

**Vegetation Report**  
**Boswell Creek Healthy Forest Initiative**  
**Sam Houston National Forest**  
**July, 2003**

**Executive Summary**

The Boswell Creek Project encompasses approximately 8,650 acres of the Sam Houston National Forest, most of which falls within Management Area 2 (MA-2), Red-Cockaded Woodpecker Emphasis. The desired future condition for MA-2 is to maintain the open understory, provide habitat for RCW recovery, and maintain an overstory dominated by large pine trees with hardwoods scattered throughout. Loblolly pine (*Pinus taeda*) dominates most stands in the Boswell Creek Project, and about 50 percent of these pine forest communities are less than 20 years old. During the mid-1980s, Southern pine beetle (SPB) decimated the pine-dominated forests in this area.

Prescribed burning and thinning proposed in the Boswell Creek Healthy Forest Initiative Project would result in the development of open forest conditions in the uplands, as overstory density and the woody understory vegetation are reduced. No fragmentation or change in the distribution of acres in various age classes will occur. The actions proposed in the Boswell Creek Healthy Forest Initiative Project are similar to those that have taken place in the last several years in and around the watershed. The end result is an open forest that provides quality habitat for the red-cockaded woodpecker and moves the Sam Houston NF towards the desired future condition for MA-2.

The No Action Alternative would allow species composition to change due to natural occurrences such as insect and disease outbreaks, wildfires, floods, tornadoes, and hurricanes. Tree mortality would increase as stands age and become predisposed to insects and disease. SPB hazard and the potential for loss of large areas to SPB infestation would remain high for much of the forest communities in the Boswell Creek Project. If SPB did infest this area, species composition would shift to more tolerant hardwood species as pine trees die.

**Design Criteria**

Prescribed fire will only be applied under an approved burning plan to meet specific resource objectives, and under the supervision of a qualified burning boss. The burning plan will plot the trajectory of the smoke plume, identify smoke-sensitive areas, predict fire behavior, and set parameters for burning conditions to minimize risk of resource damage or fire escape. Burns will not be employed if the smoke plume will impact a smoke-sensitive area, or when the mixing height is less than 1,640 feet (500 meters) and transport wind speed is less than 9 mph (4meters/second).

Within riparian areas, fire intensity would be kept low so that not all surface litter is burned or vegetation killed.

The Forest Supervisor's Office, Texas Forest Service, County Sheriff's Office, Volunteer Fire Departments, and adjacent landowners will be notified prior to ignition of any prescribed burn.

Backing fires would be used to protect hardwood stands and inclusions where possible.

Fire would be ignited in the uplands would enhance diversity and natural recovery, and would be allowed to extinguish naturally in moist areas.

In mature stands, thin from below and leave shortleaf pine wherever possible.

In mature stands, maintain a minimum spacing of 20-25 feet between dominant and co-dominant trees.