

Blackjack Bay Complex Fire
BURNED AREA EMERGENCY STABILIZATION AND REHABILITATION (ESR) PLAN

AGENCY/UNIT: USFWS, Okefenokee National Wildlife Refuge

LOCATION: Folkston, Charlton County, Georgia

DATE: December 2002

PREPARED BY: *Individual, formal team, or ad hoc team*

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Skippy Reeves, Refuge Manager at Okefenokee NWR
Shaw Davis, Assistant Refuge Manager at Okefenokee NWR

Submitted By: _____ Date: _____
Title (i.e., Burned Area Emergency Stabilization and Rehabilitation Team Leader.)

REVIEW AND APPROVAL

USFWS, Blackjack Bay Complex Fire

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 4

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

EXECUTIVE SUMMARY

Introduction

The Blackjack Bay Complex fires were located primarily within the Okefenokee National Wildlife Refuge and its Wilderness Area. The Blackjack Bay Complex consisted of three wildland fires: Number One Island, Blackjack02, and Bay Creek. The Number One Island Fire developed from a re-ignition on 20 March of a prescribed fire conducted on 7 March while the other two fires resulted from lightning strikes. The Blackjack02 was spotted on 1 May in the south central portion of the swamp. The Bay Creek Fire actually ignited outside the refuge boundary on 3 May and received initial attack but exceeded this action and spread into the refuge and swamp. During its subsequent fire spread, it moved back outside the refuge in several places but had no significant effects on private lands and resources.

Fire Name	Dates	Acres
Number One Island	March 20 - June 18, 2002	5,869
Blackjack02	May 1 - June 18, 2002	106,031
Bay Creek	May 3 - June 18, 2002	12,204

The Number One Island and Blackjack02 Fires burned across six pine islands that provide habitat for the endangered red-cockaded woodpecker: Number One Island, Blackjack Island, Mitchell Island, Honey Island, Bugaboo Island, and Billys Island. These islands are also in the designated Wilderness Area. Five of the six islands are accessible only by helicopter.

All high priority RCW cavity trees on all the islands except Honey Island were prepared for fire activity prior to 1 April 2002. This involves clipping the understory within five inches of the ground in a 10-20 foot radius around the base of the tree, scraping loose bark from the base of the tree, and ensuring there is no continuous flow of resin into the ground fuels adjacent to the trunk of the tree.

Within the total burned area of the fire complex, there was one young stand of longleaf pine and one slash pine stand that was destroyed within Management Compartment 7. These stands are approximately 50 acres and need to be re-planted to restore the habitat.

Island Resources

The primary resources on the islands are the pine habitat used by the endangered red-cockaded woodpecker and the wilderness qualities. Fire is the management tool used with a small amount of longleaf pine planting. Wildfire is an important part of the system and can be managed for the maximum benefit to the resources. Although long-term viability of the RCW populations spread across the fragmented landscape is being analyzed, the greatest regional value of these island clusters is their natural state, with no inserts or restrictor plates. The suitability of the habitat is critical in determining the limiting factors within these populations of RCW. The last comprehensive inventory of suitability and activity on the islands was conducted in spring 2000.

In addition, Number One Island has a stand of old growth (approximately 250 years old) slash and longleaf pines which is a rare and valuable habitat community in the southeast.

Analysis and Evaluation

The Okefenokee Wilderness Area is managed under the guidelines of the Wilderness Act and the U.S. Fish and Wildlife Services Wilderness Policy. Natural processes are the key to long-term preservation of the habitats.

In the refuge's attempt to use fire to its maximum benefit within the swamp ecosystem, emphasis is on preparation for fire use. This involves prescribed burning the islands for fuel reduction as well as for reducing the structure of the understory for more favorable RCW habitat. Also, high priority RCW cavity trees (active or vulnerable to fire damage due to resin flows) are periodically prepared by cutting the vegetation within a 10-20 ft radius around the base and reducing the likelihood of fire creeping up the trunk of the tree by breaking the resin flow into ground fuels and scraping off loose bark at the base of the tree.

Overall, the Blackjack Bay Complex fires were beneficial to the ecosystem. Preliminary evaluations of the island resources conducted from a helicopter indicate no damage; however, fire in combination with drought conditions may have a delayed effect. Also, individual RCW trees could not be evaluated by an aerial flight. To accurately evaluate the damage to the specific island resources identified above on the ground, surveys must be conducted. To minimize trips to the islands and maximize the damage analysis, it is proposed to organize a survey of all islands during the spring of 2003 (late April). This would allow a comparison with the last intense survey in 2000 and provide answers to the following questions:

- 1) Did the wildfires and drought kill RCW cavity trees and limit the number of suitable cavities?
- 2) Did the rate of mortality differ between RCW cavities and other trees on the interior islands?
- 3) Is the refuge's management technique for protecting RCW trees adequate?
- 4) Are refuge prescribed burns on the islands adequate for reducing fuels to minimize RCW tree damage from wildfires?

As a result of the findings, the refuge's management techniques and use of fire would be improved. The need for further manipulation of the RCW habitat would be evaluated based on the designated limiting factors, population viability and value, the Wilderness values and the commitment and availability of funding for long-term monitoring of the populations.

Summary of Resource Needs and Costs

Transportation and staff are the two main constraints for completing island RCW work. At the present time, the refuge is funded only to meet helicopter needs for the Fire Program: helispot maintenance, tree site preparation, aerial ignition, fire reconnaissance and fire suppression. No funding is allocated for the surveillance of red-cockaded woodpeckers on the five remote islands accessible only by helicopter. To accomplish the evaluation as stated above, a total of \$18,000 is requested.

In addition, \$7,000 is requested to re-plant longleaf in Management Compartment 7.

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PART A - FIRE LOCATION AND BACKGROUND INFORMATION

Fire Number	Blackjack Bay Complex 4722
Agency Unit	USFWS-Okefenokee NWR
Region	4
State	Georgia/Florida
County(s)	Charlton, Clinch, and Ware, GA and Baker, FL
Ignition Date/Cause	See below
Zone	
Date Contained	Bay Creek Fire - Uncontained as of Dec 10, 2002

The Blackjack Bay Complex fires were located primarily within the Okefenokee National Wildlife Refuge and its Wilderness Area. The Blackjack Bay Complex consisted of three wildland fires: Number One Island, Blackjack02, and Bay Creek. The Number One Island Fire developed from a re-ignition on 20 March of a prescribed fire conducted on 7 March while the other two fires resulted from lightning strikes. The Blackjack02 was spotted on 1 May in the south central portion of the swamp. The Bay Creek Fire actually ignited outside the refuge boundary on 3 May and received initial attack but exceeded this action and spread into the refuge and swamp. During its subsequent fire spread, it moved back outside the refuge in several places but had no significant effects on private lands and resources.

Fire Name	Dates	Acres
Number One Island	March 20 - Sept 17, 2002	5,869
Blackjack02	May 1 - Oct 17, 2002	106,031
Bay Creek	May 3 -Present	12,204

The Number One Island and Blackjack02 Fires burned across six pine islands that provide habitat for the endangered red-cockaded woodpecker: Number One Island, Blackjack Island, Mitchell Island, Honey Island, Bugaboo Island, and Billys Island. These islands are also in the designated Wilderness Area. Five of the six islands are accessible only by helicopter.

All high priority RCW cavity trees on all the islands except Honey Island were prepared for fire activity prior to 1 April 2002. This involves clipping the understory within five inches of the ground in a 10-20

foot radius around the base of the tree, scraping loose bark from the base of the tree, and ensuring there is no continuous flow of resin into the ground fuels adjacent to the trunk of the tree.

The fires burned across the islands as follows (Figure 1):

Number One Island: This island was prescribed burned on 7 March 2002. Conditions were good with no damage observed from subsequent flights over the area. It re-ignited on 20 March and portions of the island continued to burn; however, most of the activity was within the adjacent swamp habitat. Number One Island has a stand of old-growth slash pine, a rare habitat community.

Blackjack Island: Blackjack02 fire backed onto Blackjack Island on 8 May 2002. It continued slowly to burn the west half of the island (north to south) from 9 May to 14 May when it reached the south edge of the island. Fire also came onto the island on the east side 14 May and on the southeast side 27-29 May. The central portion of the island had been burned during a wildfire in 2001. The island had not been prescribed burned since September 1995.

Mitchell Island: Blackjack02 fire reached the northwest side of Mitchell Island on 26 May and burned across the island the next four days. This island was prescribed burned last in July 1999.

Honey Island: The western two-thirds of the island burned on 9 May. Once the fire came onto the island, it fanned out and lost intensity. The following day the northeast third burned. The last prescribed burn was June 1997.

Bugaboo Island: Blackjack02 fire reached Bugaboo Island's southwest edge on 12 May. The following day, the fire made a significant run to the northeast burning the rest of the island. Bugaboo Island was prescribed burned in July 1997.

Billys Island: Blackjack02 fire crept onto the island on 15 May. It burned the south central portion of the island on 16 May and then crept north and south on 17-18 May. This island was prescribed burned February 1999.

Island Resources

The primary resources on the islands are the pine habitat used by the endangered red-cockaded woodpecker and the wilderness qualities. Fire is the management tool used with a small amount of longleaf pine planting. Wildfire is an important part of the system and can be managed for the maximum benefit to the resources. Although long-term viability of the RCW populations spread across the fragmented landscape is being analyzed, the greatest regional value of these island clusters is their natural state, with no inserts or restrictor plates. The suitability of the habitat is critical in determining the limiting factors within these populations of RCW. The last comprehensive inventory of suitability and activity on the islands was conducted in spring 2000.

In addition, Number One Island has a stand of old growth (approximately 250 years old) slash and longleaf pines which is a rare and valuable habitat community in the southeast.

Island	Cavity Trees	Clusters	Active Clusters	Last Survey
Number One Island	9	2	0	2000
Blackjack Island	31	7	4	2000
Mitchell Island	31	5	4	2001
Honey Island	81	10	5	2000
Bugaboo Island	25	6	1	2001
Billys Island	88	15	12	2000

PART B - NATURE OF PLAN

I. Type of Plan (check one box below)

XX	Emergency Stabilization
	Rehabilitation
	Both Emergency Stabilization and Rehabilitation

II. Type of Action (check one box below)

XX	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

The Okefenokee Wilderness Area is managed under the guidelines of the Wilderness Act and the U.S. Fish and Wildlife Services Wilderness Policy. Natural processes are the key to long-term preservation of the habitats.

In the refuge s attempt to use fire to its maximum benefit within the swamp ecosystem, emphasis is on preparation for fire use. This involves prescribed burning the islands for fuel reduction as well as for reducing the structure of the understory for more favorable RCW habitat. Also, high priority RCW cavity trees (active or vulnerable to fire damage due to resin flows) are periodically prepared by cutting the vegetation within a 10-20 ft radius around the base and reducing the likelihood of fire creeping up the trunk of the tree by breaking the resin flow into ground fuels and scraping off loose bark at the base of the tree.

Overall, the Blackjack Bay Complex fires were beneficial to the ecosystem. Preliminary evaluations of the island resources conducted from a helicopter indicate no damage; however, fire in combination with drought conditions may have a delayed effect. Also, individual RCW trees could not be evaluated by an aerial flight. To accurately evaluate the damage to the specific island resources identified above on the ground surveys must be conducted. To minimize trips to the islands and maximize the damage analysis, it is proposed to organize a survey of all islands during the spring of 2003 (late April). This would allow a comparison with the last intense survey in 2000 and provide answers to the following questions:

- 1) Did the wildfires and drought kill RCW cavity trees and limit the number of suitable cavities?
- 2) Did the rate of mortality differ between RCW cavities and other trees on the interior islands?
- 3) Is the refuge s management technique for protecting RCW trees adequate?
- 4) Are refuge prescribed burns on the islands adequate for reducing fuels to minimize RCW tree damage from wildfires?

As a result of the findings, the refuge s management techniques and use of fire would be improved. The need for further manipulation of the RCW habitat would be evaluated based on the designated limiting factors, population viability and value, the Wilderness values and the commitment and availability of funding for long-term monitoring of the populations.

PART D - TEAM ORGANIZATION, MEMBERS, AND RESOURCE ADVISORS

I. Approval Authorities

Activities Requiring Regional/State/Headquarters Approval Emergency Stabilization and Rehabilitation (charged to BAR)	Status	Cost
Evaluation of impact to red-cockaded woodpecker cavities/trees on Wilderness Islands	P	\$18,000
Planting of longleaf pine on Fiddlers Island to restore damaged habitat	P	\$7,000
Subtotal		\$25,000

Status: C=Completed,; O=Ongoing; P=Planned

Total Emergency Stabilization and Rehabilitation Costs	\$25,000
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II. Bumed Area Emergency Stabilization and Rehabilitation (ESR)Team Members: *(List of technical specialists used to develop the plan)*

Position	Team Member (Agency)
Team Leader	Skippy Reeves - Refuge Manager of Okefenokee NWR
Wildlife Biologist/GIS	Sara B. Aicher - Okefenokee NWR
Forester/FMO	Fred Wetzel - Okefenokee NWR
Assistant Forester/FMO	Mike Housh - Okefenokee NWR
Photographer	Howard McCullough - Forestry Technician

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
Ralph Costa	USFWS RCW Coordinator
Jimmy Rickard	Urban Interface Fire Specialist

PART E - SUMMARY OF ACTIVITIES AND COSTS

The summary of activities and cost table below identifies rehabilitation costs proposed for funding from Burned Area Rehabilitation. Expenditures are displayed in the total cost column. They are coded with the appropriate cost authority. The total cost of the rehabilitation effort to date, excluding the costs absorbed by the fire account (fire crews, labor, and associated overhead) is displayed as either Suppression Operations (F), Burned Area Rehabilitation (BAR), Emergency Watershed Protection (EWP), or Agency Operations/Other (O/OP) or other.

Fire Name: Blackjack Bay Complex

As of September 30, 2002

Specification Cost Summary

Account	Dollars	Dollars
Fire Suppression Activity Damage Rehabilitation (F)		
Burned Area Rehabilitation (BAR)		\$25,000
Emergency Stabilization	\$	
Rehabilitation	\$ 25,000	
Emergency Watershed Protection (EWP)		
Agency Operations/Other (OP/O)		
Funding Summary - Estimated Total		\$25,000

PART E - SUMMARY OF REHABILITATION ACTIVITIES - COST SUMMARY TABLE -
 Blackjack Bay Complex Fire

Spec #	Title	Unit	Unit Cost	# of Units	Cost by Funding Source		Implementation Method	Specification Total
					BAR	OP/O		
	Evaluation of impact to RCW trees on 6 Wilderness islands	Island	\$ 3,000.00	6	\$ 18,000		P,Volunteers	\$ 18,000
	Longleaf pine planting	Acre	\$ 140.00	50	\$ 7,000		P, Volunteers	\$ 7,000
TOTAL COST						\$ 25,000	\$ 0	\$ 25,000

COST: BAR=Burned Area Rehabilitation, OP/O=Agency Operations Funding, Other **METHOD:** FC=Crew Assigned to Fire, C=Contract, EFC=Emergency Fire Contract, P=Agency Personnel

PART F - INDIVIDUAL TREATMENT SPECIFICATIONS

SPECIFICATION TITLE:	Evaluation of impact to RCW trees on 6 Wilderness islands	AGENCY:	USFWS-Okefenokee NWR
PART E LINE ITEM:		FISCAL YEAR(S) (list each year):	2003

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: Six islands within the Wilderness area will be surveyed for red-cockaded woodpecker activity and habitat damage related to 2002 wildfire activity. At the present time, the refuge is only funded to meet helicopter needs for the Fire Program: helispot maintenance, tree site preparation, aerial ignition, fire reconnaissance and fire suppression. No funding is allocated for the surveillance of red-cockaded woodpeckers on the five remote islands accessible only by helicopter. Therefore, without additional funding, a thorough evaluation of fire damages in relation to an endangered species could not be accomplished.</p> <p>B. Location/(Suitable) Sites: Six Wilderness Islands: Billys Island, Honey Island, Bugaboo Island, Blackjack Island, Mitchell Island, and Number One Island.</p> <p>C. Design/Construction Specifications: This project would take approximately 50 staff-days in the field. Individuals that have experience examining RCW cavities for activity and suitability would lead the two-person crews. All individuals participating in this effort must be fit to carry heavy gear, walk on difficult terrain, and be willing to camp with minimal provisions. Per diem would be given on those trips to the islands that require overnight stays.</p> <p>D. Purpose of Treatment Specifications: The following questions will be addressed:</p> <ol style="list-style-type: none"> 1) Did the wildfires and drought kill RCW cavity trees and limit the number of suitable cavities? 2) Did the rate of mortality differ between RCW cavities and other trees on the interior islands? 3) Is the refuge s management technique for protecting RCW trees adequate? 4) Are refuge prescribed burns on the islands adequate for reducing fuels to minimize RCW tree damage from wildfires? <p>E. Treatment Effectiveness Monitoring Proposed: As a result of the findings, the refuge s management techniques and use of fire would be improved. The need for further manipulation of the RCW habitat would be evaluated based on the designated limiting factors, population viability and value, the Wilderness values and the commitment and availability of funding for long-term monitoring of the populations.</p>
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II. LABOR, MATERIALS AND OTHER COST:

PERSONNEL SERVICES: (Grade @ Cost/Hours X # Hours X # Fiscal Years = Cost/Item):		COST/ITEM
Do not include contract personnel costs here (see contractor services below).		
Per Diem		\$1,000
TOTAL PERSONNEL SERVICE COST		
EQUIPMENT PURCHASE, LEASE AND/OR RENT (Item @ Cost/Hour X # of Hours X #Fiscal Years = Cost/Item):		COST/ITEM
Note: Purchases require written justification that demonstrates cost benefits over leasing or renting.		
Helicopter		\$15,000
TOTAL EQUIPMENT PURCHASE, LEASE OR RENTAL COST		
MATERIALS AND SUPPLIES (Item @ Cost/Each X Quantity X #Fiscal Years = Cost/Item):		COST/ITEM
Supplies		\$2,000
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	UNIT	UNITS COST	# OF UNITS	COST	FUNDING SOURCE	METHOD
FY__03	Island	\$3,000.00	6.0	\$18,000	BAR	P/Volunteers
FY__						
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

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.	P
3. Estimate supported by cost guides from independent sources or other federal agencies	
4. Estimates based upon government wage rates and material cost.	E,M
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 ESR Plan Accomplishment Report (for Rehabilitation treatments quote (include page number, approving officials name, and date approved for review and auditing purposes) pertinent passages from approved land management plans:

See attached maps in Appendix III.

SPECIFICATION TITLE:	Longleaf pine planting	AGENCY:	USFWS-Okefenokee NWR
PART E LINE ITEM:		FISCAL YEAR(S) (list each year):	2003

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

Number and Describe Each Task:

A. General Description:
Fifty acres of young longleaf pine were killed during the Blackjack Bay Complex Fire on Fiddlers Island. Although longleaf pine are generally tolerant of fire, they were at a vulnerable age for the intensity of fire that swept through the area.

B. Location/(Suitable) Sites:
Fiddlers Island

C. Design/Construction Specifications:
Containerized seedlings will be purchased to replant the 50 acres. Twenty acres will be chopped using Service equipment before it is planted.

D. Purpose of Treatment Specifications:
To restore native longleaf pine habitat for the benefit of the associated species.

E. Treatment Effectiveness Monitoring Proposed:
The site will be monitored to ensure adequate survival resulting in the desired density of trees.

II. LABOR, MATERIALS AND OTHER COST:

PERSONNEL SERVICES: (Grade @ Cost/Hours X # Hours X # Fiscal Years = Cost/Item):		COST/ITEM
Do not include contract personnel costs here (see contractor services below).		
Labor		\$4,000
TOTAL PERSONNEL SERVICE COST		
EQUIPMENT PURCHASE, LEASE AND/OR RENT (Item @ Cost/Hour X # of Hours X #Fiscal Years = Cost/Item):		COST/ITEM
Note: Purchases require written justification that demonstrates cost benefits over leasing or renting.		
TOTAL EQUIPMENT PURCHASE, LEASE OR RENTAL COST		
MATERIALS AND SUPPLIES (Item @ Cost/Each X Quantity X #Fiscal Years = Cost/Item):		COST/ITEM
Trees		\$3,000
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	UNIT	UNITS COST	# OF UNITS	COST	FUNDING SOURCE	METHOD
FY__03	Acre	\$140.00	50.0	\$7,000	BAR	P/Volunteers
FY__						
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

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.	P
3. Estimate supported by cost guides from independent sources or other federal agencies	
4. Estimates based upon government wage rates and material cost.	M
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 ESR Plan Accomplishment Report (for Rehabilitation treatments quote (include page number, approving officials name, and date approved for review and auditing purposes) pertinent passages from approved land management plans:

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. Estimated annual cost and funding source is indicated.

Rehabilitation:

Evaluation of impact to RCW trees on 6 Wilderness islands will require no post-rehabilitation requirement.

Longleaf pine planting will be evaluated through the regular prescription cycle.

PART H - CONSULTATIONS

¹ Non-9262 funding

APPENDIX I - ESR BURNED AREA ASSESSMENT REPORTS

" Wildlife Damage Assessment Report

" Forest Damage Assessment Report

BLACKJACK BAY COMPLEX FIRE WILDLIFE DAMAGE ASSESSMENT REPORT

I. Objectives

To determine fire damage to the habitat of the endangered red-cockaded woodpecker on Wilderness islands within the Okefenokee National Wildlife Refuge.

II. Issues

The Blackjack Bay Complex Fire burned across six pine islands that provide habitat for the endangered red-cockaded woodpecker: Number One Island, Blackjack Island, Mitchell Island, Honey Island, Bugaboo Island, and Billys Island. These islands are also in the designated Wilderness Area. Five of the six islands are accessible only by helicopter.

All high priority RCW cavity trees on all the islands except Honey Island were prepared for fire activity prior to 1 April 2002. This involves clipping the understory within five inches of the ground in a 10-20 foot radius around the base of the tree, scraping loose bark from the base of the tree, and ensuring there is no continuous flow of resin into the ground fuels adjacent to the trunk of the tree.

The primary resources on the islands are the pine habitat used by the endangered red-cockaded woodpecker and the wilderness qualities. Fire is the management tool used with a small amount of longleaf pine planting. Wildfire is an important part of the system and can be managed for the maximum benefit to the resources. The suitability of the habitat is critical in determining the limiting factors within these populations of RCW. The last comprehensive inventory of suitability and activity on the islands was conducted in spring 2000.

In addition, Number One Island has a stand of old growth (approximately 250 years old) slash and longleaf pines which is a rare and valuable habitat community in the southeast.

III. Observations

A. Background Information

The Okefenokee Wilderness Area is managed under the guidelines of the Wilderness Act and the U.S. Fish and Wildlife Services Wilderness Policy. Natural processes are the key to long-term preservation of the habitats.

In the refuge's attempt to use fire to its maximum benefit within the swamp ecosystem, emphasis is on preparation for fire use. This involves prescribed burning the islands for fuel reduction as well as for reducing the structure of the understory for more favorable RCW habitat. Also, high priority RCW cavity trees (active or vulnerable to fire damage due to resin flows) are periodically prepared by cutting the vegetation within a 10-20 ft radius around the base and reducing the likelihood of fire creeping up the trunk of the tree by breaking the resin flow into ground fuels and scraping off loose bark at the base of the tree.

Island	Cavity Trees	Clusters	Active Clusters	Last Survey
Number One Island	9	2	0	2000
Blackjack Island	31	7	4	2000
Mitchell Island	31	5	4	2001
Honey Island	81	10	5	2000
Bugaboo Island	25	6	1	2001
Billys Island	88	15	12	2000

B. Reconnaissance Method

The islands were observed regularly via helicopter during fire reconnaissance and after the fire left the area. On the ground observations have not been done due to limiting factors related to accessibility and Wilderness issues.

C. Findings

Overall, the Blackjack Bay Complex fires were beneficial to the ecosystem. Preliminary evaluations of the island resources conducted from a helicopter indicate no damage; however, fire in combination with drought conditions may have a delayed effect. Also, individual RCW trees could not be evaluated by an aerial flight.

IV. Recommendations

A. Specification Monitoring (specification related)

To accurately evaluate the damage to the specific island resources identified above, on the ground surveys must be conducted. To minimize trips to the islands and maximize the damage analysis, it is proposed to organize a survey of all islands during the spring of 2003 (late April). The survey would provide answers to the following questions:

- 1) Did the wildfires and drought kill RCW cavity trees and limit the number of suitable cavities?
- 2) Did the rate of mortality differ between RCW cavities and other trees on the interior islands?
- 3) Is the refuge s management technique for protecting RCW trees adequate?
- 4) Are refuge prescribed burns on the islands adequate for reducing fuels to minimize RCW tree damage from wildfires?

B. Management (specification related)

As a result of the on the ground findings, the refuge s management techniques and use of fire would be improved. The need for further manipulation of the RCW habitat would be evaluated based on the designated limiting factors, population viability and value, the Wilderness values and the commitment and availability of funding for long-term monitoring of the populations.

C. Management (non-specification related)

V. Consultations

VI. References

BLACKJACK BAY COMPLEX FIRE FOREST DAMAGE ASSESSMENT REPORT

I. Objectives

To determine the fire damage from the Blackjack Bay Complex fire to the forestry resources.

II. Issues

One of the major goals of the refuge is the restoration of native longleaf pine communities. With the Blackjack Bay Complex Fire burning approximately 124,000 acres, only one longleaf pine stand of approximately 50 acres was killed entirely. The re-planting of these acres back to longleaf pine is critical in the restoration of native habitat.

III. Observations

- A. Background Information
- B. Reconnaissance Method
- C. Findings

IV. Recommendations

- A. Management (specification related)
- B. Specification Monitoring (specification related)
- C. Management (non-specification related)

V. Consultations

VI. References

APPENDIX II - ENVIRONMENTAL COMPLIANCE

Federal, State, and Private Lands Environmental Compliance Responsibilities

All projects proposed in the Blackjack Bay Complex Fire 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); and the Departmental of Interior manual part 516 DM 6. 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 Blackjack Bay Complex burned area emergency.

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 Blackjack Bay Complex Fire, as proposed in the Blackjack Bay Complex Fire 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 Blackjack Bay Complex Fire are Categorically Excluded from further environmental analysis as provided for in the Departmental manual part 516 DM 6. 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 ESR Team and documented below.

Applicable Department of Interior 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 planting of seeds or seedlings and other minor re-vegetation actions.**

Statement of Compliance for the Blackjack Bay Complex Fire Burned Area Emergency Stabilization and Rehabilitation Plan.

This section documents consideration given to the requirements of specific environmental laws in the development of the Blackjack Bay Complex Fire 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 Blackjack Bay Complex Fire 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.**
- " Wilderness Act**

CONSULTATIONS

- " Ralph Costa, RCW Coordinator for USFWS**
- " Jimmy Rickard, Urban Interface Fire Coordinator, Ecological Services**

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)

- Adversely affect Public Health and Safety**
- Adversely affect historic or cultural resources, wilderness, wild and scenic rivers aquifers, prime farmlands, wetlands, floodplains, ecologically critical areas, or Natural Landmarks.**
- Have highly controversial environmental effects.**
- Have highly uncertain environmental effects or involve unique or unknown environmental risks.**
- Establish a precedent resulting in significant environmental effects.**
- 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.**
- Area will be harrowed again where it was planted within the past 10 years.**

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 Blackjack Bay Complex Fire 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, Okefenokee National Wildlife Refuge

Date

APPENDIX III - MAPS

" Fire Perimeter in Relation to Red-cockaded Woodpecker Clusters and Areas to be Replanted