

C I T Y of F I S H E R S

# Planting Guide + Urban Forestry Program



# Index

- i Introduction
- ii USDA Plant Hardiness Maps

## **Section 1: City of Fishers Urban Forestry Program**

- 4 Residential Street Tree Planting Regulations

## **Section 2: City of Fishers Planting Guide**

- 7 Approved Tree Species: Street Trees + Planting Trees Under Utility Lines
- 8 Planting Trees Under Utility Lines
- 10 Approved Tree Species
- 20 Approved Shrub Species
- 26 Approved Ornamental Grasses
- 29 Approved Groundcovers and Vines
- 33 Unapproved Trees, Shrubs, Grasses, Groundcovers + Vines

## **Section 3: Helpful Information**

- 41 Tree Planting Care Basics
- 42 References
- 43 Glossary



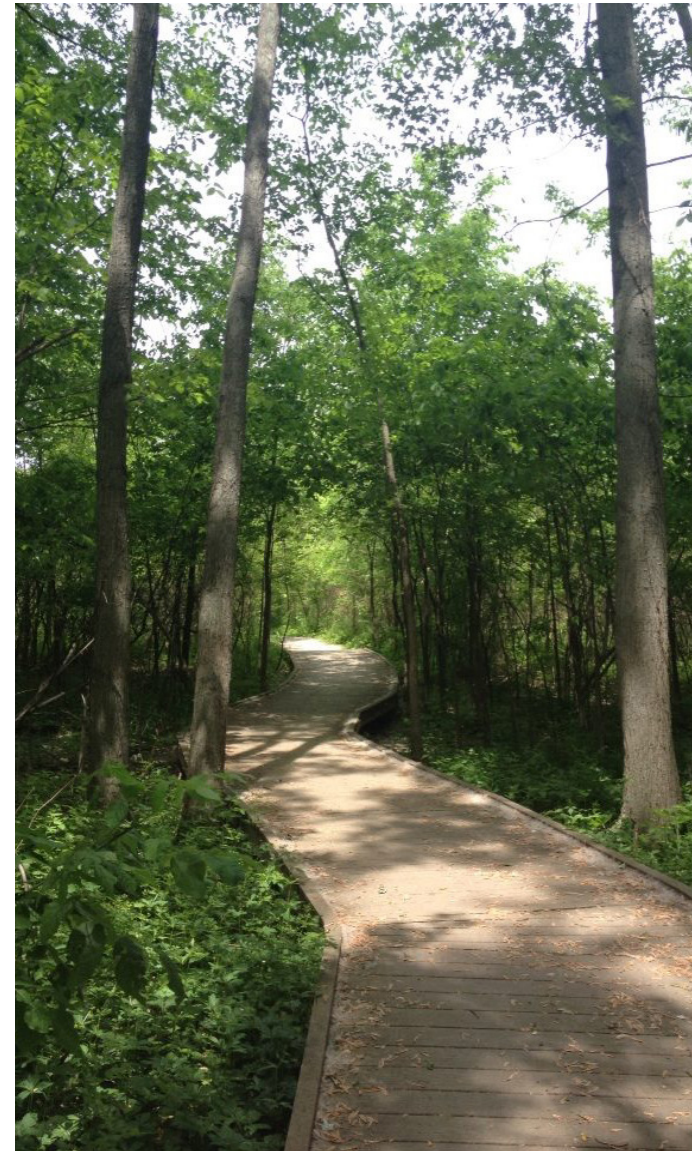
## Introduction

Some simple planning before planting a tree or a shrub will greatly increase the likelihood of success for that planting.

This guide is designed to provide homeowners and contractors with some basic information about which plant species to plant in certain situations such as planting in the right-of-way, street plantings, and under or near utility lines.

General information regarding desired native and non-native species is provided to enhance local flora and promote biodiversity in the area's ecosystem. A general understanding of tree planting and care techniques, as well as special considerations will be explained with each species' planting.

This guide only provides a small amount of information, so homeowners are encouraged to do further research and work with their local nursery, arborist, horticulturist, landscape designer, or other experienced professional to determine which specific cultivars will work the best for your location and why. Check with more than one source to get the most updated information.



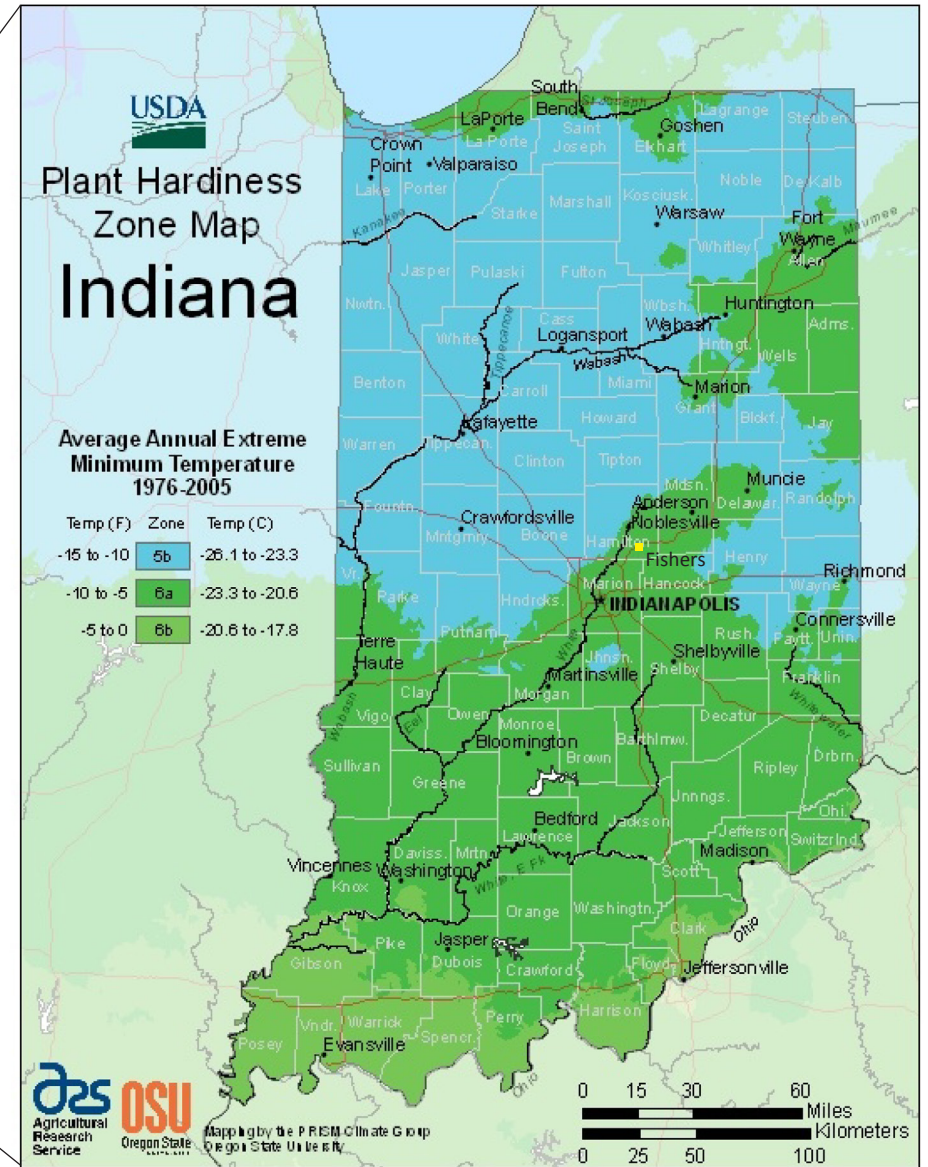
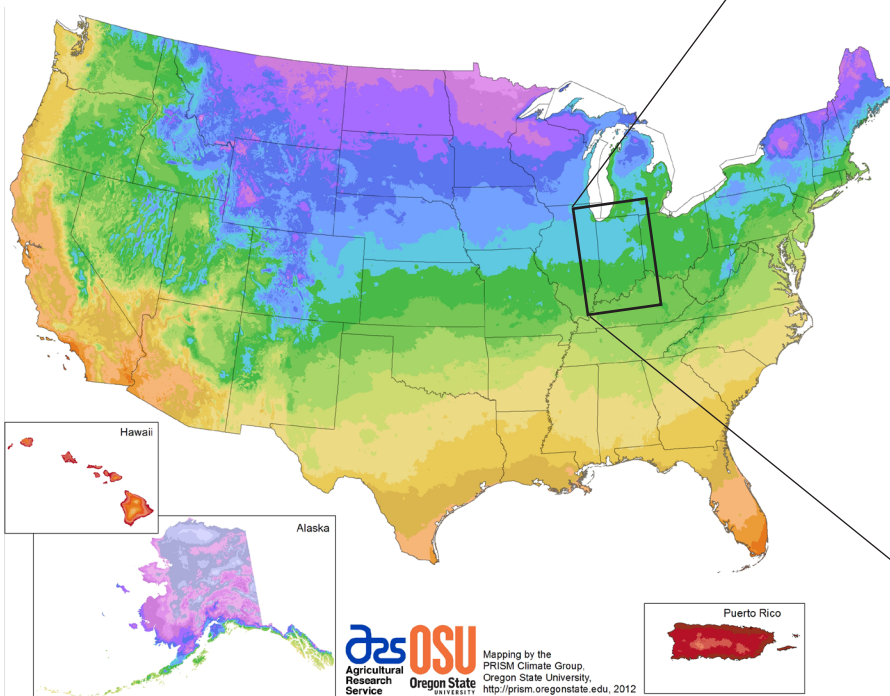
*Ritchey Woods Nature Preserve in Fishers. Photo by Taylor Firestine*



# USDA Plant Hardiness Zones

The U.S. Department of Agriculture (USDA) divides the country into different zones indicating plant species hardiness. The zones are determined by average annual minimum temperatures. Indiana is a zone 5b, 6a, and 6b.

Specifically, Fishers is located in zone 6a and within very close proximity to zone 5b. All the plant species mentioned in this guide thrive in these hardiness zones.



# Section 1:

## City of Fishers Urban Forestry Program



# Urban Forestry Program

## Residential Street Tree Planting Regulations

The purpose of these planting regulations is to provide an opportunity for homeowners in the City of Fishers to purchase and plant trees at their residence in the public right-of-way along city streets and to do so in a manner consistent with the City of Fishers Urban Forestry Program. For more information, or to apply for a street tree permit please visit <http://www.fishers.in.us/formcenter/parks--recreation-11/required-planting-guide--urban-forestry-135>.

### URBAN FORESTRY PROGRAM: Fishers Municipal Code Chapter 95

#### § 95.32 TREE SELECTION.

(A) The Tree Board, in conjunction with development staff, shall provide a list of desirable and undesirable tree, shrub and groundcover species for planting in public spaces. This list should include plant characteristics such as mature height and spread, bloom/foilage color, and various horticultural information along with recommended spacing, and may from time to time be updated as deemed necessary by the Tree Board.

(B) No species other than those included on the Tree Board's list of desirable trees may be planted as street trees without special permission of the Board or its designee. If special permission has not been granted, the cost of removal and replacement of the undesirable tree(s) shall be charged to the individual or firm who planted the tree(s).

(C) The minimum size for small trees at installation is one and one-half inches in diameter (measured six inches from the ground), and for medium or large trees is two inches in diameter (measured six inches from the ground).

(D) The minimum width for a street tree planting bed is five feet, with eight feet being preferred.

#### § 95.33 PERMITS.

(A) No person shall plant, treat, spray, or prune a street tree or hire someone to care for a street tree unless the Tree Board first grants a proper permit. The permit may be issued to property

owners or certified arborists. The purpose of this permit is to insure the planting of desirable trees and the proper location and spacing.

(B) No person shall remove a street tree unless the Tree Board has issued the proper permit. Except that, no permit is required in an emergency situation.

(C) Each permit issued shall specify the work to be performed and be valid for a period not to exceed 60 days from date of issuance. The Tree Board may extend the work period by 30 days upon written request.

(D) An annual permit shall be issued to any public or private utility for trimming trees within public rights-of-way. The permit shall specify trimming schedules and procedures and be reviewed annually with the Tree Board

#### § 95.34 INSTALLATION AND REMOVAL.

(A) It shall be a violation for any person to plant trees, shrubs, or any other plan material within any public right-of-way, required landscape easement, or municipal property until a permit has been obtained from the Tree Board. The Board is authorized to refuse to grant a permit when the planting is likely to create a public danger or nuisance or to be detrimental to the growth of adjacent trees.



## Urban Forestry Program

(B) The Board may prune, remove, or cause to be pruned or removed any plants that are installed within the public right-of-way, required landscape easement, or municipal property when it has been determined such pruning or removal is beneficial to the public health, safety, or welfare, or to adjacent.

(C) No trees may be planted under or within 15 horizontal feet of any overhead utility line, or within five horizontal feet of any underground utility line.

(D) Prior to installation, alteration, or repair of any building or structure, or any other construction activity, the owner thereof shall take all necessary steps to prevent injury to any flora growing in any public property or right-of-way.

(E) Any tree removed from the public right-of-way or municipal property must be cut flush with the ground, unless the stump is removed. No brush, limbs or other parts of a removed tree shall be allowed to remain on any city street overnight.

### § 95.35 ROUTINE TREE CARE.

(A) The city shall have the right to routinely inspect, plant, prune, maintain, and remove trees, plants, and shrubs within the boundaries of dedicated rights-of-way and other municipal properties as may be necessary to insure public safety or to preserve and enhance the symmetry and/or beauty of such public grounds.

(B) A utility may remove or cause to be removed any tree or part thereof which is in an unsafe condition, or which by reason of its nature is immediately injurious to sewers, electric lines, gas lines, water lines, or other public improvements, which is affected with any injurious fungus, insect or other pest, or which otherwise poses an identifiable threat to public safety. Except in emergency situations, communications and electric utilities shall notify the city before removing any tree.

(C) Public utilities may trim or remove trees, tree roots, and tree branches as necessary for the maintenance of utility service and as is prescribed by state law and as limited below:

Unless approved in advance by the Tree Board for good cause shown, it shall be unlawful for any person to:

1. Top trees within a city right-of-way or on other municipal property;
2. Prune horizontally a branch of more than one-inch in diameter; and/or
3. Cut limbs within a tree's canopy back to stubs.

(D) Within the limits of this subchapter and the Tree Board's budget, the city shall assume the expense of tree care for street trees. All routine care undertaken by the city shall be initiated by the Tree Board and undertaken by a certified and/or trained arborist.

(E) All property owners should be responsible for having all trees, shrubs, vines, or other plants growing under or near utility lines on their property properly trimmed or pruned. The applicable utility shall be contacted by the property owner prior to any pruning or trimming, so that service may be shut off as needed.

(F) All property owners should be responsible for proper routine care of street trees in the right-of-way between the road surface and the sidewalk or remainder of that person's property. This includes monitoring tree health and notifying the city when such trees have major maintenance needs.

# Section 2:

## City of Fishers Planting Guide





# Approved Tree Species

## Street Trees + Planting Trees Under Utility Lines

General information on the following pages represents guidelines for initial assessment only. Before planting, fully assess and research mature height, spread, and overall tree characteristics in relationship to the planting location -- all things considered.

Trees not found on this list are prohibited from the City of Fishers Tree Board or its designee. Homeowners interested in purchasing and planting trees in front of their homes within the public right-of-way (area between sidewalk and curb) can do so with an approved *Residential Street Tree Planting Permit Application* available at <http://www.fishers.in.us/formcenter/parks--recreation-11/required-planting-guide--urban-forestry-135>

**Do not** plant unknown seedlings which are likely to be undesirable species.

**Note:** The planting area corresponds with the following:

- Small = minimum 3 foot planting area
- Medium = minimum 5 foot planting area
- Large = minimum 8 foot planting area.

**Note:** Improved cultivars and seedless, thornless varieties **must** be used when available. Northern grown tree stock is advised to improve tree survival rate. Small trees used as street trees must be upright/columnar form; not clump form. Most small trees are not suitable for narrow areas due to low branching and obstruction of visibility. Minimum size for trees required by the Landscape Ordinance:

- Single- and two-family residential projects 1 1/2 inch caliper
- Commercial and multi-family projects 2 1/2 inch caliper

**Note:** While acer maples are included in the approved trees species listing, as of 2014, Fishers recommends a hiatus on planting these trees in an effort to increase diversity and prevent the continued spread of Asian long-horned beetle (ALB); maples are particularly susceptible to the ALB.

# Planting Trees Under Utility Lines

Tree branches and utility lines are not a good combination. Severe weather events, bringing thunderstorms, lightning, high winds, and ice can pose serious threats to trees located near utility lines.


Electric utility companies, including Vectren and Duke Energy in Fishers, regularly trim tree limbs in close proximity to utility lines to help prevent power outages from occurring in severe weather. Planting low-growing trees under or near power lines will not only help beautify your property, but can also help prevent service disruptions in the future.

When planting close to underground utilities, one must be mindful of future problems that can arise. Trees with aggressive root systems can damage cables or pipes which will have to be repaired later on.

## RIGHT TREE RIGHT PLACE

# 1/2 CW + 15' = X

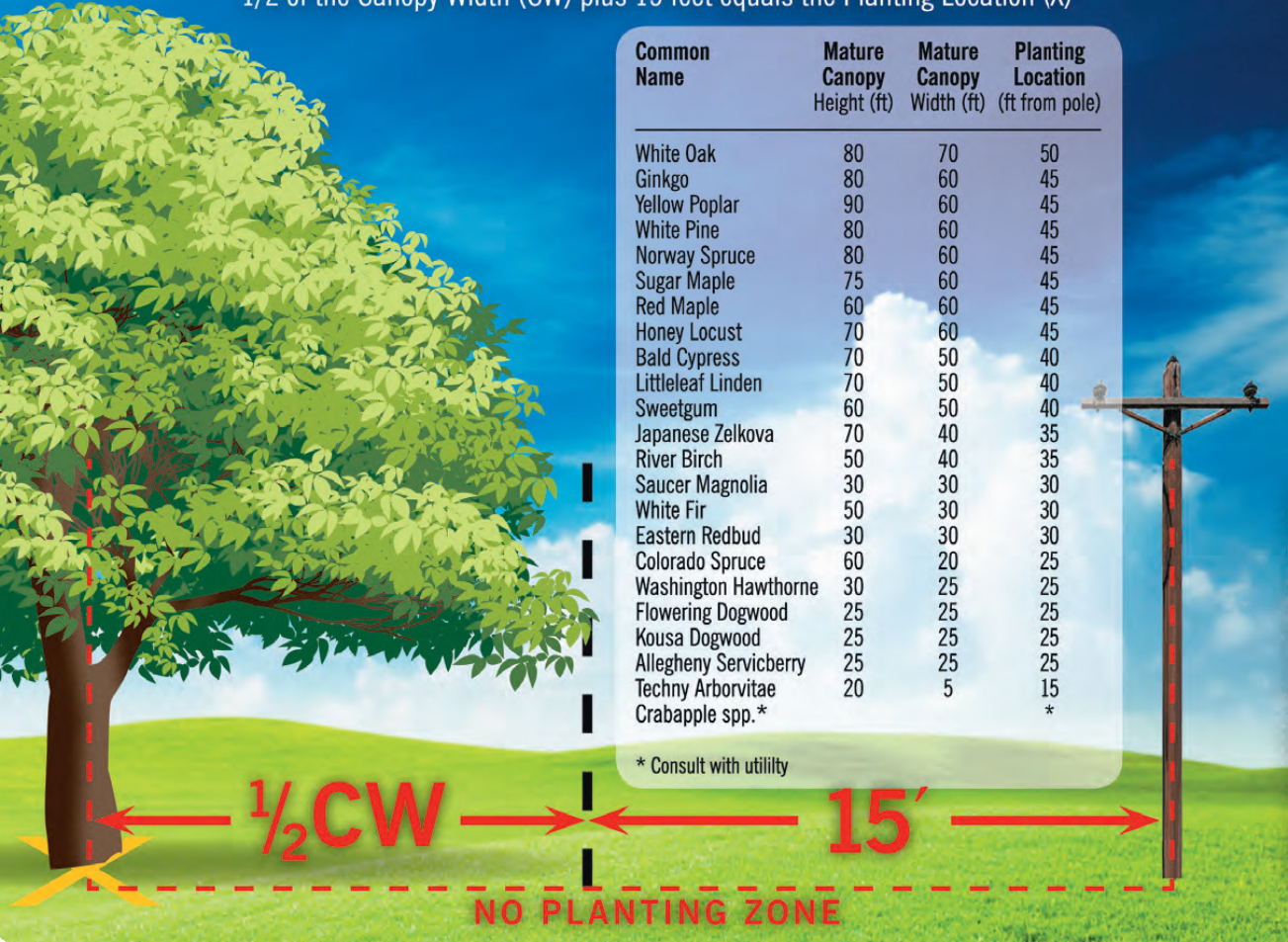
1/2 of the Canopy Width (CW) plus 15 feet equals the Planting Location (X)



Common Name	Mature Canopy Height (ft)	Mature Canopy Width (ft)	Planting Location (ft from pole)
White Oak	80	70	50
Ginkgo	80	60	45
Yellow Poplar	90	60	45
White Pine	80	60	45
Norway Spruce	80	60	45
Sugar Maple	75	60	45
Red Maple	60	60	45
Honey Locust	70	60	45
Bald Cypress	70	50	40
Littleleaf Linden	70	50	40
Sweetgum	60	50	40
Japanese Zelkova	70	40	35
River Birch	50	40	35
Saucer Magnolia	30	30	30
White Fir	50	30	30
Eastern Redbud	30	30	30
Colorado Spruce	60	20	25
Washington Hawthorne	30	25	25
Flowering Dogwood	25	25	25
Kousa Dogwood	25	25	25
Allegheny Serviceberry	25	25	25
Techny Arborvitae	20	5	15
Crabapple spp.*			*

\* Consult with utility



This diagram illustrates the minimum distance differently sized trees should be planted from utility lines. Graphic courtesy of Duke Energy.

## Planting Trees Under Utility Lines

Indiana law requires all property owners to call 811 before digging. This is a free service allowing utility professionals to mark all buried electric, gas, water, sewer, cable, and telephone lines for your safety; however, it is the caller's responsibility to know the location of all privately-owned equipment, including buried LP lines, pet fences, septic lines, and wiring for outdoor lighting.



**Know what's below. Call before you dig.**

## Approved Tree Species

Tree ID #	Common Name	Scientific Name	Max. Height	Max. Spread	Planting Area	Commercially Available	Notes	Approved Street Tree	Approved Trees Under Utility Lines
<b>Approved Tree Species</b>									
T1	White Fir*	<i>Abies concolor</i>	70'	30'	Medium - Large	Yes			
T2	Paperbark Maple*	<i>Acer griseum</i>	25'	35'	Small		Low, wide spreading branches; do not use main thoroughfares; low traffic residential areas only	Yes	Yes
T3	Miyabe Maple*	<i>Acer miyabei</i>	40'	35'	Medium		Not widely available,		
T4	Black Maple	<i>Acer nigrum/saccharum</i> subsp. <i>nigrum</i>	90'	25'	Large			Yes	
T5	Osakazuki Japanese Maple*	<i>Acer palmatum</i> 'Osakazuki'	25'	15'	Small	Yes	Water regularly and more often during hot days		
T6	Red Maple	<i>Acer rubrum</i>	90'	70'	Large		Not salt tolerant; inappropriate on main thoroughfares due to winter salt application	Yes	
T7	Sugar Maple	<i>Acer saccharum</i>	75'	50'	Large		Not salt tolerant; inappropriate on main thoroughfares due to winter salt application	Yes	
T8	Freeman Maple/Hybrid Red Maple	<i>Acer x freemanii</i>	60'	40'	Medium		Fast growth rate; urban tolerant; poor soil tolerant; great fall color; susceptible to verticillium wilt	Yes	
T9	Yellow Buckeye	<i>Aesculus flava</i>	75'	50'	Large		Asian long-horn beetle susceptible		
T10	Ohio Buckeye	<i>Aesculus glabra</i>	40'	40'	Medium	Yes	Asian long-horn beetle susceptible		



## Approved Tree Species

Tree ID#	Common Name	Scientific Name	Max. Height	Max. Spread	Planting Area	Commercially Available	Notes	Approved Street Tree	Approved Trees Under Utility Lines
T11	Red Horse Chestnut*	<i>Aesculus x carnea</i>	40'	35'	Medium		Drops fruit; can get bagworms and japanese beetles/borers		
T12	Downy Serviceberry*	<i>Amelanchier arborea</i>	25'	20'	Small		Low branching; use in smaller residential area with low traffic;	Yes	Yes
T13	Serviceberry	<i>Amelanchier spp.</i>	25'	20'	Small	Yes			Yes
T14	Allegheny Serviceberry	<i>Amelanchier laevis</i>	40'	40'	Medium	Yes			
T15	Autumn Brilliance Apple Serviceberry*	<i>Amelanchier x grandiflora</i> 'Autumn Brilliance'	25'	25'	Small			Yes	Yes
T16	Pawpaw	<i>Asimina triloba</i>	30'	25'	Small-Medium		Suckers and forms colonies, good for rain gardens		Yes
T17	Yellow Birch	<i>Betula alleghaniensis</i>	75'		Large	Yes			
T18	River Birch	<i>Betula nigra</i>	70'	60'	Medium - Large	Yes			
T19	Gray Birch	<i>Betula populifolia</i>	40'	20'	Medium				
T20	Common Hornbeam*	<i>Carpinus betulus</i> 'Fastigiata'	40'	30'	Medium		Tolerates air pollution	Yes	
T21	American Hornbeam	<i>Carpinus caroliniana</i>	30'	30'	Small - Medium	Yes	Not salt tolerant; inappropriate on main thoroughfares due to winter salt application	Yes	Yes
T22	Bitternut Hickory	<i>Carya cordiformis</i>	80'	50'	Large	Yes			
T23	Pignut Hickory	<i>Carya glabra</i>	80'	40'	Large				
T24	Pecan	<i>Carya illinoensis</i>	100'	70'	Large	Yes			
T25	Shellbark Hickory	<i>Carya laciniosa</i>	80'	60'	Large				
T26	Red Hickory	<i>Carya ovalis</i>	80'		Large				
T27	Shagbark Hickory	<i>Carya ovata</i>	90'	70'	Large	Yes			
T28	Sand Hickory	<i>Carya pallida</i>	100'		Large				
T29	Black Hickory	<i>Carya texana</i>	50'-100'		Medium - Large				

\* Non-Native Plant Species  
Updated June 2015

## Approved Tree Species

Tree ID#	Common Name	Scientific Name	Max. Height	Max. Spread	Planting Area	Commercially Available	Notes	Approved Street Tree	Approved Trees Under Utility Lines
T30	Mockernut Hickory	<i>Carya tomentosa</i>	80'	60'	Large				
T31	Northern Catalpa	<i>Catalpa speciosa</i>	70'	50'	Medium - Large	Yes			
T32	Sugarberry	<i>Celtis laevigata</i>	70'	60'	Medium - Large				
T33	Hackberry	<i>Celtis occidentalis</i>	80'	60'	Large	Yes		Yes	
T34	Eastern Redbud	<i>Cercis canadensis</i>	30'	20'	Small	Yes	Not salt tolerant; inappropriate on main thoroughfares due to winter salt application; low branching; use only in low traffic residential areas	Yes	Yes
T35	Fringetree	<i>Chionanthus virginicus</i>	20'	15'	Small		Considered endangered plant; sensitive to wind		Yes
T36	Yellowwood	<i>Cladrastis lutea</i>	50'	55'	Medium	Yes	Fragrant flowers, normally will not bloom for first 8-10 years,		
T37	Pagoda Dogwood	<i>Cornus alternifolia</i>	25'	20'	Small		Drought sensitive		Yes
T38	Flowering Dogwood	<i>Cornus florida</i>	30'	35'	Medium	Yes			Yes
T39	Kousa Dogwood*	<i>Cornus kousa</i>	30'	30'	Medium	Yes	More disease resistant and cold hardy than flowering dogwood		
T40	Cornelian Cherry Dogwood*	<i>Cornus mas</i>	25'	20'	Small		Not salt tolerant; inappropriate on main thoroughfares due to winter salt application; low branching; use only in low traffic residential areas	Yes	Yes
T41	Smoketree*	<i>Cotinus coggygria</i>	15'	15'	Small				Yes

\* Non-Native Plant Species  
Updated June 2015

## Approved Tree Species

Tree ID#	Common Name	Scientific Name	Max. Height	Max. Spread	Planting Area	Commercially Available	Notes	Approved Street Tree	Approved Trees Under Utility Lines
T42	Washington Hawthorn*	<i>Crataegus phaenopyrum</i>	30'	30'	Medium	Yes	Has some insect and disease problems	Yes	
T43	Dotted Hawthorn	<i>Crataegus punctata</i>	25'	25'	Small				Yes
T44	Green Hawthorn	<i>Crataegus viridis</i>	35'	35'	Medium	Yes		Yes	
T45	Persimmon	<i>Diospyros virginiana</i>	60'	35'	Medium				
T46	Eastern Wahoo	<i>Euonymus atropurpurea</i>	20'	25'	Small		Not to be confused with <i>Euonymus alatus</i> (Burning Bush)--not permitted in Fishers		Yes
T47	American Beech	<i>Fagus grandifolia</i>	80'	80'	Large	Yes			
T48	Tricolor Beech*	<i>Fagus sylvatica 'Tricolor'</i>	30'	30'	Medium	Yes	Can scorch in full sun; Japanese beetles can be a problem		
T49	Ginkgo (male)*	<i>Ginkgo biloba</i>	80'	40'	Large			Yes	
T50	Thornless Honeylocust	<i>Gleditsia triancanthos var. inermis</i>	80'	50'	Large	Yes		Yes	
T51	Kentucky Coffeetree	<i>Gymnocladus dioica</i>	100'	40'	Large	Yes	Not salt tolerant; inappropriate on main thoroughfares due to winter salt application	Yes	
T52	Witchhazel	<i>Hamamelis virginiana</i>	15'	15'	Small				Yes
T53	Butternut	<i>Juglans cinerea</i>	60'	60'	Medium	Yes	Canker susceptible		
T54	Black Walnut	<i>Juglans nigra</i>	100'	100'	Large				
T55	Eastern Red Cedar	<i>Juniperus virginiana</i>	65'	25'	Medium	Yes			
T56	Goldenraintree*	<i>Koelreuteria texana</i>	50'	35'	Medium		Can cause litter		
T57	Eastern Larch (Tamarack)	<i>Larix laricina</i>	80'	30'	Large	Yes			
T58	Sweetgum	<i>Liquidambar styraciflua</i>	60'	40'	Medium	Yes		Yes	

## Approved Tree Species

Tree ID#	Common Name	Scientific Name	Max. Height	Max. Spread	Planting Area	Commercially Available	Notes	Approved Street Tree	Approved Trees Under Utility Lines
T59	Tulip Tree	<i>Liriodendron tulipifera</i>	150'	50'	Large	Yes	Not salt tolerant; inappropriate on main thoroughfares due to winter salt application	Yes	
T60	Amur Maackia*	<i>Maackia amurensis</i>	30'	30'	Small - Medium		Low branching; use only in low traffic residential areas	Yes	
T61	Cucumber Magnolia	<i>Magnolia acuminata</i>	70'	35'	Medium - Large				
T62	Star Magnolia*	<i>Magnolia stellata</i>	20'	15'	Small				Yes
T63	Umbrella Magnolia	<i>Magnolia tripetala</i>	30'	30'	Small - Medium	Yes			
T64	Saucer Magnolia	<i>Magnolia x soulgiana</i>	25'	30'	Small				Yes
T65	Adams Crabapple*	<i>Malus 'Adams'</i>	25'	25'	Small				Yes
T66	Centurion Crabapple*	<i>Malus 'Centurion'</i>	25'	20'	Small				Yes
T67	Wild Sweet Crabapple	<i>Malus coronaria</i>	25'	25'	Small			Yes	
T68	Japanese Flowering Crabapple*	<i>Malus floribunda</i>	25'	25'	Small				Yes
T69	Prairie Crabapple	<i>Malus ioensis</i>	30'	35'	Small - Medium				Yes
T70	Sargent Crabapple*	<i>Malus sargentii</i>	10'	15'	Small		Disease resistant; prefers moist, well-drained, acidic soils		Yes
T71	Red Mulberry	<i>Morus rubra</i>	50'	40'	Medium		Tolerates air pollution/drought;		
T72	Black Gum	<i>Nyssa sylvatica</i>	50'	30'	Large	Yes			
T73	Hophornbeam	<i>Ostrya virginiana</i>	45'	40'	Medium	Yes	Not salt tolerant; inappropriate on main thoroughfares due to winter salt application	Yes	
T74	Sourwood	<i>Oxydendrum arboreum</i>	50'	25'	Medium				
T75	Norway Spruce*	<i>Picea abies</i>	60'	30'	Medium	Yes			

\* Non-Native Plant Species  
Updated June 2015



## Approved Tree Species

Tree ID#	Common Name	Scientific Name	Max. Height	Max. Spread	Planting Area	Commercially Available	Notes	Approved Street Tree	Approved Trees Under Utility Lines
T76	Serbian Spruce*	<i>Picea omorika</i>	60'	20'	Medium	Yes			
T77	Colorado Blue Spruce*	<i>Picea pungens</i> 'Glauca'	60'	20'	Medium	Yes			
T78	Jack Pine	<i>Pinus banksiana</i>	50'	30'	Medium	Yes	Sensetive to heat; likes sand		
T79	Eastern White Pine	<i>Pinus strobus</i>	80'	40'	Large	Yes	Sensetive to salt and pollution		
T80	Scotch Pine*	<i>Pinus sylvestris</i>	50'	30'	Medium				
T81	Virginia Pine/Scrub Pine	<i>Pinus virginiana</i>	30'	20'	Small-Medium				
T82	Columbia London Planetree*	<i>Platanus acerifolia</i>	80'	65'	Large			Yes	
T83	Sycamore	<i>Platanus occidentalis</i>	90'	70'	Large		Can cause litter		
T84	Balsam Poplar	<i>Populus balsamifera</i>	100'	70'	Large				
T85	Cottonwood	<i>Populus deltoides</i>	80'	60'	Large		Will sell/select male clone		
T86	American Plum	<i>Prunus americana</i>	25'	20'	Small				Yes
T87	Purple-Leaf Plum*	<i>Prunus cerasifera</i>	20'	20'	Small				Yes
T88	Amur Chokecherry*	<i>Prunus maakii</i>	25'	20'	Small				Yes
T89	Weeping Higan Cherry*	<i>Prunus pendula</i>	25'	25'	Small		Susceptible to a variety of insects and diseases		
T90	Pin Cherry/Fire Cherry	<i>Prunus pensylvanica</i>	40'	30'	Medium				
T91	Wild Black Cherry	<i>Prunus serotina</i>	80'	60'	Large				
T92	Kwanzan Cherry*	<i>Prunus serrulata</i> 'Kwanzan'	25'	25'	Small		Suceptible to quite a few insects and diseases; great fall color		
T93	Douglas Fir*	<i>Pseudotsuga menziesii</i>	80'	20'	Large	Yes			
T94	Hoptree	<i>Ptelea trifoliata</i>	25'	15'	Small		Not salt tolerant; inappropriate on main thoroughfares due to winter salt application		Yes

## Approved Tree Species

Tree ID#	Common Name	Scientific Name	Max. Height	Max. Spread	Planting Area	Commercially Available	Notes	Approved Street Tree	Approved Trees Under Utility Lines
T95	Wild Sweet Crabapple	<i>Pyrus coronaria</i>	30'	30'	Small-Medium		Focus on rust resistant cultivars of all crabapples		
T96	White Oak	<i>Quercus alba</i>	100'	90'	Large			Yes	
T97	Swamp White Oak	<i>Quercus bicolor</i>	90'	70'	Large	Yes	Not salt tolerant; inappropriate on main thoroughfares due to winter salt application	Yes	
T98	Scarlet Oak	<i>Quercus coccinea</i>	70'	50'	Large	Yes			
T99	Northern Pin Oak	<i>Quercus ellipsoidalis</i>	70'	60'	Large	Yes			
T100	Southern Red Oak	<i>Quercus falcata</i>	80'	50'	Large				
T101	Shingle Oak	<i>Quercus imbricaria</i>	60'	50'	Large	Yes		Yes	
T102	Overcup Oak	<i>Quercus lyrata</i>	60'	60'	Large				
T103	Bur Oak	<i>Quercus macrocarpa</i>	80'	80'	Large	Yes			
T104	Blackjack Oak	<i>Quercus marilandica</i>	35'	25'	Small-Medium				
T105	Swamp Chestnut Oak	<i>Quercus michauxii</i>	60'	50'	Medium				
T106	Chinkapin Oak	<i>Quercus muehlenbergii</i>	60'	70'	Medium - Large	Yes			
T107	Cherrybark Oak	<i>Quercus pagoda</i>	110'		Large				
T108	Pin Oak	<i>Quercus palustris</i>	70'	60'	Medium - Large				
T109	Chestnut Oak	<i>Quercus prinus</i>	70'	70'	Medium - Large				
T110	English Oak	<i>Quercus robur f. fastigiata</i>	60'	20'	Medium			Yes	
T111	Northern Red Oak	<i>Quercus rubra</i>	70'	60'	Medium - Large	Yes		Yes	
T112	Shumard Oak	<i>Quercus shumardii</i>	60'	40'	Medium				
T113	Post Oak	<i>Quercus stellata</i>	50'	50'	Medium				
T114	Black Oak	<i>Quercus velutina</i>	60'	60'	Medium				
T115	Smooth Sumac	<i>Rhus glabra</i>	20'	15'	Small				Yes
T116	Staghorn Sumac	<i>Rhus typhina</i>	25'	30'	Small		Tree is colonizing		
T117	Peachleaf Willow	<i>Salix amygdaloides</i>	70'	60'	Medium - Large		Can cause litter		

## Approved Tree Species

Tree ID#	Common Name	Scientific Name	Max. Height	Max. Spread	Planting Area	Commercially Available	Notes	Approved Street Tree	Approved Trees Under Utility Lines
T118	Black Willow	<i>Salix nigra</i>	60'	60'	Medium		Not suitable as street tree; suitable for wet areas		
T119	Silky Willow	<i>Salix sericea</i>	12'		Small		Great for attracting butterflies; has catkins and need wet soil conditions		
T120	Sassafras	<i>Sassafras albidum</i>	60'	40'	Small				
T121	Scholar Tree*	<i>Sophora japonica</i>	75'	75'	Large		Drought, salt, and urban tolerant		
T122	Ivory Silk Japanese Tree Lilac*	<i>Syringa reticulata</i>	25'	15'	Small		Low branching; use only in low traffic residential areas	Yes	Yes
T123	Common Lilac*	<i>Syringa vulgaris</i>	20'	15'	Small				
T124	Bald Cypress	<i>Taxodium distichum</i>	70'	45'	Medium - Large	Yes	Could include Dawn Redwood		
T125	American Arborvitae	<i>Thuja occidentalis</i>	40'	15'	Medium	Yes	Size depends on cultivar; can be salt sensitive; avoid windy areas and full shade		
T126	Western Arborvitae	<i>Thuja plicata</i>	70'	25'	Medium - Large		Prefers moist, well-drained soils and full to part shade; does not tolerate dry conditions		
T127	Basswood	<i>Tilia americana</i>	80'	50'	Large	Yes			
T128	Littleleaf Linden*	<i>Tilia cordata</i>	50'	40'	Medium		Not salt tolerant; inappropriate on main thoroughfares due to winter salt application	Yes	
T129	Silver Linden*	<i>Tilia tomentosa</i>	50'	40'	Medium			Yes	
T130	Canadian Hemlock	<i>Tsuga canadensis</i>	70'	35'	Medium - Large	Yes			

\* Non-Native Plant Species  
Updated June 2015

## Approved Tree Species

Tree ID#	Common Name	Scientific Name	Max. Height	Max. Spread	Planting Area	Commercially Available	Notes	Approved Street Tree	Approved Trees Under Utility Lines
T131	Rock Elm/Cork Elm	<i>Ulmus thomasii</i>	90'		Large				
T132	Winged Elm	<i>Ulmus alata</i>	50'	40'	Medium			Yes	
T133	Princeton, Valley Forge, New Harmony American Elm*	<i>Ulmus americana</i> 'Princeton', 'Valley Forge', 'New Harmony'	70'	60'	Medium - Large	Yes	Covers any American Elm hybrids; do not use regular American Elm due to Dutch Elm Disease	Yes	
T134	Slippery Elm	<i>Ulmus rubra</i>	60'	50'	Medium				
T135	Arrowwood	<i>Viburnum dentatum</i> (SHRUB)	10'	10'					Yes
T136	Nannyberry	<i>Viburnum lentago</i> (SHRUB)	16'	12'					Yes
T137	Blackhaw	<i>Viburnum prunifolium</i> (SHRUB)	15'	12'					Yes
T138	Chastetree*	<i>Vitex agnus-castus</i> (SHRUB)	10'	8'					Yes
T139	Japanese Zelkova*	<i>Zelkova serrata</i>	80'	75'	Large			Yes	
T140	Leyland cypress*	<i>x Cuprocyparis leylandii</i>	70'	15'	Large		Can get bagworms and canker/root rot		

**Small Tree (30' or less)**

Deciduous

**Medium Tree (30'-70')**

Evergreen

**Large Tree (70' and above)**



# Approved Shrub Species



## Approved Shrub Species

Shrub ID #	Common Name	Scientific Name	Max. Height	Max. Spread	Planting Area	Commercially Available	Notes
<b>Approved Shrub Species</b>							
S1	Glossy Abelia*	<i>Abelia x grandifolia</i>	6'	6'	Medium		Sensitive to cold weather
S2	Bottlebrush Buckeye	<i>Aesculus parviflora</i>	12'	15'	Large		
S3	Serviceberry	<i>Amalanchier canadensis</i>	25'	20'	Large		
S4	Red Chokecherry	<i>Aronia arbutifolia</i>	10'	6'	Medium		Tolerates a wide range of soils including wet; Also tolerates erosion and clay; winter interest
S5	Black Chokeberry	<i>Aronia melanocarpa</i>	6'	6'	Medium		Salt and soil compaction tolerant
S6	Goat's Beard	<i>Aruncus dioicus</i>	6'	4'	Medium		Prefers moist to wet soils and part shade; susceptible to leaf spot
S7	Butterfly Bush*	<i>Buddleia davidii</i>	6'	6'	Medium		
S8	Littleleaf Boxwood*	<i>Buxus microphylla</i>	4'	4'	Small		
S9	Glencoe or Green Velvet Boxwood*	<i>Buxus spp.</i>	4'	4'	Small		Evergreen that likes part shade and can tolerate deer and rabbits
S10	Beautyberry	<i>Callicarpa dichotoma</i>	6'	6'	Medium		
S11	Carolina allspice	<i>Calycanthus floridus</i>	12'	12'	Large		Tolerant of clay soils and deer; naturalization will occur if suckers are not immediately removed
S12	Bluebeard*	<i>Caryopteris x clandonensis</i>	3'	3'	Small		
S13	New Jersey Tea	<i>Ceanothus americanus</i>	4'	6'	Small		Drought and salt tolerant
S14	Buttonbush	<i>Cephalanthus occidentalis</i>	12'	8'	Large		Drought tolerant
S15	Flowering Quince*	<i>Chaenomeles speciosa</i>	10'	15'	Large		May cause litter
S16	Summersweet Clethra	<i>Clethra alnifolia</i>	6'	5'	Medium		Salt tolerant
S17	Sweet Fern	<i>Comptonia peregrina</i>	4'	8'	Small		Drought and salt tolerant
S18	Silky Dogwood	<i>Cornus amomum</i>	10'	10'	Large		
S19	Redosier/Red Stemmed Dogwood	<i>Cornus sericea</i>	10'	8'	Large		Great winter interest
S20	American Hazlenut	<i>Corylus americana</i>	10'	15'	Large		

## Approved Shrub Species

Shrub ID#	Common Name	Scientific Name	Max. Height	Max. Spread	Planting Area	Commercially Available	Notes
S21	Smoke Bush	<i>Cotinus coggygria</i>	15'	15'	Large		Can tolerate a wide variety of soils except extremely saturated and poorly draining
S22	Spreading Cotoneaster*	<i>Cotoneaster divaricatus</i>	6'	8'	Medium		Requires good drainage; somewhat drought tolerant after establishment; some minor pest and disease susceptibility
S23	Daphne Burkwood*	<i>Daphne x burkwoodii</i>	4'	4'	Small		
S24	Slender Deutzia*	<i>Deutzia gracilis</i>	3'	4'	Small		
S25	Silverberry	<i>Elaeagnus commutata</i>	10'		Large		Highly drought tolerant; medium salt tolerance
S26	Strawberry Bush	<i>Euonymus americanus</i>	6'	6'	Medium		Can be planted near black walnut trees; deer love to eat the leaves
S27	Eastern Wahoo	<i>Euonymus atropurpureus</i>	20'	15'	Large		Substitute for invasive, non-native Burning Bush; can be planted near Black Walnut
S28	Border Forsythia*	<i>Forsythia x intermedia</i>	10'	15'	Large		
S29	Fothergilla	<i>Fothergilla gardenii</i>	3'	4'	Small		
S30	Large Fothergilla	<i>Fothergilla major</i>	10'	9'	Medium		Prefers rich, moist, well-drained soil; shade tolerant; disease resistant;
S31	Mount Airy Fothergilla	<i>Fothergilla 'Mount Airy'</i>	5'	5'	Small		Fall color; needs organic, well-draining soils
S32	Blue Shadow Fothergilla	<i>Fothergilla x intermedia 'Blue Shadow'</i>	6'	6'	Medium		Can sucker and form colonies if not maintained
S33	Witchhazel	<i>Hamamelis virginiana</i>	15'	15'	Large		Pollution tolerant
S34	Seven-son Flower*	<i>Heptacodium miconioides</i>	20'	10'	Large		Can grow in a wide range of soils, has great year-round interest
S35	Rose-of-Sharon*	<i>Hibiscus syriacus</i>	12'	12'	Large		
S36	Smooth Hydrangea	<i>Hydrangea aborescens</i>	5'	5'	Small		Salt tolerant; herbicide sensitive
S37	Oak Leaf Hydrangea	<i>Hydrangea quercifolia</i>	10'	8'	Medium		
S38	Inkberry	<i>Ilex glabra</i>	12'	12'	Large		

## Approved Shrub Species

Shrub ID#	Common Name	Scientific Name	Max. Height	Max. Spread	Planting Area	Commercially Available	Notes
S39	Winterberry	<i>Ilex verticillata</i>	12'	12'	Large		Bright red berries provide winter interest through next spring; tolerant of erosion, wet soil, clay soil, and air pollution
S40	Blue Holly*	<i>Ilex x meserveae</i>	8'	8'	Medium		
S41	Virginia Sweetspire	<i>Itea virginica</i>	6'	14'	Medium		
S42	Blue Carpet Juniper	<i>Juniperus aquamata</i> 'Blue Carpet'	1'	5'	Small		
S43	Blue Star Juniper	<i>Juniperus aquamata</i> 'Blue Star'	3'	4'	Small		
S44	Common Juniper	<i>Juniperus communis</i>	10'	12'	Large		
S45	Andorra Juniper	<i>Juniperus horizontalis</i> 'Plumosa'	18'	5'	Large		
S46	Mountain Laurel	<i>Kalmia latifolia</i>	10'	10'	Large		
S47	Japanese Kerria*	<i>Kerria japonica</i>	6'	9'	Medium		
S48	Beautybush*	<i>Kolkwitzia amabilis</i>	10'	10'	Large		Need well drained soils and full sun; can tolerate clay soils and deer
S49	Golden Privet*	<i>Ligustrum vicaryi</i>	12'	13'	Large		Can become invasive
S50	Spicebush	<i>Lindera benzoin</i>	12'	12'	Large		Salt and soil compaction tolerant
S51	Twinberry	<i>Lonicera involucrata</i>	10'	10'	Large		Can tolerate heavy shade; will form colonies over time through seeds
S52	Bayberry	<i>Myrica pensylvanica</i>	12'	12'	Large		Drought and salt tolerant; tolerant of all soil types
S53	Knotweed*	<i>Persicaria polymorpha</i>	5'	4'	Small		Prefers moist soils; once established can tolerate some drought and some heat/humidity
S54	Ninebark	<i>Physocarpus opulifolius</i>	8'	6'	Medium		
S55	Diablo Ninebark	<i>Physocarpus opulifolius</i> 'Diablo'	8'	8'	Medium		Can be used as hedge a screen or as erosion control
S56	Flowering Dwarf Almond*	<i>Prunus glandulosa</i>	5'	4'	Small		
S57	Alder-leaved Buckthorn	<i>Rhamnus alnifolia</i>	3'		Small		Full sun; will not tolerate shade
S58	Carolina Rhododendron*	<i>Rhododendron carolinianum</i>	5'	10'	Small		Can cause litter
S59	Catawba Rhododendron*	<i>Rhododendron catawbiense</i>	10'	20'	Large		

\* Non-Native Plant Species  
Updated June 2015

## Approved Shrub Species

Shrub ID#	Common Name	Scientific Name	Max. Height	Max. Spread	Planting Area	Commercially Available	Notes
S60	PJM Rhododendron*	<i>Rhododendron PJM hybrids</i>	6'	5'	Medium		
S61	Jetbead*	<i>Rhodotypos scandens</i>	4'	3'	Small		
S62	Gro Low Fragrant Sumac*	<i>Rhus aromatica 'Gro Low'</i>	3'	8'	Small		
S63	Shining Sumac	<i>Rhus copallinum</i>	15'	20'	Large		Tolerant of drought, erosion and dry soil; can not tolerate poorly draining soils
S64	Smooth Sumac	<i>Rhus glabra</i>	15'	15'	Large		
S65	Alpine Currant*	<i>Ribes alpinum 'Green Mound'</i>	3'	3'	Small		Adapts well to urban conditions, tolerant of drought and heavy shade; very winter hardy; **dioecious;
S66	Redleaf Rose*	<i>Rosa glauca/rubrifolia</i>	8'	7'	Medium		Suceptible to a variety of diseases and insects; very good resistance to most diseases
S67	Knockout Roses*	<i>Rosa knockout</i>	4'	4'	Small		Suceptible to a variety of diseases and insects; has resistance to most common foliage diseases
S68	Rosemary Willow*	<i>Salix eleagnos</i>	10'	8'	Large		Needs full sun and water on occasion; can tolerate clay soil
S69	American Elderberry	<i>Sambucus canadensis</i>	12'	12'	Large		Suckers form colonies; susceptible to some diseases and pests
S70	American Red Elderberry	<i>Sambucus racemosa L.</i>	20'		Large		Berries are possibly toxic when eaten; good wildlife value
S71	Buffaloberry	<i>Shepherdia argentea</i>	8'	8'	Medium		Salt tolerant
S72	Bladdernut	<i>Staphylea trifolia</i>	12'	12'	Large		
S73	Cutleaf stephanandra*	<i>Stephanandra incisa</i>	3'	4'	Small		Quick spreading; can shape in late spring
S74	Snowberry*	<i>Symphoricarpos x chenaultii</i>	6'	8'	Medium		
S75	Miss Kim Lilac*	<i>Syringa patula</i>	8'	10'	Medium		
S76	Chinese Lilac*	<i>Syringa x chinensis</i>	15'	15'	Large		
S77	Yew	<i>Taxus x media</i>	6'	12'	Medium		Resistant to salt and pollution; sensitive to drought and/or soil compaction



## Approved Shrub Species

Shrub ID#	Common Name	Scientific Name	Max. Height	Max. Spread	Planting Area	Commercially Available	Notes
S78	Nannyberry	<i>Viburnum lentago</i>	15'	12'	Large		
S79	Arrowwood Viburnum	<i>Viburnum dentatum</i>	15'	15'	Large		
S80	Fragrant Viburnum*	<i>Viburnum ferreri</i>	10'	10'	Large		
S81	Wayfaring Tree*	<i>Viburnum lantana</i>	10'	10'	Large		Urban tolerant
S82	Smooth Witherod Viburnum	<i>Viburnum nudum v. cassinoides</i>	10'	10'	Large		
S83	European Cranberry*	<i>Viburnum opulus</i>	12'	12'	Large		
S84	Doublefile Viburnum*	<i>Viburnum plicatum</i>	10'	10'	Large		
S85	Blackhaw Viburnum	<i>Viburnum prunifolium</i>	15'	12'	Large		Can tolerate drought and air pollution
S86	Rusty Blackhaw Viburnum*	<i>Viburnum rufidulum</i>	15'	12'	Large		
S87	Siebold Viburnum*	<i>Viburnum sieboldii</i>	30'	12'	Large		
S88	Burkwood Viburnum*	<i>Viburnum x burwoodii</i>	10'	10'	Large		
S89	Judd Viburnum*	<i>Viburnum x judii</i>	10'	10'	Large		
S90	Old Fashioned Weigela*	<i>Weigela florida</i>	10'	12'	Large		
S91	Wine and Roses Weigela*	<i>Weigela florida</i> 'Wine and Roses'	5'	6'	Small		Needs full sun and well drained soils
S92	Yucca	<i>Yucca filamentosa</i>	5'	5'	Small		Urban tolerant, including salt and drought

**Small Shrub (3-6')**

**Medium Shrub (6-10')**

**Large Shrub (10' and above)**

**\*\*Dioecious plants require male and female plants to flower and produce fruit**

Deciduous

Evergreen

Herbaceous perennial

# Approved Ornamental Grasses



## Approved Ornamental Grasses

Ornamental Grass ID#	Common Name	Scientific Name	Max. Height	Max. Spread	Planting Area	Commercially Available	Notes
<b>Approved Ornamental Grasses</b>							
O1	Grass Molinia Moor	<i>Caerulea arundinacea</i> 'Windspiel'	7'	4'	Large		
O2	Leatherleaf Sedge	<i>Carex buchananii</i>	2.5'	3'	Medium		Evergreen, has short life of 2 - 3 years
O3	Ice Dance Sedge	<i>Carex morrowii</i> 'Ice Dance'	1'	2'	Small	Yes	Prefers moist soil but can do well in slightly drier; do not let soil dry out
O4	Variegated Japanese Sedge*	<i>Carex morrowii</i> 'Variegata'	1.5'	1'	Small		Semi evergreen; tolerant to heat and drought
O5	Northern Sea Oats	<i>Chasmanthium latifolium</i>	5'	3'	Large		Prefers moist soils; year round interest
O6	Feather Reed Grass	<i>Clamagrostis x acutiflora</i>	5'	2'	Large		Semi-evergreen; prefers well-drained soils
O7	Blue Fescue*	<i>Festuca glauca</i>	1'	1'	Small		Evergreen; prefers well-drained soils
O8	Common Rush/Soft Rush	<i>Juncus effusus</i>	4'	4'	Small		Semi-Evergreen; Use at the edge of a pond and containers
O9	Lily Turf*	<i>Liriope muscari</i>	1.5'	9"	Small		Evergreen
O10	Switch Grass*	<i>Panicum virgatum</i>	6'	3'	Large		
O11	Fountain Grass	<i>Pennisetum alopecuroides</i>	5'	5'	Large		Plant 30"-36" apart
O12	Dwarf Fountain Grass*	<i>Pennisetum alopecuroides</i> 'Hamein'	2'	1.5'	Small - Medium		Drought and disease resistant
O13	Autumn Moor Grass*	<i>Sesleria autumnalis</i>	1'	1'	Small	Yes	Extremely adaptable to drought; tolerant of air pollution; does not like heat or high humidity
O14	Hardstem Bulrush	<i>Schoenoplectus acutus</i>	6'		Medium		Rhizomonous; great in standing water
O15	Common Threesquare	<i>Schoenoplectus pungens</i>	4'		Small		Can stand up to 3 ' of water; soil stabilization and erosion controls; also great for wildlife habitat
O16	Blue-Eyed Grass	<i>Sisyrinchium angustifolium</i>	2'	1'	Small		

## Approved Ornamental Grasses

Ornamental Grass ID#	Common Name	Scientific Name	Max. Height	Max. Spread	Planting Area	Commercially Available	Notes
O17	Variegated Prairie Cord Grass	<i>Spartina pectinata</i> 'Aureomarginata'	6'	4'	Large		Salt tolerant; can adapt to a variety of soils but needs constant moisture

**Small Ornamental Grass (6"-2')**      **Large Ornamental Grass (5' and above)**

**Medium Ornamental Grass (2'-5')**

Herbaceous Perennial	Evergreen Grass/Sedge
Semi-Evergreen Grass/Sedge	Non-Evergreen Grass/Sedge

# Approved Groundcovers + Vines





## Approved Groundcovers + Vines

Ground-cover and Vine ID#	Common Name	Scientific Name	Max. Height	Max. Spread	Planting Area	Commercially Available	Notes
<b>Approved Groundcovers and Vines</b>							
GV1	Bishop's Weed*	<i>Aegopodium podagraria 'Variegatum'</i>	2'	4'	Large		Prefers moist soils; can become invasive
GV2	Bugleweed*	<i>Ajuga reptans</i>	10"	2'	Small		Semi-evergreen; prefers well-drained, moist soils
GV3	Bearberry	<i>Arctostaphylos uva-ursi</i>	8"	1'	Small		Evergreen; good for erosion control
GV4	Wild Ginger	<i>Asarum canadense</i>	1'	1.5'	Small		Slow spreading; tolerates deer; prefers heavy shade and wet soil
GV5	Wild Ginger*	<i>Asarum europaeum</i>	.5'	1.5'	Small		Do not like hot and humid temperatures; prefers moist, well-drained soil; tolerant of deer and can be planted near Black Walnut
GV6	Swamp Milkweed	<i>Asclepias incarnata</i>	5'	3'	Large	Yes	Native to swamps and wet meadows but can tolerate medium well-drained soils; tolerant of deer
GV7	American Bittersweet	<i>Celastrus scandens</i>	20'	6'	Large		Vine; drought and deer tolerant; has showy red berries;
GV8	Lily of the Valley	<i>Convallaria majalis</i>	1'	1'	Small		
GV9	Cotoneaster Bearberry*	<i>Cotoneaster dammeri</i>	2'	1'	Small - Medium		Prefers rich, well-drained soils
GV10	Barrenwort*	<i>Epimedium x rubrum</i>	2'	4'	Large		Prefers moist, sandy soils
GV11	Sweet Woodruff*	<i>Galium odoratum</i>	1'	2'	Small		Prefers well-drained soils
GV12	Hellebore	<i>Helleborus spp.</i>	1.5'	1.5'	Small	Yes	Easy to grow; tolerant of many things including deer, air pollution, heavy shade, and dry soil conditions; protect from winter winds
GV13	Crested Dwarf Iris	<i>Iris cristata</i>	9"	1'	Small		Prefers moist, well-drained soils
GV14	Prairie Blazing Star	<i>Liatris pycnostachya</i>	5'	2'	Large		Great for attracting birds and butterflies; tolerant of drought, poor soils and heat/humidity; Not tolerant of wet winter soil

\* Non-Native Plant Species  
Updated June 2015

## Approved Groundcovers + Vines

Ground-cover and Vine ID#	Common Name	Scientific Name	Max. Height	Max. Spread	Planting Area	Commercially Available	Notes
GV15	Kobold Blazing Star	<i>Liatris spicata</i> 'Kobold'	2.5'	1'	Medium		Great for attracting birds and butterflies; tolerant of drought, poor soils and heat/humidity; Not tolerant of wet winter soil
GV16	Cardinal Flower	<i>Lobelia cardinalis</i> (incl. hybrid cultivars)	4'	2'	Large	Yes	Prefers part shade; likes to stay wet; tolerant of deer and rabbits
GV17	Scarlet Honeysuckle/ Trumpet Honeysuckle	<i>Lonicera sempervirens</i>	15'	6'	Large		Tolerates dry soils and deer; can be planted near Black Walnut; more flowers occur in full sun
GV18	Everblooming honeysuckle	<i>Lonicera x heckrottii</i>	15'	6'	Large		Flowers attracted birds and butterflies; tolerates deer and being planted near Black Walnut
GV19	Virginia Creeper	<i>Parthenocissus quinquefolia</i>	50'	variable	Large		Good for erosion control
GV20	Summer Phlox	<i>Phlox paniculata</i> 'Katherine'	2.5'	2'	Medium	Yes	Tolerant of deer; can be planted next to Black Walnut; does not like drought and needs to be watered at the root level not from above
GV21	Summer Phlox	<i>Phlox paniculata</i> 'David'	4'	3'	Large	Yes	Tolerant of deer; can be planted next to Black Walnut; does not like drought and needs to be watered at the root level not from above
GV22	Summer Phlox	<i>Phlox paniculata</i> 'Shortwood'	4'	3'	Large	Yes	Tolerant of deer; can be planted next to Black Walnut; does not like drought and needs to be watered at the root level not from above
GV23	Prairie Ironweed	<i>Vernonia fasciculata</i>	4'	3'	Large	Yes	Prefers full sun and moist soils; can tolerate deer
GV24	Barren Strawberry	<i>Waldsteinia fragarioides</i>	.5'	1.00'	Small		Easy to grow; prefers full sun to part shade; can tolerate a wide variety of soils; do not like heat and humidity

# Approved Groundcovers + Vines

Ground-cover and Vine ID#	Common Name	Scientific Name	Max. Height	Max. Spread	Planting Area	Commercially Available	Notes
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**Small Groundcovers and Vines (6"-2')**

**Large Groundcovers and Vines (3' and above)**

**Medium Groundcovers and Vines (2'-3')**

*Sizing in width of mature spread and height*

Evergreen

Herbaceous perennial

Vine

# Unapproved Trees, Shrubs, Grasses, Groundcovers + Vines



## Unapproved Trees, Shrubs, Grasses, Groundcovers + Vines

There are many trees with various traits that render them inappropriate for planting as a street tree. Undesirable traits include significant litter, such as fruit, thorns -- particularly when large, numerous, and easily accessible, low branches that obscure visibility, poor form -- thus displeasing to the eye, shallow and aggressive roots, invasive, high susceptibility to disease, and low tolerance for insects, soil variety, and urban conditions.

Among the many trees that are considered undesirable for street tree purposes, the following are most noteworthy and are not permitted for planting as a street tree in the City of Fishers.



## Unapproved Trees, Shrubs, Grasses, Groundcovers + Vines

Common Name	Scientific Name	Undesirable Traits	Alternatives
<b>Unapproved Trees, Shrubs, Grasses, Groundcover, and Vines</b>			
Hedge Maple	<i>Acer campestre</i>	Invasive	
Amur Maple	<i>Acer ginnala</i>	Invasive	
Box Elder	<i>Acer negundo</i>	Weak wood; aggressive	
Norway Maple	<i>Acer platanoides</i>	Invasive	T3, T49, T8, T128
Silver Maple	<i>Acer saccharinum</i>	Weak wood; aggressive	
Tartarian Maple	<i>Acer tartarium</i>	Invasive	
Japanese Chaff Flower	<i>Achyranthes japonica</i>	Highly Invasive	
Tree of Heaven	<i>Ailanthus altissima</i>	Invasive; suckers; weak wood	T51, T36
Garlic Mustard	<i>Alliaria petiolata</i>	Invasive	
Black Alder	<i>Alnus glutinosa</i>	Invasive	
Porcelain Berry	<i>Ampelopsis brevipedunculata</i>	Invasive	
Mugwort	<i>Artemisia vulgaris</i>	Highly Invasive	
Small Carpgrass	<i>Arthraxon hispidus</i>	Highly Invasive	
Giant Reed	<i>Arundo donax</i>	Invasive	
Mosquito Fern	<i>Azolla pinnata</i>	Prohibited Plant Species	
Japanese Barberry	<i>Berberis thunbergii</i>	Invasive	T128, S9, S65, S30, S22, S39, S55, S66, S67, S21, S91
Common Barberry	<i>Berberis vulgaris</i>	Invasive	
Smooth Brome	<i>Bromus inermis</i>	Invasive	
Butterfly Bush	<i>Buddleia davidii</i>	Invasive	
Flowering Rush	<i>Butomus umbellatus</i>	Invasive/Prohibited Plant Species	O8, O14, O15
Narrowleaf Bittercress	<i>Cardamine impatiens</i>	Invasive	
Plumeless Thistle	<i>Carduus acanthoides</i>	Invasive	
Musk Thistle	<i>Carduus nutans</i>	Invasive	
Caulerpa/Mediterranean Killer Algae	<i>Caulerpa taxifolia</i>	Prohibited Plant Species	

## Unapproved Trees, Shrubs, Grasses, Groundcovers + Vines

Common Name	Scientific Name	Undesirable Traits	Alternatives
Oriental Bittersweet/ Asian Bittersweet	<i>Celastrus orbiculatus</i>	Invasive	GV7
Spotted Knapweed	<i>Centaurea biebersteinii</i>	Invasive	
Canada Thistle	<i>Cirsium arvense</i>	Invasive/Noxious Weed	
Bull Thistle	<i>Cirsium vulgare</i>	Invasive	
Sweet Autumn Virginsbower(Clematis)	<i>Clematis terniflora</i>	Invasive	
Poison Hemlock	<i>Conium maculatum</i>	Invasive	
Field Bindweed	<i>Convolvulus arvensis</i>	Invasive	
Crown vetch	<i>Coronilla varia/Securigera varia</i>	Invasive	
Black Swallow-Wort	<i>Cynanchum louiseae</i>	Invasive	
Pale Swallow-Wort	<i>Cynanchum rossicum</i>	Invasive	
Wild Carrot/Queen Anne's Lace	<i>Daucus carota</i>	Invasive	
Chinese Yam	<i>Dioscorea oppositifolia</i>	Invasive	
Common Teasel	<i>Dipsacus fullonum</i>	Invasive	
Cut-Leaved Teasel	<i>Dipsacus laciniatus</i>	Invasive	
Brazilian Waterweed (Brazilian Elodea)	<i>Egeria densa</i>	Invasive/Prohibited Plant Species / Pest Species	
Anchored Water Hyacinth	<i>Eichhornia azurea</i>	Invasive/Prohibited Species	
Russian Olive	<i>Elaeagnus angustifolia</i>	Invasive; poor form; shallow roots	S71, T119, S68, S19, S25
Autumn Olive	<i>Elaeagnus umbellata</i>	Invasive; poor form; shallow roots	S71, T119, S68, S19, S25
Quack Grass	<i>Elymus repens</i>	Invasive	
Burning Bush	<i>Euonymus alatus</i>	Invasive	S4, S5, S30-S32, S41, S85, S63, S26, S27, T5
Wintercreeper	<i>Euonymus fortunei</i>	Invasive	GV3-GV5, GV12
Leafy Spurge	<i>Euphorbia esula</i>	Invasive	
Tall Fescue	<i>Festuca arundinacea/S chenodorus arundinacea</i>	Invasive	
Glossy Buckthorn	<i>Frangula alnus/Rhamnus frangula</i>	Invasive	
Ash	<i>Fraxinus species</i>	Do not use due to Emerald Ash borer	

## Unapproved Trees, Shrubs, Grasses, Groundcovers + Vines

Common Name	Scientific Name	Undesirable Traits	Alternatives
Goatsrue	<i>Galega officinalis</i>	Invasive	
Ginkgo (female only)	<i>Ginkgo biloba (female only)</i>	Do not use due to smelly, fleshy, and messy fruit	
Creeping Charlie/Ground Ivy	<i>Glechoma hederacea</i>	Invasive	
English Ivy	<i>Hedera helix</i>	Invasive	
Giant Hogweed	<i>Heracleum mantegazzianum</i>	Invasive	
Dame's Rocket	<i>Hesperis matronalis</i>	Invasive	GV20-GV22
Japanese Hops	<i>Humulus japonicus</i>	Invasive	
Hydrilla	<i>Hydrilla verticillata</i>	Invasive/Prohibited Plant Species / Pest Species	
European Frogbit	<i>Hydrocharis morsus-ranae</i>	Invasive/Prohibited Plant Species	
Indian Swampweed/Miramar Weed	<i>Hygrophilia polysperma</i>	Invasive/Prohibited Plant Species	
St. John's Wort	<i>Hypericum perforatum</i>	Invasive	
Japanese Blood Grass	<i>Imperata cylindrica 'Rubra</i>	Invasive Tendencies;becoming a noxious weed	
Chinese Water Spinach	<i>Ipomoea aquatic</i>	Invasive/Prohibited Plant Species	
Yellow Iris	<i>Iris pseudacorus</i>	Invasive/Prohibited Plant Species	
Korean Lespedeza	<i>Kummerowia stipulacea</i>	Invasive	
Striate Lespedeza	<i>Kummerowia striata</i>	Invasive	
Oxygen-weed/African Elodea/ African Waterweed	<i>Lagarosiphon major</i>	Invasive/Prohibited Plant Species	
Pepperweed	<i>Lepidium latifolium</i>	Invasive	
Bicolor Lespedeza	<i>Lespedeza bicolor</i>	Invasive	
Sericea lespedeza	<i>Lespedeza cuneata</i>	Invasive	
Lyme Grass / Sand Ryegrass	<i>Leymus arenarius / Elymus arenarius</i>	Invasive	
Amur Privet	<i>Ligustrum amurense</i>	Invasive	S85
Blunt Leaved Privet/Border Privet	<i>Ligustrum obtusifolium</i>	Invasive	S85
California Privet	<i>Ligustrum ovalifolium</i>	invasive	S85
Chinese Privet	<i>Ligustrum sinense</i>	Invasive	S85
Common Privet	<i>Ligustrum vulgare</i>	Invasive	S85

## Unapproved Trees, Shrubs, Grasses, Groundcovers + Vines

Common Name	Scientific Name	Undesirable Traits	Alternatives
Asian Marshweed	<i>Limnophila sessiliflora</i>	Invasive/Prohibited Plant Species	
Japanese Honeysuckle	<i>Lonicera japonica</i>	Invasive	GV17, GV18
Amur Honeysuckle (Asian Bush Honeysuckle)	<i>Lonicera maackii</i>	Invasive	T12-T15, S34, S48
Morrow's Honeysuckle (Asian Bush Honeysuckle)	<i>Lonicera morrowii</i>	Invasive	T12-T15, S11, S48, S69, S70, S51, S73
Bush Honeysuckle	<i>Lonicera spp.</i>	Invasive	T12-T15, S11, S48, S69, S70, S51, S73
Tartarian Honeysuckle (Asian Bush Honeysuckle)	<i>Lonicera tatarica</i>	Invasive	T12-T15, S11, S48, S69, S70, S51, S73
Bella Honeysuckle (Asian Bush Honeysuckle)	<i>Lonicera x bella</i>	Invasive	T12-T15, S11, S48, S69, S70, S51, S73
Creeping Jenny	<i>Lysimachia nummularia</i>	Invasive	
Moneywort	<i>Lysimachia nummularia</i>	Invasive	
Purple Loosestrife	<i>Lythrum salicaria</i>	Invasive/Prohibited Plant Species	GV6, GV15-GV16, GV23
Osage-Orange	<i>Maclura pomifera</i>	Invasive tendencies; weak wooded	
Sweet Clover	<i>Melilotus spp.</i>	Invasive	
Japanese Stiltgrass	<i>Microstegium vimineum</i>	Invasive	
Chinese Maiden Grass/ Chinese Silvergrass	<i>Miscanthus sinensis</i>	Invasive	
Miscanthus Hybrid	<i>Miscanthus x gigantea</i>	Invasive	
Monochoria / Arrowleaf / False Pickerelweed	<i>Monochoria hastata</i>	Prohibited Plant Species	
Heartshape / False Pickerelweed	<i>Monochoria vaginalis</i>	Prohibited Plant Species	
White Mulberry	<i>Morus alba</i>	Invasive	
Parrot Feather	<i>Myriophyllum aquaticum</i>	Invasive/Prohibited Plant Species	
Eurasian Watermilfoil	<i>Myriophyllum spicatum</i>	Invasive/Prohibited Plant Species	
Brittle Naiad	<i>Najas Minor</i>	Invasive/Prohibited Plant Species	
Yellow Floating Hearts	<i>Nymphoides peltata</i>	Invasive/Prohibited Plant Species	
Star-of-Bethlehem	<i>Ornithogalum umbellatum</i>	Invasive	

## Unapproved Trees, Shrubs, Grasses, Groundcovers + Vines

Common Name	Scientific Name	Undesirable Traits	Alternatives
Duck Lettuce	<i>Ottelia alismoides</i>	Invasive/Prohibited Plant Species	
Wild Parsnip	<i>Pastinaca sativa</i>	Invasive	
Princess Tree	<i>Paulownia tomentosa</i>	Invasive	
Reed Canary/Ribbon Grass	<i>Phalaris arundinacea</i>	Invasive	O3, O13, O17
Amur Cork Tree	<i>Phellodendron amurense</i>	Invasive	
Reed Grass	<i>Phragmites australis</i>	Invasive	
Common Reed	<i>Phragmites australis ssp australis</i>	Invasive	
Japanese Knotweed	<i>Polygonum cuspidatum/Fallopia japonica</i>	Invasive	S6, S19, S53
Mile-A-Minute	<i>Polygonum perfoliatum/Persicaria perfoliata</i>	Invasive	
Curly-Leaved Pondweed	<i>Potamogeton crispus</i>	Invasive/Prohibited Plant Species	
Kudzu	<i>Pueraria lobata</i>	Invasive/Pest Species	
Callery Pear	<i>Pyrus calleryana</i>	Invasive	
Ornamental Pear	<i>Pyrus species</i>	Weak branching/Invasive	
Sawtooth Oak	<i>Quercus acutissima</i>	Invasive	
Lesser Celandine	<i>Ranunculus ficaria</i>	Invasive	
Common Buckthorn	<i>Rhamnus cathartica</i>	Invasive	T21, S20, S57, T125, T126
Jetbead	<i>Rhodotypos scandens</i>	Invasive	
Black Locust	<i>Robinia pseudoacacia</i>	Shallow; invasive roots	
Multiflora Rose	<i>Rosa multiflora</i>	Invasive/Prohibited Plant Species	
Wineberry/Wine Raspberry	<i>Rubus phoenicolasius</i>	Invasive	
Arrowhead	<i>Sagittaria sagittifolia</i>	Prohibited Plant Species	
Willow	<i>Salix species</i>	Invasive roots; weak wood	
Giant Salvinia	<i>Salvinia auriculata/biloba/herzogii</i>	Prohibited Plant Species	
Aquarium Watermoss/ Giant Salvinia	<i>Salvinia molesta</i>	Prohibited Plant Species	
Bouncing bet/Soapwort	<i>Saponaria officinalis</i>	Invasive	
Bur Cucumber	<i>Sicyos angulatus</i>	Noxious Weed	
Perennial Sow Thistle	<i>Sonchus arvensis</i>	Noxious Weed	



## Unapproved Trees, Shrubs, Grasses, Groundcovers + Vines

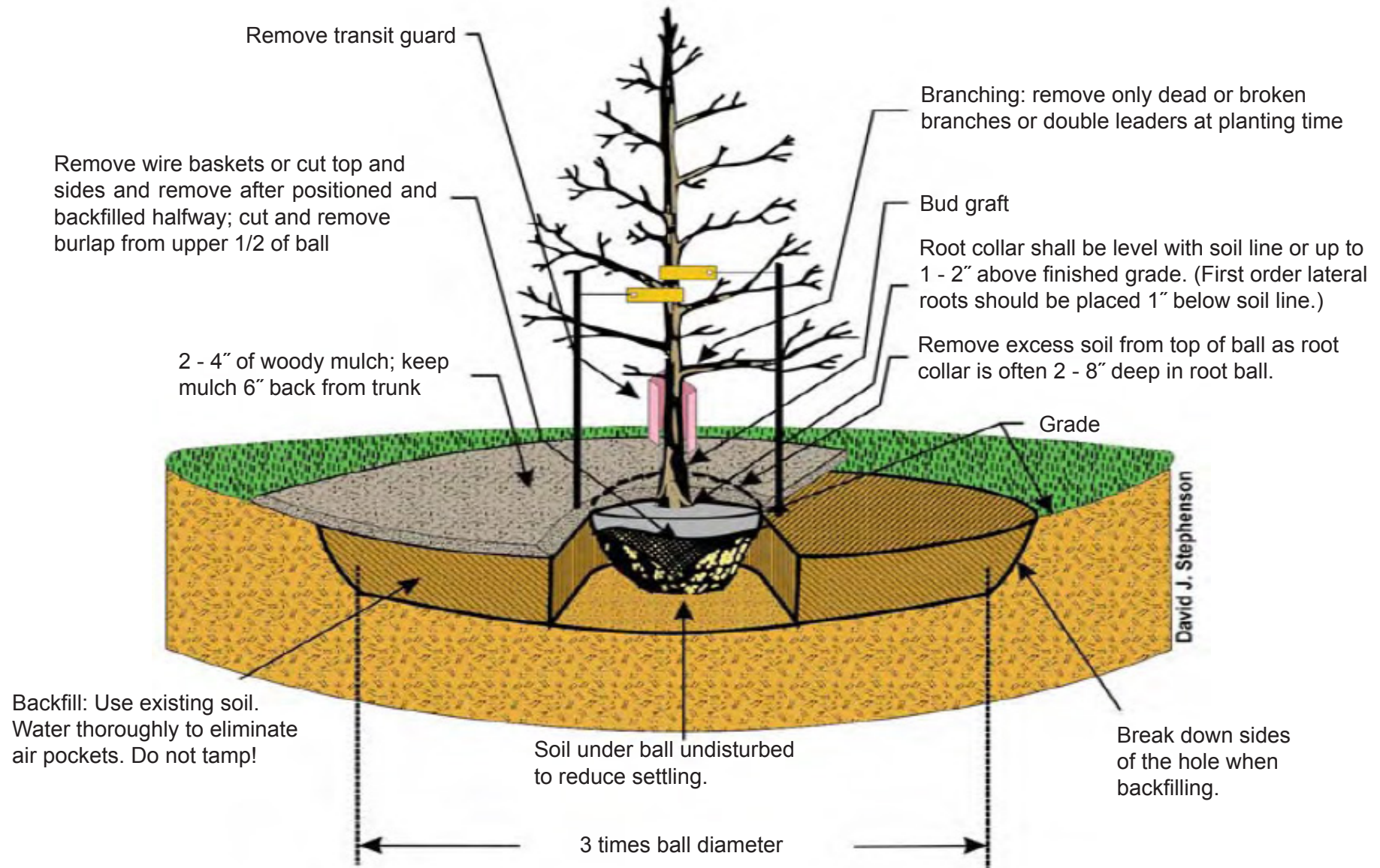
Common Name	Scientific Name	Undesirable Traits	Alternatives
Moutain Ash	<i>Sorbus spp.</i>	Do not use due to suceptibility to borers, bacterial fireblight, aphids, sawfly, scale, and scab	
Sorghum alnum	<i>Sorghum alnum</i>	Noxious Weed	
Johnson Grass	<i>Sorghum halapense</i>	Invasive/Noxious Weed	
Exotic Bur-reed	<i>Sparganium erectum</i>	Prohibited Plant Species	
Japanese Meadowsweet	<i>Spiraea japnoica</i>	Invasive	
Spreading Hedgeparsley	<i>Torilis arvensis</i>	Invasive	
Japanese Hedgeparsley	<i>Torilis japonica</i>	Invasive	
Water Chestnut	<i>Trapa natans</i>	Invasive/Prohibited Plant Species	
Narrow-leaved Cattail	<i>Typha angustifolia</i>	Invasive/Prohibited Plant Species	
Hybird Cattail	<i>Typha x glauca</i>	Invasive	
American Elm	<i>Ulmus americana</i>	Do not use due to Dutch Elm Disease	
Siberian Elm	<i>Ulmus pumila</i>	Invasive; Weak wood; susceptible to disease	T49, T132
European Cranberry-Bush	<i>Viburnum opulus var. opulus</i>	Invasive	
Highbush Cranberry	<i>Viburnum trilobum</i>	Invasive	
Vetch	<i>Vicia cracca</i>	Invasive	
Large-leaved Periwinkle	<i>Vinca Major</i>	Invasive	
Periwinkle	<i>Vinca Minor</i>	Invasive	GV3, GV24
Chinese Wisteria	<i>Wisteria Sinensis</i>	Invasive	

# Section 3:

## Helpful Information



## Tree Planting Care Basics



Stake only if you have to. Use 2-3"-wide webbing straps secured to stakes with heavy gauge wire (using wire only will damage the tree). The wire should run straight from the stake and hold the webbing strap up. Do not stake tightly. Remove all stakes after one year.

## References

### Print

Jackson, M. T. (2004) *101 Trees of Indiana: A Field Guide*. Bloomington, Indiana: Indiana University Press.

### Web

#### **City of Bloomington, Indiana**

[http://bloomington.in.gov/documents/viewDocument.php?document\\_id=3016](http://bloomington.in.gov/documents/viewDocument.php?document_id=3016)

#### **Duke Energy**

<http://www.duke-energy.com/>

#### **Illinois Wildflowers**

<http://illinoiswildflowers.info>

#### **Indiana Department of Natural Resources**

<http://www.in.gov/dnr/>

#### **Minnesota Wildflowers**

<http://minnesotawildflowers.info>

#### **Missouri Botanical Garden**

<http://missouribotanicalgarden.org>

#### **Monrovia**

<http://www.monrovia.com/>

#### **Native Plant Center**

<http://www.nativeplantcenter.net/>

#### **Plants For A Future**

<http://www.pfaf.org>

#### **Plant Lust**

<http://plantlust.com>

#### **Prairie Moon Nursery**

<https://www.prairiemoon.com>

#### **Purdue University Indiana Cooperative Agricultural Pest Survey (CAPS) Program**

<http://extension.entm.purdue.edu/caps/plants.html>

#### **United States Department of Agriculture**

<http://www.usda.gov/>

#### **United States Department of Agriculture: National Forest Service (Northeastern Area)**

<http://www.na.fs.fed.us/>

Updated May 2015

## Glossary

- **Acid soil** is commonly found in areas with sandy soil, an abundance of organic matter, and heavy rainfall; the pH is below 7
- **Asian long-horned beetle (ALB)** is a exotic beetle that attacks hardwood trees, such as maple, elm, horsechestnut, ash, birch, poplar, and willow, among others.
- **Cultivar** is an organism and especially one of an agricultural or horticultural variety or strain originating and persistent under cultivation
- **Drought** is a prolonged shortage of rainfall which can be very dangerous to some plant species.
- **Dry soil** includes solid particles that don't hold water; dries out quickly
- **Emerald ash borer (EAB)** is an exotic beetle whose larvae feast on the inner bark of ash trees.
- **Moist well-drained soil** includes particles that hold some water but also holds oxygen, resulting in adequate drainage
- **Poor soil** includes soil containing little organic matter content
- **Rich soil** includes soil containing a high organic matter content
- **Salt resistant** refers to plants that are resistant to winter salting. Many plant species are sensitive if planted close to sidewalk or streets that are salted in the winter.
- **Sandy soil** consists of larger particles and low organic matter; dries out quickly.
- **Soil compaction** occurs when heavy weight (for example construction, heavy foot traffic, etc.) compresses the soil around the plant, causing the soil to lose pore space. This soil becomes less able to absorb water.
- **Urban tolerant** is the adjective used to describe a plant that does well if planted in urban areas such as busy sidewalks and streets where exposed to winter salting, noise, traffic and heat reflection.
- **Wet soil** holds water well and dries out slowly
- **Windbreak** is a plantation usually made up of one or more rows of trees or shrubs planted in such a manner as to provide shelter from the wind and to protect soil from erosion. In some cases specific plant species themselves need a windbreak to protect them against freezing. In this situation these plants should be planted so that they have some sort of wall for protection from the northwest.