

**COTTAM FIRE
BURNED AREA EMERGENCY STABILIZATION PLAN**

**U.S. Fish and Wildlife Service
Lower Rio Grande Valley National Wildlife Refuge
August 2004**



FIRE NUMBER: 21550-9141 A75G

DATE: 7-19-2004

UNIT: Lower Rio Grande Valley National Wildlife Refuge, Cottam Tract

LOCATION: Granjeno, Hidalgo County, Texas

PREPARED BY: Mark J. Ruggiero, Fire and Aviation Management Officer

Submitted By: _____ Date: _____
Mark J. Ruggiero, South Texas Refuge Complex FMO.

**COTTAM FIRE
BURNED AREA EMERGENCY STABILIZATION PLAN
REVIEW AND APPROVAL FORM**

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

Project Leader, South Texas Refuge Complex Date

II. Regional Fire Management Coordinator concurrence that the plan fits the technical definition for use of Emergency Stabilization funding.

Regional Fire Management Coordinator, Region 2 Date

III. Emergency Stabilization Funding Approval (check one box below):

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

Regional Director, Region 2 Date

EXECUTIVE SUMMARY

Introduction

This Burned Area Emergency Stabilization Plan has been prepared in accordance with Department of the Interior (DOI) and U.S. Fish and Wildlife Service (USFWS) policy. This plan provides emergency stabilization recommendations for all burned land within the Cottam Fire perimeter and areas potentially affected downstream including public lands administered by the U.S. Fish and Wildlife Service, and other jurisdictions if necessary. A field assessment and consultation with Burned Area Emergency Response Team Members identified vegetation and natural resource impacts.

This plan has been prepared in accordance with the DOI and the USFWS policy and South Texas Refuge Complex Fire Management Plan, and the Lower Rio Grande Valley (LRGV) NWR Comprehensive Conservation Plan (CCP). This plan provides burned area emergency stabilization (ES) recommendations for all lands burned within the Cottam Fire perimeter administered by the US Fish and Wildlife Service.

This plan provides the ES recommendations for fire suppression and fire related damages to USFWS land in the Lower Grande Valley based on a field assessment conducted by the LRGV NWR Plant Ecologist on July 20, 2004. The assessment included a review of known threatened and endangered (T&E) species and their habitats, an inventory of lost vegetation (including any T&E species), and identified values at risk with associated vegetation loss.

Individual resource Burned Area Assessment Reports produced by this specialist are in Appendix I and include: the individual emergency stabilization treatment specifications and effectiveness monitoring in Part F; and a cost summary, by jurisdiction, in Part E. Appendix II contains a summary of the National Environmental Policy Act (NEPA) compliance documentation. Appendix III contains the Burned Area Emergency Stabilization Plan map. Appendix IV contains photo documentation.

Fire Background

The Cottam Fire, # 21550-9141-A75G, started on 15 July, 2004 at 1800 hrs. on the 1063 acre LRGV NWR, Cottam Tract. USFWS fire units and units from the McAllen, Texas Fire Department responded to the fire, contained it on 16 July, 2004 at 0100 hrs, and declared it out on 24 July, 2004 at 1800 hrs. The Cottam Tract is situated along the Rio Grande across the river from the City of Reynosa, Mexico which has a population of more than one million people. The source of the fire was uncontrolled trash burning at a trash dump in Reynosa. We were experiencing low RH's, high south winds, and high temperatures throughout the District and the fire spotted across the river onto USFWS land.

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

The Cottam Fire burned 54.7 acres, all on USFWS property. This area of the Cottam Tract has a history of fire and suppression primarily due to its proximity to the Reynosa trash dump. Although some elements of the native thornscrub forest remain, frequent fires have exacerbated the invasion of non-native grasses, primarily buffel grass (*Pennisetum elliiare*), and guinegrass (*Panicum masimum*). The native thornscrub is important habitat for several Federal listed Threatened and Endangered (T&E) Species including the ocelot and jaguarundi cats. Habitat for the jaguarundi and Ocelot occurs in the area of the Cottam Fire. Additionally, native vegetation communities provide watershed protection, valuable forage and habitat for non-listed wildlife species and migratory birds, and the condition desired

by the management plans for the LRGV NWR. The burn severity was estimated to be moderate to high. Complete consumption of vegetative cover (native and non-native) was observed across 75% of the total fire area.

There were no long-term impacts to human or cultural resources. Fire severity has increased the threat of soil and watershed erosion. High mortality of native woody species has elevated the erosion threats and impacted T&E Species habitat. The primary management concerns are increased soil erosion potential, degradation of Threatened and Endangered Species Habitat, and the recovery and expansion non-native invasive grasses.

This plan is the initial funding request for Emergency Fire Stabilization funds which will extend for 1 year from the approval date. At the conclusion of the funding period, a final Accomplishment Report will be produced and will specify the effectiveness and results of the treatments. A Rehabilitation Plan will be submitted if treatments and funding are required beyond 1 year.

The following goals and objectives are recommended for the Emergency Stabilization Plan.

Emergency Stabilization Goals

- Stabilize severely burned areas which pose a direct threat to human life, property or critically important cultural and/or natural resources.
- To promptly stabilize and prevent further degradation to affected resources on lands within the fire perimeter or downstream impact areas and mitigate damages caused by the fire in accordance with approved land management plans and policies, and all relevant federal, state, and local laws and regulations.
- Prevent reestablishment and expansion of non-native invasive species.
- Protect soils and ecological integrity of native thornscrub communities and Threatened and Endangered Species habitat through revegetation.

Emergency Stabilization Objectives

- Use integrated management of non-native invasive grasses within burned area using herbicide, and seeding and planting treatments.
- Provide habitat and soil stabilization through planting of native tree and shrub species which would otherwise not regenerate naturally.
- Protect, stabilize, and enhance Threatened and Endangered Species habitat.
- Prevent degradation of unburned areas within the fire perimeter before next major rain event.
- Monitor herbicide, seeding and planting for soil stabilization and revegetation effectiveness.

Lower Rio Grande Valley NWR Management Requirements

The LRGV NWR is part of the South Texas Refuge Complex and includes Santa Ana NWR and Laguna Atascosa NWR. Enabling legislation: Fish and Wildlife Act of 1956 (16 U.S.C. 742a-742j; 70 Stat. 1119), as amended, and Transfer of Certain Real Property for Wildlife Conservation Purposes Act (16 U.S.C. 667b-667d), as amended.

LRGV NWR purpose: established 12 February, 1979, "...for the development, advancement, management, conservation, and protection of fish and wildlife resources ..." 16 U.S.C. § 742f(a)(4) "...

for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude...” 16 U.S.C. § 742f(b)(1) (Fish and Wildlife Act of 1956; and “... particular value in carrying out the national migratory bird management program.” 16 U.S.C. § 667b (Transfer of Certain Real Property for Wildlife Conservation Purposes Act).

Refuge Goal: To Restore, enhance, and protect the natural diversity of the Lower Rio Grande Valley including threatened and endangered species on and off refuge lands, through (1) land acquisition when appropriate, (2) the management of habitat and wildlife resources on refuge lands; and, (3) by strengthening existing, and establishing new cooperative efforts with public and private conservation agencies, and other government jurisdictions including Mexico.

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PART A - FIRE LOCATION AND BACKGROUND INFORMATION

Fire Name	Cottam
Fire Number	21550-9141 A75G
Agency Unit	SRR
Region	2
State	TX
County(s)	Hidalgo
Ignition Date/Cause	07-15-04 Human
Zone	SACC
Date Fully Contained	07-15-04 2400
Jurisdiction	FWS
XXXXXX	
<i>other jurisdictions</i>	
Total Acres	54.7
Date Contained	07-15-04

PART B - NATURE OF PLAN

Emergency Stabilization

Type of Action (check one box below)

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

PART C - EMERGENCY STABILIZATION OBJECTIVES

- Use integrated management of non-native invasive grasses within burned area using herbicide, and seeding and planting treatments.
- Provide habitat and soil stabilization through planting of native tree and shrub species which would otherwise not regenerate naturally.
- Protect, stabilize, and enhance Threatened and Endangered Species habitat.
- Prevent degradation of unburned areas within the fire perimeter before next major rain event.
- Monitor herbicide, seeding and planting for soil stabilization and revegetation effectiveness.

PART D - TEAM ORGANIZATION, MEMBERS, AND RESOURCE ADVISORS

Position	Team Member (Agency)
Team Leader	<i>Chris Best, Plant Ecologist STRC FWS</i>
Public Information	Patty Alexander, Public Outreach STRC FWS
Operations	Mark Ruggiero, FMO STRC FWS
NEPA Compliance & Planning	Ernesto Reyes, Ecological Services, FWS
Hydrologist	
Soil Scientist	
Regional Fire Ecologist	Mark Kaib, Albuquerque RO, FWS,
Cultural Resources/Archeologist	
Vegetation Specialist	
Wildlife Biologist	Dave Blankinship, Biologist, STRC FWS
GIS Specialist	
Documentation/Computer Specialist	
Photographer	
<i>Other Technical Specialists</i>	

III. Resource Advisors:

Name	Affiliation
<i>Jeff Rupert</i>	<i>Lower Rio Grande Valley NWR</i>

Spec #	Title	Unit	Unit Cost	# of Units	Work Agent	Cost
Work Agent: CA=Coop Agreement, FA=Force Account, G=Grantee, P=Permitee, SC=Service Contract, TSP=Timber Sales Purchaser, V=Volunteer OP/C=Agency Operations						

PART F - INDIVIDUAL SPECIFICATION

TREATMENT NAME	Invasive Species Control	PART E SPECIFICATION #	
NFPORS TREATMENT CATEGORY*	3	FISCAL YEAR(S) (list each year):	04
NFPORS TREATMENT TYPE *		WUI? Y / N	Y
IMPACTED COMMUNITIES AT RISK	H	IMPACTED T&E SPECIES	Ocelot, Jaguarundi

* 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>Number and Describe Each Task:</p> <p>A. General Description:</p> <ol style="list-style-type: none"> 1. Apply Roundup UltraMax (or equivalent) herbicide @ 26 oz/ac (salient equivalent: 13.1 oz isopropylamine salt of glyphosate per acre) 6 times, beginning on or after September 1, 2004 and ending on or after July 15, 2005. Herbicide shall be applied with overhead boom application and flat-fan spray nozzles. Spray mixture shall include admixture with 1.7 pounds of Ammonium Sulfate fertilizer per acre, and marking dye to assure complete coverage. All applications shall be made when available soil moisture and favorable temperatures permit active growth of buffelgrass and other weed species. The second and third applications shall be made approximately 4 to 6 weeks after the initial application, to treat resprouting buffelgrass clumps when tillers have reached a height of 4 to 8 inches, but before tillers (stalks) have begun to flower. The remaining three applications shall be done during three time periods, to treat germinating buffelgrass seed: February – March, 2005; May-June, 2005; before July 15, 2005. Application dates may vary, depending on weather and evidence of grass infestation. The treatment area of 52.2 acres consists of two distinct areas: 1) 32.9-ac old field that is level and has relatively few trees and shrubs, which can be treated with a standard farm tractor and spray rig; 2) 19.3-ac periphery around west and south of old field, consisting of a levee and other uneven ground, and larger numbers of trees and shrubs. This area will probably require application with ATV-mounted sprayers and manual application with spray gun and 50' hose. 2. Acquire 15,660 seedlings of native trees, shrubs and cacti from approved privately-owned seedling contractors. Species and respective quantities shall be specified by personnel of LRGV NWR. Seedling contracts shall be established by January 31, 2005, according to specifications provided by personnel of LRGV NWR. Seedlings must be ready for delivery and planted by July 15, 2005. 3. Transplant 15,660 seedlings (from Task No. 2, above) at 52.2-ac site, known as Rincón Bend, on Cottam Tract, LRGV NWR. Transplanting operation shall be conducted between June 15, 2005 and July 15, 2005, when rainfall has restored available soil moisture to a depth of at least 24 inches (it is not necessary for the upper 4 inches of soil to be moist). 4. Apply Fusilade DX herbicide (Fluazifop-para-butyl) at a rate of 26 oz/ac to 52.2-ac site. Two applications shall be made to suppress non-native grass, conducted before July 15, 2005. Application dates may vary, depending on weather and evidence of grass infestation. Application shall be conducted when available soil moisture and favorable temperatures permit active growth of target grass species. <p>B. Location/(Suitable) Sites: 52.2-acre wildfire site at Rincón Bend portion of Cottam tract, LRGV NWR.</p> <p>C. Design/Construction Specifications:</p> <ol style="list-style-type: none"> 1. N/A 2. <p>D. Purpose of Treatment Specifications:</p> <ol style="list-style-type: none"> 1. Eradicate existing buffelgrass and guineagrass plants and germinating seeds of these plants for at least one year. 2. Restore native forest/shrubland vegetation. <p>E. Treatment Effectiveness Monitoring Proposed:</p> <ol style="list-style-type: none"> 1. Refuge personnel will conduct vegetation surveys before project initiation and at the one year interval, to identify and determine relative densities of grass/herbaceous vegetation, non-native cover, and survival, growth and reproduction of native woody plants.

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
Project Planning, Implementation, and Monitoring		
GS 11 @ \$26/hr x 120 hr x 1 Fiscal Years =		\$3,120
GS 7 @ \$17/hr x 240 hr x 1 Fiscal Years =		\$4,080
TOTAL PERSONNEL SERVICE COST		\$7,200
➤ EQUIPMENT PURCHASE, LEASE AND/OR RENT (Item @ Cost/Hour X # of Hours X #Fiscal Years = Cost/Item): Note: Purchases require written justification that demonstrates cost benefits over leasing or renting.		COST / ITEM
		\$0
TOTAL EQUIPMENT PURCHASE, LEASE OR RENTAL COST		\$0
➤ MATERIALS AND SUPPLIES (Item @ Cost/Each X Quantity X #Fiscal Years = Cost/Item):		COST / ITEM
15,660 seedlings of native plants @ \$0.64 each =		\$10,022.40
TOTAL MATERIALS AND SUPPLY COST		\$10,022.40
➤ TRAVEL COST (Personnel or Equipment @ Rate X Round Trips X #Fiscal Years = Cost/Item):		COST / ITEM
		\$0
TOTAL TRAVEL COST		
➤ CONTRACT COST (Labor or Equipment @ Cost/Hour X #Hours X #Fiscal Years = Cost/Item):		COST / ITEM
Apply Roundup UltraMax on flat ground at \$26/ac x 32.9 ac x 6 applications =		\$5,329.80
Apply Roundup UltraMax on rough ground at \$60/ac x 19.3 ac x 6 applications =		\$6,948.00
Apply Fusilade DX on flat ground at \$36/ac x 32.9 ac x 2 applications =		\$2,368.80
Apply Fusilade DX on rough ground at \$69/ac x 19.3 ac x 2 applications =		\$2,663.40
Transplant 15,660 native plant seedlings at \$0.26 each =		\$4,071.60
TOTAL CONTRACT COST		\$21,381.60

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
FY__	09/01/2004	05/31/2006	SC			Invasive Grass Eradication	\$17,310
FY__	09/15/2005	10/31/2005	CA			Restore Native Vegetation	\$14,094
TOTAL							

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.	M, C
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.	M, C
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:

<p>List Relevant Documentation and Cross-Reference Location within the Plan Accomplishment Report:</p> <ol style="list-style-type: none">1. Memorandum date July 28, 2004 "Revised Restoration Planning and Costs at Cottam Tract Fires, LRGV NWR.2. Cottam Bend Fire map (GPS overlay on DOQQ image), 1:4000.3. Cottam Tract locator map.
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PART H - CONSULTATIONS

U.S. Fish and Wildlife Service- Ecological Services
Ernesto Reyes, Biologist
956-784-7560

APPENDIX I - ENVIRONMENTAL COMPLIANCE

Federal, State, and Private Lands Environmental Compliance Responsibilities

All projects proposed in the Cottam Fire Burned Area Emergency Response 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 U.S. Fish and Wildlife Service. This Appendix documents the Burned area emergency response team considerations of NEPA compliance requirements for prescribed emergency stabilization and monitoring actions described in this plan for all jurisdictions affected by the Cottam Fire.

Related Plans and Cumulative Impact Analysis

Cottam Fire Burned Area Emergency Response Plan (8/13/2004). The Cottam Fire Burned Area Emergency Response Plan was reviewed with a determination that actions proposed in the Cottam Fire Burned Area Emergency Response Plan, within the boundary of the Cottam Fire, are consistent with management objectives established in the Comprehensive Conservation Plan

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 stabilization treatments for areas affected by the Cottam Fire, as proposed in the Cottam Fire Burned Area Emergency Response 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 Cottam 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 Categorical Exclusions;

516 DM 2 App. 2, 1.6
516 DM 6 App. 7.4 L (3)

Applicable U.S. Fish and Wildlife Service Categorical Exclusions;

516 DM 6 App. 1.4B (1)

516 DM 6 App. 1.4 B (3) iii
516 DM 6 App. 1.4 B (5)

Statement of Compliance for the Cottam Fire Burned Area Emergency Response Plan.

This section documents consideration given to the requirements of specific environmental laws in the development of the Cottam Fire Burned Area Emergency Response 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 Cottam Fire Burned Area Emergency Response 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.

CONSULTATIONS

None needed

NEPA Checklist: If any of the following exception applies, the Burned Area Emergency Response 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 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:

- (X) 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 Emergency Response 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).
- (X) Is not required because the Burned Area Emergency Response Plan has no potential to affect cultural resources (initial of cultural resource specialist).

Other Requirements

(Yes) (No)

- (X) Does the Burned Area Emergency Response Plan have potential to affect any Native American uses? If so, consultation with affiliated tribes is needed.
- (X) () 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 Cottam Fire Burned Area Emergency Response 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. Burned area emergency response 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.

Wildlife Biologist, Ecological Services Date

Project Leader, South Texas Refuge Complex Date

APPENDIX III - MAPS

- *Fire Perimeter*

APPENDIX V - SUPPORT DOCUMENTS

- Restoration Planning and Costs Document- Cottam Fire
Chris Best , Plant Ecologist, Lower Rio Grande Valley NWR July 19, 2004
- Native/Non-Native Plant Worksheet
- Nursery Production Targets