## Recommended Shade Trees for Private Landscapes

The community forest of Robbinsdale is under a constant threat from various diseases and insects, most notably the emerald ash borer. Other commonly planted trees such as maples and lindens have been under increasing risk from severe droughts, storm damage, stem girdling roots and alternating periods of dry and wet years. When too many trees of only one genus (i.e. maples) or a single species (American elm) are planted, an exotic insect or disease can result in a devastating loss of tree canopy. Planting a more diverse array of species can help prevent such devastating losses of tree cover.

To assist residents interested in replacing a recently lost yard tree, or for those who would like to add canopy, a recommended tree list for private yards has been created. Some species may be more challenging to find in local nurseries than others, but selections have been improving as there is increasing awareness about the importance of species diversity. Maples (especially Autumn Blaze, Norway, and sugar) often seem to be the automatic go-to planting choice due to their showy fall colors, but they have been wildly overplanted and many maples suffer from a combination of drought and dysfunctional root systems. There are many other great tree species to try instead. The City partnered with Tree Trust for its first ever tree sale in Fall of 2023, and maples were specifically left off as a species choice for the various reasons listed above.

For each species listed below there is some general information about the tree, any noteworthy cultivars, and planting site recommendations. At the bottom is a list of some trees that are NOT recommended due to insect/disease/structural issues or because of excessive overplanting in recent years.

#### Large-sized Deciduous Trees (~50' tall or greater at maturity):

American & Hybrid Elms (disease resistant cultivars): Very hardy, fast growing, tolerant of a wide variety of sites & soils, Dutch elm disease resistant cultivars include 'Accolade', 'Cathedral', 'Discovery', 'Frontier', 'Jefferson', 'New Horizon', 'Patriot', 'St. Croix' (local Minnesota selection), 'Triumph' and 'Valley Forge'

**Amur Corktree**: Unique corky bark, fast growing, plant only male cultivars, 'His Majesty' is a good male selection developed by the U of M

**Basswood (American Linden)**: Excellent species for pollinators, casts dense shade, fast growing, make sure to plant the native linden and avoid nonnative little leaf linden or 'Greenspire' linden

**Bigtooth Aspen:** Native to Minnesota, very showy yellow foliage, fast growing, superior choice to the more well-known quaking aspen, may only be available from specialty nurseries such as Knecht's or Outback

**Black walnut:** Good wildlife value, attractive form, fast growing, highly site adaptable, edible nuts, avoid planting near gardens or tomatoes, likely hard to come by in the nursery trade due to taproot

**Eastern Cottonwood (males only):** Male cottonwoods do not produce the maligned cottony seed, very fast growing, plant away from pavement or structures and with plenty of space, valuable for bees & pollinators, 'Siouxland Poplar' a commonly planted male cottonwood selection

**Ginkgo:** Pyramidal growth form, highly adaptable species, deicing salt tolerant, ancient plant family, unique fan-shaped leaf, yellow in fall, 'Autumn Gold', 'Magyar' and 'Princeton Sentry' are all common male cultivars

**Hackberry:** Very drought tolerant, fast growing, corky bark, excellent wintertime berry crops for birds, good replacement for diseased elms

**Hickory, Bitternut:** Native to southeast into central Minnesota, good wildlife value, smooth bark, strong wood, likely only available from specialty nurseries such as Knecht's or Outback

**Hickory, Shagbark:** Native to southeast Minnesota, unique shaggy bark, excellent wildlife value, edible nuts, likely only available from specialty nurseries such as Knecht's or Outback

**Honeylocust:** Fast growing, diffuse shade, small leaflets, low pruning maintenance, strong wood, cultivars include 'Shademaster', 'Imperial', 'Northern Acclaim', 'Skyline', 'Streetkeeper' and 'Sunburst'

**Kentucky Coffeetree:** Highly recommended, unique scaly bark, huge leaf, free of insect or disease problems, fast growing once established, coarse branching lets in wintertime sun, 'Expresso' is a common male cultivar

Exclamation Planetree: London planetree cultivar, closely related to sycamores, unique fast-growing

Northern Catalpa: "Magnolia of the North", attractive white spring flowers, huge leaves, very fast growing

**Oak, Bur:** Corky bark, excellent tolerance for drought & urban soils but also wetter areas, resistant to oak wilt, great for wildlife, primary species of the oak savanna originally found in east central & SE Minnesota

**Oak, Chinkapin:** Originally native to southeast MN, sawtooth leaf margins, tolerant of alkaline (high pH) soils commonly found in suburban yards, likely only available from specialty nurseries such as Knecht's or Outback

Oak, Heritage: Cross between bur and English oak, relatively fast growing, tolerant of high pH soils

**Oak, Northern pin:** Originally widespread in the region, fast growing, scarlet red fall color, very drought tolerant, \*Note - different from the eastern pin oak, which is similar but often suffers from iron chlorosis (yellowing leaves in summer) found in higher pH soils

**Oak, Northern red:** One of the fastest growing oaks, grows well on most soil types, somewhat shade tolerant, terrific fall orange & red fall colors, a good species to plant instead of like maples or lindens

Oak, Shingle: Willow-like leaves, orange in fall, hardy to Zone 4, several mature specimens at the Arboretum,

**Oak, Swamp white:** Solid performing oak for the Twin Cities, pyramidal growth, moderately fast growing, unique papery bark on branches, tolerates both high water and drought conditions

Oak, White: Drought tolerant, truly majestic when mature, very durable structure but rather slow growing

Osage Orange: Unique species with few insect or disease issues, 'White Shield' a thornless cultivar

**River Birch:** Attractive papery reddish pink bark, fast growing, good drought tolerance, 'Heritage' is a common cultivar, best to plant as a single stem and not a clump

**Sycamore:** Rare in the Twin Cities but a good species to try if available, super-fast growing, unique patterned bark, couple large private front yard specimens in Robbinsdale exist, cousin to the London Planetree

**Tuliptree**: Tulip-like spring flowers, fast growing, rated for Zone 4 hardiness, uniquely large 4-lobed leaves, several planted by the city in boulevards in recent years, best in a more protected spot

## Medium-sized Deciduous Trees (~25' - 50' tall at maturity):

Amur Chokecherry: Attractive showy copper-colored papery bark adds striking winter interest, fast growing

Black Cherry: Attractive dark flaky bark, tall growing cherry, native species good for wildlife and pollinators

Ironwood: Attractive bark when young, hop-like seeds, good for shady sites but poor tolerance for deicing salt

**Japanese Tree Lilac:** Attractive smooth bark, very drought tolerant, white aromatic early summer flowers, compliant for growing under utility lines, several cultivars widely available, excellent hardy ornamental

Katsuratree: Heart shaped leaves, yellow in fall, adaptable, native to Japan, several planted in Robbinsdale

**Magnolia:** Showy large spring flowers, 4 varieties that are hardy to southern Minnesota climate include 'Star', 'Leonard Messel', 'Merrill' and 'Cucumber tree'

May Day Tree: Fragrant white flowers, yellow fall color, relatively uncommon, an "old-fashioned" ornamental

Ohio Buckeye: Orange-reddish fall color, rounded growth form, dark brown nut with an 'eye', good for wildlife

Regal Prince Oak: Very narrow/columnar oak cultivar for tight spaces, yellow fall color

**Yellowwood:** Hanging clusters of fragrant white flowers in mid-summer, yellow fall color, smooth bark

### <u>Small-sized Deciduous Trees (less than ~25' tall at maturity):</u>

Amur Maackia: Attractive foliage and mid-summer flowers, olive green bark, deicing salt tolerant

**Apples & Crabapples:** Many different cultivars in existence with different flower colors, 'Dolgo' a great cultivar for edible fruit & white spring flowers, 'Prairiefire' a solid performer with pink spring flowers, some cultivars like 'Spring Snow' are susceptible to apple scab disease which leads to early leaf drop

Blue Beech: Unique ridged trunk bark, native to shadier locations but will do just fine in sun

**Common Chokecherry:** Native to Minnesota, edible fruit, 'Canada red cherry' a common cultivar with red leaves in summer, susceptible to black knot stem canker so plant with caution

Diabolo Ninebark Tree - Small ornamental with birch-like papery white bark and reddish purple foliage

**Eastern Redbud:** Very showy lavender spring flowers, growth form is more horizontal than vertical, the 'Minnesota Strain' redbud cultivar is the best hardy choice locally

**Hawthorn:** Good wildlife value, numerous thornless or minimal thorn varieties exist with attractive fruit and flowers, 'Cockspur', 'Crimson Cloud', 'Russian', 'Snowbird' and 'Toba' are common options

**Fruit Cherries:** Several ornamental cold hardy cherry selections include Evans Bali, Mesabi, Meteor and North Star, attractive spring flowers, large crops of sweet/tart fruit by early to mid-summer

**Mountain Ash, American & Showy:** Showy orange fruit clusters, smooth dark gray bark, not true ashes (no risk from emerald ash borer), tolerant of deicing salts

**Pear:** Various fruiting cultivars available and hardy to our climate, often 2 pears required for cross pollination

Plum, American: Attractive flowers, native species, tasty edible fruit, use common plum over cultivars

Plum, Canada: Showy white flowers, site adaptable, white flowering cultivar 'Princess Kay' commonly planted

Plum, Newport: Attractive dark red foliage during mid-summer, U of M ornamental introduction

Nannyberry Viburnum: Native, large shrub/small tree, reddish fall color, hardy

Pagoda Dogwood: Native, good wildlife value, white flowers, good for moist soils or shadier sites

Serviceberries: Good berries for birds, numerous varieties & cultivars available, also called juneberries

Spring Wonder Cherry: Ornamental fruitless vase-shaped cherry with pink flowers, very cold hardy

**Sumac**, **Smooth & Staghorn:** Excellent scarlet red fall color, tolerant of dry sunny sites, resembles a small palm, 'smooth' has hairless branches and 'staghorn' has "fuzzy" branches

**Three Flowered Maple:** Brilliant red fall color, attractive papery bark, plant in a protected location

#### Coniferous (Evergreen) Trees (all sizes):

Baldcypress: Deciduous conifer (drops needles in fall), graceful foliage, a few large specimens in Twin Cities

Cedar, Eastern Red: Common across southern Minnesota, compact growth, extremely drought tolerant

Cedar, Northern White (Arborvitae): Very fragrant foliage, great for screening or windbreaks, shade tolerant

Dawn Redwood: Deciduous conifer, fern-like foliage, russet-brown in fall, fast growing once established

Fir, Balsam: Fragrant needles recalls aroma of Christmas, pyramidal shape, plant in a cool or shady location

Fir, Douglas: Native to western US, drought tolerant evergreen, conical spruce-like shape with few diseases

**Pine, Ponderosa**: Drought resistant, long needles, broad canopy so plant in an exposed open location

Pine, Red: Prefers sandy well drained soils, red flaky bark, good self-pruner, the State Tree of Minnesota

Pine, Scotch: Unique orange bark, fast growing, often exhibits a crooked trunk in the upper canopy

**Pine, White:** Classic spreading pine of the 'northwoods', will grow on most upland soil types, native range extends to southeast Minnesota, susceptible to blister rust so avoid planting near currants or gooseberries

**Spruce**, **Norway**: Good but large landscape species, unique "drooping" twigs/branchlets distinguishes this spruce apart from others, very hardy with few insect/disease problems and fast growing, native to Europe

**Tamarack (eastern larch):** Deciduous conifer, graceful summer form, brilliant orange-yellow fall color, will do best in wetter sites but needs full sun

# Trees species & cultivars that are NOT RECOMMENDED due to overplanting, specific health issues or for other reasons:

**Ash (Green, Black & White):** All are susceptible to the emerald ash borer (EAB) so avoid planting or transplanting, no longer sold in most nurseries due to EAB

**Buckthorn (illegal to plant):** Once planted as a hedge but now a noxious weed, highly invasive species that has overtaken woodlands, berries toxic to birds, if you have any please remove and replace!

**Elm, Princeton:** This elm cultivar exhibits a poor upright branching structure that often leads to broken stems and problematic storm damage even at a young age

**Little Leaf Linden (all cultivars)**: Overplanted, nonnative, messy due to insect feeding, readily suffers from stem girdling roots and Japanese beetle defoliation, poor branching structure, prone to annoying trunk sprouts

**Maple, Freeman:** Better known as cultivars the 'Autumn Blaze' or 'Sienna Glen', fast growing but produces a problematic upright branching structure highly prone to trunk breakage and storm damage; way overplanted, requires frequent structural pruning

**Maple, Norway:** Nonnative, potentially invasive, highly prone to frost cracks and stem decay, commonly exhibits protruding large spreading surface roots that make mowing a challenge

**Maple, Red:** Overplanted, prone to sunscald & drought stress, struggles in the heat & sun of suburban yards, thin bark easily damaged by lawn equipment

**Maple, Silver**: Very fast growing but overplanted, very messy, brittle branches, still a better choice than other maples; if chosen then plant 'Silver Queen' which has better branching structure and is seedless

**Maple, Sugar:** Great fall color but best to avoid since overplanted in cities statewide, poor tolerance for drought or wetness. If must plant then do so where roots will remain cooler (i.e. partial shade) or select the 'Highland Park' hybrid which is a cross between sugar and the nonnative bigtooth maple

Paper Birch & other white barked birches: Short lived, not adapted for the heat & sun of suburban yards, susceptible to drought which causes stress and attracts infestation by the bronze birch borer

**Spruce, Black Hills:** Cultivar of the white spruce with solid drought tolerance; however, way overplanted with increasing incidences of problematic needlecast diseases so plant only in exposed sites with good exposure

**Spruce, Colorado:** Overplanted, susceptible to needlecast & canker diseases due to our humid climate, avoid at all costs unless planting in a highly exposed area with frequent wind

#### Additional Notes:

\*Many young deciduous trees, especially fruit trees, need winter bark protection from rabbits and voles – wrap a white tree guard/bark protector or small trunk fence around the trunk from November through April but remove during the growing season since bark is photosynthetic

\*The Asian long-horned beetle, an exotic insect that has not yet been found in Minnesota, targets maples and may be the "next" emerald ash borer.