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Service

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# Environmental Assessment

## Hopkins Fire Salvage PALS No. 41522

Lake George District, Ocala National Forest  
Marion County, Florida

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Lead Agency: USDA Forest Service

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- Appendix A – Biological Assessment (Federally Listed Species)
- Appendix B – Biological Evaluation (Sensitive Species)
- Appendix C – Project Area Map
- Appendix D – Economic Analysis

## CHAPTER 1

### **1.0 INTRODUCTION**

#### **1.1 Proposed Action**

The Ocala National Forest (ONF) of the National Forests in Florida (NFF) is proposing to harvest about 1,000 acres of sand pine timber that was killed by wildfire on March 2, 2013. The Proposed Action would be harvesting sand pine timber.

#### **1.2 Purpose and Need**

##### **Existing Conditions and the Need for Action**

If no action is taken, dead trees will persist on the area for 7-10 years until they eventually fall down. The presence of dead trees would preclude the use of the area by Florida scrub-jays until most of the the snags eventually fall. Also, the dead and dying timber represents high loads of hazardous fire fuels and elevated risks of additional damage to natural resources during future wildfires. Future wildfire suppression is more difficult when large amounts of dead trees are present and as dead trees start to fall, a layer of heavy debris builds up on the ground. Sand pine seeds prolifically after a wildfire and would reseed among the downfall, resulting in dense stands of young sand pine. The oak shrub layer would grow back quickly by resprouting.

The proposed action is needed to address the following:

1. **Future Habitat for Florida scrub-jay** – The ONF provides habitat for the largest remaining population of Florida scrub-jays in the world. Under current ecosystem management practices this population has been generally stable. The current suitable scrub-jay habitat is defined as stands of sand pine or scrub oak aged 3-12 years. Though wildfire kills sand pine trees and kills back scrub oaks, this area would not be suitable until dead sand pines either fall down naturally or are removed by harvesting. The natural falling of dead sand pines usually takes about 7-10 years. Harvesting trees will make the area available as scrub-jay habitat much sooner. This project would add to our base of suitable scrub-jay habitat that will be suitable in about three years from the time of the harvest.
2. **Recover the wood product and economic value of the sand pine** – After a wildfire, sand pine timber loses its value considerably and within six months would not be useable. A timely harvest following the fire allows these trees to be removed without incurring additional costs and collecting some revenue. The stumpage value is estimated at \$150,000, based on an estimated volume of 10,000 CCF (hundred cubic feet).
3. **Dead and Dying trees will continue to create a safety hazard for Forest visitors and workers and to adjacent landowners** -- the risk of falling trees creates a safety hazard, particularly in high winds. To reduce the public health hazard caused by the fuel loading in these damaged stands. Public safety related to fuel loading is of particular concern in the Wildland Urban Interface (WUI). About 300 acres of this project are within 0.5 miles of a WUI, and all but a small part is within 1.5 miles of a WUI.
4. **Suppression of future wildfires would be even more difficult and dangerous under the existing conditions** - Due to the safety hazards of standing dead trees, suppression efforts would be extremely dangerous for fire crews. Heavy downfall would increase wildfire intensity. Additionally, the extended length of time required to burn through such heavy fuel volumes would create smoke hazards. Smoke from these sites could easily impact State Road 19.

##### **Achieve Desired Condition in Forest Plan**

The Revised Land and Resource Management Plan for National Forests in Florida (LRMP) was completed in 1999 and has been amended ten times. A copy of the LMRP and its amendments is available at <http://www.fs.usda.gov/land/florida/landmanagement>. This document established Forest Plan Management Area (MA) goals, forest-wide goals, and forest-wide objectives many of which that would be achieved through implementation of this proposed project (pages 2-3 through 2-7 in LMRP). This project is located within Forest Plan Management Area 8.2. The goal for this area is described on pages 4-46 through 4-47 in the LRMP.

The Forestwide Objective #9 in the LMRP for National Forests in Florida is to maintain at least 45,000 to 55,000 acres of Florida scrub-jay habitat. Currently, on the ONF, there are 41,275 acres in suitable scrub-jay habitat. This project would add about 1,000 acres to suitable scrub-jay habitat within three years of implementation.

**1.4 Issues**

A comment period is being held concurrently with the development of a final EA. Several issues raised by the ID Team were used to develop the proposal. These issues were:

- avoid impacts to environmentally sensitive ponds or wetlands
- avoid harvesting where heritage resources may be present
- use natural regeneration to reforest harvested areas

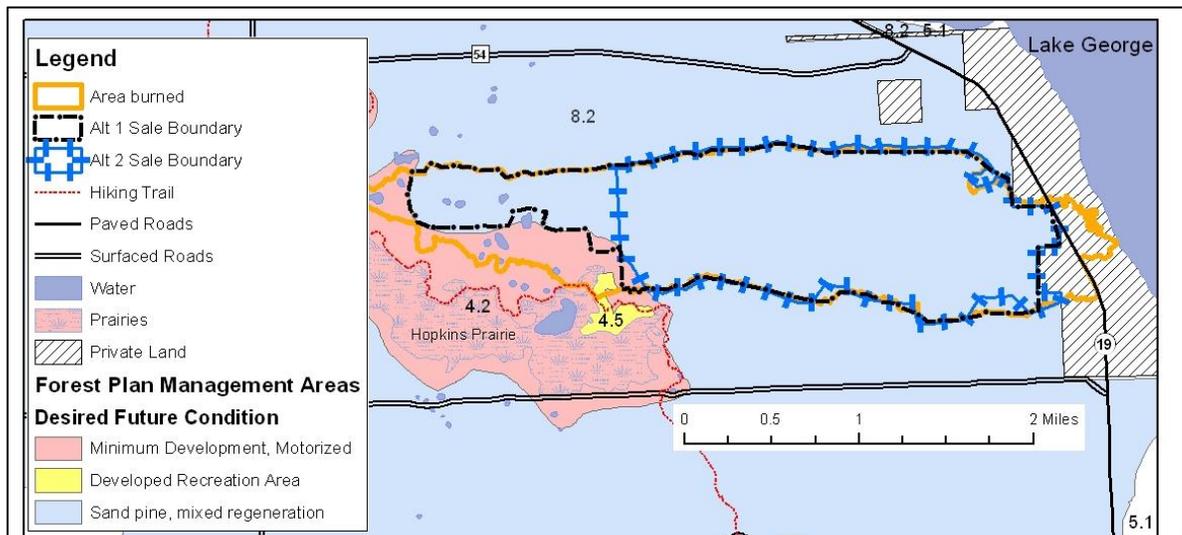
**CHAPTER 2**

**2.0 ALTERNATIVES**  
**2.1 Alternatives Considered**

**Table 1. Alternatives Considered**

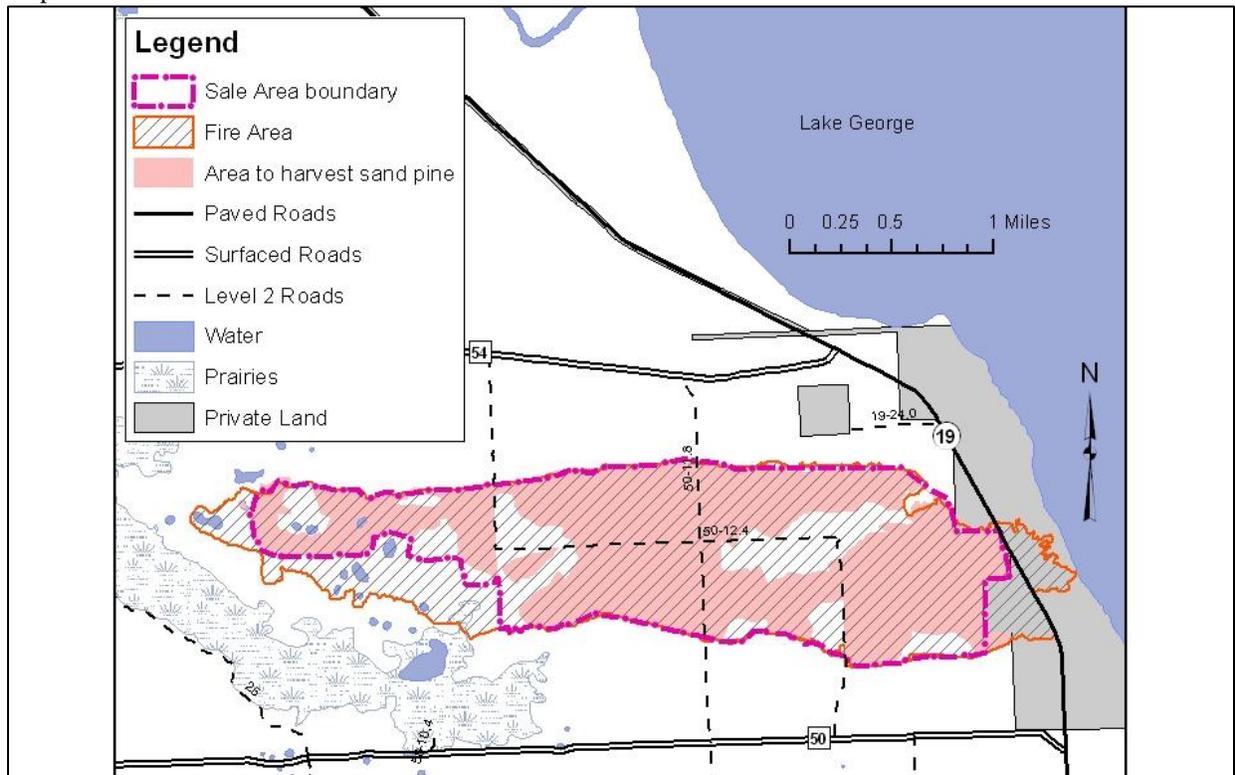
Alternative	Acres	Treatments	Comments
1	1,214	Harvest sand pine	Includes all area within fire boundary except area in MA 4.2
2	1,007	Harvest sand pine	Same as above but also excludes area west of FR 50-12.4 from the salvage to protect small ponds and prairies in that part of burned area
No Action	N/A	No Action	Does not meet Purpose and Need

Map 1. Management Areas\* and Alternatives Considered

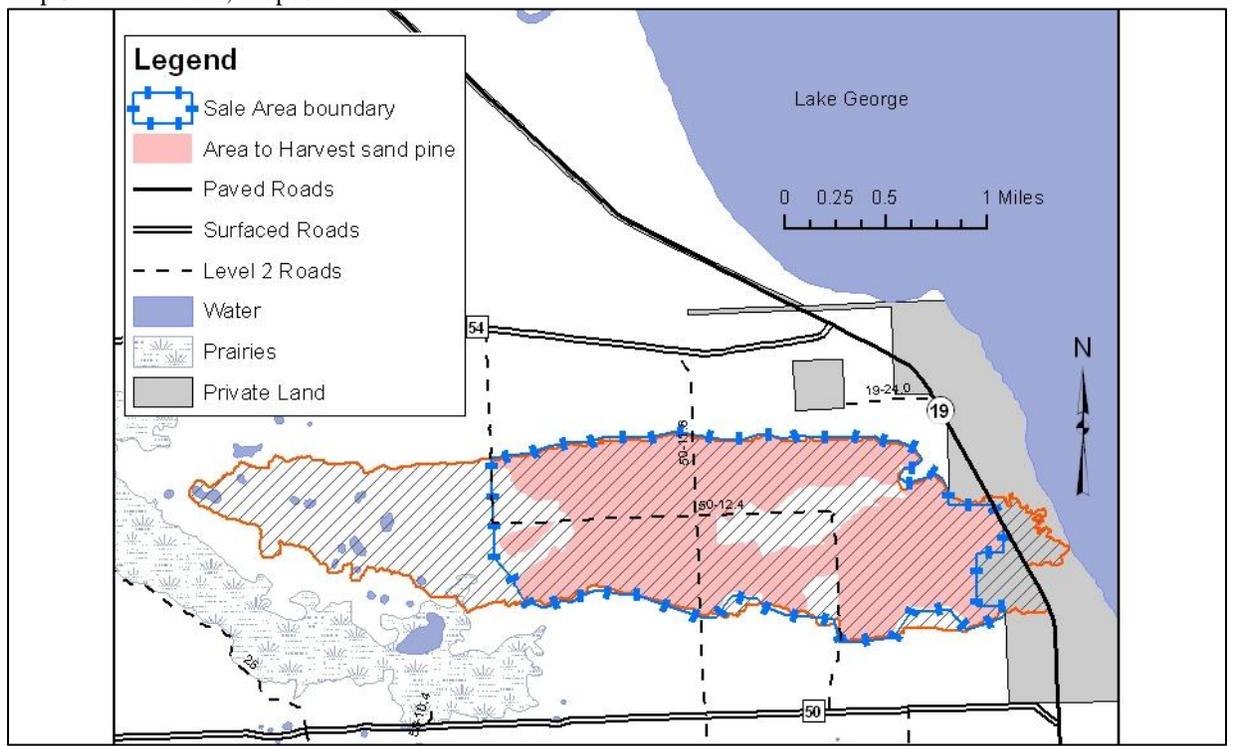


\*Management areas are described in the FLMP on pages 4-1 through 4-47.

Map 2. Alternative 1



Map 3. Alternative 2, Proposed Action



## **2.2 Project Design Criteria**

The follow site-specific project design criteria minimize adverse effects.

### **WILDLIFE:**

1. To maximize the potential for beneficial effects and minimize the potential for adverse effects on Threatened, Endangered and Sensitive (TES) plant and animal species, the timber sale administrator would coordinate with the botanist or wildlife biologist about the placement of log landings and skid trails.
2. To reduce the potential of adversely affecting eastern indigo snakes, all contractors would be educated on their identification, status, felony charges that would result from their take (16 USC, Endangered Species Act), and federal law against killing, molesting, or possessing wildlife without a permit [36 CFR 261.8(a)].
3. Field personnel and contractors would be educated in gopher tortoise burrow identification if new to the ONF. Log landings and skid trails would not be located within 25 feet of known gopher tortoise burrows. Equipment operators would be instructed to maintain a 25 foot distance during operations when previously unknown burrows are encountered.
4. There is one inactive Bald Eagle nest near the boundary of the wildfire. Based on the recommendations in the National Bald Eagle Management Guidelines (USFWS 2007), salvage activities will stay 330 feet away from the tree.

### **PLANTS:**

5. Minimize the potential for introduction and spread of non-native invasive species (NNIS) such as cogon grass, Japanese climbing fern, and Japanese mimosa on the ONF as a result of timber sales or other mechanical activities. Cogon grass and Japanese climbing fern are present in the project area. Known and new NNIS locations would be documented and treated prior to timber harvest. All equipment would be washed according to timber contract specifications (BT6.35) before entering the ONF. If site preparation equipment may be transported on a road right-of-way, a Forest Service official would inspect the route. Coordination would also take place to prevent the spread of NNIS during road maintenance.

### **HERITAGE:**

6. The ONF Archeologist would locate and protect heritage resource sites on the ground prior to ground disturbing activity as discussed in the Management Summary.

### **RECREATION:**

7. Promote scenic goals along paved roads, by using a 100-foot slash treatment zone next to State Road 19.
8. Cut material (excluding timber products) generated from timber harvesting would be used to block unauthorized travel routes and system roads planned for decommissioning that occur in or adjacent to the treatment areas.

## **CHAPTER 3**

### **3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES**

#### **3.1 Physical Environment – Soil, Water and Air**

##### **3.1.1. Affected Environment**

Most of the soils in the proposed harvest area are Paola sand, with a few areas of Astatula sand. Both of these soil types are droughty, excessively drained sands that have low erosion potential. There are no water resources in the proposed project area.

##### **3.1.2. Direct and Indirect Effects for Alternative 2, Proposed Action**

**Water:** There is no expected impact to water resources since there are no water resources in proposed project area.

**Soils:** **Timber harvesting** activities such as felling, skidding, and piling (especially at log landings) would cause some soil movement and increase the erosion potential. Movement is expected to be slight as soils impacted are sands and have little slope. Compaction risk is low on these coarse sands where harvesting is proposed. Effects are short-lived and plant cover is re-established within a year. No effect is anticipated to overall soil fertility nor are any changes in nutrient cycling anticipated. Overall risk to soil productivity is minimal.

Air: There is no expected impact to air resources from the proposed **timber harvesting**.

### **3.1.3. Cumulative Effects**

Soils: *Cumulative effects* from **harvesting** that occurs in adjacent and nearby stands over time will not be adverse as the quick vegetative response to harvesting is less than a year and erosion potential on these type soils is low.

Water and Air: None.

## **3.2 Biological Environment**

### **3.2.1 Vegetation**

#### **3.2.1.1 Affected Environment:**

The spatial scale for the vegetation analysis was set as the distribution of the scrub ecosystem on the ONF. The temporal scale was set at 10 years, because that is roughly when sand pine canopy closure begins. The sand pine scrub ecosystem is described in the FEIS (pp. 3-15 through 3-65), the BE for the LRMP (FEIS, see Appendix), and in the 2008 Sand pine/Scrub Ecosystem Landscape Scale Assessment (p.9 and PP. 20-22). Cogon grass, air potato, Chinese tallow tree, mimosa and Japanese climbing fern are non-native invasive plant species (NNIS) that may be present in the project area. Design feature 4 would minimize the potential for introduction and spread of NNIS species.

#### **3.2.1.2 Direct and Indirect Effects of Alternative 2 - Proposed Action**

By **timber harvesting** in fire-killed sand pine areas, the Proposed Action would accelerate the creation of 1,000 acres of young scrub habitat. After harvest and treatments, the same composition of plant species continues to grow on the site. Natural regeneration of sand pine would occur following harvesting.

Log skid trails and landings are small intensively disturbed areas, where individual TES plants may be killed. It is unlikely that this would result in adverse impacts at the local population level. Design feature 1, in Section 2.2, would reduce the risk to individual TES plants at log landings.

The Biological Assessment for federally endangered and threatened plants is in Appendix A. Although there are no current documented occurrences of the federally listed plant species (Florida Bonamia, Scrub Buckwheat, and Lewton's Polygala) within the proposed project area, the wildfire created conditions favorable to all three species. Therefore, the possibility exists that any of the three species could occur in the project area at the time salvage operations begin. Salvage operations pose a discountable amount of direct mortality risk to any of the three species that may occur in the project area. Disturbance from harvest machinery would be limited to above-ground disturbance and thus would only affect vegetative structures of individuals and not harm the woody taproots that these species possess. The effects determination for Alternative 2 is "may effect – not likely to adversely affect" for Florida Bonamia, Lewton's Polygala, and Scrub Buckwheat. There is an insignificant amount of disturbance possible and the potential for individuals to be killed by harvest equipment since the disturbance is not of a ground-penetrating nature.

The Biological Evaluation for Regional Forester's Sensitive Species is in Appendix B. This assessment determined that the preferred alternative "may impact individuals but would not be likely to result in a trend towards federal listing or loss of viability" for the 13 sensitive plant species that may occur in the project area based on association with scrub habitats. The proposed treatments present only a limited amount of risk of direct impacts to individual plants, much less pose any risk to the greater localized populations of these sensitive species. Direct impacts are unlikely since these species will not have enough time to colonize the area – however, should they happen to occur, the disturbance intensity is low enough (no ground-disturbing activities) and the scale of the activity is small enough that any direct effects would not be significant enough to result in a trend towards federal listing or loss of viability. Indirect impacts of the proposed project are negligible to the analyzed sensitive species. Over the long term and landscape-level, management will provide a variety of age classes within sand pine scrub habitat. Plant communities would be protected in a variety of ways by S&Gs, design features, and monitoring. Based on many years of experience with similar actions on similar sites, the long-term beneficial effects that result from the

establishment of young scrub openings greatly outweigh the short-term disturbance of vegetation being mechanically harvested.

### **3.2.1.3                    Cumulative Effects**

*Cumulative effects* from **harvesting** sand pine come from similar actions being carried out in adjacent compartments and in different years. The harvesting planned in this EA represents the amount of timber harvesting, chopping, and seeding that usually occurs on in six months on the ONF. Similar actions are being carried out on other parts of the Forest in preceding and subsequent years. All of these actions make up the cumulative effects for treatments. Though there have been no long-term studies about the effects of harvesting and related actions in the scrub at this scale, the ONF has been using this type of management in sand pine scrub since the 1950's. Botanical surveys and ecological inventories done in recent years have found the same species composition and abundance as had been found in earlier surveys. Several TES species are common and even abundant on the ONF. It does not appear that any negative cumulative effects to plant species has occurred or would occur from the proposed action.

### **3.2.2                    Wildlife**

#### **3.2.2.1                    Affected Environment:**

The analysis area for this project is sand pine scrub. Wildlife communities and habitat are described in the FEIS for the 1999 Revised LRMP (pp. 3-66 through 3-98) and in the 2009 Sand Pine/Scrub Ecosystem Landscape Scale Assessment (pp. 22-35).

The affected environment is described in the 2009 Sand pine/Scrub Ecosystem Landscape Scale Assessment (pp. 22-35) and the BE for the LRMP (FEIS, Appendix F). Three federally listed threatened species (Florida Scrub-Jay, Eastern Indigo Snake, and Sand Skink) occur or are likely to occur in the project area. Two Management Indicator Species (MIS; Florida Scrub-Jay and Scrub Lizard) occur within the project area. Note that Amendment #10 reduced the list of MIS wildlife species for the Ocala National Forest. Also see the 2010 Monitoring and Evaluation Report for population and trend data on MIS.

#### **3.2.2.2                    Direct and Indirect Effects of Alternative 2 - Proposed Action**

The Proposed Action would remove fire-killed sand pine on about 1,000 acres. As a result of the proposed action, this area will be suitable scrub-jay habitat in about three years.

General Wildlife Effects: The primary effect would be changes in scrub-jay habitat as affected by the removal of fire-killed sand pines. Following a sand pine scrub wildfire, up to several hundred dead sand pine snags remain on the area as snags and preclude development of scrub-jay habitat. Forest Service biologists have observed that snags persist for 7-10 years in an area. Harvesting dead sand pines accelerates the time it takes for an area to develop as suitable scrub-jay habitat.

Harvest areas would provide herpetofauna that require early successional scrub with habitat from 1-2 years after project completion, until reduction of basking sites from increasing tree growth forces them to relocate (about 5-10 years).

#### **Management Indicator Species (MIS):**

Effects on the Florida Scrub-Jay, which is also a Federally listed Threatened Species, are discussed in detail in the Biological Assessment in Appendix A. The proposed action may impact individuals but would not be likely to result in a trend towards federal listing or loss of viability for the Scrub Lizard. Treatment may create minor disturbance, but ultimately will be beneficial by providing a variety of age classes within sand pine scrub habitat.

**Federally Listed Threatened and Endangered Species (TES):** Effects on Threatened and Endangered species are discussed in detail in the Biological Assessment (BA) in Appendix A. The BA determinations for federally listed species are: *may affect – not likely to adversely affect* the Eastern Indigo Snake and Sand Skink; and *no effect* on the Florida Scrub-Jay. The wildfire effectively eliminated habitat for the Florida Scrub-Jay and eliminated prey/food items for the Eastern Indigo Snake and Sand Skink. There is a discountable amount of risk for Eastern Indigo Snake and Sand Skink individuals to be directly impacted by heavy machinery during salvage activities. Consult Appendix A for a more detailed effects analysis.

Regional Forester's Sensitive Species: Effects on Regional Forester's Sensitive Species are discussed in detail in the Biological Evaluation (BE) in Appendix B. The BE determinations for sensitive species are: may impact individuals but would not be likely to result in a trend towards federal listing or loss of viability for the Florida Mouse, Florida Black Bear, Florida Pine Snake, Scrub Lizard, and Short-tailed Snake. Risk of mortality to these species is insignificant, and net impacts would be beneficial. Consult Appendix B for a more detailed effects analysis.

Based on many years of experience with similar actions on similar sites, the long-term beneficial effects that result from the establishment of early successional scrub habitat greatly outweigh the short-term adverse effects of disturbance, displacement, or mortality.

### **3.2.2.3**                    **Cumulative Effects**

Based on many years of experience with similar actions on similar sites, the long-term beneficial effects on TES wildlife that would result from the establishment of early successional scrub habitat would greatly outweigh any short-term adverse effects from disturbance, displacement or mortality.

## **3.3**                    **Social Environment**

### **3.3.1**                    **Recreation**

#### **3.3.1.1**                    **Affected Environment**

Recreation resources located near proposed treatment areas include Hopkins Prairie Campground and Florida Scenic Trail (hiking).

#### **3.3.1.2**                    **Direct and Indirect Effects for Alternative 2**

Recreation would be temporarily affected by the activities of the proposed action. Recreation activities associated with the project areas include hiking and camping. Hopkins Prairie Campground is located just south of the project area and the Florida National Scenic Trail is near the south and west boundaries of the proposed harvest area. These activities would be temporarily interrupted during project implementation in the treatment areas due to noise from heavy equipment. The nearest harvesting area is about 450 feet from the Trail. Since salvage of fire-killed timber must be done quickly wood deteriorates, it is expected that the proposed harvest would be accomplished in thirty days or less. Treatment would generally occur during the week when visitation rates are lower.

#### **3.3.1.3**                    **Cumulative Effects**

There are no other known activities that would affect recreation during the treatment period that would have combined effects with the proposed action. There should be no cumulative effects to recreational activities associated with the project implementation.

### **3.3.2**                    **Human Health and Safety**

This section discusses the health and safety effects related to recreational users in the area at the time of project implementation and to workers carrying out the treatments.

#### **3.3.2.1**                    **Direct and Indirect Effects for Alternative 2, Proposed Action**

Vehicle and heavy equipment use pose the only hazards to public safety. Visitors would be affected by increased vehicle use on forest roads during harvesting and other treatments. These hazards are mitigated by timber sale and contract specifications for safety, and state traffic laws.

Project personnel would be aware of increased vehicle use on forest roads during harvesting and other treatments. Forest Service employee safety programs address defensive driving and road hazards regularly.

**3.3.2.2 Cumulative Effects**

Activities occurring on the ONF increasingly involve motorized vehicles and equipment. Though driving hazards are ever present on the ONF, any additional vehicle activity would have a cumulative effect to human health and safety.

There are no other activities that would have a combined effect on public health. Overall cumulative adverse effects to human health and safety associated by project activities would be small.

**3.3.3 Environmental Justice and the Protection of Children**

The proposed action was assessed to determine whether it would disproportionately impact minority or low-income populations (in accordance with Executive Order 12898) from environmental and health hazards. It generally applies to actions that could cause soil, water or air pollution or actions concerning hazardous or animal waste disposal, or chemical application and storage. Proposed actions for this project would not cause or propose any of these. The percent of minority and low-income populations in Marion County (11.8 and 13.6 percent, respectively) is less than or similar to the State of Florida (16 and 11.7 percent, respectively) based on 2000 census data. This demographic information indicates that this county does not qualify as an environmental justice community. Therefore, no further analysis is required.

**3.3.4 Economic Effects**

**3.3.4.1 Affected Environment**

The socioeconomic environment is described in the FEIS for the 1999 Revised LRMP (pp. 3-189 through 3-225). The spatial scale for the economic analysis was set as Marion and Lake counties, because the Proposed Action would result in tangible benefits mostly to companies and individuals in those areas. The temporal scale was set at three years following harvest, because the actions that affect economics would generally take place within that period.

**3.3.4.2 Direct and Indirect Effects for Alternative 2, Proposed Action**

A financial efficiency analysis of the action alternatives is summarized below. This analysis compared estimated expenditures with financial returns, and followed guidelines in the Forest Service Timber Sale Preparation Handbook (FSH 2409.18\_30).

<b>Benefit/Cost Category</b>	<b>Discounted Short-Term Existing Stand</b>	<b>Discounted Long-Term Regeneration Stand</b>	<b>Both Stands</b>
<b>REVENUE</b>			
Timber Sales	120000	124973	244,973
<b>TOTAL REVENUES</b>	<b>120000</b>	<b>124973</b>	<b>244,973</b>
<b>FINANCIAL COSTS</b>			
Analysis (NEPA)	3000	625	3,625
Other Resource Support	3000	925	3,925
Sale Preparation	20000	8666	28,666
Sale Administration	20000	8666	28,666
Reforestation	0	32100	32100
<b>TOTAL COSTS</b>	<b>46000</b>	<b>50981</b>	<b>96,981</b>
<b>Financial Present Net Value</b>	<b>74000</b>	<b>73992</b>	<b>147992</b>
<b>Benefit/Cost Ratio</b>	<b>2.61</b>	<b>2.45</b>	<b>2.53</b>

Alternative 2 would contribute beneficial effects from revenues and payments to contractors, but would not measurably change employment, income or population in and around the ONF. Full analysis is shown in Appendix D. Based on many years of experience with similar actions, no adverse effects on the socioeconomic environment are anticipated.

**3.3.5 Heritage Resources**

**3.3.5.1 Affected Environment**

The sand pine scrub environment is considered the very lowest potential for archeological or historical sites on the ONF. This is primarily due to the extremely arid conditions of this environment. The stands proposed for this project are primarily located within the desert-like conditions of the deep sand pine scrub ecosystem of the ONF. Spatial and temporal effects scales were not established for the heritage resource, because no direct or indirect effects are anticipated. Heritage resources are described in the FEIS (pp. 3-101 through 3-105).

**3.3.5.2 Direct and Indirect Effects for Alternative 2, Proposed Action**

A heritage resource survey and report are currently being prepared by the Ocala Archeologist. Any heritage resource site found in the survey will be mapped, reported, and a determination made as to significance and whether site needs to be avoided or actions can proceed. Report will be reviewed by State Historic Preservation Officer and Tribal Historic Preservation Officers. Their concurrence will precede the Decision.

**CHAPTER 4**

**4.0 CONSULTATION AND COORDINATION**

**Consultation and Coordination**

The Forest Service consulted the following individuals, Federal, State, and local agencies, tribes and non-Forest Service persons during the development of this environmental assessment:

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## CHAPTER 5

### **5.0      LIST OF PREPARERS**

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