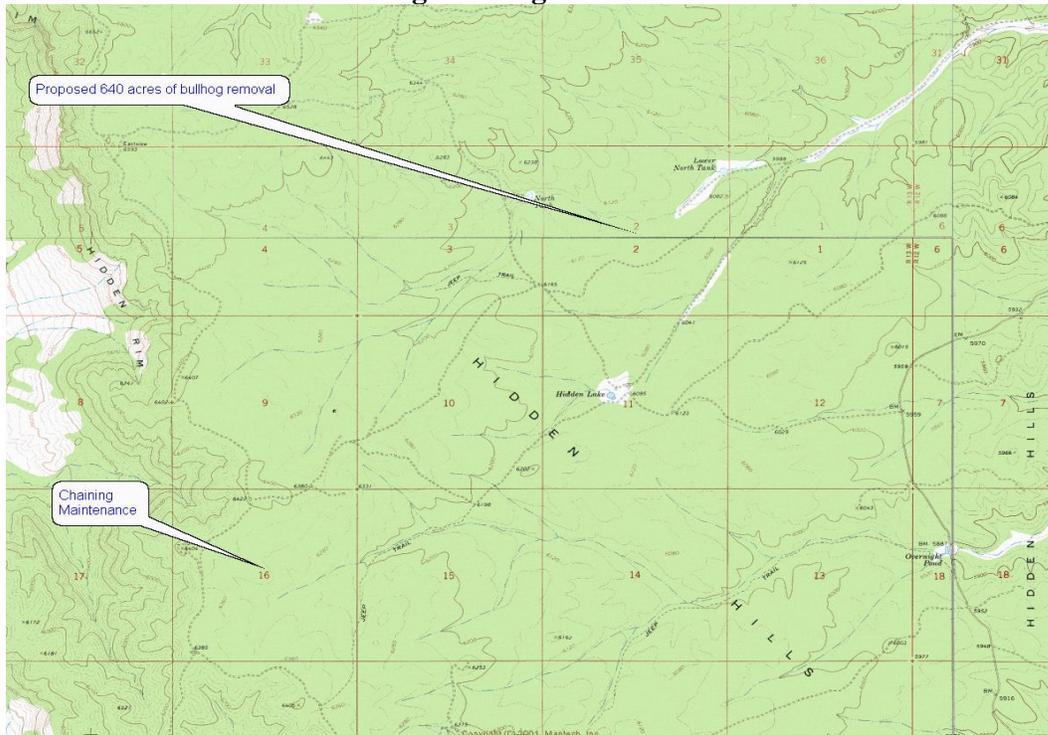
PROJECT STRATEGIES:

1. Utilizing a bullhog grinder, thin pinyon-juniper trees up to 16” diameter. Leaving clumps and patches of trees up to 10 acres in size. Trees over 16” will be left for tree dependant species as well as to limit wear on equipment.
2. Grinding activity will be implemented to produce large chips trees to provide a seed bed and microclimate conducive to browse and grass species germination. Cliffrose plants may be “topped” to encourage re-sprouting.
3. Soils will be stabilized by the chips, as well as any new vegetative growth the area experiences.

PROJECT LOCATION:

T34N 13W Sec 2 – proposed 640 acres of state land

T34N 13W Sec16 – area needing chaining maintenance



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

The land ownership at the site is 100% State Land Managed by the Arizona State Land Department.

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

N/A

HABITAT DESCRIPTION:

The habitat in the area can best be described as a pinyon-juniper woodland with Utah Juniper and Pinyon pine the dominant tree species in the area. Shrub species include cliffrose, gambel's oak, sagebrush and bitterbrush. Grass species in the area include blue grama, side-oats grama, and indian rice grass.

ITEMIZED USE OF FUNDS:

Costs Category- Equipment, Labor, Administrative, Material	NRCS	Grant Dollars Requested – Special Tag
Funding for application of Bullhog/grinder on 640 acres	\$96000.00	\$44800.00
Funding for application of agro-axe on 500 acres of chaining maintenance	\$50000.00	
Totals	\$146000.00	\$44800.00

LIST COOPERATORS AND DESCRIBE POTENTIAL PARTICIPATION:

NRCS: Approved funding of \$146,000.00 and project design and consultation.

Kline Esplin: Livestock operator on Hidden Hills Allotment will act as project contractor through NRCS. Kline will implement project as outlined by AZGFD, ASLD, and NRCS to meet objective. Mr. Esplin has the option through his contract with NRCS to contract this project to a third party.

Arizona State Land Department: Provide clearances and permits to Kline Esplin to complete project.

Arizona Game and Fish Department: Provide additional funding through HPC to utilize a bullhog/grinder on 640 acres of state land. This funding will be transferred to Kline Esplin.

PROJECT MONITORING PLAN:

AGFD in cooperation with NRCS and ASLD will monitor the implementation stage of this project. AGFD will also design the treatment area to leave patches and clumps up to 10 acres in size to maximize edge effect in the treatment unit.

NRCS and AGFD will complete long term monitoring as needed to determine the level of success of the project. Mule deer use and general wildlife use of the area will be documented and used to help determine the level of success of the project. Measures of success will include comparative browse and grass species production, as well as documented wildlife use of the area.

PROJECT MAINTENANCE:

There is expected to be minimal short term maintenance of this project. Long-term however (20+) years, there may need to be selective thinning to remove pinyon-juniper trees that have re-established into the site.

PROJECT COMPLETION REPORT TO BE FILED BY:

Luke Thompson: Wildlife Manager GMU 13B – Arizona Strip

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

ARIZONA GAME AND FISH DEPARTMENT TREE SHEARING WORKSHEET

PROJECT NAME: Hidden Hills PJ Removal – Unit 13B 2010

- 1) **What is the estimated acreage of the project?** 640 Acres
- 2) **How are the trees going to be cleared? (agro axe, chain saw, push):** Bullhog/Grinder
- 3) **What is the estimated number of trees per acre?** 30-40
- 4) **Describe trees to be cleared (species, estimated diameter, single stem, multi-stem):**
Pinyon-juniper up to 16” diameter. In general these trees are single stem, and the larger multi-stem trees exceed the capacity of the equipment. However, there will be some smaller multi-stem trees that will be targeted. Existing browse plants will be avoided, however, cliffrose may be “topped” to trigger sprouting where appropriate.
- 5) **Describe terrain (slope, soil type, rocks, etc.)** The terrain is gradual rolling slopes conducive to a bullhog/grinder. Rocks do exist however, should not preclude meeting the objectives of the project.
- 6) **Please list any special land management status for the project site (i.e. Wilderness, National Park, National Monument, etc). If private land, list landowner.**
None
- 7) **Please provide the following information about access to the proposed site:**
Type of access (mark one): ___ 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 X NO
Is the site relatively accessible for tree shearing equipment? X YES ___ NO
Please describe any restrictions to public access: None. The public would have unrestricted access prior to and after implementation.