

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

PROJECT INFORMATION

Project Title: Flagstaff Center Aspen Restoration Initiative 2007	Project No.
Region/GMU: Region II, GMU 6A & 7	HPC: Williams/Flagstaff
Project Type: Aspen Restoration and Protection	
<p>Project Description: This project is part of a multi-year landscape level effort to restore aspen on the Peaks and Mormon Lake Ranger Districts (Flagstaff Center) of the Coconino National Forest. For the 2007 grant cycle, we are requesting funding for approximately 5 miles of enclosure fencing at \$10,000/mile and for the removal of pine encroachment on approximately 10 acres. Additional thinning and prescribed burning will take place in 50% of the enclosure areas identified on the attached map as “2007 HPC Funding Request”. Aspen treatments funded by this grant will occur within the following areas identified on the attached map: Windsor Tank, La Negrita Tank, Navajo Spring, and the Hochderffer Hills.</p> <p>Treatments will consist of the removal of pine trees, where needed, either by hand or mechanical means in order to restore the vigor of aspen stands. Prescribed burning will be used to stimulate suckering of aspen in areas where aspen is dying as a result of conifer invasion and browsing by ungulates. Thinning and burning is an effective means of regenerating aspen stands, maintaining aspen on the landscape, and improving long-term habitat quality for elk, deer, and turkey. Thinning treatments will begin in these areas in 2007 and are part of an overall plan for aspen restoration on the Flagstaff Center.</p>	
Wildlife Species to Benefit: Elk, Deer, Turkey	
Possible Funding Partners: USDA Forest Service, Home Depot, Mormon Lake Lodge, Volunteers for Outdoor Arizona, Coconino National Forest Adopt an Aspen Fence Volunteers	
Implementation Schedule: Beginning: Fall 2007 Completed: Fall 2009	

PROJECT FUNDING

SBG Funds Requested: \$53,000
Cost Share Funds: \$47,130
Total Project Costs: \$100,130

PARTICIPANT INFORMATION

Applicant: Patty Ringle, USFS Telephone: (928) 527-8285	Address: Peaks Ranger District Attn: Patty Ringle 5075 N. Highway 89 Flagstaff, AZ 86004
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AGFD Contact and Phone No. Rick Miller (928) 214-1252 (If applicant is not AGFD personnel)	
Coordinated with: Patty Ringle, USFS	
Applicant's signature: P. Ringle	Date: 5/1/2007

SEND COMPLETED APPLICATIONS TO:
Mark Zornes, Game Branch
2221 W. Greenway Rd.
Phoenix, AZ 85023
mzornes@gf.state.az.us

NEED STATEMENT/PROBLEM ANALYSIS:

Aspen communities are a critical component within the Coconino National Forest. Aspen clones represent ecologically unique sites that contribute to increased biological diversity. Aspen clones have been in a gradual state of decline over the past 50 years due to fire suppression, which allowed succession to conifer species, and extreme browsing pressure from large ungulates. However, aerial and ground detection surveys have determined an accelerated rate of decline in aspen across northern Arizona over the past five years due to a severe frost event (June of 1999) and a severe drought (2002-2003). Surveys indicate affected aspen stands below 7500 feet elevation are nearing 100% mortality and affected stands between 7500 to 8500 feet have approached 50% mortality. Aspen stands across the Coconino National Forest exhibit a combination of symptoms including reduced canopies, branch dieback, increased mortality, and either non-existent aspen regeneration success or ungulate browsing damage approaching 100 percent. Ungulate browsing is compounding the decline of aspen clones across the region by preventing successful regeneration of aspen. Mortality of mature aspen coupled with continued browsing damage of regeneration by ungulates is expected to result in an eventual type conversion from aspen to conifers.

PROJECT OBJECTIVES:

The objectives of this project are:

- Identification and prioritization of aspen clones for restoration at the landscape level.
- Removal of encroaching conifers.
- Stimulation of natural aspen regeneration.
- Protection of aspen regeneration from browsing.
- Maintain aspen across the landscape to improve habitat for elk, deer, turkey, and numerous bird species.

Over 9,000 acres on the Flagstaff Center have been identified as aspen cover type, with the vast majority of those acres in need of restoration. This project will get us one step closer to reaching an ultimate goal of maintaining aspen across the landscape.

PROJECT STRATEGIES:

As a part of a district-wide initiative, aspen stands across the Flagstaff Center of the Coconino National Forest will be identified and prioritized for treatment. Stands prioritized for treatment will be thinned by mechanical means or by hand to remove conifer encroachment from aspen clones. The majority of trees to be treated are ponderosa pine that have encroached into aspen clones since the beginning of fire suppression. Cut trees will be either piled or lopped to two feet or less. A variety of techniques may be used to stimulate aspen suckering, such as prescribed burning or ripping. Fencing will be required to protect new aspen regeneration from ungulate browsing.

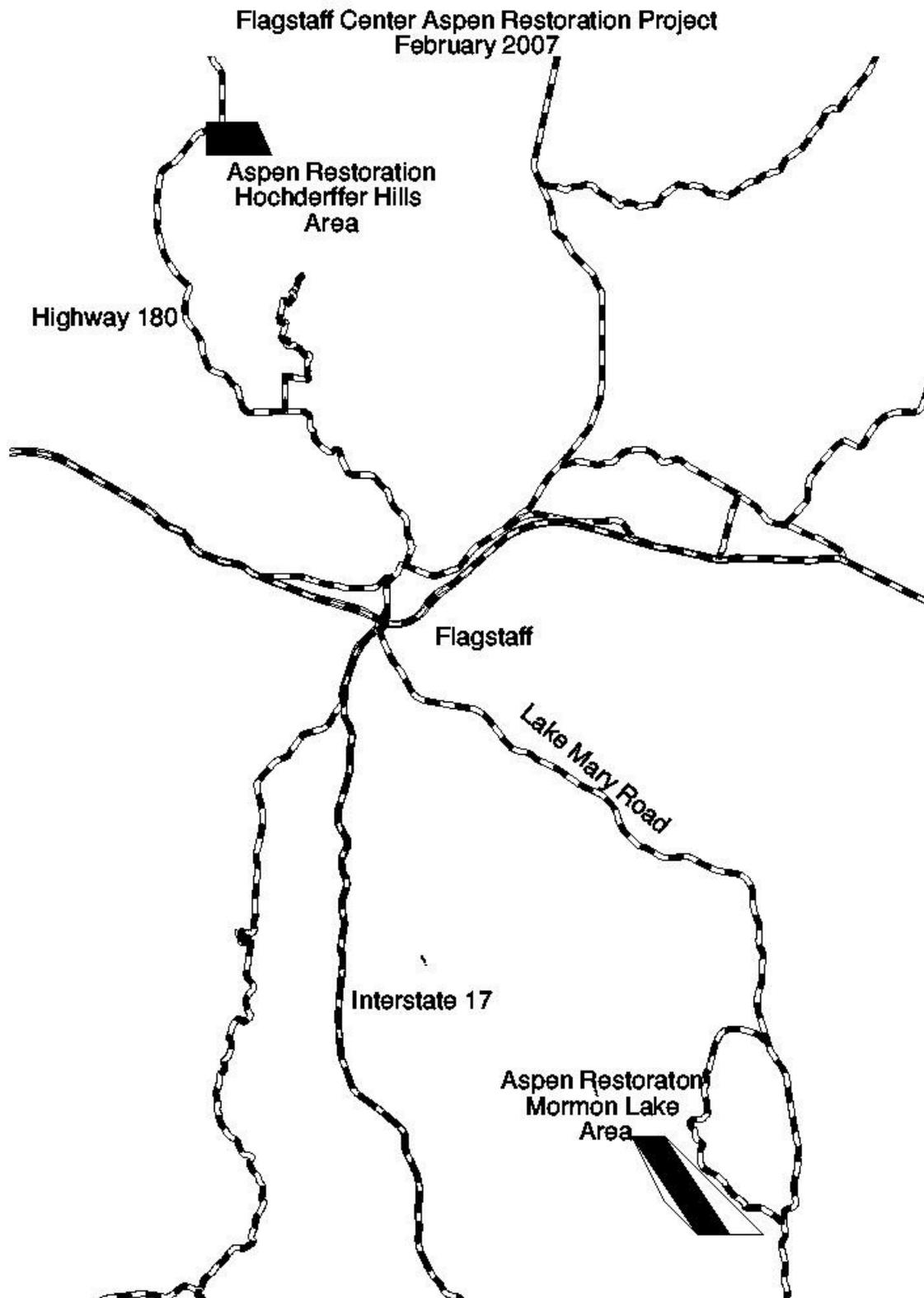
Labor will be provided using Volunteers, Forest Service personnel, contractors, and/or the Coconino Rural Environmental Corps.

The fence will need to remain up and intact for approximately 20 years.

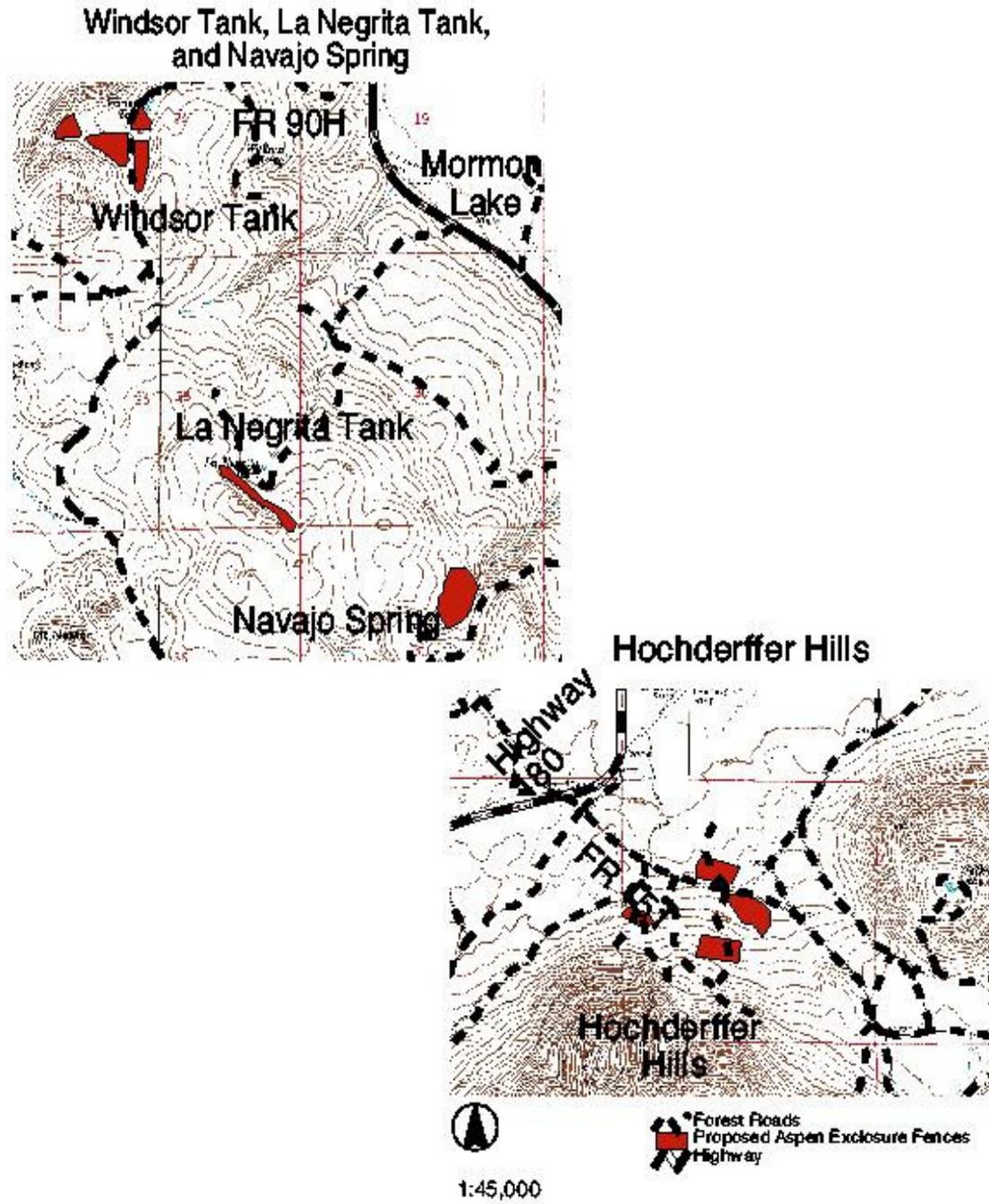
LAND OWNERSHIP AT PROJECT SITE (Please state specifically if PRIVATE PROPERTY and provide landowner's name):

This proposal is located entirely on public property managed by the Coconino National Forest.

PROJECT LOCATIONS: Please see the attached large scale map



Flagstaff Center Aspen Restoration Areas – FY 2007



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

HABITAT DESCRIPTION:

Mormon Lake Area: Current conditions of the aspen stands located near Windsor Tank, La Negrita Tank, and Navajo Spring include significant overstory mortality, reduced crown canopies, branch dieback, pine encroachment, and a lack of aspen sprout survival. Desired conditions include a healthy aspen stand with few ponderosa pine, increased crown canopies, and aspen regeneration greater than 3,000-5,000 ramets per acre.

Hochderffer Hills Area: This portion of the project area was severely burned in 1996 by the Hochderffer Fire. It is characterized by sparse young aspen clones, numerous pine snags, a significant amount of downed woody debris, a lack of aspen sprout survival, and a decrease in the size and extent of aspen clones. Desired conditions include healthy aspen clones with aspen regeneration greater than 3,000-5,000 ramets per acre and expansion of aspen clones.

Within the project area, elevations range from approximately 7,400' to 8,000'. These habitats are used in the summer by elk, mule deer, and turkey as the diversity of habitats meet their need for breeding, fawning, foraging and in some areas for cover, depending on the species.

The following picture displays typical pine encroachment and a lack of regeneration within an aspen stand.



The following picture illustrates the effectiveness of fencing on aspen regeneration. Note the abundant aspen regeneration on the inside of the fence and the complete lack of regeneration outside of the fence.



LIST COOPERATORS AND DESCRIBE POTENTIAL PARTICIPATION:

The Forest Service will provide or has completed:

- Labor and/or funding for labor to remove pine encroachment on approximately 25 acres.
- Labor for prescribed burning to stimulate regeneration on approximately 25 acres.
- Project monitoring to evaluate the effectiveness of treatments and fencing on aspen regeneration.
- Interpretive signs to educate the public regarding the importance of aspen and fencing.

The Adopt an Aspen Fence Volunteer Program will provide:

- Volunteer labor to monitor aspen fences and to perform maintenance.

The Flagstaff Home Depot will provide:

- Fencing materials at cost.

SBG funds will be used to provide:

- Funding for labor to remove pine encroachment on approximately 10 acres.
- Funding for materials and labor to construct approximately 5 miles of aspen enclosure fence.

ITEMIZED USE OF FUNDS:

COOPERATOR & PROJECT COMPONENT	COST-SHARE DOLLARS AVAILABLE	GRANT DOLLARS REQUESTED
<p>SBG FUNDS</p> <ul style="list-style-type: none"> • Funding for fencing materials and labor to construct approximately 5 miles of aspen enclosure fencing. Calculated at \$10,000/mile = \$50,000. • Funding for the removal of pine encroachment on approximately 10 acres near Windsor Tank. Calculated @ \$300/acre = \$3,000 		<p style="text-align: center;">\$50,000</p> <p style="text-align: center;">\$3,000</p>
<p>USDA – REGION 3 FOREST HEALTH PROTECTION GROUP</p> <ul style="list-style-type: none"> • Project monitoring. Calculated @ 75 acres x \$25/acre = \$1,875 per year x 6 years = \$11,250 	\$11,250	
<p>USDA – COCONINO NATIONAL FOREST FLAGSTAFF CENTER RANGER DISTRICT</p> <ul style="list-style-type: none"> • Resource surveys 45 acres @ \$12/acre = \$540 • Archaeological surveys and clearance 45 acres @ \$12/acre = \$540 • NEPA analysis 45 acres @ \$20/acre = \$900 • Timber marking 35 acres @ \$ 100/acre = \$3,500 • Thinning of pine encroachment 25 acres @ \$300/acre = \$7,500 • Prescribed burning 35 acres @ \$200/acre = \$7,000 • Interpretive signs 20 signs @ \$150/sign = \$3,000 • Administrative costs 20 days GS-9 @ \$245 per day = \$4,900 	<p style="text-align: center;">\$540</p> <p style="text-align: center;">\$540</p> <p style="text-align: center;">\$900</p> <p style="text-align: center;">\$3,500</p> <p style="text-align: center;">\$7,500</p> <p style="text-align: center;">\$7,000</p> <p style="text-align: center;">\$3,000</p> <p style="text-align: center;">\$4,900</p>	
<p>ADOPT AN ASPEN FENCE VOLUNTEER PROGRAM</p> <ul style="list-style-type: none"> • Fence monitoring and maintenance 40 hours per year @ \$10/hour = \$400 per year x 20 years = \$8,000 	\$8,000	
SUB TOTAL	\$47,130	\$53,000
TOTAL PROJECT COSTS (Ratio of Match 1/1)	\$100,130	

PROJECT MONITORING PLAN:

Monitoring of treatment effectiveness will be conducted by the USDA Forest Service Region 3 Forest Health Protection Group by inspecting treated areas for disease, insects, and resprouting. Monitoring will occur annually for the first three years and then every two years for approximately 10 years.

PROJECT MAINTENANCE:

All fences will be added to the “Adopt an Aspen Fence Program”. This program utilizes volunteers, who “adopt” an aspen fence by signing a two-year volunteer agreement, check the perimeter of the fence twice per year, and perform fence maintenance. The program has been highly successful in maintaining and repairing existing aspen enclosures across the Coconino National Forest. Three groups have already expressed interest in adopting these particular fences, including the Ecological Restoration Institute at NAU, the Forestry Club at NAU, and Mormon Lake Lodge.

PROJECT COMPLETION REPORT TO BE FILED BY:

Patty Ringle, USFS.

WATER DEVELOPMENT PROJECTS (see attached worksheet):

n/a

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

n/a