Birdon Fire
BURNED AREA REHABILITATION PLAN

UNIT: Big Cypress National Preserve (BICY)

LOCATION: *Ochopee, Collier, Florida*

DATE: 5*/26/2016*

PREPARED BY: *Tony Pernas, Biologist BICY*

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EXECUTIVE SUMMARY

Introduction

This Burned Area Rehabilitation Plan has been prepared in accordance with Department of the Interior policy. This plan provides rehabilitation recommendations for all lands burned within a one kilometer buffer of the Birdon Fire perimeter. The primary objectives of the Birdon Fire Burned Area Rehabilitation Plan are:

1) To prescribe cost effective post-fire stabilization measures necessary to protect human life, property, and critical cultural and natural resources.
2) To stabilize lands impacted by the Birdon fire and its associated suppression actions from the encroachment of invasive plants. The primary invasive plants located within the Birdon fire are Brazilian Pepper (*Schinus terebinthefolius*), Melaleuca (*Melaleuca quinquinervia*), Cogon Grass (*Imparata cylindrica*), and Java Plum *(Syzygium cuminii*). Other invasive plants such as Australian pine (*Casuarina spp.)* may also be encountered within the burned area.

The burned area response team consisted of Tony Pernas (Supervisory Botanist) and William Snyder (Biologist). We evaluated part of the burned area within 10 days of fire containment and collected basic information about changes in the biological communities

Fire Background

The Birdon fire was a sparked by a lightning strike in the Big Cypress National Preserve on May 6, 2016. The fire totaled 9226 acres.

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

The Birdon fire caused no apparent damages or threats to human safety and cultural resources. The natural biological systems of the area have been temporarily altered by this fire. Biological systems in this area are subject to frequent fires, and as such are well adapted to the associated changes that accompany seasonal burning. Significant parts of the burned area however are infested with highly fire adapted invasive plants such as Melaleuca, Old World Climbing fern and cogon grass. The Birdon fire will more than likely result in a rapid expansion of these species.

Brazilian pepper although not fire adapted will readily invade disturbed sites such as those resulting from wild fires. Due to its rapid growth and high fecundity it will establish large monocultures devoid of understory vegetation. The rapid colonization of Brazilian pepper suppresses future fires replacing pine flatwoods and savannahs with dense monocultures on Brazilian pepper.

$ This project will control invasive plants within the Birdon fire and include a 1 kilometer buffer to account for potential spread (melaleuca and cogon grass have wind dispersed propagules).

Habitat Description and Related Information

The most abundant community types in the project area are prairies, cypress savannahs, cypress domes, cypress strands and pine flatwoods. Hardwood hammocks and palmetto scrub also occur in the project

area. Disturbed sites occur as a small percent of the total project area, primarily along roadsides and on private homesites.

Targeted Area

The majority of the Birdon Fire is found north of US 41 between Birdon and Turner River roads (figure 1).

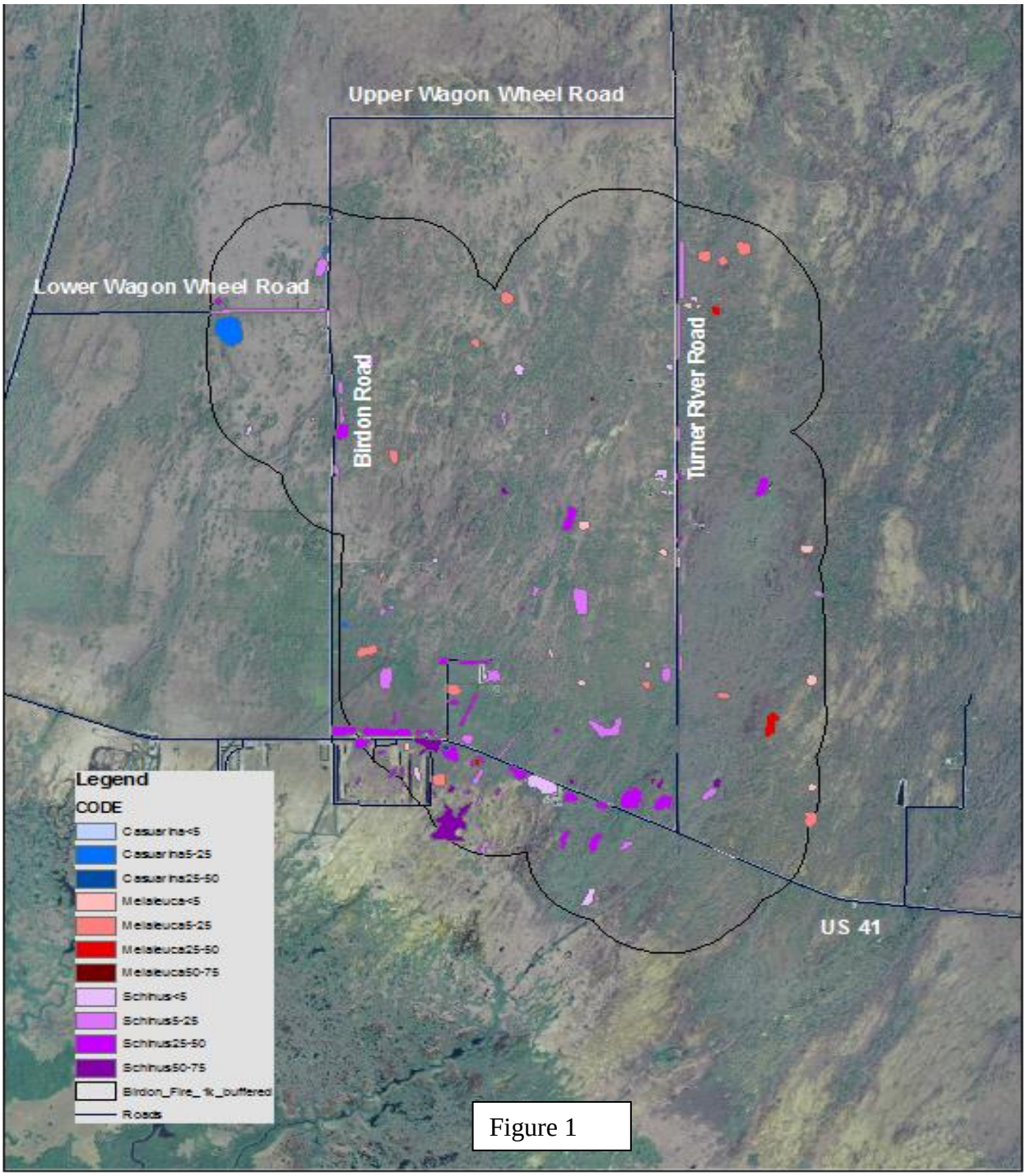


Figure 1

Acres and density of exotics mapped using Digital Aerial Sketch Maps (2012) (figure 2)

Species/ Density %	Acres
Casuarina <5	2.5
Casuarina 5-25	43
Casuarina 25-50	2.2
Casuarina total	47.8
Melaleuca<5	40.2
Melaleuca 5-25	81.3
Melaleuca 26-50	21.3
Melaleuca 51-75	1.2
Melaleuca Total:	144
Schinus <5	66.7
Schinus 5-25	222.3
Schinus 26-50	252
Schinus 51-75:	81
Schinus Total	622
All Species Total:	813.8

Table 1 Species, density and acreage of major exotic plants within the Birdon Fire.



Melaleuca in Pine Flatwoods/Birdon Fire

Documented Direction for Stabilization

Government Performance and Results Act (GPRA) planning language identifies natural areas and resident biota as entities identified for protection and restoration:
Goal Ia1A (Disturbed Areas Restored) identifies goals for rehabilitation and restoration of areas within the Preserve.
Goal Ia1B outlines requirements to reduce areas dominated by exotic plants. Activities supporting these goals clearly promote restoration of natural biological systems and have been met consistently for several years.
Goal Ia2B identifies biota of management concern and indicates that their populations will be managed to a desired condition.

The South Florida and Caribbean Parks Exotic Plant Management Plan and Environmental Impact Statement (August 2010), Big Cypress National Preserve planning section, identifies Brazilian pepper populations as highly invasive and a priority for management by elimination.

The Resource Management Plan for Big Cypress National Preserve (1998) references vegetation management, also generally as exotic plant control, and species listed for protection. There is at least one reference to developing a Vegetation Management Plan in the plan outline; this is primarily focused on exotic plants (p. 28).

A requirement to manage biological systems in nearly their natural conditions is found in some of the legislative framework that created the Preserve: "…assure the preservation, conservation, and protection of the natural, scenic, hydrologic, floral and faunal, and recreational values of the Big Cypress Watershed in the State of Florida and to provide for the enhancement and public enjoyment thereof…"…"(An Act to establish the Big Cypress National Preserve in the State of Florida and for other purposes. [88 Stat. 1225] [P. L. 93-440] October 11, 1974; Sec. 1 (a)). As community identifiers, and as the common components in most biological communities, the plant biota can be considered as the basis for management considerations in each area. Therefore plans for management based on plant communities and their constituent plants should be considered as fundamental for decisions (management) that are focused on natural areas.

PART A - FIRE LOCATION AND BACKGROUND INFORMATION

Fire Name	Birdon Fire
Fire Number	016-028/J8W1
Agency Unit	BICY
Region	SER
State	Florida
County(s)	Collier
Ignition Date/Cause	Lightning 5/6/2016
Zone	
Date Fully Controlled	5/19/2016
Jurisdiction	NPS
Total Acres	9226 acres total mapped
Date Contained	5/23/2016

PART B - NATURE OF PLAN

Type of Action (check one box below)

X	Initial Submission
	Amendment to the Initial Submission

PART C - EMERGENCY STABILIZATION ASSESSMENT

Emergency Stabilization Objectives:

- Prevent the establishment of non-native invasive plants.
- Determine the effectiveness, practicality, and economy of combining fire management methods with exotic plant control methods to reduce infestation by invasive exotic plants and help minimize hazardous fuel loads.

PART D - TEAM ORGANIZATION, MEMBERS, AND RESOURCE ADVISORS

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

Position	Team Member (Agency)
Team Leader	Tony Pernas
Public Information	
Operations	
NEPA Compliance & Planning	
Hydrologist	
Soil Scientist	
Geologist	
Cultural Resources/Archeologist	
Vegetation Specialist	Tony Pernas
Wildlife Biologist	
GIS Specialist	
Documentation/Computer Specialist	
Photographer	
Exotic Plant Specialist	William Snyder

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

Name	Affiliation
Tony Pernas	*NPS, BICY*
William Snyder	*NPS, BICY*

PART E - SUMMARY OF ACTIVITIES AND COSTS

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

EMERGENCY STABILIZATION COST SUMMARY TABLE – Birdon Fire

Spec #	Title	Unit	Unit Cost	# of Units	Work Agent	Cost
1	*47.8 acres low /moderate density Casuarina*	*days*	*$1875*	*4*	*SC*	*$7500*
2	*144 acres low/moderate density Melaleuca*	*days*	*$1875*	*8*	*SC*	*$15000*
3	*542 acres low/moderate density Schinus*	*days*	*$1875*	*16*	*SC*	*$30000*
4	*81 acres high density schinus*	*acre*	*$100*	*81*	*SC*	*$8100*
					TOTAL COST	$60, 600

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

PART F - INDIVIDUAL SPECIFICATION

TREATMENT/ACTIVITY NAME	Exotic plant removal	**PART E SPECIFICATION #**	1
NFPORS TREATMENT CATEGORY*	Invasive species	**FISCAL YEAR(S) (list each year):**	2017-18
NFPORS TREATMENT TYPE *	Hand chemical treatment	**WUI? Y / N**	Y
IMPACTED COMMUNITIES AT RISK	Natural areas	**IMPACTED T&E SPECIES**	Drymarchon corais couperi, Haliaeetus leucocephalus, Mycteria Americana, Picoides borealis, Puma concolor coryi,

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

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

Number and Describe Each Task:

A. General Description: Invasive Plant Control within the Birdon fire areas to locate and remove invasive exotic plants from native plant communities. Control will follow procedures well established and ongoing for the BICY Exotics Management program, emphasizing integrated pest management (IPM) techniques (herbicides, biological, mechanical, and cultural control methods) as appropriate to prevent the spread and establishment of noxious weeds within the fire area. This part of the control program primarily employs mechanical or hand and chemical treatments.

B. Location/(Suitable) Sites: : Areas within Birdon Fire plus a 1 kilometer buffer will be considered for invasive plant control. This is about 9k acres, mostly seasonal wetland communities. All burned areas will be examined and appropriate treatments will be applied.

C. Design/Construction Specifications: Work performance will consist of furnishing all labor, equipment, and supplies (including herbicide and adjuvants), and performing all operations for controlling exotic plants listed under Project Goals in the areas described in Project Description or delineated in Project Map(s). Every effort shall be made by the contractor to avoid damage to native vegetation or wildlife. The contractor is responsible for the control and/or removal of all exotic plants listed below including mature trees/shrubs, saplings, and seedlings

D. Purpose of Treatment Specifications: Treatments will inhibit dominance of these disturbed areas by non-native ruderal plants. This will support development of native biological communities and more natural fire recovery by these communities.

E. Treatment Effectiveness Monitoring Proposed: This area of exotic plant treatment will be part of a larger ongoing exotics management program at BICY. Monitoring for exotic plants occurs continuously, but is primarily done with annual reconnaissance flights. In this reconnaissance, locations and amounts of exotic plants are mapped to provide staff and contractors information to plan management operations annually.

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**
TOTAL PERSONNEL SERVICE COST	
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**
TOTAL EQUIPMENT PURCHASE, LEASE OR RENTAL COST	
MATERIALS AND SUPPLIES (Item @ Cost/Each X Quantity X #Fiscal Years = Cost/Item):	**COST / ITEM**
TOTAL MATERIALS AND SUPPLY COST	
TRAVEL COST (Personnel or Equipment @ Rate X Round Trips X #Fiscal Years = Cost/Item):	**COST / ITEM**
TOTAL TRAVEL COST	
CONTRACT COST (Labor or Equipment @ Cost/Hour X #Hours X #Fiscal Years = Cost/Item):	**COST / ITEM**
TOTAL CONTRACT COST	

SPECIFICATION COST SUMMARY

FISCAL YEAR	PLANNED INITIATION DATE (M/D/YYYY)	PLANNED COMPLETION DATE (M/D/YYYY)	WORK AGENT	UNITS	UNIT COST	PLANNED ACCOMPLISHMENTS	PLANNED COST
FY17/18	10/01/17	09/30/2018					$60,600
						TOTAL	$60,600

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

SOURCE OF COST ESTIMATE

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

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

RELEVANT DETAILS, MAPS AND DOCUMENTATION INCLUDED IN THIS REPORT:

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

TOTAL COST BY JURSIDICTION

JURISDICTION	UNITS TREATED	COST
Big Cypress National Preserve		$60,600
	TOTAL COST	$60,600

PART G - POST-EMERGENCY STABILIZATION REQUIREMENT

The following are post-emergency stabilization, implementation, operation, maintenance, monitoring, and evaluation actions after three years from the control of the fire to ensure the effectiveness of initial investments. Estimated total cost and funding source is indicated.

1- Continued monitoring, evaluation, and treatment of invasive exotic plants in the burned area. ($60,600; NPS)

PART H – CONSULTATIONS

No consultations have occurred to date.

APPENDIX I - BURNED AREA ASSESSMENT REPORTS

APPENDIX II - ENVIRONMENTAL COMPLIANCE

Federal, State, and Private Lands Environmental Compliance Responsibilities

All projects proposed in the Birdon Fire Burned Area Emergency Response Plan that are prescribed, funded, or implemented by Federal agencies on Federal 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 National Park 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 Birdon Fire.

Related Plans and Cumulative Impact Analysis

APPENDIX III - MAPS

Fire Perimeter – see Figure 1. in text.
Invasive Species- see Figure 1. in text.

I have reviewed the proposals in the YYYYY 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. 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.

Burned Area Emergency Response Team Environmental Protection Specialist Date

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Project Leader, XXXXX Date