

**BURNED AREA REHABILITATION PLAN  
ASH FIRE**

**AGENCY/UNIT:** U.S Fish and Wildlife Service  
Ash Meadows National Wildlife Refuge

**LOCATION:** Amargosa Valley, Nye, Nevada

**DATE:** February 18, 2006

**PREPARED BY:** Matthew Burks, Ash Meadows NWR Staff  
Sharon McKelvey



Submitted By: \_\_\_\_\_ Date: \_\_\_\_\_  
Linda L. Miller, Acting Project Leader, Desert NWR Complex

# **BURNED AREA REHABILITATION PLAN ASH FIRE**

## **EXECUTIVE SUMMARY**

### **Introduction**

This Burned Area Rehabilitation Plan has been prepared in accordance with Department of the Interior and Fish and Wildlife Service policy. This plan provides rehabilitation recommendations for all lands burned within the Ash Fire perimeter and downstream impact areas including: public lands administered by the Fish and Wildlife Service and other jurisdictions if necessary. The primary objectives of the Ash Fire Burned Area Rehabilitation Plan are to:

- Continue the control of non-native invasive species populations within the Ash Fire as identified by monitoring results to restore or establish a healthy and stable ecosystem in which native species are well represented.
- Monitor non-native invasive species treatment effectiveness and native planting recovery within the burned area to determine if objectives are being met to control non-native invasive species within the burned area and to identify future planting and non-native invasive species control measures as identified by monitoring;

This plan addresses rehabilitation treatments. The U.S. Fish and Wildlife, Ash Meadows Refuge Staff conducted an initial analysis of fire effects on the cultural and natural resources of Ash Meadows National Wildlife Refuge (NWR) using ground reconnaissance methods. The plan primarily addresses impacts to the federally listed endangered species associated with Ash Meadows NWR. Ash Meadows NWR was created in 1984 primarily to protect 13 threatened and endangered species and at least 24 plants and animals found no-where else in the world. The abundance of indigenous life distinguishes the refuge as having a greater concentration of endemic species than any other area of its size in the United States, and the second greatest concentration of endemic species in North America. The refuge's large number of endemic species is directly related to its unique hydrogeology. Ash Meadows NWR is a major discharge point for a vast underground aquifer with more than 30 major seeps and springs discharging over 17,000 cubic yards of water per acre and supporting a vast network of spring, wetland, and riparian habitat in the Mojave Desert.

Prior to being declared a National Wildlife Refuge the area known as Ash Meadows has been put to many different uses. In the early 1960's and 70's, springs and streams were extensively altered and diverted for agricultural development. Thousands of acres were leveled adjacent to the springs for alfalfa and other intensively farmed crops. In the late 1970's the property was purchased by a large land developer and initial work began for planned housing tracts and golf courses. In an effort to protect rare endemic species, the Nature Conservancy purchased 12,654 acres in 1984 which was then sold to the USFWS that same year.

While the Ash Fire burned only 80 acres of the 24,000 acres making up Ash Meadows NWR, the burn affected important spring, riparian, and wetland habitats including burning over the outflow of one

major spring. Due to prior land management practices before establishment of the refuge in 1984, a major effort has been underway to control established non-native invasive species and restore native spring, riparian, and wetland habitats. The Ash Fire impacted important portions of this habitat.

Survival of many of the threatened, endangered and endemic species within Ash Meadows NWR is dependent upon control of non-native invasive species and the reestablishment of native plant cover to prevent further spread of non-native invasive species into the burned area. As part of the emergency stabilization efforts, an NCC intern was hired to assist the refuge Biologist with implementing the non-native invasive species control, native planting and monitoring treatments and further assessing the extent of the non-native invasive species and the damage caused by the fire to vegetation. The intern has mapped nearly all of the burned area for non-native invasive species and their extent. The mapping has identified approximately 70 acres of the 80 acre fire to be infested with invasive species. The disturbance caused by the fire coupled with the record rainfall this winter has produced monoculture populations of five hooked Bassia (*Bassia hyssopifolia*) or one the refuge's highly invasive species. Also, Tamarisk control treatments have been implemented. The mapping also identified several additional undesirable non-native invasive species; Malta Star Thistle (*Centaurea melitensis*) and Burdock (*Arctium Minum*) are the most prevalent of the additional species that had not been recorded prior to the fire. The FWS Nevada Archeologist has surveyed the treatment areas. The NCC intern mapped the burned fence left over from prior land management practices, burned debris associated with the fence and past agricultural practice were identified during this process and will be removed as part of the specification.

Individual resource Burned Area Assessment Reports produced by the Ash Meadows Staff team are in Appendix I. The individual rehabilitation treatments specifications including effectiveness monitoring identified in the assessments can be found in Part F. A summary of the costs by jurisdictions is in Part E. Appendix II contains the National Environmental Policy Act (NEPA) compliance documentation summary. Appendix III contains the Burned Area Rehabilitation Plan maps. Appendix IV contains photo documentation. Appendix V contains supporting documentation.

## **Fire Background**

The Ash Fire started on March 9, 2005 as the result of human cause ignition within the boundary of Ash Meadows National Wildlife Refuge. Refuge staff, volunteers and the Interagency fire crews including BLM, Park Service, Forest Service and Nevada Division of Forestry responded. On March 10<sup>th</sup>, 2005 the Ash Fire was declared contained and county and local resources were released. Suppression tactics included direct and indirect attack with limited hand-line, and structure protection. The Ash Fire was declared controlled on March 11, 2005

## **Fire Damages and Threats to Human Safety and Natural Resources**

The Ash Meadows Refuge Manager, biologist and southern Nevada Ecological Services fisheries biologist initiated preliminary damage assessment and photo documentation of all impacts to refuges resources.

Issues identified by Refuge Staff include:

- Invasive Species Control
- Native Planting

- Wildlife Protection
- Vegetation Monitoring

Each of the above rehabilitation treatments directly relate to mitigating impacts of the Ash Fire to management and recovery of the Federal endangered or threatened species and species endemic to Ash Meadows NWR that are protected under the enabling legislation for the refuge and are therefore fundable under the U.S. Department of the Interior, Burned Area Rehabilitation Program.

Implementation of the mitigation treatments for these species and their habitat are currently being initiated through the treatments specified in the Emergency Stabilization Plan. It is critical to the survival of these species and their habitat that the treatments recommended in this Rehabilitation Plan be continued and fully funded as specified. It is important that the Implementation Team coordinate the recommended activities, track budgets, coordinate contracts, and prepare accomplishment reports in a timely manor for the rehabilitation projects for the Ash Fire in order for success.

Since the containment date of March 10 2005 a significant amount of work has been accomplished at the Ash Fire. Every acre of the fire has been mapped by a GIS specialist. Multiple maps showing the locations of native as well as invasive species have been created. Over one hundred non-native Date Palms (*Phoenix Dactylifera*) have been removed. Approximately 20 acres have been treated for Saltcedar(*Tamarix Ramissima*) resulting in negligible re-growth within treated areas. Three acres of cattails have been removed in order to promote the health of Big Springs outflow. A double wide trailer, large barn, feeding pens and several fence lines were removed from the burn site. The debris filled six-thirty yard dumpsters. Two threatened species: Spring Loving Centaury (*Centaureum Namophilum*) and Ash Meadows Gum Plant (*Grindelia Fraxino-Pratensis*) have been located at the Ash Fire and their populations are being monitored.

At the conclusion of the funding period, a final Accomplishment Report will be due to the approval authority. The Accomplishment Report will document the funding received (initial and supplemental funding), treatments installed, the effectiveness of the installed treatments, and the results of monitoring activities.

### **Ash Meadows NWR Management Requirements**

This plan documents the known damage to the vegetation resources of Ash Meadows NWR and provides specific costs for the rehabilitation actions necessary to ensure that critical native habitats adequately recover during the next growing season. This plan is consistent with approved recovery plan goals and legislative mandate for the refuge which states that Ash Meadows National Wildlife Refuge is to be managed “*to conserve (A) fish or wildlife which are listed as endangered species or threatened species....or (B) plants...*” 16 U.S.C. 1534. All specifications are fully consistent with the approved Pesticide Use Proposals (2006), which details best management practices (BMP) and Integrated Pest Management (Draft) (IPM) methods for the herbicides to be used for invasive species treatments, Land Management Plans (2000), Fire Management Plan (2004), and Draft Comprehensive Conservation Plan (2004) for the Ash Meadows National Wildlife Refuge and Desert National Wildlife Refuge Complex, as well as the Recovery Plan for Endangered and Threatened Species of Ash Meadows, Nevada.(1990).

**BURNED AREA REHABILITATION PLAN  
ASH FIRE**

**TABLE OF CONTENTS**

<b>EXECUTIVE SUMMARY</b>	<b>2</b>
<b>TABLE OF CONTENTS</b>	<b>5</b>
<b>PART A - FIRE LOCATION AND BACKGROUND INFORMATION</b>	<b>6</b>
<b>PART B - NATURE OF PLAN</b>	<b>6</b>
<b>PART C - REHABILITATION ASSESSMENT</b>	<b>7</b>
<b>PART D - TEAM ORGANIZATION AND MEMBERS</b>	<b>7</b>
<b>PART E - SUMMARY OF ACTIVITIES AND COSTS</b>	<b>8</b>
<b>PART F - INDIVIDUAL SPECIFICATION</b>	<b>10</b>
<b>PART G - RESTORATION REQUIREMENT</b>	<b>20</b>
<b>PART H – CONSULTATIONS</b>	<b>21</b>
<b>APPENDIX I - BURNED AREA ASSESSMENT REPORTS</b>	<b>22</b>
<b>APPENDIX II - ENVIRONMENTAL COMPLIANCE</b>	<b>27</b>
<b>APPENDIX III – MAPS</b>	<b>34</b>
<b>APPENDIX IV - PHOTO DOCUMENTATION</b>	<b>38</b>

**BURNED AREA REHABILITATION PLAN  
ASH FIRE**

**PART A - FIRE LOCATION AND BACKGROUND INFORMATION**

Fire Name	ASH
Fire Number	NV-AMR-BK6Y
Agency Unit	FWS
Region	California/Nevada Operations
State	Nevada
County(s)	Nye
Ignition Date/Cause	March 9, 2005 Human Caused
Zone	Western Great Basin
Date Fully Contained	March 10, 2005
Jurisdiction	Acres
U.S. Fish & Wildlife Service	70
Bureau of Land Management under agreement	10
Private	0
Total Acres	80
Date Controlled	March 11, 2005

**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

**BURNED AREA REHABILITATION PLAN  
ASH FIRE**

**PART C - REHABILITATION ASSESSMENT**

Rehabilitation Objectives

- Continue the control of non-native invasive species populations to protect and enhance resource values including biodiversity, riparian and wetland habitats, and Threatened and Endangered Species.
- Plant native species to prevent the establishment of non-native invasive species.
- Monitor the non-native invasive species and native planting treatment for effectiveness to determine if objectives are being met to control non-native invasive species and to identify future planting and non-native invasive species control needs.
- Habitat enhancement for the protection of Wildlife.

**BURNED AREA REHABILITATION PLAN  
ASH FIRE**

**PART D - TEAM ORGANIZATION, MEMBERS, AND RESOURCE ADVISORS**

I. Burned Area Rehabilitation Team Members:

<b>Position</b>	<b>Team Member (Agency)</b>
Team Leader	Implementation Leader
Cultural Resources/Archeologist	LouAnn Speulda, (FWS)
Vegetation Specialist	Cristi Baldino, (FWS) Matt Burks, (NCC) Amber Schanklin, (NCC) Mark James, (FWS) Matt Brooks, (USGS) Curt Deuser, (NPS)
Wildlife Biologist	Cristi Baldino, (FWS)
GIS Specialist	Matt Burks, (NCC) Amber Shanklin, (NCC)

**BURNED AREA REHABILITATION PLAN  
ASH FIRE**

**PART E - SUMMARY OF ACTIVITIES AND COSTS**

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

**REHABILITATION ACTIVITIES COST SUMMARY TABLE - ASH FIRE**

Spec #	Title	Unit	Unit Cost	# of Units	Work Agent	Cost
R-1	Invasive Species Control	Acre		70	SC,FA,CA	\$91,890.00
R-2	Native Planting	Acre		30	CA,FA,SC	\$71,760.00
R-3	Vegetation Monitoring	Surveys		80	CA,FA	\$38,813.00
R-4	Implementation Leader	Month		2	FA or SC	\$23,620.00
<b>TOTAL COST</b>						\$226,083.00
<b>Work Agent:</b> CA=Coop Agreement, FA=Force Account, G=Grantee, P=Permitee, SC=Service Contract, TSP=Timber Sales Purchaser, V=Volunteer						

## BURNED AREA REHABILITATION PLAN ASH FIRE

### PART F - INDIVIDUAL SPECIFICATION

TREATMENT NAME	Invasive Species Control	PART E SPECIFICATION #	R-1
NFPORS TREATMENT CATEGORY*	Invasive Species	FISCAL YEAR(S) (list each year):	2006, 2007, 2008
NFPORS TREATMENT TYPE *	Chemical Treatment	WUI? Y / N	Yes
IMPACTED COMMUNITIES AT RISK	None	IMPACTED T&E SPECIES	Centaury, Gum Plant

\* See NFPORS Restoration & Rehabilitation module - Edit Treatment screen for applicable entries.

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

<p><b>A. General Description:</b> Continue to utilize integrated pest management practices (chemical, mechanical, and cultural control methods), as appropriate to prevent the spread and establishment of noxious weeds and undesirable exotic species known to exist within the fire perimeter of the Ash Fire and as defined by monitoring.</p> <p><b>B. Location/(Suitable) Sites:</b> Control all weeds as defined on the Noxious Weed Map as "Existing" locations. There are approximately 67 acres of known weed locations.</p> <p><b>C. Design/Construction Specifications:</b></p> <ol style="list-style-type: none"> <li>1. Continue to control non-native invasive weeds within the burn area and as identified by monitoring. Known infestation of bassia (<i>Bassia hyssopifolia</i>), (Malta star thistle (<i>Centaurea melitensis</i>), Flixweed (<i>Descurainia Sophia</i>) Saltcedar (<i>Tamarix ramissima</i>) and Common Burdock (<i>Arctium Minum</i>). Multiple treatments will be required with a variety of control techniques. Ground and aerial application of chemicals including but not limited to Garlon, Glyphosate, Arsonal® may be required. Timing of application may need to be adjusted to ensure treatment of each species is conducted in the proper phenological stage to ensure the protection and recovery native and endemic species.</li> <li>2. Follow-up control in the fall, spring or subsequent years on treated sites.</li> <li>3. Locate, map, and document (using photography, topographic maps, and Global Positioning System--GPS—technology), new weed occurrences within burned area. Document percent control or kill of noxious weeds.</li> <li>4. Initiate Agency approved control measures on new weed occurrences where monitoring demonstrates the establishment or expansion of known weed populations.</li> <li>5. Monitor water quality in aquatic areas adjacent to herbicide treatments areas using USGS POCIS passive samplers to detect herbicides.</li> </ol> <p><b>D. Purpose of Treatment Specifications:</b> Control or contain existing noxious weed occurrences to prevent further spread onto uninfested sites within the burn area. Protect the ecological integrity and site productivity of Threatened or Endangered plant and animal species and their associated habitats on lands administered by the AMNWR. Prevent spread of noxious weeds into critical habitats of threatened and endangered species on unburned lands within and adjacent to the refuge.</p> <p><b>E. Treatment Effectiveness Monitoring Proposed:</b> Spot checking of noxious weed sites to ensure control methods are meeting management objectives. A staff person from the AMNWR will visit sites controlled every week after initial treatment; this is especially important for weed populations that are sprayed to ensure effectiveness of herbicide application. If both spring and summer/fall applications are used then visits will occur during both these times.</p>
--

#### II. LABOR, MATERIALS AND OTHER COST:

PERSONNEL SERVICES (Grade @ Cost/Hours X # Hours X # Fiscal Years = Cost/Item Do not include contract personnel costs here (see contractor services below).	COST/ITEM
USFWS – GS-11 Biologist @ \$25.08/hour + benefits @ 33% = \$33.36 x 8 hours/day x 42 days (2 months) x 2 year =	\$22,420.00
<b>TOTAL PERSONNEL SERVICE COST</b>	<b>\$22,420.00</b>

<b>EQUIPMENT PURCHASE, LEASE, OR RENTAL</b> (Item @ Cost/Hours or Cost/Day or # Days X # Fiscal Years = Cost/Item) Note: Purchase requires written justification that demonstrates cost/item benefits over lease or rental.	
Vehicle Lease- 4WD Pick-up truck @ \$600/month x 2 months x 2 yrs	\$2,400.00
<b>TOTAL EQUIPMENT PURCHASE, LEASE, OR RENTAL COST</b>	<b>\$2,400.00</b>
<b>MATERIAL AND SUPPLIES</b> (Item @ Cost/Each X Quantity X # Fiscal Years = Cost/Item)	<b>COST/ITEM</b>
Field and office supplies @ \$500 x 2 years	\$1,000.00
<b>TOTAL MATERIAL AND SUPPLY COST</b>	<b>\$1,000.00</b>
<b>TRAVEL COST</b> (Personnel or Equipment @ Rate X Round Trips X # Fiscal Years = Cost/Item)	<b>COST/ITEM</b>
<b>TOTAL TRAVEL COST</b>	<b>\$1,500.00</b>
<b>CONTRACT COST</b> (Labor or Equipment @ Cost/Hour X # Hours X # Fiscal Years = Cost/Item)	<b>COST/ITEM</b>
Control weeds with herbicides on 70 acres; ground application, rough terrain 70 @ 311.00/ac	\$21,770.00
Control weeds with contract crew (10 person crew @ \$3,500 / tour) (2 tours) (2 years) =	\$12,000.00
Water Quality Testing- @ \$4000 x 2 years (Water from spring supplies upstream from private land)	\$8,000.00
Contract Bio-Tech @ \$17 / hr + benefits @ 33% = 22.61 x 8 hours/day x 63 days (3 months) x 2 years	\$22,800.00
<b>TOTAL CONTRACT COST</b>	<b>\$64,570.00</b>

**SPECIFICATION COST SUMMARY**

<b>FISCAL YEAR</b>	<b>PLANNED INITIATION DATE (M/D/YYYY)</b>	<b>PLANNED COMPLETION DATE (M/D/YYYY)</b>	<b>WORK AGENT</b>	<b>UNITS</b>	<b>UNIT COST</b>	<b>PLANNED ACCOMPLISHMENTS</b>	<b>PLANNED COST</b>
FY06	03/10/2006	09/30/2006	FA,SC,C A	Acres	\$1,313	20	\$26,260.00
FY07	10/1/2006	09/30/2007	FA,SC, CA	Acres	\$1,313	40	\$52,500.00
FY08	10/01/2007	3/10/2008	FA,SC,C A	Acres	\$1,313	10	\$13130.00
<b>TOTAL</b>							<b>\$91,890.00</b>

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

**SOURCE OF COST ESTIMATE**

1.	Estimate obtained from 2-3 independent contractual sources.	C
2.	Documented cost figures from similar project work obtained from local agency sources.	C,E,M
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

**III. RELEVANT DETAILS, MAPS AND DOCUMENTATION INCLUDED IN THIS REPORT:**

List Relevant Documentation and Cross-Reference Location within the Accomplishment Report. Weed Map
---

## BURNED AREA REHABILITATION PLAN ASH FIRE

<b>TREATMENT NAME</b>	Native Planting	<b>PART E SPECIFICATION #</b>	R-2
<b>NFPORS TREATMENT CATEGORY*</b>	Reforestation	<b>FISCAL YEAR(S) (list each year):</b>	2006, 2007, 2008
<b>NFPORS TREATMENT TYPE *</b>	Planting	<b>WUI? Y / N</b>	Yes
<b>IMPACTED COMMUNITIES AT RISK</b>	None	<b>IMPACTED T&amp;E SPECIES</b>	None

\* See NFPORS Restoration & Rehabilitation module - Edit Treatment screen for applicable entries.

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

<p><b>A. General Description:</b></p> <p>Native grasses, shrubs and trees will be hand-planted by contract crews to re-establish native vegetation within moderate to high burn severity areas. Native seed will be collected and propagated at federal and private nurseries to produce seedlings to plant with in the burned area after invasive species treatments are accomplished. The need for replanting and application rates will be based on the monitoring results from subsequent years. The plantings will be conducted in conjunction with noxious weed control and is intended to reduce encroachment by non-native invasive species and protect biological diversity of plant communities and critical T&amp;E habitats.</p> <p><b>B. Location/(Suitable) Sites:</b></p> <p>The areas to be replanted are within the Ash fire perimeter in and along historic spring/stream channels and in areas where noxious weeds have encroached. The replanting will occur mostly in areas within the burn that was moderate to high intensity. The area mostly coincides with the existing noxious weed locations. See Appendix III, Noxious Weed Map.</p> <p><b>C. Design/Construction Specifications:</b></p> <ol style="list-style-type: none"> <li>1. The species selected for replanting the burn area will include but not limited to willow, ash, mesquites, saltgrass, alkali sacton, baccaris, Indian rice grass. Seed will be collected from local species and propagated under contract with federal and private nurseries.</li> <li>2. Container stock, grass plugs will be planted by contract crews under the guidance of Refuge staff.</li> </ol> <p><b>D. Purpose of Treatment Specifications:</b></p> <p>The purpose of the treatment is to help prevent noxious weed encroachment and protect threatened and endangered species and their associated habitats. The native grass plantings are important in reducing bare ground, stabilizing plant communities, reducing spread of non-native invasives and protecting critical habitats of endemic plant species. The tree planting is an important part of reestablishing the upper canopy.</p> <p><b>E. Treatment Effectiveness Monitoring Proposed:</b></p> <p>See Vegetation Monitoring Specification.</p>
--

**LABOR, EQUIPMENT, MATERIALS, AND OTHER COST:**

<b>PERSONNEL SERVICES</b> (Grade @ Cost/Hours X # Hours X # Fiscal Years = Cost/Item Do not include contract personnel costs here (see contractor services below).	<b>COST/ITEM</b>
USFWS – GS-11 Biologist @ \$25.08/hour + benefits @ 33% = \$33.36 x 8 hours/day x 42 days (2 months) x 2 year =	\$22,420.00
<b>TOTAL PERSONNEL SERVICE COST</b>	<b>\$22,420.00</b>

<b>EQUIPMENT PURCHASE, LEASE, OR RENTAL</b> (Item @ Cost/Hours or Cost/Day or # Days X # Fiscal Years = Cost/Item) Note: Purchase requires written justification that demonstrates cost/item benefits over lease or rental.	<b>COST/ITEM</b>
Vehicle Rental- 20' container truck x \$500/mo x 1 months x 2 year	\$1,000.00
Vehicle Lease- 4WD Pick-up truck @ \$600/month x 2 months x 2 yrs	\$2,400.00
Auger- General Equipment 330H Hole Digger	\$1,700.00
<b>TOTAL EQUIPMENT PURCHASE, LEASE, OR RENTAL COST</b>	<b>\$5,100.00</b>
<b>MATERIAL AND SUPPLIES</b> (Item @ Cost/Each X Quantity X # Fiscal Years = Cost/Item)	<b>COST/ITEM</b>
Dry Water – 2 pkgs x 35 plants x 30 acres =	\$2,100.00
<b>TOTAL MATERIAL AND SUPPLY COST</b>	<b>\$2,100.00</b>
<b>TRAVEL COST</b> (Personnel or Equipment @ Rate X Round Trips X # Fiscal Years = Cost/Item)	<b>COST/ITEM</b>
<b>TOTAL TRAVEL COST</b>	<b>\$0.00</b>
<b>CONTRACT COST</b> (Labor or Equipment @ Cost/Hour X # Hours X # Fiscal Years = Cost/Item)	<b>COST /ITEM</b>
Contract Bio-Tech @ \$17 / hr + overhead @ 33% = 22.61 x 8 hours/day x 63 days (3 months) x 2 years	\$22,800.00
Plant materials- 35 plants / acre x 30 acres x \$2.50 / plant x 2 year	\$5,250.00
Native Plantings- Contract Crew @ \$3,500 / tour x 2 tours x 2 year	\$14,000.00
<b>TOTAL CONTRACT COST</b>	<b>\$42,050.00</b>

**SPECIFICATION COST SUMMARY**

<b>FISCAL YEAR</b>	<b>PLANNED INITIATION DATE (M/D/YYYY)</b>	<b>PLANNED COMPLETION DATE (M/D/YYYY)</b>	<b>WORK AGENT</b>	<b>UNITS</b>	<b>UNIT COST</b>	<b>PLANNED ACCOMPLISHMENTS</b>	<b>PLANNED COST</b>
FY06	03/10/2006	09/30/2006	FA	Acres	\$2,389	5	\$11,945.00
FY07	10/01/2006	09/30/2007	FA,SC	Acres	\$2,389	15	\$35,835.00
FY08	10/01/2007	03/10/2008	FA,SC	Acres	\$2,389	10	\$23,890.00
<b>TOTAL</b>							<b>\$71,760.00</b>

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

**SOURCE OF COST ESTIMATE**

1.	Estimate obtained from 2-3 independent contractual sources.	C,E
2.	Documented cost figures from similar project work obtained from local agency sources.	C, M
3.	Estimate supported by cost guides from independent sources or other federal agencies	P
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

**III. RELEVANT DETAILS, MAPS AND DOCUMENTATION INCLUDED IN THIS REPORT:**

List Relevant Documentation and Cross-Reference Location within the Accomplishment Report.
--

## BURNED AREA REHABILITATION PLAN ASH FIRE

<b>TREATMENT NAME</b>	Vegetation Monitoring	<b>PART E SPECIFICATION #</b>	R-3
<b>NFPORS TREATMENT CATEGORY*</b>	Monitoring	<b>FISCAL YEAR(S) (list each year):</b>	2006, 2007, 2008
<b>NFPORS TREATMENT TYPE *</b>	Treatment Effectiveness Monitoring	<b>WUI? Y / N</b>	Yes
<b>IMPACTED COMMUNITIES AT RISK</b>	None	<b>IMPACTED T&amp;E SPECIES</b>	None

\* See NFPORS Restoration & Rehabilitation module - Edit Treatment screen for applicable entries.

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

#### A. **General Description:**

Continue to monitor non-native invasive species treatment effectiveness and native plantings recovery within the burned area to determine if management objectives are being met and to identify any future planting or noxious weed control needs. Plants to be monitored include saltcedar, Bassia, Mustard, Malta Starthistle, California Fan Palm and other invasives found and all native planting treatments.

Continue monitoring for new occurrences of undesirable plant species (noxious and exotic), within the burned area. Monitoring will occur in un-infested areas having a high potential for weed invasion. Continue monitoring for success of noxious weed treatments.

Continue monitoring for establishment of planted native grasses and other plant materials the first year following treatment to determine if revegetation efforts are meeting management goals.

#### B. **Location/(Suitable) Sites:**

Monitoring for noxious weeds will occur in areas with potential for weed invasion and in areas that are treated for noxious weeds (see Noxious Weed Map).

Monitoring for planting success will occur in treated areas to determine success in competing with noxious weeds and reclaiming bare ground. See Planting Map

#### C. **Design/Construction Specifications:**

1. Continue monitoring on known noxious weed occurrences and in areas of potential spread within burned area to determine spread of noxious and invasive plant species. The monitoring protocol has been developed by USGS, using a modified version of NPS-FMA protocol.
2. Locate, map, and document (using photography, topographic maps, and Global Positioning System--GPS—technology), new weed occurrences within burned area.
3. For native planting areas, monitoring transects shall continue to be read to determine survival rates of planted species including healthy, sick, dead or missing plants. This data may be used to determine if additional Emergency Stabilization and/or Rehabilitation actions will be continued. Efforts will restore the natural canopy and the biological integrity of the landscape.

#### D. **Purpose of Treatment Specifications:**

Noxious weed and undesirable plant monitoring is required to detect new noxious weed occurrences in the burned area and to monitor known weed densities and determine the effectiveness of treatments. Monitoring of native grass planting success and effectiveness is required to ascertain the degree of competition with undesirable plant species and determine if additional treatments are necessary to control non-native invasive species and protect ecosystem biodiversity.

#### E. **Treatment Effectiveness Monitoring:**

As described in this specification. Visual Monitoring and GPS reconnaissance will occur on a weekly basis by an Ash Meadows Biotech overseen by the Ash Meadows Biologist.

**II. LABOR, MATERIALS AND OTHER COST:**

<b>PERSONNEL SERVICES</b> (Grade @ Cost/Hours X # Hours X # Fiscal Years = Cost/Item Do not include contract personnel costs here (see contractor services below).	<b>COST/ITEM</b>
<b>TOTAL PERSONNEL SERVICE COST</b>	
<b>EQUIPMENT PURCHASE, LEASE, OR RENTAL</b> (Item @ Cost/Hours or Cost/Day or # Days X # Fiscal Years = Cost/Item) Note: Purchase requires written justification that demonstrates cost/item benefits over lease or rental.	<b>COST/ITEM</b>
Vehicle Lease- 4WD Pick-up truck @ \$600/month x 2 months x 2 yrs	\$2,400.00
<b>TOTAL EQUIPMENT PURCHASE, LEASE, OR RENTAL COST</b>	\$2,400.00
<b>MATERIAL AND SUPPLIES</b> (Item @ Cost/Each X Quantity X # Fiscal Years = Cost/Item)	<b>COST/ITEM</b>
<b>TOTAL MATERIAL AND SUPPLY COST</b>	\$100.00
<b>TRAVEL COST</b> (Personnel or Equipment @ Rate X Round Trips X # Fiscal Years = Cost/Item)	<b>COST/ITEM</b>
<b>TOTAL TRAVEL COST</b>	\$0.00
<b>CONTRACT COST</b> (Labor or Equipment @ Cost/Hour X # Hours X # Fiscal Years = Cost/Item)	<b>COST /ITEM</b>
Contract Bio-Tech @ \$17 / hr + overhead @ 33% = 22.61 x 8 hours/day x 105 days (5 months) x 2 years	\$38,000.00
<b>TOTAL CONTRACT COST</b>	\$38,000.00

**SPECIFICATION COST SUMMARY**

FISCAL YEAR	PLANNED INITIATION DATE (M/D/YYYY)	PLANNED COMPLETION DATE (M/D/YYYY)	WORK AGENT	UNITS	UNIT COST	PLANNED ACCOMPLISHMENTS	PLANNED COST
FY06	03/11/2006	09/30/2006	FA,C	Survey	\$1,687.5	6	\$10,125.00
FY07	10/01/2006	9/30/2007	FA,C	Survey	\$1,687.5	12	\$20,250.00
FY08	10/01/2007	03/10/2008	FA,C	Survey	\$1,687.5	5	\$8,438.00
<b>TOTAL</b>							<b>\$38,813.00</b>

**Work Agent:** CA=Coop Agreement, FA=Force Account, G=Grantee, P=Permitee, SC=Service Contract, TSP=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.	E,M
3.	Estimate supported by cost guides from independent sources or other federal agencies	C
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

**III. RELEVANT DETAILS, MAPS AND DOCUMENTATION INCLUDED IN THIS REPORT:**

**BURNED AREA REHABILITATION PLAN  
ASH FIRE**

<b>TREATMENT NAME</b>	<b>Implementation Leader</b>	<b>PART E SPECIFICATION #</b>	<b>R-5</b>
<b>NFPORS TREATMENT CATEGORY*</b>	<b>Administration</b>	<b>FISCAL YEAR(S) (list each year):</b>	<b>2006, 2007, 2008</b>
<b>NFPORS TREATMENT TYPE *</b>	<b>Contract Administration</b>	<b>WUI? Y / N</b>	<b>Yes</b>
<b>IMPACTED COMMUNITIES AT RISK</b>	<b>None</b>	<b>IMPACTED T&amp;E SPECIES</b>	<b>None</b>

\* See NFPORS Restoration & Rehabilitation module - Edit Treatment screen for applicable entries.

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

<p><b>Number and Describe Each Task:</b></p> <p><b>A. General Description:</b> Hire Implementation Leader for 4 months to develop additional contract specifications or amendments, monitor contractor performance, process contracts, maintain project documentation, and track expenditures, complete project accomplishments.</p> <p><b>B. Location/(Suitable) Sites:</b> See other treatments</p> <p><b>C. Design/Construction Specifications:</b></p> <ol style="list-style-type: none"> <li>1. Implementation Leader will coordinate all aspects of rehabilitation plan including administering contracts, documentation of treatments installed, providing accomplishment report, submitting supplemental requests for funding, ensuring the completion of all approved treatments, and coordinating treatments with other agencies and private landowners.</li> <li>2. Implementation Leader will coordinate on-the-ground implementation of treatments including sites orientation of contractors, developing daily/weekly work plans for contractors/crews, and supervising work.</li> <li>3. At completing of the funding period the implementation leader will prepare a final accomplishment report.</li> </ol> <p><b>D. Purpose of Treatment Specifications:</b> The implementation leader will develop contract specifications, coordinate contractor access to remote closed refuge property, coordinate all aspects of project implementation, inspect subcontractor work, and report accomplishments.</p> <p><b>E. Treatment Effectiveness Monitoring Proposed:</b> N/A</p>
---

**II. LABOR, MATERIALS AND OTHER COST:**

➤ <b>PERSONNEL SERVICES: (Grade @ Cost/Hours X # Hours X # Fiscal Years = Cost/Item):</b> <b>Do not include contract personnel costs here (see contractor services below).</b>	<b>COST / ITEM</b>
USFWS – GS-11 Term @ \$25.08/hour + benefits @ 33% = \$33.36 x 8 hours/day x 42 days (2 months) x 2 year	\$22,420.00
<b>TOTAL PERSONNEL SERVICE COST</b>	<b>\$22,420.00</b>
➤ <b>EQUIPMENT PURCHASE, LEASE AND/OR RENT (Item @ Cost/Hour X # of Hours X #Fiscal Years = Cost/Item):</b> <b>Note: Purchases require written justification that demonstrates cost benefits over leasing or renting.</b>	<b>COST / ITEM</b>
One Vehicle and fuel @ \$600/month x 2 months (2 yrs) =	\$1,200.00
<b>TOTAL EQUIPMENT PURCHASE, LEASE OR RENTAL COST</b>	<b>\$1,200.00</b>
➤ <b>MATERIALS AND SUPPLIES (Item @ Cost/Each X Quantity X #Fiscal Years = Cost/Item):</b>	<b>COST / ITEM</b>

TOTAL MATERIALS AND SUPPLY COST		\$0
➤	<b>TRAVEL COST (Personnel or Equipment @ Rate X Round Trips X #Fiscal Years = Cost/Item):</b>	<b>COST / ITEM</b>
TOTAL TRAVEL COST		\$0
➤	<b>CONTRACT COST (Labor or Equipment @ Cost/Hour X #Hours X #Fiscal Years = Cost/Item):</b>	<b>COST / ITEM</b>
TOTAL CONTRACT COST		<b>\$0</b>

**SPECIFICATION COST SUMMARY**

FISCAL YEAR	PLANNED INITIATION DATE (M/D/YYYY)	PLANNED COMPLETION DATE (M/D/YYYY)	WORK AGENT	UNITS	UNIT COST	PLANNED ACCOMPLISHMENTS	PLANNED COST
FY07	10/01/2006	9/30/2007	FA	months	\$5,905	2	\$11,810
FY08	10/01/2007	03/10/2008	FA	months	\$5,905	2	\$11,810
<b>TOTAL</b>							<b>\$23,620.00</b>

**Work Agent:** CA=Coop Agreement, FA=Force Account, G=Grantee, P=Permitee, SC=Service Contract, TSP=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

**III. RELEVANT DETAILS, MAPS AND DOCUMENTATION INCLUDED IN THIS REPORT:**

List Relevant Documentation and Cross-Reference Location within the Accomplishment Report.
--

**BURNED AREA REHABILITATION PLAN  
ASH FIRE**

**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. Estimated annual cost and funding source is indicated.

1. Refuge wide mapping, implementing and monitoring of non-native invasive species through Integrated Vegetation Management action (\$12,783,000., FY08-FY12, Southern Nevada Public Lands Management Act).
2. Completed last fall Refuge-wide (25,000 acres) mapping of salt cedar using aerial imagery that has been mapped utilizing on board GPS system.
3. Implement Non-native invasive species control and revegetation (in-kind services and support, Southern Nevada Restoration Team and the Lake Mead Exotic Plant Management Team)

**BURNED AREA REHABILITATION PLAN  
ASH FIRE**

**PART H - CONSULTATIONS**

U.S. Fish and Wildlife Service  
LouAnn Speulda, Regional Archeologist

U.S. Fish and Wildlife Service  
Shawn Goodchild, Ecological Services

**BURNED AREA REHABILITATION PLAN  
ASH FIRE**

**APPENDIX I - BURNED AREA ASSESSMENT REPORTS**

- Amended Vegetation Damage Assessment

**BURNED AREA REHABILITATION PLAN  
ASH FIRE**

**ASH FIRE VEGETATION DAMAGE ASSESSMENT REPORT**

Prior to being declared a National Wildlife Refuge the area known as Ash Meadows has been put to many different uses. In the early 1960's and 70's, springs and streams were extensively altered and diverted for agricultural development. Thousands of acres were leveled adjacent to the springs for alfalfa and other intensively farmed crops. In the late 1970's the property was purchased by a large land developer and initial work began for planned housing tracts and golf courses. In an effort to protect rare endemic species, the Nature Conservancy purchased 12,654 acres in 1984 which was then sold to the USFWS that same year.

The Ash Fire also has a history. Between August 6<sup>th</sup> and 10<sup>th</sup> 2002 there was a separate fire 90 acres in size in the same location known as the Big Springs Fire. This fire disturbed the soil and increased the growth of the invasive plants Bassia and Tamarisk. Treatment efforts were succeeding in removing the invasives however the larger populations of Bassia and Tamarisk altered the fire regime and allowed the Ash Fire to burn hotter and faster.

Currently Ash Meadows NWR is working to prevent a large influx of non-native plant species. Three of the most aggressive species are Russian Knapweed (*Acroptilon repens*), Five Hooked Bassia (*Bassia Hyssopifolia*) and Saltcedar(*Tamarix Ramissima*). Ash Meadows has become a central research area for the eradication of these species and the continued successes of Ash Meadows will be shared with public and private lands.

Bassia is originally from Europe, is common in cultivated fields and probably was introduced to the Refuge through hay. Bassia was present at least since 1996 but has expanded on the Refuge over the past eight years and is spreading rapidly. Phenologically, it takes advantage of disturbed areas, grows to 5 feet in height with 10 foot diameters, and inhibits growth of other plants within its zone of influence. Bassia has a 5-hooked fruit and spines on its stems that make seed dispersal easy and walking through a stand difficult after maturation. Like tumble weed, it breaks off at maturity and is transported across the landscape disseminating seed. Where native species are prevalent, Bassia is not found. However, Bassia is an opportunistic non-native invasive species and there is a high probability it will infest the sites disturbed by the Ash fire. To treat the Bassia it is first necessary to remove the skeletons. Then treatment must be applied to new growth only. Currently Bassia is covering over 20 acres of the Ash Fire.

Saltcedar is found primarily along waterways and adjacent to old agricultural fence and has the ability to totally choke out all vegetation in riparian areas. Saltcedar is a primary threat to the recovery of Ash and Mesquite and threatens critical habitat for many wildlife and plant species. Saltcedar has also been given the highest impact rank for invasive species in the United States (Morse et. al. 2004). It can spread vegetatively as well as by seed. Each flower can produce thousands of seeds that are dispersed by wind and water. The foliage and flowers provide little food value for native wildlife that depends on

nutrient-rich native plants. Salt Cedar's long tap roots allow it to intercept deep water tables and interfere with natural aquatic systems – monopolizing limited sources of moisture. Because of its ability to spread, its hardiness, high water consumption, and tendency to increase the salinity of the soil around it, Saltcedar often completely displaces native plants in wetland areas. In many sites, Saltcedar forms a pure stand that is almost impenetrable to people or wildlife. Heavily infested areas also increase the fuel load, thereby increasing the frequency and intensity of fires and floods (National Invasive Species Council 2004). In August 2004, Ash Meadows NWR experienced a fire that was fueled by Salt Cedar, burned intensely in Tamarisk-dominated areas, and destroyed one historic structure. On the Ash Fire there are approximately 50 acres that are populated by Salt Cedar.

Russian knapweed is also highly invasive and disruptive of natural ecosystems. Once established, Russian knapweed spreads rapidly using a combination of adventitious shoots and allelopathic compounds that inhibit the growth of competing plants. These compounds, contained in the roots, have been shown to persist in the soil at some level for several years. Currently there is no Russian Knapweed at the site of the Ash Fire. However it does exist on several of the nearby properties. Only by following up with the native planting and vegetation monitoring referred to earlier in this plan we will be able to prevent the spread of Russian knapweed.

Although a single plant of Russian knapweed may produce 1,200 seeds per year, which are passively dispersed, this species reproduces primarily vegetatively. The root system consists of the original taproot, which can grow to a depth of more than 2.5 meters, horizontal roots that can extend greater than seven meters, and their vertical extensions. Buds on the horizontal roots form adventitious shoots that may grow to be independent plants. Russian knapweed plants extend radially in all directions and can cover an area of 12 m<sup>2</sup> within two years (Watson 1980). Horizontal root growth rates of 2.5 meters the first year and 5-7 meters the second year have been reported (Zimmerman 1996). Infestations can grow to densities of 100-300 shoots/m<sup>2</sup>, which can easily crowd out all other species and form a monoculture. These properties (rapid spreading by roots and production of a chemical that inhibits other species from growing near it) make Russian knapweed extremely difficult to control. The persistence of this species makes it necessary to kill all of the plants in a targeted area.

Presently on the Ash Fire 70 of the 80 acres are home to populations of invasive plant species. Each acre of the Ash Fire has been mapped and the locations of the populations are known. It is imperative to continue the process of invasive control as smoothly as possible, without any pause between the Stabilization and Rehabilitation processes. The burned area is still new enough to prevent the invasive plants from blocking out a majority of the native plants. The treatments outlined earlier will be able to contain, eliminate and monitor the reoccurrence of the invasive species of Salt Cedar, Bassia, Malta Star Thistle and Burdock. During the Stabilization process of the Ash Fire 20 acres of Saltcedar were treated with a high rate of success and show little to no signs of re-growth.

Ash Meadows is working in conjunction with the Desert Complex headquarters to develop an Integrated Pest Management Plan. The Biologist Cristi Baldino at Ash Meadows is working to develop a schedule for pest management that lists the separate species, the chemical needed to treat them, the method of removal and the time of year that is best suited for treatment. Each staff member carries a sheet developed by the Biologist which outlines the invasive plants by species type, growth stage,

flower stage, fruit stage and senescence. This information combined with the IPM from Las Vegas will give Ash Meadows a solid plan for the control of invasive species.

Ash Meadows has received an award from the Southern Nevada Public Lands Management Act: Capital Improvements Project, for the aerial treatment of Saltcedar and Russian knapweed. This award has resulted in a five year plan for the removal of over 1000 acres of Saltcedar and 500 acres of Russian Knapweed. This is an excellent result for the Refuge and demonstrates how important it is treat smaller areas such as the Ash Fire which cannot be aerially treated. Due to the size of the Ash Fire treatments must occur manually to prevent the further spread of seeds both within the site and onto the surrounding areas.

I. Recommendations

A. Rehabilitation

- Invasive Species Control- continue to control non-native invasive species population using Integrated Pest Management practices to control known and new populations within and adjacent to the burn area.
- Native Planting- continue plantings of native grasses, shrubs and trees which are critical to maintain the biological integrity and biodiversity of the plant communities within the burned area and stem the noted expansion of non-native invasive species.
- Vegetation Monitoring- monitor known and new populations of non-native invasive species; monitor treatment effectiveness and implement adaptive management principles to effectively treat non-native invasives within the Ash fire.
- Wildlife Protection- remove barb wire fencing and decommission access road.

B. Non-specific related recommendations

- Continue to partner with USGS-Las Vegas Field Station; currently assisting in monitoring the vegetation within the burned area, as well as actively pursue partnerships with other agencies and non-profits to assist with implementation of rehabilitation efforts
- Continue consultation with USFWS Ecological Services on the PUP’s and non-native invasive species control measures to ensure protection of T&E and endemic species.
- Thoroughly document treatments and results for annual accomplishment reporting. Pursue additional Rehabilitation funding as necessary.

II. Consultations

<b>NAME, AGENCY, TITLE</b>	<b>TELEPHONE</b>
Shawn Goodchild, FWS, Biologist	702-515-5230
Curt Deuser, NPS, EPMT Lead	702-293-8979
Matt Brooks, USGS, Vegetation Ecologist	702-564-4615

### III. References

U.S. Fish and Wildlife Service, Ash Meadows National Wildlife Refuge August 2000 Wildfire Emergency Rehabilitation Plan. 2000.

U. S. Fish and Wildlife Service, Recovery Plan for the Endangered and Threatened Species of Ash Meadows, Nevada. 1990.

Ash Fire Burned Area Emergency Stabilization Plan – Refuge Staff and Ecological Services

Southern Nevada Public Lands Act – Weed Proposal for Ash Meadows – 2005, Cristi Baldino

2003 Annual Report for the Ash Meadows National Wildlife Refuge. December 2003.

Ash Meadows Refuge Management Plan (1987)

Whitson, Tom D. (Ed). 1996. Weeds of the West.

The Nature Conservancy. 1996. A checklist of the vascular plants of Ash Meadow National Wildlife Refuge, Nye County, Nevada. Published in cooperation with the USFWS. 18pp.

---

BAER Implementation Leader, Private Contractor- (760)-367-3885

Cristi Baldino, Wildlife Biologist, USFWS- (775) 372-5435

Sharon McKelvey, Refuge Manager, USFWS- (775)-372-5435

**BURNED AREA REHABILITATION PLAN  
ASH FIRE**

**APPENDIX II - ENVIRONMENTAL COMPLIANCE**

- **Environmental Compliance Consideration and Documentation**
- **NEPA Environmental Checklist**

**BURNED AREA REHABILITATION PLAN**  
**ASH FIRE**  
**Environmental Compliance Consideration and Documentation**

**Federal, State, and Private Lands Environmental Compliance Responsibilities**

All projects proposed in the ASH 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 Fish and Wildlife Services. This Appendix documents the Burned Area Emergency Response team (BAER) considerations of NEPA compliance requirements for prescribed rehabilitation and monitoring actions described in this plan for all jurisdictions affected by the ASH Fire.

This plan identifies specific restoration and monitoring actions designed to mitigate damages to resources that result of the Ash Fire.

**Agency Specific Guidance:** This NEPA documentation has been developed in accordance with the following agency specific guidelines.

**U.S. Fish and Wildlife Service:** Emergency stabilization, rehabilitation and monitoring actions proposed on will comply with U.S. Fish and Wildlife Service, NEPA Guidelines, Part 516 (DM 6, Appendix 1).

**Related Plans and Cumulative Impact Analysis**

*Recovery Plan for the Endangered and Threatened Species of Ash Meadows, Nevada (1990).*

*Ash Meadows National Wildlife Refuge: “to conserve (A) fish or wildlife which are listed as endangered species or threatened species....or (B) plants...” 16 U.S.C. 1534 (Endangered Species Act of 1973).*

Proposed Land and Mineral Withdrawal at the Ash Meadows National Wildlife Refuge and Environmental Assessment (2000).

*Annual Noxious Weed Control Plan 2004, including NEPA Compliance Documentation and Biological Opinions.*

Ash Meadows Fire Management Plan, 1986

**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 Ash Fire, as proposed in the Ash Fire Burned Area Restoration 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**

All treatments proposed in this plan for Ash Fire 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.

### **Applicable Department of Interior Categorical Exclusion**

- |                              |   |
|------------------------------|---|
| Part 516 DM 2, App. 1.1      | Personnel actions and investigations and personnel services contracts.  |
| Part 516 DM 2, App. 1.4      | Law enforcement and legal transactions, including such things as arrests, investigations, patents, claims, legal opinions, and judicial activities including their initiation, processing, settlement, appeal, or compliance.                     |
| Part 516 DM 2, App. 1.6      | Non-destructive data collection, inventory (including field, aerial and satellite surveying and mapping), study, research and monitoring activities.  |
| Part 516 DM 2, App. 1.7      | Routine and continuing government business, including such things as supervision, administration, operations, maintenance and replacement activities having limited context and intensity; e.g. limited size and magnitude or short-term effects. |
| Part 516 DM 2, App. 1.11     | Activities which are educational, informational, advisory or consultative to other agencies, public and private entities, visitors, individuals or the general public.  |
| Part 516 DM 6 App. 4.4 M (2) | Establishment of non-disturbance environmental quality monitoring programs and field monitoring stations including testing services.  |

### **Applicable Fish and Wildlife Service Categorical Exclusions**

(1) Research, inventory, and information collection activities directly related to the conservation of fish and wildlife resources which involve negligible animal mortality or habitat destruction, no introduction of contaminants, or no introduction of organisms not indigenous to the affected ecosystem.

(2) The construction of new, or the addition of, small structures or improvements, including structures and improvements for the restoration of wetland, riparian, streams,

or native habitats, which result in no or only minor changes in the use of the affected local area. The following are examples of activities that may be included.

- i. The installation of fences.
- ii. The construction of small water control structures.
- iii. The planting of seeds or seedlings and other minor revegetation actions.
- iv. The construction of small berms or dikes.
- v. The development of limited access for routine maintenance and management purposes.

(3) Fire management activities including prevention and restoration measures, when conducted in accordance with departmental and Service procedures.

### **Statement of Compliance for the Ash Fire Burned Area Rehabilitation Plan.**

This section documents consideration given to the requirements of specific environmental laws in the development of the Ash 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 Ash Fire Burned Area Rehabilitation Plan:

1. **National Historic Preservation Act (NHPA).** The treatment areas were surveyed by USFWS archeologist and a report issued. No cultural resources were identified during the surveys. Recommendations were to proceed with treatments that the cultural resource sites were outside of the affected area.
2. **Executive Order 11988, Floodplain Management.** All proposed treatments are in compliance with this order.
3. **Executive Order 11990, Protection of Wetlands.** All proposed treatments are in compliance with this order.
4. **Executive Order 12372, Intergovernmental Review.** Coordination and consultation is ongoing with affected Tribes, Federal, and local agencies. A copy of the plan will be disseminated to all affected agencies.
5. **Executive Order 12892, Federal actions to address Environmental Justice in Minority and Low-Income Populations.** All Federal actions must address and identify, as appropriate, disproportionately high and adverse human health or low-income populations, and Indian Tribes in the United States, The Refuge staff has determined that the actions proposed in this plan will result in no adverse human health or environmental effects for minority or low-income populations and Indian Tribes.
6. **Endangered Species Act.** The Ash Meadows wildlife biologist and vegetation specialist consulted with the U.S. Fish and Wildlife Service regarding actions proposed in this plan and

potential affects on Federally listed species and have determined that there is no effect. Individual agencies are responsible for continued consultations during plan implementation as site specific treatments are developed.

7. **Clean Water Act.** All proposed treatments are in compliance with this Act. Emergency stabilization and rehabilitation measures proposed are necessary to maintain clean water within the burn and adjacent areas. Long-term impacts are considered beneficial to water quality.
8. **Clean Air Act.** Federal Ambient Air Quality Primary and Secondary Standards are provided by the National Ambient Air Quality Standards, as established by the U.S. Environmental Protection agency (EPA) (Clean Air Act, 42 U.S.C. 7470, et seq., as amended). The Refuge staff determined that treatments prescribed in the Ash Fire burned area will have short-term minor impacts to air quality that would not differ significantly from routine land use practices for the area. Long-term treatments proposed in the plan would be expected to have a beneficial impact to air quality through stabilization of ash and soils within the Ash Fire burned area.
9. **Wilderness Act.** The Ash Fire did not impact designated or proposed wilderness.

## CONSULTATIONS

LouAnn Speulda, Archeologist, Nevada Fish and Wildlife Service Office  
Richard Hadley, Region BAER Coordinator, California/Nevada Operations  
Linda Miller, Project Leader, Desert National Wildlife Refuge Complex  
Cristi Baldino, Wildlife Biologist, Ash Meadows National Wildlife Refuge  
Sharon McKelvey, Refuge Manager, Ash Meadow National Wildlife Refuge  
Shawn Goodchild, Wildlife Biologist, Ecological Services, Las Vegas, Nevada  
Cynthia Martinez, Wildlife Biologist, Ecological Services, Las Vegas, Nevada

**NEPA Checklist:** If any of the following exception applies, the Burned Area Rehabilitation Plan cannot be Categorically 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 posted for the "protection of the environment" such as Executive Order 1 1988 (Floodplain Management) or Executive Order 1 1990 (Protection of Wetlands).

### **National Historic Preservation Act**

Ground Disturbance:

- None
- USFWS archeologists surveyed the treatment areas and provided a report. No cultural resources were identified during the survey and recommendations are to proceed as planned.

A NHPA Clearance Form:

- Is required because the project may have affected a site that is eligible or on the national register. The clearance form is attached. SHPO has been consulted under Section 106 (see Cultural Resource Assessment, Appendix I).
- Is not required because the Burned Area Rehabilitation Plan has no potential to affect cultural resources (initial of cultural resource specialist). These treatments are covered under the programmatic agreement with SHPO

### **Other Requirements**

(Yes) (No)

- ( x ) Does the Burned Area Rehabilitation Plan have potential to affect any Native American uses? If so, consultation with affiliated tribes is needed.
- ( ) Are any toxic chemicals, including pesticides or treated wood, proposed for use? If so, local agency integrated pest management specialists must be consulted.

I have reviewed the proposals in the Ash Fire Burned Area Rehabilitation Plan in accordance with the criteria above and have determined that the proposed actions would not involve any significant environmental effect. Therefore it is categorically excluded from further environmental (NEPA) review and documentation. Ash Meadows staff have completed necessary coordination and consultation to insure compliance with the National Historic Preservation Act, Endangered Species Act, Clean Water Act and other Federal, State and local environment review requirements.

---

Ash Meadows Refuge Manager

Date

---

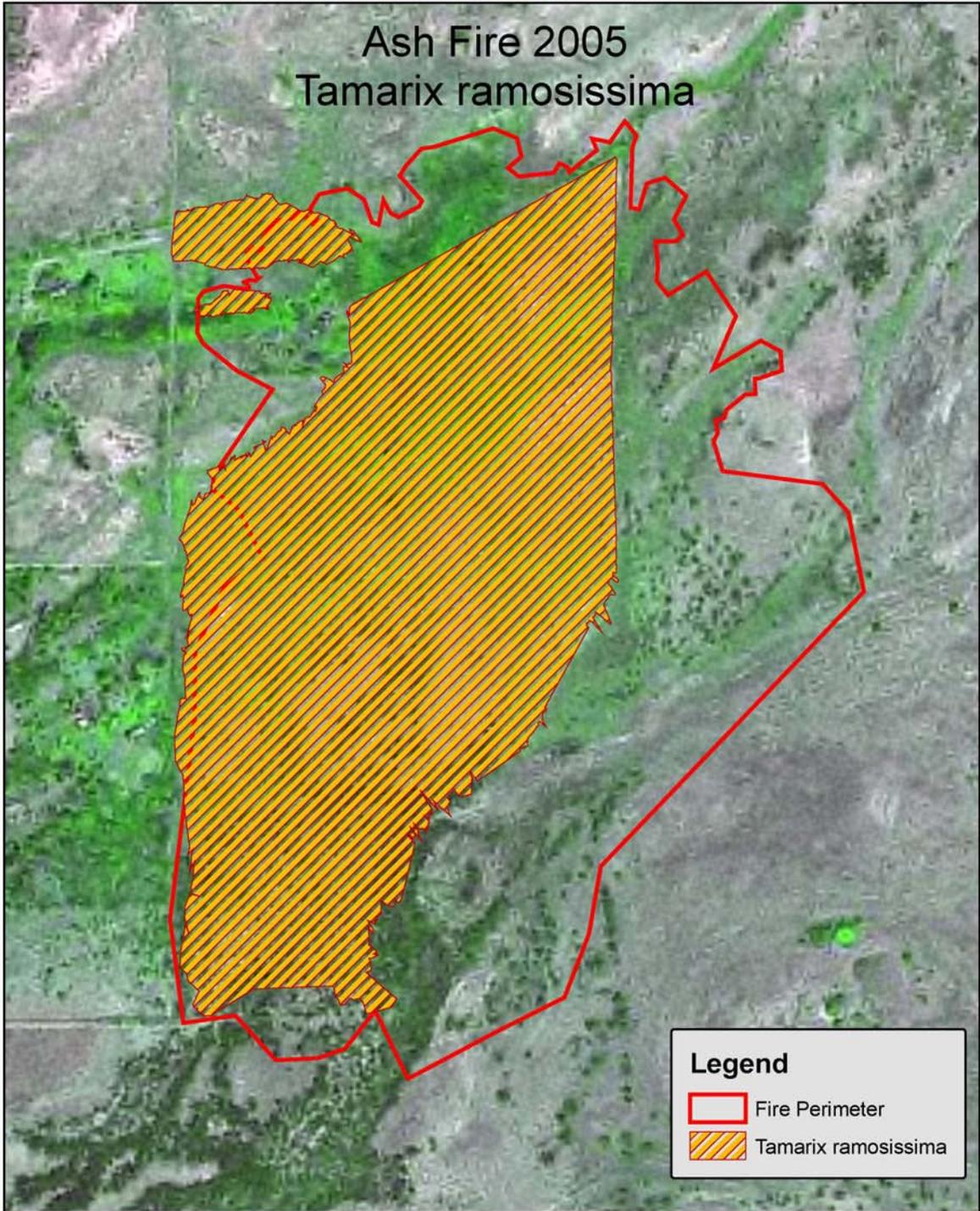
Linda L. Miller, Acting Project Leader, Desert NWR Complex, FWS

Date

**BURNED AREA REHABILITATION PLAN  
ASH FIRE**

**APPENDIX III - MAPS**

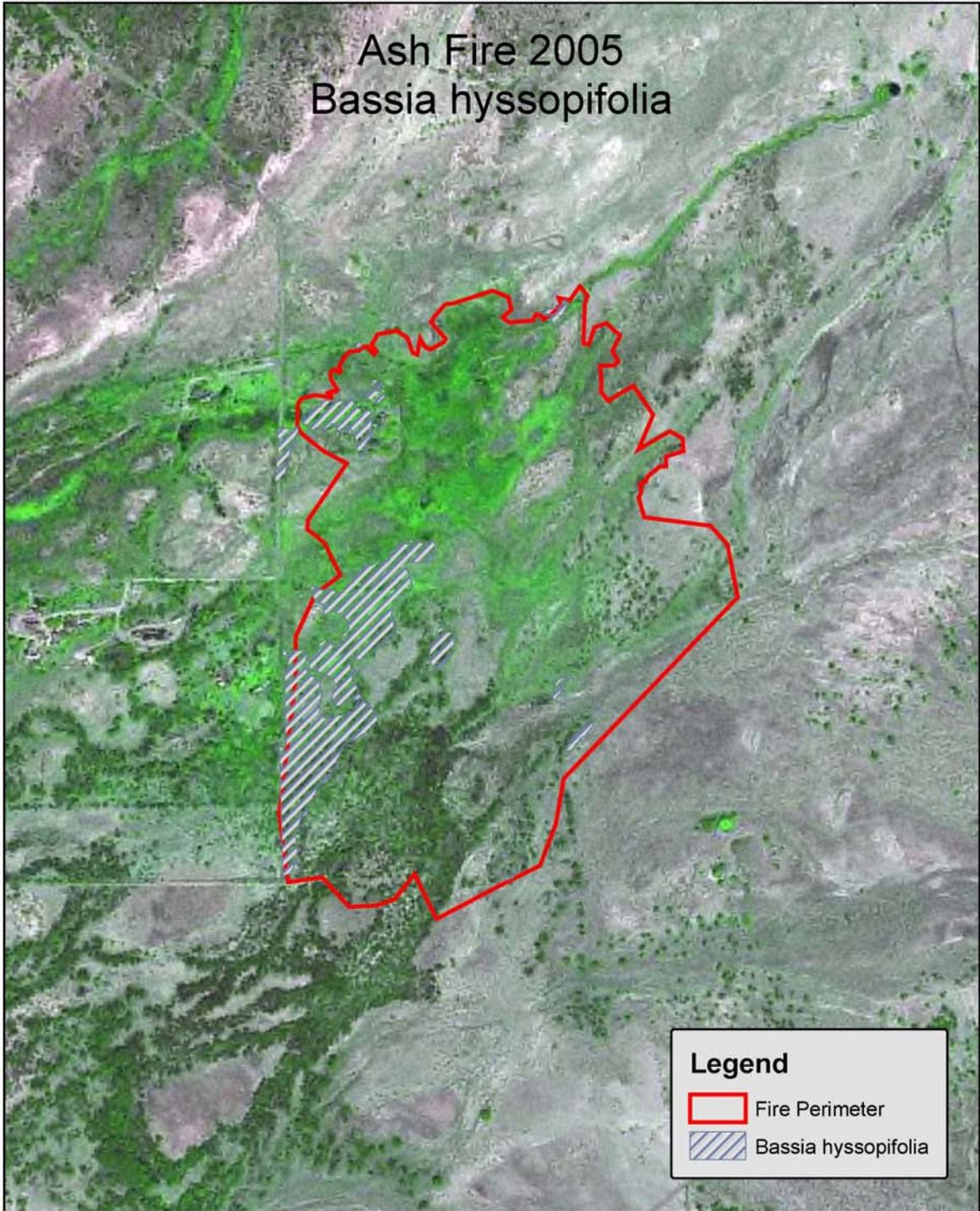
- **Non-Native Invasive Species Maps**
- **Re-planting Map**



140 70 0 140 Meters



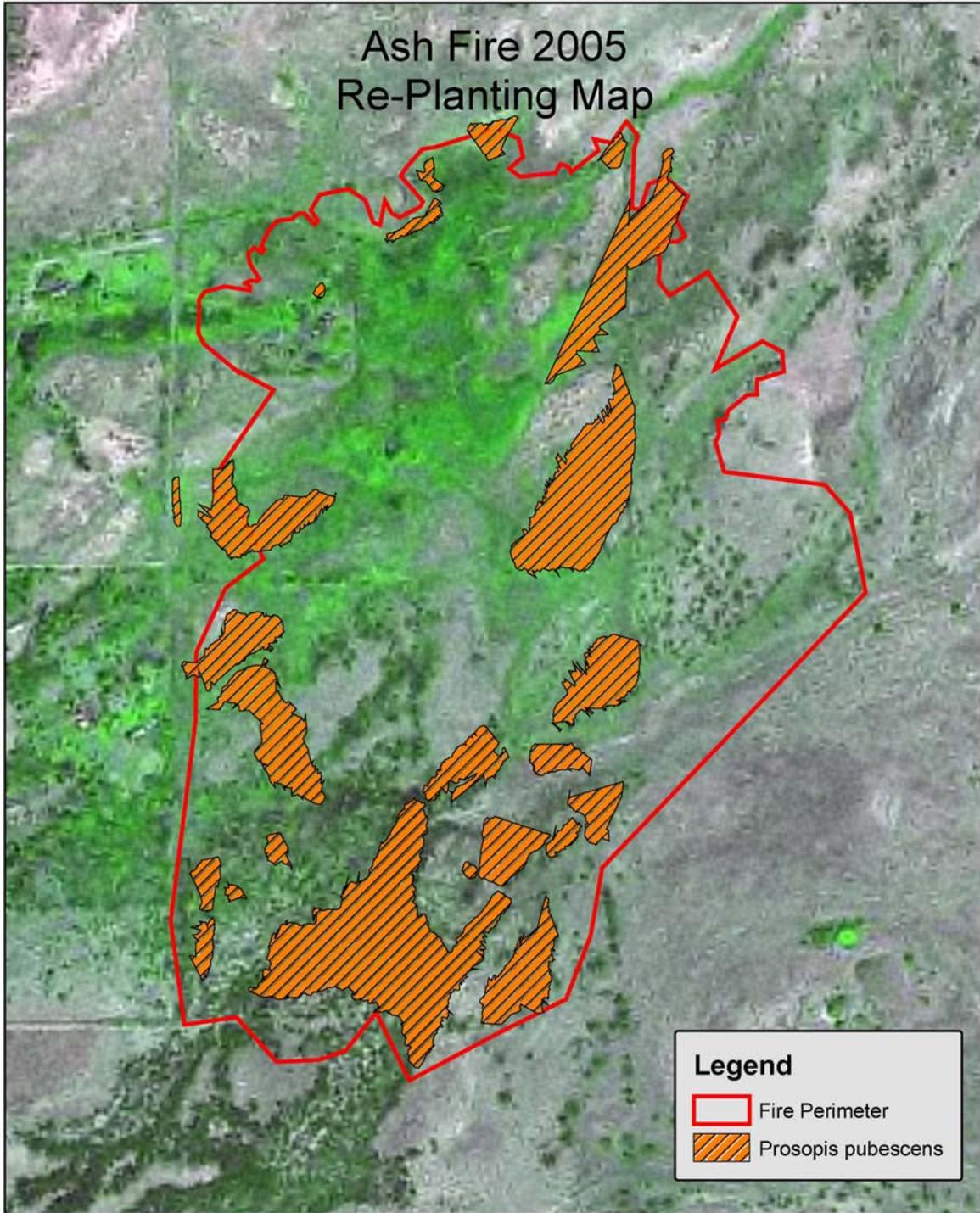
1:4,771



210 105 0 210 Meters



1:7,219



140 70 0 140 Meters  
1:4,771