

ANATOMY OF A BURN

Burn Prescription

A prescribed burn plan is prepared for a site. This plan outlines the burn unit, topography, and types of fuel, (such as leaves, grass, and logs), as well as goals of burning. It also lists the weather parameters needed to burn that site, including temperature, wind speed and direction, and relative humidity.

Firebreak Construction

Firebreaks are prepared around the burn unit. Barriers such as woods roads and plowed fields can be used as firebreaks. All fuels are cleared to expose mineral soil. Follow Best Management Practices (BMPs) to protect water quality.



Pre-Burn Crew Briefing

The burn boss leads the crew through the burn unit and points out firebreaks, potential hazards, escape routes, and safety zones. The crew is briefed on assignments, location of emergency equipment and vehicles, ignition pattern, expected fire behavior, smoke sensitive areas, and contingency plans.

Weather

Throughout the prescribed burn, the relative humidity, temperature, smoke dispersal, and wind speed and direction are closely monitored.



Test Burn

If weather conditions are within prescription and forecasted to hold for the duration of the burn, then a small test burn is ignited. The crew monitors fire behavior and determines if it is safe to proceed with the burn.

Ignition

The fire is applied to the burn unit in very specific patterns in order to achieve desired fire behavior. The burn leader determines which pattern is most appropriate according to burn objectives, fuels, topography, and weather. Typically, an ignitor uses a drip torch, which contains a mixture of diesel fuel and gasoline, to start the fire.



Backing Fire

A common method of beginning a burn is to use a backing fire. This fire generally has short flames and a slow rate of spread. It is started along a downwind firebreak and allowed to creep back into the wind.



Holding Crew

The holding crew is responsible for containing the fire within the firebreaks. It is very important to look for wind-blown firebrands (flaming or smoldering material) leaving the unit which might start a spot fire. The crew must be alert to any changes in the fire's behavior, smoke dispersal, and the weather. The holding crew is first to attack spot fires, attempting to suppress them with hand tools and a backpack pump.



Heading Fire

Once a backing fire has burned enough to provide a secure downwind firebreak, other types of ignition may be employed. A heading

fire is fast-moving, has long flames, and spreads in the direction of the wind. When a heading and a backing fire meet, intense fire behavior can be expected. This method can be used, but care should be taken not to damage trees.



Mop-Up

Working in teams, crew members use specialized tools and equipment to secure the unit. Typically, a wide zone around the edge of the unit is patrolled to extinguish all burning and smoldering material until the fire is "dead out."

Post-Burn Crew Debriefing

The fire crew reassembles to discuss the events of the fire. A post-burn evaluation is conducted during which visible effects such as amount of forest litter or duff remaining are recorded. This information will be used to determine whether the goals were achieved and to plan future burns.





The longleaf pine forest is one of the most fire-dependent ecosystems in North America. This diverse ecosystem, which can harbor hundreds of different species, was once a dominant vegetation type of the Coastal Plain in Georgia and other Southeastern states.

Today, less than three percent of this community type still remains in a natural state. Conversion to other species and suppression of naturally occurring wildfires are leading factors in the decline.

Many state and federal conservation agencies are now promoting the restoration of longleaf pine. Technical assistance is available from these agencies. It is

important to understand the appropriate frequency and timing of burns for each site.

As more landowners learn about and utilize prescribed burning as a management tool, ecosystems like the longleaf pine forest have a better chance of thriving.

" . . . a vast forest of the most stately pine trees that can be imagined"
William Bartram (1791)
early American naturalist

" . . . below [the longleaf pine's] flattened branches, grasses arch their tall, richly dun heads of seeds, and orchids and lilies paint the ground"
Janisse Ray, (2000)
contemporary Southern writer

For more information on prescribed burning, contact the Georgia Forestry Commission (GFC).

<http://www.gfc.state.ga.us/>
1-800-GATREES

GFC can help you plan a burn, prepare fire breaks, and provide necessary permits and standby assistance during your burn. They can also provide you with a list of consultants who have professional training in prescribed burning who can conduct the burn for you.



This brochure was produced by the Georgia Natural Heritage Program (GNHP), a unit of the Nongame Wildlife & Natural Heritage Section of the Georgia Department in Natural Resources' Wildlife Resources Division. The goals of GNHP are to protect and enhance rare species and natural communities. For more information on rare species in your area, check out the GNHP web page:

www.dnr.state.ga.us/dnr/wild/natural.html
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PRESCRIBED BURNING IN GEORGIA

The Longleaf Pine Forest



Growing season burn at Doerun Pitcherplant Bog State Natural Area.

Georgia has a variety of natural ecosystems, many of which are fire-maintained or fire-adapted. Using prescribed burning carefully as a management tool allows landowners to restore and enhance many native species.