



WHEN NATURE IS YOUR NEIGHBOR

Landscaping to Reduce Wildfire Risk

South Florida Edition



Florida Department of Agriculture and Consumer Services
Adam H. Putnam, Commissioner



Florida's population has nearly tripled in the last century, and much of the growth has occurred in undeveloped areas. The trend has created a complex landscape known as the **Wildland/Urban Interface**, a set of conditions under which wildland fires move beyond trees and undergrowth to threaten neighborhoods. Ensuring a home is compatible with nature can help save it and the entire community when wildfire strikes.

This guide focuses on the landscaping necessary, especially the area 30 feet around a home, for homeowners to better protect their properties from wildfires. Information is also provided for neighborhoods to become Firewise Communities/USA.

A key goal of Firewise landscaping is known as fuel reduction. This technique reduces the density of vegetation and materials that surround homes. It also promotes the retention of moisture in the vegetation around homes.

For additional information:
www.firewise.org
www.floridaforestservice.com



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Fire in Florida

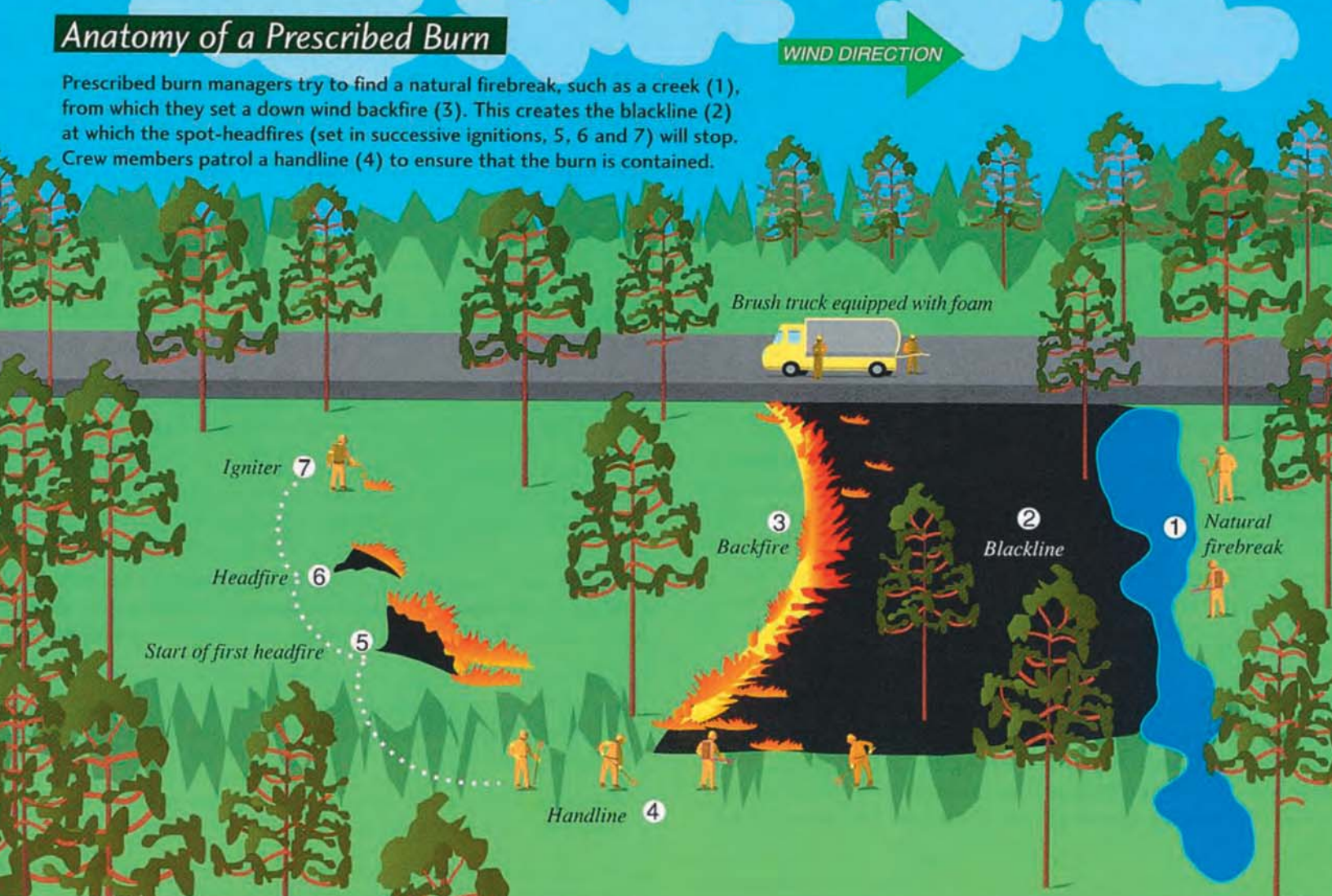
Fire shaped Florida's landscape long before homes, roads, canals and bridges. Lightning set numerous fires that burned regularly through forests and grasslands. Plants and animals developed adaptations to these *good fires* that cleared underbrush and prevented the buildup of dense vegetation that now regularly fuels large-scale, catastrophic wildfires across the state. As development spread and people suppressed *natural fire*, the lack of frequent burns led to *fire famine* that hurt habitats and created intense wildfires that threatened homes.

Land managers recommend *prescribed fire* to restore the natural cycle of fire and regeneration. If the Florida Forest Service is not actively fighting wildfires, firefighters and rangers are conducting planned burns or mowing and chopping vegetation in high fire risk areas with extremely flammable vegetation.

Prescribed or planned fires, help restore the natural cycle of fire and rebirth in Florida's ecosystems. These burns mimic natural fire conditions to prevent the build-up of excess, dangerous vegetation, *or fuels*. Carefully planned fires, handled by expert burn managers, recreate the fire patterns on which native plants and animals depend.

Anatomy of a Prescribed Burn

Prescribed burn managers try to find a natural firebreak, such as a creek (1), from which they set a down wind backfire (3). This creates the blackline (2) at which the spot-headfires (set in successive ignitions, 5, 6 and 7) will stop. Crew members patrol a handline (4) to ensure that the burn is contained.



Wooded Areas and Preserves

South Florida has several areas of **spot building** where homes are built in neighborhoods with large, unmanaged properties nearby where little or no regular landscape maintenance is conducted. Local governments often require neighborhoods to maintain designated preserves or conservation areas where plants and wildlife must remain untouched. Work in the preserves is often restricted to minimize the impacts for wildlife and native vegetation. Yet these preserves must still be managed. Fire plays an important role because Florida plants and animals rely on it. If left unmanaged, the forest floor becomes a thick layer of dead pine needles, leaves, sticks and twigs. Regular maintenance of preserves improves the chances for new growth. Otherwise, dead vegetation accumulates and causes fire danger to increase. These unmanaged areas force animals to forage outside their normal habitat. Regular food supplies run low for gopher tortoises and other species that rely on periodic fire to burn off the excess vegetation often found in these preserves.



If the property is owned or managed by someone else:

- **Find out who owns/manages the property. The county property appraiser's office is a good source. If the property is owned by a homeowners association, its members may have access to the property agreement or the preserve management plan.**
- **Contact the owner/manager and share your concerns.**
- **Contact the Florida Forest Service and request a wildfire risk assessment at no cost. You will learn what you can do to protect your property, and the assessment may be used as a tool to help the nearby property owners reduce fire risk for you and your neighborhood.**
- **Properties owned by the city, county or state may require a letter from a neighborhood or association that requests assistance from the Florida Forest Service. Contact the property owner first to express your concerns.**

Notice the green vegetation on top of the 5-foot-tall saw palmetto and all of the dead vegetation that blankets the forest floor. New green growth is stifled.

Retreat Community

A wildfire threatened the Retreat Community in south Florida. Residents thought charred trees and ash were all that was left of their beautiful preserve.

The reality is that a natural wildfire cleaned the forest floor of accumulated, dead vegetation.

Sick trees will die off to allow stronger trees to thrive. The newly cleaned forest floor will allow seedlings to germinate in soil that has been infused with nutrients from the ash.



These photos show how fast habitats recover after fire. The photo below was taken two months after a wildfire burned through the Retreat Community neighborhood preserve. Vegetation grows quickly as soon as rains come.



Fire is a natural process. People build homes close to nature to enjoy its beauty. Enjoying that beauty means recognizing that fire is a natural occurrence, and people can live in fire-prone areas if they accept that regular fire is required to ensure their safety and to maintain healthy ecosystems.



The Retreat Community was built with firebreaks between homes and the preserve.

The grass strip (left) serves as a firebreak.

The community keeps the area mowed and well-irrigated. The wildfire burned in the preserve and stopped at the grass.

Consider the amount of space around your home. A minimum of 30 feet of clear space is needed. Palmetto can grow more than five feet tall without regular fire, and the height of flames can reach 10 feet or more. Winds push flames toward homes, and 30 feet of space provides a greater chance that a home will be safe.



The gravel driveway provided added protection from the excessive 1,600+ degree temperatures.

Lean, Clean and Green

Regular landscape maintenance makes a home safer from wildfire

Close to a home, plant less-flammable vegetation that is free of resins, oils and waxes that easily burn in fire. Annuals and high-moisture perennials work well. Mow the lawn regularly. Use less-flammable landscaping materials such as chunky mulches. Rocks and pavers are great alternatives. ***Local county extension offices are good sources for planting recommendations.***

Remove dry, dead vegetation, such as pine needles and leaves from gutters, roofs, under decks and within 30 feet of a home. Prune trees away from the home and ensure the lowest limbs are 6-10 feet off the ground. Patio furniture is flammable. Keep it inside during high fire potential times of year. Keep firewood and propane tanks at least 30 feet from the house.

Water plants regularly so they stay healthy and green, especially during the dry season and within water restrictions. Consider xeriscaping in areas with low water supplies or severe water restrictions. Have an outside water source available during the dry season such as a hose or pond.

When planning the 30-foot-perimeter around a home, examine flammable attachments, such as wood/vinyl decks, fences and backyard structures.

The perimeter should extend 30 feet beyond these attachments. Within five feet of the home, use nonflammable landscaping materials such as rocks, pavers and high moisture content perennials.



Regular home maintenance is essential to reduce wildfire risk. Excess pine needle accumulation on a roof (left) makes a home more vulnerable to a fire.

Nearby, dense vegetation can serve as a ladder fuel for a fire, meaning that a ground fire can quickly climb into treetops and present greater fire risk.



Proper Tree Pruning

Dead trees present a significant wildfire risk, especially if they are within 30 feet of a home. A few dead trees well away from a home can be beneficial for nesting birds and insects.

Consider hiring an arborist certified by the International Society of Arboriculture to remove dead trees. Prune trees so that the lowest limbs are 6-10 feet from the ground. This prevents fire from climbing from the forest floor into the tree. Prune tree branches away from the direction of a home to reduce the threat of fire.



Invasive Plants

Invasive, exotic plants take habitat away from Florida's native vegetation and present management challenges. Many invasive plants are extremely flammable and include: melaleuca, lygodium, downy rose myrtle, cogon grass, and eucalyptus. Another native, nuisance plant that presents fire concerns is grape vine.



Left—Lygodium (Old World Climbing Fern) is a ladder fuel that carries fire into treetops.

Right—Melaleuca is adapted to fire and extremely flammable. Its papery bark acts as a ladder fuel. Dense stands easily spread fire up to three miles from its origin.





Assessing Wildfire Risk

Low Wildfire Hazard Homes are built with concrete and appropriate non-flammable roofing materials. Short grass, low shrubs and light duff are present. The forest and heavy vegetation are not continuous throughout the community. Wildfires that do occur in these areas are less intense and easier to suppress because of the lower volume of fuel to feed and sustain the fire.

Medium Wildfire Hazard Wildland vegetation is continuous throughout the community. Tall grass, medium shrubs, thick duff and ladder fuels are prominent in the area. Vegetation is less than 30 feet from homes. Homes are built with vinyl, plastic or other types of less fire-resistant materials. Access is limited and the concentration of fuel to feed fires causes more intense fire behavior. Fire suppression becomes more difficult and costly.

Firewise Homes Lehigh Acres

These two homes survived a wildfire that burned more than 2,000 acres and destroyed 13 homes. Here's why:

1. Driveways are free of overhanging tree branches and wide enough (14 feet) to accommodate emergency vehicles.
2. Roofs and gutters are free of dry, dead vegetation. The homes are built with fire-resistant concrete and tile.
3. Vegetation near the homes is neatly trimmed and regularly irrigated.
4. Lawns are watered and mowed.
5. Enough *defensible space* exists between the homes and dense vegetation on the nearby undeveloped properties that burned in the fire.
6. Flammable palmetto is not on either property because the landscaping is well maintained.
7. Streets are paved and marked, which allows for faster emergency response.



Courtesy of The News-Press

High Wildfire Hazard

Dense, highly flammable vegetation surrounds the neighborhood and is within a few feet of homes. A thick layer of vegetation is present on the forest floor. Access to the neighborhood is limited to one entrance and/or on poorly maintained roads. Homes are rarely built with fire-resistant materials. Continuous, overgrown vegetation limits access and creates intense wildfire conditions. Fire suppression is challenging and requires more resources (engines, dozers, aircraft) and firefighters than normal.

Vegetation Management

Prescribed Fire is the best vegetation management tool. For smaller areas around homes, hand clearing is a good alternative.

Leaf Litter

Leaf litter is the most dangerous for wildfire growth because it accumulates quickly on the forest floor over long periods of time. If left unmanaged, it dries out and can easily ignite. When leaf litter burns, it may cook the roots of trees, often leading to their death. Thick layers of leaf litter cause wildfires to spread rapidly. Wind can carry embers up to a quarter mile away and start new fires.

Remove leaf litter from around a home. Keep pine needles and leaves off roofs and out of gutters by using a rake or leaf blower.



Palmetto

Palmetto is a highly combustible shrub that must be managed. It burns even if it is green and sweats an oily, flammable resin. Dead palmetto is often the ignition source for nearby green vegetation. Trim dead fronds from the trunks and remove green vegetation near the forest floor. Haul vegetation away after it is cut. Do not dump it and create a new wildfire risk.

Call the Florida Forest Service for permission to burn vegetation.



Cabbage Palm

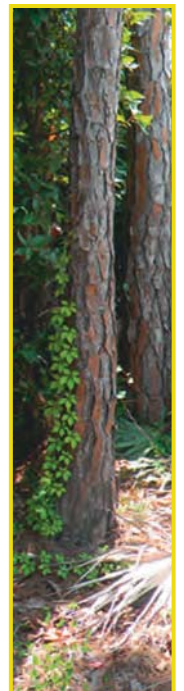
Firefighters often call this tree the Roman candle of the forest because fire easily runs from the ground to the top of it in seconds. The boots of the tree are often packed with dead pine needles and leaves.

Remove dead vegetation in trees and remove the boots from the bottom third of a tree. Remove dead fronds.

Vine (Ladder) Fuels

Vines carry fire from the ground up a tree like a ladder. Green vines burn as readily as dead vines. Fire in the treetops is often carried by wind and creates new fires.

Cut the vines from the tree.



South Florida Vegetation



Grass

Grassy areas may be filled with water in the rainy season, but these areas can quickly dry out. Green grass turns brown and brittle and ignites easily because it does not hold as much moisture as denser vegetation. Fires in grass are fast moving and driven by wind. They are easier to access and suppress but burn fast and hot.

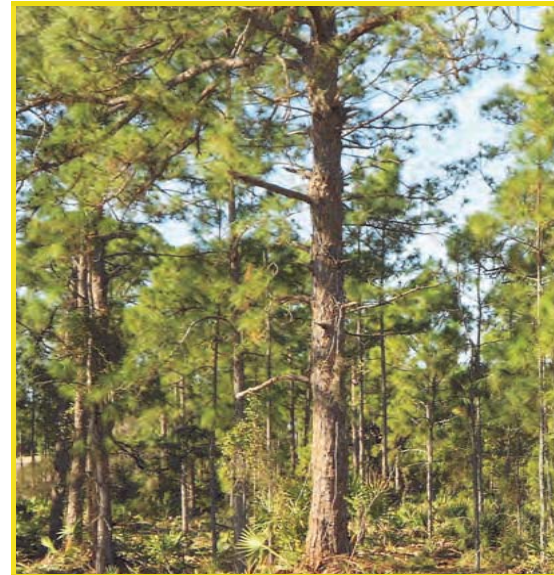
Mowing is the best option for grass near homes.

Pine Trees

Individual trees may not survive a wildfire but they are adapted to fire. Thick bark serves as insulation that protects healthier trees from the extreme heat.

Sand pine trees in particular have serotinous cones that open with fire and release their seeds into the bare, ash-enriched soil.

Trim lower tree limbs and nearby shrubs close to homes.



Scrub

Areas of scrub shrubs can be harsh because there is little or no tree canopy for shade. Summer temperatures are hotter than other areas, and vegetation dries out faster than other plants. Rain water rushes through the deep, sterile sands as fast as it falls. Fires burn the scrub to the ground at unpredictable intervals.

Maintaining trails through these areas is vital. Trails serve as fire-breaks. Shrubs should be regularly trimmed. Scrub oaks in these areas should be kept three to five feet tall.

Animals and Fire

Florida's native plants and animals depend on fire to burn off excess vegetation. Pine trees need fire to grow and spread their seeds, while animals need fire so they can better forage for food. Periodic fire promotes the variety of plants and animals that thrive in these areas. Endangered, threatened species like Florida panthers, gopher tortoises, indigo snakes and red cockaded woodpeckers need fire to survive. Deer, turkey, dove, and quail are popular game animals that also benefit from periodic fire.



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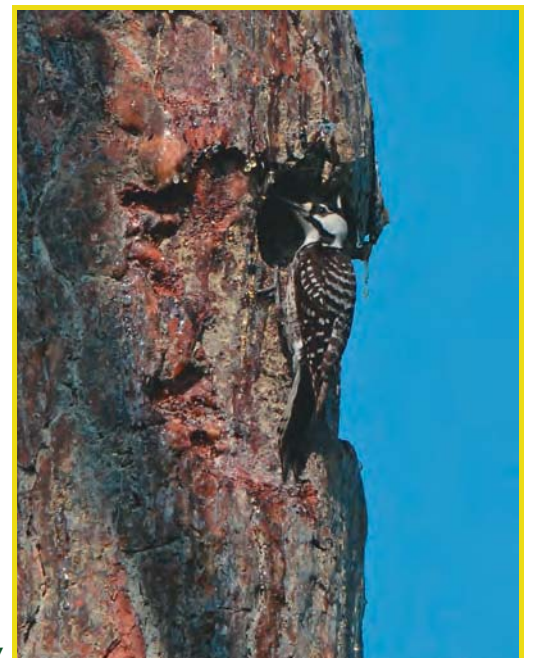
Florida panthers and black bears require large tracts of land to live in. Regular fire regimes provide better habitat.

The red cockaded woodpecker nests in fire-adapted, native pine trees and takes advantage of fires to snack on insects.

Courtesy of Jerome A. Jackson, Florida Gulf Coast University



Gopher tortoise burrows are deep and serve as shelter for a variety of wildlife including indigo snakes. Periodic fire provides more foraging and travel opportunities for tortoises and other wildlife.



Firewise Communities/USA

Firewise Communities/USA is a national recognition program that empowers individuals to make homes and neighborhoods safer from wildfires. Communities, in partnership with local fire departments and the Florida Forest Service, develop plans to reduce wildfire risk. The preemptive measures addressed in these plans allow agencies to focus on direct wildfire suppression efforts.

Communities that complete plans receive a national award along with annual updates and information. More importantly, residents learn ways to reduce wildfire risk and improve their community's safety when wildfires strike. Applications are renewed each year and residents participate in community Firewise events.



Wildfire Information Resources

Florida Forest Service

www.floridaforests-service.com

Firewise Communities/USA

www.firewise.org

Fire Adapted Communities

www.fireadapted.org

Good Fires

www.goodfires.org

University of Florida

<http://fireinflorida.ifas.ufl.edu/landscaping.html>

Florida Division of Emergency Management

<http://floridadisaster.org/EMTOOLS/wildfire/wildfire.htm>



The mission of the Florida Forest Service is to protect Florida and its people from the dangers of wildland fire and manage the forest resources through a stewardship ethic to assure they are available for future generations. Our core program areas are: wildfire prevention, detection, mitigation and suppression, state land management, and forestry technical assistance.

Firewise® and Firewise Communities/USA® are registered trademarks of the National Fire Protection Association; Quincy, MA.

When Nature is Your Neighbor: Landscaping to Reduce Wildfire Risk was written and designed by Melissa Yunas and Victor Hill.

Please contact a Florida Forest Service office near you or visit www.floridaforestservice.com.

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