

### **xx.xx.xxx Tree Species.**

The following tables provides information on selected species of native and non-native trees suitable for replanting in open space, forested, street tree, and ornamental landscape areas. Trees listed in the Native Trees table are most appropriate for use in native restoration areas, though some of the species are also appropriate for ornamental landscapes or as street trees.

Trees listed in the Non-Native Trees table are best used in ornamental landscapes. Some of the non-native trees are also appropriate for street tree use. In general, non-native trees should not be used in native restoration areas, though there are a few exceptions. Non-native trees that *are* considered appropriate in native restoration areas are noted in the table; however, some jurisdictions may prohibit all non-natives in native restoration areas.

All species listed are suited to one or more of the climate conditions found in the Pacific Northwest. Some of the species are best for wet or boggy sites and will not perform well on drier sites without plentiful supplemental irrigation. These trees are not recommended for landscapes where water conservation is a project goal, unless the site contains wetland or boggy areas with year-round moist soil conditions.

When choosing between native and non-native species, the landscape function of the plant materials should be considered. If the goal is to re-establish or supplement plantings in a riparian or wetland setting, the plant palette should be native. If the goal is to provide an open space or forested area with high stormwater management function, then a mix of native and non-native trees may be most appropriate. This is particularly true in suburban, urban, and subdivision settings outside of wetland or riparian areas and their buffers. The *LID Technical Guidance Manual for Puget Sound* (2005, pp. 58-59) provides the following plant palette recommendations for open space/forested areas to provide optimal stormwater management function:

- In the Puget Sound, coniferous evergreen trees provide the most year-round stormwater management function
- The plant palette should include a mix of species to minimize potential for plant disease
- Provide a multi-layer canopy of large trees, small trees, and shrubs. The mix should be approximately 50% large trees and 50% small to medium trees and shrubs
- A ratio of 2 evergreen trees to 1 deciduous tree will approximate native forest cover conditions for many Puget Sound sites that were previously forested. Unless native-only species are required for the site, it is acceptable to use non-native species to create this type of forest cover condition.

The tree lists provided here are for guidance only and are not intended to be all-inclusive. Other tree species may be utilized where appropriate when recommended by a professional forester, certified arborist, or licensed landscape architect. Species availability and quantity may be limited in some cases. For native species, it is best to coordinate in advance with nurseries specializing in native plants.

For bioretention areas, a complete list of appropriate plants can be found in Appendix 3 of the *LID Technical Guidance Manual for Puget Sound* (2005 or most recent).

Native Trees			
Species Scientific Name	Canopy Size Category <sup>1</sup>	Street Tree?	Characteristics
Grand fir <i>Abies grandis</i>	Large	No	Coniferous tree achieving heights of up to 150 feet. Tolerant of a variety of soil conditions, similar needs as Douglas fir.
Vine maple <i>Acer circinatum</i>	Small	No	Deciduous tree typically reaching heights of 5-35 feet. Treelike in open sun, crooked sprawling and viselike in shade. Good fall color. Tolerant of a wide variety of soil conditions. Prefers moist soils, but can tolerate drier conditions once established.
Big leaf maple <i>Acer macrophyllum</i>	Large	No	Deciduous tree. Form varies widely based upon competition and soil conditions. Typically 20 to 30 feet high when grow in open conditions but can reach heights of 80 feet or more in the forest. Good fall color. Tolerant of a wide variety of soil conditions. Similar environmental needs as Douglas fir. Available only in 5-gallon or smaller sizes
Red Alder, Oregon Alder, Western Alder <i>Alnus rubra</i>	Medium	No	Deciduous tree to 50 feet. Best in restoration settings. Mature trees can be very attractive, especially in naturalized settings. Beautiful, mottled grey bark.
Serviceberry <i>Amelanchier alnifolia</i>	Small	No	Deciduous tree seldom larger than 20 feet in height. Tolerant of a wide variety of soil conditions. Fruit very valuable to wildlife.
Madrone <i>Arbutus menziessii</i>	Medium	No	Attractive tree, but very difficult to establish. Expect high losses. Review plant establishment notes at <a href="http://www.soundnativeplants.com">www.soundnativeplants.com</a> before considering. Do not provide supplemental water once established.
Weeping nootka cypress <i>Chamaecyparis nootkatensis 'Pendula'</i>	Small	No	Narrow (5'), pyramidal evergreen conifer. Main trunk grows straight up with branchlets that weep straight down from drooping branches.
Black hawthorn <i>Crataegus douglasii</i>	Small	No	Deciduous tree up to 30 feet in height. Scarlet fruit. Prefers highly fertile soil and grows best in moist, open areas.
Oregon Ash <i>Fraxinus latifolia</i>	Medium	No	Deciduous tree up to 80 feet in height. Prefers moist or wet sites with rich soils. Works well for streamside and wetland plantings. Best in natural or restoration plantings and generally not appropriate for ornamental landscaping applications.
Sitka spruce <i>Picea sitchensis</i>	Large	No	Coniferous tree achieving 80-160 feet. Best in moist areas.
Shore pine <i>Pinus contorta</i>	Medium	No	Coniferous tree to 35 feet tall. Can be trained if a more manicured look is desired.
Western white pine <i>Pinus monticola</i>	Medium	No	Coniferous tree to 60 feet tall. Soil adaptable. Soft blue-green needles 2 inches long. Cones 5-10 inches long. Great specimen tree.
Black cottonwood <i>Populus balsamifera</i> spp. <i>trichocarpa</i>	Large	No	Heavy-limbed deciduous tree, brittle wood. Best in moist, native plantings where space is plentiful.

Native Trees			
Species Scientific Name	Canopy Size Category <sup>1</sup>	Street Tree?	Characteristics
Choke Cherry <i>Prunus virginiana</i>	Medium	No	Needs well drained soil. Usually upright branching with an oval crown. Fragrant white flowers.
Douglas fir <i>Pseudotsuga menziesii</i>	Large	No	Fast growing, long lived coniferous tree growing to height of 150 feet or more. Prefers drier sites, but tolerates a wide variety of soil conditions.
Western crabapple <i>Pyrus (Malus) fusca</i>	Small	No	Best in native or restoration plantings and generally not appropriate for ornamental landscape use.
Cascara <i>Rhamnus purshiana</i>	Medium	No	Deciduous tree that produces black berries. Best in restoration settings.
Western red cedar <i>Thuja plicata</i>	Large	No	Coniferous tree growing to height of 150 feet or more. Best under moist, shaded conditions, but tolerates a wide variety of soil conditions once established.
Western hemlock <i>Tsuga heterophylla</i>	Large	No	Fairly fast grower, Picturesque and also makes a good background, screen, or hedge.
Notes:			
1. Canopy size categories:			
a. Large: mature canopy area > 1,250 square feet			
b. Medium: mature canopy area 450 to 1,250 square feet			
c. Small: mature canopy area < 450 square feet			

Non-Native Trees			
Species Scientific Name	Canopy Size Category <sup>1</sup>	Street Tree?	Characteristics
Japanese Maple <i>Acer palmatum</i>	Small	Yes	Common deciduous landscape tree. Slow growing; typically grow to no larger than 20 feet in height. Well suited for small lot use. Popular varieties 'Atropurpureum' and 'Bloodgood'.
Norway Maple (varieties) <i>Acer platanoides</i>	Large	Yes	Common deciduous landscape tree. Typically achieves heights of 50 to 60 feet. Care must be taken near sidewalks and drives as roots can become a problem.
Red Maple <i>Acer rubrum</i>	Small	Yes	Common deciduous landscape tree. Varieties 'Armstrong' and 'Red Sunset' are recommended for street tree use. Fast growing, typically to 40 feet with brilliant fall color. May be appropriate in a native setting
Whitebarked Himalayan birch <i>Betula utilis</i> var. <i>jacquemontii</i>	Medium	No	Prefers rich, moist, well drained soil. Narrow tree with oval crown. Brilliant white bark. Yellow fall color.

Non-Native Trees			
Species Scientific Name	Canopy Size Category <sup>1</sup>	Street Tree?	Characteristics
Incense cedar <i>Calocedrus decurrens</i>	Large	No	Coniferous tree achieving height of 150 feet. Drought and wind resistant. Slow growth. Native to California, Nevada, Oregon. Appropriate for native restoration areas.
European hornbeam <i>Carpinus betulus</i>	Medium	Yes	Deciduous tree growing to 40 feet. Variety 'Fastigiata' recommended for street tree use.
Eastern redbud <i>Cercis canadensis</i>	Medium	Yes	Tolerates any soil but wet. Short trunk with spreading branches. Flowers appear before leaves. Heart-shaped leaves emerge reddish and trunk dark green. Yellow fall color.
Katsura Tree <i>Cercidiphyllum japonicum</i>	Medium	Yes	Deciduous tree, slow growing to 40 feet. Good fall color. Well suited for small lot use.
Hybrid Western dogwood 'Eddie's White Wonder' <i>Cornus nutallii x florida</i>	Small	Yes	Hybrid of <i>Cornus florida</i> and the native western dogwood species. May be appropriate in a native setting. More successful than the native species for transplanting. Deciduous tree up to 30 feet in height. Prefers well-drained sites and partial shade. Could work well as a supplemental planting under a canopy of larger trees.
Washington hawthorn <i>Crataegus laevigata</i>	Small	Yes	Small deciduous tree, typically no larger than 25 feet. Well suited for small lot use with good fall color..
English hawthorn <i>Crataegus phaenopyrum</i>	Small	Yes	Small deciduous tree, typically no larger than 25 feet. Well suited for small lot use, but can be prone to disease.
White Ash (varieties) <i>Fraxinus americana</i>	Medium	Yes	Prefers deep, moist, well drained soil. Green leaflets turn to purple shades. Fall color may include yellow, orange, red, and dark purple.
Green ash <i>Fraxinus pennsylvanica</i>	Medium	Yes	Fast growing deciduous tree with height of 40 feet. For street tree use, seedless varieties such as 'Marshall' are preferred.
Honey locust <i>Gleditsia triacanthos</i>	Medium	Yes	Fast growing deciduous tree with height of 40 feet. Varieties 'Shademaster', 'Skyline', and 'Moraine' are preferred varieties.
American sweet gum <i>Liquidambar styraciflua</i>	Medium	Yes	Common landscape tree very tolerant of urban conditions. Achieves heights of 60 feet with good fall color.
Tulip tree <i>Liriodendron tulipifera</i>	Large	No	Large deciduous tree achieving height of up to 60 feet. Very tolerant of urban conditions.
Crabapple <i>Malus sp.</i>	Medium	Yes	'Red Jewel', 'Jade', 'Snowdrop' are good varieties.
Dawn redwood <i>Metasequoia glyptostroboides</i>	Large	No	A deciduous conifer. Fast growing. Bright green fern-like needles. Fall color ranges from bronze to apricot.
Sourwood <i>Oxydendron arboreum</i>	Medium	Yes	Medium deciduous tree with good fall color. Achieves height of 18 feet.
Yoshino flowering cherry <i>Prunus yedoensis</i>	Medium	Yes	Medium sized deciduous tree achieving height of 40 feet. Fast growing.

Non-Native Trees			
Species Scientific Name	Canopy Size Category <sup>1</sup>	Street Tree?	Characteristics
Flowering callery pear <i>Pyrus calleryana</i>	Medium	Yes	Widely used in commercial landscaping. Deciduous tree 25 to feet in height. Well suited to urban conditions. Varieties for street tree use include 'Aristocrat', 'Bradford', 'Capital', 'Chanticleer', 'Redspire' and 'Whitehouse'.
Pin oak <i>Quercus palustris</i>	Large	No	Deciduous tree achieving heights of 50 to 80 feet. Better suited to park or large lot use due to size.
Scarlet oak <i>Quercus coccinea</i>	Large	No	Oval to round canopy shape with high, open branching pattern. Bright green leaves turn scarlet in fall. Deep roots allow for lawn or perennial plant growth beneath canopy.
English oak <i>Quercus robur</i>	Large	No	Prefers well drained sites. Open form. Deep green leaves with yellow-brown fall color. Needs ample space.
Giant Sequoia <i>Sequoiadendron giganteum</i>	Large	No	A good choice in a landscape with adequate space.
Japanese snowbell <i>Styrax japonicus</i>	Medium	Yes	Needs well drained soil and ample water. Medium green foliage with yellow fall color. Blooms in June with fragrant white bell-shaped flowers.
Little Leaf Linden <i>Tilia cordata</i>	Small	Yes	Small deciduous tree reaching height of 30 feet. Tolerant of urban conditions.
Sawleaf zelkova <i>Zelkova serrata</i>	Large	No	Water well initially to establish deep roots. Once established, very drought and wind tolerant. Fall foliage varies from yellow to dark red. Smooth gray bark.
<p>Notes:</p> <ol style="list-style-type: none"> <li>1. Canopy size categories: <ol style="list-style-type: none"> <li>a. Large: mature canopy area &gt; 1,250 square feet</li> <li>b. Medium: mature canopy area 450 to 1,250 square feet</li> <li>c. Small: mature canopy area &lt; 450 square feet</li> </ol> </li> </ol>			