

**DECISION NOTICE
AND
FINDING OF NO SIGNIFICANT IMPACT**

ANALYSIS UNIT 22

USDA Forest Service
Homochitto National Forest
Homochitto Ranger District,
Amite County, Mississippi

Introduction

Analysis Unit 22 is located within the Brushy Creek Watershed in southern portion of the Homochitto National Forest in Amite County, Mississippi. The project area totals 3,290 acres of National Forest System land.

In the early part of the 20th century most of the area that is now the Homochitto National Forest was dominated by fire dependent longleaf woodland communities on the ridges and upper slopes. The species composition in these longleaf woodlands also included mixes of shortleaf and loblolly pine. These woodlands were characterized as open, with grass and low shrub understories. On the lower slopes and drainages burned with less intensity and frequency consisted, of mixes of loblolly pine, oak, and hickory.

Widespread timber harvest in the 1920s and the absence of fire has resulted in the loss of the longleaf woodland community on the Homochitto. This community has largely been replaced by loblolly pine and fire intolerant hardwoods such as sweetgum, American beech, and magnolias. A large portion of the loblolly pine in the Cedar Creek Project Area is either late successional or growing in overcrowded conditions. Loblolly forests in these conditions tend to have a higher risk for southern pine beetle infestation.

The Purpose and Need for this Project

The purpose of this project is:

- 1) To improve overall forest health by reducing the risk of southern pine beetle to minimize the risk to red-cockaded woodpecker and related species habitats.
- 2) To encourage the restoration of longleaf/bluestem grass woodlands, and other components of mixed-pine fire communities and provide more stable habitat for the red-cockaded woodpecker and related species.
- 3) Ensure an even flow and long-term availability of quality habitat for the red-cockaded woodpecker.
- 4) Maintain wildlife habitats, including early, mid-, and late-seral habitat.
- 5) Maintain forest stand diversity

The Environmental Assessment (EA) for Analysis Unit 22 documents five management alternatives. The Environmental Assessment is on file in the District Ranger's Office in Meadville, Mississippi. This document was prepared by an interdisciplinary team to evaluate opportunities of reducing southern pine beetle risk and improving forest health, restoring the longleaf pine component to lands where it was historically a dominant tree species, ensure even flow, long-term availability, and stability of quality habitat for the red-cockaded woodpecker, maintain a continuing supply of various wildlife habitats, maintaining forest stand diversity. The actions evaluated include the use of commercial timber sales using several different silvicultural methods, including clearcutting, seed tree harvest, and thinning. Connected actions such as site preparation, planting, and road construction, reconstruction and maintenance are also part of the analysis.

These actions are needed to meet the goals and objectives of the Land and Resource Management Plan for the National Forests in Mississippi. As a side benefit, this project would support a balanced program of market and non-market outputs. These actions will serve to modify the area described in the Environmental Assessment so that it will more closely resemble the desired future condition of the Homochitto Ranger District as described in the Land and Resource Management Plan.

Public Involvement

Public Involvement included an initial scoping period in which mailings were made to all individuals on the District harvest activity mailing list. This list is comprised of individuals and organizations who have expressed interest in harvest activities on the Homochitto National Forest. The list was supplemented with other individuals considered to potentially have interest in this project, such as adjacent landowners. Also, a detailed description of the proposed activities and a request for comments was posted in the Jackson Clarion Ledger (paper of record for the National Forests in Mississippi). Internal and external comments generated the issues and concerns found in Chapter 1 of the Environmental Assessment.

Decision

Based on the analysis documented in the Environmental Assessment, it is my decision to adopt Alternative 5 with some modifications. Alternative 5 identifies the use of irregular seed tree harvest in stand 279/14 that is typed as loblolly pine. The aim of this harvest and associated cultural treatments was to convert the stand to mixed pine/hardwood (oak). Cultural treatments aimed at establishing more significant advanced oak reproduction needs to occur prior to removing the existing overstory. I have decided not to implement this treatment in these stands because I do not feel it will meet the mixed pine-hardwood desired conditions stated for this stand. The decision not to harvest these stands at this time will reduce suitable habitat for wildlife and plants associated with grass/shrub habitats. However, this habitat condition will be sustained on wide-spread in this analysis unit on acres of open, woodland conditions maintained through prescribed burning, thinning, and longleaf restoration. The decision not to harvest these stands at

this time will reduce the estimated volume for this project by approximately 3,136 CCF to 15,446 CCF.

Alternative 5 includes an emphasis on restoring stands to a healthy state of mixed pine (primarily longleaf pine) and mixed pine hardwood using clear-cut with reserves regeneration. Thinnings are intended to help promote resistance to the southern pine beetle. Alternative 5 will accomplish the restoration of longleaf woodlands through clearcut with reserves regeneration on 157 acres in stands. These areas will be planted to longleaf pine at a spacing of 8X8 or 680 trees per acre. Herbicides and prescribed burning will be applied to these restoration areas to control understory vegetation and favor the establishment of longleaf pine. The restoration of mixed pine-hardwood (oak) forests will be accomplished through clearcut with reserve regeneration on 56 acres. These areas will be planted with loblolly pine on a spacing of 10X10 or 435 trees per acre. Cultural treatments will be aimed at establishing a mixed pine-hardwood forest. Hand herbicide applications (spot herbaceous spraying and tree injection) and mechanical treatments will be used in the mixed pine-hardwood restoration areas to insure successful regeneration of the desirable hardwood component. Thinning will occur on 552 acres with 402 acres of sawtimber thinning and 150 acres of first thinnings. Prescribed burning would occur on approximately 348 acres of sawtimber-thinned stands. Site preparation would be accomplished through the use of prescribed burns, herbicides and mechanical means such as the use of chainsaws.

A site-specific list of the treatments by Compartment and Stand is provided below:

Treatment	Compt.	Stand	Acres	Forest Type	Age Year
Regeneration	277*	7	50	31/10	1925
	277*	28	45	31/10	1933
	277*	38	62	31/10	1901
	280	3	56	31/10	1926
(Total 213)					
*Stands managed for longleaf pine regeneration					

Treatment	Compt.	Stand	Acres *	Forest Type	Age Year
Mixed Pine Pulpwood Thin					
	277	22	47	31/11	1981
	279	12	68	31/11	1987
	280	7	35	31/11	1971
			(Total 150)		

Treatment	Compt.	Stand	Acres *	Forest Type	Age Year
Sawtimber Thin	277	5	143	31/10	1930
	277	6	59	31/10	1930
	277	9	51	13/10	1933
	277	10	68	31/10	1931
	279	11	28	31/10	1901
	280	6	26	31/10	1927
	280	22	27	31/10	1926
				(Total 402)	

Other connected activities to be accomplished include approximately .9 miles of road maintenance and 9.4 miles of road reconstruction. There would be approximately 2.1 miles of temporary road and approximately 1.4 miles of constructed road along 4 right of ways. Also, site preparation by prescribed burn, chainsaw felling, and hand directed herbicides should be applied on approximately 213 acres in preparation for the planting of pine seedlings.

Future activities expected to occur in this analysis unit, but which are unconnected to this decision, are:

- Approximately 1,553 acres of prescribed burning, which would be completed on a three-year interval starting one year after completion of harvesting. The objective is to maintain a mixed pine forest type. These benefits would be directly facilitated as a result of this project.

Herbicides to be used include Imazapyr, Triclopyr-amine, Triclopyr-ether, Sulfometuron methyl, and Hexazinone. A detailed discussion of quantity and rates is included in Appendix G of the Environmental Assessment.

The Proposed Action and Alternatives Considered

In addition to the selected alternative, four other alternatives were examined in detail to determine which would best meet the purpose and need for this project and address the concerns brought out in public and internal scoping. The alternatives considered are outlined below and compared in Table 2.5 of the Environmental Assessment:

Alternative 1: No action. Defer harvest and other connected activities to another period.

Alternative 2: Represents a maximum of acres to be regenerated based on the forest plan.

Alternative 3: No Herbicides: This alternative would involve the same harvest and regeneration activities as the Proposed Action (Alt. 5), but would not use herbicides for site preparation. Road reconstruction, use, and maintenance would be the same as the Proposed Action.

Alternative 4: Thin Only: There would be no regeneration activities under this alternative. Sawtimber would be thinned on approximately 402 acres, which includes all areas in the selected alternative. There would be no site preparation required under this alternative. Poletimber would be thinned on approximately 150 acres.

Alternative 5: Proposed Action: This is the alternative chosen, with modifications, and is outlined above.

The Environmental Assessment discloses the effects of each alternative with mitigation measures applied. Any specific mitigation that is above the standard mitigation measures specified in the Forest Plan is discussed in the effects section for each alternative. Standard mitigation measures that generally apply to all activities across the forest, including the actions discussed in the Environmental Assessment for this project, are attached in Appendix C for reference.

Other alternatives considered but not analyzed in detail included the following:
(Chapter 2 of the Environmental Assessment)

Uneven-aged Management

Uneven-aged management, for the whole project area, was considered but then eliminated from further consideration. It was decided that it would not meet the need for ensuring the forest health conditions needed to sustain healthy stands. Both the single-tree selection and the group-selection methods of uneven aged regeneration would produce conditions that would reduce resistance to the southern pine beetle. This alternative does not meet direction outlined in the Forest Plan.

The desired future condition, as stated in Chapter 1, page 3, calls for a steady-state forest of relatively balanced age classes interspersed with patches of older seral stages and unregulated areas. The forest would be relatively intensively managed with small pine sawtimber poles and large hardwood sawtimber as the end product objective. Uneven-aged management would create a wide mix of age classes. Since the majority of the regenerated stands in Analysis Unit 22 are currently loblolly pine, it would be difficult to impossible to convert stands to mixed pine or mixed pine-hardwood, which is a specific objective of this Environmental Assessment (see Chapter 1, Purpose and Need).

No Harvest, Restoration Only

In response to public comments, an alternative was developed which would allow for the salvage of pine beetle-infested trees and the restoration of these areas without conducting a timber sale. Restoring the native longleaf pine on sites now occupied by loblolly pine requires that the overstory trees be felled to reduce loblolly seeding and provide the sunlight necessary for longleaf seedling development. Reduction of southern pine beetle risk also involves the felling of trees. To evaluate this option we assumed a cost of \$150 per thousand board feet to fell the trees, dispose of them with a whole-tree chipper, and spread the chips evenly through the stands. Multiplying this by the approximate 9,996 MBF in the Proposed Actions produces a cost of \$1,499,400. This cost would fall entirely upon the tax payers of the United States, as would the cost of cultural treatments needed to meet the propose of the project.

These cultural treatments, such as site preparation and planting, are generally funded by the Knutson-Vandenburg Fund, which uses moneys from a timber sale to reforest the sale area. The Homochitto National Forest is not currently allocated that much money for ecosystem restoration on a project-by-project basis. Such an alternative may also be outside the intent of the law, since both the National Forest Management Act and the Resource Planning Act provide utilization language for timber harvested on the National Forests. For these reasons, this alternative was considered unreasonable and was eliminated from further analysis.

Natural Regeneration of Longleaf Pine

Regeneration by natural methods requires an adequate seed source to be successful. Longleaf pine in Analysis Unit 22 lacks the needed concentration of available seed source to make natural regeneration a viable alternative. With the present dominant species (loblolly pine), attempting to establish longleaf in the regeneration areas would result in failure. Since natural methods would not achieve the desired future conditions of restoring a longleaf component to the forest, this alternative was considered unreasonable and was not developed in detail.

Decision Rationale

Alternative 5, with modifications, was selected because it provides the best combination of short-term habitat development and protection along with a reasonable level of long-term habitat replacement, while meeting concerns expressed during public scoping. Specific characteristics of this alternative are:

- This alternative adequately addresses forest health issues associated with southern pine beetle and other insect and disease concerns. Thinning addresses stand and individual tree vigor concerns that make stands susceptible to infestation, and regeneration replaces ageing stands in an orderly process that insures healthy forests for the future. (Appendix K of the environmental Assessment)
- Regeneration will restore the historic mixed pine and open understory ecosystem that dominated upland sites on the Homochitto National Forest in settlement and pre-settlement days. Characteristics of this system are a dominant component of longleaf pine with open bluestem and low brush understory, incorporating fire as a maintenance component. Longleaf/fire dominated ecosystems, once common across the South, have been critically reduced to only 1%-2% of their pre-settlement range. (Table 1.3 of the Environmental Assessment)
- Habitat for other wildlife, including both consumptive and nonconsumptive species, will be improved or maintained; (Chapter 3 of the Environmental Assessment, p.57)
- Habitat for regionally declining populations of neotropical migrants will be improved; (Chapter 3 of the Environmental Assessment, p.69)
- Thinning in pulpwood and chip-n-saw stands will result in an immediate addition of 150 acres of habitat improvement for a wide variety of species. In their current condition, these stands provide limited benefits and have no identified management indicator species. After thinning they will be suitable for species associated with open pine sawtimber stands. These species include most of the neotropical migrant bird species that are declining regionally but increasing on the

Homochitto in response to management that restores their habitat; (Chapter 3 of the Environmental Assessment, p. 69)

- Creation of early seral habitat; (Table 1.3 of the Environmental Assessment)
- Supports a balanced program of market and non-market forest product outputs; (Chapter 3 of the Environmental Assessment, p. 113)
- Minimizes the impact of vegetative management on dispersed uses in the analysis unit. (Chapter 3 of the Environmental Assessment, p. 120)

Alternative 1 was not selected because it would not meet the purpose and need of this project, nor lead the Forest toward the desired future conditions stated in the EIS for the National Forests in Mississippi. Specifically, no early seral habitat would be created, the overstocked stands would continue to be high risk areas for southern pine beetle infestations, and diversity of vegetation in the form of different ages of trees would not be accomplished. (Pg.2-4, chapter 2 of the Environmental Assessment)

Alternative 2 was not selected due to required spacing of regeneration openings, efforts to manage the landscape to provide large blocks of unfragmented habitat for the future while protecting similar areas of current habitat, and wildlife needs. (Pg. 2-5, Chapter 2 of the Environmental Assessment)

Alternative 3 was not selected because withholding the use of herbicides offered no significant environmental benefits. The probability of restoring a high percentage of longleaf pine to the regeneration stands was very low without herbicide treatments because of the amount of competition present and longleaf's initial slow growth characteristics. This alternative would not assure the appropriate desired future condition as stated in the Environmental Assessment. (Pg. 2-7, Chapter 2 of the Environmental Assessment)

Alternative 4 was not selected because it did not result in the establishment of any early seral habitat, nor restore historic ecosystems to the Analysis Unit. Even though extensive thinning would minimize southern pine beetle hazard, without an even flow of habitat replacement, future viability endangered species such as the red cockaded woodpecker, could not be insured. (Pg. 2-8, Chapter 2 of the Environmental Assessment)

Consistency with Laws, Regulations, and Previous NEPA Decisions

It is my finding that actions in this decision comply with the requirements of the National Forest Management Act (NFMA) of 1976, NFMA implementing regulations in 36 CFR Section 219, and the National Forests in Mississippi Land and Resource Management Plan as amended with this decision.

Harvesting on Suitable Lands

I have determined that the land on which harvesting has been proposed is suitable for timber production as described in the 16 U. S. C. 1604(k) and 36 CFR 219.14 and 36 CFR 219.27(c)(1).

1. Land is forested land capable of producing crops of industrial wood. (Pg.1-7, chpt. 1)
2. Technology is available to harvest timber from the land without irreversible resource damage to soil productivity or watershed conditions. (Appendix I)
3. The land that is regenerated can be adequately restocked within 5 years of final harvest. (Table 1.3 of the Environmental Assessment)
4. The land is not withdrawn from timber production by act of congress, the Secretary of Agriculture or the Chief of the Forest Service.
5. The land has not been deemed inappropriate for timber production due to assignment to other resource use or considerations of cost efficiency. (Pg.1-7, chpt.1)

National Forest Management Act Requirements

All proposals involving the manipulation of tree cover for any purpose comply with the seven requirements found in 36 CFR 219.27(b). Specifically they:

1. Are best suited to the multiple use goals for the area; (pg.1-24 Chapter 1)
2. Occur on lands where adequate reforestation can be assured; (pg.1-7 Chapter 1)
3. Were chosen after consideration of the effects on residual trees and adjacent stands; (pg.1-24 Chapter 1)
4. Were not chosen primarily because they gave the greatest dollar return of timber output; (Estimated Value Generated and Estimated Prorated share table, Chapter 3 of the Environmental Assessment, p.113)
5. Avoid impairment of site productivity and ensure soil and water resource coordination. (Pg.3-1 Chapter 3)
6. Provide the desired effects on all affected resources. (Table 1.2 of Environmental Assessment)
7. Employ practical timber harvest techniques and transportation systems. (Table 2-5, 2-6, and appendix H and J of the Environmental Assessment)

National Historic Preservation Act

Consultation was initiated with the Mississippi State Historic Preservation Office (SHPO) to ensure that cultural resources are not adversely affected. The Cultural Resource Report concluded that 5 sites would be protected and monitored according to Class I and Class II Property Avoidance Procedures outlined in Appendix E of that Memorandum of Understanding; SHPO has concurred with this determination. (See Appendix E of the Environmental Assessment)

Clean Water Act

The actions in my decision will have only slight, short-term effects on water quality. Those effects are limited to slight predictions in sedimentation. No other adverse effects are anticipated. (See Appendix I of the Environmental Assessment)

Appropriateness of Even-Aged Management

Even-aged regeneration in this project consists of 213 acres of clearcutting with reserves. The 1402 acres of sawtimber timber thinning is considered an even-aged management. The 150 acres of first thinning is a forest health treatment applied to carry the stands forward to an age where regeneration regimes may be considered and does not commit the stands to even-aged or uneven-aged management.

Optimality of Clearcutting

Based upon the desired future conditions and the need to provide early seral habitat and maintain habitat diversity, I have determined that clearcutting with reserve trees regeneration methods for other resource coordination is the optimum method. Where restoration of a historic longleaf pine component is the objective, a suitable seed source for this species is not present. The existing dominant species, loblolly pine, is a prolific seeder with aggressive initial growth characteristics. Longleaf pine is a highly shade intolerant species. Natural regeneration methods, including uneven-aged regeneration strategies, cannot provide for longleaf regeneration in the absence of a seed source, and would result in excessive competition if underplanting or other methods were used to establish a longleaf component. Clearcutting removes the loblolly seed source and provides appropriate light conditions.

Where pine/hardwood regeneration is prescribed, the objective is to develop a high component of hardmast producing hardwoods (oaks). These species are highly shade intolerant and regenerate best in open light conditions. Pines do not regenerate from rootstock and require seedtrees for natural regeneration. The loblolly seedtrees would provide a prolific seed source, which is likely to produce a large number of pine seedlings. On the Homochitto, pines tend to rapidly over-top hardwoods and shade them out, occupying the site and creating pure pine stands. More shade tolerant hardwoods such as beech and magnolia tend to proliferate.

The production of hard mast was a significant public issue in the forest plan which sets an objective of 40% if the hardwood component in hardmast producing species. It is unlikely that this could be achieved by natural or uneven-aged methods without extensive additional treatments. Harvesting all pines by clearcutting and replacing the pine component by planting on a wide spacing with limited ground clearing during site preparation controls pine density and provides the appropriate light conditions and growing space for hardmast hardwoods. As a result, clearcutting represents the optimum method for pine/hardwood regeneration in this project.

The use of clearcutting complies with the following circumstances of the Chief's Working Guidelines for Ecosystem Management, which states: "Clearcutting would be limited to areas where it is essential to meet forest plan objectives and involve one or more of the following circumstances:

1. To preclude or minimize the occurrence of potentially adverse impacts or insect or disease infestations, windthrow, logging damage, or other factors affecting forest health; and
2. To provide for the establishment and growth of desired trees or other vegetative species that are shade intolerant."

This determination is in accordance with the requirements of 16 U.S.C. 1604(g)(3)(f)(i) and (ii).

Finding of No Significant Impact

Through the Environmental Assessment, I have determined that this is not a major Federal action that would significantly affect the quality of the human environment. Therefore, an Environmental Impact Statement is not needed. This determination is based on the following factors:

1. The analysis documented in the Environmental Assessment did not identify any individual or cumulatively significant adverse or beneficial short- or long-term effects. (Chapter 3, p.14 & Appendix I, Analysis Unit 22 Environmental Assessment)
2. The decision will not result in any adverse effects on public health and safety (Chapter 3, p. 129, Analysis Unit 22 Environmental Assessment).
3. This decision will not result in adverse effects to wetlands, prime farmlands, wild and scenic rivers, ecologically critical areas, or other unique characteristics of the area. (Chapter 3, p. 14, Analysis Unit 22 Environmental Assessment)
4. Effects disclosed in the Environmental Assessment are not highly controversial. Controversy here refers to extent or types of effects, not to the level of opposition. (Chapter 3, Analysis Unit 22 Environmental Assessment)
5. I am satisfied that the analysis documented in the Environmental Assessment discloses the effects of the alternatives and that they do not involve uncertain, unique, or unknown risk. (Chapter 3, Analysis Unit 22 Environmental Assessment)
6. This proposal does not establish a precedent for future action beyond the alternatives proposed.
7. This proposal is not related to other proposals that would cause a cumulatively significant impact. The cumulative effects of this action and other actions are documented in the Environmental Assessment. Those effects are not significant. (Chapter 3, Analysis Unit 22 Environmental Assessment)
8. This proposal does not affect any properties on or eligible for listing for the National Register of Historic Places. It will not cause the loss or destruction of significant scientific, cultural, or historic resources. (Chapter 3, pg. 128, Appendix E, Analysis Unit 22 Environmental Assessment)
9. Documented in the Biological Assessments is the conclusion that no Threatened or Endangered species will be adversely affected by implementing this timber sale. The U.S. Fish and Wildlife service has concurred with this determination. (Appendix D, Analysis Unit 22 Environmental Assessment)
10. I find that this proposal does not threaten a violation of any Federal, State, or local law or requirement for protection of the environment. (Chapter 3, Appendix C, the Analysis Unit 22 Environmental Assessment)

Implementation and Request for Review

This decision is subject to appeal pursuant to Forest Service regulations at 36 CFR 215.7. A written notice of appeal must be postmarked or received within 45 days after the date this notice is published in the Clarion-Ledger, Jackson, Mississippi pursuant to 36 CFR 215.13. The Notice of Appeal should be sent to USDA Forest Service, Southern Region, ATTN.: Appeals Deciding Officer, 1720 Peachtree Road, N.W., Atlanta, Georgia 30367-9102.

Appeals must meet content requirements of 36 CFR 215.14. For additional information concerning this decision or the Forest Service appeal process, contact the Acting District Planning Team Leader, April Hargis at (601) 384-5876.

If no appeal is received, implementation of this decision may occur on, but not before, five (5) business days from the close of the appeal filing period. If an appeal is received, implementation may not occur for 15 days following the date of appeal disposition.



GLEN D. GAINES
District Ranger

February 5, 2004

Date