

Prescribed Fire

A cost-effective, efficient tool to manage land.

PHOTO: CARSON LOVE

Prescribed fire is the planned, controlled use of fire on a landscape. It is a cost-effective and efficient tool widely used in the Southeast to restore and manage land toward specific objectives.

Benefits of Prescribed Fire:

- Improve forest aesthetics by increasing visibility and access for easier hunting, hiking, and timber management
- Reduce hazardous fuel loads and wildfire risk
- Promote native grasses, legumes and forbs that provide food and cover for wildlife
- Support forest management by controlling unwanted hardwoods, preparing sites for planting, restoring fire-adapted ecosystems, and reducing pests and disease
- Enhance nutrient cycling back into the soil

Many trees and plants are adapted to frequent fire on a landscape, these are called fire-tolerant species. Adaptations found in fire-tolerant species include:

- fire activated seeds
- thermal insulation
- resprouting
- prolific flowering
- tall crowns

The Science of Prescribed Fire:

Fire releases nutrients like nitrogen, phosphorus, and potassium that are locked in dead plant material, converting them to ash that plants can readily absorb, stimulating a flush of nutritious new growth after a burn. It also top-kills shade-tolerant hardwoods like sweetgum and reduces leaf litter, allowing more sunlight to reach the forest floor. This encourages dormant seeds to germinate and increases grasses, forbs, and overall herbaceous diversity.

Examples of plants and wildlife that depend on fire-maintained ecosystems:

- Longleaf Pine
- Red-cockaded Woodpecker
- Pitcher Plants
- Morel Mushrooms
- Bobwhite Quail



PHOTO: R. VASSALO



PHOTO: R. WATSON



PHOTO: J. TROTH

Considerations before you burn:

- Objectives: Clearly define your goals (examples: fuel reduction, hardwood control wildlife habitat improvement, site preparation, or agricultural clearing).
- Personnel: Ensure you have adequately trained personnel and equipment on site, as outlined in your burn plan.
- Fire Breaks: Create strong firebreaks made of bare soil and make them about as wide as the flames are expected to be tall.
- Weather: Monitor wind speed and direction, humidity, fuel moisture, and temperature. Always conduct a test fire the day of the burn to confirm on-site conditions.
- Location and Smoke Management: Identify smoke-sensitive areas such as roads, homes, hospitals, and airports. You are responsible for smoke impacts, so consider fuel load, wind conditions and nearby receptors. In some locations, burning may not be feasible.

Legalities of Prescribed Burning:

- **Burn Notification**: You must notify the Forestry Commission before burning. Be prepared to provide the following:
 - Location of burn (lat/long coordinates)
 - Location of downwind smoke-sensitive areas
 - Time of burn
 - Type of burn
 - Estimated fuel load and/or acreage of burn
 - Person in charge and their contact information
- **Liability**: Landowners have a legal right to burn for forestry and agricultural purposes, but they are responsible for preventing fire escape and avoiding hazardous smoke impacts (such as reduced visibility).
- **Certified Prescribed Burn Manager**: A certified prescribed burn manager is recommended but not required. If one is present, follows a written burn plan, and adheres to Smoke Management Guidelines, liability is limited to cases of gross negligence.



How you can get started:

- The South Carolina Forestry Commission and several non-profit groups can assist with burns, though waitlist may apply. Their website offers planning steps, considerations, and helpful resources.
- The Longleaf Alliance, Clemson Extension, and the Forestry Commission regularly host Learn-to-Burn workshops and Certified Prescribed Burn Manager courses for landowners.
- Local burn cooperatives allow landowners to work together and help burn one another's properties.
- The South Carolina Prescribed Fire Council is a network of prescribed fire practitioners and a valuable resource for guidance.

Visit ASC's Working Lands website.

