

Table 1. Storm-resistant trees for Mississippi.

MSU - Extension Service

Tree	Species	Ice resistant ¹	Wind resistant ²	Flood tolerant ³	Salt spray tolerant ⁴	Saline soil tolerant ⁴
American beech	<i>Fagus grandifolia</i>			X		
American holly	<i>Ilex opaca</i>		X		X	
American hornbeam	<i>Carpinus caroliniana</i>	X	X			
American sycamore	<i>Platanus occidentalis</i>		X	X		
American witchhazel	<i>Hamamelis virginiana</i>	X				
Bald cypress	<i>Taxodium distichum</i>	X	X	X	X	X
Bitternut hickory	<i>Carya cordiformis</i>	X				
Black cherry	<i>Prunus serotina</i>				X	
Black locust	<i>Robinia pseudoacacia</i>				X	X
Black walnut	<i>Juglans nigra</i>	X			X	X
Black willow	<i>Salix nigra</i>			X		
Blackgum	<i>Nyssa sylvatica</i>	X	X		X	
Boxelder	<i>Acer negundo</i>			X		
Bur oak ⁵	<i>Quercus macrocarpa</i>	X		X		
Cabbage palm	<i>Sabal palmetto</i>		X		X	X
Carolina laurelcherry	<i>Prunus caroliniana</i>					X
Chaste tree ⁵	<i>Vitex agnus-castus</i>					X
Chickasaw plum	<i>Prunus angustifolia</i>		X			
Chinese magnolia ⁵	<i>Magnolia x soulangiana</i>		X			
Common buttonbush	<i>Cephalanthus occidentalis</i>			X		
Common persimmon	<i>Diospyros virginiana</i>		X	X	X	X
Crapemyrtle ⁵	<i>Lagerstroemia indica</i>		X			
Dahoon	<i>Ilex cassine</i>		X			
Eastern cottonwood	<i>Populus deltoides</i>			X		
Eastern redbud	<i>Cercis canadensis</i>		X			
Eastern redcedar	<i>Juniperus virginiana</i>	X			X	X
Eastern swampprivet	<i>Forestiera acuminata</i>			X		
Farkleberry	<i>Vaccinium arboreum</i>		X			
Flowering dogwood	<i>Cornus florida</i>		X			
Green ash	<i>Fraxinus pennsylvanica</i>			X	X	
Honeylocust	<i>Gleditsia triacanthos</i>			X	X	X
Hophornbeam	<i>Ostrya virginiana</i>	X	X			
Inkberry	<i>Ilex glabra</i>		X		X	
Japanese maple ⁵	<i>Acer palmatum</i>		X			
Laurel oak	<i>Quercus laurifolia</i>		X			
Live oak	<i>Quercus virginiana</i>		X		X	X
Longleaf pine	<i>Pinus palustris</i>				X	
Maidenhair tree ⁵	<i>Ginkgo biloba</i>	X			X	
Mockernut hickory	<i>Carya tomentosa</i>		X			
Myrtle oak	<i>Quercus myrtifolia</i>		X			
Nuttall oak	<i>Quercus texana</i>			X		
Overcup oak	<i>Quercus lyrata</i>			X		
Pecan	<i>Carya illinoensis</i>		X	X		
Pignut hickory	<i>Carya glabra</i>	X	X			
Pin oak	<i>Quercus palustris</i>			X		

Tree	Species	Ice resistant ¹	Wind resistant ²	Flood tolerant ³	Salt spray tolerant ⁴	Saline soil tolerant ⁴
Planertree	<i>Planera aquatica</i>			X		
Pond cypress	<i>Taxodium ascendens</i>		X	X		
Possumhaw	<i>Ilex decidua</i>			X		
Post oak	<i>Quercus stellata</i>		X			
Red maple	<i>Acer rubrum</i>			X		
River birch	<i>Betula nigra</i>		X			
Sand live oak	<i>Quercus geminata</i>		X			
Saw palmetto	<i>Serenoa repens</i>				X	X
Shagbark hickory	<i>Carya ovata</i>	X				
Shumard oak	<i>Quercus shumardii</i>		X			
Silver maple	<i>Acer saccharinum</i>			X		
Slash pine	<i>Pinus elliotii</i>					X
Southern catalpa	<i>Catalpa bignonioides</i>	X				
Southern crab apple	<i>Malus angustifolia</i>	X	X			
Southern magnolia	<i>Magnolia grandiflora</i>		X		X	X
Southern redcedar	<i>Juniperus virginiana var silicicola</i>				X	X
Southern sugar maple	<i>Acer floridanum</i>		X			
Staghorn sumac	<i>Rhus typhina</i>				X	X
Sugarberry	<i>Celtis laevigata</i>			X		
Swamp chestnut oak	<i>Quercus michauxii</i>		X			
Swamp white oak	<i>Quercus bicolor</i>	X		X		
Sweetbay	<i>Magnolia virginiana</i>		X			X
Sweetgum	<i>Liquidambar styraciflua</i>	X	X	X	X	
Turkey oak	<i>Quercus laevis</i>		X			
Water oak	<i>Quercus nigra</i>		X	X		
Water hickory	<i>Carya aquatica</i>			X		
Water locust	<i>Gleditsia aquatica</i>			X		
Water tupelo	<i>Nyssa aquatica</i>		X	X		
Wax myrtle	<i>Morella cerifera</i>				X	X
White ash	<i>Fraxinus americana</i>		X	X	X	X
White fringetree	<i>Chionanthus virginicus</i>		X			X
White oak	<i>Quercus alba</i>	X				X
Willow oak	<i>Quercus phellos</i>			X	X	
Winged elm	<i>Ulmus alata</i>		X	X		
Yaupon	<i>Ilex vomitoria</i>		X		X	X

¹Hauer, Wang, and Dawson (1993) evaluated damage to numerous species of urban trees after an ice storm by comparing to a pre-storm tree inventory. They found that tree form, strength of limb joints, and overall tree size were related to subsequent ice damage. Later, Hauer, Dawson, and Werner (2006) published a more comprehensive summary of their research on tree resistance to ice damage in urban forests. Their findings included assessments on tree species, age and form of the tree, and particularly the ability of tree branch junctures to withstand ice loads.

²Duryea, Kampf, and Littell (2007) and Duryea and Kampf (2017) assessed tree damage resulting from nine hurricanes in Florida and Puerto Rico between 1992 and 2004, with sustained winds between 85 and 165 miles per hour. The first assessment surveyed homeowners regarding tree damage after Hurricane Andrew in 1992. For the remaining eight hurricanes, researchers surveyed arborists, urban foresters, and forest scientists.

³Bratkovich, Burban, Katovich, Locey, Pokorny, and Wiest (1993) published an assessment of flooding effects on trees along the Mississippi and Missouri Rivers. Flood tolerance indicates that tree species are able to survive standing water through at least one growing season. Clatterbuck (2005) was an additional source for flood-tolerant trees.

⁴Tolerance to salt spray and seawater inundation were compiled from the following sources: Appleton, Greene, Smith, French, Kane, Fox, Downing, and Gilland (2015); Ruter and Pennisi (2017); Smith 2019.

⁵Non-native ornamental.