

Using Native Plants and Ecological Design Principles in Commercial, Suburban, and Urban Landscapes



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Table 1: Native Trees for Use in Landscape Plantings

Availability	Value	Latin Name	Common Name	Zone	Height Range	Drought Tolerance	Moisture	Fertility	Soil	pH Range	Light Requirement
Medium	H/Orn, Adapt	<i>Acer x fremanii</i>	Freeman Maple	4 to 8	50 - 75'	Low-Mod	D, M, Mo, W	Low-High	PD/L, C	5.0 - 7.5	S, PS, PSh
Uncommon	H/Orn, Adapt	<i>Acer nigrum</i>	Black Maple	4 to 8	60 - 75'	Mod-High	D, M, Mo	Mod-High	WD/L, C, G	5.0 - 8.0	S, PS, PSh, Sh
Common	H/Orn, Adapt	<i>Acer rubrum</i>	Red Maple	3 to 9	40 - 60'	Low	D, M, Mo, W	Low-High	PD/L, C	5.0 - 7.0	S, PS, PSh
Common	L/ Adapt	<i>Acer saccharinum</i>	Silver Maple	3 to 9	50 - 70'	Mod	D, M, Mo, W	Low	PD/L, C	5.0 - 7.5	S, PS
Common	H/Orn, Adapt	<i>Acer saccharum</i>	Sugar Maple	4 to 8	60 - 75'	Low	M, Mo	Mod-High	WD/L, C	5.0 - 7.5	S, PS, PSh, Sh
Uncommon	M/Orn, Wild	<i>Aesculus flava</i>	Yellow buckeye	4 to 8	60 - 75'	Mod	M, Mo	Mod-High	WD/S, L, C	5.0 - 7.0	S, PS
Uncommon	M/Orn, Wild	<i>Aesculus glabra</i>	Ohio Buckeye	4 to 7	30 - 70'	Low	M, Mo, W	Mod-High	WD/S, L, C	5.0 - 7.0	S, PS
Rare	M/Orn, Wild	<i>Betula alleghaniensis</i>	Yellow Birch	3 to 7	60 - 75'	Mod	M, Mo	Low-High	PD/S, L	5.0 - 7.0	S, PS, PSh
Uncommon	M/Orn, Adapt, Wild	<i>Betula lenta</i>	Sweet Birch	4 to 7	40 - 55'	Mod	D, M, Mo	Mod-High	WD/L, G	5.0 - 7.0	S, PS, PSh
Common	H/Orn, Adapt, Wild	<i>Betula nigra</i>	River Birch	3 to 8	40 - 70'	Mod-High	D, M, Mo, W	Mod-High	PD/L, C	5.0 - 7.0	S, PS
Medium	H/Orn, Wild	<i>Betula papyrifera</i>	Paper Birch	3 to 6	50 - 70'	Low-Mod	M, Mo	Mod-High	WD/L, G	5.0 - 8.0	S, PS, PSh
Medium	M/Orn, Wild	<i>Betula populifolia</i>	Gray Birch	3 to 7	20 - 30'	Mod	D, M, Mo	Low-Mod	WD/L, G	5.0 - 7.0	S, PS
Uncommon	H/Orn, Wild	<i>Carpinus caroliniana</i>	American Hornbeam	3 to 8	20 - 30'	Mod	M, Mo, W	Mod-High	PD/L, C	5.0 - 8.0	S, PS, PSh, Sh
Rare	M/Orn, Adapt, Wild	<i>Carya cordiformis</i>	Bitternut Hickory	4 to 8	50 - 75'	High	D, M, Mo	Low-Mod	WD/L, C	5.0 - 7.5	S, PS
Rare	M/ Adapt, Wild	<i>Carya ovata</i>	Shagbark Hickory	4 to 8	60 - 80'	High	D, M, Mo	Low-Mod	WD/L, C	5.0 - 7.5	S, PS
Uncommon	M/ Adapt, Wild	<i>Celtis occidentalis</i>	Hackberry	3 to 8	40 - 60'	High	VD, M, Mo	Low-High	WD, L, C	5.0 - 8.0	S, PS
Uncommon	H/ Orn	<i>Cladrastis lutea</i>	Yellow wood	4 to 8	30 - 50'	Low-Mod	M, Mo	Mod-High	WD/Loam	5.0 - 8.0	S, PS
Rare	L/ Adapt, Wild	<i>Diospyros virginiana</i>	Persimmon	4 to 8	35 - 60'	Mod	D, M, Mo	Poor-Mod	WD/S, L, C	5.0 - 8.0	S, PS, PSh
Rare	M/Orn, Wild	<i>Fagus grandifolia</i>	American Beech	4 to 8	50 - 70'	Low-Mod	M, Mo	Poor-High	WD/Loam	5.0 - 7.0	S, PS, PSh, Sh
Medium	M/ Adapt	<i>Fraxinus americana</i>	American Ash	4 to 8	50 - 80'	Low-Mod	D, M, Mo	Mod-High	WD, L, C	5.0 - 8.0	S, PS
Common	M/ Adapt	<i>Fraxinus pennsylvanica</i>	Green Ash	3 to 8	50 - 60'	High	VD, M, Mo, W	Poor-High	PD/L, C	5.0 - 8.0	S, PS
Common	M/Orn, Adapt	<i>Gleditsia triocanthus inermis</i>	Honey Locust	4 to 8	30 - 70'	High	VD, M, Mo	Poor-Mod	WD/L, C, G	5.0 - 8.0	S, PS
Uncommon	M/Orn, Adapt	<i>Gymnocladus dioica</i>	Kentucky Coffee Tree	3 to 8	60 - 75'	High	VD, M, Mo	Poor-Mod	WD, L, C	5.0 - 8.0	S, PS

Availability: Common, Medium, Uncommon, Rare

Value: H = High; M = Medium; L = Low; ADAPTable; ORNamental; WILDlife

Drought tolerance: High; Moderate; Low

Moisture: WD = Well drained; VD = Very dry; D = Dry; M = Medium; Mo = Moist; W = Wet

Fertility: High; Moderate; Low

Soils: S = Sand; L = Loam; C = Clay; G = Gravel

Light Requirement: S = Full sun; PS = Partial sun; PSh = Partial shade; Sh = Full shade

Table 3: Native Wildflowers and Grasses for Use in Landscape Plantings

Availability	Value	Latin Name	Common Name	Zone	Height Range	Mioisture	Soil	pH Range	Light Requirement
Medium	M/ Orn, Adapt	<i>Actaea pachypoda</i>	White Dolls Eye	3 to 8	1'-2'	M, Mo	L	5.0-7.5	PSh, Sh
Uncommon	M/ Orn, Adapt	<i>Actaea rubra</i>	Red Baneberry	2 to 8	1'-2'	M, Mo	L	5.0-7.5	PSh, Sh
Common	H/ Orn, Adapt, Wild	<i>Agastache foeniculum</i>	Lavender Hyssop	3 to 9	2'-3'	D, M,	S, L, C, G		S, PS
Medium	M/ Orn, Adapt, Wild	<i>Allium cernuum</i>	Nodding Pink Onion	3 TO 9	1'-2'	M, Mo	S, L, C	5.0-7.0	S, PS
Uncommon	M/ Orn, Adapt	<i>Amsonia tabernaemontana</i>	Blue star	3 to 9	3'	D, M, Mo	S, L, C	5.0-7.0	S, PS
Medium	M/ Orn, Adapt	<i>Anemone canadensis</i>	Canada Anemone	2 to 9	1'- 2'	M, Mo	L	5.0-6.5	PS, PSh, Sh
Common	H/ Orn, Adapt, Wild	<i>Aquilegia canadensis</i>	Columbine	3 to 9	1'- 2'	D, M	WD	5.0-8.0	S, PS, PSh,
Common	M/ Orn, Adapt	<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	3 to 9	1'	M, Mo	S, L	4.5-6.5	PS, PSh, Sh
Medium	H/ Orn, Adapt	<i>Aruncus dioicus</i>	Goat's Beard	4 to 8	3'-5'	Mo	Rich	5.0-6.5	PS, PSh, Sh
Medium	M/ Orn	<i>Asarum canadense</i>	Wild Ginger	3 to 8	<1'	M, Mo	WD, S, L, G	5.0-8.0	PSh, Sh
Medium	H/ Orn, Adapt, Wild	<i>Asclepias incarnata</i>	Swamp Milkweed	3 to 9	2'- 4'	M, Mo, W	S, L, C	5.0-8.0	S, PS,
Common	H/ Orn, Adapt, Wild	<i>Asclepias tuberosa</i>	Butterflyweed	3 to 9	2'- 3'	D, M	S, L	5.0-7.0	S, PS,
Medium	H/ Orn, Adapt, Wild	<i>Aster azureus</i>	Sky Blue Aster	3 to 9	1'- 3'	D, M	S, L	5.5-7.5	S, PS,
Uncommon	M/ Orn, Adapt, Wild	<i>Aster cordifolius</i>	Heart Leaved Aster	3 to 8	2'- 3'	D, M	S, L, C	5.5-7.5	PS, PSh, Sh
Uncommon	M/ Orn, Adapt, Wild	<i>Aster divaricatus</i>	White Wood Aster	3 to 8	1'- 2'	D, M	S, L, C	6.0-8.0	PS, PSh, Sh
Medium	H/ Orn, Adapt, Wild	<i>Aster laevis</i>	Smooth Aster	3 to 9	1'- 3'	D, M	S, L	5.5-7.5	S, PS
Common	H/ Orn, Adapt, Wild	<i>Aster novae-angliae</i>	New England Aster	3 to 9	2'- 5'	M, Mo	S, L, C	5.0-7.5	S, PS
Medium	H/ Orn, Adapt, Wild	<i>Aster novi-belgii</i>	New York Aster	3 to 9	1'- 3'	M, Mo	S, L, C	5.5-7.0	S, PS
Medium	H/ Orn, Adapt, Wild	<i>Baptisia australis</i>	Blue False-indigo	4 to 8	3'- 4'	D, M,	S, L, C	5.0-6.5	S, PS
Uncommon	M/ Orn, Adapt, Wild	<i>Baptisia bracteata</i>	Cream False-indigo	4 to 8	1'- 2'	D, M,	S, L	5.0-6.0	S, PS
Uncommon	M/ Orn, Adapt, Wild	<i>Baptisia lactea</i>	White False-indigo	4 to 8	3'- 5'	M, Mo	S, L, C	5.0-6.0	S, PS
Medium	M/ Orn, Adapt, Wild	<i>Boltonia asteroides</i>	False Aster	4 to 9	3'- 4'	D, M, Mo	S, L, C	4.5-6.0	S, PS
Uncommon	L/ Orn, Adapt	<i>Caltha palustris</i>	Marsh-marigold	1 to 8	1'- 2'	Mo, W	L, C	5.0-7.0	S, PS, PSh, Sh
Uncommon	L/ Orn, Adapt	<i>Caulophyllum thalictroides</i>	Blue Cohosh	3 to 8	2'- 3'	M, Mo	S, L	5.5-7.5	PSh, Sh
Medium	M/ Orn, Adapt, Wild	<i>Chelone glabra</i>	White Turtle Head	3 to 9	2'- 3'	M, Mo, W	S, L, C	5.0-6.5	S, PS, PSh
Medium	M/ Orn, Adapt, Wild	<i>Chelone lyonii</i>	Pink Turtle Head	4 to 9	2'- 3'	M, Mo, W	S, L, C	5.0-6.5	S, PS, PSh
Uncommon	H/ Orn, Adapt	<i>Chrysogonum virginianum</i>	Gold Star	5 to 9	<1'	D, M, Mo	S, L, C	5.0-7.5	S, PS, PSh

Moisture: WD = Well drained; VD = Very dry; D = Dry; M = Medium; Mo = Moist; W = Wet

Soils: S = Sand; L = Loam; C = Clay; G = Gravel

Light: S = Full sun; PS= Partial sun; PSh = Partial shade; Sh = Full shade

Table 5: Non-native Trees, Shrubs, Wildflowers and Grasses that are Considered Invasive and should Never be Used in Landscape Plantings

Code	Latin Name	Common Name	Code	Latin Name	Common Name
Large Shade Trees			A, C, E	<i>Celastrus scandens</i>	Oriental Bittersweet
B, C, E	<i>Acer ginnala</i>	Amur maple	C, D	<i>Chaenomeles japonica</i>	Japanese Quince
A, D	<i>Acer platanoides</i>	Norway maple	C, D	<i>Chaenomeles speciosa</i>	Flowering Quince
A, D	<i>Acer platanoides</i> 'Crimson King'	Norway maple "Crimson King"	C, D	<i>Cornus sanguinea</i>	Blood-twig Dogwood
A, D, E	<i>Acer pseudoplatanus</i>	Sycamore maple	C, D	<i>Cotoneaster apiculatus</i>	Cranberry Cotoneaster
B, C, E	<i>Acer tartaricum</i>	Tartarian maple	C, D	<i>Cotoneaster dammeri</i>	Cotoneaster
A, D, E	<i>Ailanthus altissima</i>	Tree of Heaven	C, D	<i>Cotoneaster horizontalis</i>	Rock Cotoneaster
C, D, E	<i>Alnus glutinosa</i>	Black Alder	C, D, E	<i>Cytisus scoparius</i>	Scotch Broom
C, D, E	<i>Koelreuteria paniculata</i>	Golden rain tree	A, C, D	<i>Elaeagnus angustifolia</i>	Russian Olive
B, D, E	<i>Maackia amurensis</i>	Amur Maackia	A, C, D	<i>Elaeagnus umbellata</i>	Autumn Olive
B, D, E	<i>Paulownia tomentosa</i>	Princess Tree	A, C, D	<i>Euonymus alatus</i>	Burning bush
B, D, E	<i>Phellodendron amurense</i>	Amur corktree	A, C, D	<i>Euonymus fortunei</i>	Wintercreeper
B, D, E	<i>Quercus acutissima</i>	Sawtooth Oak	A, C	<i>Hedera helix</i>	English Ivy
C, D, E	<i>Quercus robur</i>	English Oak	A, C, D	<i>Ligustrum species</i>	Privet
C, D, E	<i>Quercus robur</i> 'Fastigiata'	English oak	A, C, D	<i>Ligustrum vulgare</i>	European Privet
C, D, E	<i>Salix babylonica</i>	Weeping Willow	A, C, D	<i>Ligustrum x vicari</i>	Golden Privet
C, D, E	<i>Salix matsudana</i>	Corkscrew Willow	A, C, D	<i>Lonicera japonica</i>	Japanese Honeysuckle
C, D, E	<i>Sorbus acuparia</i>	European Mt Ash	A, C, D	<i>Lonicera maackii</i>	Amur honeysuckle
C, D, E	<i>Sorbus alnifolia</i>	Korean Mt Ash	A, C, D	<i>Lonicera morrowii</i>	Morrow Honeysuckle
C, D, E	<i>Styphnolobium japonica</i>	Japanese scholar tree	A, C, D	<i>Lonicera species</i>	Honeysuckle
B, D, E	<i>Tilia tomentosa</i>	Siberian linden	A, C, D	<i>Lonicera tartarica</i>	Tartarian Honeysuckle
B, D, E	<i>Ulmus parviflora</i>	Chinese elm	C, E	<i>Nandina domestica</i>	Heavenly Bamboo
A, D, E	<i>Ulmus pumilla</i>	Siberian Elm	A, C	<i>Pachysandra terminalis</i>	Japanese Pachysandra
			A, C	<i>Parthenocissus tricuspidata</i>	Boston Ivy
Small Flowering Trees			C, D, E	<i>Prunus cerasifera</i>	Cherry Plum
B	<i>Crataegus laevigata</i>	English Hawthorn	C, D, E	<i>Prunus x cistena</i>	Purple Sand Cherry
C, D, E	<i>Prunus cerasifera</i>	Cherry Plum	C, D, E	<i>Rhodotyphos scandens</i>	Black Jetbead
A	<i>Pyrus calleryana</i>	Bradford Pear	C, D, E	<i>Ribes alpinum</i>	Alpine Currant
A, D, E	<i>Rhamnus frangula</i>	Glossy Buckthorn	A, C, E	<i>Rosa multiflora</i>	Multiflora Rose
A, D, E	<i>Rhamnus cathartica</i>	European Buckthorn	B, C, D	<i>Rosa rugosa</i>	Rugosa Rose
			B, C, D	<i>Rosa species</i>	Rose species
Shrubs			C, D, E	<i>Salix alba</i>	White Willow
B, C, D	<i>Akebia quinata</i>	Fiveleaf Akebia	C, D, E	<i>Salix caprea</i>	French Pussywillow
A, C, D	<i>Ampelopsis brevipedunculata</i>	Porcelainberry	C, D, E	<i>Salix integra</i>	Nishiki Willow
A	<i>Berberis thunbergii</i>	Japanese Barberry	C, D, E	<i>Salix species</i>	Willow species
A	<i>Berberis vulgaris</i>	Common Barberry	C, D	<i>Sambucus nigra</i>	European Elder
C, D	<i>Buddleia davidii</i>	Butterfly Bush	B, C	<i>Spirea japonica</i>	Japanese Spirea
C, D	<i>Callicarpa dichotoma</i>	Purple Beautyberry	B, C, D	<i>Viburnum opulus</i>	Euro. cranberry bush vib.
C, D	<i>Callicarpa japonica</i>	Japanese Beautyberry	B, C, D	<i>Wisteria floribunda</i>	Wisteria
C, D	<i>Caragana arborescens</i>	Siberian Peashrub	D, E	<i>Prunus domestica</i>	Prune Plum

A: Plant is invasive throughout the northeast.

B: Plant is invasive locally in the northeast.

C: Plant poses moderate to high risk of escape from cultivation.

D: There are desirable native replacements.

E: Is seldom used in landscaping.