

Tree and Landscaping Manual - Plant Materials



City of Portland, Oregon - Bureau of Development Services

1900 SW Fourth Avenue · Portland, Oregon 97201 | 503-823-7300 | www.portlandoregon.gov/bds



Plant Materials and the Suggested Plant Lists

General

Portland maintains several Plant Lists:

- *Suggested Plant Lists for Required Landscaping* are part of the Tree and Landscaping Manual, and apply to landscaping required by the Zoning Code.
- *Portland Plant Lists* are primarily lists of plants native to Portland, but also include the Nuisance and Prohibited Plant Lists. These lists were first developed for use in the city's Environmental Zones.
- *Street Tree Lists* are maintained by the Urban Forester, and apply to trees planted in the right-of-way. The Zoning Code generally does not apply to the right-of-way.
- Stormwater Management Manual, maintained by the Bureau of Environmental Services.

For required landscaping, you may use any plants not on the Nuisance and Prohibited Plants listed in the Portland Plant List.

The *Suggested Plant Lists for Required Landscaping* are intended to assist you in selecting plant materials, but you do not have to limit yourself to plants on the lists. If you select plants that are not on the *Suggested Plant Lists for Required Landscaping*, you must provide the Bureau of Development Services with the necessary growth and spacing characteristics. The characteristics must come from objective sources, such as books, manuals, or cut sheets (printed nursery information).

Ground Cover Plants

- Ground cover plants must be planted to fill in the area within 3 years. Grasses can count as ground cover plants.
- Mulch is not a substitute for ground cover plants. Mulch must be confined to areas underneath plants.
- Ground cover plants, except turf grasses, must be at least four-inch pot size when planted.
- The ground cover plant lists include plant-spacing specifications for calculating how many plants are required.

Shrubs

- Shrubs must be planted to meet the height and screening requirements within 3 years.
- Shrubs must be at least the 1-gallon size at planting.
- The shrub lists include spacing recommendations.

Trees

- Trees may be broadleaf or coniferous, but must follow any plant diversity requirements.
- Broadleaf trees at the time of planting must be fully branched.
- Broadleaf trees planted must be a minimum of 1.5 inches in diameter.
- Conifer trees at the time of planting must be fully branched and a minimum of 5 feet in height.
- These minimum requirements do not apply to trees used for mitigation, remediation, or restoration.



Tree sizes

Trees are categorized as large, medium or small based on their height and crown spread at maturity and on their growth rate. Many trees have already been categorized in the Suggested Plant List included as a part of the Landscaping Manual.

If you want to use a tree that is not already on the list, give the Bureau of Development Services (BDS) information about the tree's growth rate, mature height and mature crown spread. Objective information may come from published sources, Internet Web sites or from the nursery providing the tree like cut sheets. You must also tell BDS where you got the information.

Trees sizes are determined according to the *Canopy Factor*, which is calculated using the following formula:

$$\text{(mature height in feet)} \times \text{(mature crown spread in feet)} \times \text{(growth rate number)} \times 0.01 = \text{Canopy Factor}$$

The growth rate number is 1 for slow growing trees, 2 for moderately growing trees, and 3 for fast growing trees.

The <i>Canopy Factor</i> is
greater than 90 = large trees
from 40 to 90 = medium trees
less than 40 = small trees

BDS will update the Suggested Plant List from time to time to include additional trees and plants.

Other Rules

Existing vegetation

You may use existing landscaping or natural vegetation to meet the standards if you protect and maintain it during construction as specified in Zoning Code Section 33.248.030.D.1, and if the plants are not listed in the Nuisance Plants List.

Existing trees may be used to meet landscape requirements if they are protected and maintained during construction. Each existing tree 1.5 up to 6 inches in diameter counts as one small tree. Each existing tree 6 or more inches in diameter counts as 1 medium tree for each full 6 inch increment. For example, a 19-inch tree would count as three medium trees, while an 11-inch tree would count as one medium tree.

Selection of materials

Select and locate your landscape materials to produce a hardy and drought-resistant landscape area. Consider soil type and depth, the amount of maintenance required, spacing, exposure to sun and wind, the slope and contours of the site, and compatibility with existing native vegetation preserved on the site. Arborescent shrubs from the Portland Plant List may not be used to meet the tree requirement.

Prohibited materials

Plants listed as nuisance or prohibited in the Portland Plant Lists are prohibited in required landscaped areas. Prohibited plants include plants identified by the Director of the Bureau of Development Services or the City Forester as potentially damaging to sidewalks, roads, underground utilities, drainage improvements, foundations, etc.

Exceeding standards

You may plant landscaping materials that exceed the standards so long as all fence or vegetation height limitations are met, including the vision clearance standards of Title 16, Vehicles and Traffic.

Complying with the standards

It is the applicant's responsibility to show that the landscaping materials proposed will comply with the standards.

Tree and Landscaping Manual - Suggested Plant Lists



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Suggested plant lists

These are lists of suggested plants for use in required landscaping. The listed species are not required, and individual plants listed are not suitable for all uses. Successful plantings depend on planting the appropriate plant for the site and providing water and care adequate for the plants to survive and thrive.

No single plant is best for all situations. Evaluate the conditions at your site as well as the uses that will exist after you complete your development before selecting your plant materials. Consider the amount of light and heat, if people will walk across your planted area (and ways to prevent it), whether the landscaping will receive runoff from roofs or paving, the possibility that low hanging branches or dropped fruit will interfere with pedestrians or cars, and so on.

It is your responsibility to ensure that the plants survive. The most common problem is a lack of water in the first one to three summers. Plants that die must be replaced.

Q What are the Suggested Plant Lists for Required Landscaping for?

- A** The *Suggested Plant Lists for Required Landscaping* are meant to provide information about plants for general use, and to make it easier for applicants to select plants. They also help staff to conduct plan reviews and inspections.

Q What is the Portland Plant List?

- A** The Portland Plant List is separate from the *Suggested Plant Lists for Required Landscaping* and the Tree and Landscaping Manual. It lists plants native to Portland, and includes Nuisance and Prohibited Plant Lists. Using native plants from the Portland Plant List is encouraged wherever conditions are suitable.

Q Do I have to use native plants?

- A** Native plants are required only in environmental zones, but they are recommended for use throughout the City. Native plants are suited to Portland's climate and soil, and they require less watering, fertilizer and pesticide. Native plants also provide habitat for native wildlife.

Q How can I use the Suggested Plant Lists?

- A** First identify the characteristics of your site, then select plants that match those characteristics. For example, if you have a planter 4 feet wide, you do not want to plant a tree that requires an 8-foot wide planter. Also, many parking lots have a lot of reflected heat in the summer, so in a parking lot you will probably want to use a drought-tolerant plant that tolerates full sun.

Q What if I want to use a plant that is not on the lists?

- A** You must include information about the plant size and spacing requirements when you submit your plans. The information may come from a commonly available reference, such as the *Sunset Western Garden Book*, or the *Manual of Woody Landscape Plants* by M. A. Dirr, from a Web site or from a nursery, wherever it comes from, you must indicate the source of the information. It is your responsibility to demonstrate that the Zoning Code's planting and spacing requirements will be met.

You may propose to use any plant that is not on the Portland Nuisance and Prohibited Plant Lists.

Q If I use a tree that is not on the list, how do I know what size it is?

- A** Trees are categorized by size according to the *Canopy Factor*, which is calculated using the following formula:
(mature height in feet) x (mature crown spread in feet) x (growth rate number) x 0.01 = *Canopy Factor*

The growth rate number equals **1** for slow growing trees, **2** for moderately growing trees, and **3** for fast growing trees. The *Canopy Factor* for large trees is greater than 90, for medium trees is from 40 to 90, and for small trees is less than 40.

To find out how big trees will become at maturity, check printed sources or the Internet.

Q How are the lists organized?

- A** There are four lists: the Tree List, the High Screen Shrub List, the Low Screen Shrub List, and the Ground Cover List. Plant characteristics, such as height, spread, spacing, drought tolerance and so on, are provided to help you select appropriate plants.

Suggested Plant Lists for Required Landscaping



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Trees

Explanation of column headings for trees:

- **Min Planter Width:** The minimum recommended planter width for the tree to be healthy.
- **Height:** The maximum observed height of this species in the Portland area.
- **Spread:** The maximum observed spread of this species in the Portland area.
- **Growth Rate:** The rate observed in the Portland area.
- **Native:** Identifies plants on the Portland Native Plant list (PDX), native to the Willamette Valley (WV) or native elsewhere in Oregon (OR).
- **Drought Tolerant:** Identifies trees noted for adaptability to drought and dry conditions.
- **Canopy Factor Number:** This is the canopy factor calculated by the Bureau of Development Services (BDS) using the formula described in the Tree and Landscaping Manual.

Botanical Name COMMON NAME	Min Planter Width	Height	Spread	Growth Rate	Native	Drought Tolerant	Canopy Factor Number	Remarks
LARGE TREES								
<i>Albizia julibrissin</i> SILKTREE, MIMOSATREE	4'	50'	70'	3		Yes	105	Deciduous broadleaf, pink pincushion flowers.
<i>Alnus glutinosa</i> BLACK ALDER	4'	75'	50'	3			113	Deciduous broadleaf, tolerates moist or wet soils.
<i>Alnus rhombifolia</i> WHITE ALDER	4'	100'	50'	3	WV		150	Deciduous broadleaf, more tolerant of heat or drought than <i>A. rubra</i> (Red Alder).
<i>Catalpa speciosa</i> NORTHERN CATALPA	4'	90'	70'	2			126	Deciduous broadleaf, adaptable to wet or dry conditions, tolerates heat.
<i>Cedrus atlantica</i> (also <i>C. libani</i> ssp 'atlantica') ATLAS CEDAR	4'	100'	80'	2			160	Evergreen conifer.
<i>Cedrus deodara</i> DEODAR CEDAR	4'	70'	75'	2			105	Evergreen conifer, prefers drier soils than <i>C. atlantica</i> .
<i>Celtis occidentalis</i> COMMON HACKBERRY	4'	100'	70'	2		Yes	140	Deciduous broadleaf, drought tolerant, does not lift pavement.
<i>Cladrastis kentukea</i> AMERICAN YELLOWWOOD	6'	75'	70'	2			105	Deciduous broadleaf, fragrant summer blooms, prune in summer.
<i>Cupressocyparis leylandii</i> LEYLAND CYPRESS	4'	70'	60'	3			126	Evergreen conifer.
<i>Fagus sylvatica</i> EUROPEAN BEECH	8'	80'	100'	2			160	Deciduous broadleaf, needs moderate water, lowest branches brush close to ground and may need pruning, can suppress lawn growth under older trees.

Botanical Name COMMON NAME	Min Planter Width	Height	Spread	Growth Rate	Native	Drought Tolerant	Canopy Factor Number	Remarks
LARGE TREES								
<i>Fraxinus angustifolia</i> NARROWLEAF ASH	4'	70'	70'	2			98	Deciduous broadleaf.
<i>Fraxinus excelsior</i> EUROPEAN ASH	4'	70'	70'	2			98	Deciduous broadleaf.
<i>Fraxinus pennsylvanica</i> 'Cimmaron,' 'Marshall,' 'Urbanite' GREEN ASH	4'	100'	100'	2			200	Deciduous broadleaf 'Marshall' is not as large, but still grows up to 75' tall.
<i>Liquidambar styraciflua</i> SWEET GUM	8'	90'	60'	3			162	Deciduous broadleaf, tolerates damp soil, needs room for root development, prone to lifting pavement. Cultivar 'Rotundiloba' reduces fruit drop.
<i>Liriodendron tulipifera</i> TULIPTREE	8'	100'	80	3			240	Deciduous broadleaf, needs room for root development, prefers summer watering.
<i>Pinus nigra</i> AUSTRIAN PINE	4'	100'	50'	2			100	Evergreen conifer.
<i>Platanus acerifolia</i> 'Yarwood', 'Bloodgood', x <i>hispanica</i> , 'Columbia' LONDON PLANE TREE	4'	80'	95'	3		Mod	231	Deciduous broadleaf, these varieties resistant to anthracnose; tolerate reflected heat, dust, soot, and smog. Other varieties more subject to red spider mites, powdery mildew, and anthracnose.
<i>Pseudotsuga menziesii</i> DOUGLAS FIR	8'	240'	60'	2	PDX	Yes	288	Evergreen conifer, can grow very tall given time, tends to drop needles and cones year- round, prune lower branches for clearance, older trees drop large branches.
<i>Quercus alba</i> WHITE OAK	4'	100'	100'	1			100	Deciduous broadleaf, does best in slightly acid, well- drained soils.
<i>Quercus coccinea</i> OAK, SCARLET	4'	100'	75'	2		Yes	150	Deciduous broadleaf, fall color, drought tolerant.
<i>Quercus garryana</i> OREGON WHITE OAK	8'	100'	100'	1	PDX	Yes	100	Deciduous broadleaf, drought tolerant.
<i>Quercus imbricaria</i> SHINGLE OAK	4'	80'	80'	2			128	Deciduous broadleaf, pest resistant.
<i>Quercus kelloggii</i> CALIFORNIA BLACK OAK	4'	80'	80'	2	WV	Yes	128	Deciduous broadleaf, drought tolerant, good fall color, can be host to Sudden Oak Death.
<i>Quercus lobata</i> VALLEY OAK, or CALIFORNIA WHITE OAK	4'	100'	100'	3		Yes	375	Deciduous broadleaf, California native, drought tolerant.
<i>Quercus macrocarpa</i> BUR OAK	4'	90'	90'	2			160	Deciduous broadleaf, litters large acorns.

Botanical Name COMMON NAME	Min Planter Width	Height	Spread	Growth Rate	Native	Drought Tolerant	Canopy Factor Number	Remarks
LARGE TREES								
<i>Quercus nigra</i> WATER OAK	4'	100'	100'	3			300	Deciduous broadleaf, tolerates wet conditions, has weak wood.
<i>Quercus phellos</i> WILLOW OAK	4'	90'	100'	2			180	Deciduous broadleaf, slender form when young, more rounded with time.
<i>Quercus robur</i> ENGLISH OAK	4'	80'	80'	2			128	Deciduous broadleaf, litters, short-lived, can be invasive. Variety 'Fastigiata' is less spreading, but has Canopy Factor # of 100.
<i>Quercus rubra</i> RED OAK	4'	100'	100'	3			300	Deciduous broadleaf, needs summer water, can become very large over time, can be host to Sudden Oak Death.
<i>Quercus shumardii</i> SHUMARD RED OAK	4'	150'	90'	2		Yes	270	Deciduous broadleaf, more drought tolerant than other red oaks, tolerates poorly drained soil.
<i>Quercus velutina</i> BLACK OAK	4'	75'	115'	3			258	Deciduous broadleaf, faster growth with summer irrigation, tolerates wide range of soil types.
<i>Quercus virginiana</i> SOUTHERN LIVE OAK	4'	60'	100'	3			180	Evergreen broadleaf, tolerates moisture.
<i>Quercus wislizenii</i> INTERIOR LIVE OAK	4'	70'	70'	2		Yes	98	Evergreen broadleaf, western native, drought tolerant.
<i>Sequoia sempervirens</i> COAST REDWOOD	12'	100'	50'	3			150	Evergreen conifer, grows tall, prefers to be watered in summer, not best for hot, dry sites, can be a host to Sudden Oak Death.
<i>Sequoiadendron giganteum</i> GIANT SEQUOIA	16'	115'	55'	3		Yes	189	Evergreen conifer, trunk quickly becomes massive, needs ample space.
<i>Taxodium distichum</i> BALD CYPRESS	8'	100'	60'	2			120	Deciduous conifer, tolerates wet conditions or dry conditions, prefers summer irrigation.
<i>Thuja plicata</i> WESTERN RED CEDAR	8'	150'	70'	1	PDX		105	Evergreen conifer, prefers moist conditions and shade until established, then drought tolerant. Characteristic form lost if low-hanging branches are pruned.

Botanical Name COMMON NAME	Min Planter Width	Height	Spread	Growth Rate	Native	Drought Tolerant	Canopy Factor Number	Remarks
LARGE TREES								
<i>Tilia americana</i> LINDEN, AMERICAN, or AMERICAN BASSWOOD	4'	100'	75'	2			150	Deciduous broadleaf, deep rich soil, plenty of water, prone to aphids, which cause it to drip honeydew and develop sooty mold. 'Redmond' is a useful cultivar, but this tree is not a good choice for parking lots.
<i>Tsuga heterophylla</i> WESTERN HEMLOCK	4'	150'	70'	2			210	Evergreen conifer, prefers moist or seasonally wet soils.
<i>Umbellularia californica</i> OREGON MYRTLE, CALIFORNIA LAUREL, CALIFORNIA BAY	4'	75'	75'	2	OR	Yes	112	Evergreen broadleaf, drought tolerant, best in deep soil, can be host for Sudden Oak Death.
<i>Zelkova serrata</i> 'Green Vase' ZELKOVA	8'	85'	75'	3		Yes	192	Deciduous broadleaf, prune when young, aggressive roots.
MEDIUM TREES								
<i>Abies concolor</i> WHITE FIR	4'	100'	40'	1		Yes	40	Evergreen conifer.
<i>Abies grandis</i> GRAND FIR	8'	150'	40'	1	PDX		60	Evergreen conifer, can grow very tall, can get aphids, can be a host for Sudden Oak Death.
<i>Acer x freemanii</i> 'Jefferson Red' JEFFERSON RED MAPLE	4'	60'	40'	3			60	Deciduous broadleaf.
<i>Acer macrophyllum</i> MAPLE, BIG LEAF	8'	75'	60'	2	PDX		90	Deciduous broadleaf, plant from containerized stock, roots lift pavement, can host Sudden Oak Death.
<i>Acer nigrum</i> 'Greencolumn' GREENCOLUMN MAPLE	4'	70'	30'	2			42	Deciduous broadleaf
<i>Acer rubrum</i> RED MAPLE	4'	70'	60'	2			84	Deciduous broadleaf 'Bowhall' is a smaller – but still medium size – cultivar, reaching 50 feet in height and 30 feet in spread.
<i>Aesculus hippocastanum</i> 'Baumannii' BAUMANN HORSE CHESTNUT	4'	105'	80'	2			89	Deciduous broadleaf, <i>Baumannii</i> is fruitless, other varieties drop fruit. Needs summer water. Can be host to Sudden Oak Death.
<i>Alnus rubra</i> RED ALDER	4'	60'	40'	3	PDX		72	Deciduous broadleaf, short-lived, needs moisture, favored by tent caterpillars. This tree tends to suffer sun scald.

Botanical Name COMMON NAME	Min Planter Width	Height	Spread	Growth Rate	Native	Drought Tolerant	Canopy Factor Number	Remarks
MEDIUM TREES								
<i>Calocedrus decurrens</i> INCENSE CEDAR	4'	100'	30'	2	OR		60	Evergreen conifer, fragrant, heat tolerant, deep watering when young will make it drought tolerant later.
<i>Carpinus betulus</i> , except 'Fastigiata' EUROPEAN HORNBEAM	4'	60'	70'	2			84	Deciduous broadleaf, hardy, densely pyramidal.
<i>Celtis australis</i> EUROPEAN HACKBERRY	4'	95'	45'	2		Yes	85	Deciduous broadleaf, mod. irrigation, drops fruit, best to buy in container, does not lift pavement.
<i>Celtis</i> 'Magnifica' MAGNIFICA HACKBERRY	4'	50'	40'	3			60	Deciduous broadleaf, fast growing, insect resistant.
<i>Chamaecyparis nootkatensis</i> 'Pendula' NOOTKA CYPRESS, ALASKA YELLOW CEDAR	6'	100'	25'	2			50	Evergreen conifer, does not tolerate high heat well, does tolerate poor soil, prefers summer water.
<i>Fraxinus americana</i> WHITE ASH	4'	60'	75'	2			90	Deciduous broadleaf. 'Chicago Regal' is a useful cultivar that reaches about 45 feet height and 35 feet spread. 'Skyline,' and 'Junginger' are also good cultivars.
<i>Fraxinus angustifolia</i> (also <i>F. oxycarpa</i>) RAYWOOD ASH, CLARET ASH	4'	50'	50'	3			75	Deciduous broadleaf, compact, produces no seeds, good fall color.
<i>Fraxinus latifolia</i> ASH, OREGON	4'	60'	40'	2	PDX	Yes	48	Deciduous broadleaf, tolerates wet conditions and summer drought.
<i>Fraxinus nigra</i> BLACK ASH	4'	80'	40'	2			64	Deciduous broadleaf, tolerates wet soil.
<i>Fraxinus ornus</i> FLOWERING ASH	4'	60'	35'	3			63	Deciduous broadleaf, fragrant late-spring flowers.
<i>Fraxinus pennsylvanica</i> 'Patmore' PATMORE ASH	4'	45'	35'	3			63	Deciduous broadleaf. 'Patmore' is seedless, smaller than other <i>F. pennsylvanica</i> cultivars.
<i>Fraxinus quadrangulata</i> BLUE ASH	4'	60'	70'	2		Yes	84	Deciduous broadleaf, drought tolerant.
<i>Magnolia kobus</i> KOBUS MAGNOLIA	4'	70'	60'	2			84	Deciduous broadleaf, hardy.
<i>Metasequoia glyptostroboides</i> DAWN REDWOOD	8'	70'	30'	3			63	Deciduous conifer, prefers moist soils, needs room for root development, trunk can become quite large.

Botanical Name COMMON NAME	Min Planter Width	Height	Spread	Growth Rate	Native	Drought Tolerant	Canopy Factor Number	Remarks
MEDIUM TREES								
<i>Morus alba</i> WHITE MULBERRY	4'	50'	60'	2		Yes	60	Deciduous broadleaf, soil adaptable, drought tolerant. Females display attractive blossoms, bear edible fruit that attracts birds, is messy and stains pavement. Males lack blossoms and fruit, require less maintenance.
<i>Nothofagus obliqua</i> BEECH, ROBLE	4'	70'	40'	3			84	Deciduous broadleaf
<i>Nyssa sylvatica</i> TUPELO, SOUR GUM	4'	75'	60'	2			90	Deciduous broadleaf, good fall color, tolerates wet conditions
<i>Ostrya virginiana</i> AMERICAN HOPHORNBEAM	4'	70'	60'	1		Yes	42	Deciduous broadleaf, drought tolerant, pyramidal form in youth, becomes more rounded with age.
<i>Phellodendron amurense</i> CORK TREE	4'	50'	35'	3		Yes	45	Deciduous broadleaf, drought tolerant, smog tolerant, tends to have spreading habit. 'Macho' is a useful cultivar.
<i>Pinus monticola</i> WESTERN WHITE PINE	8'	75'	45'	2	WV		68	Evergreen conifer, very hardy, year-round needle drop
<i>Pinus ponderosa ssp. Valley</i> PONDEROSA PINE, Valley subspecies	8'	85'	50'	2	PDX	Yes	86	Evergreen conifer, prefers drier conditions, but Valley subspecies is adapted to Willamette Valley climate.
<i>Pistacia chinensis</i> CHINESE PISTACHE	4'	70'	70'	1		Yes	49	Deciduous broadleaf, drought tolerant, fall color, young tree can be lopsided, gawky, may need pruning to shape.
<i>Prunus cerasifera</i> CHERRY PLUM	4'	45'	50'	2			45	Deciduous broadleaf, attractive spring blossoms
<i>Prunus sargentii</i> , 'Columnaris' or 'Rancho' SARGENT CHERRY	4'	45'	45'	2			41	Deciduous broadleaf, except for hardiest of oriental cherries
<i>Prunus x yedoensis</i> YOSHINO CHERRY	4'	40'	60'	2			48	Deciduous broadleaf, attractive spring blossoms and fall color.
<i>Pyrus calleryana</i> 'Aristocrat' CALLERY PEAR	4'	50'	30'	3			45	Deciduous broadleaf, attractive spring blossoms. 'Aristocrat' is a medium-size cultivar. Avoid columnar cultivars, e.g., 'Capital,' 'Chanticleer.'
<i>Quercus acutissima</i> SAWTOOTH OAK	4'	60'	50'	3			90	Deciduous broadleaf.

Botanical Name COMMON NAME	Min Planter Width	Height	Spread	Growth Rate	Native	Drought Tolerant	Canopy Factor Number	Remarks
MEDIUM TREES								
<i>Quercus bicolor</i> SWAMP WHITE OAK	4'	60'	70'	2			84	Deciduous broadleaf, tolerates wet soil, but also thrives in well-drained soil.
<i>Quercus frainetto</i> 'Forest Green,' 'Schmidt' FOREST GREEN OAK	4'	50'	30'	3		Yes	45	Deciduous broadleaf, drought tolerant, drops acorns.
<i>Quercus ilex</i> HOLLY OAK, HOLM OAK	5'	70'	55'	2		Yes	77	Evergreen broadleaf, drought tolerant, can be host to Sudden Oak Death.
<i>Quercus palustris</i> PIN OAK	4'	60'	75'	2			90	Deciduous broadleaf, tolerates wet and poorly drained soils, can be damaged by alkaline soils.
<i>Quercus suber</i> CORK OAK	4'	45'	45'	2		Yes	41	Evergreen broadleaf, drought tolerant, attractive bark, needs good drainage. The variety 'Occidentalis' is hardy.
<i>Sassafras albidum</i> COMMON SASSAFRAS	4'	90'	60'	1			54	Deciduous broadleaf, fall color, tends to produce suckers, grows quickly to 20', then slows.
<i>Sophora japonica</i> JAPANESE PAGODATREE	4'	50'	75'	2		Yes	76	Deciduous broadleaf, adaptable to soil and water conditions, pest free.
<i>Tilia cordata</i> LINDEN, LITTLE LEAF	4'	85'	50'	2			86	Deciduous broadleaf, deep rich soil, plenty of water, prone to aphids, which cause it to drip honeydew and develop sooty mold.
<i>Tilia x euchlora</i> CRIMEAN LINDEN	4'	60'	50'	2			60	Deciduous broadleaf, tolerates heat, aphid free. Older trees develop low-hanging branches.
<i>Tilia tomentosa</i> 'Sterling' SILVER LINDEN	4'	60'	50'	3		Yes	90	Deciduous broadleaf, drought tolerant once established, aphid free.
<i>Ulmus</i> 'Accolade,' 'Morton Glossy' (Triumph), 'Pioneer' ELM	4'	60'	50'	3			60	Deciduous broadleaf, disease resistant, beautiful leaf, drops papery seeds. The listed cultivars are disease resistant.
<i>Ulmus parvifolia</i> 'Athena', 'Allee' CHINESE ELM	4'	60'	60'	2			72	Deciduous or evergreen broadleaf, excellent disease resistance, mod. irrigation, frequent pruning.

Botanical Name COMMON NAME	Min Planter Width	Height	Spread	Growth Rate	Native	Drought Tolerant	Canopy Factor Number	Remarks
SMALL TREES								
<i>Acer buergerianum</i> (also <i>A. buergeranum</i>) TRIDENT MAPLE	4'	40'	30'	1		Yes	12	Deciduous broadleaf, drought tolerant.
<i>Acer campestre</i> HEDGE MAPLE	4'	50'	30'	1			15	Deciduous broadleaf, air pollution tolerant.
<i>Acer davidii</i> DAVID MAPLE	4'	50'	20'	2		Yes	20	Deciduous broadleaf, somewhat drought tolerant.
<i>Acer ginnala</i> AMUR MAPLE	4'	30'	30'	3			27	Deciduous broadleaf, hardy and adaptable.
<i>Acer grandidentatum</i> BIGTOOTH MAPLE, ROCKY MOUNTAIN SUGAR MAPLE	4'	60'	40'	1		Yes	24	Deciduous broadleaf, drought tolerant, 'Schmidt' is a locally developed cultivar.
<i>Acer griseum</i> PAPERBARK MAPLE	4'	25'	20'	2			10	Deciduous broadleaf, tolerates partial shade, attractive bark and fall color.
<i>Acer miyabei</i> 'Morton,' 'State Street' STATE STREET MAPLE	4'	45'	35'	2			32	Deciduous broadleaf.
<i>Acer negundo</i> 'Flamingo,' 'Sensation' BOXELDER	4'	30'	25'	1		Yes	8	Deciduous broadleaf, very hardy, tolerates drought, wet conditions, poor soils. Subject to various diseases, hosts boxelder bugs. 'Flamingo' is a smaller cultivar. 'Sensation' is slower growing, and is all male clones. Male plants are cleaner.
<i>Acer palmatum</i> (except 'Dissectum' varieties) JAPANESE MAPLE	4'	20'	20'	1			4	Deciduous broadleaf, attractive color. Select upright forms. Good varieties include 'Atropurpureum,' 'Bloodgood,' 'Heptalobum Osakazuki,' 'Oshio Beni,' and 'Senkaki.'
<i>Acer pseudoplatanus</i> 'Atropurpureum' WINELEAF MAPLE	4'	50'	30'	2			30	Deciduous broadleaf, somewhat sensitive to heat.
<i>Acer rufinerve</i> REDVEIN MAPLE	4'	60'	30'	1			18	Deciduous broadleaf, young bark is green striped, becomes gray with age. Prefers dryer soils.
<i>Acer saccharum</i> SUGAR MAPLE (except 'Legacy')	4'	60'	50'	1			30	Deciduous broadleaf, fairly drought tolerant, fall color, 'Green Mountain' is the most drought tolerant cultivar.

Botanical Name COMMON NAME	Min Planter Width	Height	Spread	Growth Rate	Native	Drought Tolerant	Canopy Factor Number	Remarks
SMALL TREES								
<i>Aesculus flava</i> YELLOW BUCKEYE	6'	55'	50'	1			28	Deciduous broadleaf, fruit and leaf drop can be messy, needs room to develop.
<i>Betula jaquemontii</i> WHITE-BARKED HIMALAYAN BIRCH	4'	75'	30'	1			23	Deciduous broadleaf.
<i>Betula nigra</i> RIVER BIRCH	4'	70'	50'	1			35	Deciduous broadleaf, needs summer water, resistant to birch borer.
<i>Betula papyrifera</i> PAPER BIRCH	4'	70'	50'	1			35	Deciduous broadleaf, does not tolerate heat.
<i>Carpinus betulus</i> 'Fastigiata,' 'Franz Fontaine' EUROPEAN HORNBEAM	4'	30'	10'	2			6	Deciduous broadleaf, columnar forms. Older specimens of 'Fastigiata' have been observed to reach 30 feet in diameter. Potential availability problems.
<i>Carpinus caroliniana</i> AMERICAN HORNBEAM	4'	40'	50'	1			20	Deciduous broadleaf, rounded form, hardy.
<i>Cercidiphyllum japonicum</i> KATSURATREE	6'	80'	40'	1			32	Deciduous broadleaf, needs ample water to establish.
<i>Cercis canadensis</i> EASTERN REDBUD	4'	30'	30'	1			9	Deciduous broadleaf, trunk usually branches close to ground, spreading crown.
<i>Cornus alternifolia</i> PAGODA DOGWOOD	4'	40'	40'	1			16	Deciduous broadleaf, prefers acidic soils, moisture.
<i>Cornus controversa</i> GIANT DOGWOOD	4'	40'	40'	1			16	Deciduous broadleaf, prefers moisture.
<i>Cornus kousa</i> KOUSA DOGWOOD	4'	40'	40'	2			32	Deciduous broadleaf, prefers moist soil, but is moderately drought tolerant.
<i>Cornus mas</i> CORNELIAN CHERRY	4'	30'	30'	1			9	Deciduous broadleaf, tolerates various soil types.
<i>Crataegus suksdorfii</i> , BLACK HAWTHORN	4'	40'	45'	1	PDX		18	Deciduous broadleaf, tolerates wet areas. This is the only species of Hawthorn allowed in required landscaping.
<i>Eucalyptus pauciflora</i> ssp. <i>niphophila</i> , ssp. <i>Deberzevillei</i> SNOW GUM	4'	35'	35'	2		Yes	25	Deciduous broadleaf, drought tolerant, deep rooted.

Botanical Name COMMON NAME	Planter Width	Height	Spread	Growth Rate	Native	Drought Tolerant	Factor Number	Remarks
SMALL TREES								
<i>Fagus sylvatica</i> 'Tricolor' TRICOLOR BEECH	4'	30'	20'	1			6	Deciduous broadleaf, leaves start purple, then turn green edged with pink and white
<i>Ginkgo biloba</i> , GINKGO, MAIDENHAIR TREE	4'	60'	60'	1			36	Deciduous broadleaf, form varies, old trees may reach 60 feet. Use the male only; female produces messy, smelly fruit. 'Autumn Gold,' 'Shangri-La,' and 'Saratoga' are good cultivars.
<i>Gleditsia triacanthos</i> HONEYLOCUST	4'	40'	40'	2		Yes	32	Deciduous broadleaf, tolerates a wide range of conditions, produces a large seedpod, but seedless varieties are available.
<i>Gymnocladus dioica</i> KENTUCKY COFFEETREE	4'	50'	35'	2		Yes	36	Deciduous broadleaf, heat and drought tolerant, saplings grow very fast, then slow down. Seed pods produce litter. 'Espresso' is a seedless variety.
<i>Koelreuteria bipinnata</i> CHINESE FLAMETREE	4'	30'	30'	2			18	Deciduous broadleaf, adaptable to soil conditions, heat tolerant, produces some seed litter.
<i>Koelreuteria paniculata</i> (also <i>K. bipinnata</i>) GOLDENRAIN	4'	30'	30'	2			18	Deciduous broadleaf, mod. irrigation, yellow summer flowers, produces some seed litter; tolerates cold, heat, drought, wind, and alkaline soil. Needs watering when young.
<i>Lagerstroemia indica</i> <i>x L. fauriei</i> , 'Catawba,' 'Cherokee,' 'Pecos' CRAPE MYRTLE	4'	35'	35'	1			12	Deciduous broadleaf, full sun, summer flowers, summer water, good drainage.
<i>Laurus nobilis</i> SWEET BAY	4'	30'	15'	1		Yes	5	Evergreen broadleaf, needs good drainage, drought tolerant, best in filtered or afternoon shade, tends to send up suckers.
<i>Maackia amurensis</i> AMUR MAACKIA	4'	25'	20'	1			5	Deciduous broadleaf, adaptable to different soils, prefers sunny exposures.
<i>Magnolia</i> 'Elizabeth' ELIZABETH MAGNOLIA	4'	25'	25'	1			6	Deciduous broadleaf.
<i>Magnolia grandiflora</i> SOUTHERN MAGNOLIA	4'	40'	40'	1			16	Evergreen broadleaf, growth rate varies by cultivar, very slow without irrigation, drops leaves and petals. Good cultivars include 'DD Blanchard,' 'Edith Boge,' 'Victoria.'

Botanical Name COMMON NAME	Planter Width	Height	Spread	Growth Rate	Native	Drought Tolerant	Factor Number	Remarks
SMALL TREES								
<i>Magnolia x soulangiana</i> SAUCER MAGNOLIA	4'	40'	40'	1			16	Deciduous broadleaf.
<i>Magnolia stellata</i> STAR MAGNOLIA	4'	30'	20'	1			6	Deciduous broadleaf.
<i>Malus cvs.</i> CRABAPPLE	4'	20'	20'	2	PDX, one sp.		8	Deciduous broadleaf, adaptable to wide range of conditions, but prefers moist, acidic soil. <i>M. fusca</i> , Western Crabapple, is native to Portland.
<i>Morus nigra</i> BLACK MULBERRY	4'	30'	40'	1			12	Deciduous broadleaf, edible fruit. Birds attracted by fruit, fruit drop can be messy.
<i>Nothofagus dombeyi</i> BEECH, SOUTH AMERICAN	4'	85'	40'	1			34	Evergreen broadleaf.
<i>Parrotia persica</i> PERSIAN PARROTIA, PERSIAN IRONWOOD	4'	40'	30'	1			12	Deciduous broadleaf, good autumn color.
<i>Picea pungens var. glauca</i> COLORADO BLUE SPRUCE	4'	50'	20'	1			10	Evergreen conifer, very adaptable, more drought tolerant than other spruces.
<i>Pinus contorta var. contorta</i> , SHORE PINE	4'	40'	30'	1	OR		12	Evergreen conifer, needs good drainage, year-round needle drop.
<i>Populus tremuloides</i> QUAKING ASPEN	4'	25'	15'	1	OR		4	Deciduous broadleaf, requires regular watering. Use in stormwater facilities. Roots are invasive; avoid planting near pavement, sewer lines, or septic tanks.
<i>Prunus 'Amanogawa'</i> AMANOGAWA FLOWERING CHERRY	4'	40'	30'	2			24	Deciduous broadleaf. This tree grows in a relatively columnar form, in contrast to other flowering cherries, which are spreading.
<i>Prunus padus</i> BIRD CHERRY	4'	50'	50'	1			25	Deciduous broadleaf, adaptable to range of soil conditions, lovely blossoms produce fruits that attract birds.
<i>Prunus serrulata cvs.</i> JAPANESE FLOWERING CHERRY	4'	30'	30'	2			18	Deciduous broadleaf, lovely spring blossoms, good fall color.
<i>Pyrus calleryana 'Bradford'</i> BRADFORD CALLERY PEAR	4'	60'	60'	1			36	Deciduous broadleaf, attractive spring blossoms. 'Bradford' is slow growing.
<i>Pyrus calleryana 'Glen's Form'</i> CALLERY PEAR	4'	40'	20'	3			24	Deciduous broadleaf, attractive spring blossoms. 'Glen's Form' is faster growing, smaller than 'Bradford.'

Botanical Name COMMON NAME	Planter Width	Height	Spread	Growth Rate	Native	Drought Tolerant	Factor Number	Remarks
SMALL TREES								
<i>Quercus buckleyi</i> TEXAS RED OAK	4'	50'	30'	2		Yes	30	Deciduous broadleaf.
<i>Quercus chrysolepis</i> CANYON LIVE OAK	4'	40'	90'	1	WV	Yes	36	Evergreen broadleaf, drought tolerant, can be host to Sudden Oak Death.
<i>Rhamnus purshiana</i> CASCARA	3'	25'	20'	2	PDX		10	Deciduous broadleaf, yellow in fall, if in full sun does best with ample water. Can host Sudden Oak Death disease.
<i>Sorbus alnifolia</i> KOREAN MOUNTAIN ASH	4'	40'	30'	2			24	Deciduous broadleaf, white blossoms produce orange fruits that are attractive to birds, can be messy.
<i>Styrax japonicus</i> JAPANESE SNOWBELL	4'	30'	30'	2			18	Deciduous broadleaf, white blossoms in spring.
<i>Styrax obassia</i> FRAGRANT SNOWBELL	4'	30'	20'	2			12	Deciduous broadleaf, white blossoms in spring.
<i>Thuja plicata</i> 'Fastigiata,' 'Hogan Cedar' WESTERN RED CEDAR	8'	50'	15'	1	PDX		8	Evergreen conifer, prefers moist conditions and shade; once established, drought tolerant. Other varieties have much wider spread, low-hanging branches.
Columnar Trees (Only the listed varieties of each species are columnar)								
<i>Acer rubrum</i> 'Bowhall' RED MAPLE	4'	50'	15'	2			15	Deciduous broadleaf, good fall color.
<i>Acer saccharum</i> 'Newton Sentry' SUGAR MAPLE	4'	50'	15'	2			15	Deciduous broadleaf, good fall color.
<i>Carpinus betulus</i> 'Franz Fontaine' EUROPEAN HORNBEAM	4'	30'	10'	2			6	Deciduous broadleaf, hardy, soil adaptable.
<i>Cupressus sempervirens</i> cvs. ITALIAN CYPRESS	4'	100'	20	1		Yes	20	Evergreen conifer, hardy, drought tolerant. 'Tiny Tower' is shorter, can be a high screen shrub. 'Swanes Golden' has yellow foliage.
<i>Fagus sylvatica</i> 'Dawyk,' 'Dawyk Gold,' 'Dawyk purple' EUROPEAN BEECH	8'	80'	15'	2			24	Deciduous broadleaf, does not tolerate compacted soil.
<i>Ginkgo biloba</i> ' Princeton Sentry' GINKGO, MAIDENHAIR TREE	4'	60'	15'	1			9	Deciduous broadleaf, hardy, good fall color.
<i>Prunus sargentii</i> 'Columnaris' or 'Rancho' SARGENT CHERRY	4'	25	10	2			5	Deciduous broadleaf, these are two columnar cultivars.
<i>Quercus</i> 'Crimson Spire' CRIMSON SPIRE OAK	4'	45'	15	2			13	Deciduous broadleaf.
<i>Quercus rober</i> 'Fastigiata' ENGLISH OAK	4'	50'	20'	2			20	Deciduous broadleaf.

SHRUBS

Explanation of column headings for shrubs:

- **Height:** Approximate maximum height.
- **Spacing:** Optimum spacing when shrubs are not used for screening. For screening, shrubs need to be planted closer together.
- **Evergreen/Deciduous:** Indicated by E or D.
- **Native:** Identifies plants on the Portland Native Plant List (PDX), native to the Willamette Valley (WV), or native elsewhere in Oregon (OR).
- **Drought Tolerant:** Yes identifies plants that are well adapted to dry conditions and periods of drought.
- **Sun or Shade:** FSun = full sun, Sun = sun, PtSun = part sun Shd = shade, FShd = full shade, PtShd = part shade.
NOTE: Where the Zoning Code requires screening, shrubs may need to be planted closer than suggested in the "Spacing" column. In such cases, follow the requirements of the code, rather than the suggested spacing in this table.

Botanical Name COMMON NAME	Height	Spacing	Evergreen/ Deciduous	Native	Drought Tolerant	Sun or Shade	Remarks
HIGH SCREEN SHRUBS, 6 FEET AND TALLER							
<i>Abelia</i> 'Edward Goucher' ABELIA	6'	6'	E		Yes	FSun/ PtShd	Best in full sun, often grown as hedge.
<i>Acer circinatum</i> VINE MAPLE	8-10'	6'+	D	PDX	Yes	FShd/ PtSun	Prefers shade and moisture.
<i>Amelanchier alnifolia</i> 'Regent' SERVICEBERRY	6'	5'	D	OR	Yes	FSun/ PtShd	'Regent' is compact shrub. Other varieties can be larger.
<i>Arbutus unedo</i> STRAWBERRY TREE	8-10'+	6'	E			Sun	'Compacta' is a compact variety.
<i>Arctostaphylos columbiana</i> MANZANITA	6-7'	6'	E	PDX	Yes	FSun	
<i>Arctostaphylos hookeri</i> MANZANITA	6'	5'	E	PDX	Yes	FSun	West coast native.
<i>Aronia arbutifolia</i> 'Brilliant' BRILLIANT RED CHOKEBERRY	10'	5'	D		Yes	FSun/ PtShd	Good for mass plantings or hedges.
<i>Berberis thunbergii</i> 'Rose Glow,' Helmond Pillar' JAPANESE BARBERRY	6'	6'	D		Yes	FSun/ PtShd	'Rose Glow' spreads to 6', 'Helmond Pillar' is columnar, and spreads to about 3'; does not tolerate very moist conditions.
<i>Buxus sempervirens</i> 'Graham Blandy' COMMON BOXWOOD	9'	1.2'	D		Yes	FSun/ PtShd	Adaptable, often used for hedge.
<i>Callicarpa bodinieri</i> 'Profusion' BODINIER BEAUTYBERRY	8'	6'	D			FSun/ PtShd	Best in full sun, brilliantly colored berries.
<i>Camellia sasanqua</i> cvs., <i>Camellia x williamsii</i> cvs. CAMELLIA	6-8'	Varies	E			Sun	Fall/winter flower; potential espalier.
<i>Carpenteria californica</i> BUSH ANEMONE	8'	6'	E		Yes	FSun/ PtShd flowers.	Looks best in light shade, lightly fragrant summer
<i>Chimonanthus praecox</i> WINTERSWEET	10'	8'	D			FSun/ PtShd	Winter fragrance, late winter, early spring flowers, needs occasional summer water.
<i>Clethra alnifolia</i> SUMMERSWEET, SWEET PEPPERBUSH	6'	3'	D			FSun/ PtShd	Fragrant late summer flowers, grows best with some shade.

Botanical Name COMMON NAME	Height	Spacing	Evergreen/ Deciduous	Native	Drought Tolerant	Sun or Shade	Remarks
HIGH SCREEN SHRUBS, 6 FEET AND TALLER							
<i>Cornus sericea</i> RED OSIER DOGWOOD	6'+	6'	D	PDX		FSun/ FShd	Bright fall leaf color, red winter twigs for color.
<i>Cupressus sempervirens</i> ITALIAN CYPRESS	15+'	3'	E		Yes	FSun/ PtShd	May need shearing and tying to keep within limited area.
<i>Deutzia Magicien, Deutzia x lemoinei, Deutzia scabra</i> DEUTZIA	7'	6'	D		Yes	FSun/ PtShd	Abundant May flowers.
<i>Elaeagnus x ebbingei</i> cvs. EBBINGE'S SILVERBERRY	8'	8'	E		Yes	FSun/ PtShd	
<i>Escallonia exoniensis</i> (and other species) ESCALLONIA	6-8'	6'	E			Sun	Somewhat drought tolerant, but looks best with ample water.
<i>Euonymus japonica</i> 'Green Spire' JAPANESE EUONYMUS	6'	2'	E		Yes	FSun/ PtShd	Very heat tolerant, also tolerates poor soils.
<i>Fatsia japonica</i> JAPANESE FATSIA, JAPANESE ARALIA	7-8'	6'	E			PtSun/ FShd	
<i>Fothergilla major</i> 'Mt. Airy' FOTHERGILLA	6'	5'	D			FSun/ PtShd	Good fall color.
<i>Garrya elliptica</i> cvs. COAST SILKTASSEL	8-9'	6'	E	OR	Yes	FSun/ PtShd	Coast native.
<i>Holodiscus discolor</i> OCEANSPRAY	8'	6'	D	PDX	Yes	FSun/ PtShd	White flowers.
<i>Ilex cornuta</i> 'Berries Jubilee' CHINESE HOLLY	10'	10'	E		Yes	Sun Shade	Grows most compactly and attractively in sun.
<i>Ilex crenata</i> 'Sky Pencil' ('Sky Sentry' JAPANESE HOLLY	8'	1.5'	E		Yes	Sun Shade	Grows most compactly and attractively in sun.
<i>Juniperus scopulorum</i> 'Sky Rocket' JUNIPER	20'	2'	E		Yes	Sun Shade	
<i>Lagerstroemia 'Zuni'</i> ZUNI CRAPE MYRTLE	9'	8'	D		Yes	FSun/ PtShd	
<i>Ligustrum japonicum</i> 'Texanum' JAPANESE PRIVET, WAX LEAF PRIVET	10'	6'	E		Yes	FSun/ PtShd	Adaptable to various soils, but does not tolerate very wet conditions. Excellent hedge plant.
<i>Loropetalum chinense</i> var. <i>rubrum</i> 'Pipa's Red' LOROPETALUM	6'	6'	E		Yes	FSun/ PtShd	
<i>Myrica californica</i> PACIFIC WAX MYRTLE	8-10'	6'	E	OR	Yes	FSun/ PtShd	Coast native.
<i>Nandina domestica</i> 'Moyers Red' HEAVENLY BAMBOO, SACRED BAMBOO	6'	3'	E		Yes	FSun/	
<i>Osmanthus delavayi</i> DELAVAY OSMANTHUS	6'	5'	E		Yes	FSun/ PtShd	Winter flowering.

Botanical Name COMMON NAME	Height	Spacing	Evergreen/ Deciduous	Native	Drought Tolerant	Sun or Shade	Remarks
HIGH SCREEN SHRUBS, 6 FEET AND TALLER							
<i>Osmanthus fragrans</i> SWEET OLIVE	8'+ fast	6'	E			FSun/ PtShd	Fragrant flowers, young plants best in partial shade, tolerates sun when mature.
<i>Osmanthus heterophyllus</i> HOLLY-LEAVED OSMANTHUS	8'+ fast	6'	E			FSun/ PtShd	Fragrant flowers.
<i>Philadelphus lewisii</i> cvs MOCK ORANGE	6'	5'	D	PDX	Yes	FSun/ PtShd	
<i>Photinia x fraseri</i> FRASER PHOTINIA	12'	12'	E		Yes	FSun/ PtShd	Good for hedges.
<i>Prunus ilicifolius</i> HOLLY LEAFED CHERRY	6-8'	4-5'	E		Yes	FSun/ PtShd	West coast native, not hardy in cold winters.
<i>Physocarpus capitatus</i> WESTERN NINEBARK, PACIFIC NINEBARK	8'	6'	D	PDX		FSun/ PtShd	Prefers moist conditions, requires some summer water.
<i>Physocarpus opulifolius</i> cvs. COMMON NINEBARK, EASTERN NINEBARK	10'	6'	D		Yes	FSun/ PtShd	
<i>Rhamnus alaternus</i> ITALIAN BUCKTHORN	8'	5'	E		Yes	FSun/ PtShd	Fast growing, tolerates drought, heat, wind.
<i>Ribes sanguinum</i> RED-FLOWERING CURRANT	6-8'	6'	D	PDX	Yes	FSun/ PtShd	Drought tolerant, does best with summer water.
<i>Syringa x laciniata</i> CUTLEAF LILAC	6'	5'	D		Yes	FSun/ PtShd	
<i>Syringa meyeri</i> 'Palibin' PALABIN MEYER LILAC	6'	5'	D		Yes	FSun/ PtShd	
<i>Syringa patula</i> 'Miss Kim' MISS KIM KOREAN LILAC, MISS KIM MANCHURIAN LILAC	6'	5'	D		Yes	FSun/ PtShd	Good fall leaf color.
<i>Thuja occidentalis</i> 'Smaragd' (Emerald) AMERICAN ARBORVITAE	12'	3'	E		Yes	FSun/ PtShd	Withstands excessive moisture.
<i>Viburnum x bodnantense</i> 'Dawn' DAWN BODNANTENSE VIBURNUM	15'	10'	D		Yes	FSun/ PtShd	Winter blossoms.
<i>Viburnum carlesii</i> KOREAN SPICE VIBURNUM	6-8'	6'	D			FSun/ PtShd	Fragrant snowball blossoms; loose open habit.
<i>Viburnum</i> 'Cayuga', 'Mohawk' VIBURNUM	6-8'	6'	D			FSun/ PtShd	Fragrant blossoms.
<i>Viburnum cinnamomifolium</i> CINNAMON LEAF VIBURNUM	8'	6'	E		Yes	FSun/ FShd	Small early-spring flowers
<i>Viburnum ellipticum</i> OREGON VIBURNUM	8'	6'	D	PDX		FSun/ PtShd	
<i>Viburnum odoratissimum</i> v. <i>awabuki</i> SWEET VIBURNUM	6-8'	6'	E			FSun/ PtShd	Glossy leaves, best with summer water. not as winter hardy as other viburnums.

Botanical Name COMMON NAME	Height	Spacing	Evergreen/ Deciduous	Native	Drought Tolerant	Sun or Shade	Remarks
HIGH SCREEN SHRUBS, 6 FEET AND TALLER							
<i>Viburnum tinus</i> LAURUSTINUS VIBURNUM	6-7'	5'	E		Yes	FSun/ FShd	Pink buds open to white flowers in winter and spring.
<i>Vitex agnus-castus</i> CHASTETREE	4'	10'	D		Yes	FSun/ PtShd	Drought tolerant, flowers, spreading multi-trunked habit.
LOW SHRUBS, 3 to 4 FEET							
<i>Abelia x grandiflora</i> GLOSSY ABELIA	4'	4'	Semi E			FSun/ PtShd	Best with some shade, prefers acid, peaty soil
<i>Berberis x gladwynensis</i> 'William Penn' WILLIAM PENN BARBERRY	3'	4'	E		Yes	FSun/	
<i>Berberis thunbergii</i> 'Aurea' JAPANESE BARBERRY	4'	4'	D		Yes	FSun/ PtShd	Yellow leaves, good color accent plant.
<i>Berberis verruculosa</i> WARTY BARBERRY	3'	4'	E		Yes	FSun/ PtShd	Very spiny branches.
<i>Buxus sempervirens</i> 'Suffruticosa' EDGING BOXWOOD, TRUE DWARF BOXWOOD	4'	3'	E		Yes	Sun Shade	
<i>Caryopteris x clandonensis</i> BLUE MIST, BLUEBEARD	3'	4'	D		Yes	FSun/ PtShd	Best in full sun, very drought tolerant, abundant blue blossoms from August to frost.
<i>Ceanothus sp.</i> (eg, <i>velutinus</i> , <i>thyrsiflorus</i> , <i>integerrimus</i>) CALIFORNIA LILAC	4'+	5-8'	E	NW	Yes	FSun	Most species are native to California. Use cultivars tested for Portland region. Most species are short-lived (<10 years).
<i>Choisya ternata</i> MEXICAN TERNATE ORANGE, Also <i>Choisya</i> 'Aztec Pearl'	3-4'	4'	E			FSun/ PtShd	Fast growing, attractive blossoms
<i>Cistus (various species)</i> ROCK ROSE	3-5'	3-5'	E		Yes	FSun	Showy spring flowers, hardy, drought tolerant. If in area receiving watering, needs well-drained soil.
<i>Clethra alnifolia</i> 'Hummingbird' SUMMERSWEET SWEET PEPPERBUSH	3'	3'	D			FSun/ PtShd	'Hummingbird' is smaller than other cultivars.
<i>Corylopsis pauciflora</i> BUTTERCUP WINTER HAZEL	4'	5'	D		Yes	PtShd	Late Winter or very early fragrant spring blossoms.
<i>Daphne sp.</i> DAPHNE	3-4'	3-4'	E/D		Yes	FSun/ PtShd	Winter flower, very fragrant, <i>D. odora</i> is sensitive, requires careful planting and maintenance. Other varieties are hardier.
<i>Daphne x burkwoodii</i> BURKWOOD DAPHNE	3'	5'	E			FSun/ PtShd	Does best with some summer water.
<i>Daphne caucasica</i> cvs. CAUCASIAN DAPHNE	3'	3'	E			FSun/ PtShd	

Botanical Name COMMON NAME	Height	Spacing	Evergreen/ Deciduous	Native	Drought Tolerant	Sun or Shade	Remarks
LOW SHRUBS, 3 to 4 FEET							
<i>Daphne tangutica</i> DAPHNE	3'	3'	E			FSun/ PtShd	
<i>Deutzia gracilis</i> 'Nikko' SLENDER DEUTZIA	3'	5'	D		Yes	FSun/ PtShd	D. gracilis is shorter than other species.
<i>Exocorda x macrantha</i> 'The Bride' PEARL BUSH	4'	4'	D			Sun	Late April blossoms
<i>Hydrangea macrophylla</i> 'Pia' BIG-LEAF HYDRANGEA GARDEN HYDRANGEA	3'	4'	D			Shade	Requires summer water for best performance.
<i>Hydrangea quercifolia</i> 'PeeWee' OAK-LEAF HYDRANGEA	4'	6'	D			FSun/ PtShd	Requires summer water for best performance.
<i>Hydrangea serrata</i> 'Prezosa' HYDRANGEA	4'	4'	D			FSun/ PtShd	Requires summer water for best performance.
<i>Ilex crenata</i> JAPANESE HOLLY	4'	4'	E			Sun Shade	Very hardy, grows best in slightly acid soil.
<i>Ilex glabra</i> 'Shamrock' INKBERRY	4'	4'	E		Yes	Sun Shade	
<i>Itea virginica</i> 'Little Henry' LITTLE HENRY SWEETSPIRE	3'	4'	D			Sun Shade	
<i>Lavandula sp.</i> LAVENDER	2-3'	2-3'	E		Yes	FSun	Short-lived.
<i>Lonicera nitida</i> BOX HONEYSUCKLE	4'	5'	E		Yes	FSun PtShd	Fragrant June blossoms.
<i>Loropetalum chinense var. rubrum</i> 'Suzanne' PINK-FLOWERING FRINGE FLOWER	4'	5'	Semi E			FSun PtShd	
<i>Mahonia aquifolium</i> TALL OREGON GRAPE	3-4'	3'	E	PDX	Yes	Sun Shade	Portland native; yellow flowers. Can reach over 6 feet high, but tolerates being cut back.
<i>Nandina domestica</i> 'Firepower', 'Compacta', 'Gulfstream' HEAVENLY BAMBOO, SACRED BAMBOO	3'	3'	E		Yes	FSun/ PtShd	These are shorter cultivars.
<i>Philadelphus lewisii</i> MOCK ORANGE	3'	3'	D	PDX	Yes	FSun/ PtShd	Portland native, fragrant flowers
<i>Philadelphus x virginalis</i> 'Dwarf Snowflake' VIRGINAL MOCK ORANGE	4'	4'	D			FSun PtShd	
<i>Phygelius x rectus</i> cvs. CAPE FUSCHIA	3'	3'	Semi E		Yes	FSun PtShd	Bright flowers from July through September
<i>Potentilla fruticosa</i> cvs. BUSH CINQUEFOIL	3'	3'	D		Yes	FSun PtShd	
<i>Rhamnus californica</i> COFFEEBERRY, smaller cvs.	3-4'	3'	E		Yes	FSun/ PtShd	Western native. Looks best with some summer water.

Botanical Name COMMON NAME	Height	Spacing	Evergreen/ Deciduous	Native	Drought Tolerant	Sun or Shade	Remarks
LOW SHRUBS, 3 to 4 FEET							
<i>Rosa</i> 'Carefree Delight' CAREFREE DELIGHT ROSE	4'	5'	D		Yes	FSun PtShd	Disease resistant, self-cleaning.
<i>Rosa x odorata</i> 'mutabilis' TWELVE-MONTH ROSE	3-4'	3'	semi E			FSun	
<i>Rosa pisocarpa</i> CLUSTERED ROSE	3-4'	3'	D	PDX	Yes	FSun/ PtShd	Portland native; grows near water.
<i>Sarcococca ruscifolia</i> , <i>S. confusa</i> FRAGRANT SARCOCOCCA	3-4'	3'	E			FShd/ PtSun	Winter flower / fragrant, does best with summer water. Grows well in deep shade.
<i>Spiraea x bumalda</i> cvs. BUMALD SPIRAEA,	3'	3'	E			FSun PtShd	Fragrant winter flower. Does best with summer water. Grows well in deep shade.
<i>Spiraea betulifolia</i> SHINY-LEAF SPIRAEA, WHITE SPIRAEA, BIRCHLEAF SPIREA	3'	3'	D	PDX	Yes	FSun/ PtShd	Var. <i>S.b. lucinda</i> is a Portland native.
<i>Spiraea densiflora</i> SPIRAEA	3'	3'	D		Yes	FSun	
<i>Spiraea douglasii</i> WESTERN SPIRAEA, HARDHACK	3-4'	3'	D	PDX		FSun/ PtShd	Portland native; grows near water.
<i>Spiraea japonica</i> cvs. JAPANESE SPIRAEA	3'	3'	D		Yes	FSun	
<i>Spiraea nipponica</i> NIPPON SPIRAEA	3'	3'	D		Yes	FSun	
<i>Symphoricarpos albus</i> SNOWBERRY	3'	3'+	D	PDX	Yes	Sun/ Shade	Portland native. Pink spring flowers, white summer berries. Fruits best in full sun.
<i>Symphoricarpos orbiculatus</i> CORAL BERRY, INDIAN CURRANT	3'	3'	D		Yes	Sun Shade	
<i>Viburnum davidii</i> DAVID VIBURNUM	3'	3'	E			Sun/ Shade	Takes full sun with good soil; does not tolerate heavy clay.
<i>Viburnum opulus</i> 'Nanum' DWARF EUROPEAN CRANBERRY BUSH	3'	4'	D		Yes	Sun/ Shade	Tolerates wet soil. 'Nanum' is a dwarf variety; other cvs. are taller.
<i>Viburnum x pragense</i> VIBURNUM	4'	4'	E			Sun/ Shade	Winter flowering. Can grow over 6 feet tall.
<i>Viburnum propinquum</i> VIBURNUM	3'	3'	E			Sun/ Shade	
<i>Weigela florida</i> 'Java Red' JAVA RED WEIGELA	4'	5'	D		Yes	FSun/ PtShd	

GROUND COVER

Explanation of column headings for ground cover plants:

- **Height:** Approximate maximum height.
- **Spacing:** Use this spacing figure to calculate the number of plants needed to fill the landscaped area.
- **Evergreen/Deciduous:** Indicated by E or D.
- **Native:** Identifies plants on the Portland Native Plant List (PDX), native to the Willamette Valley (WV), or native elsewhere in Oregon (OR).
- **Drought Tolerant:** Yes identifies plants that are well adapted to dry conditions and periods of drought.
- **Sun or Shade:** FSun = full sun, Sun = sun, PtSun = part sun Shd = shade, FShd = full shade, PtShd = part shade.
(NOTE: To calculate the number of ground cover plants needed, use the Plant Coverage Table and the Spacing figure from this list. The Plant Coverage Table is found at the beginning of the Suggested Plant Lists.)

Botanical Name COMMON NAME	Height	Spacing	Evergreen/ Deciduous	Native	Drought Tolerant	Sun or Shade	Remarks
Ground Covers							
<i>Arctostaphylos nummularifolia</i> MANZANITA	10"	1.5'	E		Yes	FSun	
<i>Arctostaphylos uva ursi</i> KINNIKINICK, BEARBERRY	12"	2'	E	PDX	Yes	PtSun	Slow in starting to spread
<i>Baccharis magillanicus</i> SPREADING COYOTE BUSH	6"	4'	E		Yes	FSun	
<i>Berberis</i> (see Mahonia listings below) MAHONIA							
<i>Bergenia</i> cvs. BERGENIA	16"	1.5'	E		Yes	Sun Shade	Best in partial shade, Drought tolerance greatest in shade.
<i>Ceanothus 'Blue Cushion'</i> BLUE BUSH, CALIFORNIA LILAC	8"	3'	E		Yes	FSun	Does not tolerate summer watering once established.
<i>Ceanothus gloriosus</i> , cvs. CALIFORNIA LILAC	6"	4'	E	NW	Yes	FSun	Tolerates heavy soil and moderate summer water.
<i>Ceanothus porrectus</i> , cvs. CALIFORNIA LILAC	6"	4'	E		Yes	FSun	
<i>Cotoneaster dammeri</i> BEARBERRY COTONEASTER	4"	3"	E		Yes	FSun	Does best in dry conditions.
<i>Euonymus fortunei 'Coloratus'</i> PURPLE-LEAF WINTER CREEPER	2'	3'	E			Sun Shade	Does best with some summer water. Also known as <i>E. radicans</i> .
<i>Fragaria chiloensis</i> SAND, BEACH, or CHILEAN STRAWBERRY	6"	1.5'	E	NW	Yes	PtShd	Needs annual mowing or cutting back to force new growth.
<i>Helianthemum</i> cvs. SUN ROSE	10"	1.5'	E		Yes	FSun	Does best in dry settings, rock gardens. Plants are not long-lived; become straggling after a few years.
<i>Iris tenax</i> and other species PACIFIC COAST IRIS and HYBRIDS	12"	2'	E	PDX	Yes	Sun LtShd	Good in day shade

Botanical Name COMMON NAME	Height	Spacing	Evergreen/ Deciduous	Native	Drought Tolerant	Sun or Shade	Remarks
GROUND COVERS							
<i>Mahonia nervosa</i> (<i>Berberis nervosa</i>) LONGLEAF MAHONIA	2'	2'	E	PDX		PtShd/ Shade	<i>M. nervosa</i> requires shade
<i>Mahonia repens</i> (<i>Berberis repens</i>) CREEPING OREGON GRAPE	18"	2'	E	NW	Yes	FSun PtShd	
<i>Oxalis oregana</i> REDWOOD SORREL	8"	Indet.	D	PDX	Yes	Shade	Looks best with summer water.
<i>Petasites frigidus</i> <i>var. palmatus</i> SWEET COLTSFOOT	18"	3'	D	PDX			Can sit in water. Very vigorous and will spread.
<i>Polystichum munitum</i> SWORD FERN	2-3'	3'	E	PDX	Yes	Shade	Grows best with summer water
<i>Ribes laurifolium</i> LAUREL-LEAVED CURRANT	8"	3'	E		Yes	Shade	Grows best with some summer water. Difficult to find.
<i>Sarcococca hookeriana</i> <i>var. humilis</i> HIMALAYAN SARCOCOCCA	20"	2'	E			Shade	Does well even in deep shade. Best with some summer water.
<i>Trachelospermum jasminoides</i> & <i>T. asiaticum</i> STAR JASMINE	10"	2'	E			FSun/ PtShd	Fragrant. <i>T. asiaticum</i> is hardier, but must grow over peak of fence or wall to flower. <i>T. majus</i> is also hardy, but not readily available in region yet.
<i>Zauschneria</i> <i>spp.</i> CALIFORNIA FUSCHIA	18"	2.5'	Semi-E		Yes	FSun	
GROUND COVERS, GRASSES AND GRASS-LIKE PLANTS							
<i>Acorus gramineus</i> 'Ogon', 'Variegatus' GRASSY-LEAVED SWEET FLAG	1'	1.5'	E			FSun/ PtShd	Tolerates wet soil and standing water.
<i>Carex morrowi</i> SEDGE	2'	1.5'	E			Sun Shade	
<i>Elymus magellanicus</i> MAGELLAN GRASS	2'	3'	E		Yes	FSun/ PtShd	Does best with some summer water.
<i>Festuca glauca</i> 'Elijah Blue' BLUE FESCUE	1'	1'	E		Yes	FSun/ LtShd	Best in full sun. Does not tolerate wet soils.
<i>Hokonechloa macra</i> 'Aureola' HAKONE GRASS	20"	2'	E			FSun/ PtShd	Perfers partial shade. Needs some summer water.
<i>Helictotrichon sempervirens</i> BLUE OAT GRASS	2'	1.5'	E		Yes	FSun/ lt/shd	Tolerates light shade, but does best in full sun; best color in dry soils.
<i>Juncus patens</i> GROOVED RUSH	3'	3'	E	PDX	Yes	Yes	Requires moist soil. Tolerates standing water.