

**PLANT MATERIAL UPDATES- ADDITION TO THE STANDARD SPECIFICATIONS MANUAL**

**PLANT MATERIAL**

**Purpose**

Two plant material lists are contained in this Manual. The first is a selection of plants that will enhance the native landscapes of Cary, create wildlife habitat, provide for shade, reduce surface temperatures, capture carbon, enhance clean air, reduce stormwater runoff, and minimize water consumption. The second list contains a selection of prohibited plants that due to their invasive nature or other characteristics are unsuitable for landscapes in Cary.

**Intent**

To ensure that appropriate plants are selected for use in the Town of Cary. The “Recommended Plant List” tables offer species selections with some performance characteristics, while the “Prohibited Plant List”, along with the associated invasive species lists, lists plants which do not perform well and/or are recognized as invasive and inappropriate in this region. These plant lists will evolve over time.

Plants with more exacting growing conditions or those with less certainty of success should be reserved for minor accent or specialty use. Plants which have invasive tendencies, even if they are not on the lists, should not be planted. The lists emphasize native, functional, and often drought tolerant plants. Non-drought tolerant plants may be appropriate if non-public water sources are used for irrigation, if the planting area is naturally wet, or the planting area is to be used for bioretention. A note to that effect must be included on the plan.

The plant lists of this manual generally do not include named hybrids and species subtypes such as subspecies, varieties, and cultivars due to the number and rapidly evolving availability of these plants. Even though hybrids and named species subtypes are not listed, the Town of Cary anticipates the use of such plants, and even encourages their use in situations where they are expected to perform significantly better than species types. However, plant hybrids, cultivars or named species subtypes may differ greatly in habit, size, and other characteristics from that of the parent species or other genetically related hybrids or subtypes thus, may not always be appropriate substitutes. For example, columnar forms of shade trees are not considered shade trees, and would not qualify as such, for example, in the case of Champion tree replacement requirements. Additionally, some cultivars, such as those with year-round red leaves, do not provide the same wildlife benefits as those with green leaves, so if used, should be limited to accents, and not used as foundation plantings. Thus, if the proposed plant selection is not expected to meet minimal performance requirements for its particular application, it may be disapproved regardless of its generic relationship to a parent species on plant selection.

**Plant Material Charts**

Below are charts of recommended plant materials. These charts are meant to provide an easy reference as to the types of plants that meet development standards for Cary. These charts are not inclusive of all acceptable plants. The key to the letters is as such:

<b>Recommended Planting Location</b>	<b>Evergreen versus Deciduous</b>	<b>Type of Plant</b>	<b>Light Needs</b>	<b>Plant is Native</b>
<b>P:</b> Parking Lots & Streets	<b>E:</b> Evergreen	<b>T:</b> Tree	<b>FS:</b> Full Sun	<b>Y:</b> Yes

<b>L:</b> Landscape	<b>D:</b> Deciduous	<b>S:</b> Shrub	<b>PS:</b> Part Sun	<b>N:</b> No
<b>B:</b> Buffer		<b>GC:</b> Ground Cover	<b>SH:</b> Shade	
		<b>V:</b> Vine		

**Upper-story Trees**

The chart below provides examples of trees which are considered Upper-story.

Species Name	Common Name	Where to Plant	Evergreen or Deciduous	Type of Plant	Light Needs	Native
<i>Acer floridanum (barbatum)</i>	Sugar Maple	P,L,B	D	T	FS/PS/SH	Y
<i>Acer rubrum</i>	Red Maple	L,B	D	T	FS/PS/SH	Y
<i>Acer saccharum</i>	Sugar Maple	L,B	D	T	FS/PS/SH	Y
<i>Betula nigra</i>	River Birch	L,B	D	T	FS/PS	Y
<i>Celtis laevigata</i>	Sugarberry	P,L,B	D	T	FS/PS	Y
<i>Celtis occidentalis</i>	Hackberry	L,B	D	T	PS/SH	Y

<i>Fagus grandifolia</i>	American Beech	L,B	D	T	PS/SH	Y
<i>Ginkgo biloba</i>	Ginkgo, Maiden Tree	P,L,B	D	T	FS/PS	N
<i>Liquidambar styraciflua</i>	Sweetgum	B	D	T	FS/PS	Y
<i>Liriodendron tulipifera</i>	Tulip Poplar	L,B	D	T	FS/PS/SH	Y
<i>Metasequoia glyptostroboides</i>	Dawn Redwood	P,L	D	T	FS/PS	N
<i>Nyssa sylvatica</i>	Black Gum, Tupelo	P,L,B	D	T	FS/PS	Y
<i>Platanus occidentalis</i>	American Sycamore	L,B	D	T	FS/PS	Y
<i>Populus deltoides</i>	Eastern Cottonwood	P,L,B	D	T	FS/PS	Y
<i>Quercus bicolor</i>	Swamp White Oak	P,L,B	D	T	FS/PS/SH	Y
<i>Quercus falcata</i>	Southern Red Oak	L,B	D	T	FS/PS/SH	Y
<i>Quercus lyrata</i>	Overcup Oak	P,L,B	D	T	FS/PS	Y

<i>Quercus michauxii</i>	Swamp Chestnut Oak	P,L,B	D	T	FS/PS	Y
<i>Quercus nuttallii</i>	Nuttal Oak	P,L,B	D	T	FS/PS	Y
<i>Quercus palustris</i>	Pin Oak	P,L,B	D	T	FS/PS	Y
<i>Quercus phellos</i>	Willow Oak	P,L,B	D	T	FS/PS	Y
<i>Quercus shumardii</i>	Shumard Oak	P,L,B	D	T	FS/PS	Y
<i>Quercus velutina</i>	Black Oak	P,L,B	D	T	PS/SH	Y
<i>Taxodium ascendens</i>	Pond Cypress	P,L,B	D	T	FS/PS	Y
<i>Taxodium distichum</i>	Bald Cypress	P,L,B	D	T	FS/PS	Y
<i>Tillia americana</i>	American Linden	L,B	D	T	FS/PS	Y
<i>Tillia cordata</i>	Little Leaf Linden	P,L	D	T	FS/PS	N
<i>Ulmus alata</i>	Winged elm	P,L,B	D	T	FS/PS	Y
<i>Ulmus americana</i>	American elm (Dutch Elm Disease resistant variety)	P,L,B	D	T	FS/PS	Y

<i>Juniperus virginiana</i>	Eastern Red Cedar	P,L,B	E	T	FS/PS	Y
<i>Magnolia grandiflora</i>	Southern Magnolia	P,L,B	E	T	FS/PS/SH	Y
<i>Pinus eliotti</i>	Slash Pine	L,B	E	T	FS/PS	Y
<i>Pinus palustris</i>	Longleaf Pine	P,L,B	E	T	FS	Y
<i>Pinus taeda</i>	Loblolly Pine	P,L,B	E	T	FS	Y
<i>Quercus hemisphaerica</i>	Laurel Oak	P,L,B	E	T	FS/PS	Y
<i>Quercus virginiana</i>	Sothern Live Oak	P,L,B	E	T	FS/PS	Y

### Understory tree

The chart below provides examples of trees which are considered understory.

Species Name	Common Name	Where to Plant	Evergreen or Deciduous	Type of Plant	Light Needs	Native
<i>Amelanchier arborea</i>	Downy Serviceberry	L,B	D	T	FS/PS/SH	Y
<i>Amelanchier x grandiflora</i>	Apple Serviceberry	L,B	D	T	FS/PS/SH	Y

<i>Carpinus carolinana</i>	American Hornbeam	P,L,B	D	T	FS/PS	Y
<i>Cercis canadensis</i>	Eastern Redbud	P,L,B	D	T	FS/PS/SH	Y
<i>Chionanthus virginicus</i>	American Fringe Tree	P,L,B	D	T	FS/PS	Y
<i>Cladrastis kentukea</i>	American Yellowwood	L,B	D	T	FS/PS	Y
<i>Cornus florida</i>	American Dogwood	L,B	D	T	PS/SH	Y
<i>Cornus kousa</i>	Kousa Dogwood	P,L,B	D	T	FS/PS	N
<i>Cotinus obovatus</i>	American Smoketree	L,B	D	T	FS/PS	Y
<i>Crataegus phaenopyrum</i>	Washington Hawthorn	L,B	D	T	FS/PS	Y
<i>Crataegus viridis</i>	Green Hawthorn	L,B	D	T	FS/PS	Y
<i>Diospyros virginiana</i>	American Persimmon	L,B	D	T	FS/PS	Y
<i>Hamamelis virginiana</i>	American Witchhazel	L,B	D	T	PS	Y
<i>Ilex decidua</i>	Possumhaw Holly	L,B	D	T	FS/PS/SH	Y
<i>Lagerstroemia species</i>	Crape Myrtle	P,L	D	T	FS/PS	N
<i>Magnolia stellata</i>	Star Magnolia	P,L	D	T	FS/PS	N
<i>Ostrya virginiana</i>	Ironwood, Hop-hornbeam	P,L,B	D	T	FS/PS	Y
<i>Oxydendrum arboretum</i>	Sourwood	L,B	D	T	FS/PS/SH	Y

<i>Parrotia persica</i>	Parrotia Tree	L	D	T	FS/PS	N
<i>Prunus 'yedoensis' or subhirtella</i>	Flowering Cherry	L	D	T	FS/PS	N
<i>Styrax americana</i>	American Snowbell	L,B	D	T	FS/PS	Y
<i>Ilex cassine</i>	Dahoon Holly	P,L,B	E	T	FS/PS	Y
<i>Ilex opaca</i>	American Holly	P,L,B	E	T	FS/PS	Y
<i>Ilex 'Nellie Stevens'</i>	Nellie Stevens Holly	P	E	T	FS	N
<i>Ilex vomitoria</i>	Yaupon Holy	P,L,B	E	S	FS/PS	Y
<i>Magnolia virginiana</i>	Sweetbay Magnolia	P,L,B	E	T	FS/PS	Y

### Understory Plants

The chart below provides examples of plants which are considered understory.

Species Name	Common Name	Where to Plant	Evergreen or Deciduous	Type of Plant	Light Needs	Native
<i>Salvia lyrata</i>	Lyreleaf Sage	P,L,B	D	GC	FS/PS/SH	Y
<i>Sisyrinchium angustifolium</i>	Blue-Eyed Grass	P,L,B	D	GC	FS/PS/Sh	Y
<i>Carex laxiculmis</i>	Creeping Sedge	P,L,B	E	GC	PS/SH	Y
<i>Carex plantaginea</i>	Broadleaf Sedge	P,L,B	E	GC	PS/SH	Y

<i>Hypericum stragulum</i>	Dense St. Johnswort	P,L,B	E	GC	FS/PS	Y
<i>Juniperus horizontalis</i>	Creeping Juniper	P,L	E	GC	FS/PS	Y
<i>Phlox subulata</i>	Moss Phlox	P,L,B	E	GC	FS/PS	Y
<i>Aesculus pavia</i>	Red Buckeye	L,B	D	S	FS/PS/SH	Y
<i>Callicarpa americana</i>	American Beauty Berry	P,L,B	D	S	FS/PS	Y
<i>Cornus racemosa</i>	Gray Dogwood	L,B	D	S	FS/PS	Y
<i>Cyrilla racemiflora</i>	Ti-ti	P,L,B	D	S	FS/PS	Y
<i>Fothergilla gardenii</i>	Dwarf Fothergilla	P,L,B	D	S	FS/PS	Y
<i>Fothergilla major</i>	Witch-Alder	P,L,B	D	S	FS/PS	Y
<i>Hamamelis x intermedia</i>	Hybrid Witchhazel	P,L	D	S	FS/PS	N
<i>Hydrangea arborescens</i>	Smooth Hydrangea	L,B	D	S	PS/SH	Y
<i>Hydrangea quercifolia</i>	Oakleaf Hydrangea	L,B	D	S	PS/SH	Y
<i>Hypericum densiflorum</i>	Dense St. Johnswort	L,B	D	S	FS/PS	Y
<i>Hypericum prolificum</i>	Shrubby St. Johnswort	L,B	D	S	FS/PS	Y
<i>Ilex verticillata, Winterberry</i>	Winterberry	P,L,B	D	S	FS/PS	Y
<i>Itea virginica</i>	Virgina Sweetspire	P,L,B	D	S	FS/PS	Y
<i>Lindera benzoin</i>	Spice Bush	L,B	D	S	PS/SH	Y
<i>Magonlia soulangeana</i>	Saucer Magnolia	P,L	D	S	FS/PS	N



<i>Rhododendron (native deciduous)</i>	Rhododendron (Native)	L,B	D	S	PS/SH	Y
<i>Rhus aromatica</i>	Fragrant Sumac	P,L,B	D	S	FS/PS	Y
<i>Rhus glabra</i>	Smooth Sumac	L,B	D	S	FS/PS	Y
<i>Rhus typhina</i>	Staghorn Sumac	L,B	D	S	FS/PS	Y
<i>Rosa carolina</i>	Carolina Rose	L,B	D	S	FS/PS	Y
<i>Sambucus canadensis</i>	Elderberry	L,B	D	S	FS/PS	Y
<i>Sassafras albidum</i>	American Sassafras	L,B	D	S	FS/PS	Y
<i>Viburnum acerifolium</i>	Mapleleaf Viburnum	P,L,B	D	S	PS/SH	Y
<i>Viburnum dentatum</i>	Arrowood Viburnum	L,B	D	S	FS/PS	Y
<i>Viburnum nudum</i>	Possum Haw Viburnum	L,B	D	S	FS/PS	Y
<i>Viburnum prunifolium</i>	Blackhaw Viburnum	L,B	D	S	FS/PS	Y
<i>Zenobia pulverulenta</i>	Dusty Zenobia	L	D	S	FS/PS	Y
<i>Abelia x grandiflora</i>	Glossy Abelia	P,L	E	S	FS/PS	N
<i>Agarista populifolia</i>	Fetterbush	L,B	E	S	FS/PS	Y
<i>Aucuba japonica</i>	Acuba	P,L	E	S	FS/PS	N
<i>Buxus microphylla var. japonica</i>	Japanese Boxwood	P,L	E	S	FS/PS	N
<i>Camellia sasanqua</i>	Camellia, Sansanqua Varieties	P,L	E	S	FS/PS	N

<i>Cephalotaxus harringtonia</i>	Plum Yew	P	E	S	FS/PS	N
<i>Gardenia jasminoides</i>	Creeping Gardenia	P,L	E	S	PS/SH	N
<i>Ilex cornuta</i>	Dwarf Burford Holly Varieties	P	E	S	FS/PS	N
<i>Ilex glabra</i>	Inkberry	P,L,B	E	S	FS/PS	Y
<i>Ilex vomitoria 'Nana'</i>	Dwarf Yaupon Holly	P,L,B	E	S	FS/PS	Y
<i>Ilex x attenuata 'Fosteri' or 'Savannah'</i>	Foster or Savannah Holly	P,L,B	E	S	FS/PS	Y
<i>Illicium parviflorum</i>	Anise Tree	P,L,B	E	S	PS/SH	Y
<i>Juniperus chinensis</i>	Chinese Juniper	P	E	S	FS	N
<i>Juniperus davurica 'Expansa'</i>	Parson's Juniper	P	E	S	FS	N
<i>Myrica cerifera</i>	Wax Myrtle	P,L,B	E	S	FS/PS	Y
<i>Osmanthus americanus</i>	American Tea Olive	L,B	E	S	FS/PS	Y
<i>Osmanthus x fortune</i>	Fortunes Osmanthus	P,L	E	S	FS/PS	N
<i>Podocarpus macrophyllus</i>	Chinese Podocarpus, 'Maki', Yew	P	E	S	FS/PS	N
<i>Rhododendron (evergreen)</i>	Southern Indica Rhododendron	L,B	E	S	PS/SH	N
<i>Sarcococca hookeriana var. humilis</i>	Sarcococca	L	E	S	PS/SH	N

<i>Viburnum obovatum</i>	Dwarf Viburnum, Walter's Viburnum	P,L,B	E	S	FS/PS	Y
<i>Yucca filamentosa</i>	Needle Yucca	L,B	E	S	FS/PS	Y
<i>Bignonia capreolata</i>	Crossvine	L,B	D	V	FS/PS	Y
<i>Campsis radicans</i>	Trumpet Vine	L,B	D	V	FS/PS	Y
<i>Parthenocissus quinquefolia</i>	Virginia Creeper	L,B	D	V	FS/PS	Y
<i>Passiflora incarnata</i>	Passion Flower, Maypop	L,B	D	V	FS/PS	Y
<i>Gelsemium sempervirens</i>	Carolina Jessamine	L,B	E	V	FS/PS	Y
<i>Lonicera sempervirens</i>	Trumpet Honeysuckle	L	E	V	FS/PS	Y

**Invasive Species**

The Town of Cary encourages the preservation, installation, and maintenance of beautiful, functional, and resilient landscapes. This includes landscapes that are filled with robust native plants and absent of invasive species. According to the USDA, an invasive species is a species which is not native to a particular ecosystem, and whose introduction causes or is likely to cause economic or environmental harm, or harm to human health. Thus, non-native plants included in the following invasive species lists and table below are prohibited from being planted as part of required landscaping and are discouraged from being utilized anywhere within the Town of Cary.

Invasive species lists:

1. North Carolina Invasive Plant Council: <http://nc-ipc.weebly.com/nc-invasive-plants.html>
2. Invasive Plant Atlas: <https://www.invasiveplantatlas.org/>

Prohibited Planting List	
Scientific Name	Common Name
<i>Acer ginnala</i>	Amur Maple
<i>Ajuga reptans</i>	Carpet Bugle
<i>Berberis spp</i>	Barberry Species

<i>Buddleia davidii</i>	Butterfly Bush
<i>Cupressus x leylandii</i>	Leyland Cypress
<i>Callicarpa dichotoma</i>	Asian Beautyberry
<i>Elaeagnus spp</i>	Elaeagnus Species
<i>Euonymus alatus</i>	Burning Bush
<i>Euonymus fortunei var. coloratus</i>	Winter creeper
<i>Fraxinus spp</i>	Ash trees- includes green ash, white ash, etc
<i>Hedera canariensis</i>	Algerian Ivy
<i>Hedera helix</i>	English Ivy
<i>Kolreuteria paniculata</i>	Golden Raintree
<i>Lespedeza thunbergii, bicolor, cuneta</i>	Lesbedesia, non-native
<i>Ligustrum species</i>	Privet
<i>Liriope muscari, spicatum</i>	Liriope Species
<i>Lonicera spp</i>	Non-native Honeysuckle
<i>Mahonia spp</i>	Mahonia
<i>Miscanthus sinensis</i>	Chinese silvergrass
<i>Nandina domestica</i>	Heavenly Bamboo
<i>Ophiopogon japonicus</i>	Mondo Grass
<i>Parthenocissus tricuspidata</i>	Boston Ivy
<i>Phellodendron amurense</i>	Amur Cork Tree
<i>Photinia x faseri</i>	Fraser photinia
<i>Platanus x acerifolia</i>	London Planetree
<i>Pyracantha coccinea, koidzumii</i>	Firethorn species
<i>Pyrus calleryana</i>	Bradford or Callery Pear
<i>Quercus acutissima</i>	Sawtooth Oak
<i>Quercus robur</i>	English Oak
<i>Rhaphiolepis umbellata (R. indica), India Hawthorn</i>	Indian Hawthorn
<i>Ulmus parvifolia</i>	Chinese elm, Lacebark Elm
<i>Vinca major, minor</i>	Periwinkle Species
<i>Zelkova serrata</i>	Zelkova