



Landscape Design Standards

I. Background and Overview

- A. The City's Program Standards and Procedures (PSP) are intended to be used in conjunction with the data contained in related standards and procedures. They are not intended to be used as stand alone documents. It is the responsibility of the Designer to become familiar with all the PSP documents and comply with the criteria set forth as a whole.
- B. This standard is intended to provide consistency in design criteria, materials and products for future landscape, and irrigation development at Willow Lake Water Pollution Control Facility (WLWPCF). This Landscape Design Standards is intended to be used in conjunction with the Sustainable Design Standards and Site Design Standards. This Landscape Design Standards includes the following sections:
 - II. Goals and Objectives
 - III. Codes and Standards
 - IV. General Landscaping
 - V. Parking Lots
 - VI. Screening and Buffering
 - VII. Irrigation

II. Goals and Objective

- A. Clearly define spaces, articulate use areas, and unify site elements through use of landscape materials:
 - 1. Create a distinction between process and non-process facilities within WLWPCF.
 - 2. Use consistent site features such as signs and benches.
- B. Provide clear wayfinding as appropriate for facilities:
 - 1. Create a strong entry.
 - 2. Provide clear direction to primary building entries.
 - 3. Enhance circulation corridors with trees and plant materials.



- C. Support a safe and clear circulation system(s):
 - 1. Provide appropriate sidewalk and roadway width as described in the Site Design Standards.
 - 2. Improve visibility, safety, and aesthetics as appropriate for facilities.
- D. Use sustainable landscaping practices:
 - 1. Limit and control erosion throughout site.
 - 2. Minimize use of non-sustainable fertilizers, herbicides, and pesticides.
 - 3. Use plant material to reduce adverse climatic conditions such as heat, wind, and precipitation.
 - 4. Guide future development toward sustainable and environmentally sound design through use of native and locally available plant material, reclaimed water irrigation, and other practices.
 - 5. Feature native Willamette Valley plant material.
 - 6. Reinforce agricultural/orchard context of site **by simulation of this type of planting.**
 - 7. **Consider xeriscape approaches where natural, low maintenance plant material would be desired (i.e. exterior fringes of plant site).**

III. Codes and Standards

- A. Designer shall refer to appropriate jurisdictional standard regarding specific requirements for landscaping of parking lots, screening and buffering, and general landscaping. Also reference the Site Design Standards for specific site requirements. The following is a summary of some applicable requirements and is not intended to replace necessary research.
 - 1. City of Salem—Codes and Standards:
 - a. Chapter 68 - Preservation of Trees and Vegetation.
 - b. Chapter 86 - Trees and Shrubs.
 - c. Chapter 132 - Landscaping:
 - 1) 132.140 - Required Elements for Landscape Plans.



- 2) 132.150 - Landscape materials shall be planted at such a size as to provide 75 percent ground coverage within five years of installation.
- 3) 132.190 - A permanent underground irrigation system shall be provided.
- 4) 132.220 - Buffer Yards and Screening:
 - a) Buffers and screening shall be provided in compliance with City of Salem, Codes and Standards, Tables 132-1 and 132-2.
 - b) Required plant units, as shown in Table 132-3, shall provide 75 percent coverage of the required buffer area within five years. Trees shall account for a minimum of 40 percent of the required plant units.
- 5) 132.230 - Parking Lots:
 - a) Parking areas shall be separated from building walls by a five-foot-wide landscape strip or a five-foot-wide sidewalk.
 - b) Wheel stops shall be provided.
 - c) A landscape buffer strip shall separate parking areas from public right-of-way.
 - d) Perimeter buffer yards shall be provided based on Table 132-1.
 - e) Dependant on parking lot size, five-to-eight percent of parking and driveway area shall be interior landscaping.
 - f) Trees shall be provided within parking areas at a rate of one-per 12 spaces.
 - g) Planters shall have minimum interior dimensions of 25 square feet.

2. City of Keizer:

- a. 2.303.11 - Parking and Loading Area:
 - 1) Parking lots abutting a residential lot must be separated with a 40-foot-wide landscape yard or a fence or wall with minimum height of four feet.



- 2) Provide one-tree for every eight parking spaces. The minimum planting area dimension shall be four feet square and protected by a curb.
- b. 2.309.01 - Site and Landscaping Design:
- 1) Screening shall be required between industrial and residential uses and for parking lots larger than 30 spaces.
 - 2) Screening may be accomplished with solid hedges, berms, walls, fences, or other design techniques.
 - 3) Buffering shall be used between dissimilar adjoining uses. Buffer options include:
 - a) Provide a 15-foot-wide planting area with trees spaced 15 feet on center, a sight obscuring hedge with a minimum height of five feet in one-year, and landscaping material to cover the balance.
 - b) Provide a 10-foot-wide berm with a sight obscuring hedge, minimum combined height of berm and hedge not less than five feet.
 - c) Provide a solid wall or fence minimum height of five feet with a five-foot landscape strip.

3. Marion County:

a. Chapter 29 - Landscaping:

- 1) 29.06 - Parking lots with 20 spaces or more shall provide a landscape area equal to a minimum of five-percent of the parking spaces and driveways. The required landscape area will be within or adjacent to the parking area.
- 2) 29.07 - A landscape area shall be provided between parking spaces and adjacent streets or residential lots with a minimum width of three feet.

A site obscuring fence may be provided along the property line in lieu of landscaping.

- 3) 29.08 - Plantings within landscaped areas shall be spaced so as to provide 75 percent ground cover within five growing seasons. The remaining landscape area may be covered by organic or rock material.



- b. Chapter 30 - Off-street parking and loading:
 - 1) 30.17 - Parking spaces shall be a minimum of nine feet wide by 17 feet long. Compact spaces may have reduced width of 8.5 feet. Up to 30 percent of spaces provided may be compact.
 - 2) 30.18 - Minimum width for two-way driveway with no parking is 22 feet. Minimum width of drive aisles serving parking is 12 to 24 feet dependant on the angle. (24 feet for 90 degree parking).

4. Industry standards:

Quality definitions, grading tolerances, and caliper to height ratios shall be no less than minimums specified by the American Landscape and Nursery Association, American Standards for Nursery Stock. Standard reference may be obtained from publisher.

IV. General Landscaping

A. The Landscape Design Standard, Supplement—Plant Material at the end of this section, shall be used as a guide for selecting trees, shrubs, and groundcover.

1. Context:

The site is in an historically agricultural setting and is currently surrounded by orchards and nursery production, leading to a common grid or row theme.

- 2. Landscaping shall be designed to create a low maintenance and sustainable campus. Plant materials shall be selected to provide buffering and screening, to mitigate harmful effects of sun, wind, rain, noise, and odor.
- 3. WLWPCF is on a disturbed site. Site soils are a mix of native soil and imported fill, silt, and sand. Soil make-up and fertility may vary widely throughout the site. Prior to commencing design, verify soil fertility and amendment needs for the immediate design area.
- 4. The nutrient content of the water intended for irrigation of the design area shall also be considered.
- 5. Perform a site analysis that accounts for micro-climate conditions, sun exposure, and prevailing winds (relative to wind breaks and odor control), prior to commencing design.
- 6. WLWPCF maintains an on-site weather tracking facility. Historic data may be available to the Designer.



7. Protect existing site improvements. Verify location of underground utilities prior to performing work.
8. Preserve and protect existing trees and vegetation when possible.

Existing plant material in a healthy condition shall be transplanted or relocated if feasible when displaced by construction or other disruption.

B. Soil preparation:

Soil preparation shall include the addition of fertilizer and soil amendments to establish fertile planting soil, adjust pH, enhance soil texture and moisture content. A soil test should be performed to determine exact amendments necessary for each site. The following is a select list of organic amendments and their uses:

1. Fertilizer:

- a) Nitrogen—blood meal, fish waste, bat guano, cottonseed meal.
- b) Phosphorous—bone meal, rock phosphate.
- c) Potassium—Greensand.
- d) Trace minerals (boron, iron, manganese, zinc, etc.)—seaweed or kelp meal.
- e) Dolomite lime and agricultural lime can be used to adjust pH.

2. Soil amendments:

- a) Humus.
- b) Peat.
- c) Compost.
- d) Manure.

C. Vegetation Control:

1. On-going maintenance shall be required for vegetation control.
2. Initial weed establishment can be deterred with annual mulching of planted areas. Cultivation and hand weeding may also be necessary to prevent weed establishment during the growing season.



D. Trimming and Pruning:

1. Pruning of trees and shrubs shall be performed no more than once per year, or as necessary.
2. Pruning can be used to develop plant form, remove disease and dead wood, and thin branches when desired. Consult a horticultural guide for detailed species requirements regarding time, method, and extent of pruning.

E. Tree Protection:

1. Temporary fencing shall be used to protect existing trees and vegetation from construction damage.
2. Fence shall be placed at edge of canopy drip zone to protect roots from backfill, compaction, and noxious materials.
3. Where root disturbance and excavation cannot be avoided in tree protection zones, hand clearing, and excavation may be required to minimize damage.

F. Sustainable Practices:

1. The Designer is referred to the Site Design Standards.
2. Control erosion through management practices that prevent soil loss caused by stormwater run-off or wind erosion of exposed soil. Prevent sediment from leaving site or entering stormwater catch basins.
3. Apply grass seed and/or another form of erosion control to disturbed areas as soon as practicable to prevent soil loss.
4. Utilize species that are locally grown and available.
5. Use a high-efficiency, low volume irrigation systems.
6. Provide shade on 30 percent of impervious surfaces including parking lots, sidewalks and plazas to reduce reflected heat, glare and stormwater run-off where practical.
7. Locate plant material adjacent to non-process buildings to reduce energy use in heating and cooling.

G. Plant material:

1. Nursery stock shall be locally grown and obtained within a 100-mile radius of project site.
2. Select plant material that is long lived, requires low maintenance, and is disease and insect infestation resistant.



3. Locate and organize plant material in accordance with species siting needs (i.e. sun or shade, soil type, root depth, growth habit, etc.)
4. Consider plant habit, root depth, and size at maturity in location of plant material to avoid damage to other facilities such as sidewalks, parking lots, and underground pipes.
5. Consider intended life of landscaping being designed.

Long-term temporary landscaping (up to five years) shall be designed to provide erosion control and soil stabilization at minimal expense with foreknowledge of future disturbance.

6. Trees shall be located to provide shade on buildings, parking lots, and sidewalks.
7. Trees shall be selected and placed to prevent leaf litter from entering open basins.
8. Trees shall be located to prevent interference with underground utilities.
9. Specified plant material shall meet the following minimum size criteria:

Shade Trees	2-inch gallon.
Ornamental Trees	1 ½-inch gallon.
Conifer Trees	6-8 feet height
Large Shrubs	5 gallon container
Medium Shrubs	3 gallon container
Small Shrubs	1 gallon container
Ground Cover	4-inch pot

H. Lawns and grasses:

1. Specify quality seed mix with high germination rate capable of producing an attractive, permanent ground cover.
2. Grass seed shall be selected for ease of maintenance.
3. Select a grass seed mix appropriate for the needs of the specific project.
 - a. Erosion Control Seeding—This will be used for quick cover and erosion control. This seed should be used to transition areas between construction projects, and should have a lifespan not to exceed one year.
 - b. Long-Term Temporary Seeding—This seeding will provide inexpensive, non-irrigated cover in areas intended for future disturbance. Lifespan is intended for projects lasting one-to-five years.



- c. Permanent Seeding—This lawn seeding shall be a sun tolerant mix, requiring a permanent irrigation system.
4. Provide mow-strips around trees, structures, and anywhere there is not a hard edge (i.e. curbs and sidewalks) to reduce trimming labor.

I. Non-Process Facilities:

Utilize concentrations of smaller decorative planting to accentuate primary building entries.

1. Planting may be used around foundations of non-process facilities.
2. Use shade trees to provide shade on south facing walls and windows. Improve passive solar aspect of walls and buildings.
3. Locate trees to provide shade along access routes and adjacent to building entries.

J. Process Facilities:

1. Maintain clear visual and physical access around perimeter of all process facilities.
 - a. Provide a minimum three-foot-wide concrete mow strip around exterior walls of open basins and tanks.
 - b. Maintain a minimum 10-foot clear access on all sides of electrical equipment. Lawn, gravel, paver stones, asphalt, or concrete will be acceptable within access area.
2. Minimize small decorative planting adjacent to process facilities, except at entries.
3. Locate trees to provide shade along access routes and adjacent to building entries.
4. Observe clearance requirements for trees and plant material adjacent to open basins and underground structures.

K. Circulation and Wayfinding:

1. Enhance future and existing circulation corridors with trees and plant material.
2. Provide clear direction to primary building entries. Prioritize and accentuate building entries with concentrations of landscape material.



3. Refer to the Landscape Design Standards, Supplement—Plant Material at the end of this section, for a list of plant materials that will be considered for use on projects at WLWPCF.

V. Parking Lots

- A. The Designer is referred to the Site Design Standards for additional information pertaining to parking lot design.
- B. Parking lots shall include landscaping for the purpose of breaking up expanses of impervious surface, providing shade and shelter, and reducing stormwater run-off.
- C. Interior Landscaping:
 1. Non-process facility parking (laboratory, administration, visitor).
 2. Trees shall be dispersed throughout parking lot.
 3. Landscape islands and strips shall be dispersed throughout parking lot to provide increased pervious surface.
 4. Provide the amount of landscaping in parking and driveway areas required by the applicable codes.
 5. Minimum interior dimensions of landscape islands shall be 60 inches.
 6. Interior trees shall be selected for columnar nature and/or islands and landscape strips shall be dimensioned accordingly to minimize overhang of parked vehicles. Tree canopy when mature shall be taken into consideration in design.
- D. Process Facility Vehicle Parking:

Parking areas for maintenance and service vehicles shall not require interior landscaping or trees.

 1. Perimeter trees and screening may be provided where practical.
 2. Where such parking areas are within 50 feet or sight of adjacent residential properties, perimeter screening shall be provided.
- E. Perimeter Landscaping:
 1. Parking lots shall be screened from view from the right-of-way and adjacent properties.



2. Buffer width between parking lot and right of way shall be a minimum of five feet:
 - a. Provide a low hedge, as defined in screening and buffering below, as a visual barrier.
 - b. Buffer width between parking lot and other adjacent uses shall be a minimum of ten feet.
 - c. Provide a tall hedge and/or solid fence, as defined in screening and buffering below, as a visual barrier.
3. Landscaping shall be protected by wheel stop or curb from vehicular damage.
4. Screening and buffering shall be used to soften the impact of parking lots, loading areas, and unsightly plant facilities.
5. Provide appropriate visual, and other buffering as needed to assist facilities to better fit in neighborhoods and surrounding communities.
6. Use a combination of distance and plant material to create a visual barrier to separate adjacent properties from facilities within the plant.
7. Low hedge shall be used to screen parking lots from adjacent streets and right-of-way. Low hedge shall be a continuous, opaque screen with a minimum height of three feet and shall include one-tree-per 40 linear feet.
8. Tall hedge or fence shall be used to screen parking lots plant facilities from adjacent residential neighbors. Tall hedge shall be a continuous, opaque screen of plant material, fence or wall with a height of six feet, and shall include one-tree-per 40 linear feet.
9. Minimum buffer width between site facilities and adjacent properties shall be ten feet.

VI. Irrigation

- A. The designer is referred to Master Guide Specifications for irrigation systems and the Process Identification, Finishes and Labeling Design Standards.
- B. General requirements for irrigation include:
 1. The irrigation system shall be designed to provide full coverage to all permanent landscape areas.
 2. Lawn and other plants with high water demand shall be zoned separate from shrub and ground cover areas with reduced water requirements.



3. Consider future plant expansion in design of irrigation system.
4. Appropriate measures shall be taken as necessary to extend wiring and other system components to entire plant.
5. Designer shall verify available operating pressure before starting.
6. System shall be designed in compliance with manufacturer and industry standards.
7. Maximum water velocity in pipes shall not exceed five feet-per-second.
8. System shall be designed to minimize excessive pressure loss at furthest reaches of plant.
9. Consider using the DCS for control of irrigation valves. However, if not practical, use of a MaxiCom central control system is acceptable.
10. Alternative forms of irrigation shall be pursued. Water to serve the irrigation system may be available from several different sources. Designer shall consider source of water in design.

C. Products:

1. The approved product line for this site shall be Rainbird.
2. The system shall be designed and provisions made such that a MaxiCom central control system can be incorporated if desired.
3. Coordinate controller location with facility staff. Controller shall be placed in a secure, locking box, and mounted on a wall or pedestal.
4. Approved controller shall be ESP-MC or MaxiCom compatible equal.
5. System elements used in conveyance of non-potable water shall be clearly identified as non-potable by text and/or color.
6. Valves shall be solid brass body construction.

D. Piping and Fixtures:

1. Main lines that are four inches in diameter and less shall be Schedule 40 PVC, minimum depth 24 inches.
2. Main lines greater than four inches in diameter shall be Class 200 PVC, minimum depth 24 inches.
3. Lateral lines shall be Schedule 40 PVC, minimum depth 18 inches.



4. Sleeves shall be Schedule 40 PVC, minimum depth 24 inches.
 - a. Sleeves shall extend beyond edge of pavement a minimum of 12 inches.
 - b. Sleeves shall have a minimum dimension of four inches or be sized as necessary to accommodate elements they convey.
5. All fittings shall be of the same material/class and rating as the pipe of that size.

—END OF SECTION—



SUPPLEMENT—PLANT MATERIAL										
Scientific Name	Common Name	PNW	Ecology	Layer/	Conifer/	Mature	Texture	Habit	Key features	Site Use
		Native		Height	Deciduous	Canopy				
SUPPLIERS										SITE USE
Balance Restoration		Chehalem Mountain Nursery								B Buffers & Hedges
541.942.5530		503.628.3765								P Parking Areas
tamfrobinson@cs.com		www.chehalemountain.com								O Ornamental
										S Shade Trees
Blooming Nursery		Wallace Hansen								H Habitat Areas
506.357.2904		503.581.2638								
www.bloomingnursery.com		www.nwplants.com								
										* = Preferred variety where appropriate
Bosky Dell Natives		Northwest Native Plants								
503.638.5946		503.632.7079								
boskydellnatives@aol.com		nwnative@bctonline.com								
Cascadian Nurseries		Teufel Nursery								
503.645.3350		503.646.1111								
sales@cascadiannurseries.com		www.teufel.com								

SUPPLEMENT—PLANT MATERIAL										
Scientific Name	Common Name	PNW	Ecology	Layer/ Height	Conifer/ Deciduous	Mature Canopy	Texture	Habit	Key features	Site Use
TREES										
Abies concolor	white fir	yes	sun	tree/ 50'	conifer	25-30'	fine	pyramidal		B, O, H
Acer circinatum	vine maple	yes	shade - p. sun	t. shrub/ 20'	deciduous	15'	medium	open	brilliant fall color	O, H
Acer platanoides	Norway maple	no	sun - p. shade	tree/ 50'	deciduous	35'	coarse	broad oval	yellow fall color	P, O, S
Acer rubrum	red maple	no	sun - p. shade	tree/ 40'	deciduous	15-30'	coarse	broad oval	shade / fall color	P, O, S
Acer saccharum	sugar maple	no	sun - p. shade	tree/ 50'	deciduous	35'	coarse	broad oval	yellow - red fall color	P, O, S
Alnus rubra	red alder	yes	sun - shade	tree / over 40'	deciduous	25'	medium	oval		H
Calocedrus decurrens	incense cedar	yes	sun	tree/ 50'	conifer	15'	fine	columnar		B, O
Chamaecyparis lawsoniana	Port Orford cedar	yes	sun - p. shade	tree/ 30-60'	conifer	15-20'	fine	narrow pyramidal		B, O
Chamaecyparis nootkatensis	Alaska cedar	yes	sun - p. shade	tree/ 75'	conifer	15-20'	fine	pyramidal		O
Cornus kousa	Kousa dogwood	no	sun - shade	sm. tree/ 20'	deciduous	15-20'	medium	upright, vase	flower / fall color	O
Cornus florida	flowering dogwood	no	sun - shade	sm. tree/ 25'	deciduous	20'	medium	spreading	flower / fall color	O
Corylus cornuta	hazelnut	yes	sun - p. shade	t. shrub/ 20'	deciduous	20'	medium	open		B, O, H
Crataegus suksdorfii	black hawthorn	yes	sun	sm. tree/ 20'	deciduous	15'	medium	upright, oval		O, H
Fraxinus latifolia	Oregon ash	yes	sun	tree/ 60'	deciduous	25'	medium	upright, oval	yellow fall color	S, H
Fraxinus penn. 'Summit'	Summit Ash	no	sun	tree / 40'	deciduous	25-35'	medium	oval		P, O, S
Gleditsia tri. inermis	Honeylocust	no	sun	tree / 35-40'	deciduous	30-35'	fine	oval	fine texture / open shade	P, O, S
Magnolia stellata	star magnolia	no	sun - shade	sm. tree / 10-15'	Deciduous	10-15'	medium		flowers	O
Magnolia x soulangiana	saucer magnolia	no	sun - shade	tree / 20-30'	Deciduous	20-30'	coarse		flowers	O
Malus spp.	crabapple	no	sun - p. shade	sm. tree/ varies	deciduous	varies	medium	spreading	flowers/fruit/fall color	P, O
Pinus contorta var. contorta	shore pine	yes	sun	tree / 20-30'	conifer	20'	fine	open, rounded		O, H
Pinus ponderosa	ponderosa pine	yes	sun	tree / 50-60'	conifer	20'	fine	broad pyramidal		O
Prunus emarginata	bitter cherry	yes	sun - shade	sm. tree/ 20-30'	deciduous	20'	medium	open		H
Prunus virginiana	chokecherry	yes	sun - p. shade	sm. tree/ 25'	deciduous	15'	medium		flowers/fruit/fall color	
Prunus spp.	flowering cherry	no	sun	sm. tree/ 25'	deciduous	25'	coarse	spreading	flowers	P, O
Pseudotsuga menziesii	Douglas fir	yes	sun - p. shade	tree/ up to 75'	conifer	25-30'	fine	upright, pyramidal		B, O, H
Pyrus calleryana cvs.	Callery pear	no	sun - p. shade	tree / 40'	deciduous	25-35'	medium	varies		P, O
Quercus coccinea	scarlet oak	no	sun	tree / 50'	deciduous	40'	coarse	broad spreading	shade / fall color	O, S, H
Quercus garryana	Oregon oak	yes	sun	tree/ 50'	deciduous	50'	coarse	broad spreading	shade	O, S, H
Quercus frainetto	forest green oak	no	sun	tree / 50'	deciduous	30'	coarse	broad spreading	shade	O, S, H
Quercus rubra	red oak	no	sun	tree/ / 50'	deciduous	40'	coarse	broad spreading	shade / fall color	O, S, H
Sambucus caerulea	blue elderberry	yes	sun - p. shade	t. shrub/ 20'	deciduous	15'	coarse	upright / open	blue fruit	O, H
Sambucus racemosa	red elderberry	yes	sun - p. shade	t. shrub/ 20'	deciduous	15'	coarse	upright / open	red fruit	O, H
Styrax japonica	Japanese snowbell	no	sun - p. shade	tree / 25'	deciduous	25'	medium	rounded	white flowers	O
Thuja plicata	Western red cedar	yes	sun - p. shade	tree / over 100'	conifer	25'	fine	pyramidal		B, O, H
Tsuga heterophylla	Western hemlock	yes	sun - p. shade	tree / over 100'	conifer	35'	fine	pyramidal		O, H
Zelkova serrata	zelkova	no	sun	tree / 50'	deciduous	35-40'	medium	upright / vase		O, P

SUPPLEMENT—PLANT MATERIAL										
Scientific Name	Common Name	PNW	Ecology	Layer/ Height	Conifer/ Deciduous	Mature Canopy	Texture	Habit	Key features	Site Use
SHRUBS										
Amelanchier alnifolia	serviceberry	yes	sun - p. shade	shrub/ 6-10'	deciduous	6-8'	medium		red & yellow fall color	O, H
Berberis thun. 'Atropurpurea'	red barberry	no	sun - p. shade	shrub/ 4'	deciduous	4'	fine		red foliage	O, P, B
Berberis thun. 'Crimson Pygmy'	crimson pygmy barberry	no	sun - p. shade	shrub/ 2'	deciduous	3'	fine		red foliage	O, P
Berberis thun. 'Rosy Glow'	rosy glow barberry	no	sun - p. shade	shrub/ 4'	deciduous	4'	fine		red & pink foliage	O, P, B
Ceanothus integerrimus	deerbrush	yes	sun - p. shade	t. shrub/ 8-12'	deciduous	6'	medium			H, EC
Cornus sericea 'Isanti'	Isanti redbud dogwood	no	sun - shade	shrub/ 6'	deciduous	6'	medium		red fall color & red twigs	B, P, O, H
Cornus sericea 'Kelsey'	Kelsey redbud dogwood	no	sun - shade	shrub/ 3'	deciduous	3'	fine		fine red twigs	B, P, O, H
Cornus sericea 'Flaviramea'	yellow-twig dogwood	no	sun - shade	shrub/ 6'	deciduous	6'	medium		yellow twigs	B, P, O, H
Cornus sericea	redbud dogwood	yes	sun - shade	shrub/ 10'	deciduous	6-8'	medium		red twigs	B, H
Daphne odora 'Aureo marginata'	winter daphne	no	p. shade	shrub/ 4'	brd evergreen	3-4'	medium		early fragrant flowers	O
Escallonia x 'Frades'	Pink Princess Escallonia	no	sun - shade	shrub/ 5-6'	brd evergreen	6'	fine		glossy foliage / early flowers	O, P, B
Euonymus alata 'Compacta'	burning bush	no	sun - shade	shrub/ 4-6'	deciduous	4'	fine		brilliant fall color	B, P, O
Euonymus f. 'Emerald Gaeity'	emerald gaeity euonymus	no	sun - shade	shrub / 3'	brd evergreen	3'	fine		variegated foliage	O, P
Euonymus japonica	Japanese euonymus	no	sun - shade	shrub / 5-6'	brd evergreen	4-5'	medium			O, P, B
Holodiscus discolor	ocean spray	yes	sun	shrub/ 8-15'	deciduous	8'	medium		showy flower mid-summer	O, H, B
Hydrangea m. 'Bluebird'	bluebird hydrangea	no	p. to full shade	shrub / 5'	deciduous	5-6'	coarse		showy flower mid-summer	O
Hydrangea pan. 'Grandiflora'	PeeGee Hydrangea	no	p. to full shade	shrub / 5'	deciduous	5-6'	coarse		showy flower mid-summer	O
Ilex crenata 'Convexa'	Japanese holly	no	sun - shade	shrub/ 3-4'	brd evergreen	3'	fine			O, P, B
Ilex x meserveae	blue holly	no	sun - shade	shrub / 4-6'	brd evergreen	4-6'	medium			O, P, B
Leucothoe fontanesiana	drooping leucothoe	no	p. to full shade	shrub/ 3-4'	brd evergreen	3-4'	medium			O
Lonicera pileata	privet honeysuckle	no	sun - shade	shrub / 3'	brd evergreen	3'	fine			O
Mahonia aquifolium	tall Oregon grape	no	sun - shade	shrub/ 4'	brd evergreen	2'	medium	upright	green/ bronze foliage	P, O, H
Mahonia aquifolium 'compacta'	compact Oregon grape	no	sun - shade	shrub/ 2-3'	brd evergreen	2'	medium	upright	green/ bronze foliage	P, O, H
Mahonia nervosa	Cascades mahonia	yes	p. to full shade	shrub/ 2-3'	brd evergreen	2'	medium	upright	glossy foliage	O, H
Nandina domestica	heavenly bamboo	no	sun - shade	shrub/ 4'	brd evergreen	3'	fine	upright		O
Oemleria cerasiformis	Indian plum	yes	p. shade	t. shrub/ 12'	deciduous	8'	meduym	upright, arching	early spring flowers	O, H

SUPPLEMENT—PLANT MATERIAL										
Scientific Name	Common Name	PNW	Ecology	Layer/	Conifer/	Mature	Texture	Habit	Key features	Site Use
		Native		Height	Deciduous	Canopy				
SHRUBS Continued										
Osmanthus delavayi	Delavay holly olive	no	sun - p. shade	shrub/ 4'	brd evergreen	3-4'	medium			O, P, B
Philadelphus lewisii	mock-orange	yes	sun	shrub/ 6-8'	deciduous	6'	medium		large white flowers	P, O, B
Physocarpus capitatus	ninebark	yes	sun - shade	shrub/ 6-8'	deciduous	4-6'	medium		exfoliating bark	O, H
Pieris japonica	Japanese andromeda	no	p. to full shade	shrub/ 4-6'	brd evergreen	4'	medium	upright		P, O
Prunus laur. 'Otto Luyken'	Otto Luyken laurel	no	sun - shade	shrub/ 4-6'	brd evergreen	4'	medium		low, solid evergreen hedge	O, P, B
Prunus laur. 'Zabeliana'	Zable's laurel	no	sun - shade	shrub/ 4-6'	brd evergreen	4'	medium		low, solid evergreen hedge	O, P, B
Rhododendron spp.	rhododendron	no	p. to full shade	shrub/ varies	brd evergreen	varies	coarse		flowers / foliage	P, O
Rhododendron macrophyllum	Pacific rhododendron	yes	p. to full shade	shrub/ 4-6'	brd evergreen	4'	coarse		flowers / foliage	r
Ribes sanguineum	flowering red currant	yes	sun - shade	t. shrub/ 8-12'	deciduous	6-8'	fine		early pink-red flowers	B, P, O, H
Rosa 'Meidiland varieties'	Meidiland rose	no	sun	shrub/ 3'	deciduous	4'	fine		flowers	O, H
Rosa nutkana	Nootka rose	yes	sun	shrub/ 4'	deciduous	4'	fine		flowers / red rosehips	O, H
Rosa pisocarpa	clustered rose	yes	sun	shrub/ 4'	deciduous	4'	fine		flowers / red rosehips	O, H
Salix spp.	willow	yes	sun	shrub/ varies	deciduous	varies	fine			H
Skimmia japonica	Japanese skimmia	no	sun - shade	shrub/ 3-4'	brd evergreen	3-4'	medium			O
Spiraea japonica	Japanese spirea	no	sun - shade	shrub/ 3-4'	deciduous	3-4'	fine			O, P, B
Spiraea douglasii	hardhack	yes	sun	shrub / 6'	deciduous	4'	fine		flowers	H
Spiraea x bumalda	bumald spirea	no	sun - p. shade	shrub/ 4'	deciduous	3-4'	fine			O, P
Symphoricarpos albus	snowberry	yes	sun - shade	shrub/ 4-6'	deciduous	4'	fine		white fruit	H
Syringa vulgaris	common lilac	no	sun - p. shade	shrub/ 6-8'	deciduous	4-6'	medium		fragrant flowers	O
Vaccinium ovatum	evergreen huckleberry	yes	sun - shade	shrub/ 4'	brd evergreen	3'	fine		foliage	B, O, H
Viburnum carlesii	koreanspice viburnum	no	sun - shade	shrub/ 4-6'	deciduous	4-6'	medium		fragrant flowers	O, P, B
Viburnum davidii	David's viburnum	no	sun - shade	shrub/ 3'	brd evergreen	3'	coarse		glossy foliage	B, P, O
Vib. plicatum tomentosum	doublefile viburnum	no	sun - shade	shrub/ 6'	deciduous	6'	medium		white flowers	B, P, O
Viburnum tinus	laurustinus	no	sun - shade	shrub/ 4'	brd evergreen	4'	medium		fragrant flowers	B, P, O
Viburnum trilobum	American cranberry	no	sun - shade	shrub/ 4'	deciduous	3-4'	coarse		white flowers/ red berries	B, P, O, H
Weigela florida	weigela	no	sun - shade	shrub/ 4'	deciduous	3-4'	medium		colorful foliage/ flowers	

SUPPLEMENT—PLANT MATERIAL										
Scientific Name	Common Name	PNW	Ecology	Layer/	Conifer/	Mature	Texture	Habit	Key features	Site Use
		Native		Height	Deciduous	Canopy				
GROUND COVERS / PERENNIALS / ORNAMENTAL GRASSES										
Arctostaphylos uva-ursi	kinnikinnik	yes	sun - shade	ground cover	brd evergreen		fine			P, O
Cornus canadensis	bunchberry	yes	p. to full shade	ground cover	deciduous		medium			O, H
Athyrium filix-femina	lady fern	yes	p. to full shade	fern	deciduous		medium			O, H
Blechnum spicant	deer fern	yes	p. to full shade	fern	deciduous		medium			O, H
Polystichum munitum	Western sword fern	yes	sun - shade	fern	brd evergreen		coarse			O, H
Crococsmia spp.	Crococsmia	no	sun	perennial	deciduous		medium		showy flowers	O
Hemerocallis spp.	daylily	no	sun - shade	perennial	deciduous		medium		showy flowers	O
Rudbeckia hirta	yellow cone-flower	no	sun	perennial	deciduous		medium		showy flowers	O
Sedum spp.	stonecrop	no	sun - shade	perennial	deciduous		medium		showy flowers	O
Hosta spp.	hosta	no	p. to full shade	perennial	deciduous		coarse		variable foliage	O
Iris reticulata	iris	yes	sun - shade	perennial	deciduous		medium		showy flowers	O
Iris spp.	iris	no	sun - shade	perennial	deciduous		medium		showy flowers	O
Narcissus spp.	daffodil	no	sun - shade	bulb	deciduous		fine		showy flowers	O
Tulipa spp.	tulip	no	sun - shade	bulb	deciduous		fine		showy flowers	O
Crocus spp.	crocus	no	sun - shade	bulb	deciduous		fine		showy flowers	O
Calamagrostis a. 'Karl Foerster'	feather reed grass	no	sun	grass / 4-6'	deciduous	2-3'	fine			O
Imperata cylindrica 'Red Baron'	Japanese blood grass	no	sun - p. shade	grass / 2-3'	deciduous	2'	fine			O
Miscanthos sinensis	Eulalia grass	no	sun	grass / 3-4'	deciduous	2-3'	fine			O
Molina caerulea	moor grass	no	sun - p. shade	grass / 2'	deciduous	1-2'	fine			O
Pennisetum alopecuroides	fountain grass	no	sun	grass / 2-3'	deciduous	2-3'	fine			O