

Capital University Tree Campus USA

“...for from the fruit the tree is known” Matthew 12:33”

I. Stated Purpose

The Capital University mission is as follows:

Transforming lives through higher education. By drawing upon the Lutheran principle of free inquiry, Capital University:

- Provides for personal growth by encouraging, enabling, and celebrating learning;
- Prepares individuals to be knowledgeable, independent, critical thinkers — educated for lives of leadership and service in an increasingly diverse society; and
- Inspires individuals to be morally reflective, spiritually alive, and civically engaged.

Capital University’s implementation of Tree Campus USA would be a bold step toward the deliberate approach to the responsibility of stewardship of the campus, community and global environment. By instituting and adhering to the guidelines of this program we will further our mission! On campus you can frequently hear Dr. Beth Paul, President of Capital University, echo the phrase “On Purpose”. Facilities Management has decided to make decisions on our urban forest population based “on purpose”. All the decisions made will be thought out and intentional with awareness to the immediate and long term impact to the environment. The purpose of this plan is to be a checklist for all the tree related decisions made on Capital’s campus.

“...for from the fruit the tree is known” Matthew 12:33”. The passage is a reminder of the question: what is it we are bearing? Are we bearing the responsibility of our mission? Capital University has an obligation as stewards of our physical environment with purpose to maintain and nurture our heritage. The following guidelines will ensure the best possible decisions can be made at various stages supporting our urban forest.

II. Responsible Authority

The Tree Care Plan will be managed by Facilities Management in consultation with The Advisory Subcommittee of the Capital University Sustainability Council. Facilities Management has been designated as the authority responsible to enforce the campus Tree Care Plan.

III. Campus Tree Advisory Subcommittee

This subcommittee will be responsible for reviewing, enacting and communicating the policies of the tree care plan. They will determine the short term and long term goals and approve events for the University. They will plan and communicate tree campus associated events. They will pursue grants for funds to be used for campus tree canopy. They will meet every other month in order to maintain consistent communication and propel enthusiasm among students, faculty, staff and community. The advisory committee is comprised of the following individuals:

Students: Youting Chen, Seth Martin

Faculty: Dr. Christine Anderson, Marcy Day

Facilities Management: Paul Matthews, Rima Leonaviciute, Becky Hare & Jason Halliwell

Community Members: Grant Archer

IV. Tree Care Policies

1. Planting

Planting will be performed in accordance with Capital University's Master Plan guidelines.

NOTES:

1. CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION.

2. FINAL TREE STAKING PLACEMENT TO BE APPROVED BY OWNER.

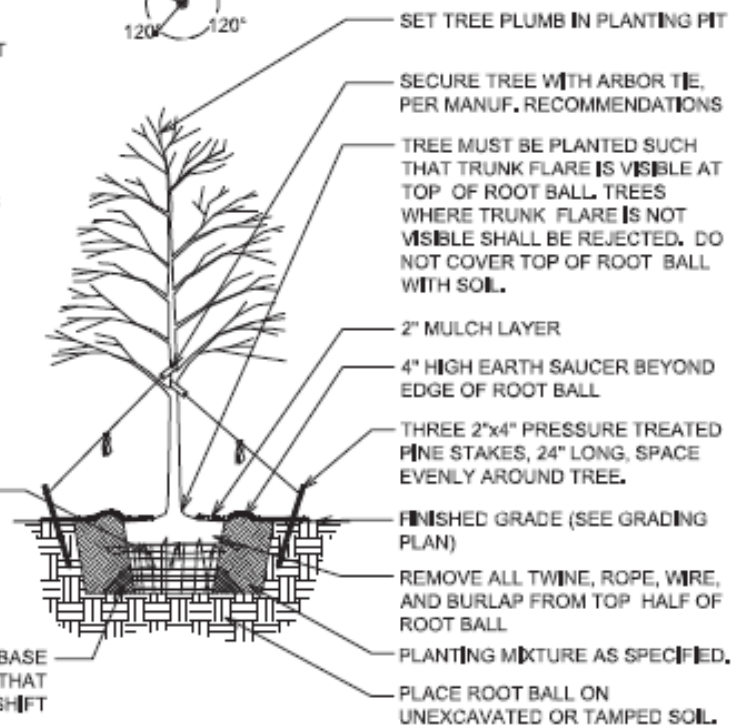
3. DO NOT HEAVILY PRUNE TREES AT PLANTING, PRUNE ONLY CROSSOVER LIMBS, CO-DOMINANT LEADERS, & BROKEN OR DEAD BRANCHES. SOME INTERIOR TWIGS AND LATERAL BRANCHES MAY BE PRUNED; HOWEVER, DO NOT REMOVE THE TERMINAL BUDS OF BRANCHES THAT EXTEND TO THE EDGE OF THE CROWN.

4. MARK THE NORTH SIDE OF THE TREE IN THE NURSERY, AND ROTATE TREE TO FACE NORTH AT THE SITE WHEN EVER POSSIBLE.

IF PLANT IS SHIPPED WITH A WIRE BASKET AROUND THE ROOT BALL, CUT THE WIRE BASKET IN 4 PLACES AND FOLD DOWN (8") INTO PLANTING HOLE

TAMP SOIL AROUND ROOT BALL BASE FIRMLY WITH FOOT PRESSURE SO THAT ROOT BALL DOES NOT SHIFT

STAKING PLAN



2. Landscaping

Landscaping around a tree will be done in such a way as to promote healthy growth of the tree. No hardscapes should be set near young trees that will impede the roots or canopy of the tree in its later development. The surrounding landscape should minimize likelihood of damages by mowers, string trimmers and large equipment. Mulch circles are often used as a buffer from mowers and string trimmers. Landscaping near trees must take into account the growing patterns of the particular tree. As an example, plantings that require full sun may not thrive if planted under an existing mature canopy.

3. Maintenance

a. Pruning and Irrigation

Trees that are newly planted up to 2 years will receive 20 gallons of water per week. The Grounds department will prune to balance young branches, remove crossing branches, sucker growth and water shoots.

Trees that are 2 years to 7 years will be pruned by Grounds annually for raising, structure formation, removal of crossover branches and suckers. Irrigation will be done in the event of an extended period of time with no rain.

Trees over 7 years will be pruned by Grounds as long as the branches are within reach of the university equipment. Pruning for older trees will be the same as for younger but also to keep away from structures, removal of dead or declining branches and to raise canopy to assured clearances. For higher branches, pruning contractors will be called upon for services. Irrigation will be done in drought conditions.

b. Cleaning

Trees will be cleared of the fallen leaves, seeds, branches, fruit and any other debris to maintain the overall landscape. The majority of campus trees have turf below the canopy which needs to be cleared to maintain the health of the turf. Branches, seeds, fruit, etc. must be cleared as soon as possible for aesthetics and to prevent trip hazards. Leaves can either be completely removed or mulched up into fine particles to fertilize the tree as long as it does not damage the turf.

c. Mulching

Mulching will be done annually for trees not to exceed two inches of mulch total. However, mulch will be repositioned so as not to bury the root flare.

d. Fertilization and Pest Management

Trees will be inspected by Grounds staff quarterly to check for health issues. Trees showing signs of disease are then diagnosed and treated as recommended by a certified arborist. There is no regular tree fertilization beyond treatment received as a result of lawn fertilization.

e. Removal

Trees may only be removed after consultation with a certified arborist's written recommendation. When the committee cannot reach a consensus, an independent assessment by a qualified arborist may be required and submitted to the committee for review. If the tree has sustained physical damage by vandalism and is in immediate danger of falling or causing harm to pedestrians, vehicular traffic or causing significant property damages it may be removed immediately with permission from Capital's Director of Facilities Management.

f. Recommended species

Capital will select tree species from the index of Ohio Native Trees as listed by the Ohio Department of Natural Resources. There may instances where a new area or design calls for a tree outside of this list and will be accepted as long as it is confirmed with a certified arborist that the species will thrive in the conditions it is planted.

<u>Alder, European Black</u>	<u>Cranberrybush, American</u>	<u>Osage-Orange</u>
<u>Arborvitae</u>	<u>Cucumbertree</u>	<u>Pawpaw</u>
<u>Ash</u>	<u>Dogwood</u>	<u>Persimmon</u>
<u>(All) (Blue, Green, White)</u>	<u>(All) (Flowering, Silky)</u>	<u>Pine</u>
<u>Aspen</u>	<u>Elm</u>	<u>(all) (Austrian, Loblolly, Pitl</u>
<u>(All) (Bigtooth, Quaking)</u>	<u>(All) (American, Slippery)</u>	<u>olly, Red, Scotch, Virginia,</u>
<u>Baldcypress</u>	<u>Fir, Balsam</u>	<u>White)</u>
<u>Basswood, American</u>	<u>Hackberry</u>	<u>Plum, American</u>
<u>Beech</u>	<u>Hawthorn</u>	<u>Redbud</u>
<u>(All) (American, Blue)</u>	<u>(All) (Washington)</u>	<u>Redcedar, Eastern</u>
<u>Birch</u>	<u>Hazelnut</u>	<u>Rose, Rugosa</u>
<u>(All) (Black, River, Yellow)</u>	<u>Hemlock, Eastern</u>	<u>Sassafras</u>
<u>Blackhaw</u>	<u>Hickory</u>	<u>Serviceberry, Thicket</u>
<u>Boxelder</u>	<u>(All) (Bitternut, Shagbark,</u>	<u>Spicebush</u>
<u>Buckeye</u>	<u>Shellbark)</u>	<u>Spruce</u>
<u>(All) (Ohio, Yellow)</u>	<u>Honeysuckle, Amur</u>	<u>(all) (Colorado, Norway, W</u>
<u>Buckthorn, Common</u>	<u>Hophornbeam, American</u>	<u>hite)</u>
<u>Burning Bush</u>	<u>Horsechestnut</u>	<u>Sumac, Smooth</u>
<u>Butternut</u>	<u>Larch, Eastern</u>	<u>Sweetgum</u>
<u>Buttonbush</u>	<u>Locust (All) (Black, Honey)</u>	<u>Sycamore</u>
<u>Catalpa, Northern</u>	<u>Maidenhair Tree</u>	<u>Tree-of-Heaven</u>
<u>Cherry, Black</u>	<u>Maple</u>	<u>Tuliptree</u>
<u>Chestnut</u>	<u>(All) (Red, Silver, Sugar)</u>	<u>Tupelo, Black</u>
<u>(All) (American, Chinese)</u>	<u>Mulberry</u>	<u>Viburnum, Arrowwood</u>
<u>Chokeberry, Black</u>	<u>Oak</u>	<u>Walnut, Black</u>
<u>Coffeetree, Kentucky</u>	<u>(All) (Black, Bur, Chestnut,</u>	<u>Willow</u>
<u>Cottonwood, Eastern</u>	<u>Chinquapin, English, Pin, R</u>	<u>(all) (Black, Streamco)</u>
<u>Crabapple</u>	<u>ed, Sawtooth, Scarlet, Shin</u>	
<u>(All) (American, Sargent)</u>	<u>gle, Shumard, Swamp</u>	
	<u>White, White)</u>	

g. Prohibited species

Species will be prohibited on the basis of the tree's ability to thrive long term. Invasive species are prohibited (autumn olive, common buckthorn, tree-of-heaven, etc). If a large tree, for example, will not grow due to physical factors such as proximity to other trees or structures a smaller one may be more appropriate. If a tree will become a nuisance to the surrounding structures or environment as it matures it will be prohibited. Fruit trees cannot be planted near parking lots or sidewalks due to the fruit litter. Pine trees should not be planted where they will grow above gutters along buildings. These are the type of considerations prohibiting tree species.

h. Managing catastrophic events

In the event of a large scale wind or ice storm or any other type of event which causes multiple tree damage the first priority is safety.

- (1) Make sure no one has been trapped under any canopy debris and secure the area. This may be done by using cones and caution tape to section off a large perimeter so no pedestrians or vehicles drive or walk into "harm's way".
- (2) Immediately call for additional help from tree contractors. Upon response they will be needed to help with chipping of the large piles of branches, clear cutting of any torn branches to the trees, and stump grinding of any fallen trees.
- (3) Clear off roads and walkways to open pathways. Reset perimeter barriers. Arrange the fallen limbs and debris into manageable piles to consolidate until the piles can be hauled away by Capital Grounds Department or picked up and chipped up by tree contractors.
- (4) Repair all turf, mulch as needed, and replace trees with approved species. Spring and Fall are the best planting times.
- (5) Records for catastrophic events will be kept for insurance purposes.

V. Protection and Preservation

Regarding building construction, preservation will be attempted. This will involve establishing a perimeter fence around the tree at minimum to the drip line. Care will be taken to prevent leaching from construction zone. If the tree cannot be preserved the subcommittee will be informed and a new Ohio "tolerant" species will be planted as a replacement on Capital's campus at a different location.

IV. Goals and Targets

- The Tree Plan will begin by identifying the immediate needs for pruning, tree removal, and plant health care (phc). We will assess the health of trees. An outside contractor will do the pruning, removal/stump grinding, backfill and seeding. The contractor will also be contracted for plant health care in the event of pest infestation or diseases.
- Throughout campus we will identify trees that have mulch circles and reestablish turf areas up to 4-6 inches from the base of the tree.
- On the Capital University Facilities Management website a page for Tree Campus is to be created. The website will include action photos, Arbor Day Observance, Tree Plan, Sustainability Month events, and Sustainability Week in April. (See attached Media)
- Work with Capital community and the Bexley community to tag trees on campus, to develop mapping of trees, and satellite imaging.
- Capital has instituted a unique recognition program for faculty and staff. Employees who have dedicated 25 years of faithful service to the University are awarded a bronze plaque which is placed at the base of a tree on Capital's grounds. This tradition began in 1875 and continues every year with a new group of employees who are recognized. Much enthusiasm is expressed in the placement of the commemorative plaque under the chosen tree. With great pride many of the employees refer to a tree as: "my tree"! Retirees and their families often come back to campus to visit "their tree"! This form of recognition has maintained interest in the trees on campus for generations. (See attached Media #3 & #4)
- Update the tree inventory to reflect changes on campus.

V. Damage Assessment

After any sustained damage due to high winds, ice, or snow the Grounds Maintenance staff will conduct a visual inspection of all campus trees. The trees will be assessed by Grounds Department in consultation with an arborist to include the Bexley City Arborist to determine the best possible steps to take to insure the health and repair of the tree assets. This could include such things as pruning, straightening, cabling, transplanting, etc. Actions should be taken to promote rejuvenation unless the tree is so damaged it will need to be removed.

In the event of chemical damage or pest infestation, a certified arborist will be consulted to determine the best course of action to take in rejuvenating the tree. All damages need to be documented for review by the Tree Advisory Subcommittee and Facilities Management. All physical damages must also be reported to Department of Public Safety. All documents relating to damage assessment will be filed in the Facilities Management Office to include photos, costs, assessment reports, invoices etc.

VI. Prohibited Practices

No hammocks, ropes, swings, bike locks, cabling, nails, staples, and vandalism shall be placed on campus trees. Vandalism such as spray painting will be assessed by Grounds Maintenance Staff. Only biodegradable material such as twine or thin yarn will be approved to hang on trees. Christmas lights will be the only exception and there is to be no zip-tying the lights to the branches, the cords will drape across the branches and be removed timely after the Holidays.

As stated in Columbus City Ordinance section 912.17- Abuse or Mutilation of trees, which Capital University will abide by: "Unless issued a written permit by the director of the recreation and parks department, no person shall attach any rope, wire, nails, advertising poster, or other contrivance to any tree in any public street, park or public place. No person shall permit any fire to burn where such fire or heat therefrom, or heat from any source, will injure any portion of any tree in any public street, park or public place. Without permit, no person shall use herbicides or other chemicals on any trees, shrubs or evergreens in any public street, park or public place."

Absolutely no climbing of trees will be done by staff, students and local residents. If anyone is found to be climbing trees Department of Public Safety will be called to ask them to stop. The only personnel permitted to climb campus tree will be that of a professional tree service to perform maintenance and they will be required to wear associated PPE.

VII. Definitions:

Arborist: A specialist in the care and maintenance of trees.

Buffer: A specific area set aside from the construction zone to ensure the tree's health this zone is to be marked by fencing and any additional signage to prevent damages in construction zones.

Cabling: The use of cables to stabilize an established tree growing in the manner that is not sustainable, if left uncorrected.

Conifer: Evergreens and shrubs that have needle-shaped leaves that can form cones and other fruit.

Construction Zones: The area where there will be any sort of disturbance to the environment due to construction. This even include additional vehicle traffic, changes created in in sunlight or rainwater due to construction.

Deciduous: Trees the shed leaves seasonally, normally in the fall.

Drip line: Outermost circumference of the tree canopy where water drips from and onto the ground.

Girdling: When a root is tightly wrapped around the trunk or stem. A stem girdling root circles or partially circles the base of a tree at or just below the soil surface. Stem girdling roots choke off the flow of water and nutrients between the roots and branches and food produced in the leaves from reaching the roots.

Hangers: Limbs broken off or torn off the tree fully or partially but are still dangling loose in the branches creating hazardous potential.

Ill Sighted: Planting a tree in a location or environment where it will not thrive or will cause damage to its surroundings.

Invasive Species: A plant that displaces the native plants, impacts wild life, and forms monoculture plant communities which reduce biological diversity.

Ornamental: Trees planted for decorative purposes.

Pruning: Trimming a tree by cutting away dead or overgrown branches or stems, especially to increase fruitfulness and growth.

Physical Damages: Unwanted cuts in the tree, broken branches, chemical spills, and any naturally or unnaturally occur harm to a tree including canopy, trunk and roots.

Root Flare: Part of the tree that the roots attach to the trunk.

Tree Canopy: The extent of the outer layer of leaves an individual tree or group of trees.

Trimming: Making the tree neat or of the required size or form by cutting away irregular or unwanted parts or to reduce the size.

Urban Forest: Trees planted within a city, often the conditions are not the native or natural habitat due to construction.

VIII. Communication Strategy

The Campus Urban Forest updates and events are communicated through the Chimes newspaper to the campus community, student newsletters, Alumni Magazine and through the Facilities Management link on the Capital website.

Media #1- Primmer Property seed collection



Media #2- Arbor Day tree planting of 2 Red Buds



Media #3- Commemorative Tree



Media #4- 25 year Commemorative Plaque



Media #5- annual Holiday Tree Decorating



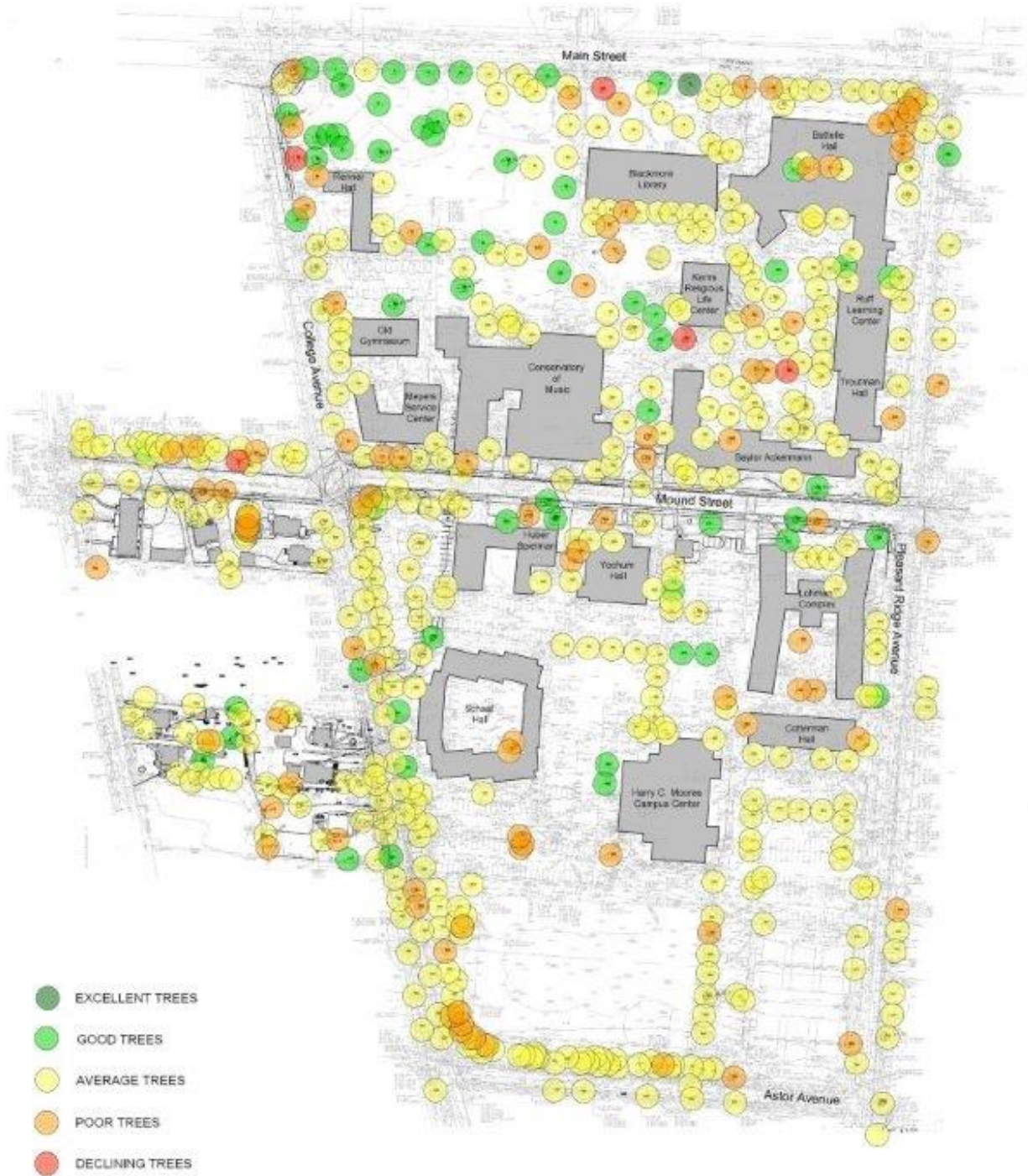
Media #6- physical damage



Tree Update Map 2018



Campus Map - Tree Locations



Tree Inventory

1. American Holly
2. American
Hophombean
3. American Linden
4. American
Sycamore
5. Amur Corktree
6. Amur Maple
7. Austrian Pine
8. Baldcypress
9. Black Locust
10. Black Walnut
11. Blue Ash
12. Boxelder
13. Callery Pear
14. Cherry
15. Cherry Plum
16. Chinese Dogwood
17. Chinese Juniper
18. Colorado Blue
Spruce
19. Common
Chokecherry
20. Common
Hackberry
21. Douglasfir
22. Eastern Arborvitae
23. Eastern
Cottonwood
24. Eastern Hemlock
25. Eastern Redbud
26. Eastern Red-cedar
27. English Oak
28. European Beech
29. European
Hornbeam
30. European
Horsechestnut
31. European White
Birch
32. Flowering
Dogwood
33. Freeman Maple
34. Ginkgo
35. Green Ash
36. Grey Birch
37. Hawthorne
38. Hedge Maple
39. Higan Cherry
40. Hybrid Crapapple
41. Hybrid Magnolia
42. Japanese Tree Lilac
43. Japanese Zelkova
44. Kentucky
Coffeetree
45. Littleleaf Linden
46. London Planetree
47. Northern Catalpa
48. Norway Maple
49. Norway Spruce
50. Paper Birch
51. Pin Oak
52. Red Maple
53. Red Mulberry
54. Red Oak
55. Red Pine
56. River Birch
57. Rose of Sharon
58. Russian-olive
59. Saucer Magnolia
60. Scarlet Oak
61. Scotch Pine
62. Serviceberry
63. Shumard Oak
64. Siberian Elm
65. Silver Maple
66. Star Magnolia
67. Swamp White Oak
68. Sweetbay Magnolia
69. Sweetgum
70. Thornless
Honeylocust
71. Tree of Heaven
72. Tulip-poplar
73. Washington
Hawthorn
74. White Ash
75. White Fir
76. White Pine
77. White Spruce
78. Wild Black Cherry
79. Yellow Buckeye