

Wake County Native Plants Initiative

Facilities Design & Construction GLUE Committee

June 11, 2018



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Discussion

- Why Plant with Native Species ?
- Native vs. Non-Native Plants
- Current Wake County Standards
 - Unified Development Ordinance
 - Design Guidelines and Standards
- Process for Updates
 - Research
 - Proposed Plan
- Questions ?



Why plant with Native species ?

- Stewardship of the land
- Celebrate natural diversity
- Provide food and shelter for wildlife
- Create a sense of place
- Lower water needs
- Restore regional landscapes
- Withstand regional weather extremes
- Educational Opportunity
- A model for other development



Definitions

Native Plants:

A plant that is part of a balance of nature that has developed over hundreds or thousands of years in a particular region or ecosystem.

Used with a qualifier:
Native to the Southeast



United States Department of Agriculture
Natural Resources Conservation Service



PLANTS
Database



NC STATE UNIVERSITY





GOING NATIVE
URBAN LANDSCAPING FOR WILDLIFE WITH NATIVE PLANTS



Native Trees and Shrubs for Your Garden*

TREES

Evergreen Trees

Atlantic White-cedar, *Chamaecyparis thyoides*
Ti-ti, *Cyrilla racemiflora*
American Holly, *Ilex opaca*
Topel Holly, *Ilex x attenuata*
Eastern Red-cedar, *Juniperus virginiana*
Southern Magnolia, *Magnolia grandiflora*
Sweet-bay, *Magnolia virginiana* var. *australis*
Common Wax-myrtle, *Morella cerifera* syn. *Myrica cerifera*
Red Bay, *Persea palustris* syn. *Persea borbonia*
Long-leaf Pine, *Pinus palustris*
Eastern White Pine, *Pinus strobus* is suitable for the mountains though difficult to grow in the piedmont or coastal plain
Loblolly Pine, *Pinus taeda*
Laurel Oak, *Quercus hemisphaerica*
Live Oak, *Quercus virginiana*
Eastern Arborvitae, *Thuja occidentalis*
Eastern Hemlock, *Tsuga canadensis*

Small Trees (under 30 feet at maturity)

Chalk Maple, *Acer leucoderme*
Red Buckeye, *Aesculus parva*
Service-berry, *Amelanchier arborea* & other *Amelanchier* species
Redbud, *Cercis canadensis*
White Fringetree, *Chionanthus virginicus*
Flowering Dogwood, *Cornus florida*
Hawthorn, *Crataegus phaenopyrum* & other *C.* species
Ti-ti, *Cyrilla racemiflora*
Silverbell, *Halesia diptera* and *H. carolina*
American Holly, *Ilex opaca*
Yaupon Holly, *Ilex vomitoria*
Sweetbay, *Magnolia virginiana*, though selected cultivars are under 30 ft, the straight species can be taller
Common Wax-myrtle, *Morella cerifera* syn. *Myrica cerifera*
Snowbell, *Styrax grandifolius* and *S. americanus*

Trees for Dry Sites

Chalk Maple, *Acer leucoderme*
White Fringetree, *Chionanthus virginicus*
American Smoketree, *Cotinus obovatus*
Common Wax-myrtle, *Morella cerifera* syn. *Myrica cerifera*

Sourwood, *Oxydendrum arboreum*

Loblolly Pine, *Pinus taeda*
Laurel Oak, *Quercus hemisphaerica*
Live Oak, *Quercus virginiana*
Black Locust, *Robinia pseudacacia*
Sassafras, *Sassafras albidum*

Trees for Moist Sites

Red Buckeye, *Aesculus parva*
Service-berry, *Amelanchier arborea* & other *Amelanchier* species
River Birch, *Betula nigra*
Hawthorn, *Crataegus phaenopyrum* & other *C.* species
Ti-ti, *Cyrilla racemiflora*
Southern Magnolia, *Magnolia grandiflora*
Sweet-bay, *Magnolia virginiana*
Common Wax-myrtle, *Morella cerifera* syn. *Myrica cerifera*
Black-gum, *Nyssa sylvatica*
Eastern Hop-hornbeam, *Ostrya virginiana*
Fever-tree, *Pinckneya bracteata*
Overcup Oak, *Quercus lyrata*
Swamp Chestnut Oak, *Quercus michauxii*
Bald-cypress, *Taxodium distichum*

Trees that Attract Wildlife

Yellow Buckeye, *Aesculus octandra*
Red Buckeye, *Aesculus parva*
Service-berry, *Amelanchier arborea* & other *Amelanchier* species
Flowering Dogwood, *Cornus florida*
Hawthorn, *Crataegus phaenopyrum* & other *Crataegus* species
Eastern Persimmon, *Diospyros virginiana*
American Holly, *Ilex opaca*
Yaupon Holly, *Ilex vomitoria*
Eastern Red-cedar, *Juniperus virginiana*
Southern Magnolia, *Magnolia grandiflora*
Common Wax-myrtle, *Morella cerifera* syn. *Myrica cerifera*
Loblolly Pine, *Pinus taeda*
Carolina Cherry Laurel, *Prunus caroliniana*
Black Cherry, *Prunus serotina*
Sassafras, *Sassafras albidum*
Eastern Hemlock, *Tsuga canadensis*

continued...

www.ncbg.unc.edu

NORTH CAROLINA BOTANICAL GARDEN
THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

Definitions

Non-Native Plants

- **Naturalized:** A species introduced from other areas that has become established in, and more or less adapted to, a region by long, continued growth. Does not require artificial inputs for survival and reproduction

4/2/2018 Welcome to the PLANTS Database | USDA PLANTS

USDA United States Department of Agriculture
Natural Resources Conservation Service

PLANTS Database


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USDA Plant Hardiness Map

The PLANTS Database provides standardized information about the vascular plants, mosses, liverworts, hornworts, and lichens of the U.S. and its territories.

Plant of the Week

shellbark hickory
Carya laciniosa (Michx. f.) G. Don
Click on the photo for a full plant profile.

Spotlights

2016 National Wetland Plant List
The wetland indicator status ratings from the 2016 National Wetland Plant List (NWPL) are now on our species profile pages and are fully searchable.

NRCS pollinator references and documents - Updated
See NRCS pollinator-related literature and documentation, including the updated Technical Note TN-190.B.78 - Using 2014 Farm Bill Programs for Pollinator Conservation.

Slide show for Images
PLANTS now presents images in a "slide show", enabling PLANTS users to scroll through photos and line art, providing a faster and easier way to review images.

PLANTS has new maps
PLANTS is trying out a new, more modern mapping system. Our new system allows users to scroll side to side and zoom in and out. At higher scale zoom levels users can see county-level data.

Redesigned profile pages: Tabs
PLANTS has redesigned its profile pages for species and genera, now presented in tabs instead of across one large page. Your feedback has helped us improve our new design, and we welcome your additional input.

Pocket Guide to Sagebrush
Funded partly by NRCS, a new guide to sagebrush is available. Written by Lella Shultz and produced by SageSTEP, this guide covers the characteristics, distribution, and habitats of 18 sagebrush species.

I Want To...
See a list of the plants in my state
Learn about the wetland plants in my region
Learn about all the endangered plants of the U.S.
Learn about noxious and invasive plants
Search for and view images of plants
Read and print abstracts about important conservation plants
Download data or posters
Contribute plant distribution information to PLANTS
Get ecological descriptions of sites from around the country
View the USDA Plant Hardiness Zone Map

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Frequently Asked Questions
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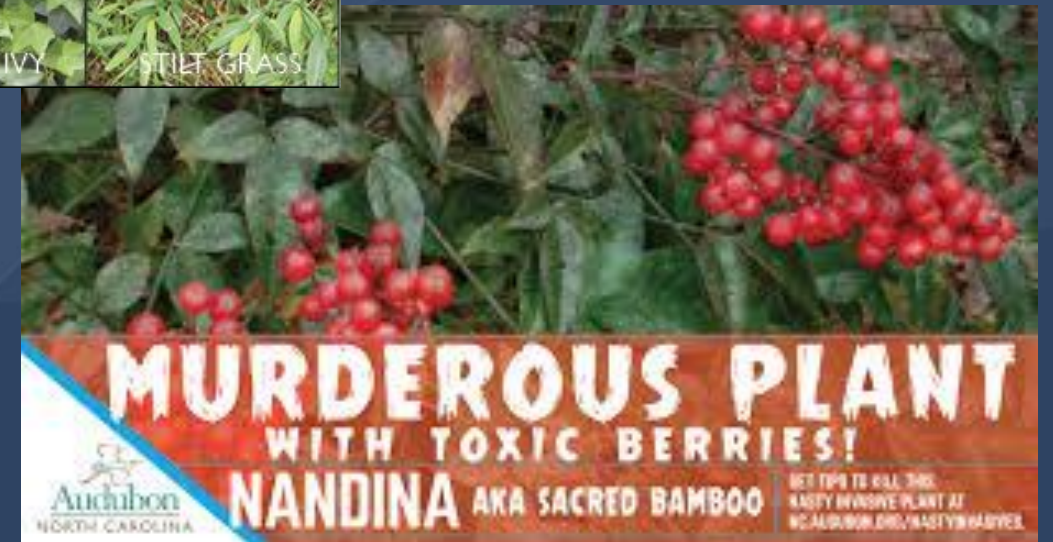
<https://plants.usda.gov/home/>

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Definitions

Invasive Plants:

A plant that is both non-native and able to establish on many sites, grow quickly, and spread to the point of disrupting plant communities and ecosystems.



Current Wake County Standards

Unified Development Ordinance

Article 16

Landscaping and Tree Protection

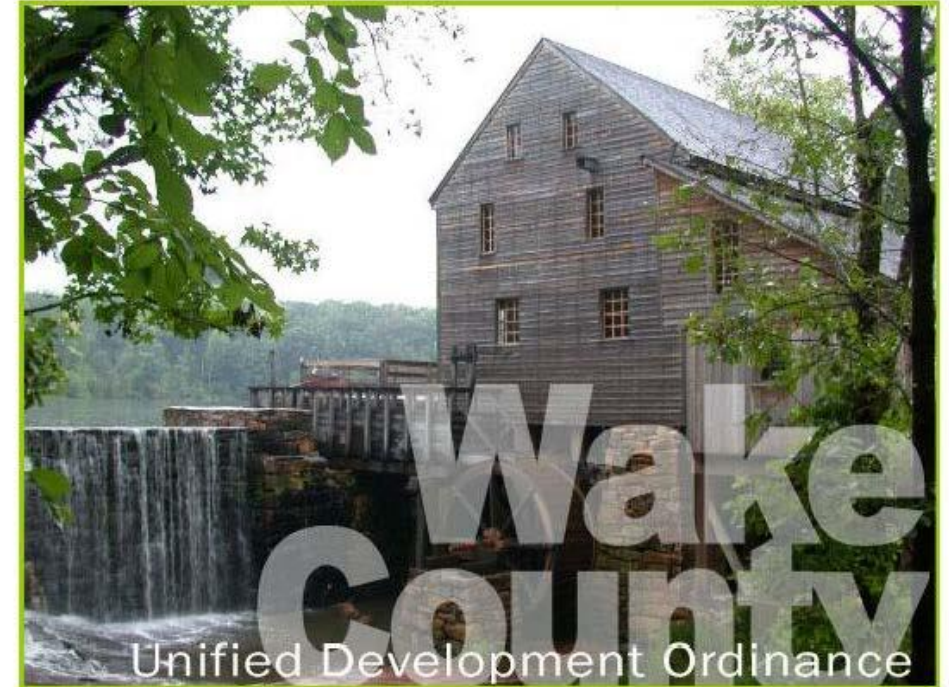
Article 16 Landscaping and Tree Protection

16-10 Landscaping and Bufferyards

16-10-3 Plant Material, Installation and Maintenance

(3) General Standards

All landscaping materials must comply with the American Nurseryman's Standards. Nonnative or invasive plant species may not be used for planting in landscaping and bufferyards (see the USDA list of these species). Native species used in replantings are encouraged over ornamentals. All species chosen for planting should be chosen from amongst those species that typically grow in our geographical area, Zone 7. The developer is responsible for researching the biological requirements of each species utilized in the plantings.



Effective Date: April 17, 2006
Last Amended: February 5, 2018

Current Wake County Standards

Design Guidelines and Standards Division 02 -SITE

DIVISION 02 SITE

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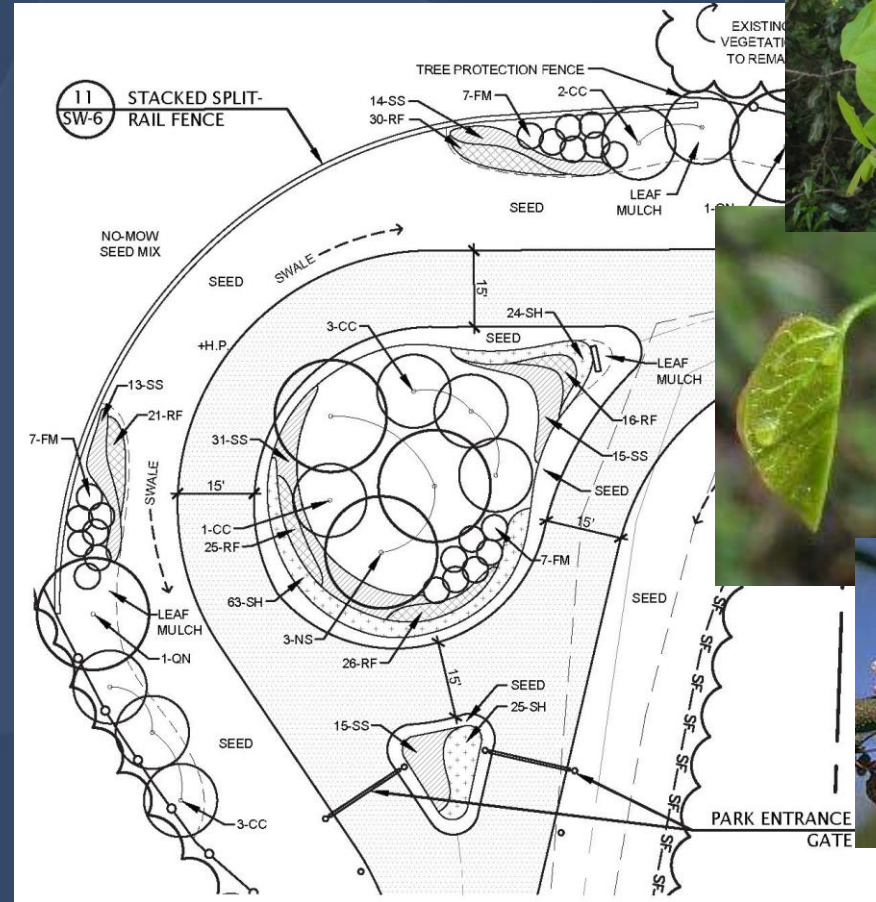
.14 Landscaping General:

- .a Landscaping shall comply with minimum nursery standards.
- .b County preference is the use of native plant species.
- .c Turf Grass: Common Bermuda or Tall Fescue.
- .d SOD: Variety as approved by the Owner.
- .e Deciduous Trees: Container grown or Balled and Burlapped.
- .f Deciduous Shrubs: Container grown or Balled and Burlapped.
- .g Coniferous and Broadleaf Evergreens: Container grown or Balled and Burlapped.
- .h Mulch: 4" – 5" pine straw or 3" – 4" triple shredded hardwood.
- .i Soil Amendments: Compost; fertilizer/lime as determined by soil tests.
- .j Tree Protection Fencing: Comply with requirements of authorities having jurisdiction.



Current Projects using Native Plants

- **PROS Nature Preserves**
 - Robertson Millpond
 - Turnipseed
- **SWLF Improvements Project**
- **Wake Forest Library Expansion**
- **Fuquay Varina Library**
- **Cary Library**
- **Oak City Center**



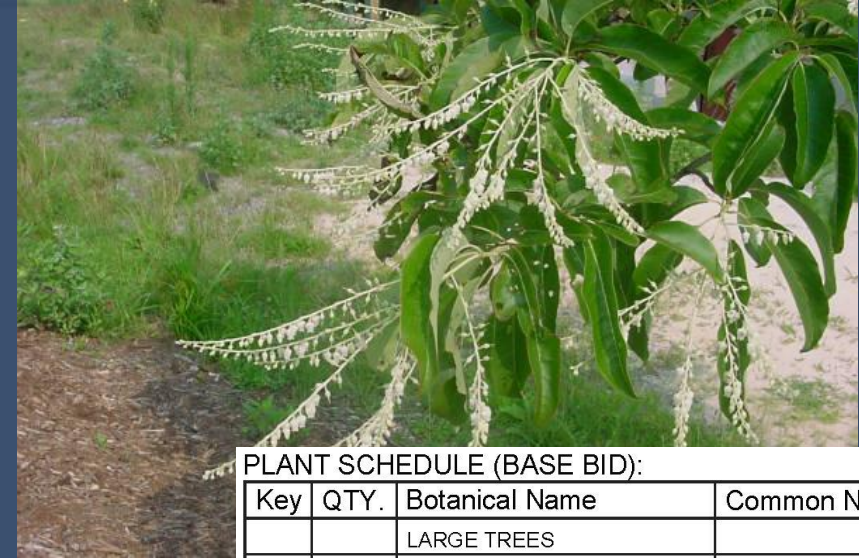
Process for Updates - Research

- Review current standards
- Facilitate input from professionals:
landscape architects, plant specialists,
NCSU, JCR Arboretum, NC Botanical
Gardens, landscape contractors,
landscape nurseries ...
- Review of other municipalities / government
bodies with native plant criteria
- Review with General Services Staff



Process for Updates – Proposed Plan

- Identify opportunities and challenges
 - Municipal requirements
 - Nursery supply / sourcing
 - Plant choices – sizes and types
- Recommend Native / Invasive Plants criteria
- Recommend new guidelines / criteria for Wake County project landscape plans
- Create a platform for education
- Evaluate applicability beyond Wake County projects
- Return to GLUE - late Summer



PLANT SCHEDULE (BASE BID):

Key	QTY.	Botanical Name	Common Name
LARGE TREES			
NS	3	Nyssa sylvatica	Black Gum
QN	2	Quercus rubra	Red Oak
UNDERSTORY			
CC	9	Cercis canadensis	'Eastern Redbud
SHRUBS, PERENNIALS & ORNAMENTAL GRASSES			
FM	21	Fothergilla major 'Mount Airy'	'Mount Airy' Fothergilla
RF	118	Rudbeckia fulgida 'Goldstrum'	'Goldstrum' Black-eyed Susan
SH	112	Sporobolus heterolepis	Prairie Dropseed
SS	88	Schizachyrium scoparium	Little Bluestem



Questions ???