

BURNED AREA EMERGENCY
REHABILITATION PLAN

EUREKA FIRE 64630-9261-6341
BOYD FIRE 64630-9261-6343

April 19, 2002
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U. S. FISH AND WILDLIFE SERVICE

MARAIS des CYGNES NATIONAL WILDLIFE REFUGE

Prepared by: _____
Refuge Biologist

Date: _____

Reviewed by: _____
Project Leader

Date: _____

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Reviewed by: _____
Zone Fire Mgmt. Officer

Date: _____

Approved by: _____

Date: _____

Approved by: _____

Date: _____

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EUREKA FIRE #64630-9261-6341

BOYD FIRE #64630-9261-6343

Marais des Cygnes National Wildlife Refuge

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4/19/02

T21S, R25E, Sec. 22

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EXECUTIVE SUMMARY

Introduction

This plan has been prepared in accordance with U.S. Fish and Wildlife Service policy. This plan provides burned area emergency stabilization and rehabilitation (ESR) recommendations for all lands burned within the Eureka and Boyd Fire perimeters and downstream impact areas including: public lands administered by the U.S Fish and Wildlife Service. The primary objectives of the Eureka - Boyd Burned Area Emergency Rehabilitation (ESR) Plan are:

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

Rehab Needs:

The needs for rehabilitation come from erosion potential, spread of noxious weeds, and threats to a rare bird species. Although the slopes are not steep (maximum 5%), the soils are erodible. The aerial photos show an erosion ditch within the Eureka fire. Furthermore, when the Boyd site was being farmed, terraces were required to control erosion.

Vegetation structure, or lack thereof, also contributes to erosion potential at these sites. Annual weeds offer little protection to the soil surface, because stems are the only things poking out of the ground. The scattered grasses on these sites are not thick enough to offer the protection that a native prairie would.

Sericea lespedeza, the most prevalent noxious weed on the refuge, takes advantage of any exposed soil. The Refuge currently sprays to keep the spread in check and to hopefully start making progress on the problem as a whole. A sun-loving species, *sericea* poses a threat to grasslands. Yet, *sericea* has difficulty invading sites with a healthy stand of grasses and forbs. Therefore, the Refuge attempts to revegetate exposed sites with a diverse grass/forb mix as quickly as possible.

The Henslow s sparrow, a rare grassland species, nests in the Gama Prairie. Without grass and forb cover, the surrounding uplands could erode and alter the hydrology of the Gama Prairie. Wet prairies are rare on the Refuge and need to be maintained as such. Erosion could choke the drainage, compromising the integrity of Henslow s habitat.

Rehabilitation Objective

The Refuge intended to restore these areas to native grasslands, 87 acres at Eureka and 80 acres at the Boyd site. USFWS Fire Management Handbook (5.1.3) defines rehabilitation as techniques to improve natural resources as stipulated in approved refuge management plans. However, total rehabilitation is not within the scope of Emergency Rehabilitation funding. What we propose at Marais des Cygnes is not a total rehab, because that would require a dozen of species of grasses and 100+ species of forbs. We propose to plant 6 species of grasses and 12 species of forbs. This rehab plan would put back a

different species mix than what the fire burned. The existing annual weeds would be replaced by grasses and forbs that stabilize the soil and are sustainable for the long-term.

The Marais des Cygnes CCP (1998) states an objective of restoring and maintaining 1,300 acres of prairie. This project would maintain the existing Gama Prairie and begin the restoration process east of the Gama Prairie (Boyd Fire) and also on the Eureka site.

Work Completed

During the week of April 8th, the Refuge replanted part of the Boyd Fire with the grass and forb seed that we had on hand. I checked the site on April 18th and found the grasses already germinating and taking hold.

Site Description

Climate - The Refuge averages 38-40 inches of precipitation annually. Twenty-five percent of that falls during the months of May and June, the two wettest months of the year. The past 18 months have seen relatively little rainfall. We were behind on rainfall at the time of the wildfires. The Refuge went into fire severity soon after the wildfires.

Vegetation - The Refuge occurs on the transition between tallgrass prairie and the eastern hardwood forest. The Refuge consists of forests, grasslands, and agricultural fields. All three fires burned in crop fields that were no longer being farmed. These areas were historically native tallgrass prairie. A few native grasses and some forbs grow on the site of the Eureka fire. With no restoration efforts, abandoned crop fields revert back to low-quality annual weeds with a few native prairie species mixed in. These are the fuels that carried the fires.

If this rehab plan is funded, we would add wild rye into the seed mix. It s a cool season native grass the germinates readily in the spring. Wild rye would stabilize the soil until the native warm season grasses come on strongly.

PART A - FIRE LOCATION AND BACKGROUND INFORMATION

Fire Names	Eureka, Boyd
Fire Numbers	64630-9261-6341, -6343
Agency Unit	Marais des Cygnes NWR
Region	6 Mountain-Prairie
State	KS
County(s)	Linn
Ignition Date/Cause	Eureka 3/23/02, Human Caused Boyd 3/30/02, Human Caused
Zone	CO-KS-NE

Date Controlled	Eureka 4/5/02 Boyd 4/5/02
Acreage	Eureka 98.5 Boyd 92.6

Fire Background

Eureka - The Eureka Fire, a wind-driven human-caused wildfire started on 3/23/02. It likely burned the abandoned field (fuel model 3) in the evening when no Refuge personnel were around. The refuge discovered the fire and took suppression action on 3/25/02, when activity increased as the fire began burning in upland hardwood forest litter FM-9. Suppression action was taken upon discovery. Additional resources were requested on 3/26 and arrived on 3/27. The fire was declared contained on 3/29 and controlled on 4/5/02 at approximately 98.5 acres.

Boyd - The Boyd Fire, a wind-driven human-caused wildfire started on 3/30/02. Immediate suppression action was taken on 3/30. The fire was contained on 3/31 and declared controlled on 4/5/02 at approximately 92.6 acres.

Fire Damages and Threats to Human Safety and Natural and Cultural Resources

The damages were not caused by suppression, but rather by the fire itself. A privately owned CRP field to the east of the fire was threatened, but the fire was suppressed before reaching that area. In its current condition, neither human safety nor cultural resources are threatened at the fire site.

Marais des Cygnes National Wildlife Refuge Management Requirements

Rehabilitation

The following statements in approved Comprehensive Conservation Plan justify the proposed burned area rehabilitation treatments.

Native Prairie Objective: Restore and maintain approximately 1,300 acres of native upland prairie consisting of big and little bluestem, switchgrass, Indian grass, side oats grama, and native forbs. The maintenance, rehabilitation, and reestablishment of native grassland communities will protect water quality and soils from the effects of erosion. (Marais des Cygnes NWR Comprehensive Conservation Plan, March 1998, p.32, Jerre Gamble-Project Leader)

PART B - NATURE OF PLAN

I. Type of Plan

X	Emergency Stabilization
	Rehabilitation
	Both Emergency Stabilization and Rehabilitation

II. Type of Action

X	Initial Submission
	Updating or Revising the Initial Submission
	Supplying Information of Accomplishment to Date on Work
	Different Phase of Project
	Final Accomplishment Report (To Comply with the Closure of the 9262 Account)

PART C - EMERGENCY STABILIZATION AND REHABILITATION ASSESSMENT

Rehabilitation Objectives

- " Stabilize burned slopes which pose a direct threat to important natural resources: native prairie, drainages, Henslow s sparrow nesting habitat.

- " Prevent the establishment of non-native invasive plants, particularly sericea lespedeza.

- " Restore native vegetation, perennial grasses and forbs.

PART D - TEAM ORGANIZATION, MEMBERS, AND RESOURCE ADVISORS

Position	Team Member (Agency)
Team Leader	Tim Menard USFWS
Public Information	Bruce Freske, USFWS
Operations	Tim Menard USFWS
NEPA Compliance & Planning	Tim Menard USFWS
Vegetation Specialist	Tim Menard USFWS
Wildlife Biologist	Tim Menard USFWS
GIS Specialist	Tim Menard USFWS
Documentation/Computer Specialist	Tim Menard USFWS
Photographer	Bruce Freske, USFWS

III. Resource Advisors: (Note: Resource Advisors are individuals who assisted the ESR 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
Jerre Gamble	Flint Hills and Marais des Cygnes NWR, Project Leader
Bruce Freske	Marais des Cygnes NWR Refuge Manager

PART E - SUMMARY OF REHABILITATION ACTIVITIES - COST SUMMARY TABLE

Title	Unit	Unit Cost	# of Units	Cost by Funding Source		Implementation Method	Specification Total
				BAR	OP/O		
Native Grass and Forb seed	Acre	\$ 100.00	163 acres	\$ 16,300		P	\$ 16,300
Tractor Fuel	163 acres	\$ 400.00	1			P	\$ 400
				\$ 16,300	\$ 0		\$ 16,700

PART F - INDIVIDUAL TREATMENT SPECIFICATIONS

SPECIFICATION COST SUMMARY

FISCAL YEAR	UNIT	COST	FUNDING SOURCE	METHOD
FY03	Marais des Cygnes NWR	\$16,700	BAR	P
TOTAL				

FUNDING SOURCE

F - Suppression Operations

BAR - Burned Area Rehabilitation

EWP - Emergency Watershed Protection

OP/O - Agency Operations/Other

METHODS

P - Agency Personnel Services

C - Contract (long-term)

EFC - Emergency Fire Contract (short-term)

FC - Incident Management Crew Assignment

PART G - POST-REHABILITATION REQUIREMENT¹

The following are post-rehabilitation, implementation, operation, maintenance, monitoring, and evaluation actions beyond three years to ensure the effectiveness of initial investments.

Rehabilitation

1. Photopoints will be taken before and after rehabilitation occurs. The Refuge biologist maintains bird point counts at both the Eureka and Boyd sites. Furthermore, both sites will ultimately become plots within long-term veg monitoring plan.

APPENDIX I- ENVIRONMENTAL COMPLIANCE

Federal, State, and Private Lands Environmental Compliance Responsibilities

All projects proposed in the Eureka - Boyd Burned Area Emergency Stabilization and Rehabilitation (ESR) 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). This Appendix documents the ESR Team considerations of NEPA compliance requirements for prescribed rehabilitation and monitoring actions described in this plan for all jurisdictions affected by the Eureka - Boyd burned area emergency.

Related Plans and Cumulative Impact Analysis

The Eureka - Boyd Plan was reviewed and it was determined that actions proposed in the Eureka - Boyd Fires ESR Plan within the boundary of the Marais des Cygnes National Wildlife Refuge 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 emergency protection and rehabilitation treatments for areas affected by the Eureka - Boyd Fires, as proposed in the Eureka - Boyd Fires ESR 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 Eureka - Boyd Fires are Categorically Excluded from further environmental analysis as provided for in the Department of Interior Manual 516 DM 6 and U.S. Fish and Wildlife Service Manual 516 DM 6 Appendix 1.4B 3,5, and 6.

Statement of Compliance for the Eureka - Boyd Fires Burned Area Emergency Stabilization and Rehabilitation Plan.

This section documents consideration given to the requirements of specific environmental laws in the development of the Eureka - Boyd ESR 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 Eureka - Boyd ESR Plan:

- " National Historic Preservation Act (NHPA).
- " Executive Order 11988. Floodplain 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.

REVIEW AND APPROVAL

U.S. Fish and Wildlife Service, Region 6

I. Suppression Operations Funding Approval (check one box below):

- * Approved
- * Approved with Revision (see attached)
- * Disapproved

Specify Title and Jurisdiction (Field Unit Agency Administrator), Date

II. Burned Area Rehabilitation (9262) Funding Approval (check one box below):

- * Approved
- * Approved with Revision (see attached)
- * Disapproved

Specify Title and Jurisdiction (Region/State Agency Administrator), Date

Regional Fire Management Coordinator concurrence that the plan fits the technical definition for use of Burned Area Rehabilitation finding. *(U.S. Fish and Wildlife Service Only)*

Regional Fire Management Coordinator, Region 6

Date

III. Agency Operational Base Funding Approval (check one box below):

- * Approved
- * Approved with Revision (see attached)
- * Disapproved

Specify Title and Jurisdiction (Region/State), Date

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

- * Approved
- * Approved with Revision (see attached)
- * Disapproved

Specify Title and Jurisdiction (Headquarters), Date

NEPA Checklist: If any of the following exception applies, the ESR 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.

- Adversely effects properties listed or eligible for listing in the National Register of Historic Places
- Adversely affect a species listed or proposed to be listed as Threatened or Endangered.
- Threaten to violate any laws or requirements imposed for the "protection of the environment" such as Executive Order 1 1 988 (Floodplain Management) or Executive Order 1 1 990 (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 ESR Plan.

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 ESR Plan has no potential to affect cultural resources (initial of cultural resource specialist).

Other Requirements

(Yes) (No)

- Does the ESR 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 Eureka - Boyd Fires Burned Area Emergency Stabilization and 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. ESR Team technical specialists 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.

ESR Team Environmental Protection Specialist

Date

Project Leader, Flint Hills and Marais des Cygnes National Wildlife Refuge

Date