

**OLMSTED SOIL & WATER CONSERVATION DISTRICT  
DESCRIPTION OF TREES AVAILABLE 2017**

**CONIFERS**

**ARBORVITAE, Techny (Thuja occidentalis 'Techny')**

- Characteristics:** Dark green dense foliage. Very winter hardy.  
**Growth Habits:** Growth rate is rapid with heights 15 to 25 feet; crown spread 6 to 20 feet.  
**Tolerance:** Full sun and partial sun.  
**Soils:** Prefers well-drained, moist soils. Will tolerate poor drainage.  
**Uses:** Good dense hedge or screen; wildlife.



**WHITE PINE (Pinus strobes 'Eastern')**

- Characteristics:** In fascicles (groups) of fives; 3 to 5 inch needles, bluish-green color, soft and flexible. 4 to 8 inches slightly curved cones, Bark is thin, smooth light gray or greenish-gray becoming darker gray and rougher with age.  
**Growth Habits:** Growth rate is rapid; maturity age is 200 to 300 plus years, height 80 to 100 feet, with a crown spread of 50 to 80 feet.  
**Tolerance:** Intermediate shade tolerance (most tolerant pine).  
**Soils:** Prefers moist well-drained soils.  
**Uses:** Shelterbelts, wildlife cover, pulpwood, saw logs. Not recommended for field windbreaks.



**NORWAY PINE (Pinus resinosa 'Red Pine')**

- Characteristics:** In fascicles (groups) of twos; 4 to 6 inch long flexible needles, dark yellow-green in color; 2 inch cones; bark is thin, light reddish-brown.  
**Growth Habits:** Growth is moderate to rapid, maturity age is 200 to 300 plus years, height 40 to 60 plus feet, and crown spread is 25 to 30 feet.  
**Tolerance:** Intolerant of shade.  
**Soils:** Prefers light acid, sandy soils; will grow in poorer soils than White Pine but not in as poor a soil as Jack Pine. Prefers moist well-drained soils but will tolerate dry conditions.  
**Uses:** Shelterbelts, X-mas trees, wildlife cover, pulpwood, sawlogs. Not recommended for field windbreaks.



**BLACK HILLS SPRUCE (Picea glauca var. densata)**

- Characteristics:** 1/3 to 3/4 inch needles; blue-green color, 1 1/2 to 2 inch dark cone, bark is ash brown.  
**Growth Habits:** Rate is slow at first, after 5 to 8 years rate becomes rapid. Long-lived maturity, heights of 30 to 60 feet and crown spread of 15 to 25 feet.  
**Tolerance:** Full sun to partial sun.  
**Soils:** Prefers moist, well-drained porous soils, but will grow on other soils if moisture is available.  
**Uses:** Windbreaks, wildlife, nesting, roosting, winter cover, food source, and ornamental plantings.



### **COLORADO SPRUCE (Picea Pungens 'Blue Spruce')**

- Characteristics:** Needles are 3/4 to 1 1/4 inches, color variable from dull green, blue-green, to silvery-blue. Cones are 2 1/2 to 4 inches long and light yellow-brown or tan. Bark is ash-brown.
- Growth Habits:** Rate is slow, (slowest of spruces); maturity is 200 plus years, height can be 30 to 65 plus feet, crown spread can be 20 to 30 feet.
- Tolerance:** Moderate tolerance of shade (least tolerant spruce).
- Soils:** Prefers medium to fine textured soils, will tolerate heavy clays. Prefers moist well-drained soils but will tolerate dry conditions.
- Uses:** Farmstead shelterbelts, wildlife, X-mas trees and ornamental plantings.



### **NORWAY SPRUCE (Picea abies)**

- Characteristics:** Needles are 1/2 to 1 inch, deep shiny green, pointed tips; cones are 4 to 7 inches (longest of spruces); bark is thin, grayish-brown.
- Growth Habits:** Growth rate is rapid, (fastest of spruces) maturity is 200 plus years, height 80 to 100 plus feet, crown spread can reach 20 to 35 feet..
- Tolerance:** Tolerant of shade.
- Soils:** Prefers medium to fine textured soils. Prefers moist well-drained soils.
- Uses:** Farmstead shelterbelts, field windbreaks, X-mas trees, wildlife, pulp and sawlogs.



### **WHITE SPRUCE (Picea glauca)**

- Characteristics:** Needles 1/3 to 3/4 inch, blue-green in color, cones 1 to 2 1/2 inch long, bark is thin, reddish brown to gray.
- Growth Habits:** Growth is fairly rapid. Maturity age could be 100 to 200 years, height 40 to 80 feet, and crown spread 20 to 30 feet.
- Tolerance:** Shade tolerant.
- Soils:** Grows on variety of soils, prefers medium and fine textured soils. Prefers moist well-drained soils.
- Uses:** Shelterbelts (not recommended for field windbreaks), X-mas trees (leading species), wildlife (very good) nesting, cover, dens, pulpwood, saw timber and specimen tree.



### **CANAAN FIR (Abies balsamea var phanerolepis)**

- Characteristics:** Uniform, short ascending branches form a tightly pyramidal to conical formal habit; 3/4 - 1 1/2 inch long, flat needles are lustrous dark green above with white stomatic bands below; dark violet cones when young, turn gray-brown at maturity.
- Growth Habits:** 6 to 7 foot tree in 7-9 years. Maturity height 40 to 50 feet, with crown spread 20 to 25 feet.
- Tolerance:** Sun to partial shade.
- Soils:** Tolerate soils with less than perfect drainage; it performs best in deep, well-drained loam with ample moisture.
- Uses:** Screening, group planting, formal appearance makes it a suitable accent plant. Christmas trees.



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## LARGE DECIDUOUS

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### CHERRY, BLACK ( *Prunus Serotina* )

- Characteristics:** Bark is smooth and brown becoming red-gray, shaggy, and peeling on older trees. Leaf: Alternate, 2 to 5 inches long, oval to oblong, lance-shaped. Margins are finely serrated, dark green and lustrous above, paler below; usually with a dense yellowish-brown, sometimes white pubescence along mid-rib. Flower: White racemes appear when leaves are half to newly formed. Flowers May to July. Fruit: Flesh is dark purple, almost black when ripe, with a bitter-sweet taste. Matures June to October.
- Growth Habits:** Growth is rapid, maturity height is 70 to 100 feet, and rounded crown-spread can be 35-50 feet.
- Tolerance:** Full sun through partial sun.
- Soils:** Prefers sandy loam through clay.
- Uses:** A native tree valued for its lumber.



### HACKBERRY ( *Celtis occidentalis* )

- Characteristics:** Simple, singly toothed heart shaped base leaves. Twigs are zigzag, reddish brown; bark is gray, corky warts or ridges on young trees, fine bark layers.
- Growth Habits:** Growth is rapid, maturity age is 150 to 200 years, height is 40 to 60 feet, and crown-spread can be 30-50 feet.
- Tolerance:** Intermediate to tolerant to shade.
- Soils:** Prefers well-drained moist soils but will tolerate both moderately wet and dry conditions.
- Uses:** Used as farmstead shelterbelts, not recommended for field windbreaks, good for wildlife, and sawlogs, shade and street planting.



### LINDEN, AMERICAN ( *Tilia americana* )

- Characteristics:** Simple, broad-cordate or heart-shaped, oblique base leaves.
- Growth Habits:** Pyramidal when young, becoming rounded when mature. Height is 50 to 70 feet with a crown spread of 30-50 feet.
- Tolerance:** Full sun, but will tolerate shade.
- Soils:** Grows well on deep, fertile, well-drained loam and clay soils. Flood plain tree.
- Uses:** Medium to tall tree for farmstead windbreaks, and riparian plantings.



### RUBRUM MAPLE ( 'Red Maple' *Acer rubrum* )

- Characteristics:** 3-lobed leaves are bright green. Brilliant yellow, orange and red fall color. Red colored twigs, bark is smooth and gray on young trees.
- Growth Habits:** Growth is moderate to rapid; maturity age is 70 to 80 years, and height 40 to 60 feet. Crown spread is 30 to 50 feet.
- Tolerance:** Requires full sun for best effect. Intermediate to shade.
- Soils:** Will grow on coarse sands to fine clays, common in swampy areas. Prefers moist well-drained soils but tolerates wide range of moisture conditions. Does not tolerate poorly aerated soils or high pH.
- Uses:** Farmstead shelterbelts, not recommended for field windbreaks very good for wildlife, maple syrup, sawlogs.



### SILVER MAPLE (*Acer saccharinum*)

- Characteristics:** Leaves are five lobed, light green in color with a silvery lower surface. Bark is gray.
- Growth Habits:** Rate of growth is very rapid, maturity could be 50 to 100 plus years, height could reach 40 to 70 plus, crown spread can reach 30-50 feet plus.
- Tolerance:** Intermediate tolerance to shade.
- Soils:** Prefers moderately coarse sandy loams to fine sandy and silty clays, common in swampy areas. Prefers moist well-drained soils but will tolerate a wide range of moisture conditions.
- Uses:** Should be a temporary tree in a shelterbelt unless considerable space is given at least 40 feet between rows. Not recommended for windbreaks. Very good for wildlife. Commonly planted for shade.



### SUGAR MAPLE (*Acer saccharum*)

- Characteristics:** Leaves are simple, usually five lobed, bright green turning yellow to orange or scarlet in the fall. Twigs are brownish to dark brown and sharply pointed, bark is gray.
- Growth Habits:** Rate is slow to moderate, maturity age is 75 to 150 plus years, height is 40 to 70 feet, crown spread can reach 30 to 50 feet.
- Tolerance:** Very tolerant of shade.
- Soils:** Prefers loam and clay loams, short lived on sandy soils, prefers well-drained moist soils will not tolerate poor drainage.
- Uses:** Not recommended for shelterbelts or windbreaks, excellent for wildlife, sawlogs, veneer, and maple syrup. Commonly planted for ornamental and street plantings.



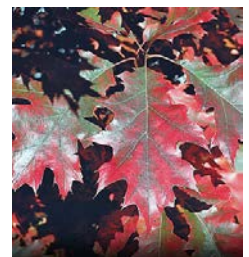
### BUR OAK (*Quercus macrocarpa*)

- Characteristics:** Leaves are simple, large rounded lobes. Fall color is yellow-green to brown.
- Growth Habits:** Slow, maturity, age 200 to 300 years. Height is 50 to 80 feet; crown spread 40 to 80 feet.
- Tolerance:** Full sun, shade tolerance is intermediate.
- Soils:** Prefers well-drained moist loamy soils but will tolerate wide range of soils and conditions.
- Uses:** Not recommended for shelterbelts or windbreaks. Good for wildlife and saw logs.



### RED OAK (*Quercus rubra*)

- Characteristics:** Leaves are large simple with sharply pointed lobes. Leaves are dark green, quite glossy and develop excellent fall colors from orange to various shades of red.
- Growth Habits:** Growth is rapid; maturity age 200 to 300 years. Crown 40 to 80 feet, height 50 to 70 feet.
- Tolerance:** Intermediate to shade.
- Soils:** Prefers well-drained moist soils; fine to medium textured soils.
- Uses:** Not recommended unless wildlife is a prime consideration. Wildlife and sawlogs, also a specimen tree.



### **SWAMP WHITE OAK (Quercus bicolor)**

- Characteristics:** Simple, lobed; tips of lobes rounded, greenish color above and silvery green beneath. Fall color is yellowish tan to orange brown.
- Growth Habits:** Slow growing; maturity approximately 300 years; height 40 to 60 feet; crown spread 30 to 60 feet.
- Tolerance:** Intermediate tolerance to shade.
- Soils:** Prefers moist to wet moderately drained but tolerates poorly drained soils.
- Uses:** Not recommended for shelterbelts and/or windbreaks. Excellent for wildlife; saw logs.



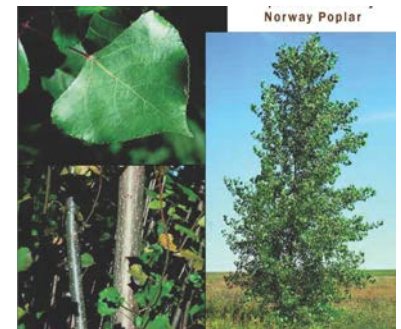
### **WHITE OAK (Quercus alba)**

- Characteristics:** Medium green leaves are 5-6" long and have distinct lobes with rounded sinuses and tips turning red or brown in the fall. Bark is light gray color.
- Growth Habits:** Moderate growth rate; maturity 350 to 400 years; height 50 to 70 feet; crown spread 40 to 80 feet.
- Tolerance:** Intermediate tolerance to shade.
- Soils:** Prefers moist well-drained soils but will tolerate moderately dry soils.
- Uses:** Not recommended for shelterbelts and or windbreaks unless wildlife is prime consideration. Excellent for wildlife; sawlogs.



### **NORWAY POPLAR (Populus deltoides x nigra)**

- Characteristics:** Simple yellow-green, 3 to 6 inch long leaves, twigs are stout and angular, yellowish-brown, bark is greenish-yellow.
- Growth Habits:** Rate is very rapid; maturity age can reach 70 plus years. Height can be 80 to 100 plus feet, crown spread can reach 80 to 100 feet.
- Tolerance:** Intolerant of shade.
- Soils:** Prefers moist well-drained soils.
- Uses:** Of poplar species the Norway is recommended for shelterbelts or field windbreaks, however all species have a short life-span and wide spreading crown. Excellent for wildlife, pulpwood and saw logs.



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## SMALL DECIDUOUS

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### **RED SPLENDOR CRAB (Malus baccata)**

- Characteristics:** The leaves are single; green in summer turning purple in fall. Pink flowers in the spring and red fruit (apple).
- Growth Habits:** Growth is rapid, small to medium tree, reaches 20-25 feet, crown spread of 20 feet.
- Tolerance:** Requires sun. Winter hardy and drought resistant.
- Soils:** Prefers sandy through clay loamy soils. Does best in moist well-drained soils.
- Uses:** Windbreaks, wildlife.



### **MIDWEST CRAB (Malus baccata var. Mandshurica)**

- Characteristics:** The leaves are alternate, simple, ovate to oval, finely serrated to irregularly toothed or lobed, and usually dark or olive green above and paler green below. The bark is ridged to scaly, dark gray or reddish gray. The small apples are 1/4 to 1/2 inch in diameter. The white blossoms are especially attractive during the spring.
- Growth Habits:** Moderately rapid growing medium-sized tree reaching heights of 20 feet. It will have a rounded crown when open and will maintain its branches close to the ground. It is extremely hardy and disease resistant.
- Tolerance:** Sun to partial shade.
- Soils:** No particular soil preferences except soil should be well drained.
- Uses:** The fruit is a favorite food of the ruffed grouse, pheasant, and woodpecker. Countless other birds rely upon the fruit, seed, buds, nectar, and flowers for food. Deer are drawn to crabapple trees for the fruit and to browse any new growth. Can be used in farmstead windbreaks.



### **AMERICAN PLUM (Prunus americana)**

- Characteristics:** Leaves are simple, sharply toothed, dark-green paler underneath, turning pale golden yellow in fall; twigs are red-brown armed with short thorn-like spur branches. Bark is quite scaly on older plants. White fragrant flowers in April and May.
- Growth Habits:** Growth rate is fast, 35 to 65 years maturity, height can reach 20 to 25 feet, and crown spread can be 15 to 25 feet.
- Tolerance:** Requires well-drained soil and a sunny location.
- Soils:** Prefers deep prairie loams, sandy loams will tolerate some drought.
- Uses:** Not recommended for shelterbelts because of root suckering habit, good for wildlife.



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## SHRUBS

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### CHOKEBERRY (*Aronia melanocarpa*)

- Characteristics:** Open, upright, spreading, rounded but leggy, deciduous shrub. Features clusters of 5-petaled, white flowers in spring which are followed in early autumn by blackish purple, blueberry-sized fruits. Lustrous, dark green foliage turns an attractive purplish red in the fall.
- Growth Habits:** Rate is slow; height can reach 3 to 6 feet. Crown spread equals height.
- Tolerance:** Full sun through partial sun.
- Soils:** Sand through Clay
- Uses:** Jams, jellies, wildlife.



### AMERICAN CRANBERRY (*Viburnum trilobum*)

- Characteristics:** Leaves are lobed; 2 to 4 inches long, dark green turning bright red in fall, white flowers in late May. Tart, juicy red fruit.
- Growth Habits:** Rate is moderate; height can reach 8 to 12 feet. Crown spread equals height.
- Tolerance:** Shade, sun, partial sun tolerant.
- Soils:** Not particular but prefers cool conditions on moist, well-drained soils.
- Uses:** Questionable for farmstead shelterbelts, might be subject to snow damage. Good for wildlife or informal hedge or screen. Fruit is edible but sharply acid; used for jelly and juice.



### GRAY DOGWOOD (*Cornus Racemosa*)

- Characteristics:** Leaves are opposite; smooth edges; 3 to 5 veins that tend to follow leaf edges toward tip, 2 -3" clusters of creamy white flowers in late spring and white berries on red pedicels in late summer. Fall coloration is a deep maroon.
- Growth Habits:** Height can reach 6-10 feet, width of 6-8 feet.
- Tolerance:** Well adapted to either full sun or light shade. Open sites often found shrub masses of 5-6' in height while in shade it is often taller, but less dense.
- Soils:** Tolerant to wet, dry, or low fertility soils.
- Uses:** Wildlife, fruits are edible by ring-necked pheasant, ruffed grouse, and sharptail grouse.



### RED OISER DOGWOOD (*Cornus stolonifera*)

- Characteristics:** Leaves are simple with distinct veins, turn purplish to red in fall. It has 2-3" clusters of white flowers in late spring. Fruit are small white berries; twigs are red which becomes brighter in late winter.
- Growth Habits:** Rate is moderate; height can reach up to 10 feet. Crown spread is up to 12 feet.
- Tolerance:** Does well in either full sun or light shade.
- Soils:** Prefers wetter sites, but is tolerant of diverse soil types.
- Uses:** Shelterbelts are not recommended because of root suckering. Good for wildlife.



### **JUNEBERRY ('Saskatoon, Serviceberry' Amelanchier alnifolia)**

- Characteristics:** Leaves are simple, oval, ¾ to 2 ½" long. White flowers in early spring prior to leafing out. Edible, blue-black fruit ripens in mid summer. Foliage develops an excellent yellow-orange to red-purple fall coloration.
- Growth Habits:** Rate of growth is moderate. Height usually is 6 to 8 feet, may reach 20-25 feet. Crown spread is 6 to 8 feet.
- Tolerance:** Does best in full sun, but will grow in partial shade; fewer fruits and flowers will be produced in the shade.
- Soils:** Requires well-drained soil.
- Uses:** Not recommended for shelterbelts. Wildlife, fruits are edible but bland and normally taken by birds.



### **LILAC/COMMON PURPLE (syringa vulgaris)**

- Characteristics:** Attractive, winter-hardy; leaves are smooth dark blue-green in color; fragrant purple flowers in the spring.
- Growth Habits:** Medium to tall, may reach heights 10 - 12 feet with crown spread of 10-12 feet.
- Tolerance:** Requires full sun for best performance, will tolerate partial shade.
- Soils:** Best on moist, well-drained soils.
- Uses:** Windbreaks, good for wildlife.



### **NINEBARK (Physocarpus Opulifolius)**

- Characteristics:** Upright, spreading shrub with stiffly recurved branches, rounded and dense medium green in foliage. White umbrella-like flower clusters in the spring. Fruit: russet pod, dense clusters in the late fall and a golden yellow fall leaf color.
- Growth Habits:** Rate is rapid; height 5 - 10 foot. Crown spread 6 to 10 foot.
- Tolerance:** Full sun. Moderately tolerant of shade.
- Soils:** Will grow in a variety of soils.
- Uses:** Windbreaks and shelterbelts.



**FERTILIZER PACKETS:** Right Start Packets provide your plantings with a twelve-month release 16-8-8 plant food giving your trees extra nutrients to assure a good start.

PLANTSKYDD Repellent: Granular, Pre-mixed, Powder, 1.32 Gallon Protects your trees from deer, rabbits and small critters.

**NOTE: THIS IS GENERAL INFORMATION ABOUT EACH TREE AND GROWTH CHARACTERISTICS. LIFE EXPECTANCY WILL DEPEND ON THE CARE AND WEATHER CONDITIONS.**

**DISCLAIMER:  
THE OLMSTED SOIL AND WATER CONSERVATION DISTRICT MAKES NO GUARANTEE ON NURSERY STOCK THAT IS EITHER EXPRESSED OR IMPLIED.**