

DECISION NOTICE
and
FINDING OF NO SIGNIFICANT IMPACT
for the
Suppression of Southern Pine Beetle on the Shoal Creek Ranger
District of the Talladega National Forest

September 2007

USDA Forest Service
Southern Region
Talladega National Forest
Shoal Creek Ranger District
Calhoun, Cleburne, Clay, and Cherokee Counties, Alabama

Decision and Reasons for the Decision

Background

The Southern Pine Beetle (*Dendroctonus frontalis*) has long been recognized as the most destructive pine insect pest in the Southeastern United States. The earliest accounts of SPB infestation date to the 1750's when Moravian settlers in North Carolina reported the loss of many pines near the settlement of Hope. During the early 1800's, South Carolina plantation owners reported widespread losses of pines. Several outbreaks of SPB were reported during the 19th century from Southern Pennsylvania to the Piedmont of the Carolinas. Between 1882 and 1985, twenty SPB epidemics were recorded in the southeastern United States. These epidemics have lasted from one year to five years in duration. The epidemic of 1971 through 1976 ranged over the entire South and destroyed over six million cords of wood (6MMBF).

It is important to recognize the total impact of southern pine beetles to the limited public lands available for multiple-use management in the Southern Region. Southern pine beetles have the potential to significantly alter a forest and negatively impact the recovery efforts for endangered species, particularly the Red-cockaded woodpecker. On National Forests in Texas in 1986, an uncontrolled southern pine beetle infestation occurred on National Forest lands. Within a year, a single spot grew to over 10,000 acres. Essentially, nature created a 10,000 acre cutover. This small spot grew regardless of property lines and affected the timber of private landowners. In addition, habitat and colonies for the endangered red-cockaded woodpecker were also lost.

In recent years, southern pine beetles have attacked pines in Kentucky, Tennessee, and Alabama. The National Forests in Alabama have lost the natural and native pine component on 20,000 to 30,000 acres. In Kentucky, the small, residual population of red-cockaded woodpeckers was lost along with their habitat. Although, the range of this endangered species has been significantly reduced, it is unlikely that this species could be returned to its natural range in Kentucky, even

with significant effort over a lifetime. These epidemics if left untreated or responded to slowly are completely contradictory to the objectives of the Endangered Species Act.

In relatively low numbers (endemic populations), it normally attacks stressed or dying trees, or trees already infested by other species of beetles. During the outbreaks (epidemic populations), it attacks, colonizes, and kills even the most healthy pines. All species of pines are at risk, but loblolly and shortleaf pine are most susceptible. Tree mortality is caused by massive disruption of the cambium (growing) layer.

Mature beetles are reddish brown to black and are smaller than a grain of rice. During infestation, adults bore S-shaped egg galleries in the inner bark: after pupation, new adults emerge through the bark, vacate the host tree, and spread to others. At maximum growth, they can complete one generation cycle in about a month. Each generation can produce a ten-fold increase in total numbers. During peak outbreaks, beetles within a “spot” of 100 trees can kill an additional 100 to 200 trees within 30 days.

Major outbreaks last from three to five years and occur in irregular cycles of seven to ten years; the SPB is almost always in outbreak status somewhere within its range in the Southeast. Since 1994, SPB activity has fluctuated both in the level of activity and the location of the hardest hit district on the Talladega National Forest. While other districts on the Talladega National Forest have been harder hit than the Shoal Creek, SPB activity is expected to increase overall with the coming of warmer summer months. In some years, activity has continued almost throughout the entire year. Mild winters, ice storms, tornadoes and other severe weather can all affect the severity and length of outbreak.

The environmental assessment (EA) documents the analysis of 3 alternatives to meet this need.

Decision

Based upon my review of all alternatives, I have decided to implement Alternative 2. The Shoal Creek Ranger District proposes to suppress southern pine beetle spots and restore damaged areas to suitable forest types using the methods described below. Currently, this applies only to areas of the District defined as “at-risk” of pine beetle infestations and designated on the “susceptible stands” maps. However, since we cannot predict exactly where pine beetles will initiate attack, these maps are only the best estimate available of the area “at-risk”. The proposed actions will be applied to any and all southern pine beetle infestations occurring on the Shoal Creek Ranger District. The following is a description of Alternative 2.

Suppression

Suppression is the process of impeding the further development of a southern pine beetle spot once it occurs. Suppression methods identified in the Revised Land and Resource Management Plan for the National Forests in Alabama are identified as follows:

1. Cut and Remove – The infested trees, plus a sanitizing buffer zone, are cut and removed. Vacated trees do not need to be cut. Mechanized equipment would be utilized. This method is usually associated with selling the timber as salvage and this is also the preferred method of suppression because it is the most effective. The reason for its effectiveness is that the tree is removed from the site and utilized to produce wood

products. By removing the tree from the site and cutting up the tree, the life cycle of the southern pine beetle is interrupted and this will prevent future generations of beetles from infesting other trees.

2. Cut and Leave – The infested trees and a buffer zone are felled toward the center of the spot and left on the ground. Vacated trees do not need to be cut. Chainsaw felling if not accessible by road, otherwise mechanized equipment. This method would be applied in unmerchantable stands, remote sites, or stands where commercial treatment could not be applied within 21 days. Southern pine beetles in the early stages of their life cycle die when cut trees overheat as they lie on the ground during the hot summer sun. Southern pine beetles in the late stages of their life cycle are basically unaffected, but may become disoriented due to the large concentration of volatilizing turpines emitted by the cut trees and the displacement and dispersion of the insect's pheromones used to orient them toward newly infested pines. While this method is effective in the summer when felled trees are super-heated by the sun, this method of suppression is less effective than the “cut and remove” or “cut and spray” suppression tactics, which are effective year round and during the entire life cycle of the southern pine beetle.
3. Cut and Spray – infested trees are felled, limbed and cut into workable lengths for spraying. All bark surfaces are sprayed with EPA-approved insecticides. No buffer zone needs to be cut and vacated trees may remain standing. This method of suppression would typically be used in high value areas such as recreation sites or red-cockaded woodpecker colonies. It is mainly effective in small spots, as large active infestations will grow faster than the trees can be treated.
4. Cut, Pile, and Burn – infested trees are cut, piled toward the center of the spot, and burned until the bark is charred. No buffer zone is needed and vacated trees do not need to be treated.

Application of one of these suppression strategies on a given spot would be based upon the following actions:

- Use aerial and ground surveys to locate southern pine beetle infestations. The possibility exists that spots may be found outside of the “susceptible stands” shown on the maps in the EA, due to the difficulty in pre-identifying exactly where pine beetle infestation will occur.
- Evaluate all detected pine beetle infestation sites to determine whether or not to suppress. Suppression may not be necessary on small inactive spots or where there is no threat to high value resources. The inactive spots where no suppression action was taken would be monitored in case the spot became active.
- Utilize “cut and remove” suppression where possible. Trees would be salvaged by commercial sale and removed from the forest. Usually the vacated trees would not be removed unless there was a safety concern.
- Where “cut and remove” suppression can not be utilized, initiate “cut and leave” suppression. This suppression tactic is often used in pine sapling and poletimber stands, stands inaccessible to mechanized equipment, or during periods when market conditions do not support salvage activities and infestations can not be suppressed by “cut and remove” within 21 days.

- If neither of the above methods can effectively be used to suppress a given southern pine beetle spot, then either “cut and spray” or “cut, pile and burn” may be utilized.
- In red-cockaded woodpecker colonies, a Forest Service biologist would be consulted before any treatment of infested trees occurred. The United States Fish and Wildlife Service would also be consulted on spots threatening or affecting nesting trees. During previous epidemics, the Fish and Wildlife Service has determined that the “cut and remove” method was the most successful and least disturbing treatment, even when applied during breeding season.
- Regardless of the suppression method employed, vacated trees adjacent to existing roads or trails would be felled due to the severe safety hazard that these dead trees pose. These stems would be left on site unless the stem is a merchantable component of a “cut and remove” operation.

All of these treatments would not be carried out on a single SPB spot, but all of the treatment options need to be analyzed for their effects as we can not predict the exact location where a SPB outbreak will occur.

Restoration

The purpose of restoration is to reestablish historic or appropriate forest communities. Restoration activities are necessary because natural processes such as fire have been disrupted by roads, private inholdings, and the need to provide for public safety and the protection of private property. The goal of restoration is to insure that damaged sites are returned to the appropriate forested condition as quickly as possible. The National Forest Management Act requires that regeneration suitable to the site be reestablished within 5 years.

Restoration will likely vary based on the current conditions of a specific site. The following is a decision framework for the management activities to be applied to southern pine beetle spots.

1. All pine and pine-hardwood spots averaging 1 acre and larger (1/2 acre and larger within the red-cockaded woodpecker habitat management area) would be evaluated for restoration needs.
2. Sites that are 1 acre and larger or pine sites that are ½ acre and larger in red-cockaded woodpecker habitat management areas would be site-prepared and regenerated as needed. To do this, the following criteria would be used:
 - Soil/site relationships and not prior forest structure should determine management objectives. Maps depicting possible restoration opportunities for longleaf/mixed-pine and pine-hardwood/hardwood are located in the EA. A field examination for site specific determination of suitable species will be conducted prior to restoration implementation.
 - Hardwood sites where sparse pines are removed and sufficient hardwoods remain to occupy the site would be not be treated. Over time, the hardwoods would expand to occupy the locations vacated by lost pines.
 - Hardwood sites occupied predominately by pine, but with adequate hardwood rootstock to regenerate naturally would be site-prepared and allowed to revert naturally to hardwood. This situation would typically occur on an old field site which regenerated to pine after they were abandoned, and have experienced an in-growth of hardwoods over time.

- Pine sites would be site-prepared and regenerated to pine. Longleaf pine would be established on suitable sites in an effort to restore this ecosystem to its appropriate range.
- Longleaf pine would be planted on suitable sites where pines were desired and burning was a part of the management regime.
- A site-specific field examination would occur at a given site once the suppression activities are complete, to determine if and which site preparation techniques would be utilized. The intention of site preparation would be to regenerate the site to the appropriate ecosystem by treating vegetation that would inhibit the development of the new stand.
- Sites with excessive vegetation competition would be site prepared by injection and foliar spray. Saw-and-stump spray and foliar spray would be substituted in spots adjacent to roads where visual management mitigation is a high priority. Tree injection, saw-down, and foliar spray would be used in hardwood and pine hardwood areas. Chapter 3 of the EA contains a listing of proposed herbicides and treatment rates by application method.
- Prescribed burning would be used as a follow-up treatment on all sites.
- Release / precommercial thinning would be planned on all pine and pine-hardwood sites.

Other Alternatives Considered

In addition to the selected alternative, I considered 2 other alternatives. A comparison of these alternatives can be found in the EA on page 21.

Alternative 1

No Action

Under the No Action alternative, current management plans would continue to guide management of the project area.

Alternative 3

Suppression without chemical site prep.

Under this alternative, suppression of southern pine beetle would occur but there would not be the use of herbicides in preparing the sites for planting.

RATIONALE FOR THE DECISION

Based on the analysis presented in the *Suppression of Southern Pine Beetle on the Shoal Creek Ranger District of the Talladega National Forest EA*, I have decided to select Alternative 2 because it best meets the purpose and need and the Forest-wide Goals discussed above. The following is the rationale for my decision.

I first eliminated the No Action Alternative (Alternative 1) since it failed to meet the purpose and need established for the project in several ways. The No Action Alternative would violate the direction given in the Revised Land and Resource Management Plan for the National Forests in Alabama (pg 3-35), which states that management for Red-cockaded Woodpecker habitat will be based on sections 3 and 4 of the Record of Decision of the Final Environmental Impact Statement for the Management of the Red-cockaded Woodpecker and its Habitat on National Forests in the Southern Region. Under the No Action Alternative, the thinning covered in the Forest Health and RCW Initiative EIS would continue but no suppression of southern pine beetle would occur.

Next, I eliminated the No Herbicide Alternative (Alternative 3) since it also failed to meet the purpose and need established for the project. The National Forest Management Act requires that regeneration suitable to the site be reestablished within 5 years. The inability to use herbicides would compromise the success of regenerating stands once the suppression treatments have been completed. The use of herbicides in site prep and release treatments has the potential to be much more successful than mechanical treatments, especially on slopes which are greater than 35%.

This left Alternative 2 (Proposed Action). I found Alternative 2 (Proposed Action) superior because it provides for better meeting guidelines set forth in the Revised Land and Resource Management Plan for the National Forests in Alabama (Goal 3 and Forest Wide Standards 6, 9 and 19 - 30), and having a greater beneficial effect on the RCW over the long-term.

Activities proposed under Alternative 2 would minimize negative impacts to the quality of RCW habitat on the forest. Alternative 2 would protect existing and future RCW habitat and maintain healthy forests, by reducing losses of pine trees through active Integrated Pest management. This alternative is also necessary to minimize visual impacts, as well as impacts to recreational opportunities, wildlife, soil and water. This action responds to the goals and objectives outlined in the Revised Land and Resource Management Plan (January 2004), and helps move the project area towards desired conditions described in that plan (p2-10).

Public Involvement

As described in the background, there has been an ongoing need for this action. A proposal to suppress Southern Pine Beetle was listed in the Schedule of Proposed Actions in March 2007. The proposal was provided to the public and other agencies for comment during scoping from 5/16/2007 to 6/15/2007. A legal notice requesting written comments was also published in the Anniston Star in May 2007. Three written responses were received during scoping and all were in favor of the project. The EA was also made available to the public on the Forest's Internet site. Copies of the EA were also mailed to those individuals that had responded by mail during the scoping period. Record of the comment period is located in the project record. Pursuant to 36 CFR 215.3 (a-e) (2003), since only supportive comments were received during the scoping and comment period this decision is not subject to appeal. A legal notice of the Decision Notice and Finding of No Significant Impact was published in the Anniston Star in September 2007.

Finding of No Significant Impact

After considering the environmental effects described in the EA, I have determined that these actions will not have a significant effect on the quality of the human environment considering the

context and intensity of impacts (40 CFR 1508.27). Thus, an environmental impact statement will not be prepared. I base my finding on the following:

1. My finding of no significant environmental effects is not biased by the beneficial effects of the action.
2. There will be no significant effects on public health and safety.
3. Within the limited context of the planned actions along with the restrictions and mitigation measures (EA pages 22 - 46), there will be no significant effect on any unique characteristics or features of the geographic area. (EA pages 22 - 46).
4. The effects on the quality of the human environment are not likely to be highly controversial, because there is no known scientific controversy over the impacts of the project (see EA pages 22 - 46).
5. There are no known effects on the human environment that are highly uncertain or involve unique or unknown risks. Numerous vegetation management projects of a similar nature have been completed on the Forest such that environmental consequences (see EA pages 22 - 46) of this project are well understood.
6. The action is not likely to establish a precedent for future actions with significant effects, because there are no significant effects from the proposed actions and these actions have been carried out in similar projects in recent years.
7. The possible cumulative effects of the proposed actions have been analyzed with consideration for past and reasonably foreseeable future activities on adjacent private and public lands. Each environmental component in Chapter 3 of the EA includes consideration of cumulative effects. The context and intensity of cumulative impacts over space and time will not be significant. (see EA pages 22 through 46).
8. The proposed actions will not adversely affect any sites listed, or eligible for listing, in the National Register of Historic Places, nor will they cause the loss or destruction of significant scientific, cultural, or historical resources. This is based on findings of site-specific cultural resource surveys of the project area (see EA pages 31 – 32).
9. Implementing this decision will not adversely affect threatened or endangered species, or result in loss of any other species' viability, or create significant trends toward Federal listing of the species under the ESA. This determination is based on site-specific surveys, the Biological Evaluation for the Suppression of Southern Pine Beetle on the Shoal Creek Ranger District of the Talladega National Forest (Project File), and concurrence from the USFWS under Section 7(a) (2) of the ESA. (USFWS concurrence in Project File).

The action will not violate Federal, State, and local laws or requirements for the protection of the environment. Applicable laws and regulations were considered in the

EA. The action is consistent with the Revised Land and Resource Management Plan for the National Forests in Alabama.

Findings Required by Other Laws and Regulations

National Forest Management Act

This decision is consistent with the National Forest Management Act (NFMA) of 1976 regarding the effective management, use, and protection of the natural resources of the area affected by this project.

Forest Plan Consistency

I have determined that all actions of the selected alternative will be consistent with the management requirements for the revised Land and Resource Management Plan for the National Forests in Alabama, January 2004.

Implementation Date

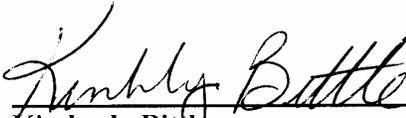
Pursuant to 36 CFR 215.3 (a-e) (2003), as only supportive comments were received during the scoping and comment period this decision is not subject to appeal and can be implemented immediately.

Administrative Review or Appeal Opportunities

Pursuant to 36 CFR 215.3 (a-e) (2003), as only supportive comments were received during the scoping and comment period this decision is not subject to appeal.

Contact

For additional information concerning this decision or the Forest Service appeal process, contact Kimberly Bittle, District Ranger, Shoal Creek Ranger District, 45 Hwy 281, Heflin, Alabama 36203, (256) 463-2272.



Kimberly Bittle
District Ranger
Shoal Creek Ranger District

9/27/07
Date

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, or marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.