

power planting

how to select and plant trees
near power lines



Please visit our new online tree and shrub database at mge.com/trees.

Front Cover Plants (clockwise from the top):

Molten Lava crabapple, Prairiefire crabapple, Washington hawthorn

Back Cover Plants (clockwise from upper left):

**Autumn Blaze callery pear, Saucer magnolia, Orange Crush crabapple,
Allegheny serviceberry, Dark Green arborvitae, Star magnolia**

Plant the right tree in the right place

Tree limbs and power lines aren't good neighbors—especially when storms bring lightning, high winds or ice. Limbs that touch power lines can cause power outages. MGE regularly trims trees to help prevent power outages from occurring during severe weather.



You can reduce the need to trim trees by selecting the right tree to plant near power lines. Place low-growing trees (mature height of less than 25 feet) under or near power lines to help beautify your yard and prevent future service problems. You'll also help us to control our tree-trimming budget and your electricity costs. Wisconsin utilities spend more than \$31 million per year on tree trimming, not to mention the costs to restore power caused by tree-related outages.



Trees are trimmed throughout the year in the Madison area. In some cases the entire center of the tree must be removed to allow enough clearance for electric lines (top left). Our crews work from buckets to trim trees that are near the street (above). Arborists typically trim backyard trees by climbing into the tree and cutting limbs (bottom left).

Start with a plan

It's rewarding to visit a nursery, buy trees and shrubs for your yard and then plant them. The plants you buy add to the enjoyment and value



Plan for underground lines and energy-savings when planting around new homes.

of your home. Planning before you shop can help you select the right plants. From a utility standpoint, the important factors to include in your plan are:

- The location of overhead and underground electrical equipment (power lines and pad-mounted transformers). If you have underground service, remember that somewhere in your yard you have a line that runs from the transformer to your home.
- The orientation of your home on its lot. New shrubs and trees provide shade and protection from the wind. Properly placed they can help reduce heating and cooling costs.

Overhead lines

If you live in an area with overhead power lines, tree height and distance from the power line are main concerns. Use Figure A to determine the size of tree that is right for the location you're considering. Then use the tree and shrub guide that starts on page 6 to narrow your search.

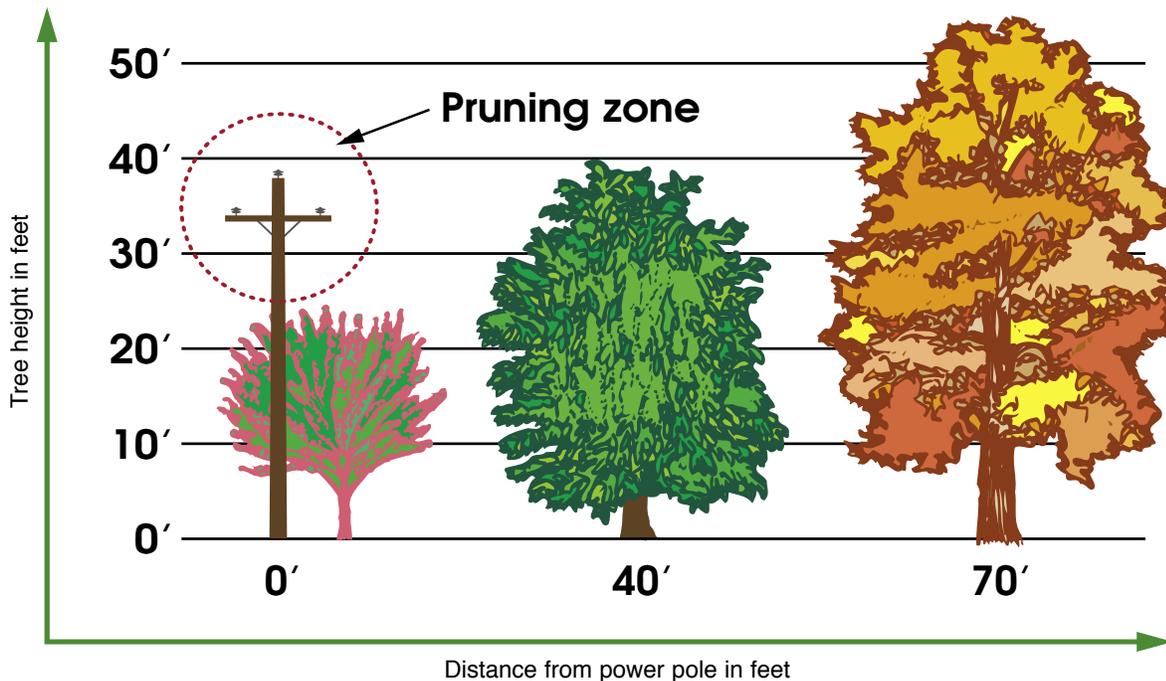


Figure A. *Planting distances. Use this diagram to determine the minimum distance to plant from utility poles and lines based on a tree's mature height.*

Underground lines

People prefer underground electric lines in their neighborhood. Pad-mounted transformers are part of the underground system. They are placed on easements in yards and serve the same purpose as transformers on utility poles. Because transformers may serve several homes, underground lines may go out from them in many directions.

More than 60% of our area is served by an underground electric system. Maintaining the proper clearance around the transformer is important to the reliability of your electric service and its cost. If we have to remove plants or trees before we service the transformer, the cost of the service is increased, and you incur a cost to replace the plants that have been removed.

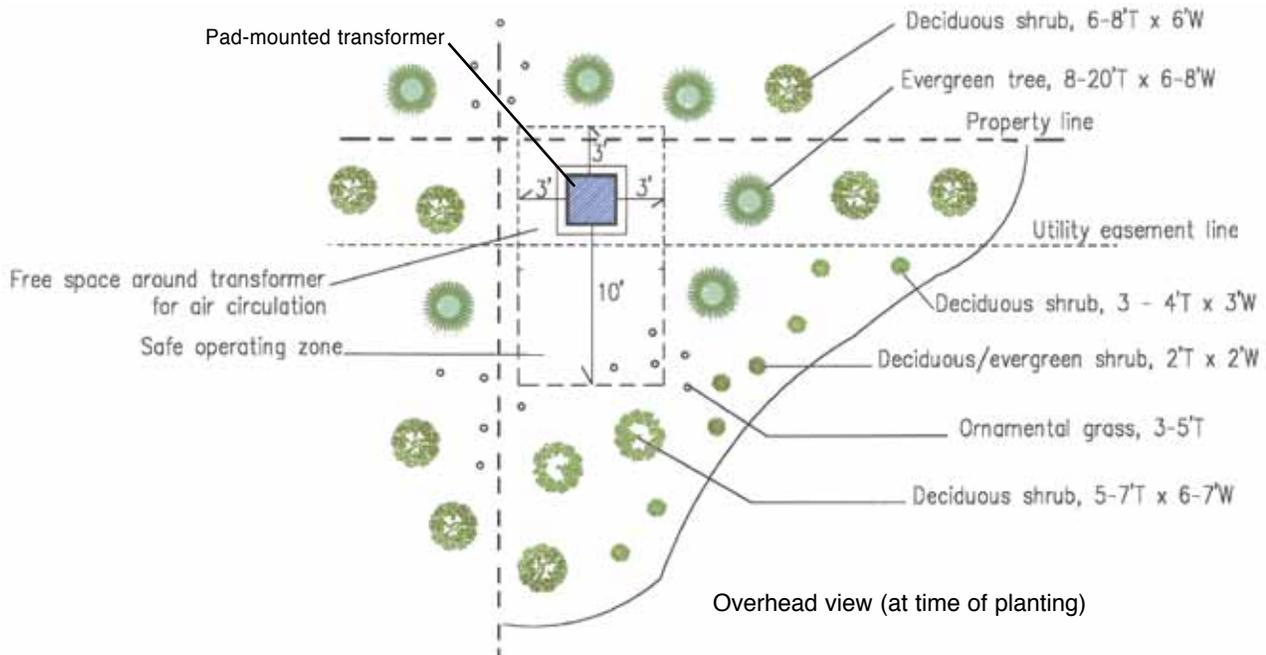
MGE has worked with a landscape designer to develop some suggested landscape options

around pad-mounted transformers. You can see these options at www.mge.com/environment/trees/landscaping.



*You can use trees, shrubs and flowers to screen the view of pad-mounted transformers. Make sure you contact Diggers Hotline, **811**, before you plant. Diggers Hotline TTY number for the hearing impaired is 1-800-542-2289.*

Planting near pad-mounted transformers



Maintain a 10-foot clearance in front of the transformer. Line crews work on “energized” transformers to avoid interrupting your service. They use long fiberglass sticks to reach the energized lines and need this space to work safely. Maintain a 3-foot clearance to the sides and back so that air can circulate around the transformer to keep it cool.

Electric and gas meters

You'll find suggestions in this book for shrubs to plant as screening. Please remember to leave room around your electric and gas meters for our workers to perform maintenance work.

Save some energy when you plant

Careful planning before you plant helps you save energy. Putting the right type of tree in the right position around your home impacts the amount of energy you use for heating and cooling. If we all strategically plant trees to help save energy, we can affect the total amount of energy used in our area. That's the power of working together.



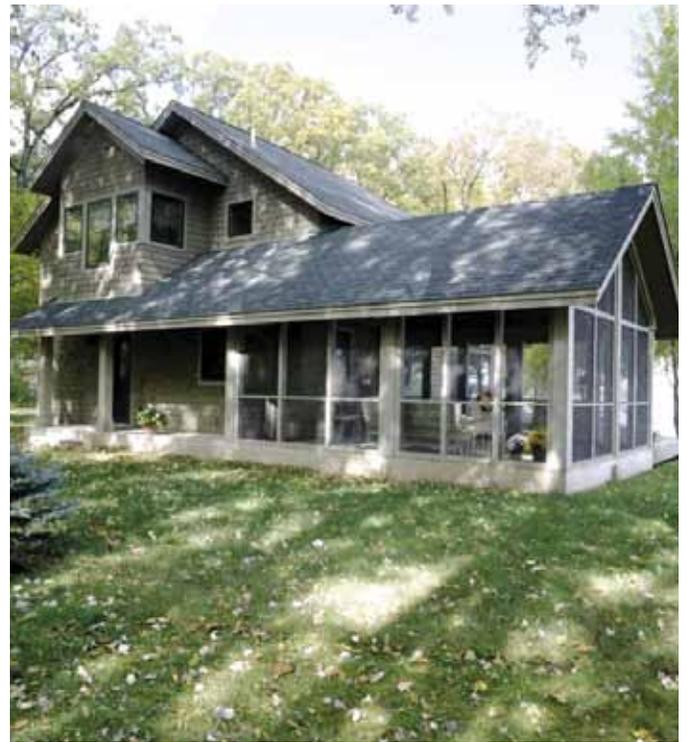
Evergreens planted to the north and west of this home provide a break from winter winds and help to reduce home heating needs.

Call before you dig!

Before you dig, be sure all underground utility lines are marked. Call Diggers Hotline at **811** at least three working days before you plan to start. They will mark the locations of underground service lines in the area that you plan to dig. There is no charge for this service. Diggers Hotline TTY number for the hearing impaired is 1-800-542-2289.

Buried electric, gas, water, sewer, cable and telephone lines are the responsibility of Diggers Hotline. It is your responsibility to know the location of all privately-owned equipment including buried LP lines, invisible pet fences, septic lines and wiring for outdoor lighting.

When you get ready to plant, stay at least 24 inches away from any marked lines and consider the length and depth of the roots of the mature tree.



Deciduous trees planted on the west and south sides of this home provide cooling shade from the hot afternoon sun. During the winter, when they have lost their leaves, sunlight gets through to help warm the home.

How to use this guide

This guide provides basic information about which trees can be planted under or near power lines.

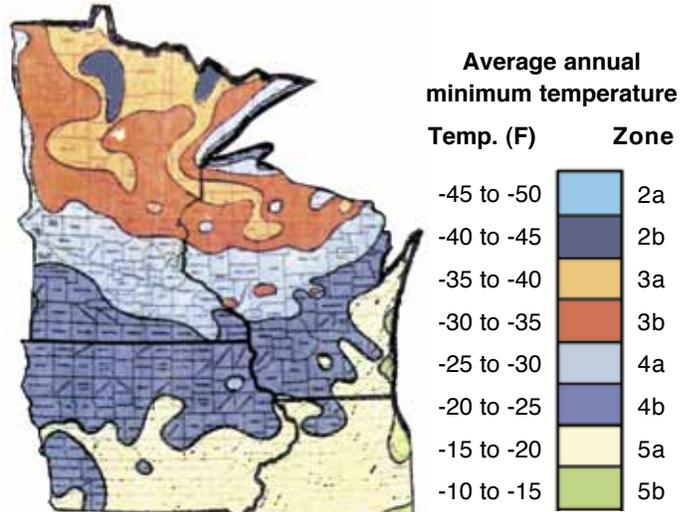
Be careful selecting trees. Individual cultivars in this book can reach a height of 25 feet or more and overhead line height can vary. Try to avoid planting directly under the lines.

Our guide does not list all smaller species. Other cultivars may be appropriate; however, they may not be readily available. For more information, visit your local garden center, consult with a utility forester or visit mge.com/trees.

USDA hardiness zones

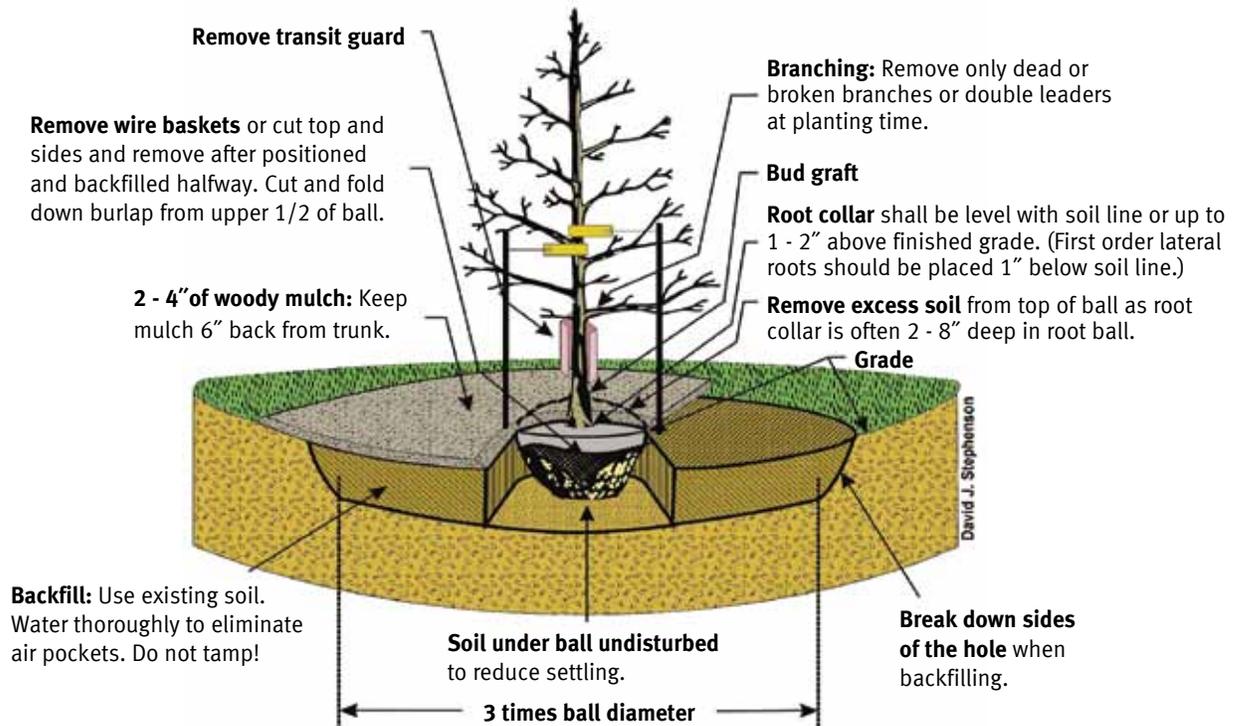
The U.S. Department of Agriculture divides the country into different cold hardiness zones that

are determined by the average annual minimum winter temperatures. A tree that is hardy to zone 3 will survive winter temperatures of minus 40°F. Madison is located in hardiness zone 5a with surrounding Dane County cities in hardiness zone 4b.



Tree planting and care basics

The planting diagram provides important information. For additional instructions, check with your local nursery or look for University of Wisconsin-Extension publications at www.uwex.edu/ces/wihort.



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—trees gain strength from movement. Remove all stakes after one year. Use of tree wrap is not recommended, as it causes a number of problems for the tree.

Source: Wisconsin Department of Natural Resources, Oct. 2000

For more information visit: dnr.wi.gov/org/land/forestry/publications/index.htm#ucf

Low-growing trees

Tatarian maple (*Acer tataricum*): oval to upright form; low branches; 20-25' tall; 18-20' wide; pinkish-red fruit in summer turns brown in fall; yellow to reddish fall color; full sun; adaptable to a wide range of soils and pH; drought, road salt, urban tolerant; susceptible to verticillium wilt; can reseed itself; native to Europe and Asia; hardy to zone 3a. Cultivars include: 'Actar' (Summer Splendor™), 'GarAnn' (Hot Wings™), 'JFS-KW2' (Rugged Charm™), 'Patdell' (Pattern Perfect™)



Tatarian maple



Japanese tree lilac

Japanese tree lilac (*Syringa reticulata*): rounded to upright-oval form; multi- to single-stemmed (depending on cultivar); 20-25' tall; 15-20' wide; reddish-brown, shiny bark; large, creamy-white, slightly fragrant, terminal flowers in June; tends to flower heavily every other year; yellowish fall color; full sun; adaptable to most soils and pH; prefers moist, well-drained soil; drought, salt, and urban tolerant; native to Asia; hardy to zone 3a. Cultivars: 'Ivory Silk', 'Elliott' (Snowcap™), 'Golden Eclipse', 'Ivory Silk', 'Summer Snow', 'Williamette' (Ivory Pillar™)

American hornbeam, musclewood (*Carpinus caroliniana*): wide-spreading, multistemmed tree with low branches; 20-30' tall and wide; fluted, muscle-like bark and branches; yellow to orange-red fall color; slow grower; prefers rich, moist, well-drained, slightly acid soil; plant in spring only; full sun to partial shade; sensitive to road salt; native to Wisconsin; hardy to zone 3b.



American hornbeam

Eastern redbud (*Cercis canadensis*): upright, spreading, flat-topped tree; low branches; multistemmed; 20-30' tall and wide; heart-shaped, reddish-purple new leaves that quickly change to green in spring; brownish-black bark with orange inner bark; showy, early, reddish-purple flowers that fade to pink in early spring; yellowish-green fall color; full sun to partial shade; adaptable to most soils and pH, but prefers a rich, loamy soil; prefers a moist, well-drained soil; drought tolerant; sensitive to road salt; very susceptible to verticillium wilt; native to eastern U.S.; hardy to zone 4b. Cultivar: 'Columbus Strain', see more at mge.com/trees.



Eastern redbud



Apple serviceberry (*Amelanchier × grandiflora*): upright; single or multistemmed tree; 15-30' tall; 15-25' wide; smooth gray bark; white flowers in early spring; bronze to purplish-red, fuzzy leaves in spring that become smooth and green; edible purple fruit in June that attracts birds; yellow-orange to red fall color; full sun to partial shade; prefers a moist, well-drained, loamy, slightly acid soil; does poorly in poorly drained, heavy clay soil; sensitive to drought; plant in spring only; hybrid parents native to Wisconsin; hardy to zone 3a. Cultivars: 'Autumn Brilliance', 'Cole's Select', 'Forest Prince', 'Princess Diana', 'Robin Hill', 'Rogers' (Lustre®)

Apple serviceberry

Callery pear (*Pyrus calleryana*): upright, oval to rounded form; 25-35' tall; 20-30' wide; showy, white flowers in May; small fruit hidden by leaves; late, yellow, orange-red to purple fall color; fast grower; adaptable to most soils and pH; prefers moist, well-drained soil but is drought, salt, air pollution, and urban tolerant; some cultivars are susceptible to fire blight and narrow branch crotch angles; susceptible to limb breakage in storms; native to China and Korea; hardy to zone 4b-5a (depending on cultivar). Cultivars include: Aristocrat®, 'Autumn Blaze', 'Cambridge', 'Capital', 'Cleveland Select' or 'Glen's Form' (Chanticleer®). More at mge.com/trees.



Autumn Blaze callery pear

Cherries



Amur chokecherry

Amur chokecherry (*Prunus maackii*): pyramidal when young becoming rounded; multi-stemmed; 25-35' tall and wide; very showy, bronze, shiny, slightly exfoliating bark; white flowers produced with the leaves in May; reddish-black fruit in summer that attracts birds; yellow fall color; full sun; adaptable to most soils and pH; needs well-drained soil; intolerant to poorly drained, compacted soil; sensitive to road salt; plant in spring only; less susceptible to insects and diseases than other *Prunus* spp.; native to Asia; hardy to zone 3a. Avoid planting directly under power lines as it may grow too tall.

fruit in summer that attracts birds; full sun; adaptable to most soils and pH; needs well-drained soil; tolerant to drier soils; intolerant to poorly drained, compacted soil; sensitive to road salt; plant in spring only; susceptible to a number of insects and diseases especially black knot and eastern tent caterpillar; native to Wisconsin; hardy to zone 3a. Cultivars include: 'Canada Red', 'Shubert'

Chokecherry (*Prunus virginiana*): pyramidal to oval-rounded form; 20-30' tall; 15-20' wide; suckers and can be multi-stemmed; white flowers produced with the leaves in spring; reddish-purple



Canada Red chokecherry

Sargent cherry (*Prunus sargentii*): oval to vase-shaped form; 25-30' tall; 20-30' wide; showy, single, pink flowers in clusters in early spring; small, purplish-black fruit in summer that attracts birds; bronze to orange-red fall color; reddish-gray to chestnut-brown, polished bark; full sun; adaptable to most soils and pH; needs well-drained soil; intolerant to poorly drained, compacted soil; plant in spring only; less susceptible to pests; native to Japan; hardy to zone 4b. Cultivars include: 'Columnaris', 'JFS-KW58' (Pink Flair®), Rancho®



Sargent cherry

Snow Fountains® cherry (*Prunus* 'Snofozam'): weeping form with cascading branches; small tree; 6-12' tall; 10-12' wide; white flowers; few to no black fruit; orange to gold fall color; full sun; adaptable to most soils and pH; needs well-drained soil; intolerant to poorly drained, compacted soil; sensitive to road salt; plant in spring only; hardy to zone 5a.

Dogwoods and Mountainash

Corneliancherry dogwood (*Cornus mas*): multi- to single-stemmed tree; upright, oval form with low branches; 20-25' tall; 15-20' wide; small, yellow flowers in early April that are long lasting; tart, cherry-red fruit in late summer that matures to purple and are edible; purplish to no fall color; adaptable to most soils and pH; full sun to partial shade; moist, well-drained soil; sensitive to drought and road salt; native to Europe and Asia; hardy to zone 4b. Cultivars: 'Golden Glory', 'Pyramidalis'



Golden Glory corneliancherry dogwood

Pagoda dogwood (*Cornus alternifolia*): spreading form with wide, horizontal branches to the ground; 15-20' tall; 25-30' wide; fragrant, creamy-white flowers in June; bluish-black fruit on red stems in July



Pagoda dogwood

that attracts birds; red-dish-purple fall color; prefers partial shade; moist, well-drained, slightly acid, cool

soils high in organic matter; intolerant to poorly drained, compacted, heavy clay soil, heat, air pollution, drought, and road salt; very susceptible to canker when stressed; native to Wisconsin; hardy to zone 3b.



Korean mountainash

Korean mountainash (*Sorbus alnifolia*): pyramidal when young becoming upright-oval; 25-35' tall; 20-25' wide; smooth gray bark; white flowers in May; showy, pinkish-red to scarlet fruit in fall; orange-red fall color; full sun; prefers a cool, moist, well drained soil; pH adaptable; intolerant to poorly drained, compacted soil, salt, and air pollution; susceptible to fire blight; native to Asia; hardy to zone 4a.



European mountainash (*Sorbus aucuparia*): upright, oval to rounded form; 20-35' tall; 15-25' wide; white flowers in late spring; orange-red fruit in clusters in late summer to fall that attracts birds; yellow to reddish fall color; full sun; prefers a cool, slightly acid soil, moist, and well-drained; intolerant to poorly drained, compacted soil, drought, air pollution, and salt; susceptible to a number of insects and diseases, especially fire-blight; native to Europe and Asia; hardy to zone 3b. Cultivars: 'Black Hawk', 'Mitchred' (Cardinal Royal®), 'Rossica'

Ornamental Crabapples

Flowering crabapple (*Malus* spp.): various growth habits and sizes from 5-25' tall and wide; flowers bloom in May and color varies from white, pink, rose, or maroon; fruit color varies from yellow, orange, red, or purple; some cultivars have purplish leaves; typically has no fall color or yellowish; full sun only; tolerant to a wide range of soils and pH; urban tolerant; susceptible to many insects and diseases, hence, select disease resistant cultivars from the list below; mainly hybrid origin; hardy to zone 4a.

It is important when selecting crabapples to not only select for ornamental value, but also disease resistance. The fruit on many crabapples can be very colorful and last for months versus flowers last only a week to ten days. The list below provides information on some of the most ornamental, disease resistant crabapples commercially available for landscaping in the Midwest.

White flowers/red fruit



Red Jewel crabapple

'Jewelcole' (Red Jewel[®]): upright, pyramidal to rounded form; 15-18' tall; 12' wide; white flowers; persistent, shiny, bright-red fruit turning dark red when cold, borne on long stems; slightly susceptible to fire blight. Other cultivars: 'Adirondack', *Malus baccata* 'Jackii', 'Guinzam' (Guinevere[®]), 'Kinarzam' (King Arthur[®]), *Malus sargentii* 'Select A' (Firebird[®]), *Malus sargentii* 'Tina', 'Sutyzam' (Sugar Tyme[®]), *Malus zumi* var. *calocarpa*

White flowers/yellow to orangish fruit

'Cinzam' (Cinderella[®]): dwarf, oval to upright form; 6-8' tall; 5' wide; red buds opening to white flowers; persistent, golden-yellow fruit. Other cultivars: 'Bob White', 'Excazam' (Excalibur[™]), 'Lanzam' (Lancelot[®]), 'Ormiston Roy'



Cinderella crabapple



Bob White crabapple



Camelot crabapple

Red or pink flowers/red to maroon fruit (more cultivars at mge.com/trees)

'Camzam' (Camelot™): rounded form; 10' tall; 8-10' wide; pinkish-white flowers; burgundy-green leaves; persistent, burgundy fruit.

'Prairifire': upright, spreading to rounded form; 15-20' tall and wide; slower growing; purple leaves become reddish-green; purple, shiny bark; bright, pinkish-red flowers open later than

other crabapples; persistent, reddish-purple to dark red fruit. Other cultivars: 'Candymint', 'Cardinal', 'Parrisi' (Pink Princess®)



Prairifire crabapple



Weeping form



Coral Cascade crabapple

'Louisa': graceful, weeping form; 10-15' tall; 15' wide; rose colored buds open to pink flowers; yellow fruit that fades to orangish-brown; dark green, glossy leaves.

'Molazam' (Molten Lava®): wide-spreading, horizontal, semi-weeper; 10-15' tall; 15-20' wide; red buds opening to white flowers; persistent, bright red to orangish-red fruit. Other cultivars: 'Coral Cascade', 'Luwick', 'Manbeck Weeper' (Anne E.®)

Hawthorns

Winter King hawthorn (*Crataegus viridis* 'Winter King'): vase-shaped to rounded form; wide spreading with low branches; 20-25' tall; 20-30' wide; few if any thorns; silver gray bark that exfoliates exposing orange inner bark; white flowers in late May; bright scarlet, persistent fruit in fall that attracts birds; yellow to orangish fall color; full sun; adaptable to most soils and pH; plant in spring only; urban and drought tolerant; sensitive to road salt; native to eastern U.S.; hardy to zone 4b.



Winter King hawthorn



(continued on next page)

Hawthorns (continued)

Washington hawthorn (*Crataegus phaenopyrum*): multi-stemmed tree with upright, vase-shaped form and low branches; 20-30' tall; 20-25' wide; white flowers in mid June; bright, orange-red, persistent fruit in clusters in fall that attract birds; orange to scarlet-purple fall color; sharp thorns on branches; full sun; adaptable to most soils and pH; plant in spring only; drought, urban, and sandy soil tolerant; sensitive to road salt; susceptible to cedar apple rust; native to eastern U.S.; hardy to zone 4b. Cultivars: 'Presidential', 'Westwood I' (Washington Lustre®)



Washington hawthorn



Cockspur hawthorn

Cockspur hawthorn (*Crataegus crus-galli*): multi-stemmed tree with horizontal, tiered branches; wide spreading; 20-30' tall; 25-35' wide; has long, sharp thorns on branches; white flowers in late spring; dark red fruit in fall that attracts birds; dark green, glossy leaves turn orangish to purplish in fall; full sun; adaptable to most soils and pH; plant in spring only; drought, air pollution, urban, and road salt tolerant; susceptible to cedar apple rust; native to Wisconsin; hardy to zone 4a. Cultivars: 'Cruzam' (Crusader®), var. *inermis* (thornless)

Magnolias

Loebner magnolia (*Magnolia × loebneri*): oval, upright to rounded form; multi-stemmed; 20-30' tall; 25-35' wide; smooth, light gray bark; very fragrant, pink or white flowers in April; no fall color; full sun; prefers loamy, organic soil; pH adaptable; moist, well-drained soil; intolerant to dry, compacted, heavy clay, poorly drained soils, drought, and road salt; plant in spring only; flowers can be killed by late, hard frosts so plant on eastern or northeastern side of a building to delay flowering up to one week; hardy to zone 4b. Cultivars: 'Ballerina', 'Leonard Messel', 'Merrill', 'Powder Puff', 'Spring Joy', 'White Rose'



Merrill magnolia



Saucer magnolia



Saucer magnolia (*Magnolia × soulangiana*): wide-spreading; irregular oval to rounded; multi-stemmed tree, with low branches; 25-30' tall; 20-30' wide; coarse textured; smooth, gray bark; large, fragrant flowers, dark pinkish-purple on outside, white on inside flowers in April; no fall color; full sun; prefers loamy, organic, neutral to slightly acidic, moist, well-drained soil; intolerant to dry, compacted, heavy clay, poorly drained soils, drought, and road salt; plant in spring only; flowers can be killed by late, hard frosts so plant on eastern or north-eastern side of a building to delay flowering up to one week; hardy to zone 5a. Other cultivars: 'Alexandrina', 'JUR-mag1' (Black Tulip™), 'Rustica Rubra'

Star magnolia (*Magnolia stellata*): small tree to large shrub; oval to rounded, wide-spreading form; 10-18' tall; 15-18' wide; slow grower; smooth, light gray bark; white, very fragrant

flowers in April; no fall color; full sun; prefers loamy, organic soil, neutral to slightly acidic pH, moist, well-drained soil; intolerant to dry, compacted, heavy clay, poorly drained soils, drought, and road salt; plant in spring only; flowers can be killed by late, hard frosts so plant on eastern or northeastern side of a building to delay flowering up to one week; native to Japan; hardy to zone 4b. Cultivars: 'Centennial', 'Chrysanthemumiflora', 'Encore', 'Jane Platt', 'Kikuzaki', 'Royal Star'



Star magnolia



Betty magnolia

Little Girl Series hybrid magnolias (*Magnolia* spp.): most are upright, shrubby, multi-stemmed tree; 10-15' tall and wide; flowers open before the leaves but later than other magnolias; can produce a few flowers sporadically in summer; full sun; prefers loamy, organic soil, neutral to slightly acidic pH, moist, well-drained soil; intolerant to dry, compacted, heavy clay, poorly drained soils, drought, and road salt; plant in spring only; hardy to zone 5a. Cultivars: 'Ann', 'Betty', 'Jane', 'Pinkie', 'Randy', 'Susan'

Yellow hybrid magnolias (*Magnolia* spp.): upright form; 15-30' tall and wide; most have ivory or deep yellow flowers either before the leaves or as the leaves are emerging; same culture as magnolias above; plant in spring only; hardy to zone 4b. Cultivars: 'Butterflies', 'Elizabeth', 'Gold Finch', 'Gold Star', 'Ivory Chalice', 'Limelight', 'Yellow Bird', 'Yellow Fever', 'Yellow Lantern'

Evergreens

Chinese juniper (*Juniperus chinensis*): certain cultivars are suitable for planting under powerlines; dense, mainly upright forms; foliage remains green throughout the year; female cultivars have small blue-gray cones that attract birds; full sun; tolerant to a wide range of soils and pH; urban, air pollution and drought tolerant; rust resistant; native to Asia; hardy to zone 4. Cultivars include: 'Ames', 'Blue Point', 'Columnaris', 'Fairview', 'Hooks', 'Iowa', 'Keteleeri', 'Mountbatten', 'Robusta Green', 'Spartan', 'Spearmint', 'Wintergreen'



Canaert eastern red-cedar

Eastern red-cedar (*Juniperus virginiana*): certain cultivars are suitable for planting under powerlines; mainly dense, upright forms; evergreen leaves turning russet-brown in winter; female cultivars have small, blue-gray cones that attract birds; full sun; tolerant to a wide range of soils and pH; urban, drought, sandy soil and salt tolerant; susceptible to cedar apple rust; native to Wisconsin; hardy to zone 3b. Cultivars include: 'Blue Arrow', 'Burkii', 'Canaertii', 'Glauca', 'Hillii', 'Hillspire' also called 'Cupressifolia', 'Idyllwild', 'Monbell' (Prairie Pillar™), 'Taylor'



Mountbatten Chinese juniper

Eastern white-cedar, arborvitae (*Thuja occidentalis*): certain cultivars are suitable for planting under powerlines; mainly upright, dense forms, but smaller, dwarf, rounded forms are available; soft, evergreen, aromatic leaves; full sun to partial shade; adaptable to most soils and pH; prefers

a moist, well-drained soil; sensitive to road salt and deer browsing; can be sheared; native to Wisconsin; hardy to zone 3 (four on some cultivars). Other cultivars include: 'BailJohn' (Technito®), 'Brabant', 'Brandon', 'Columbia', 'Degroot's Spire', 'Gold Cargo', 'Hetz Wintergreen', 'Holmstrup', 'Klmeighteen' (Patriot™), 'Lutea' also known as 'George Peabody', 'Nigra', 'Pyramidalis' also called 'Fastigiata', 'Rushmore', 'Sherwood Frost', 'Smaragd' (Emerald arborvitae), 'Spiralis', 'Sunkist', 'Techny' (Mission arborvitae), 'Trautman', 'Walter Brown' (Techny Gold™), 'Wandsdyke Silver', 'Wareana', 'Wareana Lutescens', 'Yellow Holmstrup', 'Yellow Ribbon'



Techny arborvitae

Swiss stone pine (*Pinus cembra*): narrow, dense, upright, oval form; 30-40' tall; 15-25' wide but below cultivars are smaller (15-25' tall); slow grower; soft, densely arranged, dark blue-green needles; full sun; prefers a loamy, slightly acidic to neutral soil; intolerant to poorly drained, compacted, heavy clay soil; prefers moist, well-drained soil; intolerant to drought and road salt; native to Europe and Asia; hardy to zone 3b. Select these shorter cultivars: 'Chalet', 'Glauca Nana', 'Nana'

Japanese yew (*Taxus cuspidata*): wide-spreading, broad-pyramidal form; 4-40' tall and 4-30' wide (depends on cultivar); slow growing; mainly low growing shrub cultivars; soft, dark green leaves; reddish-brown bark; partial shade to full shade; prefers a sandy, loamy soil; pH adaptable; moist, well-drained soil; will not tolerate poorly drained, compacted soils; susceptible to root rot in poorly drained soil; subject to deer browsing; can shear into hedge; native to Asia; hardy to zone 4b. Other tree cultivars include: 'Capitata', 'Fastigiata' (Captain™)



Pinus cembra 'Nana'



Japanese yew



Falsecypress (*Chamaecyparis pisifera*): usually a large, evergreen tree, but these cultivars are smaller; soft foliage; full sun; prefers a rich, loamy soil high in organic matter; slightly acid soil; prefers a moist, well-drained soil; sensitive to drought and road salt; subject to winterburn so plant in protected location; many shrub forms are available; native to Japan; hardy to zone 4b. Cultivars: 'Boulevard', 'Filifera Aurea'



Golden threadleaf falsecypress

Large Shrubs for screening

Dogwood, Euonymus and Witchhazel (more cultivars at mge.com/shrubs)



Gray dogwood



Gray dogwood (*Cornus racemosa*): rounded; wide-spreading, suckering shrub; 10-15' tall and wide; forms colonies; fast grower; purple to reddish-purple fall color; gray stems; small, creamy-white flowers in late spring; white fruit in summer produced on bright, reddish-pink stems that persist; fruit attracts birds; full sun to partial shade; adaptable to most soils and pH; tolerates wet soils; urban and drought tolerant; susceptible to leaf spot; do not shear; native to Wisconsin; hardy to zone 3b.

Burningbush or winged euonymus (*Euonymus alatus*): upright, rounded with horizontal branches; compact; 4-15' tall; 6-15' wide (size depends on cultivar); slow to moderate grower; pinkish to bright red fall color; corky, winged stems; may or may not produce reddish, poisonous fruit that opens revealing orange-red seeds; full sun to partial shade; adaptable to most soils and pH; prefers moist, well-drained soil; intolerant to wet soil; urban tolerant; susceptible to rabbit and vole injury at base of plant; can shear into a formal hedge; invasive in wild, hence, do not plant near any natural areas; native to China; hardy to zone 4.



Burningbush



Common witchhazel

Common witchhazel (*Hamamelis virginiana*): upright, open; wide-spreading; irregular to rounded, large shrub to small tree; 15-20' tall; 20-25' wide; coarse texture; slightly fragrant, long lasting, showy, yellow flowers with thin, strap-like, curling petals in late fall; bright yellow fall color; smooth, gray bark; prefers a loamy, rich, slightly acid soil; gets chlorotic (yellow) at high pH; plant in spring only; prefers moist, well-drained soil; intolerant to drought and road salt; do not shear; full sun to shade; native to Wisconsin; hardy to zone 3b.

Sumac, Forsythia and Spirea



Staghorn sumac (*Rhus typhina*): large, open, suckering, wide-spreading shrub; 10-25' tall; 15-25' wide; fast grower; coarse texture; very fuzzy stems; greenish-yellow flowers in summer; fuzzy, crimson to reddish-black fruit in clusters in late summer to fall on female plants later turning black and persisting; early, orange to scarlet fall color; full sun; adaptable to most soils and pH; drought, salt, and urban tolerant; susceptible to verticillium wilt; do not shear; native to Wisconsin; hardy to zone 3b.

Staghorn sumac

Hybrid forsythia (*Forsythia* spp.): upright, wide-spreading; suckering, large shrub; 6-10' tall; 8-12' wide; fast grower; yellowish-purple to no fall color; bright yellow flowers in early spring; full sun; adaptable to most soils and pH; drought and urban tolerant; do not shear; flower bud hardy to zone 4 or 5 (depending on cultivar); choose cold hardy cultivars like 'Meadowlark', 'Sunrise', 'Northern Gold', 'Northern Sun'



Sunrise forsythia



Vanhoutte spirea (*Spiraea x vanhouttei*): upright, arching, vase-shaped; wide-spreading shrub; 6-8' tall and wide; fast grower; blue-green leaves; orangish-purple to no fall color; showy, white flowers in May on arching branches; full sun; adaptable to most soils and pH; prefers a moist, well-drained soil; urban tolerant; do not shear; hardy to zone 4a.

Vanhoutte spirea

Lilacs

Lilac (*Syringa*): You'll find a large selection of lilacs at local garden centers. We have presented just a few of the popular species here. The plants vary widely in size, from smaller 4-8 foot shrubs all the way up to 25 foot trees. Please remember to check the location of power lines if you would like to select one of the taller tree types.



Miss Kim lilac (*Syringa pubescens* subsp. *patula* 'Miss Kim'): dense, compact, broadly rounded; non-suckering shrub; 6-7' tall; 4-6' wide; slow to moderate grower; purplish to maroon fall color; showy, pale violet to lilac, fragrant flowers in late May to early June; full sun; adaptable to most soils and pH; prefers a moist, well-drained soil; heat and urban tolerant; resistant to powdery mildew; susceptible to verticillium wilt; do not shear; native to Asia; hardy to zone 3b.

Miss Kim lilac

Common lilac (*Syringa vulgaris*): upright, wide-spreading; suckering shrub; 8-15' tall; 6-12' wide; coarse texture; no fall color; many cultivars; showy, white, violet, purple, magenta, lilac, blue, or pink, fragrant flowers in May; full sun; adaptable to most soils and pH; prefers a moist, well-drained soil; urban tolerant; susceptible to powdery mildew, verticillium wilt, and lilac borer; do not shear; native to southeastern Europe, hardy to zone 3a.



Yankee Doodle lilac



Avalanche lilac



Wonderblue lilac

Viburnums

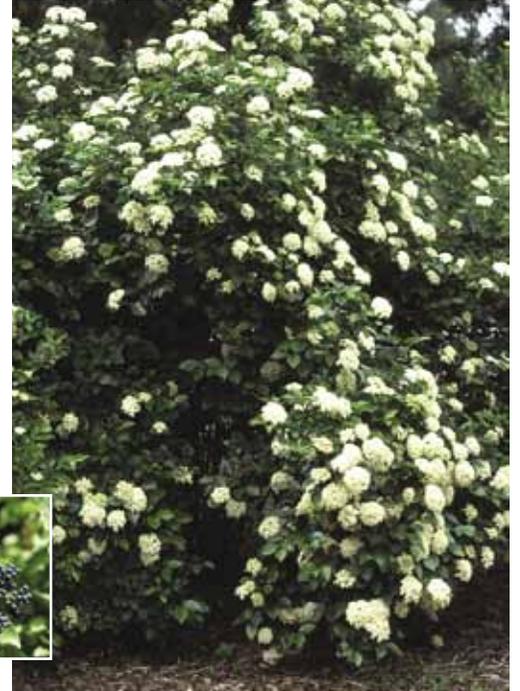


Koreanspice viburnum

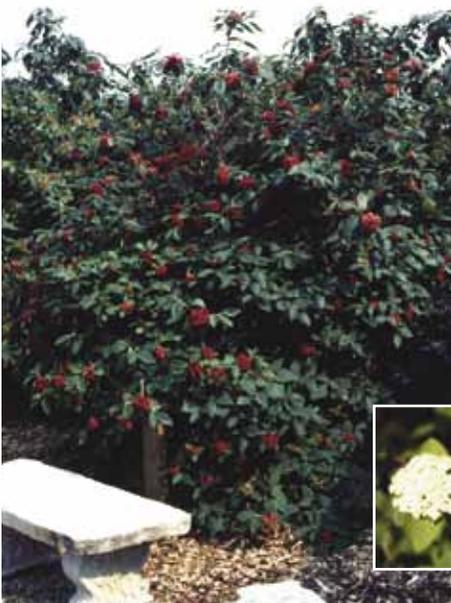


Koreanspice viburnum (*Viburnum carlesii*): compact, rounded; dense, stiff branches; 5-8' tall and wide; slow grower; late, reddish-wine fall color; pink buds open to showy, rounded, fragrant, white flowers in early May; full sun to partial shade; prefers cool, fertile, loamy, slightly acidic soil but is adaptable to pH; intolerant to poorly drained, compacted, heavy clay soil and road salt; prefers a moist, well-drained soil; susceptible to viburnum borer and rabbit injury at base of plant; do not shear; native to Korea; hardy to zone 4b.

Arrowwood viburnum (*Viburnum dentatum*): upright, vase-shaped to rounded; dense, suckering shrub; 6-12' tall; 6-8' wide; many cultivars; produces long, straight stems that arch; rounded, corrugated, semi-glossy leaves; yellow, red to purple fall color; showy, creamy-white flowers in late spring; bluish-black to blue fruit in mid to late summer that attracts birds; full sun to partial shade; adaptable to most soils, but prefers a fertile, cool soil; pH adaptable; prefers a moist, well-drained soil; sensitive to road salt; do not shear; native to central and eastern U.S. and Canada; hardy to zone 4a.



Arrowwood viburnum



Wayfaringtree viburnum



Wayfaringtree viburnum (*Viburnum lantana*): wide-spreading; rounded, upright shrub; 10-15' tall and wide; coarse texture; no fall color; showy, creamy-white flowers in late spring; red fruit that changes to black in late summer to early fall; fruit attracts birds; full sun to partial shade; adaptable to most soils and pH, but prefers a cool, fertile, loamy soil; prefers a moist, well-drained soil; drought tolerant; sensitive to road salt; susceptible to viburnum borer; do not shear; native to Europe and Asia; hardy to zone 4a.

More trees and shrubs that may be planted near powerlines.

Some may be hard to find. Go to mge.com/trees to find more options.

Trees	Mature Height (Feet)	Mature Spread (Feet)	Tree Form	Growth Rate	Fall Color	Flowers
Hedge maple (<i>Acer campestre</i>)	25-35	25-30	rounded to pyramidal	slow	yellow	not ornamental
Japanese maple (<i>Acer palmatum</i>)	6-25	6-25	oval to broad	slow	orange-red to purplish-red	not ornamental
Globe Norway maple (<i>Acer platanoides</i> 'Globosum')	15-20	15-18	dense, very rounded	slow	yellow	not ornamental
Korean maple (<i>Acer pseudosieboldianum</i>)	15-25	15-20	multi-stemmed, rounded	slow	orange to bright red	not ornamental
Amur maple (<i>Acer tataricum</i> subsp. <i>ginnala</i>)	15-18	15-18	rounded, multi-stemmed	moderate	orange to red	small, fragrant, creamy white
Three-flowered maple (<i>Acer triflorum</i>)	20-25	15-25	upright, rounded	slow	orange	inconspicuous, yellow
Shantung maple (<i>Acer truncatum</i>)	20-30	20-30	broad-rounded, dense	slow to moderate	yellow-orange	not ornamental
Downy serviceberry (<i>Amelanchier arborea</i>)	15-20	15-20	horizontal to upright	moderate	yellow	white, in spring
Allegheny serviceberry (<i>Amelanchier laevis</i>)	15-25	15-20	upright, oval	moderate	orange-red to bronze	white, in spring
Fox Valley® river birch (<i>Betula nigra</i> 'Little King')	10-12	12-15	multi-stemmed, compact, oval	slow	yellow	none
Weeping Siberian peashrub (<i>Caragana arborescens</i> 'Pendula')	10	6-8	narrow, weeping	slow	none	yellow, in spring
Frans Fontaine European hornbeam (<i>Carpinus betulus</i> 'Frans Fontaine')	30-35	10-15	narrow, columnar	slow	yellow to green	not ornamental
White Fringetree (<i>Chionanthus virginicus</i>)	12-18	8-15	multi-stemmed, spreading	moderate	yellow	fragrant, white, in late spring
American smoketree (<i>Cotinus obovatus</i>)	20-30	15-20	oval to rounded	moderate	yellow-orange to red	smoky pink, in summer
Seven-son tree (<i>Heptacodium miconioides</i>)	15-20	8-15	upright, irregular	moderate	yellow	creamy-white, fragrant, in late summer to fall
Amur maackia (<i>Maackia amurensis</i>)	20-30	20-30	vase shaped, rounded	slow	none	white, in summer
Hoptree, waferash (<i>Ptelea trifoliata</i>)	15-20	10-15	rounded, low branches	slow	yellow	pale greenish-white, fragrant, in spring
Weeping willowleaf pear (<i>Pyrus salicifolia</i> 'Pendula')	12-18	10-12	rounded and weeping	moderate	none	creamy-white, in spring
China Snow® Pekin lilac (<i>Syringa pekinensis</i> 'Morton')	20-25	20	upright-oval to spreading	moderate	none	large, slightly fragrant, creamy white, in early summer

Shrubs	Mature Height (Feet)	Mature Spread (Feet)	Shrub Form	Growth Rate	Fall Color	Flowers
Bottlebrush buckeye (<i>Aesculus parviflora</i>)	8-12	12-15	broad spreading shrub	slow	bright yellow	erect, white flower clusters, in July
Shadblow serviceberry (<i>Amelanchier canadensis</i>)	8-10	10-15	upright, large, suckering, can form thickets	moderate	yellow	white flowers, in spring
Red chokeberry (<i>Aronia arbutifolia</i>)	6-8	5-7	upright, rounded, suckering, spreading, leggy	slow to moderate	red-orange to purple	white to pinkish-white flowers, in mid spring
Glossy black chokeberry (<i>Aronia melanocarpa</i> var. <i>elata</i>)	5-8	6-10	upright, rounded, suckering, spreading, can form colonies	slow to moderate	orange to wine-red	white flowers in clusters, mid spring
Redosier or redtwig dogwood (<i>Cornus stolonifera</i>)	7-9	8-10	upright, suckering, wide-spreading	fast	yellow to reddish-purple to no color	small, creamy-white flowers in late spring
American hazelnut (<i>Corylus americana</i>)	5-10	5-8	irregular to rounded, suckering shrub	moderate to fast	yellowish to orange	pendulous catkins in early spring are somewhat showy
Smokebush (<i>Cotinus coggygria</i>)	10-15	10-15	large, wide-spreading, upright shrub	moderate	orange-yellow to purplish	showy, yellowish to white to pink, long lasting flowers, resembles smoke
Hedge cotoneaster (<i>Cotoneaster lucidus</i>)	6-10	6-10	erect, rounded to spreading shrub	moderate	yellow to reddish-orange	small, pinkish-white flowers
Panicle hydrangea (<i>Hydrangea paniculata</i>)	6-15	6-10	upright, spreading	moderate to fast	none	white flowers in summer, fade to pink then eventually brown in fall

Fruit	Hardiness Zone	Culture	Comments
not ornamental	5b	tolerant to a wide range of soils and pH	dense form; branches close to ground; urban tolerant
not ornamental	5b	prefers fertile, organic, loamy, moist soil	plant in very protected areas; Emperor 1™ is more cold hardy - with red leaves
not ornamental	4b	tolerant to a wide range of soils and pH	only this cultivar may be used under powerlines; can reseed in wild; urban tolerant
not ornamental	4a	prefers moist, fertile, well-drained soil	more cold hardy than Japanese maple; sensitive to drought
red, winged	3a	adaptable to a wide range of soils and pH; full sun	reseeds readily; do not plant near any natural areas; susceptible to verticillium wilt
not ornamental	4b	moist, well-drained soil	exfoliating, golden amber-brown bark; more hardy than paperbark maple
not ornamental	4a	tolerant to many soils and pH	urban and drought tolerant
purple, edible	3b	well-drained, slightly acid soil; full sun to partial shade	smooth gray bark; attracts birds; tolerant to poor, dry soils; native to Wisconsin; suckering
purple, edible	3a	moist, well-drained, slightly acid soil; full sun to partial shade	reddish-bronze new growth in spring; attracts birds; native to Wisconsin
none	4a	prefers acidic soil; tolerant wet soil; plant in spring only; sensitive to drought	showy, exfoliating, reddish-brown bark; borer resistant; only this cultivar may be used under powerlines; native to Wisconsin
not ornamental	2a	tolerant to a wide range of soils and pH	green stems; drought and salt tolerant
not ornamental	5a	adaptable to most soils and pH; well drained soil	plant in spring only; gray, fluted bark
female plants only, bluish-black	4b	pH adaptable; prefers moist, fertile, well-drained soil	plant with male pollinator for fruit; attracts birds; no pests; urban tolerant
not ornamental	4b	tolerant to a wide range of soils and pH; drought tolerant	blue-green leaves; susceptible to verticillium wilt
rose-sepals in fall	5a	prefers rich, moist, well-drained, slightly acidic soil	needs protection in winter; marginally hardy; exfoliating, grayish-brown bark
not ornamental	4a	tolerant to a wide range of soils and pH; urban tolerant	amber to olive bark; urban tolerant; no pests
rounded, winged, flat	4a	prefers moist, well-drained soil; slightly acid, tolerates shade; dry soil	suckering; native to Wisconsin
1" small pears	4b	tolerant to a wide range of soils and pH	narrow, gray-white leaves; susceptible to fireblight
not ornamental	4a	tolerant to a wide range of soils and pH	showy, cherry-like, exfoliating bark; urban and salt tolerant

Fruit	Hardiness Zone	Culture	Comments
few small, poisonous fruit	4b	prefers a rich soil; pH adaptable; moist, well-drained soil; full sun to partial shade	plant in spring only; do not shear
edible purple fruit; attracts wildlife	3b	prefers a moist, well-drained, loamy, slightly acid soil; full sun to partial shade	plant in spring only; do not shear; fruit attracts birds
glossy bright red fruit; attracts wildlife	4b	prefers a slightly acidic to neutral pH; moist, well-drained soil; full sun	do not shear; tolerates wet soil, drought and road salt
black fruit in clusters, late summer to early fall	3b	adaptable to most soils and pH; full sun to partial shade	tolerates wet soils, drought and road salt; do not shear; native to Wisconsin
white fruit in summer attracts birds	3a	adaptable to most soils and pH; prefers moist, well-drained soil; tolerates wet soil	susceptible to twig blight and leaf spot; bright red, coral or yellow twigs in winter; intolerant to drought, wilts easily; do not shear; native to Wisconsin
edible, brown nut in fall, attracts wildlife	3a	adaptable to most soils and pH; moist, well-drained soil; full sun	plant in spring only; do not shear; native to Wisconsin; drought tolerant
not ornamental	4b-5a	adaptable to most soils and pH; full sun	drought and urban tolerant; do not shear; some cultivars have purple leaves; susceptible to verticillium wilt
black fruit	3a	adaptable to most soils and pH; full sun	urban tolerant; can shear into a formal hedge; but will not flower or fruit; tolerates dry, poor soils
not ornamental	4a	prefers an organic, fertile soil; adaptable to most soils and pH	prefers a moist, well-drained soil; urban tolerant; do not shear; native to Asia

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Primary Author: Dr. Laura Jull

Photos by: Dr. Laura Jull and Dr. Ed Hasselkus

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