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Environmental Assessment

Mechanical Fuel Reduction

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Apalachicola and Wakulla Ranger Districts, Apalachicola National Forest, Liberty and Wakulla Counties, Florida

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SUMMARY

The Forest Service is proposing to mechanically reduce approximately 1400 acres of hazardous fuels to enhance fire protection capabilities adjacent and near the wildland-urban interface and other private and agency property, and to facilitate the reintroduction of fire into the forest ecosystem. The treatment area includes portions of compartments 85, 335, 348, 351, 352, 353, and 354 on the Apalachicola National Forest. These areas are located in sections of T3SR2W, T4SR2W, T5SR2W, T5SR3W, and T5SR5W.

Mechanical treatments would be used to create fire breaks up to 75 feet in width on Forest Service managed land. Approximately the first 15 feet of these fire breaks would be cleared of vegetation and then periodically brought down to mineral soil as is typically done with fire breaks. In the remainder of the width (approximately 60 feet) all shrubs and hardwood trees under 10 inches dbh, or up to the size limitation of the equipment, would be treated. The mechanical treatment would also be used for reduction of mid and understory vegetation in other selected pine stands in addition to two RCW clusters and a RCW recruitment stand. Pines would not be targeted for removal with this project, therefore, as many pines as possible would be left. The treatments would be accomplished using a Gyro-Trac™, Supertrak™, or a similar mulcher/shredder, or with equipment designed to remove the vegetation for other uses such as biomass. Cutting blades and equipment would be set to minimize ground disturbance. Manual labor with chainsaws or other hand tools may also be used on occasion.

The proposed activities could have localized, short-lived, minor effects on air or water. Blading and/or disking of fire lines next to private property has been occurring periodically, therefore, there would be little additional soil disturbance other than what is already being done as an accepted fire management practice (Apalachicola Fiscal Year (FY) 2007 – 2011 Prescribed Burn EA August 28, 2006). The vegetative structure in the project area would be changed but there would be no long-term negative impacts on desirable plants or animals including Threatened, Endangered, or Sensitive species. The proposed actions may temporarily impact recreation and visual quality but after the application of a couple of prescribed burns, recreational and visual quality would ultimately improve. The proposal would not impact Heritage Resources, the local economy, environmental justice or civil rights. There would be no irreversible and irretrievable commitment of resources and productivity would be maintained or increased.

In addition to the Proposed Action, a No Action alternative was evaluated. This alternative would maintain the current level of management in the analysis area.

Based on this analysis of the two alternatives, the responsible official will decide whether to implement the Proposed Action or continue with existing management.

INTRODUCTION

Background

Many ecosystem conditions across the United States and on the Apalachicola National Forest (ANF) are inherently linked to fire, thus a rating system developed to categorize the level of fire fuels, the Fire Regime Condition Class (FRCC) can be applied to describe existing vegetation conditions. The FRCC categories of 1 through 3 describe a range of vegetative fire fuels; “FRCC 1” represents conditions close to natural (or preEuropean settlement) structure and species composition, “FRCC 2” denotes an intermediary stage, and “FRCC 3” represents a marked departure from a healthy, functioning ecosystem. FRCC 3 is characterized by unnaturally heavy fire fuel loads that create a potential for extreme resource damage in the event of wildland fire¹.

The Apalachicola National Forest is actively maintaining and restoring fire on the Forest and as part of this effort those areas that are outside the appropriate condition class (FRCC 1) are being identified. The existing fuel loads in the proposed project area most closely resemble FRCC 3. Many of the forest stands which would historically burn several times each decade have not burned well or at all in at least the last ten to fifteen years. The lack of frequent fire and past silvicultural management have altered vegetation structure and composition, creating dense stands that allow fire to travel faster, higher into the canopy, and with more intensity. These increased fuel loads raise the risk of extreme fire behavior when wildfires occur or prescribed fire is applied. In the event of a wildfire, this extreme fire behavior increases the threat to private structures, firefighter safety, and natural resources.

This Environmental Assessment (EA) was prepared in order to implement and periodically maintain an important fuel reduction project. The analysis is tiered to other environmental documents: the Revised Land and Resource Management Plan's (LRMP) and the accompanying Final Environmental Impact Statement (FEIS), the EIS for Vegetation Management in the Coastal Plain/Piedmont (VMEIS), the Apalachicola Fiscal Year (FY) 2007 – 2011 Prescribed Burn EA (August 28, 2006), EA for Non-Native Invasive Plant Control on the Apalachicola National Forest (July 15, 2004), Apalachicola National Forest Motorized Route Designation EA (September 28, 2007).

These documents are available for review upon request at the District offices or the Forest Supervisor's office in Tallahassee, FL.

Purpose and Need for Action

The treatment areas are adjacent or in close proximity to the wildland-urban interface or other private and agency property boundaries. Typically, fire fuel loads are heavy along these

¹ The level of fuel loading can be categorized using the Fire Regime Condition Class (FRCC), a definition that grew out of the Federal Wildland Fire Policy of 1995 (*Western National Forests: A Cohesive Strategy is Needed to Address Catastrophic Wildfire Threats* (RCED-99-65)). The FRCC is a classification of the condition of fuels using vegetative structure, species composition, and pattern in relation to the natural (historical) fire regime appropriate to the local ecosystem or regional biogeographic classification.

National Forest system/other land boundaries where smoke concerns and the close proximity of structures increase restraints during prescribed burns. Fuels may be contiguous across the National Forest/other lands boundary and create complex prescribed burning scenarios. In the past, the use of prescribed burning to decrease fuel loads in the treatment areas has been infrequent or avoided due to the fuel accumulation and the complexity of establishing secure enough firelines in these interface areas.

Two active red-cockaded woodpecker (RCW) clusters and one inactive recruitment stand with old inserts exist within the treatment area. The absence of fire has created dense mid- and understories with a reduced herbaceous groundcover. These areas will most likely not continue to serve as productive habitat for the RCW or any other rare species if grassy and herbaceous groundcover and sparse midstory conditions are not restored.

This Mechanical Fuels Reduction project is proposed to assist the continuing restoration of fire to the forest ecosystem as directed by the National Forests in Florida Forest Plan and to return these areas to the desired FRCC. The purpose of the project is to create and maintain fire breaks and reduce heavy fuel loads in forest stands adjacent and near the wildland-urban interface and other private and agency property. This in turn would aid the reintroduction of prescribed fire to the forest ecosystem, reduce wildfire risk and behavior, and enhance wildfire protection capabilities. Fuel reduction in these interface areas could also lessen some smoke management concerns. Another component of the purpose and need is to improve red-cockaded woodpecker (RCW) habitat within the treatment areas. There are two clusters and one recruitment stand that are overgrown with shrubs due to their location along the forest boundary and/or the complexity involved with burning them. RCWs and other rare species require more open, grassy, and herbaceous habitat in order to thrive. These open conditions can be achieved with prescribed fire but presently the fuel loading is too high and burning the clusters without prior fuel reduction treatments could result in tree and cavity tree mortality.

Proposed Action

The Forest Service is proposing to mechanically reduce approximately 1400 acres of hazardous fuels to enhance fire protection capabilities adjacent and near the wildland-urban interface and other private and agency property and to facilitate the reintroduction of fire into the forest ecosystem. The treatment area includes portions of compartments 85, 335, 348, 351, 352, 353, and 354 on the Apalachicola National Forest. These areas are located in sections of T3SR2W, T4SR2W, T5SR2W, T5SR3W, and T5SR5W. (Table 1 and Appendix A Maps 1, 2, 3, 4, 5, 6).

Mechanical treatments would be used to create fire breaks up to 75 feet in width on Forest Service managed land. Approximately the first 15 feet of these fire breaks would be cleared of vegetation and then periodically brought down to mineral soil as is typically done with fire breaks. In the remainder of the width (approximately 60 feet) all shrubs and hardwood trees under 10 inches dbh, or up to the size limitation of the equipment, would be treated. The mechanical treatment would also be used for reduction of mid and understory vegetation in other selected pine stands in addition to two RCW clusters and a RCW recruitment stand. Pines would not be targeted for removal with this project, therefore, as many pines as possible would be left. The treatments would be accomplished using a Gyro-Trac™, Supertrak™, or a similar mulcher/shredder, or with equipment designed to remove the vegetation for other uses such as

biomass. Cutting blades and equipment would be set to minimize ground disturbance. Manual labor with chainsaws or other hand tools may also be used on occasion.

Table 1. Proposed Action by compartment, township, range, section, and stand, 1390 total acres.

Compartment	Township	Range	Sections	Stand Number	Acres
335	3 S	2 W	25	44	42
351	4 S	2 W	26, 34, 35, 36	1, 3, 5, 6, 7, 8, 10, 11, 18, 19, 21, 24, 28, 29	Stands 625 Lines 55
	5S	2 W	2, 3	30, 31, 32, 33, 34	
352	4 S	2 W	31	1, 20	22
	5 S	2 W	5, 6, 7	5, 8, 9, 16, 17, 24, 25, 26	Stands 182 Lines 25
348	5 S	3 W	1	1	45
353	5 S	3 W	14, 15, 23, 26, 27, 28, 35	3, 4, 5, 9, 11, 25	Stands 188 Lines 41*
				*7.5 acres of lines are in C354	
85	5 S	5 W	16, 17, 18		165

Decision Framework

Given the purpose and need, the Responsible Official will review the Proposed Action, and the No Action alternative. The decision to be made is whether to:

- Take No Action at this time - Alternative A or
- Implement the Proposed Action - Alternative B.

Public Involvement

The proposal was provided to the public and other agencies in an initial scoping letter dated June 23, 2009. Thirteen comments were received. In addition, this project was listed on the Schedule of Proposed Actions (4/2009). This schedule is available on the National Forests in Florida website.

A Request for Comments was published as a legal notice in the **Tallahassee Democrat and Calhoun Liberty Journal on date?**

On August 2009 notification that the draft EA was available on-line for review was mailed to the same individuals who received the initial scoping letter. Comments are summarized in Appendix D.

Issues

The Responsible Official and Interdisciplinary Team reviewed comments raised during project scoping. Issues are defined as unresolved conflicts that would be directly or indirectly caused by implementing the proposed action.

Issues are separated into two groups: significant and non-significant. Significant issues are defined as those directly or indirectly caused by implementing the proposed action. Non-significant issues are identified as those: 1) outside the scope of the proposed action; 2) already decided by law, regulation, Forest Plan, or other higher level decision; 3) irrelevant to the decision to be made; or 4) conjectural and not supported by scientific or factual evidence. The Council on Environmental Quality (CEQ) NEPA regulations require this delineation in Sec. 1501.7, "...identify and eliminate from detailed study the issues which are not significant or which have been covered by prior environmental review (Sec. 1506.3)..." There were no significant issues. A summary of non-significant issues brought up during scoping and reasons regarding their categorization as non-significant may be found in Appendix D.

ALTERNATIVES

Alternative A - No Action

This alternative would not implement the Proposed Action, current management would continue. The Forest Service maintains the option to reconsider and propose this action or similar actions at a later date.

Alternative B - The Proposed Action (maps 1-6)

Mechanical treatments would be used to create fire breaks up to 75 feet in width on Forest Service managed land. Approximately the first 15 feet of these fire breaks would be cleared of vegetation and then periodically brought down to mineral soil as is typically done with fire breaks. In the remainder of the width (approximately 60 feet) all shrubs and hardwood trees under 10 inches dbh, or up to the size limitation of the equipment, would be treated. The mechanical treatment would also be used for reduction of mid and understory vegetation in other selected pine stands in addition to two RCW clusters and a RCW recruitment stand. Pines would not be targeted for removal with this project, therefore, as many pines as possible would be left. The treatments would be accomplished using a Gyro-Trac™, Supertrak™, or a similar mulcher/shredder, or with equipment designed to remove the vegetation for other uses such as biomass. Cutting blades and equipment would be set to minimize ground disturbance. Manual labor with chainsaws or hand tools may also be used on occasion. Approximately 1400 acres would be treated. All acre quantities are estimates based on preliminary measurements.

No other alternatives were developed.

Coordination Measures

1. Work in the active clusters in Compartment 85 would not occur during the RCW breeding season, April 1 through July 31, unless a biologist determines through direct observation that the cluster is no longer active, there is not a pair, the pair is not nesting, or the young have fledged before July 31.
2. Gopher tortoise burrows would be avoided with heavy equipment. Equipment operators would be instructed to maintain a 25 foot distance during operations when known or previously unknown burrows are encountered.
3. To promote scenic and environmental goals of the Florida National Scenic Trail (FNST), trail protection measures would be used on the section in Compartment 351 as outlined in the FNST Certification Agreement between the USDA Forest Service and the Florida Trail Association, summarized in Appendix B.
4. To reduce the introduction and spread of non-native invasive plant species, contract clauses would require operators to clean equipment before entering a work site and when moving to a new site.
5. To reduce the possibility of rutting, treatment would occur during drier time periods. The Contracting Officers Representative (COR) and/or the assigned inspector would have the ability to adjust field operations due to soil and vegetation conditions.
6. Intact savannas and/or seepage areas in Compartment 85 would be GPSed, mapped and then flagged on the ground by the District Ecologist. The Ecologist and COR (or inspector) would be present during treatment to ensure heavy equipment does not impact the rare plants.

Comparison of Alternatives

This section provides a summary of the effects of implementing each alternative. Information in the table is focused on activities and effects where different levels of effects or outputs can be distinguished quantitatively or qualitatively among alternatives.

Table 2 - Comparison of Alternatives

Activity	Alternative A - No Action	Alternative B - Proposal
Acres mechanically treated for fuel reduction	0	1390
Acres RCW habitat restored/improved (pine type over 50 years of age)	0	491
Acres T&E plant habitat restored/improved (Apalach District C-85 only)	0	165

ENVIRONMENTAL CONSEQUENCES

Physical Components

Air, Soil, and Water

Affected Environment

Air

The Apalachicola National Forest is located directly adjacent to the city of Tallahassee and Tallahassee Regional Airport. Other populated communities surround the National Forest including Bristol, Crawfordville, Hosford, Sopchoppy, and Telogia. There are also small communities on the interior of the Forest. Several major state highways border, cross, or are located in close proximity to National Forest lands. Air quality in the forest may be affected slightly and periodically by industry, motor vehicle use, weather, and smoke from prescribed fire, wildfire, and debris burning by forest residents. The Forest Service works with state and federal regulatory agencies to assure a level of air quality that is adequate to promote public enjoyment of forest resources and to achieve the desired future conditions of forest resources. There is an air monitor positioned at the Wakulla Work Center that is maintained by the Florida Division of Air Resource Management. The proposed project is located within the Air Quality Class II area, which allows a reasonable amount of air pollution. The Bradwell Bay Wilderness, located on the Wakulla Ranger District, is designated as a Class I area. Air quality is further described in the Forest Plan FEIS (pp. 3-5 and 3-6), and in the National Forests in Florida 2007 Annual Monitoring and Evaluation Report.

Soil

There are 18 main soil series in the project area. All have a "slight" erosion hazard and 14 have "moderate" equipment limitations with 4 having "severe" limitations. Drainage class varies from Moderately Well Drained (2), Somewhat Poorly Drained (5), Poorly Drained (7) to Very Poorly Drained (4). More about soils may be found in the Forest Plan FEIS (p. 3-6) and specific series information is available from the Team Leader for this project.

Water

Presently, all streams and lakes on the ANF that have been monitored meet State and Federal water quality standards. They are usually clear, very soft, acidic, and low in phosphorus. Most are stained brown by tannic acid. The Sopchoppy River on the Wakulla Ranger District is considered representative of unaltered conditions and is used as a hydrologic benchmark. The ANF has approximately 671 miles of perennial streams, 2,735 acres of lakes, 280,017 acres of wetlands and 17,436 acres of other riparian areas. Some of the proposed treatment areas are near or adjacent to wetlands and also to the portion of the Sopchoppy River in compartment 353 designated as "Recreational". Water is discussed in the FEIS (pp. 3-7 through 3-15).

Effects of No Action - Alternative A

Without the proposed action no additional impacts on air quality, soils, or water quality are anticipated. Except, if a wildfire does occur in these areas, there would be a temporary impact on

air quality from the amount of smoke that would result from burning through the increasingly high fuel loadings. Additionally, in the event of a wildfire, some soil characteristics may be altered by the heat from an intense fire burning in heavy fuel loads.

Effects of the Proposed Action - Alternative B

Air

Air quality would be temporarily reduced in the immediate vicinity of heavy equipment due to exhaust from their combustion engines. If conditions become very dry the activities may further reduce air quality by increasing dust in the air. These would be very temporary impacts that would dissipate in a relatively short time frame. All air quality standards would continue to be met.

Air monitoring on the Wakulla Ranger District has shown that with prescribed fire there are far less impacts on air quality than with wildfires (Harvey and Fitzgerald 2004). Smoke concerns become more serious as fuel loadings increase. Heightened concerns would still temporarily exist in these areas, especially if the mulched material is not removed, but they would lessen as time went on and the areas are repeatedly burned.

Soil

Soil productivity is maintained by minimizing erosion, compaction, and rutting. A comparison of soil loss and sediment yield rates with tolerable soil loss rates shows that soil loss from National Forests in Florida lands falls within acceptable limits (FEIS, p. 3-6).

Vegetation treatments may cause minute reductions in soil fertility due to minor soil disturbance. Most disturbances would be limited to the vegetative litter. If the vegetation is not left on site and removed for other uses this could also cause a small reduction of soil fertility in the treatment areas. Either way, no permanent impairment of site productivity is expected.

Erosion is not anticipated; soils in the treatment areas are not sensitive to erosion and are all in the "slight" category for erosion hazard. Five categories are typically used to assess erosion hazard - slight, moderate, high, very high and extreme. These assessments have been based on field observations of existing erosion, terrain factors and the erodibility of the soil materials in the soil landscape. A category of "slight" indicates that no substantial erosion damage is likely to occur during and after a particular land use.

The drainage classes on all of the soils and equipment limitation on some indicate that care must be taken to avoid rutting during the vegetation treatments. The Contracting Officers Representative would be given flexibility to adjust field operations due to soil conditions.

Plowing, blading, and/or disking of fire lines next to private property has already been occurring periodically, therefore, there would be very little additional soil disturbance other than what already has been done and analyzed as an accepted fire management practice (Apalachicola Fiscal Year (FY) 2007 – 2011 Prescribed Burn EA. August 28, 2006).

Water

No erosion into streams, lakes, or wetlands is likely. The soils in the project area have a "slight" erosion hazard, some sand and small surface litter may be moved a few feet during treatment. Past projects on this Forest (mostly timber sales) have shown that no adverse effects on water quality are likely to take place.

The section of the Sopchoppy River that is in proximity to the project area is designated as "Recreational". This designation allows "substantial evidence of human activity" (Wild and Scenic Rivers Reference Guide. 2007). With this current designation the proposed project falls within the guidelines for this river.

Biological Components

Vegetation

Affected Environment

The treatment acres are predominately within the mesic and wet flatwoods community types (pp. 3-15 through 3-65 FEIS). These natural communities need frequent fire to maintain their character and species balance. The treatment areas have been fire excluded too long to maintain this balance. Without regular fire, shrubs and hardwood trees will dominant the site instead of the desired fire climax state of pines and herbaceous vegetation. This dominance of woody shrubs creates abnormal, excessive fuel loading that, if a wildfire does occur, it could be catastrophic for both natural and human communities. Threatened, endangered and sensitive plant species are covered in Appendix E of the Forest Plan FEIS.

Plant Communities

Effects of No Action - Alternative A

Plant composition and balance would not change, except slowly by natural community succession. This succession, if it goes on long enough, would result in a shrubby, overgrown hardwood dominated community with high fire hazard. Pines would likely not be able to regenerate under these conditions.

Effects of the Proposed Action - Alternative B

The mechanical treatment alone would not change the vegetation composition or community type but it would set back the shrubs and possibly allow some herbaceous recovery. The subsequent prescribed fire is what would move these areas back to the desired fire climax vegetative composition.

One potential adverse effect is the introduction or spread of exotic species such as cogongrass (*Imperata cylindrica*). To minimize this potential, contract clauses would require operators to clean equipment before relocating to the Forest and when moving between separate treatment areas. If a population of non-native invasive species is discovered in the analysis area it would

be treated under the authority established in the Environmental Assessment for Non-Native Invasive Plant Control on the Apalachicola National Forest (July 15, 2004).

Management Indicator Species - Plants

A Management Indicator Species (MIS) is a species selected because its welfare is presumed to be an indicator of the welfare of other species in the same habitat. It is a species whose condition can be used to assess the impacts of management actions on a particular area. More information can be found pp 5-9 through 5-11 in the LRMP.

Three plants have been designated as MIS for Mesic and Wet Flatwoods community types: Curtis dropseed (*Sporobolus curtissii*), white-birds-in-a-nest (*Macbridea alba*) and wiregrass (*Aristida beyrichiana*). No baseline sampling was conducted specifically for this project. We do know, from their requirements, that in the present state the treatment areas do not offer much, if any, good habitat for these plants.

For more information see the National Forests in Florida 2007 Monitoring Report available on line.

Effects of No Action - Alternative A

Any MIS plants present would likely eventually drop out of the community as it succeeds from mesic and wet pine flatwoods to a much more shrubby and woody dominated system.

Effects of the Proposed Action - Alternative B

The mechanical treatment alone would not change the vegetation composition or community type but it would set back the shrubs and possibly allow some herbaceous and MIS recovery. The subsequent prescribed fire is what would move these areas back to the desired fire climax vegetative composition and result in habitat conditions needed by these MIS.

Threatened, Endangered, and Sensitive Plants

A survey of the area in Compartment 85 on the Apalachicola Ranger District was conducted in 2001 and two locations of Florida skullcap (*Scutellaria floridana*) were found in the treatment area. The site is very overgrown with shrubs, it likely will not offer habitat for listed species much longer. There are no known locations of T&E plants on the Wakulla Ranger District. See Biological Evaluation in Appendix C.

Effects of No Action - Alternative A

The BE determined that the No Action May Affect plants listed as Threatened because they were known to be present and the habitat is gradually degrading due to lack of management, mostly fire. The No Action May Impact Individuals but is Not Likely to Cause a Trend to Federal Listing or a Loss of Viability for Sensitive species. This determination for Sensitive species is based on the loss of habitat due to continued fire exclusion in the project area.

Effects of the Proposed Action - Alternative B

The BE determined that the Proposed Action would be Not Likely to Adversely Effect Federally listed plant species. Although there are records of Florida skullcap in the Compartment 85 treatment area, the present and continued encroachment of titi and other woody vegetation poses a larger risk to this threatened plant species than mowing and/or mulching and prescribed burning would. These management activities, by opening up the midstory, would enhance this plant's chances for survival and increase in this area. The Proposed Action May Impact Individuals but is Not Likely to Cause a Trend to Federal Listing or a Loss of Viability for Sensitive plant species. This is due to the possibility of them being cut or crushed with the heavy equipment. Shrub cover reduction would be a positive change in habitat for these species and the subsequent prescribed burning has the potential to allow populations to recover and increase.

Wildlife

Affected Environment

The Apalachicola National Forest is directed to operate under the guidelines of ecosystem management as prescribed in the National Forest Management Act (NFMA), Endangered Species Act (ESA), and the LRMP for the National Forests in Florida. NFMA mandates that the U. S. Forest Service provide for and maintain a diversity of plant and animal communities and manage habitat to maintain viable populations of vertebrate wildlife, and that all management prescriptions minimize serious or long-lasting hazards from wildfire. ESA mandates federal agencies to conserve endangered and threatened species and to implement recovery plans for listed species, while it also prohibits the take of listed species. There are 4 threatened, 7 endangered, and 23 sensitive animal species listed that may occur on the ANF. Wildlife is addressed pp 3-66 through 3-79 in the Forest Plan FEIS, threatened, endangered and sensitive wildlife species are covered in Appendix E of the FEIS.

The predominant natural community in this project proposal is mesic to wet pine flatwoods and the wildlife that could occur in the analysis area is typical of the southern Coastal Plain.

Management Indicator Species - Animals

A Management Indicator Species (MIS) is a species selected because its welfare is presumed to be an indicator of the welfare of other species in the same habitat. It is a species whose condition can be used to assess the impacts of management actions on a particular area. More information can be found pp 5-9 through 5-11 in the LRMP.

Two animals have been designated as MIS for Mesic and Wet Flatwoods community types: bobwhite quail (*Colinus virginianus*) and red-cockaded woodpecker (*Picoides borealis*).

The bobwhite quail is a popular game species and serves as an indicator for sandhill and flatwoods communities on the National Forests in Florida. Breeding Bird Survey (BBS) data indicate low densities statewide. BBS counts and R8 bird point data for the Forest show the northern bobwhite at low and variable densities and trends difficult to determine (2007 Annual

Monitoring and Evaluation Report, National Forests in Florida). This type of monitoring is planned to continue. There is concern about the decline of this bird across its entire range and presently there are numerous management initiatives addressing this.

The red-cockaded woodpecker (RCW) is listed as a federally endangered species. There are 2 active clusters and 1 inactive recruitment site in the treatment area. The most recent GIS database shows there are 499 active and 160 inactive clusters on the Apalachicola Ranger District and 130 active and 213 inactive on the Wakulla Ranger District. A random sample of clusters has been chosen and monitored since 1992. This sampling, along with other forms of monitoring, indicates a stable population on the Apalachicola District. The Wakulla Ranger District population had shown a decline but is now recently showing signs of increase.

Effects of No Action - Alternative A

With the No Action alternative, bobwhite quail trends in these areas would be expected to show no change or a decline. The lack of prescribed burning and herbaceous vegetation would likely result in continued habitat degradation for this bird.

The No Action alternative would not reduce the shrubs and other woody vegetation in the RCW clusters or recruitment area in order for the Forest Service to prescribe burn them. If fire exclusion continues the RCWs in the two active clusters will likely abandon due to the continuing degradation of their habitat and the recruitment site would never become active.

Effects of the Proposed Action - Alternative B

The action alternative would contribute to improving habitat for the bobwhite quail. Mechanical shrub and hardwood reduction and prescribed fire to control woody vegetation are common practices used in quail management. Like RCWs, bobwhites prefer open, well-burned pine stands. It is unlikely a significant population difference would be realized due to this one project. The effects of this and other ongoing and future projects that restore the open pine system could influence quail numbers in a noticeable way but these would be long-term changes. We would expect to see an increase in quail as the desired future condition for the entire Forest is attained.

The Proposed Action would dramatically improve habitat conditions for the RCW in the project area. Reducing the fuel height and loading with mechanical means followed by prescribed burning would stop and reverse the change in vegetative structure that is occurring in the two active clusters on the Apalachicola Ranger District. Implementing this project would likely prevent the RCWs from abandoning. We also may eventually see RCWs move into areas on the Wakulla Ranger District where they presently do not occur once the habitat is in better shape for them.

Threatened, Endangered, and Sensitive Wildlife

Effects of No Action - Alternative A

The BE (Appendix C) has a May Affect determination for RCWs. If the current shrub growth continues in the two active clusters, the birds will eventually abandon those sites and those individuals would be impacted.

A No Effect determination has been concluded for the gray bat, wood stork, indigo snake, flatwoods salamander, gulf sturgeon and mussels. It is highly unlikely any of these species occur in the project areas.

The No Action would have No Impact on Aquatic Sensitive species and for Terrestrial Sensitive species it May Impact Individuals but is Not Likely to Cause a Trend toward Federal Listing or a Loss of Viability for Sensitive species. There may be some impact on individuals from the continued high woody vegetative load and lack of fire in their habitat.

Effects of the Proposed Action - Alternative B

A No Effect determination has been concluded for the gray bat, wood stork, indigo snake, gulf sturgeon and mussels. It is highly unlikely any of these species occur in the project areas.

The proposal is Not Likely to Adversely Affect the RCW or flatwoods salamander. One of the goals of this project is to improve RCW habitat and when achieved, it would also improve the type of habitat used by flatwoods salamanders (open, well-burned flatwoods).

There would be No Impact on Aquatic Sensitive species and for Terrestrial Sensitive species the proposal May Impact Individuals but is Not Likely to Cause a Trend toward Federal Listing or a Loss of Viability. Heavy equipment use would be the main impact on these species, they may be crushed and injured or killed. In the long term, with the reintroduction of fire, the habitat would improve and the overall project would be beneficial.

See Biological Evaluation in Appendix C for more information.

Socioeconomic Components

Under ecosystem management, the Forest is viewed as a composite of tangible and intangible values in both a biological and social context. In the social context, the environment consists of the economic, physical, cultural, and spiritual conditions existing as places, settings, enclaves, or specialized landscapes at various scales. The socioeconomic environment is described in the FEIS (pp. 3-189 through 3-198).

Economics

Affected Environment

The Forest contributes to local county economies via receipts from user fees and sale of forest products. A percent of the revenues from National Forest lands within state boundaries are returned to that state. The state then distributes those funds to their counties with National Forest

lands in their boundaries. The Forest also contributes to the economy by attracting out of area visitors who then spend tourism dollars at local businesses.

Effects of No Action - Alternative A

There would be no associated dollar revenues or costs. This alternative would not measurably change employment, income or population in and around the ANF. No effects on the socioeconomic environment are anticipated. If a wildfire did occur in these areas of heavy fuel loading and it could not be controlled, houses and other property could be lost and firefighters put in heightened danger. Any event where houses and property are lost causes economic impacts not only on the property owners but the community also.

Effects of the Proposed Action - Alternative B

The Proposed Action would not measurably change employment, income, or population in and around the ANF. No discernable effects on the socioeconomic environment are anticipated. The project is planned to be implemented with a contract and it is assumed it would be awarded to a local company because of their proximity to the Forest they are more likely to bid. Therefore, there could be some local economic benefit for a few but not enough to change the current overall situation. If it is not contracted and the work is done by Forest Service personnel, again, there would be no noticeable economic impact on the community. The project would have no impact on tourism.

There would be the intangible, mostly immeasurable benefits of a better managed forest and a reduced possibility of catastrophic wildfire which would in turn lessen the chances of loss of property and firefighter harm.

Recreation and Scenery

Affected Environment

The affected environment is described in the FEIS (pp. 3-133 through 3-143, and pp. 3-154 through 3-160).

The visual quality of the ANF meets LRMP standards. A variety of ecosystems are present, but the dominant ones are mesic and wet flatwoods. All seral stages can be seen from roads or trails. This provides opportunities to view a variety of landscapes and wildlife. Driving for sightseeing is popular on the ANF and complaints related to visual quality are very rare.

A section of the Florida National Scenic Trail (FNST) traverses the treatment area in Compartment 351. The project would go almost to the banks of a portion of the Sopchoppy River designated as "Recreational" (FEIS, Wild and Scenic Rivers Reference Guide 2007).

Adjacent homeowners may enjoy the Forest as an undeveloped view from their properties and as a buffer between them and other developments such as highways and buildings.

Effects of No Action - Alternative A

Camping, hiking, driving for sightseeing, off-road vehicle driving, wildlife viewing, hunting and fishing opportunities would not be adversely affected in the short term. The current scenery would remain, but would change over time as the hardwoods become more dominant. Live healthy pine trees would age with time until natural events (insects, disease, wind, fire, or succession) alter the situation. The chance for catastrophic type wildfires in these urban interface areas would increase. Those types of fires would char the scenery and could create dangerous situations for users.

Effects of the Proposed Action - Alternative B

Opening up the fire lines along Forest/private boundaries may tempt some Forest users to drive on these lines. Some of them run very close to private dwellings. If the lines are not designated as a numbered road, do not have a number posted on them on the ground, and are not on the Forest's Motor Vehicle Use Map (MVUM) than it is illegal to be using a motor vehicle on them. The Forest Service has no plans to designate these fire lines as public travelways if they are not already at this time.

Local residents adjacent to the Forest would have to deal with the temporary annoyance of having equipment operate next to their property and in some cases very close to their homes. The present visual and scenic aspects that the public has become used to are outside the norm and are not indicative of the fire climax community. These aspects would be impacted due to the clearing, mulched materials and subsequent prescribed burning. A regular prescribed fire regime would be applied that would allow for the natural forest processes such as regrowth and regeneration to occur in all but the 15-foot disked line. Broadleaf forest areas would be treated the same and they may or may not burn with subsequent prescribed fire. Natural regrowth would take place. The "look" of the Forest would improve with each burn and fuels would stay low (Hull et. al, 2008).

Hiking on the FNST may be made temporarily unappealing. To protect the FNST in Compartment 351, operational guidance in proximity to the Florida Trail is provided in Appendix B. Any potential impacts to the trail or trail user safety would be of short duration.

The section of the Sopchoppy River that is in proximity to the project area is designated as "Recreational". This designation allows "substantial evidence of human activity" (Wild and Scenic Rivers Reference Guide. 2007). With this current designation the proposed project falls within the guidelines for this river.

Heritage Resources

Affected Environment

Heritage resources are described in the FEIS (pp. 3-101 through 3-105). All proposed projects on the ANF are reviewed by an archeologist and the State Historic Preservation Officer (SHPO) is also consulted.

Effects of No Action - Alternative A

Without any actions no impacts on heritage resources are anticipated.

Effects of the Proposed Action - Alternative B

The Proposed Action would have no adverse effects on known heritage resources. A review by the District Archeologist of the project area was conducted. Any known sites of concern would be avoided or potential damage prevented with operating guidelines developed with the archeologist and incorporated into the contract specifications.

Environmental Justice and Civil Rights

Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations", provides that each "Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations."

No disproportionately high and adverse human health or environmental impact on minority populations, low income populations, or Indian tribe is likely to result from the selection of either alternative. Neither alternative is expected to have any negative affects on the civil rights of citizens of Franklin, Leon, Liberty or Wakulla counties or the surrounding area. No minorities would be discriminated against because of either alternative. No groups of people would be disproportionably affected as a consequence of either alternative. All labor contracts prepared to implement the Proposed Action would have clauses that prohibit discrimination. There are no foreseeable changes in the management of the forest or surrounding private lands that would adversely affect the civil rights of people in the future.

Short-term Uses versus Long-term Productivity

National Environmental Policy Act (NEPA) requires consideration of "the relationship between short-term uses of man's environment and the maintenance and enhancement of long-term productivity (40 CFR 1502.16). As declared by Congress, this includes using all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans (NEPA Section 101).

The No Action, may in the long-term, reduce productivity as the areas succeed to shrub and hardwood dominated systems that become prone to catastrophic fire events.

The Action Alternative would maintain and even increase productivity on these acres by reducing fuels, recycling nutrients, and maintaining or restoring the native fire climax community.

Irreversible and Irretrievable Commitment of Resources_____

Irreversible commitments of resources are those that cannot be regained, such as the extinction of a species or the removal of mined ore. Irretrievable commitments are those that are lost for a period of time such as the temporary loss of timber productivity in forested areas that are kept clear for use as a power line right-of-way or road.

Neither of the alternatives would cause an irreversible commitment of resources.

Both alternatives would cause an irretrievable commitment of resources (no trees) in the 15-foot fire line in exchange for fire protection and management.

AGENCIES AND PERSONS CONSULTED OR CONTACTED

The Forest Service consulted with or contacted the following federal, state and local agencies, tribes, organizations and individuals during the development of this environmental assessment:

Interdisciplinary Team

- Susan Fitzgerald, Wildlife Biologist, ANF, NFF (Team Leader)
- Lauren Stull, Deputy District Ranger, NFNC (Previous Team Leader)
- Ken Gordon, Fire Planner, NFF (Original Team Leader)
- Steve Parrish, Fire, ANF, NFF

Contributors

- Eugene Watkins, USFS, ANF Fuels Technician
- Chuck Hess, USFS, ANF Wildlife Biologist
- Haven Cook, USFS, NFF, Dispersed Recreation Specialist
- Michelle Mitchell, NFF, Trails Coordinator
- Kent Wimmer, FNST, Trails Liaison
- Chandra Roberts, USFS, ANF, Forester
- Andrea Repp, USFS, ANF, Archeologist
- Louise Kim, USFS, ANF, District Ecologist

Federal, State, and Local Agencies

- Florida State Division of Forestry
- Florida State Division of Historical Resources
- US Fish and Wildlife Service
- Florida Fish and Wildlife Conservation Commission

Tribes

- Kialegee Tribal Town

- Miccosukee Indian Tribe
- Mississippi Band of Choctaw Indians
- Choctaw Nation of Oklahoma
- Chickasaw Nation
- Alabama-Quassarte Tribal Town
- Seminole Tribe of Florida
- Seminole Nation of Oklahoma
- Poarch Creek Indians
- Muscogee (Creek) Nation

Others

- Adjacent Land Owners
- Apalachicola National Forest Interested Public Mailing List

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http://www.fs.fed.us/r8/florida/projects/documents/2007_annual_monitoring_report.pdf

USDA Natural Resource Conservation Service. Soil Survey of Liberty County, Florida (2007) and Soil Survey of Wakulla County, Florida (1991)

http://soils.usda.gov/survey/online_surveys/florida/

Soil erosion categories

<http://www.environment.nsw.gov.au/soils/tests9.htm>

Appendix A – Maps 1-6

Map 1 - Project Proposal Area

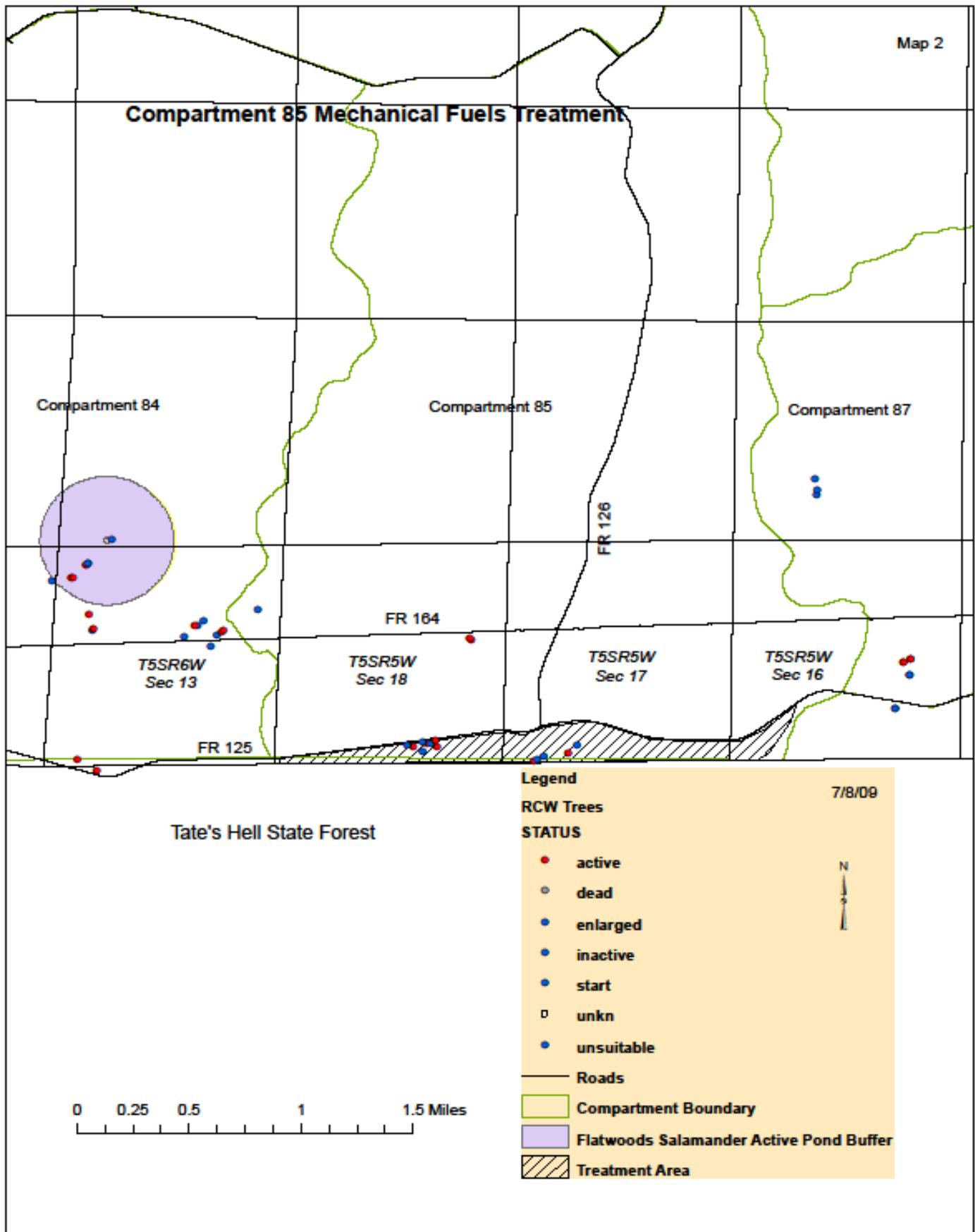
Map 2 - Compartment 85 – T5S R5W

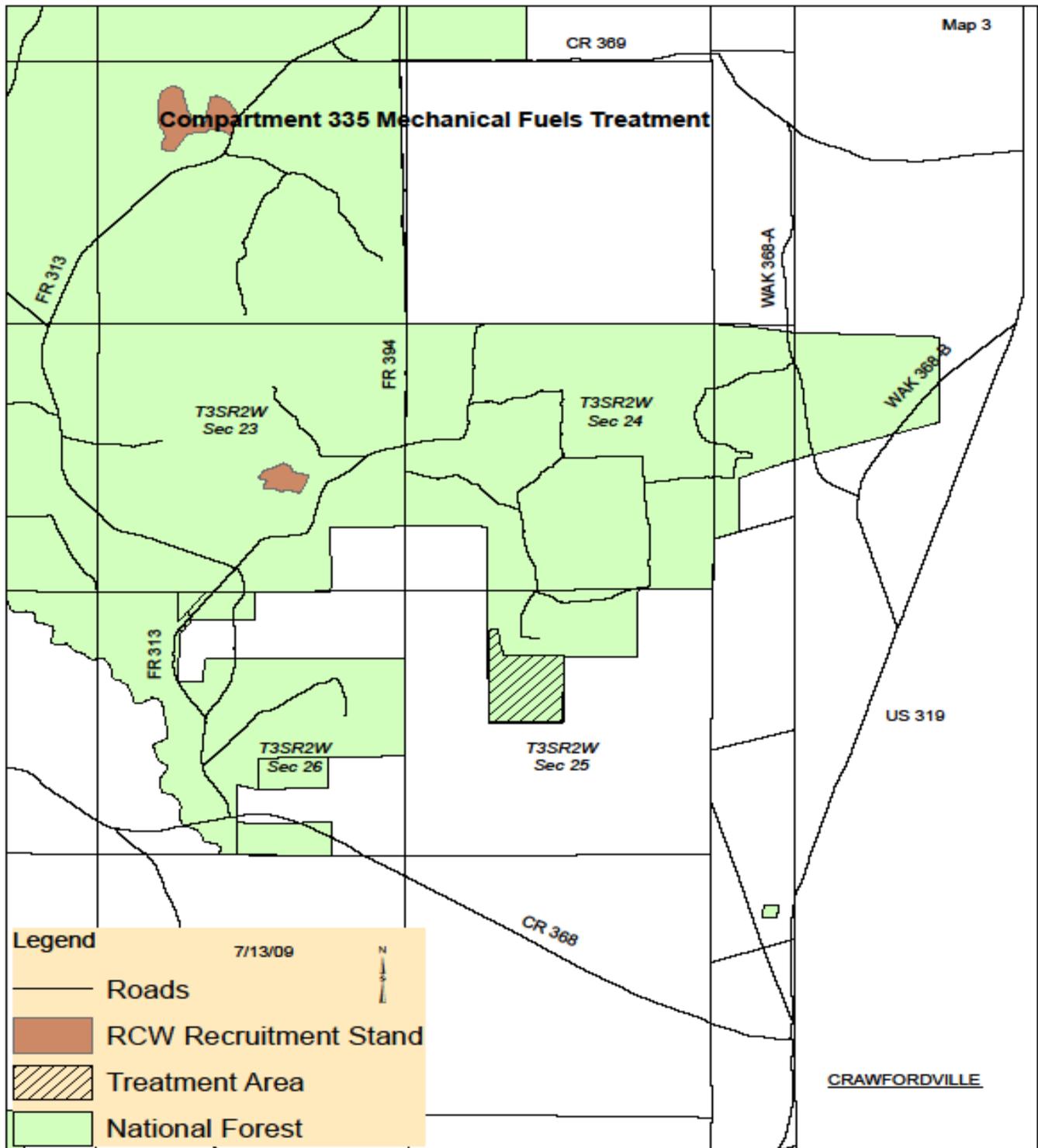
Map 3 - Compartment 335 – T3S R2W

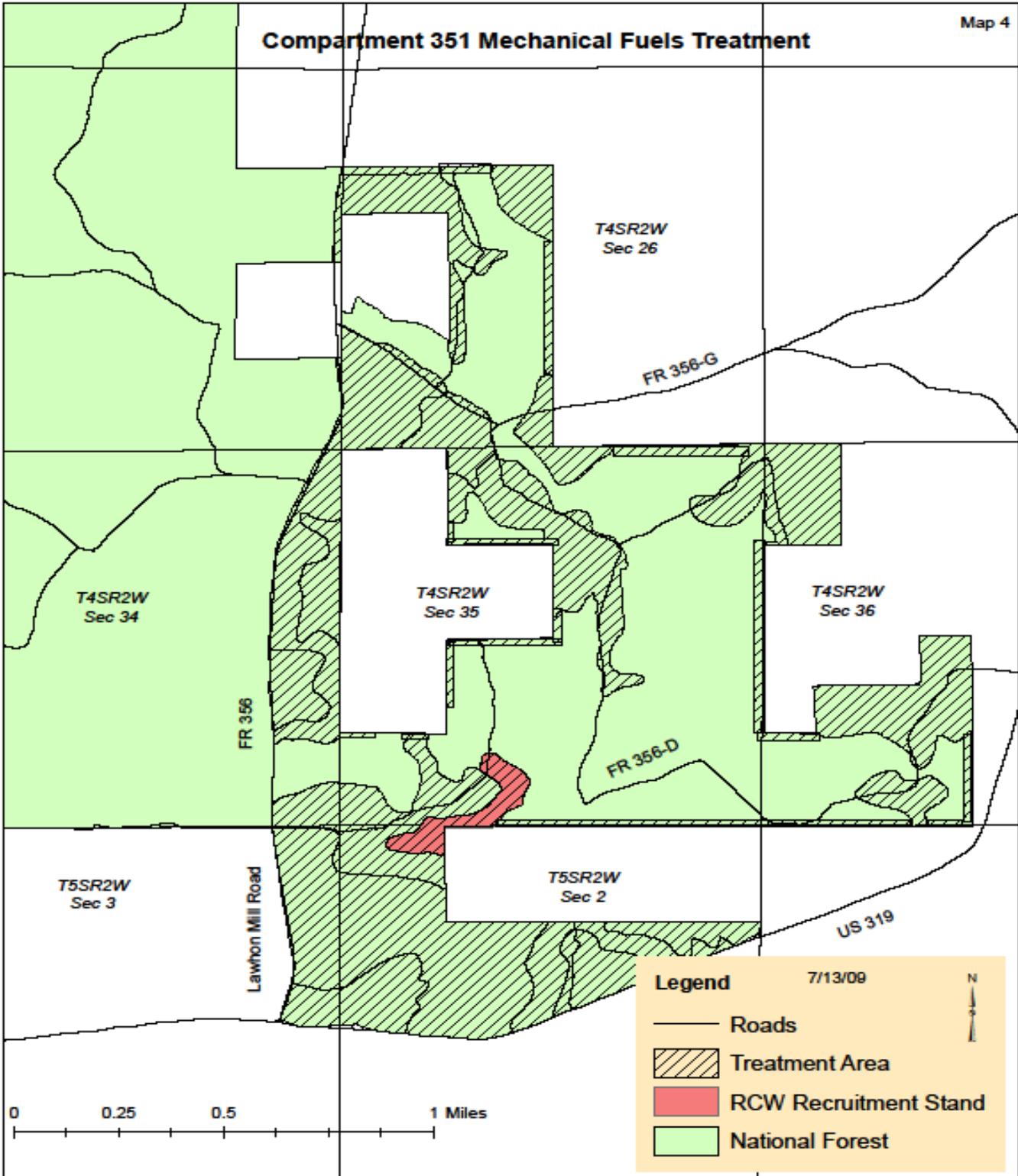
Map 4 - Compartment 351 – T4S R2W, T5S R2W

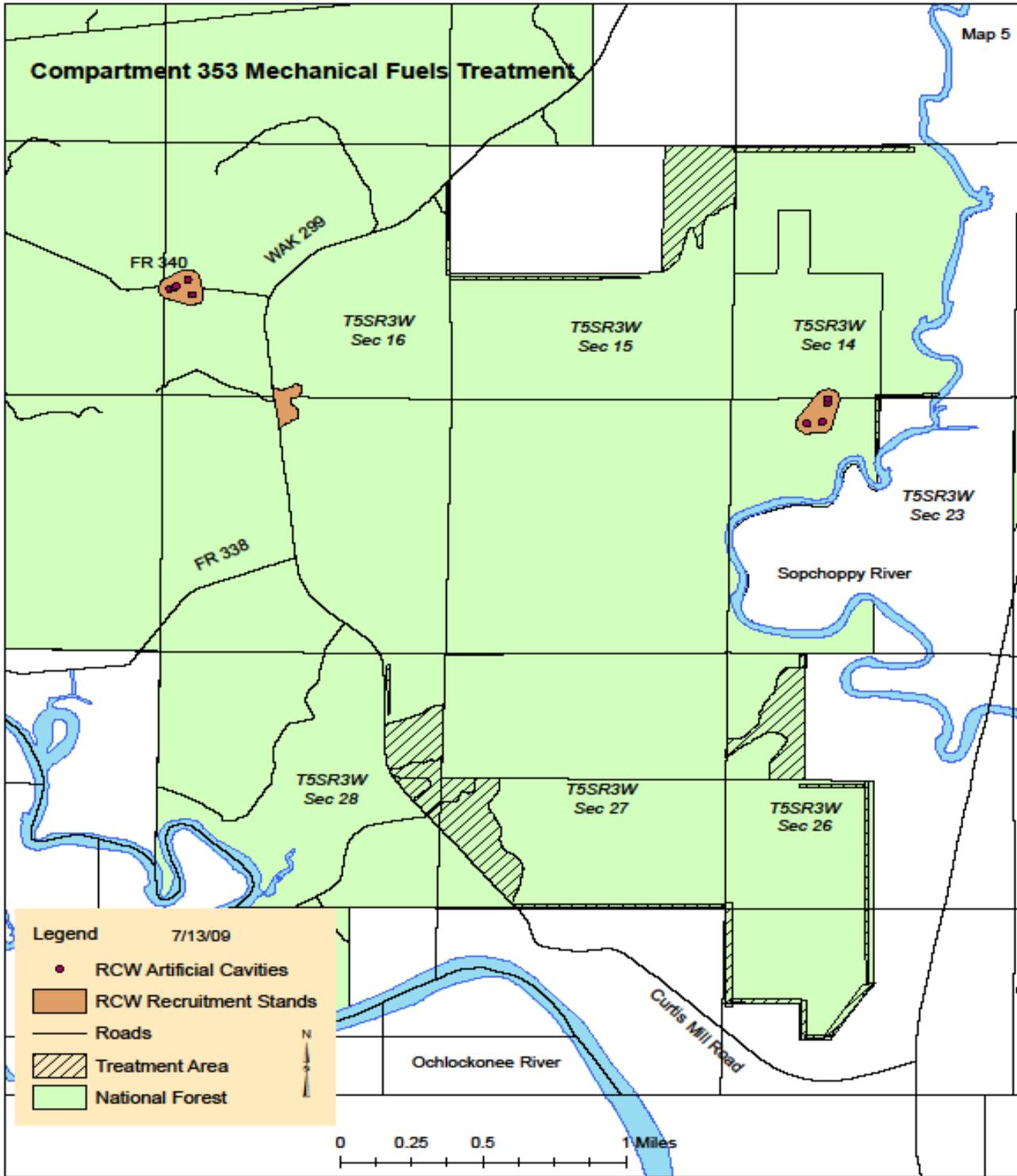
Map 5 - Compartment 353 – T5S R3W

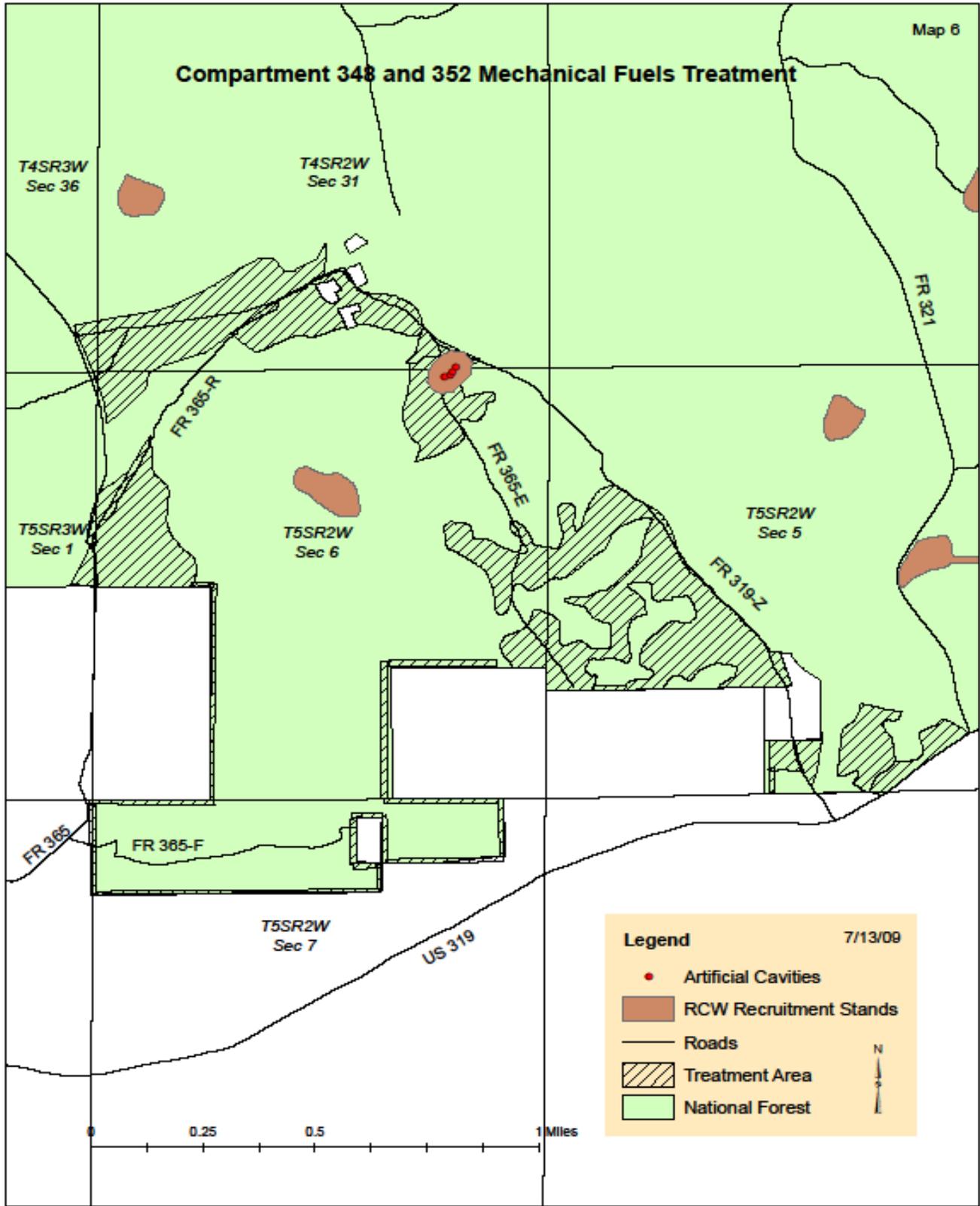
Map 6 - Compartment 348, 352 – T5S R3W, T4S R2W, T5SR2W











Appendix B

Guidance for operations to protect the Florida National Scenic Trail:

1. The Trail experience should be managed in accordance with the USDA Forest Service's scenery management system. The objective is to minimize negative visual impacts in the trail viewshed and to improve the scenic characteristics within the trail viewshed, especially within the foreground. The Trail experience should be further enhanced by preventing or mitigating sound impacts.
2. Notify trail users about mechanical fuel reduction activities through FTA (Kent Wimmer) and by posting of signs at road crossings on each side of the area of operations, any affected campsites and/or trailheads and through personal contact with hikers.
3. When possible, alternative temporary routes around these areas should be established for trail users prior to operations or the existing trail route through the operations area should be kept passable via prompt blazing and debris removal.
4. Informational signs should be posted on the trail where it enters a fuel reduction operations area informing hikers of the harvest activities and potential benefits to the forest.
5. Reduced vegetation should be scattered and treated to lie within two feet of the ground and at least 10 feet from the trail.
6. Protect the trail tread (the compacted soil where hikers place feet), blazed trees, and trail signs from damage during fuel reduction operations.
7. Repair damaged tread, replace blaze trees that are eliminated with posts if necessary, and replace damaged trail signs as soon as possible. The trail tread should remain be at least 18 wide. The trail tread should be properly cleared with all vegetation removed or cut at or below ground level to avoid leaving stubs in the tread that trip hikers.
8. Avoid felling trees on or across the Trail.

Appendix C

Biological Evaluation
Mechanical Fuels Reduction
Compartments 85, 335, 348, 351, 352, 353, 354
Apalachicola National Forest
August 2009

I. INTRODUCTION

Background

Many ecosystem conditions across the United States and on the Apalachicola National Forest are inherently linked to fire, thus a rating system developed to categorize the level of fire fuels, the Fire Regime Condition Class (FRCC) can be applied to describe existing vegetation conditions. The FRCC categories of 1 through 3 describe a range of vegetative fire fuels; “FRCC 1” represents conditions close to natural (or preEuropean settlement) structure and species composition, “FRCC 2” denotes an intermediary stage, and “FRCC 3” represents a marked departure from a healthy, functioning ecosystem. FRCC 3 is characterized by unnaturally heavy fire fuel loads that create a potential for extreme resource damage in the event of wildland fire².

The Apalachicola National Forest (ANF) is actively maintaining and restoring fire on the Forest, as part of this effort those areas that are outside the appropriate condition class (FRCC 1) are being identified. The existing fuel loads in the proposed project area most closely resemble FRCC 3. Many of the forest stands which would historically burn several times each decade have not burned or not burned well in at least the last ten to fifteen years. The lack of frequent fire and past silvicultural management have altered vegetation structure and composition, creating dense stands that allow fire to travel faster, higher into the canopy, and with more intensity. These increased fuel loads raise the risk of extreme fire behavior when wildfires occur or prescribed fire is applied. In the event of a wildfire, this extreme fire behavior increases the threat to private structures, firefighter safety, and natural resources.

Purpose and Need for Action

The treatment areas are adjacent or in close proximity to the wildland-urban interface or other private and agency property boundaries. Typically, fire fuel loads are heavy along these National Forest system/other land boundaries where smoke concerns and the close proximity of structures increase restraints for prescribed burning. Fuels may be contiguous across the National Forest/other lands boundary and create complex burning scenarios. In the past, the use of prescribed burning to decrease fuel loads in the treatment areas has been infrequent or avoided

² The level of fuel loading can be categorized using the Fire Regime Condition Class (FRCC), a definition that grew out of the Federal Wildland Fire Policy of 1995 (*Western National Forests: A Cohesive Strategy is Needed to Address Catastrophic Wildfire Threats* (RCED-99-65)). The FRCC is a classification of the condition of fuels using vegetative structure, species composition, and pattern in relation to the natural (historical) fire regime appropriate to the local ecosystem or regional biogeographic classification.

due to the fuel accumulation and the complexity of establishing secure firelines in these interface areas.

Two active red-cockaded woodpecker (RCW) clusters, one inactive recruitment stand with old inserts, and a recruitment stand with no cavities exist within the treatment area. The absence of fire has created dense mid- and understories with a reduced herbaceous groundcover. These areas will most likely not continue to serve as productive habitat for the RCW or any other rare species if grassy and herbaceous groundcover and sparse midstory conditions are not restored.

This Mechanical Fuels Reduction project is proposed to assist the continuing restoration of fire to the forest ecosystem as directed by the National Forests in Florida Forest Plan and to return these areas to the desired FRCC. The purpose of the project is to create and maintain fire breaks and reduce heavy fuel loads in forest stands adjacent and near the wildland-urban interface and other private and agency property. This in turn would aid the reintroduction of prescribed fire to the forest ecosystem, reduce wildfire risk and behavior, and enhance wildfire protection capabilities. Fuel reduction in these interface areas could also lessen some smoke management concerns. Another component of the purpose and need is to improve red-cockaded woodpecker (RCW) habitat within the treatment areas. There are two clusters and two recruitment stands that are overgrown with shrubs due to their location along the forest boundary and/or the complexity involved with burning them. RCWs and other rare species require more open, grassy, and herbaceous habitat in order to thrive. These open conditions can be achieved with prescribed fire but presently the fuel loading is too high and burning the clusters without prior fuel reduction treatments could result in tree and cavity tree mortality.

II. AFFECTED AREA AND PROPOSED ACTION

The Forest Service is proposing to mechanically reduce approximately 1400 acres of hazardous fuels to enhance fire protection capabilities adjacent and near to the wildland-urban interface and other private and agency property and to facilitate the reintroduction of fire into the forest ecosystem. The treatment area includes portions of compartments 85, 335, 348, 351, 352, 353, and 354 on the Apalachicola National Forest. These areas are located in sections of T3SR2W, T4SR2W, T5SR2W, T5SR3W, and T5SR5W. (Table 1 and Maps 1-6).

Mechanical treatments would be used to create fire breaks up to 75 feet in width on Forest Service managed land. Approximately the first 15 feet of these fire breaks would be cleared of vegetation and then periodically brought down to mineral soil as is typically done with fire breaks. In the remainder of the width (approximately 60 feet) all shrubs and hardwood trees under 10 inches dbh, or up to the size limitation of the equipment, would be treated. The mechanical treatment would also be used for reduction of mid and understory vegetation in other selected pine stands in addition to two RCW clusters and two RCW recruitment stands. Pines would not be targeted for removal with this project, therefore, as many pines as possible would be left. The treatments would be accomplished using a Gyro-Trac™, Supertrak™, or a similar mulcher/shredder, or with equipment designed to remove the vegetation for other uses such as biomass. Cutting blades and equipment would be set to minimize ground disturbance. Manual labor with chainsaws or other hand tools may also be used on occasion.

Alternatives

Alternative A - No Action

This alternative would not implement the Proposed Action, current management would continue. The Forest Service maintains the option to reconsider and propose this action or similar actions at a later date.

Alternative B - The Proposed Action (Maps 1-6)

Mechanical treatments would be used to create fire breaks up to 75 feet in width. Approximately the first 15 feet of these fire breaks would be cleared of all vegetation and trees and then periodically brought down to mineral soil as is typically done with fire breaks. In the remainder of the width (approximately 60 feet) all shrubs and hardwood trees under 10 inches dbh, or up to the size limitation of the equipment, would be treated. The mechanical treatment would also be used for reduction of mid and understory vegetation in other selected pine stands in addition to two RCW clusters and two RCW recruitment stands. Pines would not be targeted for removal with this project, therefore, as many pines as possible would be left. The treatments would be accomplished using a Gyro-Trac™, Supertrak™, or a similar mulcher/shredder, or with equipment designed to remove the vegetation for other uses such as biomass. Cutting blades and equipment would be set to minimize ground disturbance. Manual labor using chainsaws or hand tools may also be used on occasion. Approximately 1400 acres would be treated. All acre quantities are estimates based on preliminary measurements. Intact savannas and/or seepage areas (some containing documented rare plant locations) occur within the project area and would be avoided (Compartment 85).

No other alternatives were developed.

Coordination Measures

- Work in the active clusters in Compartment 85 would not occur during the RCW breeding season, April 1 through July 31, unless a biologist determines through direct observation that the cluster is no longer active, there is not a pair, the pair is not nesting, or the young have fledged before July 31.
- Gopher tortoise burrows would be avoided with heavy equipment. Equipment operators would be instructed to maintain a 25 foot distance during operations when known or unknown burrows are encountered.
- To reduce the introduction and spread of non-native invasive plant species, contract clauses would require operators to clean equipment before entering a work site and when moving to a new site.
- To reduce the possibility of rutting, treatment would occur during drier time periods. The Contracting Officers Representative (COR) and/or the assigned inspector would have the ability to adjust field operations due to soil and vegetation conditions.

- Intact savannas and/or seepage areas in Compartment 85 would be GPSed, mapped and then flagged on the ground by the District Ecologist. The Ecologist and COR (or inspector) would be present during treatment to ensure heavy equipment does not impact the rare plants.

Table 1. Proposed Action by compartment, township, range, section, and stand, 1390 total acres.

Compartment	Township	Range	Sections	Stand Number	Acres
335	3 S	2 W	25	44	42
351	4 S	2 W	26, 34, 35, 36	1, 3, 5, 6, 7, 8, 10, 11, 18, 19, 21, 24, 28, 29	Stands 625 Lines 55
	5S	2 W	2, 3	30, 31, 32, 33, 34	
352	4 S	2 W	31	1, 20	22
	5 S	2 W	5, 6, 7	5, 8, 9, 16, 17, 24, 25, 26	Stands 182 Lines 25
348	5 S	3 W	1	1	45
353	5 S	3 W	14, 15, 23, 26, 27, 28, 35	3, 4, 5, 9, 11, 25	Stands 188 Lines 41*
				*7.5 acres of lines are in C354	
85	5 S	5 W	16, 17, 18		165

III. DETERMINATION OF EFFECT

Currently there are 84 sensitive, 3 threatened, and 1 endangered plant species and 23 sensitive, 4 threatened and 7 endangered animals known or expected to occur on the ANF (Appendix A). Proposed, endangered, and threatened (PET) species and subspecies are listed by the US Fish and Wildlife Service (USFWS) and adopted by each FS Regional Forester. Sensitive species are designated by FS Regional Foresters. The list in Appendix A is a subset of the Region 8 (Southern Region) list, modified by this Forest to reflect potential occurrences based on county records. The standards of protection for USFWS listed species are different from those for FS listed sensitive species because of the differences in the degree of endangerment. PET species are protected both as individuals and at the population level, while Sensitive species are generally protected at the population level only. Because of this, determining and stating the potential effects on PET species is not the same as deciding the possible effects for Sensitive species.

The conceptual relationship between analysis and findings for PET species is as follows:

	Type of Effects Identified	Corresponding Determination of Effect
1.	No effects (not ever, any)	“No effect”
2.	Discountable, insignificant or completely beneficial effects	“Not likely to adversely affect”*
3.	Adverse effects	“Likely to adversely affect”*

*Both 2 & 3 determinations may be referred to as “may affect” determinations under the 1986 ESA regulations, but without further elaboration, the term “may affect” could be misunderstood.

The conceptual relationship between analysis and findings for Sensitive species is as follows:

	Type of Effects Identified	Corresponding Determination of Effect
1.	No effects	“No impacts”
2.	Beneficial effects	“Beneficial impacts”
3.	Adverse effects (one of these two determinations, depending on extent of adverse effects)	“May impact individuals but not likely to cause a trend to federal listing or a loss of viability” or “Likely to result in a trend to listing or a loss of viability”

A. ANIMALS

1. Proposed, Endangered, and Threatened Animals

No Action - Alternative A

A No Effect determination has been concluded for the gray bat, wood stork, indigo snake, flatwoods salamander, gulf sturgeon and mussels. It is highly unlikely any of these species occur in the project areas.

This Alternative would have a May Affect determination for RCWs in the long term. If the current shrub growth continues in the two active clusters, the birds would eventually abandon those sites and those individuals would be impacted.

Proposed Action - Alternative B

A No Effect determination has been concluded for the gray bat, wood stork, indigo snake, gulf sturgeon and mussels. It is highly unlikely any of these species occur in the project areas.

The proposal is Not Likely to Adversely Affect the RCW or flatwoods salamander. One of the goals of this project is to improve RCW habitat and when achieved, it would also improve the type of habitat used by flatwoods salamanders (open, well-burned flatwoods).

2. Sensitive Animals

No Action – Alternative A

The No Action would have No Impact on Aquatic Sensitive species and for Terrestrial Sensitive species it May Impact Individuals but is Not Likely to Cause a Trend toward Federal Listing or a Loss of Viability. There may be some impact on individuals from the continued high woody vegetative load and lack of fire in potential habitat.

Proposed Action - Alternative B

There would be No Impact on Aquatic Sensitive species and for Terrestrial Sensitive species the proposal May Impact Individuals but is Not Likely to Cause a Trend toward Federal Listing or a Loss of Viability. Heavy equipment use would be the main impact on these species; they may be crushed and injured or killed. In the long term, with the reintroduction of fire, the habitat would improve and the overall project would be beneficial.

Table 2. Summary of the effects determinations for TES animals for the Mechanical Fuels Reduction project, July 2009.

SPECIES	ALT A	ALT A CUM	ALT B	ALT B CUM
*Gray bat	No Effect	No Effect	No Effect	No Effect
*Wood stork	No Effect	No Effect	No Effect	No Effect
*RCW	Not Likely	May Affect	Not Likely	Not Likely
*Indigo snake	No Effect	No Effect	No Effect	No Effect
*Flatwoods salamander	No Effect	No Effect	Not Likely	Not Likely
*Gulf sturgeon	No Effect	No Effect	No Effect	No Effect
*Mussels	No Effect	No Effect	No Effect	No Effect
Sensitive aquatic	No Impact	No Impact	No Impact	No Impact
Sensitive terrestrial	May Impact	May Impact	May Impact	Beneficial

CUM = cumulative, over the long term

* US Fish and Wildlife Service Endangered or Threatened

B. PLANTS

A more detailed discussion of the potential impacts on TES plant species can be found in Section IV of this biological evaluation.

1. Proposed, Endangered, and Threatened Plants

No Action - Alternative A

Due to the nature of the project and the site on which it would be implemented, Alternative A is **Not Likely to Adversely Effect** USFWS listed plant species *Scutellaria floridana* and *Pinguicula ionantha* and would have **No Effect** on *Harperocallis flava* or *Macbridea alba* (neither of which occur within the project area). A primary risk factor repeatedly noted for federally listed plant species is shading/competition for resources. Individuals, if present in the treatment area, may continue to be suppressed or otherwise impacted by the lack of sunlight/competition for resources with this alternative.

Proposed Action - Alternative B

Alternative B is **Not Likely to Adversely Effect** USFWS listed plant species *Scutellaria floridana* and *Pinguicula ionantha* and would have **No Effect** on *Harperocallis flava* or *Macbridea alba*, (neither of which occur within the project area). Intact, herbaceous savannas and/or seepage areas (some containing documented *Scutellaria floridana*) within the project area would be flagged/mapped for avoidance. Potential habitat for *Scutellaria floridana* and *Pinguicula ionantha* occurs within the shrub encroached treatment area, although no individuals were identified during a previous post-prescribed fire survey. The risk remains that unidentified individuals may be crushed, broken, uprooted, buried or otherwise impacted during the proposed mechanical fuel reduction, however it is important to note the anticipated outcome is overall

habitat improvement. Loss of individuals may occur.

2. Sensitive Plants

No Action - Alternative A

Due to the nature of the project and the site on which it would be implemented, Alternative A **May Impact Individuals, But Is Not Likely to Cause a Trend Toward Federal Listing or a Loss of Viability** for sensitive plant species that occur in the affected area (Pine Flatwoods; Savannas, Bogs, Seepage Slopes; Strands, Cypress Pond, Swamps) because these affected species are light dependent. A primary risk factor repeatedly noted for sensitive species is shading/competition for resources. Individuals would continue to be suppressed or otherwise impacted by the lack of sunlight with this alternative.

Proposed Action - Alternative B

Due to the nature of the project and the site on which it would be implemented, Alternative B (CUM) **May Impact Individuals, But Is Not Likely to Cause a Trend Toward Federal Listing or a Loss of Viability** for sensitive plant species that occur in the affected area (Pine Flatwoods; Savannas, Bogs, Seepage Slopes; Strands, Cypress Pond, Swamps) because these species are light dependent and require minimal shading/competition for resources. The risk remains that individuals may be crushed, broken, uprooted, buried or otherwise impacted during the proposed mechanical fuel reduction; however it is important to note the anticipated outcome is overall habitat improvement. Loss of individuals may occur.

Table 3. Threatened, Endangered and Sensitive Plant Effects Summary, Mechanical Fuels Reduction Project, July 2009.

SPECIES or ASSEMBLAGES	ALT A	ALT A CUM	ALT B	ALT B CUM
Harperocallis flava *	No Effect	No Effect	No Effect	No Effect
Macbridea alba *	No Effect	No Effect	No Effect	No Effect
Scutellaria floridana*	No Effect	Not Likely	Not Likely	Not Likely
Pinguicula ionantha*	No Effect	Not Likely	Not Likely	Not Likely
Mesic-Wet Flatwoods	No Impact	May Impact Indv.	May Impact Indv.	May Impact Indv.
Strands, Cypress Ponds, Swamps	No Impact	May Impact Indv.	May Impact Indv.	May Impact Indv.
Savannas, Bogs, Seepage Slopes	No Impact	May Impact Indv.	May Impact Indv.	May Impact Indv.
Sandhills	No Impact	No Impact	No Impact	No Impact
Pond, Lake Margins	No Impact	No Impact	No Impact	No Impact
Aquatic	No Impact	No Impact	No Impact	No Impact
Slope, Hardwood Forest	No Impact	No Impact	No Impact	No Impact
Bluffs	No Impact	No Impact	No Impact	No Impact
River/Streambanks	No Impact	No Impact	No Impact	No Impact
Floodplains	No Impact	No Impact	No Impact	No Impact

* US Fish and Wildlife Service Endangered or Threatened
CUM = cumulative, over the long term

SIGNATURES: If modifications are made in the Mechanical Fuels Reduction project, or if additional information regarding the effects of the project on listed species becomes available, the USFWS will be notified and their review will be reinitiated if the USFWS or the USFS determines it is needed.

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IV. SPECIES REVIEWED

A. ANIMAL SPECIES ACCOUNTS

The following species were not evaluated individually because there would be negligible effects on them or their habitat by this project: gray bat, Rafinesque's big-eared bat, round-tailed muskrat, wood stork, bald eagle, eastern indigo snake, Suwannee cooter turtle, one-toed amphiuma, Apalachicola dusky salamander, striped newt, Gulf sturgeon, Alabama shad, spotted bullhead, Suwannee bass, fat three-ridge mussel, shiny-rayed pocketbook mussel, Ochlockonee moccasinshell mussel, oval pigtoe mussel, purple bankclimber mussel, Florida arc mussel, Apalachicola floater, Florida floater, Woodville cave crayfish, arogos skipper, Say's dragonfly, Belle's sand clubtail and Calvert's emerald. More information on threats and habitat requirements is available from the Apalachicola District Office, Florida Natural Areas Inventory and NatureServe. 2009. NatureServe Explorer: An online encyclopedia of life [web application]. Version 4.5. NatureServe, Arlington, Virginia. Available <http://www.natureserve.org/explorer>.

Individual species accounts were done for the following because this project would or may occur in their habitat and animals are not as easily grouped into communities as plants. Much of this information was compiled by other National Forests in Florida wildlife biologists to assist Forest Plan analyses and biological evaluations. Their original write-ups are available from the Forest Supervisor's office in Tallahassee, FL.

1. Proposed, Endangered and Threatened Animals

Red-cockaded Woodpecker

There are 5 populations on the National Forests in Florida. The population on the Apalachicola Ranger District is the largest existing of this species. On the National Forests in Florida, red-cockaded woodpeckers (RCW) inhabit the Sandhills/scrubby Flatwoods and

Mesic/wet Flatwoods Habitat Associations. The flatwoods habitat on the ANF and Osceola National Forests is highly interspersed with the other habitat associations. The Ocala National Forest is predominately sand pine with a few islands of longleaf and slash pine. Quality of the habitat is unknown but may be inferred by age class, distribution of active clusters, and burn history.

The latest GIS database of the ANF shows there are 499 active and 160 inactive clusters on the Apalachicola Ranger District (ARD) and 130 active and 213 inactive on the Wakulla Ranger District (WRD). A random sample of clusters has been chosen and monitored since 1992. This sampling, along with other forms of monitoring, indicates a stable population on the ARD and a recent increase on the WRD. For more detail on the ANF's monitoring and results see Ruhl 2000 updated periodically by Hess, available from the Apalachicola District office.

Risk factors for this species include:

- Loss of cavity trees or potential cavity trees through harvest, burning, windthrow, or infestation (southern pine beetle)
- Degradation of nesting habitat through lack of prescribed burning.
- Reduction of foraging habitat through excessive harvest or wildfire.
- Degradation of foraging habitat through lack of prescribed burning.
- Demographic isolation.
- Disturbance during nesting season.

Given the efforts underway and direction in the Forest Plan, all the populations on the National Forests in Florida have a chance of achieving viability eventually. Some populations have a far better chance than others. The ARD population viability is high because of the current population size and trend. Rangeland viability is moderate off the National Forests in Florida, this includes all other lands, government, commercial, and private ownership, with highest viability on government managed lands.

Alternative A

This No Action alternative may lead to abandonment of the two active clusters in Compartment 85 due to the dense shrub growth. No action would also not improve any habitat on the WRD, although there are no RCWs presently, there are recruitment stands.

Alternative B

The action alternative would improve habitat for the RCW especially in the two active clusters. Mechanical fuel reduction would then allow us to prescribe burn these areas with less risk to the current RCW cavity trees and other pines. Breeding season operating restrictions in the two clusters would reduce the potential for disturbance. On the WRD this alternative would allow us to burn those areas with less risk and move them toward better habitat than is there now.

Frosted Flatwoods Salamander

The flatwoods salamander has been extirpated throughout much of its range. The species is still found Florida, with the majority of breeding sites occurring on the ARD. There are also breeding ponds on the St. Marks Wildlife Refuge south of the WRD (Printiss 2001). Osceola National Forest appears to have a small relict population.

Rangewide, the savannas, flatwoods and ephemeral swamps inhabited by flatwoods salamanders have been logged, drained, and converted to development, agriculture, and intensively managed timber production. Areas of habitat not directly converted have been degraded through fire suppression, land drainage, and alteration of hydrology and water quality. Flatwoods salamanders are dependent on microhabitat characteristics that are poorly understood. These characteristics include lack of predatory fish in breeding ponds, soil ecology, winter hydroperiod of breeding ponds, water quality, upland groundcover, and herbaceous wetland littoral zones and basins. For these and other reasons, many areas with wiregrass flatwoods, savannas, and ephemeral acidic swamps do not provide suitable habitat for this species. No research has been able to estimate population densities or abundances of flatwoods salamanders.

Efforts to protect this species may be hindered by their fossorial habit and irregular breeding events, whereas they may be undetected during surveys, and assumed not to occur on given sites. Even on lands that are now protected, past forestry practices and fire suppression have altered the land such that it may require extensive lengths of time for the habitat to be sufficiently restored. On the National Forests, breeding ponds may be degraded by illegal off-road vehicles. Probability of persistence of flatwoods salamander populations in the ARD is high.

Alternative A

This No Action alternative would have no effect on flatwoods salamanders.

Alternative B

There are no known breeding ponds on the WRD. The closest known pond and also the closest pond designated as potential are a mile or more away from the treatment area in Compartment 85 on the ARD. The project may benefit salamanders in the future by reducing shrub cover and starting a more frequent burn regime which would result in additional suitable upland habitat.

2. Sensitive Animal Species

Florida Black Bear

Forested wetlands and uplands are where this bear will usually occur. Swamps and bottomland hardwoods are particularly desirable. Thick cover and absence of heavily traveled roads are also desirable. Black bear require large areas with very low densities of humans. The quantity and distribution of escape cover can be very important in the vicinity of towns and cities and/or in areas where bear are hunted. No sport hunting is permitted by the State at this time. Swamps are numerous and distributed across the ANF.

Florida black bears are known to occur on all three National Forests in Florida. The Apalachicola and Osceola are the most secure populations. Ocala population has most mortality related to road-kills. Bears are widespread but actual densities are unknown on the ANF. Severe loss of habitat has isolated populations to five major areas in the State. Population declines are related to habitat loss due to urbanization. Populations are secure on all three National Forests. Forest Plan implementation, which includes prescribed fire, provides a high probability of maintaining species viability on the forest. Swamps and bottomland hardwoods will not be managed for timber; motorized access has been reduced.

Alternative A

This no action alternative would have no impact on black bears.

Alternative B

The action alternative may reduce available cover for the black bear in these areas but that may be positive. We do not want to encourage black bears near these urban interface areas. If they have sufficient cover and denning opportunities and feel relatively secure, their range may become backyards.

Bachman's Sparrow

In Florida, Bachman's sparrows occur in open forested uplands with a grassy/herbaceous understory. They are dependent on grasslands for both nesting and foraging habitat. There is a lack of information on population dynamics and biogeography (size and distribution of habitat needed to sustain a viable population). To a lesser extent, lack of information on the effects of different disturbance regimes.

Apparently this species is declining, both on a rangewide basis and in Florida. Grasslands are declining throughout the eastern United States. Suitable habitat is frequently unoccupied in the northern parts of its range, possibly as the result of changes in migratory and/or wintering habitat (Rising 1996). The loss of habitat in the Deep South has weakened and fragmented resident populations. Fortunately, Bachman's sparrow is found in the habitat preferred by RCWs, and local populations are benefiting from efforts to save that species. Bachman's can be heard singing during the breeding season throughout the ANF wherever suitable habitat does occur.

Rangewide, the probability of maintaining a well-distributed population is threatened by the loss of grassland habitat. The existence of resident populations and the Forest Plan's emphasis on prescribed burning to restore native habitat makes it very likely that large enough areas of grassland would be restored and maintained to support viable populations.

Alternative A

This alternative would not improve habitat for Bachman's sparrows.

Alternative B

The action alternative would improve habitat for this sparrow. They prefer open, grassy areas with a low shrub component. The mechanical fuel reduction alone would likely not achieve these conditions but it would reduce the risk of prescribed burning these areas. A frequent fire regime is what would ultimately create more habitat.

Gopher Tortoise

The range of the gopher tortoise extends from southern South Carolina to extreme eastern Louisiana, and south through coastal south Florida. They are in decline throughout their range, and are federally listed as Threatened west of the Tombigbee and Mobile Rivers in Alabama. Gopher tortoises occupy a variety of xeric habitats including open scrub, sandhill and well-drained hammock. They require sandy well-drained soils in which to excavate extensive burrows. Because they also need a year-round supply of herbaceous forage and areas of high light penetration, fire is an important element of disturbance in gopher tortoise habitat. The burrows built by gopher tortoises serve as refugia, and in some cases entire habitat, for more than 60 vertebrates and 300 invertebrates. Throughout the range of the species, areas with well-drained, sandy soils are being rapidly converted for development, mining and crop production.

Gopher tortoises are still relatively common in well-drained habitats of rural Florida, but habitat loss and degradation, and poaching, have led to limited distribution, population fragmentation and decline in areas of increased urbanization. Gopher tortoises occur in all National Forests in Florida. The Ocala National Forest holds the greatest density and most robust population of gopher tortoises in the range of the species (Joan Berish, FWCC, pers. comm.). The ANF population is restricted to sandhill communities and patches with sufficiently low water tables.

Human developments, intensive timber management, croplands, fire exclusion, and mining reduce the quality of, or obliterate, gopher tortoise habitat. Increased raccoon, fox, skunk and dog populations in wildland-urban interfaces cause increased depredation of gopher tortoise eggs. In addition, larger dogs not only dig up burrows but also attack and kill tortoises. Gopher tortoises are diurnal, slow moving, and highly visible, which makes them easy to collect for food. Poachers, who use tools to pull the tortoises out, easily find their highly visible burrows. In areas of rapid development, the probability for local populations of gopher tortoises to persist is low. On the National Forests in Florida, increasing urban interface and road mortality are the greatest threats to gopher tortoise populations. Within the National Forests in Florida, continued viability of gopher tortoises is high due to large areas of appropriate habitat and FP provisions for frequent prescribed fire. With the implementation of the Forest Plan the ANF provides, and will continue to provide a minimum of 30,000 acres of potential habitat.

Alternative A

There would be no impact from this No Action alternative.

Alternative B

Given the dominant community types of mesic and wet flatwoods plus a review of the soils in the project area, it is unlikely there are any gopher tortoises present. They are addressed here because there is a chance of small, drier ridges occurring within the main community types. Due to this possibility, there needs to be awareness of the tortoise and Coordination Measures.

Apalachicola Kingsnake

The Apalachicola kingsnake may be found in Liberty and Franklin Counties, between the Apalachicola and Ochlockonee rivers and south of Telogia creek to the Gulf of Mexico. A large part of this snakes' range is in public land holding, ANF and Tate's Hell State Forest. Habitat should be secure into the future. The condition of its habitat will depend on the management of the land by the agency charged with stewardship. Apalachicola kingsnakes live in flatwoods, primarily along wetland margins of bayheads, creek swamps, acid bogs, savannas, ditches, cypress strands, and evergreen scrub communities. Little is known about the life history or ecology of this population. Their food probably consists of snakes, amphibians, eggs of ground nesting birds and turtles, and small rodents.

Collection by private and commercial snake collectors is identified as a risk factor for this species because of its limited range. Continued viability of the Apalachicola kingsnake is high since most of this species range is in public land holdings and habitat conditions will be maintained. Enforcement against collection of these snakes is important to its viability.

Alternative A

The No Action would likely have no impact on the kingsnake population.

Alternative B

This alternative may result in harm to individual snakes, if they are in the area in compartment 85, due to injury from the equipment. But they would likely be aware of the equipment and move away from it; additionally, the blade may be set high enough to allow escape.

Florida Pine Snake

The range of the Florida pine snake is throughout the Gulf and Atlantic coastal plains from South Carolina through south Florida (excluding the Florida Keys). The Florida Fish and Wildlife Conservation Commission lists the Florida pine snake as a Species of Special Concern. The number of Florida pine snakes has been in decline due to habitat loss and road mortality. Florida pine snakes occupy xeric sites, including longleaf-scrub oak forest, well-drained flatwoods, and sand pine scrub. Throughout the southeast, these habitats are being rapidly converted to agriculture and developments. This species occurs in all National Forests in Florida. Within the ANF there is an estimated 30,000 acres of sandhill and scrubby flatwoods that should provide habitat for this snake.

Florida pines snakes prefer open habitats, and may select earlier successional scrub and fire-maintained pine forests over those habitats with heavier canopies. They show no preference between disturbed and undisturbed sites. Wetland ecotones and gopher tortoise burrows may be important thermal and fire refugia. Research indicates that pine snakes avoid areas of high human use. Florida pine snakes occupy extensive territories, and those of male snakes do not overlap. Therefore, large areas of intact habitat are necessary to support a population.

Fire suppression, malicious killing and habitat conversion are the greatest threats to this species throughout its range. Within the National Forest in Florida, the greatest risk to pine snakes is road mortality. In areas of rapid development, the probability for local populations of Florida pine snakes to persist is low. Throughout rural Florida and within the National Forests in Florida, continued viability of Florida pine snakes is high due to large areas of appropriate habitat and Forest Plan provisions for frequent prescribed fire.

Alternative A

The No Action would likely have no impact on the Florida pine snake population.

Alternative B

This snake is unlikely to occur in the project area but there is always a chance, especially if there are gopher tortoises and burrows present. This alternative may result in harm to individual snakes, if they are in the area, due to injury from the equipment. But they would likely be aware of the equipment and move away from it; additionally, the blade may be set high enough to allow escape.

B. PLANT SPECIES ACCOUNTS

The methods for selecting species for review are as follows: Briefly, the TES species that might occur in the area were determined by using known habitat requirements, field data, and occurrence records. This process helps identify species that may be in the area even though they may be difficult or impossible to detect during field surveys.

Appendix A contains lists of all TES plants and animals that potentially occur on the ANF,

additionally a table with the TES plants grouped by habitat is also in Appendix A. Some plants potentially occur in more than one habitat type and appear more than once on the Plant/Habitat table.

1. Proposed, Endangered, and Threatened Plants

USFWS listed threatened and endangered plant species on the ANF inhabit well defined and identifiable habitats such as savannas, seepage slopes, and transition zones. They do not randomly occur. There are potentially two threatened plant species within the project area boundaries on the ARD; however none of the listed species are known to occur on the WRD (District/Florida Natural Areas Inventory-FNAI 2009).

Species-specific surveys for *Harperocallis flava*, *Macbridea alba*, *Pinguicula ionantha*, and *Scutellaria floridana* were conducted post-prescribed fire (2001) in Compartment 85. Two locations of *Scutellaria floridana* individuals were documented in intact, herbaceous savannas. Documented *Pinguicula ionantha* individuals were located adjacent to the project area in equally well-maintained habitat. Potential habitat for both *Scutellaria floridana* and *Pinguicula ionantha* likely once occurred within encroached relic savannas and ecotones found in the treatment area. If present in the last vestiges of remnant, native vegetation, they would likely be highly suppressed.

Alternative A

Vegetative changes would be limited to those resulting from natural phenomena, gradual community succession, and prescribed burning. This alternative may accomplish limited groundcover/midstory maintenance where prescribed burning is effective, but in sites with advanced hardwood encroachment this alternative would have little effect. The hardwood dominated midstory would continue to effectively shade out the remnant herbaceous groundcover component and moving further away from suitable rare plant habitat. Native groundcover species, including threatened plants, would continue to lose vigor and may over time vanish. This alternative would eventually lead to excessive fuel loading with high wildfire potential. Loss of habitat due to hardwood encroachment, continued fire exclusion, and/or extreme fire behavior may result in loss of individuals.

Alternative B

The project would utilize a low-ground pressure machine designed specifically for mulching vegetation, leaving behind a fine, rapidly bio-degradable, nutrient-rich mulch. Feeder root systems, as well as soil structure and natural hydrology are left virtually intact assuming proper operation with minimal turning. The proposed mulching would directly affect the project vegetation, including either threatened plant species, if present. Individual plants located in the path of equipment may be crushed, broken, uprooted, or buried. Most perennial species can be expected to survive top-kill but are likely to die if uprooted. Coordination measures would reduce or eliminate additional impacts, although loss of individual plants may occur.

It must be noted that hardwood encroachment poses a greater risk to these threatened plant species than the proposed mechanical fuel reduction. This management tool is effective in temporarily reducing hardwood midstory height and relative dominance. Experience has shown that mechanical fuel reduction, in concert with prescribed burning, leads to open sites that typically provide improved habitat for rare plants.

2. Sensitive Plants

Potentially affected species include those with documented District or FNAI records within the project area or those likely to occur due to habitat requirements and/or proximate county distribution records. The ANF consists of four counties: Franklin, Liberty, Leon, and Wakulla. All FS listed sensitive plants cited in *The Atlas of Florida Vascular Plants* (Wunderlin, R. P., and B. F. Hansen. 2003) database as vouchered plant specimens in these or adjacent counties were originally considered potentially affected for this analysis. Three sensitive species, *Aster eryngiifolius*, *Baptisia simplicifolia*, and *Verbesina chapmanii* have documented records within the project area.

Much greater latitude was used in developing the affected species list for this project for several reasons. At the time of the surveys, only a small percentage of the FS listed sensitive species would have been in flower even under optimum conditions and most would have been unrecognizable in a vegetative condition. Plants may also be suppressed and difficult to detect due, in part, to years of shading. There is a likelihood that some of these species may appear on subsequent surveys following the proposed management activities, particularly prescribed burns. Also, the ANF has a new sensitive species list as of January 1, 2002 and 35 plant species were added. Little is known about the distribution of many of these new species other than general county and state occurrence information gained from the Atlas and NatureServe. FNAI does not track the majority of these species and there is no distribution data on record for the ANF as of yet. All species determined to possibly occur within the Mechanical Fuel Reduction “affected areas” are therefore considered as potentially affected since there is little evidence for justifying removal of any particular one.

The following habitats were determined to be “affected areas”— Pine Flatwoods; Savannas, Bogs, Seepage Slopes; and Strands, Cypress, Swamps. Fifty-six (56) plant species occupy habitats that constitute the “affected acres” of the project area and will be considered in the effects analysis. The remaining plant species (those that occur in Sandhills; Floodplains; Slope/Upland Hardwood Forests; Aquatic; Bluffs; River/Streambanks; and Pond/Lake Margins) were eliminated from further analysis because their habitat requirements are known and they would be unaffected by the proposed activities. What follows is a brief synopsis the plant species and assemblages eliminated from further review.

Floodplain species *Arnoglossum diversifolium*, *Carex decomposita*, and *Micranthemum glomeratum* and stream/river bank species *Aristida patula* and *Rhynchospora crinipes* are considered likely to occur on the forest, but have been recently added to the sensitive species list and there is no information yet as to their distribution on the ANF. Suitable habitat for these plants does not occur within the cutting units, although habitat exists nearby. BMPs and FP Standards and Guidelines would reduce impacts on the habitat of these protected species.

Boltonia apalachicolaensis, *Lythrum curtissii*, and *Magnolia ashei* are only found in slope, upland hardwood forests. The first two are known from proximate county populations only, while the latter has been documented near the Ochlockonee River. Once again, there is no habitat present in the activity area.

All six bluff species are considered likely to occur on the ANF, but have been recently added to the sensitive species list and there is little information yet as to their distribution on the ANF. *Carex baltzellii* and *Physalis carpenterii* may occur along the Ochlockonee River on the WRD.

Two records exist for *Rhododendron austrinum* north of each district and there are also two *Schisandra glabra* north of the ARD. No population data exists for *Forestiera godfreyi* or *Matelea floridana*. Suitable habitat for these bluff plants does not occur in the analysis area.

Najas filifolia and *Myriophyllum laxum* are aquatic plants. The former is not known from the ANF, but has two documented population north/northeast of the WRD. *M. laxum* is known to occur on the ARD, although there are no documented populations within the affected area. It is found in ponds, lakes, streams, backwaters, sloughs, and canals. Both of these plants typically float just below the surface of the water. They have predominately submersed leaves forming mats of vegetation with flowers emerging out of the water. The proposed project would not impact these rare, aquatic herbs.

Pond/Lake Margins species *Lachnocaulon engleri*, *Rhexia salicifolia* (karst), *Rhynchospora pleiantha* (karst), *Xyris longisepala* (karst) have no habitat in the project area and neither do River/Streambanks species *Aristida patula* or *Rhynchospora crinipes*.

Sensitive plants known to occur only in sandhills inhabit well-defined and identifiable habitats. Suitable habitat for these plants does not occur in the analysis area, therefore, this species assemblage was not addressed.

Alternatives A and B

Impacts to potentially affected sensitive plant species would be similar to those discussed under **Proposed, Endangered, and Threatened Plants.**

V. BIBLIOGRAHY

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BIOLOGICAL EVALUATION APPENDIX A

Plant and Animal Species Listed as Proposed, Endangered, Threatened or Sensitive on the Apalachicola
National Forest

Apalachicola National Forest PETS Animals
(Subset of the R8 Regional Forester's List dated 08/07/01)

Revised August 7, 2001 effective January 1, 2002.

Common Name	Scientific Name	Species Status
MAMMALS		
Gray Bat	<i>Myotis grisescens</i>	E
Rafinesque's Big-eared Bat	<i>Corynorhinus rafinesquii</i>	S
Round-tailed Muskrat	<i>Neofiber alleni</i>	S
Florida Black Bear	<i>Ursus americanus floridanus</i>	S
BIRDS		
Wood Stork	<i>Mycteria americana</i>	E
Red-cockaded Woodpecker	<i>Picoides borealis</i>	E
Bald Eagle	<i>Haliaeetus leucocephalus</i>	S
Bachman's Sparrow	<i>Aimophila aestivalis</i>	S
REPTILES		
Eastern Indigo Snake	<i>Drymarchon corais couperi</i>	T
Gopher Tortoise	<i>Gopherus polyphemus</i>	S
Apalachicola Kingsnake	<i>Lampropeltis getulus goini</i>	S
Florida Pine Snake	<i>Pituophis melanoleucus mugitus</i>	S
Suwannee Cooter Turtle	<i>Pseudemys concinna suwanniensis</i>	S
AMPHIBIANS		
Frosted Flatwoods Salamander	<i>Ambystoma cingulatum</i>	T
One-toed Amphiuma	<i>Amphiuma pholeter</i>	S
Apalachicola Dusky Salamander	<i>Desmognathus apalachicolae</i>	S
Striped Newt	<i>Notophthalmus perstriatus</i>	S
FISH		
Gulf Sturgeon	<i>Ascipenser oxyrinchus desotoi</i>	T
Alabama Shad	<i>Alosa alabamiae</i>	S
Spotted Bullhead	<i>Ameiurus serracanthus</i>	S
Suwannee Bass	<i>Micropterus notius</i>	S
MOLLUSKS		
Fat Three-Ridge Mussel	<i>Amblema neislerii</i>	E
Shiny-Rayed Pocketbook	<i>Lampsilis subangulata</i>	E
Ochlockonee Moccasinshell	<i>Medionidus simpsonianus</i>	E
Oval Pigtoe	<i>Pleurobema pyriforme</i>	E
Purple Bankclimber Mussel	<i>Elliptoideus sloatianus</i>	T
Florida Arc Mussel	<i>Alasmidonta wrightiana</i>	S
Apalachicola Floater	<i>Anodonta heardi</i>	S
Florida Floater	<i>Utterbackia peggyae</i>	S
CRUSTACEANS		
Woodville Cave Crayfish	<i>Procambarus orcinus</i>	S
INSECTS		
Arogos Skipper	<i>Atrytone arogos arogos</i>	S
Say's Dragonfly	<i>Cordulegaster sayi</i>	S
Belle's Sand Clutail	<i>Progomphus bellei</i>	S
Calvert's Emerald	<i>Somatochlora calverti</i>	S

APALACHICOLA NATIONAL FOREST PETS PLANTS HABITAT/SPECIES LIST 2002**SANDHILLS**

Agalinis divaricata
 Agrimonia incisa
 Baptisia simplicifolia
 Berlandiera subacaulis
 Calamintha dentata
 Euphorbia discoidalis
 Galactia microphylla
 Paronychia rugelii
 Phlox floridana
 Physalis arenicola
 Pityopsis flexuosa
 Polygala leptostachys
 Pteroglossapsis (Eulophia) ecristata
 Pycnanthemum floridanum
 Sisyrrinchium xerophyllum
 Tephrosia mohrii
 Warea sessilifolia

MESIC-WET FLATWOODS

Agalinis divaricata
 Angelica dentata
 Aristida simpliciflora
 Asclepias viridula
 Aster chapmanii
 Aster eryngiifolius
 Baptisia simplicifolia
 Cleistes bifaria
 Hedeoma graveolens
 Hypericum exile
 Lachnocaulon engleri
Macbridea alba (Threatened)
 Nolina atopocarpa
 Phlox floridana
 Phoebanthus tenuifolia
 Pityopsis oligantha
 Pteroglossapsis (Eulophia) ecristata
 Rhynchospora brevisetata
 Rudbeckia nitida
 Silphium simpsonii
 Spiranthes longilabris
 Sporobolus curtissii
 Sporobolus floridanus
 Tridens carolinianus
 Xyris drummondii

STRANDS, CYPRESS PONDS, SWAMPS

Carex decomposita
 Coreopsis nudata
 Hymenocallis henryae
 Hypericum chapmanii
 Linum westii
 Macranthera flammea
 Micranthemum glomeratum
 Pieris phillyreifolia
 Pinckneya bracteata
Pinguicula ionantha (Threatened)
 Pinguicula planifolia

FLOODPLAINS

Arnoglossum diversifolium
 Carex decomposita
 Micranthemum glomeratum

SAVANNAS, BOGS, SEEPAGE SLOPES

Andropogon arctatus
 Arnoglossum sulcatum (seeps)
 Asclepias viridula
 Aster chapmanii
 Aster eryngiifolius
 Cleistes bifaria
 Coreopsis nudata
 Gentiana pennelliana
Harperocallis flava (Endangered)
 Justicia crassifolia
 Lachnocaulon digynum
 Nyssa ursina
 Oxypolis ternata
 Parnassia caroliniana
 Physostegia godfreyi
Pinguicula ionantha (Threatened)
 Pinguicula planifolia
 Pityopsis oligantha
 Platanthrea integra
 Polygala hookeri
 Rhexia parviflora
 Rhynchospora brevisetata
 Rhynchospora macra
 Rudbeckia graminifolia
 Ruellia noctiflora
 Schoeolirion albiflorum
Scutellaria floridana (Threatened)
 Sporobolus floridanus
 Verbesina chapmanii
 Pteroglossapsis (Eulophia) ecristata
 Xyris drummondii
 Xyris isoetifolia
 Xyris louisianica
 Xyris scabrifolia

POND/LAKE MARGINS

Lachnocaulon engleri
 Rhexia salicifolia (karst)
 Rhynchospora pleiantha (karst)
 Xyris longisepala (karst)

AQUATIC

Myriophyllum laxum
 Najas filifolia

SLOPE/UPLAND HARDWOOD FOREST

Boltonia apalachicolensis
 Lythrum curtissii
 Magnolia ashei

BLUFFS

Carex baltzellii
 Forestiera godfreyi
 Matelea floridana
 Physalis carpenteri
 Rhododendron austrinum
 Schisandra glabra

RIVER/STREAMBANKS

Aristida patula
 Rhynchospora crinipes

APALACHICOLA NATIONAL FOREST PETS PLANT SPECIES LIST – 2002

SCIENTIFIC NAME

COMMON NAME

Endangered

Harperocallis flava

Harper's Beauty

Threatened

Macbridea alba

White Birds-in-a-Nest

Pinguicula ionantha

Godfrey's Butterwort

Scutellaria floridana

Florida Skullcap

Sensitive

Agalinis divaricata

Pinelands false foxglove

Agrimonia incisa

Incised Groovebur

Andropogon arctatus

Pine-Woods Bluestem

Angelica dentata

Coastal-Plain Angelica

Aristida patula

Tall threeawn

Aristida simpliciflora

Southern threeawn grass

Arnoglossum diversifolium

Variableleaf Indian plantain

Arnoglossum sulcatum

Indian plantain

Asclepias viridula

Southern Milkweed

Aster chapmanii

Chapman's Aster

Aster eryngiifolius

Coyote Thistle Aster

Baptisia simplicifolia

Coastal Plain Wild Indigo

Berlandiera subacaulis

Florida Greeneyes

Boltonia apalachicolensis

Apalachicola Doll's Daisy

Calamintha dentata

Toothed Savory

Carex baltzelli

Baltzell's sedge

Carex decomposita

Cypress-knee sedge

Cleistes bifaria

Small spreading pogonia

Coreopsis nudata

Georgia Tickseed

Euphorbia discoidalis

No Common Name

Forestiera godfreyi

Godfrey's swampprivet

Galactia microphylla

No Common Name

Gentiana pennelliana

Wiregrass Gentian

Hymenocallis henryae

Panhandle Spiderlily

Hypericum chapmanii

A Saint John's-Wort

Hypericum exile

A Saint John's-Wort

Justicia crassifolia

Thick-leaved Water Willow

Lachnocaulon digynum

Bog Button

Lachnocaulon engleri

Engler's bogbutton

Linum westii

West's Flax

Lythrum curtissii

Curtiss' Loosestrife

Macranthera flammea

Hummingbird Flower

Magnolia ashei

Ashe's Magnolia

Matelea floridana

Florida milkvine

Myriophyllum laxum

Piedmont Water-Milfoil

Najas filifolia

Needleleaf waternymph

Nolina atopocarpa

Florida Beargrass

Nyssa ursina

Bog Tupelo

Oxypolis ternata

No Common Name

<i>Paronychia rugelii</i>	Rugel's nailwort
<i>Parnassia caroliniana</i>	Carolina Grass of Parnassus
<i>Phlox floridana</i>	Florida Phlox
<i>Phoebanthus tenuifolia</i>	No Common Name
<i>Physalis arenicola</i>	Cypresshead groundcherry
<i>Physalis carpenterii</i>	Carpenter's groundcherry
<i>Physostegia godfreyi</i>	Apalachicola Dragonhead
<i>Pieris phillyreifolia</i>	Climbing Fetterbush
<i>Pinckneya bracteata</i>	Fevertree
<i>Pinguicula planifolia</i>	Chapman's Butterwort
<i>Pityopsis flexuosa</i>	Bent Golden Aster
<i>Pityopsis oligantha</i>	Coastal-Plain Golden-Aster
<i>Platanthera integra</i>	Yellow fringeless orchid
<i>Polygala balduinii</i>	White Milkwort
<i>Polygala hookeri</i>	Hooker's milkwort
<i>Polygala leptostachys</i>	Slender spike milkwort
<i>Pteroglossaspis ecristata</i>	Wild Coco
<i>Pycnanthemum floridanum</i>	Florida mountainmint
<i>Rhexia parviflora</i>	Small-Flowered Meadow Beauty
<i>Rhexia salicifolia</i>	Panhandle Meadow Beauty
<i>Rhododendron austrinum</i>	Orange azalea
<i>Rhynchospora breviseta</i>	Shortbristle beaksedge
<i>Rhynchospora crinipes</i>	Hairy peduncled beakrush
<i>Rhynchospora macra</i>	Large beakrush
<i>Rhynchospora pleiantha</i>	Brown Beaked-Rush
<i>Rudbeckia graminifolia</i>	Grass-Leaf Coneflower
<i>Rudbeckia nitida</i>	Shiny coneflower
<i>Ruellia noctiflora</i>	White-Flowered Wild Petunia
<i>Schisandra glabra</i>	Bay starvine
<i>Schoenolirion albiflorum</i>	White sunnybells
<i>Silphium simpsonii</i>	Simpson's rosinweed
<i>Sisyrinchium xerophyllum</i>	Jeweled blue-eyed grass
<i>Spiranthes longilabris</i>	Giant spiral ladies'-tresses
<i>Sporobolus curtissii</i>	Pineland dropseed
<i>Sporobolus floridanus</i>	Florida Dropseed
<i>Stachydeoma graviolens (Hedeoma graveolens)</i>	Mock Pennyroyal
<i>Tephrosia mohrii</i>	Pineland hoarypea
<i>Tridens carolinianus</i>	Carolina fluffgrass
<i>Verbesina chapmanii</i>	Chapman's Crownbeard
<i>Warea sessilifolia</i>	Sessile-Leaved Warea
<i>Xyris drummondii</i>	Drummond's Yellow-eyed Grass
<i>Xyris isoetifolia</i>	Quillwort yelloweyed grass
<i>Xyris longisepala</i>	Karst Pond Xyris
<i>Xyris louisianica</i>	Kral's Yellow-eyed Grass
<i>Xyris scabrifolia</i>	Harper's Yellow-eyed Grass

Appendix D

PUBLIC COMMENT SUMMARY – MECHANICAL FUELS REDUCTION

This document shows the comments we received in response to our scoping efforts and how those comments were addressed.

Public Scoping Announcements and Dates

Scoping Document	Date of Document	End of Comment Period	External Comments Received
Initial Scoping	June 23, 2009	July 9, 2009	13
Schedule of Proposed Actions	April 1, 2009		
30 Day Legal Notice Scoping			
Decision Notice			

Listed below are issues generated from the public scoping requests and how they were addressed.

Date Rec.	Who Commented	Issues, Concerns, and Opportunities	How Were the Comments Addressed?
6/24/09	Melanie McCall Local property owner	Requested better map. Would like us to put line in and burn their property at the same time.	Sent map specifically for her property. Sent name and phone number of DOF FAS for assistance with firelines and burning.
6/25/09	Phil Dunaway Local property owner	Requested better map. Concerned we would be cutting on his land. Concerned opening up firelines and stands will promote more use behind his house by hunters, poachers, dumpers, ATVs, etc. He wants us to put up a gate. Concerned about hunters and poachers shooting toward his property. Concerned that present fireline ends at Cow Creek. Has erosion and drainage concerns from berms and piles.	Sent map specifically for his property. Clarified the work would be on FS land. The proposed firebreaks would be for administrative use only. The Forest Service has recently implemented the decision for the Apalachicola National Forest Motorized Route Designation Environmental Assessment, designating roads and trails that are open for motorized public use. However, the firebreaks may be used by horseback riders or hikers; these uses are not limited to designated routes. Violators would be regulated by Forest Service and local law enforcement. Public motor vehicle use on undesignated travelways is illegal. Opening up fire lines and reducing stand density would increase sight distance. Discharging firearms over paved public roads, right-of-way, highways, streets or occupied premises is prohibited. Violators should be reported to Florida Fish and Wildlife Conservation or local law enforcement. We will not be plowing lines, we will be mulching and disking so there shouldn't be big berms as he has seen in the past.
6/25/09	William (Billy) Daughtry Local property owner	Requested better map. Would like to burn his property but cannot find landline in order to have DOF put in fireline.	Sent map specifically for his property. Landline will be found by us and followed closely with this project where ever possible and hopefully allow him to find it also.
6/26/09	Priscilla Symon Local property owner	Requested better map. Concerned that the area between her property and US 319 will be treated and they will loose the buffering the	Sent map specifically for her property. Confirmed that yes the area she is concerned about is part of the proposal but we will not be treating wetlands so any of those in that

Date Rec.	Who Commented	Issues, Concerns, and Opportunities	How Were the Comments Addressed?
		Forest offers.	area would still provide buffering.
6/26/09	Paul A. Larson Local property owner	Has 30 acre tree farm and supports the project. Concerned about the 50 or so bald cypress he planted along his easement through the Forest to his land. He would like to protect them but won't be back until December.	Thank you for your comment and interest.
6/29/09	Chris Lewis Local property owner	Has own line around their property and does not need another. Does not want the fireline or the woods opened up around his property. Very concerned about the public being directly behind his property, his house is close to the line. Concerned opening up firelines and stands will promote more use behind his house by hunters, poachers, dumpers, ATVs, etc Wants us to skip the area behind his property.	The proposed firebreaks would be for administrative use only. The Forest Service has recently implemented the decision for the Apalachicola National Forest Motorized Route Designation Environmental Assessment, designating roads and trails that are open for motorized public use. However, the firebreaks may be used by horseback riders or hikers. These uses are not limited to designated routes. Violators would be regulated by Forest Service and local law enforcement. Public motor vehicle use on undesignated travelways is illegal. Opening up fire lines and reducing stand density would increase sight distance. Discharging firearms over paved public roads, right-of-way, highways, streets or occupied premises is prohibited. Violators should be reported to Florida Fish and Wildlife Conservation or local law enforcement. We plan to treat what we have proposed and will not skip any areas that are accessible for the equipment. Fire breaks need to be as consistent as possible along the boundary to reduce the complexity of prescribed burning these areas, and so firefighters won't run into any surprises with untreated sections.
6/29/09	C.W. Truxell Local property owner	Property boundaries are not clearly identified. Is contending some of his boundaries, survey stakes were removed from G.O. Willis road. Main concern is getting correct boundaries.	Landline will be found by us and followed closely with this project where ever possible and hopefully allow him to find it also.
6/29/09	Louie and Helen Posey Local property owner	Supports proposal for us to burn behind their home in Medart.	Thank you very much for your interest and comments.
6/30/09	Seminole Tribe of Florida	Project is potentially ground disturbing, would like a copy of EA. Reference THPO-003684.	They will be notified when the EA is available.
6/30/09	David Roddenberry Local property owner	The scoping letter should have said what we planned to do at the very beginning of the letter. Concerned about visual and scenic effects of the project. Concerned that the removal of all small trees would result in no replacement trees coming on and through time there would be a treeless 75 foot firebreak. Concerned about treatment in broadleaf forest areas.	Visual and scenic impacts of the mechanical treatment would be relatively short-lived. Presently the plan is that the mechanical removal of brush and small trees would be a one-time treatment. A regular prescribed fire regime would than be applied that would allow for the natural forest processes such as regrowth and regeneration to occur in all but the 15 foot disked line. Broadleaf forest areas would be treated the same and they may or may not burn with prescribed fire. Natural regrowth would take place with or without prescribed fire.
7/7/09	Ed Chason	Concerned project would impact a cemetery on Apalach District that is close to the project area.	We worked it out over the phone that the project is not occurring in the same Section that the cemetery is in.
7/8/09	Ellen Cable Local property owner	Would like us to p-burn her land also.	Her niece, Melanie McCall, has already contacted us about that possibility and I gave Ms. McCall the name of the local DOF FAS.

Date Rec.	Who Commented	Issues, Concerns, and Opportunities	How Were the Comments Addressed?
			Ms. Cable will discuss further with Ms. McCall.
7/9/09	Brett Paben Wild South	Fire breaks alone will not protect WUI communities from catastrophic wildfire. Include a public “fire wise” education component with project. Also consider alternative of not implementing the 15-ft denuded fire break if the private property owners do not implement similar “fire wise” strategies on their property.	We agree that fire breaks alone may not, in all cases, protect communities from wildfire. That is why we propose to put these breaks in and begin a more frequent prescribed burning regime to improve forest health and keep the fuel loading more manageable in the event of a wildfire. We plan to treat what we have proposed and will not skip any areas that are accessible for the equipment. Fire breaks need to be as consistent as possible along the boundary to reduce the complexity of prescribed burning these areas, and so firefighters won’t run into any surprises with untreated sections.

Appendix E

Archeological Report