

U.S. Fish & Wildlife Service

Wildland Fire Management in the Southeast

Keeping Fire on Our Side







This blue goose, designed by “Ding Darling,” has become a symbol of the Refuge System.

Friend or Foe?

What comes to mind when you hear the word “fire”? Warmth, danger, comfort, excitement, power? People have a love-hate relationship with fire, and for good reason. Under the right conditions, fire can be useful and even necessary for survival. At the wrong time and place, however, it can be destructive and life-threatening. Fire seems to have two sides, the friendly and the fierce.

Yet in nature, the two sides of fire come as a complete package. The Southeast is full of plants and animals that have adapted to fire or need frequent fire for their very existence. Fire has been a part of human development for centuries and the use of controlled burns has benefited man in many ways like hunting and agriculture.

Today, land managers use controlled or “prescribed” burning to improve wildlife habitat and reduce the risk of dangerous fires. Wildfire, on the other hand, can threaten life and property of both people and wildlife especially when it occurs with little notice and under extreme conditions.

The U.S. Fish & Wildlife Service is working to make fire a positive force on its lands and for its neighbors, keeping fire on our side.



It's Only Natural

Fire plays a beneficial role in shaping natural habitats in the Southeast. In fact, fires can burn in the Southeast in almost any month and influence habitats all year long. Under natural conditions, lightning-caused fires occur with regularity, with the highest number of starts in the spring and summer. In some areas of the Southeast these burn once every 1 to 10 years. Many of our natural habitats depend on and benefit from fire. Examples include longleaf pine forests, mixed pine-hardwoods, sand pine scrub, savannas and pocosins.

Fire has many different ecological roles. It removes dead vegetation and returns nutrients to the soil, helping to prepare a seedbed for plant germination. Fire helps to reduce disease and insect infestations and naturally prunes vegetation. It promotes habitat for rare and endangered wildlife species. Fire encourages growth of native plants that are adapted to fire and used by wildlife for food. Over 50 species of rare and endangered plants and animals benefit from fire in the Southeast.

Across the Southeast there are many examples of adaptations to fire. Frequent fire is necessary to maintain the open nature of the longleaf pine-wiregrass habitat and to perpetuate its associated species, including the endangered Red-cockaded Woodpecker. Fires burn away the woody shrubs that grow around trees that, if allowed to grow, could provide snakes and other predators easy access to the woodpecker nests.

Wiregrass is one of several plant species that require fire for flowering. Southeastern pine trees, such as pond and sand pine, require heat from a fire for seed release. Other plants have adapted to survive frequent fire by resprouting from their underground parts. Such plants include marsh plants, lilies, some orchids, many shrubs and some herbs. Another group of plants go one step further and have chemicals in their leaves that are flammable and actually encourage fire to spread. These plants quickly resprout after a fire and can get a big head start on their neighbors. Such plants include bays, myrtles and palmettos, which are found along our coastal plain.



A Prescription for Healthy Habitat and Human Safety

Each year, U.S. Fish & Wildlife Service staff use prescribed fire to restore, maintain, and enhance wildlife habitat on National Wildlife Refuge System lands throughout the Southeast. Prescribed burns rejuvenate the diverse ecosystems by fulfilling some of the natural roles of fire. They help prevent the dense build-up of vegetation that leads to damaging wildfires, improving conditions for both wildlife and people.

Surrounding communities and landowners benefit from the Service's regular use of prescribed burning. Through regular burning, large volumes of vegetation or "fuel" are prevented from building up to dangerous levels. Prescribed burns generate less smoke and harmful emissions than wildfires, and the burns can be done under controlled conditions to limit smoke's impact on human health.

Recognizing that neither ecosystems nor wildfires stop at refuge boundaries, Service staff also work beyond refuges to help communities manage fire. Refuge firefighters may respond to off-site wildfires to protect people and property and often work collaboratively with other federal agencies, states, and landowners to conduct prescribed burns off refuges. The Rural Fire Assistance Program provides funding to local fire departments which may assist with fighting wildfires on or near refuge lands.





Just What the Doctor Ordered

Firefighter and public safety is the top priority for any prescribed burn, which is a carefully planned and executed event that allows the Service to manage fire safely, professionally, and cost-effectively.

Long before a match is struck, staff will complete a unit-specific Prescribed Fire Plan describing the area to be managed. Firebreaks are prepared to prevent a runaway blaze. Managers use computer software to predict what smoke emissions will be produced and where the smoke will



go. Steps to mitigate smoke's impact are lined out as part of the Prescribed Fire Plan. Managers carefully choose days when weather conditions will help control the smoke and flames while still allowing

an effective burn. Wind speed and direction, vegetation and soil moisture, air temperature, and humidity must all be “within prescription.”

On the day of the burn, equipment and trained personnel are assembled at the site. After confirming that weather conditions meet the requirements, the “Burn Boss,” a specially qualified fire manager, gives the okay and oversees the burn. Fire and smoke conditions are carefully monitored. Flames near the perimeter are extinguished before staff leave the site, and the unit is frequently monitored until the next significant rainfall.



Checklist For a Safe, Efficient Prescribed Burn

- Complete Prescribed Fire Plan
- Construct fire breaks
- Assemble equipment and trained crew
- Check conditions:
 - air temperature
 - humidity
 - wind speed and direction
 - moisture of vegetation and soil
- Notify local emergency personnel and neighbors
- Set test fire to confirm conditions
- Conduct burn with constant supervision
- Secure perimeter
- Monitor until fire is completely out

A Dangerous Combination

People living in and among the fire-adapted plant communities of the Southeast have always been at risk from wildland fire, but population growth trends in the late 20th century have set the stage for even more fire-related disasters. Public safety officials and natural resource managers are concerned about this growing phenomenon, the Wildland Urban Interface. Many people are leaving cities and making their homes near wild places where their homes adjoin or are interspersed with undeveloped land, creating a



potentially volatile situation. As more people choose to live in rural areas, safely managing fire on the natural landscape is becoming more difficult and more crucial.

A Year of Fire in the Southeast

of wildfires = 154

of prescribed fires = 354

of acres the Fish and Wildlife

Service managed with prescribed fire = 121,472 acres

These statistics are taken from the U.S. Fish and Wildlife Service Fire Management Branch.



Living with Fire

The relationship of fire and people in the Southeast has a long history. As populations continue to expand into wildland areas, this relationship cannot be lost. Along with the pleasure of living among the wildlands comes the responsibility

of preparing home and property for a wildfire. From construction to maintenance, there are things you can do to make your home more fire-resistant and increase the odds that it will still be standing once a fire has passed.



Select a safe site

Be a Firewise Homeowner

When buying or building your home choose a level location, at least 30 feet from a ridge or cliff.

*Create a
Survivable Space*

Clear an area 30 feet wide around your home. Remove dry grass, brush, dead leaves, and pine needles. Replace highly flammable plants with fire-resistant, high-moisture ones. Re-locate woodpiles away from structures. Keep trees pruned.

*Make your roof,
walls, and
windows
fire-resistant*

If you have wood shakes, treat or replace them with non-combustible materials. Replace plate glass with tempered.

*Install screens on
chimneys, vents,
eaves, and gutters*

Flying sparks can enter through any opening. Keep gutters free of leaves, pine needles, and debris.

*Check all
additional
structures*

Wooden decks, fences, and trellises can act as ignition points and lead fire to your house. Clean leaves and debris from patios and decks. Consider building ground-level terraces. Don't attach wooden fences to your house.

Be accessible

Make sure your driveway is well marked and wide enough for fire equipment to enter.

A Friendship Based on Respect

For thousands of years, humans have had an active partnership with fire. Indigenous people used fire extensively as did frontiersmen and settlers first colonizing the Southeast. When respected and managed with care, fire can be a beneficial ally rather than an awesome opponent. Thoughtful preparation and action by public managers and private property owners can help keep fire's effects positive. Together, we can keep fire on our side.



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<http://www.fws.gov/fire>

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Related Links:

www.nifc.gov - National Interagency Fire Center

www.smokeybear.com - Smokey's official website

**www.firewise.org - Firewise sponsored by the National
Wildland/Urban Interface Fire Program**