

Mollicy Warren Fire
BURNED AREA REHABILITATION PLAN
Upper Ouachita National Wildlife Refuge
January 2006



Burned Hardwood Tree Seedlings in Burned Area

UNIT: Upper Ouachita NWR, North Louisiana Refuges Complex

LOCATION: Beekman, Louisiana, Morehouse Parish

FIRE DATE: January 4, 2006

FIRE SIZE: 314 acres FWS, 1500 acres private lands

PREPARED BY: Gypsy Gooding
US Fish and Wildlife Service
North Louisiana Refuges Complex
Wildlife Biologist

Submitted By: _____ Date: _____
Brett Hortman, BAER Team Leader, Upper Ouachita NWR

BURNED AREA REHABILITATION PLAN REVIEW AND APPROVAL

I. Project Leader approval that the Burned Area Rehabilitation Plan meets approved land management plan management objectives.

Project Leader, North Louisiana Refuges Complex

Date

II. Regional Fire Management Coordinator concurrence that the plan fits the technical definition for use of Rehabilitation finding.

Regional Fire Management Coordinator, Region 4

Date

III. Rehabilitation Funding Approval (check one box below):

Approved

Approved with Revision (see attached)

Disapproved

Regional Director, Region 4

Date

IV. Rehabilitation Funding Approval (check one box below):

Approved

Approved with Revision (see attached)

Disapproved

National Office

Date

EXECUTIVE SUMMARY

Introduction

This plan has been prepared in accordance with USFWS Policy. This plan provides burned area rehabilitation recommendations for all lands burned within the Mollicy Warren Fire perimeter which lies within the Upper Ouachita NWR administered by the USFWS. The primary goals of the Mollicy Warren Fire Burned Area Rehabilitation Plan are:

- Utilize integrated management activities to improve lands unlikely to recover naturally from severe wildland fire damage by emulating historic ecosystem structure, function, diversity and dynamics according to approved management plans.
- Restore or establish healthy, functioning ecosystems, even if these ecosystems cannot fully emulate historic or pre-fire conditions as specified in the approved management plans.

The primary objective of the Mollicy Warren Fire Burned Area Rehabilitation Plan is to:

- Enhance native tree species colonization and promote the reestablishment of the natural bottomland hardwood ecosystem by replanting native tree species that were killed by the fire.

Fire Background

The Mollicy Warren fire was located on the Mollicy Unit of Upper Ouachita National Wildlife Refuge and private lands adjacent to the refuge. The Mollicy Unit fire ignited on 2 January 2006 at approximately 1330 CST on refuge lands and spread onto private land east of the refuge. Extended drought, warm weather, and high winds caused the fire to move rapidly through 314 acres of refuge lands and onto private timber industry lands, where it burned an additional 1,500 acres.

The primary resource on the refuge in the vicinity of the fire is 10,000 acres of hardwood reforestation. Tree seedlings were planted on the Mollicy Unit from 1997 to the present in an effort to restore bottomland hardwood forests. The Mollicy Warren fire burned through a reforestation area. This Burned Area Rehabilitation Plan will assess the damage to reforested trees and replant trees in areas where seedlings were killed by the fire.

Fire Damages and Threats to Human Safety and Natural Resources

The current burned area poses no threat to human safety or cultural resources in the area. The burned area lies within the Upper Ouachita NWR which serves as a significant link in the bottomland hardwood reforestation efforts along the Mississippi River Alluvial Valley. Major habitat types include seasonally flooded bottomland hardwood forests, upland forests, wooded swamp, shrub swamp, reforested bottoms (formerly agricultural lands), agricultural lands, moist soil units and open water. The Mollicy unit is 16,000 acres of which most is hardwood forest, either natural or reforested. The Mollicy fire burned through 314 acres of reforested bottomlands. The reforestation project on the Mollicy unit has been an ongoing effort since 1997 when the unit was first acquired. Since then over XXXX acres of the unit have been replanted with bottomland hardwood species, contributing to one of the largest replanting

efforts in the country. The loss of replanted tree seedlings due to the fire has been significant to the refuge resources as well as the regional reforestation efforts within the Mississippi River Alluvial Valley.

Management Requirements

The refuge is actively replanting hardwood tree species as part of a larger bottomland hardwood reforestation effort throughout the Lower Mississippi Valley. Over 17 million acres of bottomland hardwood forests have been lost within the Mississippi River floodplain (Twedt and Loesch 1999). The refuge commenced reforestation efforts on the Mollicy Unit in 1997 using hardwood trees species known to have grown on the refuge in the 1960s when the land was cleared for agriculture. At that time, the effort was the largest bottomland hardwood forest reforestation project in the country. Tree seedlings planted on the refuge must be in good health, the correct species, and planted with appropriate techniques. Service personnel supervise contractors while planting, following behind the planting crews to ensure seedlings are being planted correctly. Survival checks are completed according to the standards developed by the Lower Mississippi Joint Venture Office.

Rehabilitation

The following statements in the approved management plans justify the proposed burned area rehabilitation treatments funded with Emergency Fire Rehabilitation Funds.

- reforestation efforts that meet the above management objectives.

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PART A - FIRE LOCATION AND BACKGROUND INFORMATION

Fire Name	Mollicy Warren
Fire Number	B93P
Agency Unit	Upper Ouachita NWR
Region	R-4, Southeast Region
State	LA
County(s)	Morehouse
Ignition Date/Cause	Jan. 2, 2006 / unknown
Zone	FWS Fire Management District 7 R4
Date Fully Contained	Jan. 3, 2006
Jurisdiction	314 Acres

PART B - NATURE OF PLAN

Type of Action (check one box below)

<input checked="" type="checkbox"/>	Initial Submission
<input type="checkbox"/>	Amendment to the Initial Submission

PART C - REHABILITATION ASSESSMENT

Rehabilitation Objectives

- *Assess damage to hardwood and pine trees in the burned area*
- *Plant tree seedlings in areas where trees were killed*

PART D - TEAM ORGANIZATION, MEMBERS, AND RESOURCE ADVISORS

I. Burned Area Emergency Response Team Members: *(List of technical specialists used to develop the plan)*

Position	Team Member (Agency)
Team Leader	Brett Hortman, Upper Ouachita NWR
FMO	Chris Foster, Upper Ouachita NWR
Wildlife Biologist	Gypsy Gooding, North Louisiana Refuges

III. Resource Advisors: (Note: Resource Advisors are individuals who assisted the Burned area emergency response team with the preparation of the plan. See Part H for a full list of agencies and individuals who were consulted or otherwise contributed to the development of the plan.)

Name	Affiliation
Sue Grace	Southeast Louisiana Refuges, Regional Fire Ecologist

PART E - SUMMARY OF ACTIVITIES AND COSTS

The summary of activities and cost table below identifies rehabilitation costs charged or proposed for funding from subactivity 9262 funding sources.

REHABILITATION ACTIVITIES COST SUMMARY TABLE – Mollicy Warren Fire

Spec #	Title	Unit	Unit Cost	# of Units	Work Agent	Cost
1	Hardwood Reforestation	acre	\$127.16	314	SC	\$39,930
2	Monitor Treatment Effectiveness	acre	\$7.13	314	FA	\$2,240
TOTAL COST						\$42,170

Work Agent: CA=Coop Agreement, FA=Force Account, G=Grantee, P=Permitee, SC=Service Contract, TSP=Timber Sales Purchaser, V=Volunteer

PART F - INDIVIDUAL SPECIFICATION, Specification #1

TREATMENT/ACTIVITY NAME	Hardwood Reforestation	PART E SPECIFICATION #	1
NFPORS TREATMENT CATEGORY*		FISCAL YEAR(S) (list each year):	2006, 2007
NFPORS TREATMENT TYPE *		WUI? Y / N	No
IMPACTED COMMUNITIES AT RISK	None	IMPACTED T&E SPECIES	No

WORK TO BE DONE (describe or attach exact specifications of work to be done):

<p>Number and Describe Each Task:</p> <p>A. General Description: Over 300 acres of hardwood reforestation were killed during the wildfire. Hardwoods are generally intolerant to fire. The trees had been originally planted through forced account as part of the largest bottomland hardwood reforestation project in the country at that time. The 314 acres will be replanted.</p> <p>B. Location/(Suitable) Sites: Mollicy Unit of Upper Ouachita NWR</p> <p>C. Design/Construction Specifications: Containerized hardwood seedlings would be purchased from a local nursery and planted by contract personnel on the 314 acres at a standardized rate of 302 seedlings/acre.</p> <p>D. Purpose of Treatment Specifications: Reforestation of bottomland hardwood forests is a high priority in the Mississippi Alluvial Valley. The Service had paid for and planted the seedlings that were killed in the fire. These monies will pay to have the seedlings replaced.</p> <p>E. Treatment Effectiveness Monitoring Proposed: Standard protocols will be used to monitor survival of tree seedlings (see specification #3)</p>

LABOR, MATERIALS AND OTHER COST:

PERSONNEL SERVICES:	COST / ITEM
TOTAL PERSONNEL SERVICE COST (GS 11 @ \$32/hour X 50 hrs X 1 yr = \$1400)	\$1,600
EQUIPMENT PURCHASE, LEASE AND/OR RENT	COST / ITEM
TOTAL EQUIPMENT PURCHASE, LEASE OR RENTAL COST	
MATERIALS AND SUPPLIES	COST / ITEM
TOTAL MATERIALS AND SUPPLY COST (94,828 tree seedlings @ \$0.22/seedling X 1 yr = \$20,862)	\$20,862
TRAVEL COST	COST / ITEM
TOTAL TRAVEL COST	
CONTRACT COST (Labor or Equipment @ Cost/Hour X #Hours X #Fiscal Years = Cost/Item):	COST / ITEM
TOTAL CONTRACT COST (Labor to Plant @\$ 353.36/hr X 50 hrs X 1 yr = \$17,668)	\$17,668

SPECIFICATION COST SUMMARY

FISCAL YEAR	PLANNED INITIATION DATE (M/D/YYYY)	PLANNED COMPLETION DATE (M/D/YYYY)	WORK AGENT	UNIT S	UNIT COST	PLANNED ACCOMPLISHMENTS	PLANNED COST
FY__07	1/5/2007	09/30/2007	SC, F	314	\$127.65		\$40,130
FY_							
FY_							
FY__							
TOTAL							

Work Agent: C=Coop Agreement, F=Force Account, G=Grantee, P=Permittees, S=Service Contract, T=Timber Sales Purchaser, V=Volunteer

SOURCE OF COST ESTIMATE

1.	Estimate obtained from 2-3 independent contractual sources.	
2.	Documented cost figures from similar project work obtained from local agency sources.	M/S, C
3.	Estimate supported by cost guides from independent sources or other federal agencies	
4.	Estimates based upon government wage rates and material cost.	P
5.	No cost estimate required - cost charged to Fire Suppression Account	

P = Personnel Services, E = Equipment M = Materials/Supplies, T = Travel, C = Contract, F = Suppression

RELEVANT DETAILS, MAPS AND DOCUMENTATION INCLUDED IN THIS REPORT:

See Map of Mollicy Warren Fire and Reforested Area

TOTAL COST BY JURSDICTION

JURISDICTION	UNITS TREATED	COST
Upper Ouachita NWR	314	40,130
	TOTAL COST	

PART F - INDIVIDUAL SPECIFICATION, Specification #2

TREATMENT/ACTIVITY NAME	Monitor Treatment Effectiveness	PART E SPECIFICATION #	2
NFPORS TREATMENT CATEGORY*		FISCAL YEAR(S) (list each year):	2007, 2008
NFPORS TREATMENT TYPE *		WUI? Y / N	No
IMPACTED COMMUNITIES AT RISK	None	IMPACTED T&E SPECIES	No

WORK TO BE DONE (describe or attach exact specifications of work to be done):

Number and Describe Each Task:

A. General Description:
Monitor effectiveness of rehabilitation efforts

B. Location/(Suitable) Sites:

314 acres of rehab area of Mollicy Unit of Upper Ouachita NWR

C. Design/Construction Specifications:

Refuge biologist will make determinations of effectiveness of rehabilitation treatments

D. Purpose of Treatment Specifications:

To determine if rehabilitation treatments were effective

E. Treatment Effectiveness Monitoring Proposed:

Seedling success will be monitored using standard survival rate determination protocols

LABOR, MATERIALS AND OTHER COST:

PERSONNEL SERVICES:	COST / ITEM
TOTAL PERSONNEL SERVICE COST (GS 11 @ \$32/hour X 40 hrs X 2 yrs = \$2240)	\$2560
EQUIPMENT PURCHASE, LEASE AND/OR RENT	COST / ITEM
TOTAL EQUIPMENT PURCHASE, LEASE OR RENTAL COST	
MATERIALS AND SUPPLIES	COST / ITEM
TOTAL MATERIALS AND SUPPLY COST	
TRAVEL COST	COST / ITEM
TOTAL TRAVEL COST	
CONTRACT COST (Labor or Equipment @ Cost/Hour X #Hours X #Fiscal Years = Cost/Item):	COST / ITEM
TOTAL CONTRACT COST	

SPECIFICATION COST SUMMARY

FISCAL YEAR	PLANNED INITIATION DATE (M/D/YYYY)	PLANNED COMPLETION DATE (M/D/YYYY)	WORK AGENT	UNIT S	UNIT COST	PLANNED ACCOMPLISHMENTS	PLANNED COST
FY__07	5/1/2007	09/30/2007	F	314	\$4.07		\$1280
FY_08	5/1/2008	09/30/2008	F	314	\$4.07		\$1280
FY_							
FY__							
TOTAL							

Work Agent: C=Coop Agreement, F=Force Account, G=Grantee, P=Permittees, S=Service Contract, T=Timber Sales Purchaser, V=Volunteer

SOURCE OF COST ESTIMATE

1.	Estimate obtained from 2-3 independent contractual sources.	
2.	Documented cost figures from similar project work obtained from local agency sources.	
3.	Estimate supported by cost guides from independent sources or other federal agencies	
4.	Estimates based upon government wage rates and material cost.	P
5.	No cost estimate required - cost charged to Fire Suppression Account	

P = Personnel Services, E = Equipment M = Materials/Supplies, T = Travel, C = Contract, F = Suppression

RELEVANT DETAILS, MAPS AND DOCUMENTATION INCLUDED IN THIS REPORT:

See Map of Mollicy Warren Fire and Reforested Area
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TOTAL COST BY JURSDICTION

JURISDICTION	UNITS TREATED	COST
Upper Ouachita NWR	314	\$2,560
	TOTAL COST	

PART G - RESTORATION REQUIREMENT

The following are post-rehabilitation implementation, operation, maintenance, monitoring, and evaluation actions beyond three years from fire control to ensure the effectiveness of initial investments. Costs for monitoring and survival studies will be incurred by the refuge.

Restoration

1. Refuge staff will continue to monitor the effectiveness of rehabilitation treatments and seedling survival.

PART H - CONSULTATIONS

Refuge Staff, North Louisiana NWRs
 Regional Fire Ecologist, Southeast Region
 District 7, Prescribed Fire Specialist, Mississippi Sandhill Crane NWR

APPENDIX I - BURNED AREA ASSESSMENT REPORTS

MOLLICY WARREN FIRE RESOURCE DAMAGE ASSESSMENT REPORT

I. Objectives

To assess the first order fire effects and any damages to Upper Ouachita NWR natural resources incurred by the Mollicy Warren wildfire.

II. Observations

The burned area lies within the Upper Ouachita NWR which serves as a significant link in the bottomland hardwood reforestation efforts along the Mississippi River Alluvial Valley. Major habitat types include seasonally flooded bottomland hardwood forests, upland forests, wooded swamp, shrub swamp, reforested bottoms (formerly agricultural lands), agricultural lands, moist soil units and open water. The Mollicy unit is 16,000 acres of which most is hardwood forest, either natural or reforested. The Mollicy fire burned through 314 acres of reforested bottomlands.

III. Recommendations

- Reforest trees killed by fire
- Continue assessment in six months following fire during next growing season\
- Monitor success of reforestation treatment

IV. Consultations

- NELA staff, R4 Fire Ecologist, District 7 Prescribed Fire Specialist

V. References

- Annual narratives, Mollicy Unit 1997-2005

APPENDIX II - ENVIRONMENTAL COMPLIANCE

Federal, State, and Private Lands Environmental Compliance Responsibilities

All projects proposed in the Mollicy Warren Burned Area Rehabilitation Plan that are prescribed, funded, or implemented by Federal agencies on Federal, State, or private lands are subject to compliance with the National Environmental Policy Act (NEPA) in accordance with the guidelines provided by the Council on Environmental Quality (CEQ) Regulations (40 CFR 1500-1508); Department of the Interior and the U.S. Fish & Wildlife Service. This Appendix documents the Burned area emergency response team considerations of NEPA compliance requirements for prescribed rehabilitation and monitoring actions described in this plan for all jurisdictions affected by the Mollicy Warren Fire.

Related Plans and Cumulative Impact Analysis

Mollicy Warren Burned Area Rehabilitation Plan (*approval date*). The Mollicy Warren Fire Burned Area Rehabilitation Plan was reviewed and it was determined that actions proposed in the Fire Burned Area Rehabilitation Plan within the boundary of the Mollicy Warren Fire are consistent with the management objectives established in the Comprehensive Conservation Plan. The Comprehensive Conservation Plan NEPA compliance process specifically addresses

Cumulative Impact Analysis

Cumulative effects are the environmental impacts resulting from the incremental impacts of a proposed action when added to other past, present, and reasonably foreseeable future actions, both Federal and non-Federal. Cumulative impacts can result from individually minor, but collectively significant actions taking place over a period of time. The rehabilitation treatments for areas affected by the Mollicy Warren Fire, as proposed in the Mollicy Warren Fire Burned Area Rehabilitation Plan, do not result in an intensity of impact (i.e. major ground disturbance, etc.) that would cumulatively constitute a significant impact on the quality of the environment. The treatments are consistent with the above jurisdictional management plans and associated environmental compliance documents and categorical exclusions listed below.

Applicable and Relevant Categorical Exclusions

The individual actions proposed in this plan for Upper Ouachita NWR are Categorically Excluded from further environmental analysis as provided for in the *specify relevant departmental and agency Categorical Exclusions*. All applicable and relevant Department and Agency Categorical Exclusions are listed below. Categorical Exclusion decisions were made with consideration given to the results of required emergency consultations completed by the Burned area emergency response team and documented below.

Statement of Compliance for the Mollicy Warren Fire Burned Area Rehabilitation Plan.

This section documents consideration given to the requirements of specific environmental laws in the development of the Mollicy Warren Fire Burned Area Rehabilitation Plan. Specific consultations initiated or completed during development and implementation of this plan are also documented. The following executive orders and legislative acts have been reviewed as they apply to the Mollicy Warren Fire Burned Area Rehabilitation Plan:

- National Historic Preservation Act (NHPA).
- Executive Order 11988. Flood plain Management.
- Executive Order 11990. Protection of Wetlands.
- Executive Order 12372. Intergovernmental Review.
- Executive Order 12892. Federal Actions to Address Environmental Justice in Minority and Low-income Populations.
- Endangered Species Act.
- Secretarial Order 3127. Federal Contaminated
- Clean Water Act.
- Clean Air Act.

CONSULTATIONS

- NELA Staff, Southeast Region Fire Ecologist, District 7 Prescribed Fire Specialist

NEPA Checklist: If any of the following exception applies, the Burned Area Rehabilitation Plan cannot be Categorical Excluded and an Environmental Assessment (EA) is required.

(Yes) (No)

- (x) Adversely affect Public Health and Safety
- (x) Adversely affect historic or cultural resources, wilderness, wild and scenic rivers aquifers, prime farmlands, wetlands, floodplains, ecologically critical areas, or Natural Landmarks.
- (x) Have highly controversial environmental effects.
- (x) Have highly uncertain environmental effects or involve unique or unknown environmental risks.
- (x) Establish a precedent resulting in significant environmental effects.
- (x) Relates to other actions with individually insignificant but cumulatively significant environmental effects.
- (x) Adversely effects properties listed or eligible for listing in the National Register of Historic Places
- (x) Adversely affect a species listed or proposed to be listed as Threatened or Endangered.
- (x) Threaten to violate any laws or requirements imposed for the "protection of the environment" such as Executive Order 11988 (Floodplain Management) or Executive Order 11990 (Protection of Wetlands).

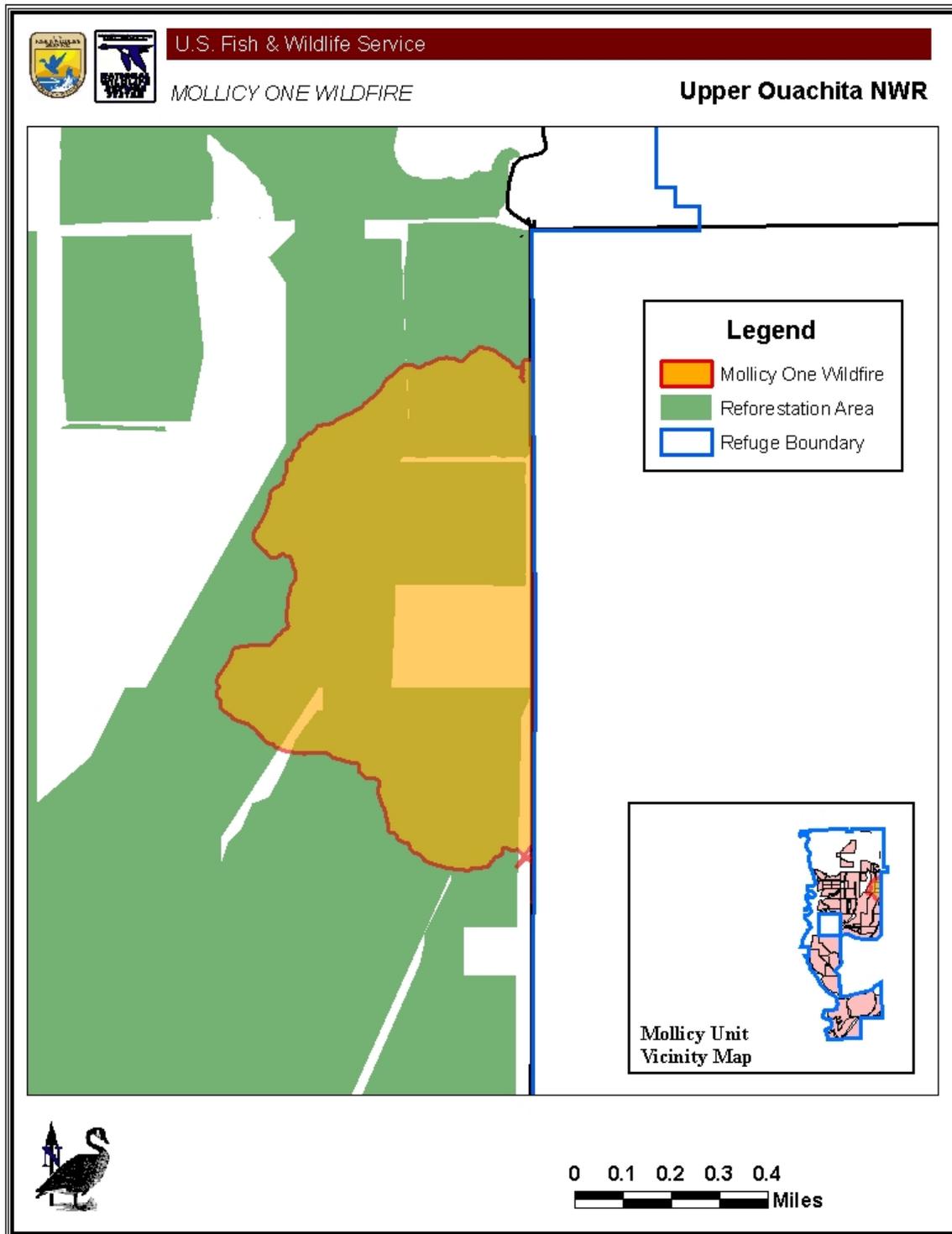
National Historic Preservation Act

Ground Disturbance:

- None
- Ground disturbance did occur and an archeologist survey, required under section 110 of the NHPA will be prepared. A report will be prepared under contract as specified by the Burned Area Rehabilitation Plan.

APPENDIX III - MAPS

- *Fire Perimeter and Reforestation Area*



APPENDIX IV - PHOTO DOCUMENTATION



APPENDIX V - SUPPORT DOCUMENTS

Twedt, D.J. and C.R. Loesch. 1999. Forest area and distribution in the Mississippi Alluvial Valley: implications for breeding bird conservation. *Journal of Biogeography* 26: 1215-1224.

Lower Mississippi River Ecosystem Team Plan. 2004. Lower Mississippi River Eco Team, U.S. Fish & Wildlife Service.