Fire-Resistant Landscaping in North Carolina

NC STATE EXTENSION

Contents

Do you live in a home or community that is tucked into the woods or surrounded by natural shrubs, woodlands, or marsh? If so, this publication will teach you how to create and maintain a fire-resistant landscape and reduce your risk of damage from a wildfire while achieving other landscape objectives.

What Is Fire-Resistant Landscaping?

Fire-resistant landscaping involves creating "defensible space," or selecting, placing, and maintaining plants and other landscape features around your home in a way that helps make your home less vulnerable to damage or loss from wildfire. Defensible space is the area extending outward from your home that is designed to serve as a buffer to slow or stop a wildfire. The ideal amount of defensible space in a fire-resistant landscape should extend outward from your home and any attached structures such as fences or decks at least 100 feet in all directions.

Defensible space doesn't mean you cannot have trees or other vegetation in your yard. Nor does it need to be a stark landscape absent of wildlife. Instead, fire-resistant landscaping guidelines allow you to make decisions about what you value while taking steps to reduce your risk.

This publication summarizes basic guidelines for creating and maintaining a fire-resistant landscape around your home. It includes lists of native plants with flammability ratings for use in landscaping and maintenance decisions. Many of North Carolina's native plants are well suited for fire-resistant landscaping. These plants have evolved to thrive in the state's soils and climate, are considered noninvasive and aesthetically pleasing, and are best suited to provide food, shelter, and nesting sites for North Carolina's wildlife.

Basic Concepts

All vegetation can burn and is potentially fuel for a fire. There are no fireproof plants. The type, amount, and placement of vegetation near your home, however, can have a dramatic effect on fire behavior. Plant choice, spacing, and maintenance are critical to fire-resistant landscaping.

The recommended distance for defensible space varies based on the kinds of vegetation around your home and the steepness of the terrain. For homes and other structures on terrain that slopes less than 20 percent, a minimum of 100 feet is recommended for defensible space (Figure 1). For steeper terrain, defensible space may need to extend from the structure as far as 200 feet. To determine how much defensible space you need for your home, contact your local fire officials, the North Carolina Forest Service or your local Cooperative Extension center (see Additional Resources).

Plant Selection

Reduce the flammability potential of your landscape by selecting plants with low flammability characteristics (Table 1), and maintaining these characteristics by managing the vegetation over time (Table 2). For areas nearest the house, select plants with the lowest flammability rating (Table 3). Though not recommended, some homeowners still wish to include one or more moderately to highly flammable species in their landscape for aesthetic or other reasons. In a fire-resistant landscape, it is highly recommended to place these plants as far away from the home as possible and surround them with fuel breaks (low or nonflammable areas like lawns, dry riverbeds, or walkways).

Plant Placement

Keep plants widely spaced vertically and horizontally. Fire can spread rapidly from one plant to another when there is no space between plants. Use small, irregular clusters and island plantings to maintain ample space between plants, and separate these groupings by fuel breaks such as a well-watered lawn. Decreasing the volume of fuel available in your landscape will reduce the threat of damage from wildfire. Fire-resistant landscaping also enables easier access to the home for firefighters helping to defend it in the event of a wildfire.

Do not plant vines or ornamental grasses within the defensible space, particularly near the home or other structures. Vines and ornamental grasses, such as switchgrass (*Panicum virgatum*), are extremely flammable plants that can cause a wildfire to spread rapidly. Thatch, duff, or build-up of dead growth associated with such plants can cause fire to spread even faster. Vines and ornamental grasses also can become "ladder fuels" if they are planted under other vegetation. Ladder fuels allow a fire to move from the ground to the canopy of trees by climbing closely spaced plants of varying heights. Avoid creating ladder fuels by leaving ample vertical space above plants. Be sure the edges of tree limbs (the dripline) are no closer than 10 feet to the home or structure.

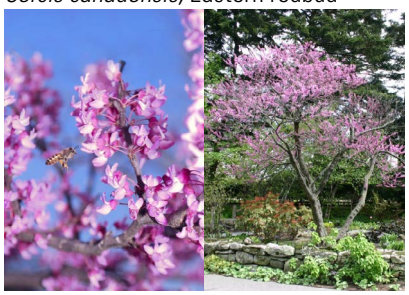
Figure 1. A fire-resistant landscape. Source: North Carolina Forest Service

Plant Maintenance

Fire resistance requires maintenance! A landscape is a dynamic system that is constantly changing. Trees, shrubs, and herbaceous plants that have a low flammability rating and low fuel volumes can lose these characteristics over time if they are not maintained properly. Conducting seasonal maintenance activities, such as pruning, will help you to maintain the plants' fire-resistant properties by keeping them green and healthy. When scheduling and conducting maintenance, remember that North Carolina's fire seasons are typically in the spring and fall. During those times, fire risk may be heightened and plant maintenance is especially important. To decide what plant maintenance is needed for your fire-resistant landscape, consult local experts from the North Carolina Forest Service or your local Cooperative Extension center or refer to Table 2. You may also find the following tips helpful:

- Remove vegetation encroaching on power lines.
- Remove branches within 10 feet of the chimney and roof.
- Remove vegetation touching the house or structure.
- Prune outside the nesting season, which takes place between early March and late July, to minimize wildlife impacts.

Table 1. Low Flammability Plant Characteristics

Characteristic	Low Flammability Example	Characteristic	Low Flammability Example
Grows without accumulating large amounts of combustible dead branches, needles, or leaves.	*Cornus* florida, flowering dogwood 	Grows slowly and requires little maintenance, such as pruning.	*Carpinus caroliniana*, ironwood or American hornbeam 
Open, loose branches with a low volume of total vegetation.	*Euonymus americanus*, strawberry bush 	Short and grows close to the ground.	*Viola pedata*, bird-foot violet 
Low sap or resin content. Pines, junipers, and most other conifers are highly flammable due to large volume of sap or resin content.	Many deciduous species, including *Cercis canadensis,* Eastern redbud 	Quickly resprouts following fire, minimizing the costs of replanting a landscape after a fire.	*Rhus glabra*, smooth sumac 
High moisture content.	*Impatiens capensis*, jewelweed 		

Images from the North Carolina Extension Gardener Plant Toolbox *(plants.ces.ncsu.edu).*

Table 2. Managing Vegetation

Fuel Type	Recommended Practice
Standing dead trees	☐ Remove all standing dead trees within the defensible space. ☐ Keep dead trees, or snags, to attract wildlife *only* if the snag is on the outer edge of the defensible space, 80–100 feet from the home.
Standing live trees	☐ Prune lower branches of large trees 6–10 feet from the ground. Maintain at least 60 percent of the total height of the tree as canopy. ☐ Prune lower branches of smaller trees, removing no more than 1/3 of the total tree height. ☐ Space shrubs at least 10 feet from the lower branches of the tree.
Downed dead trees	☐ Remove downed dead trees if they have recently fallen and are not yet embedded in the ground. Leave in place downed trees that are embedded in the soil and cannot be removed without soil disturbance. ☐ Remove all exposed branches from embedded downed trees.
Dead shrubs	☐ Remove all dead shrubs within the defensible space.
Live shrubs	☐ Maintain spacing in planting beds and control height under trees (to avoid ladder fuels) by pruning.
Grasses, wildflowers, herbaceous plants, and lawn grasses	☐ Mow or trim turfgrass to a height of 4 inches or less within the defensible space. ☐ Cut and remove dried-out or "cured" grasses and wildflowers. ☐ Keep plants well watered.
Dried needles, leaves, twigs, branches, and cones (on ground)	☐ Remove dead leaves, twigs, cones, and branches. ☐ Remove all needles, leaves, branches, and cones within 5 feet from home (including on decks, patios, and fences). ☐ Reduce thick layers of pine needles, but you may leave needles beyond the 5-foot zone around the home. Take care not to disturb the "duff" layer (dark area at the ground surface where needles are decomposing), if present.
Dried needles, leaves, twigs, branches, and cones (off ground)	☐ Remove all dead leaves, branches, twigs, and needles still attached to living trees and shrubs so that a surface fire cannot climb into upper portions of a tree or shrub. Prune trees 6–10 feet from the ground. For shorter trees (less than 30 feet tall), do not remove more than 1/3 of the overall tree height. ☐ Remove all debris that accumulates on the roof and in the rain gutters at least once a year, particularly before spring and fall fire seasons or when wildfire danger is high.
Mulch	☐ Remove any leaves or other organic debris that accumulate in mulch within 5 feet of the home. Nonflammable mulch such as gravel and decomposed granite is recommended. ☐ Outside the 5-foot zone around the home, maintain a thin moist layer of mulch (4 inches maximum) around plants, making sure not to create ladder fuels between mulch and other plants.
Firewood and combustible items	☐ Store firewood and other combustible items (for example, wood scraps, grass clippings, leaf piles, fuel tanks, play structures, boats, and RVs) at least 30 feet from the house, uphill if possible.

Construction Materials

Home construction and the materials used can substantially affect a home's flammability and fire resistance. The fire resistance of a home or structure is affected not only by the home and area around it, but also by all attached structures such as fences, outbuildings, and decks. Use materials that are less susceptible to fire, such as fire-resistant roofing material or double-paned, tempered glass windows. If larger changes to the home's construction are not practical, consider making small modifications to the home (for example, closing in eaves). Perform regular maintenance to remove flammable debris that accumulates in or around the home (for example, clearing leaves accumulated on roofs and in gutters). Many homes destroyed by wildfires are ignited by relatively small embers, not the flaming front of the fire. Small steps such as placing metal mesh screens over vents can prevent these embers from endangering your home. For more information on materials and construction techniques that can improve a home's fire resistance, visit the Prepare for Wildfire website or the National Fire Protection Association's Firewise USA® program website (see Additional Resources).

North Carolina Native Plants

Tables 3 to 5 provide a guide to the flammability ratings of North Carolina native plant species. Many factors influence the flammability of plants, including placement and maintenance. When selecting plants for your home, keep in mind that a plant described as having low flammability can easily become more flammable if not properly placed and maintained.

These tables also include other information you may find useful when selecting plants for your landscape, such as the conditions preferred by each species, wildlife benefits provided, and native region. Not all native plants are suitable in the three regions of North Carolina, so be sure to choose species that are suitable for where you live. Figure 2 shows the three regions of North Carolina used in these tables—coastal plain, piedmont, and mountains. Region boundaries are not absolute, so if you are unsure if a plant is native to your region, contact the North Carolina Forest Service or your local Cooperative Extension Center.

Native plants may not be available at typical home and garden stores. The North Carolina Native Plant Society maintains a list of nurseries in North Carolina that sell native plants, along with links to related resources (see Additional Resources).

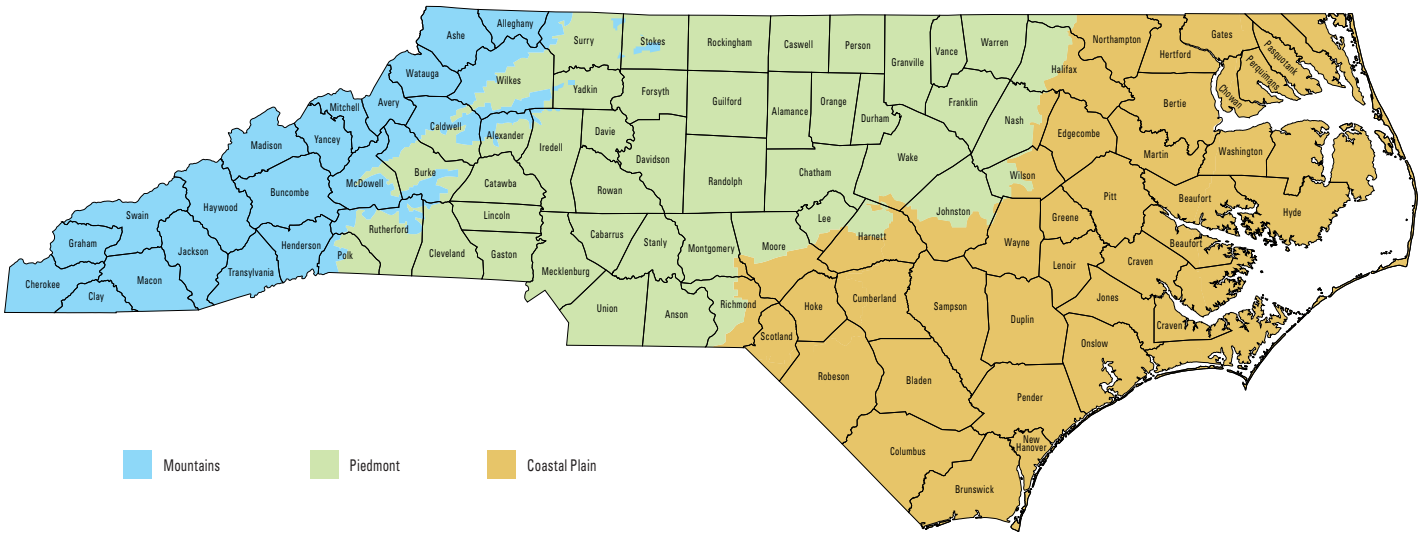


Figure 2. Three regions of North Carolina.

Table 3. Plant Species Native to North Carolina with a *Low* Flammability Rating

Scientific Name	Common Name	Soil Moisture			Light Needs			Native Region			Wildlife Value					
		Wet	Moist	Dry	Full sun	Partial shade	Shade	Mountains	Piedmont	Coastal plain	Winter cover	Fleshy fruit	Seed, mast, or catkin	Hummingbird nectar	Butterfly/insect nectar	Butterfly larvae host
Tall Trees (taller than 30 feet)																
Acer barbatum	Southern sugar maple		●		●	●	●		●	●			●			
Acer rubrum	Red maple	●	●	●	●	●	●	●	●	●			●			
Acer saccharum	Sugar maple		●		●	●	●	●					●			
Aesculus flava	Yellow buckeye		●			●	●	●						●		
Betula lenta	Sweet birch		●	●	●	●	●	●					●			●
Betula nigra	River birch		●		●				●	●			●			●
Carya glabra	Pignut hickory		●	●	●	●		●	●	●			●			●
Carya ovata	Shagbark hickory		●	●	●	●	●	●	●	●			●			●
Carya tomentosa	Mockernut hickory		●	●	●	●		●	●	●			●			●
Celtis laevigata	Sugarberry		●		●	●	●		●	●		●				●
Diospyros virginiana	Persimmon		●	●	●	●		●	●	●		●				
Fraxinus americana	White ash		●		●	●	●	●	●				●			●
Fraxinus pennsylvanica	Green ash	●	●	●	●	●		●	●	●			●			●
Liquidambar styraciflua	Sweetgum		●		●	●		●	●	●			●			
Liriodendron tulipifera	Yellow poplar		●		●	●		●	●	●			●	●	●	●
Magnolia acuminata	Cucumber tree		●		●	●		●	●				●			
Magnolia virginiana	Sweetbay	●	●		●	●			●	●			●			●
Nyssa sylvatica	Blackgum		●	●	●	●		●	●	●		●				
Oxydendrum arboreum	Sourwood		●	●	●	●	●	●	●	●					●	
Prunus serotina	Black cherry		●	●	●			●	●	●		●			●	●
Quercus alba	White oak		●	●	●	●		●	●	●			●			●
Quercus coccinea	Scarlet oak			●	●	●		●	●				●			●
Quercus falcata	Southern red oak		●	●	●	●		●	●	●			●			●
Quercus michauxii	Swamp chestnut oak		●		●	●			●	●			●			●
Quercus nigra	Water oak		●		●	●			●	●			●			●
Quercus pagoda	Cherrybark oak		●		●	●			●	●			●			●
Quercus phellos	Willow oak		●		●	●			●	●			●			●
Quercus rubra	Northern red oak		●		●	●		●	●				●			●
Quercus shumardii	Shumard oak		●		●	●			●	●			●			●
Quercus stellata	Post oak		●	●	●			●	●	●			●			●
Quercus velutina	Black oak		●	●	●	●		●	●	●			●			●
Robinia pseudoacacia	Black locust		●	●	●	●		●	●				●			●
Salix nigra	Black willow	●	●		●	●	●	●	●	●						●
Sassafras albidum	Sassafras		●	●	●	●		●	●	●		●				●
Taxodium distichum	Baldcypress	●	●		●	●				●			●			
Tilia americana	Basswood		●		●	●		●	●	●			●		●	●
Ulmus alata	Winged elm		●	●	●	●		●	●	●			●			●
Ulmus americana	American elm		●		●	●		●	●	●			●			●

Table 3. Plant Species Native to North Carolina with a *Low* Flammability Rating (continued)

Scientific Name	Common Name	Soil Moisture			Light Needs			Native Region			Wildlife Value					
		Wet	Moist	Dry	Full sun	Partial shade	Shade	Mountains	Piedmont	Coastal plain	Winter cover	Fleshy fruit	Seed, mast, or catkin	Hummingbird nectar	Butterfly/insect nectar	Butterfly larvae host
Small Trees and Shrubs (10 to 30 feet tall)																
Aesculus pavia	Red buckeye		●			●				●				●	●	
Aesculus sylvatica	Painted buckeye		●			●			●					●		
Alnus serrulata	Alder	●	●		●	●		●	●	●			●			●
Amelanchier arborea	Serviceberry		●		●	●	●	●	●			●			●	●
Amelanchier canadensis	Juneberry		●		●	●			●	●		●			●	●
Amelanchier laevis	Allegheny serviceberry		●	●	●	●	●	●				●			●	●
Aralia spinosa	Devil's walking stick		●		●	●		●	●	●		●			●	
Asimina triloba	Pawpaw		●		●	●	●	●	●	●		●				●
Carpinus caroliniana	Ironwood		●			●	●	●	●	●			●			●
Celtis tenuifolia	Dwarf hackberry			●	●	●			●			●				●
Cercis canadensis	Eastern redbud		●	●	●	●		●	●				●		●	●
Chionanthus virginicus	Fringetree		●	●	●	●		●	●	●		●				
Cornus florida	Flowering dogwood		●	●	●	●		●	●	●		●			●	●
Crataegus spp.	Hawthorn		●		●	●	●	●	●	●		●		●	●	●
Halesia carolina	Carolina silverbell		●			●	●	●	●						●	
Hamamelis virginiana	Witch hazel		●		●	●	●	●	●	●			●			
Ilex decidua	Possumhaw	●	●	●	●	●	●		●	●		●			●	●
Ilex verticillata	Winterberry	●	●		●	●	●	●	●	●		●			●	●
Morus rubra	Red mulberry		●	●	●	●	●	●	●	●		●				●
Ostrya virginiana	Hophornbeam		●	●	●	●	●	●	●			●				●
Prunus americana	Wild plum		●	●	●			●	●			●			●	●
Prunus angustifolia	Chickasaw plum		●	●	●				●	●		●			●	●
Prunus pensylvanica	Fire cherry		●	●	●			●				●			●	●
Rhus copallinum	Winged sumac		●	●	●	●		●	●	●		●			●	●
Rhus glabra	Smooth sumac		●	●	●	●		●	●	●		●			●	●
Salix caroliniana	Carolina willow	●	●		●	●			●	●						●
Sambucus canadensis	Elderberry	●	●		●	●		●	●	●		●				
Sorbus americana	Mountain ash		●		●	●		●				●				
Viburnum prunifolium	Blackhaw		●		●	●	●	●	●	●		●				●
Viburnum rufidulum	Rusty blackhaw		●	●	●	●	●		●	●		●				●
Small Shrubs (less than 10 feet tall)																
Callicarpa americana	American beautyberry		●	●	●	●	●		●	●		●				
Calycanthus floridus	Sweetshrub		●			●	●	●	●						●	
Ceanothus americanus	New Jersey tea		●	●		●	●	●	●	●			●		●	●
Cephalanthus occidentalis	Buttonbush	●	●		●	●		●	●	●			●	●	●	
Clethra alnifolia	Sweet pepperbush	●	●		●	●			●	●		●		●	●	
Corylus americana	Hazelnut		●		●	●		●	●				●			
Euonymus americanus	Strawberry bush		●			●	●	●	●	●			●			

Table 3. Plant Species Native to North Carolina with a *Low* Flammability Rating (continued)

Scientific Name	Common Name	Soil Moisture			Light Needs			Native Region			Wildlife Value					
		Wet	Moist	Dry	Full sun	Partial shade	Shade	Mountains	Piedmont	Coastal plain	Winter cover	Fleshy fruit	Seed, mast, or catkin	Hummingbird nectar	Butterfly/insect nectar	Butterfly larvae host
Small Shrubs (less than 10 feet tall) (continued)																
Gaylussacia frondosa	Blue huckleberry		●	●	●	●	●		●	●		●			●	●
Hydrangea arborescens	Wild hydrangea		●			●	●	●	●				●		●	
Itea virginica	Virginia willow	●	●			●	●	●	●	●			●		●	
Lindera benzoin	Spicebush		●	●	●	●	●	●	●	●		●				●
Photinia pyrifolia	Red chokeberry		●		●	●		●	●	●		●				●
Vaccinium corymbosum	Highbush blueberry		●		●	●			●	●		●			●	●
Vaccinium stamineum	Deerberry		●	●	●	●		●	●	●		●			●	●
Vaccinium pallidum	Lowbush blueberry			●	●	●		●	●	●		●			●	●
Viburnum acerifolium	Mapleleaf viburnum		●	●		●	●	●	●			●				●
Viburnum dentatum	Arrowwood		●	●	●	●	●	●	●	●		●				●
Viburnum nudum	Wild raisin	●	●		●	●	●	●	●	●		●				●
Ferns																
Polystichum acrostichoides	Christmas fern		●			●	●	●	●	●	●					
Herbs and Wildflowers																
Apocynum cannabinum	Hemp dogbane		●	●	●	●		●	●	●					●	
Arisaema triphyllum	Jack-in-the-pulpit		●			●	●	●	●	●		●				
Aristolochia serpentaria	Virginia snakeroot		●	●		●	●	●	●	●						●
Chrysogonum virginianum	Green-and-gold		●				●		●	●			●		●	
Desmodium spp.	Beggarlice		●	●	●	●		●	●	●			●			●
Eupatorium coelestinum	Mistflower		●		●	●		●	●	●			●		●	
Eupatorium fistulosum	Joe-pye-weed		●		●			●	●	●			●	●		●
Geranium maculatum	Wild geranium		●	●	●	●		●	●				●		●	
Houstonia caerulea	Bluets		●	●	●	●	●	●	●	●					●	
Impatiens capensis	Jewelweed		●			●	●	●	●	●				●	●	
Iris cristata	Crested iris		●			●	●	●	●					●		
Phlox carolina	Carolina phlox		●	●	●	●		●	●	●					●	
Phlox divaricata	Blue phlox		●			●	●	●	●	●					●	
Phlox paniculata	Summer phlox		●		●	●		●	●	●					●	
Phlox pilosa	Prairie phlox		●	●	●	●			●	●					●	
Phlox subulata	Moss pink		●	●	●			●	●						●	
Silene virginica	Fire pink		●	●		●	●	●	●	●			●	●	●	
Spigelia marilandica	Indian pink		●			●	●	●	●	●				●		
Viola pedata	Bird-foot violet		●	●	●	●		●	●	●						●

Table 4. Plant Species Native to North Carolina with a *Medium* Flammability Rating

Scientific Name	Common Name	Soil Moisture			Light Needs			Native Region			Wildlife Value					
		Wet	Moist	Dry	Full Sun	Partial Shade	Shade	Mountains	Piedmont	Coastal plain	Winter cover	Fleshy fruit	Seed, mast, or catkin	Hummingbird nectar	Butterfly/insect nectar	Butterfly larvae host
Tall Trees (taller than 30 feet)																
Fagus grandifolia	American beech		●			●	●	●	●	●			●			
Gordonia lasianthus	Loblolly bay	●	●		●	●				●	●					
Magnolia grandiflora	Southern magnolia		●			●	●		●	●	●		●			
Persea borbonia	Redbay	●	●		●	●	●			●	●	●				●
Platanus occidentalis	Sycamore		●		●	●		●	●	●			●			
Small Trees and Shrubs (10 to 30 feet tall)																
Castanea pumila	Chinquapin		●	●	●	●		●	●	●			●			
Cornus amomum	Silky dogwood	●	●		●	●		●	●	●		●			●	●
Cyrilla racemiflora	Titi	●	●		●	●	●		●	●	●				●	
Osmanthus americanus	Wild olive, devilwood		●	●	●	●				●	●	●				
Prunus caroliniana	Carolina laurel cherry		●	●	●	●				●	●	●			●	●
Symplocos tinctoria	Sweetleaf		●	●	●	●	●	●	●	●			●		●	●
Small Shrubs (less than 10 feet tall)																
Gaylussacia dumosa	Dwarf huckleberry		●	●	●	●		●	●	●		●			●	●
Lyonia lucida	Fetterbush		●			●	●		●	●	●				●	
Rhododendron atlanticum	Dwarf azalea		●	●	●	●	●		●	●				●	●	
Rhododendron calendulaceum	Flame azalea		●	●		●	●	●						●	●	
Rhododendron maximum	Rosebay rhododendron		●			●	●	●	●		●			●	●	
Rhododendron periclymenoides	Wild azalea		●		●	●	●	●	●	●				●	●	
Vaccinium arboreum	Sparkleberry		●	●	●	●	●		●	●	●	●			●	●
Herbs and Wildflowers																
Aquilegia canadensis	Columbine		●	●		●	●	●	●	●			●	●	●	
Aruncus dioicus	Goat's beard		●			●	●	●	●							●
Asclepias incarnata	Swamp milkweed	●	●		●	●		●	●	●					●	●
Asclepias tuberosa	Butterfly weed			●	●	●		●	●	●					●	●
Asclepias variegata	White milkweed		●	●	●	●		●	●	●					●	●
Aster curtisii	Aster		●	●	●	●		●					●		●	●
Aster divaricatus	Heart-leaved aster		●	●		●	●	●	●				●		●	●
Aster novae-angliae	New England aster		●	●	●	●		●					●		●	●
Aster novi-belgii	New York aster		●		●	●				●			●		●	●
Aster pilosus	White heath aster			●	●			●	●	●			●		●	●
Baptisia australis	Blue false indigo		●		●	●		●	●						●	●
Baptisia tinctoria	Yellow wild indigo			●	●	●		●	●	●					●	●
Bidens aristosa	Sticktight	●	●	●	●	●			●	●			●		●	
Chamaecrista fasciculata	Partridge pea		●	●	●			●	●	●			●			●
Cimicifuga racemosa	Black cohosh		●				●	●	●							●
Coreopsis angustifolia	Narrow-leaved coreopsis		●		●	●				●			●		●	
Coreopsis falcata	Sickle tickseed	●	●		●	●			●	●			●		●	

Table 4. Plant Species Native to North Carolina with a *Medium* Flammability Rating (continued)

Scientific Name	Common Name	Soil Moisture			Light Needs			Native Region			Wildlife Value					
		Wet	Moist	Dry	Full Sun	Partial Shade	Shade	Mountains	Piedmont	Coastal plain	Winter cover	Fleshy fruit	Seed, mast, or catkin	Hummingbird nectar	Butterfly/insect nectar	Butterfly larvae host
Herbs and Wildflowers (continued)																
Coreopsis lanceolata	Lance-leaved coreopsis		●	●	●			●	●	●			●		●	
Coreopsis major	Greater tickseed		●	●	●	●		●	●				●		●	
Coreopsis verticillata	Threadleaf coreopsis		●	●	●	●		●	●	●			●		●	
Echinacea purpurea	Purple coneflower		●	●	●			●	●				●		●	
Helianthus angustifolius	Swamp sunflower	●	●		●	●		●	●	●			●		●	
Helianthus atrorubens	Sunflower		●	●	●			●	●	●			●		●	●
Helianthus divaricatus	Woodland sunflower		●	●		●		●	●	●			●		●	
Heliopsis helianthoides	Ox-eye		●	●	●	●		●	●	●			●		●	
Hibiscus moscheutos	Rose mallow		●		●	●		●	●	●				●	●	
Liatris spicata	Blazing star		●		●	●		●	●						●	
Lobelia cardinalis	Cardinal flower	●	●		●	●	●	●	●	●				●	●	
Lobelia puberula	Downy lobelia	●	●	●	●	●		●	●	●				●	●	
Lobelia siphilitica	Great blue lobelia	●	●			●	●	●						●	●	
Mitchella repens	Partridgeberry		●		●	●	●	●	●	●		●				
Monarda didyma	Beebalm		●			●	●	●						●	●	
Monarda fistulosa	Wild bergamot		●	●	●	●		●	●					●	●	
Monarda punctata	Horsemint		●	●	●	●			●	●				●	●	
Oenothera fruticosa	Sundrops		●	●	●	●		●	●	●			●	●		
Penstemon canescens	Hairy beardtongue		●	●	●	●		●	●					●	●	●
Penstemon laevigatus	Smooth beardtongue		●		●	●	●	●	●	●				●	●	●
Phytolacca_americana	Pokeweed		●	●	●			●	●	●		●	●			
Pycnanthemum incanum	Hoary mountainmint		●	●	●	●		●	●	●					●	
Rudbeckia fulgida	Orange coneflower		●		●			●	●	●			●		●	
Salvia lyrata	Lyreleaf sage		●	●	●	●	●	●	●	●				●	●	
Solidago spp.	Goldenrod		●	●	●	●		●	●	●			●		●	
Vernonia noveboracensis	Ironweed		●		●	●		●	●	●					●	

Table 5. Plant Species Native to North Carolina with a *High* Flammability Rating

Scientific Name	Common Name	Soil Moisture			Light Needs			Native Region			Wildlife Value					
		Wet	Moist	Dry	Full Sun	Partial Shade	Shade	Mountains	Piedmont	Coastal plain	Winter cover	Fleshy fruit	Seed, mast, or catkin	Hummingbird nectar	Butterfly/insect nectar	Butterfly larvae host
Tall Trees (taller than 30 feet)																
Chamaecyparis thyoides	Atlantic whitecedar	●	●		●	●				●	●					●
Ilex opaca	American holly		●	●	●	●	●	●	●	●	●	●			●	●
Juniperus virginiana	Eastern redcedar		●	●	●	●		●	●	●	●	●				●
Pinus echinata	Shortleaf pine		●	●	●	●		●	●	●	●		●			●
Pinus palustris	Longleaf pine		●	●	●				●	●	●		●			
Pinus strobus	Eastern white pine		●	●	●			●	●		●		●			
Pinus taeda	Loblolly pine		●	●	●			●	●	●	●		●			●
Quercus virginiana	Live oak		●	●	●					●	●		●			●
Tsuga canadensis	Eastern hemlock		●			●	●	●	●		●		●			
Small Trees and Shrubs (10 to 30 feet tall)																
Ilex vomitoria	Yaupon		●	●	●	●				●	●	●			●	●
Morella cerifera	Wax myrtle		●	●	●	●			●	●	●	●				●
Small Shrubs (less than 10 feet tall)																
Ilex glabra	Inkberry		●		●	●			●	●	●	●			●	●
Kalmia carolina	Carolina laurel		●	●	●	●	●			●	●			●	●	
Kalmia latifolia	Mountain laurel		●	●	●	●	●	●	●		●			●	●	
Leucothoe axillaris	Doghobble	●	●		●	●		●	●	●	●				●	
Rhododendron catawbiense	Catawba rhododendron		●			●	●	●	●		●			●	●	
Vines																
Ampelopsis arborea	Peppervine	●	●		●	●				●		●				
Aristolochia macrophylla	Dutchman's pipe		●	●		●	●	●								●
Berchemia scandens	Rattanvine, supplejack	●	●		●	●			●	●		●				
Bignonia capreolata	Crossvine		●	●	●	●			●	●				●		
Campsis_radicans	Trumpet vine		●	●	●	●		●	●	●				●		
Decumaria barbara	Climbing hydrangea		●		●	●	●			●					●	
Gelsemium sempervirens	Carolina jasmine		●		●	●			●	●	●			●	●	
Lonicera sempervirens	Coral honeysuckle		●		●	●			●	●				●		
Parthenocissus quinquefolia	Virginia creeper		●	●	●	●	●	●	●	●		●				
Passiflora incarnata	Passionflower		●	●	●	●		●	●	●				●	●	●
Smilax spp.	Greenbrier	●	●	●	●	●		●	●	●	●	●				
Vicia caroliniana	Wood vetch			●	●	●		●	●	●			●			●
Vitis spp.	Grape	●	●	●	●	●		●	●	●		●				

Table 5. Plant Species Native to North Carolina with a *High* Flammability Rating (continued)

Scientific Name	Common Name	Soil Moisture			Light Needs			Native Region			Wildlife Value					
		Wet	Moist	Dry	Full Sun	Partial Shade	Shade	Mountains	Piedmont	Coastal plain	Winter cover	Fleshy fruit	Seed, mast, or catkin	Hummingbird nectar	Butterfly/insect nectar	Butterfly larvae host
Grasses																
Andropogon glomeratus	Bushy bluestem		●		●				●	●	●		●			●
Andropogon temarius	Splitbeard bluestem		●	●	●			●	●	●	●		●			●
Aristida stricta	Wiregrass		●	●	●	●			●	●	●		●			
Arundinaria gigantea	Switchcane	●	●	●	●	●	●	●	●	●	●		●			●
Panicum virgatum	Switchgrass	●	●		●	●		●	●	●	●		●			●
Sorghastrum nutans	Indiangrass		●	●	●			●	●	●	●		●			

Summary

Wildfire can damage or destroy homes and also significantly reduce the resources and benefits produced by North Carolina's wildlands, including wildlife habitat, recreation, clean water, timber, and scenic beauty. Roughly 52 percent of North Carolina's homes are located within the wildland-urban interface (WUI) (Martinuzzi et al. 2015), the zone where human development meets or intermixes with wildland vegetation. The risk that a wildfire will encroach upon a home in the WUI continues to grow due to climate change, population growth, and homes increasingly being built in the WUI. Some homeowners may have to deal only with smoke and evacuation. For others, fire can result in the destruction of their home and property. By using fire-resistant landscaping strategies, homeowners can create landscapes with less potential fuel for a fire and minimize the risk of a wildfire spreading to their home.

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