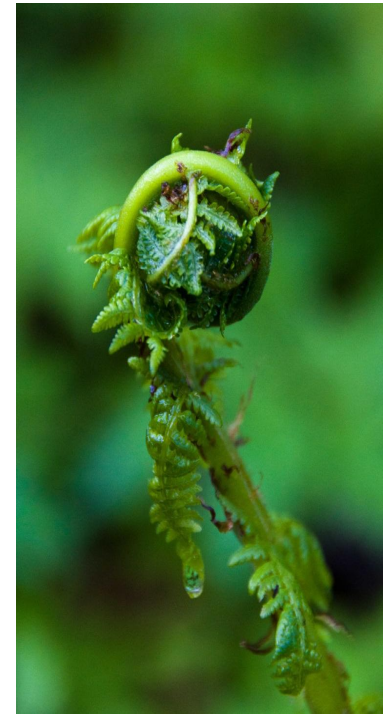




Backyard Habitat: Naturescaping with Native Plants

1. The “Why” of Native Plants
2. Plant & site conditions
3. Canopy layers
4. Pollinators
5. Calculating naturescaped areas
6. Additional learning opportunities

Naturescaping with native plants



5% of the yard
3 canopy layers



15% of the yard
4 canopy layers



50% of the yard
5 canopy layers

What is naturescaping?

Generally: Gardening with techniques that emulate nature, including planting native plants in conditions they are adapted to.



What is naturescaping?

Backyard Habitat: Planting multiple canopy layers with primarily native plants.



Photo Credit: Laura Taylor, West Multnomah Soil & Water Conservation District

Native to Where?



- Lower Willamette Valley
- Portland Plant List
- Species that were here before European colonization
- Growing conditions match our weather
- Require less maintenance (watering) and no pesticides

Portland Plant List

These are the plants we're looking for when certifying a site.

Cultivars and hybrids are considered non-native for this program.



3.1 EVERGREEN TREES

Grand Fir *Abies grandis*

The Grand Fir is the only native fir that is common in the lower elevations (below 2500') of Western Oregon. Its needles are arranged in flat sprays on opposite sides of the twig, and when crushed have a tangerine-like fragrance. Grand Fir is able to reproduce in dense shade and young seedlings may be found growing in the understory of Douglas fir forests.

Mature height: 150 ft.	Mature spread: 40 ft.
10 yr. height: 30 ft.	10 yr. spread: 20 ft.
Growth rate: Medium	
Conditions: Full sun to full shade, moist to seasonally wet soil	
Relocate success: Medium	
Availability: High (bare root, container)	
Habitat type(s): Wetland, Riparian, Forest, Forest slope	



Pacific Madrone *Arbutus menziesii*

The only broadleaf evergreen among the native trees of the Pacific Northwest, the Pacific Madrone is commonly found in forest openings or edges. It has attractive, peeling bark and clusters of creamy white, fragrant, bell-shaped flowers in the spring. The red-orange berries appear in the fall and persist into the early winter. The berries were a food source for the Northwest Indians, and are attractive to many species of birds.

Mature height: 50 ft.	Mature spread: 50 ft.
10 yr. height: 6 ft.	10 yr. spread: 6 ft.
Growth rate: Very slow	
Conditions: Full sun, dry soil	
Relocate success: Low	
Availability: High (seed, container)	
Habitat type(s): Forest	



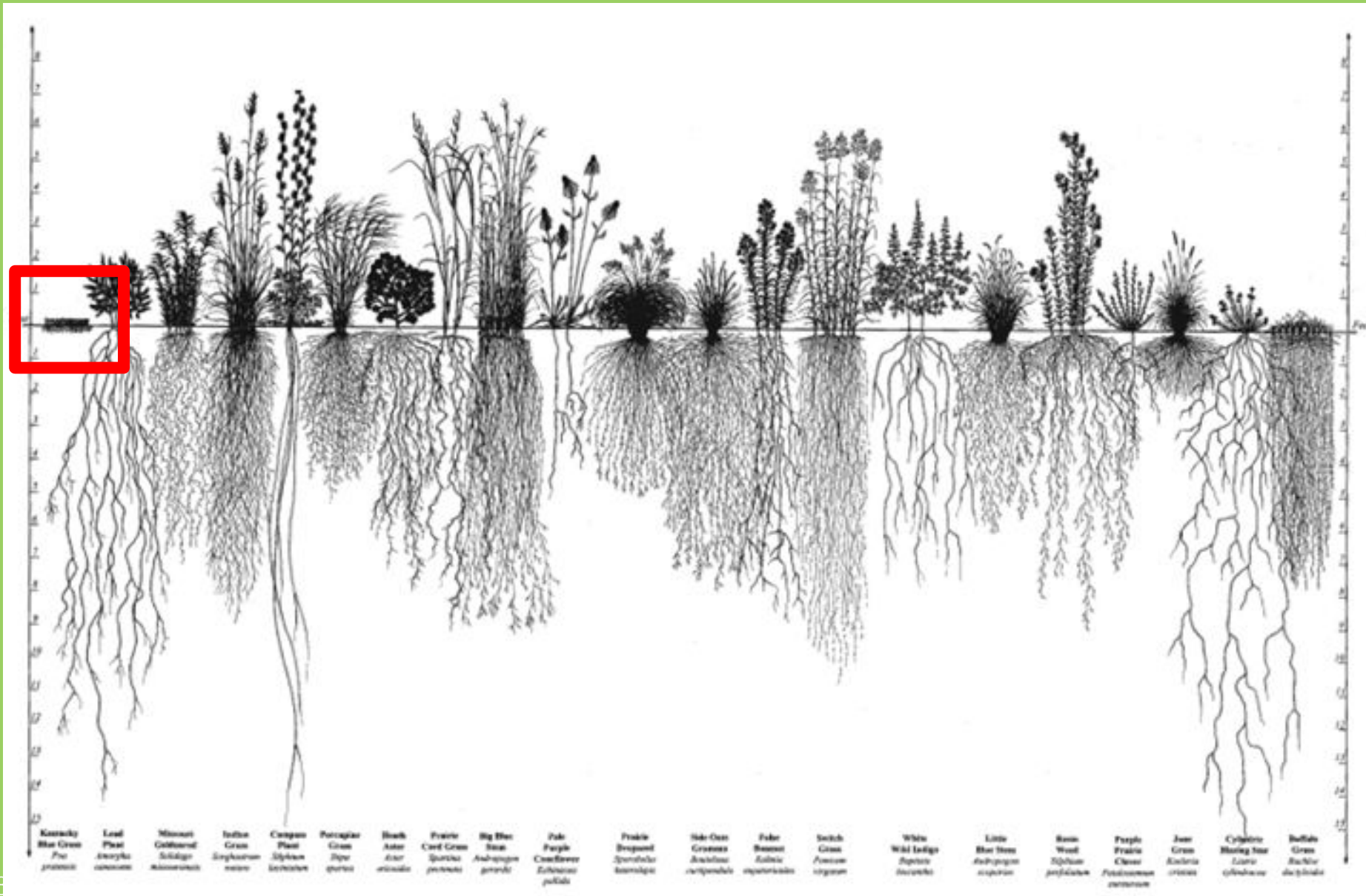


Why native species?

- Adapted to our climate
- Naturally resistant to diseases
- Often have superior stormwater functionality
- Documented to best support local wildlife
- 90% of insects depend on native plants to survive
- 96% of land birds feed on insects
- 100% of adult amphibians (and most reptiles) eat insects



Stormwater Management + Carbon Sequestration



What about cultivars?

Cultivar: a plant variety bred for specific traits:

- Different bloom color
- Longer bloom time
- Different bloom shape

Large-leaved lupine -
Lupinus polyphyllus (native)



What about cultivars?



Identification:

- Different color/shape/size than native species.
- Look for quotes in the name: *Lupinus* “*The Chatelaine*”

Lupinus “*The Chatelaine*”
(cultivar)

What about hybrids?

Hybrid: new species produced by cross-pollinating two different species.

Red columbine - *Aquilegia formosa* (native)



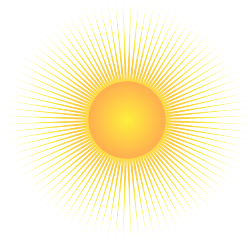
What about hybrids?



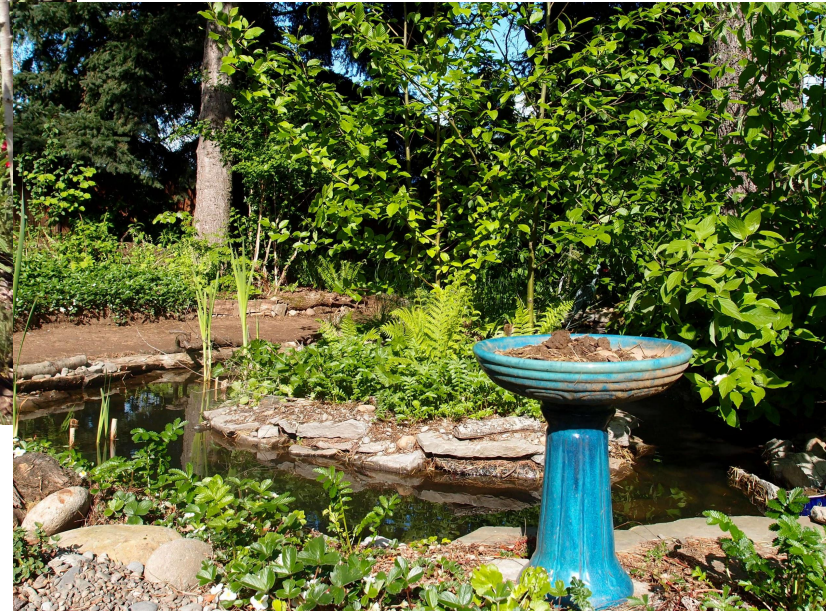
Identification:

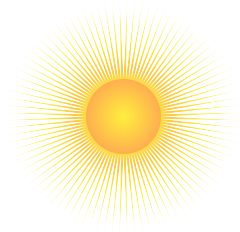
- Different color/shape/size than native species.
- Look for an “x” in the name: *Aquilegia x hybrida*

Hybrid columbine – *Aquilegia x hybrida* (hybrid)



Right Plant, Right Place





Right Plant, Right Place



More Density = More Wildlife Diversity

- Mass similar plants together (i.e. group plants)
 - Group multiple plants of same species together



More Layers = More Wildlife Diversity



3 canopy layers



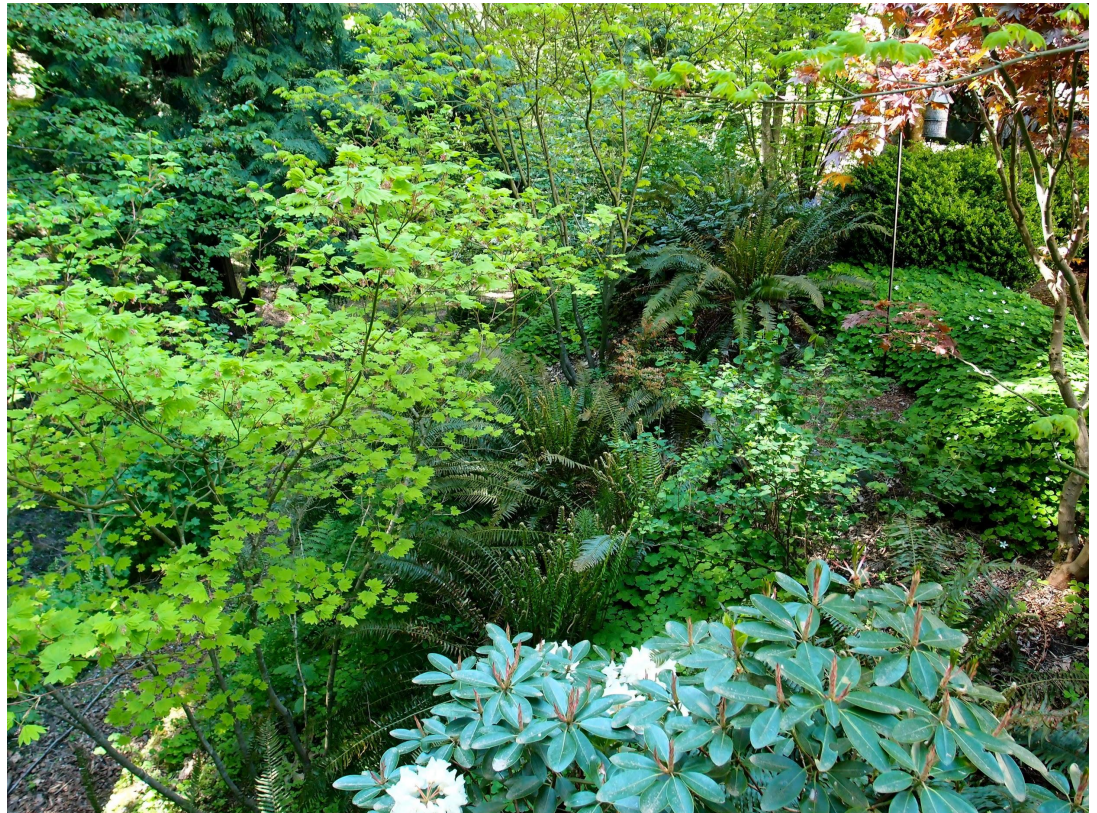
4 canopy layers



5 canopy layers

The Layers

- **Ground cover / Herbaceous Layer**
 - Grasses, sedges, & rushes
 - Perennials, annuals, biennials (forbs)
- **Small Shrubs & Ferns**
(up to 5ft)
- **Large Shrubs**
(up to 20ft)
- **Small Trees**
(up to 30ft)
- **Large Trees**
(30+ ft)



Plant Recommendations by Condition & Layer

Where to find:

- Volunteer Manual
 - Appendix, p. 26-36

APPENDIX

- Plant Recommendations by Condition
- Pollinators Often Seen in the Garden
- Birds Often Seen at the Feeders
- Bird Nest Box Dimensions
- Winter Twig ID

Plant Recommendation by Condition

Full Sun

CONDITION: Full Sun ☀		
LARGE TREES (More than 30ft)		
Common Name	Scientific Name	Moisture Conditions
Grand fir	<i>Abies grandis</i>	Moist-seasonally wet
Bigleaf Maple	<i>Acer macrophyllum</i>	Moist-seasonally wet
Red Alder	<i>Alnus rubra</i>	Any moisture
Pacific Madrone	<i>Arbutus menziesii</i>	Dry
Pacific Dogwood	<i>Cornus nuttallii</i>	Moist-seasonally wet
Oregon Ash	<i>Fraxinus latifolia</i>	Moist-seasonally wet
Ponderosa Pine	<i>Pinus ponderosa</i>	Dry
Quaking Aspen	<i>Populus tremuloides</i>	Moist
Black Cottonwood	<i>Populus trichocarpa</i>	Any moisture
Douglas-fir	<i>Pseudotsuga menziesii</i>	Any moisture
Oregon Oak	<i>Quercus garryana</i>	Dry
Pacific Willow	<i>Salix lasiandra</i>	Moist-seasonally wet
Scouler's Willow	<i>Salix scouleriana</i>	Moist-seasonally wet
Pacific Yew	<i>Taxus brevifolia</i>	Moist-seasonally wet
Western Hemlock	<i>Tsuga heterophylla</i>	Moist-seasonally wet
Western Red Cedar	<i>Thuja plicata</i>	Moist-seasonally wet

CONDITION: Full Sun ☀		
SMALL TREES (Up to 30ft)		
Common Name	Scientific Name	Moisture Conditions
Vine Maple	<i>Acer circinatum</i>	Moist-seasonally wet
Black Hawthorn	<i>Crataegus suksdorfii/douglasii</i>	Any moisture
Western Crabapple	<i>Malus fusca</i>	Moist-seasonally wet
Bitter Cherry	<i>Prunus emarginata</i>	Moist-seasonally wet
Cascara	<i>Rhamnus purshiana</i>	Moist-seasonally wet
Sitka Willow	<i>Salix sitchensis</i>	Moist-seasonally wet

Large Trees



Grand Fir



Bigleaf Maple



Western Hemlock

CONDITION: Full Shade ●

LARGE TREES (more than 30ft)

Common Name	Scientific Name	Moisture Conditions
Grand Fir	<i>Abies grandis</i>	Moist-seasonally wet
Pacific Dogwood	<i>Cornus nuttallii</i>	Moist-seasonally wet
Pacific Yew	<i>Taxus brevifolia</i>	Moist-seasonally wet
Western Hemlock	<i>Tsuga heterophylla</i>	Moist-seasonally wet

Small Trees



Cascara



Vine Maple



Black Hawthorn

CONDITION: Part Sun/Part Shade ►

SMALL TREES (up to) 30ft:

Common Name	Scientific Name	Moisture Conditions
Vine Maple	<i>Acer circinatum</i>	Moist-seasonally wet
Black Hawthorn	<i>Crataegus suksdorfii/douglasii</i>	Any moisture
Western Crabapple	<i>Malus fusca</i>	Moist-seasonally wet
Cascara	<i>Rhamnus purshiana</i>	Moist-seasonally wet
Sitka Willow	<i>Salix sitchensis</i>	Moist-seasonally wet

Large Shrubs



Twinberry



Tall Oregon Grape



Mock Orange

CONDITION: Full Sun ☀

LARGE SHRUBS (Up to 20ft)

Common Name	Scientific Name	Moisture Conditions
Serviceberry	<i>Amelanchier alnifolia</i>	Any moisture
Hairy Manzanita	<i>Artostaphylos columbiana</i>	Dry-moist
Red-osier Dogwood	<i>Cornus stolonifera</i>	Moist-perennially wet
Hazelnut	<i>Corylus cornuta</i>	Moist
Western Wahoo	<i>Euonymus occidentalis</i>	Moist
Oceanspray	<i>Holodiscus discolor</i>	Any moisture
Black Twinberry	<i>Lonicera involucrate</i>	Moist-seasonally wet
Tall Oregon Grape	<i>Mahonia (Berberis) aquifolium</i>	Dry-moist
Osoberry (Indian Plum)	<i>Oemleria cerasiformis</i>	Dry-moist
Mock Orange	<i>Philadelphus lewisii</i>	Dry-moist

Small Shrubs / Ferns



Salal



Common Snowberry



Maidenhair Fern

CONDITION: Full Shade ●

SMALL SHRUBS and FERNS (up to 5ft)

Common Name	Common Name	Common Name
Salal	<i>Gaultheria shallon</i>	Dry-moist
Cascade Oregon Grape	<i>Mahonia (Berberis) nervosa</i>	Dry-moist
Badhip Rose	<i>Rosa gymnocarpa</i>	Any moisture
Dewberry	<i>Rubus ursinus</i>	Any moisture
Common Snowberry	<i>Symphoricarpos albus</i>	Any moisture
Creeping Snowberry	<i>Symphoricarpos mollis</i>	Any moisture
Orange Honeysuckle VINE	<i>Lonicera ciliosa</i>	Moist
Maidenhair Fern	<i>Adiantum pedatum</i>	Moist

Groundcover / Herbaceous Layer



Western columbine



Douglas aster



Common yarrow

CONDITION: Full Sun ☀

HERBACEOUS LAYER – PERENNIALS, ANNUALS, BIENNIALS (forbs)

Common Name	Scientific Name	Moisture Conditions
Common Yarrow	<i>Achillea millefolium</i>	Dry
Hooker's Onion/Taper-tip onion	<i>Allium acuminatum</i>	Dry
Nodding Onion	<i>Allium cernuum</i>	Dry
Pearly Everlasting	<i>Anaphalis margaritacea</i>	Dry
Western Red Columbine	<i>Aquilegia Formosa</i>	Dry-moist
Great Northern Aster	<i>Aster modestus</i>	Moist-seasonally wet
Douglas' Aster	<i>Aster subspicatus</i>	Moist
Tall Boykinia	<i>Boykinia major</i>	Moist-seasonally wet
Hyacinth Brodiaea	<i>Brodiaea hyacinthia</i>	Dry-moist

From a bird's perspective...



Fun with Plants!

Projects to build bird and pollinator habitat



Native Hedgerow

Closely spaced shrubs and/or trees planted in a row.



Western serviceberry

Red osier dogwood

Salal

Douglas spirea

Oceanspray

Oregon grape

Red-flowering currant

Blue and Red elderberry

Sitka and Scouler willow



Native Hedgerow



60% of regional bird species nest in the SHRUB layer.
Beneficial insects LOVE rows of blooming shrubs.

Pollinator Meadow



Plant for Pollinators

- Varied bloom times throughout spring/summer/fall
- Bare ground/Rock
- Yellow and white flower preference
- Shrubs with hollow stems for nesting
- Access to water



Spring Plants for Pollinators



Large-leaved lupine



Common yarrow



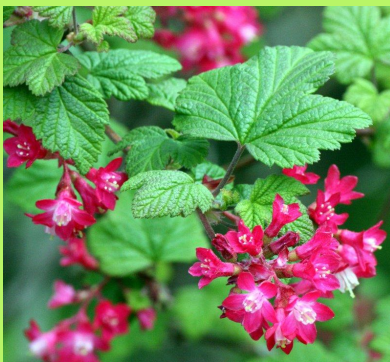
Heal-all



Camas



Blue-headed
gilia



Red Flowering Currant



Farewell to spring



California
poppy

Summer Plants for Pollinators



Douglas spirea



Western
columbine



Meadow checker mallow



Showy fleabane



Foamflower



Snowberry

Fall Plants for Pollinators



Pearly everlasting



Goldenrod



Douglas aster



Harebell



Yarrow

What to do with those extra Benjamins?



Best Bang for your Buck

TREES

- **Vine Maple**
(17 birds, 3 mammals)
- **Pacific Dogwood**
(20 birds, 10 mammals)
- **Chokecherry**
(35 birds, 4 mammals)
- **Oregon white oak**
(24 birds, 10 mammals)

SHRUBS

- **Blue Elderberry**
(30 birds, 4 mammals)
- **Red Osier Dogwood**
(20 birds, 10 mammals)
- **Serviceberry**
(21 birds, 5 mammals)
- **Salmonberry**
(33 birds, 3 mammals)

HERBACEOUS

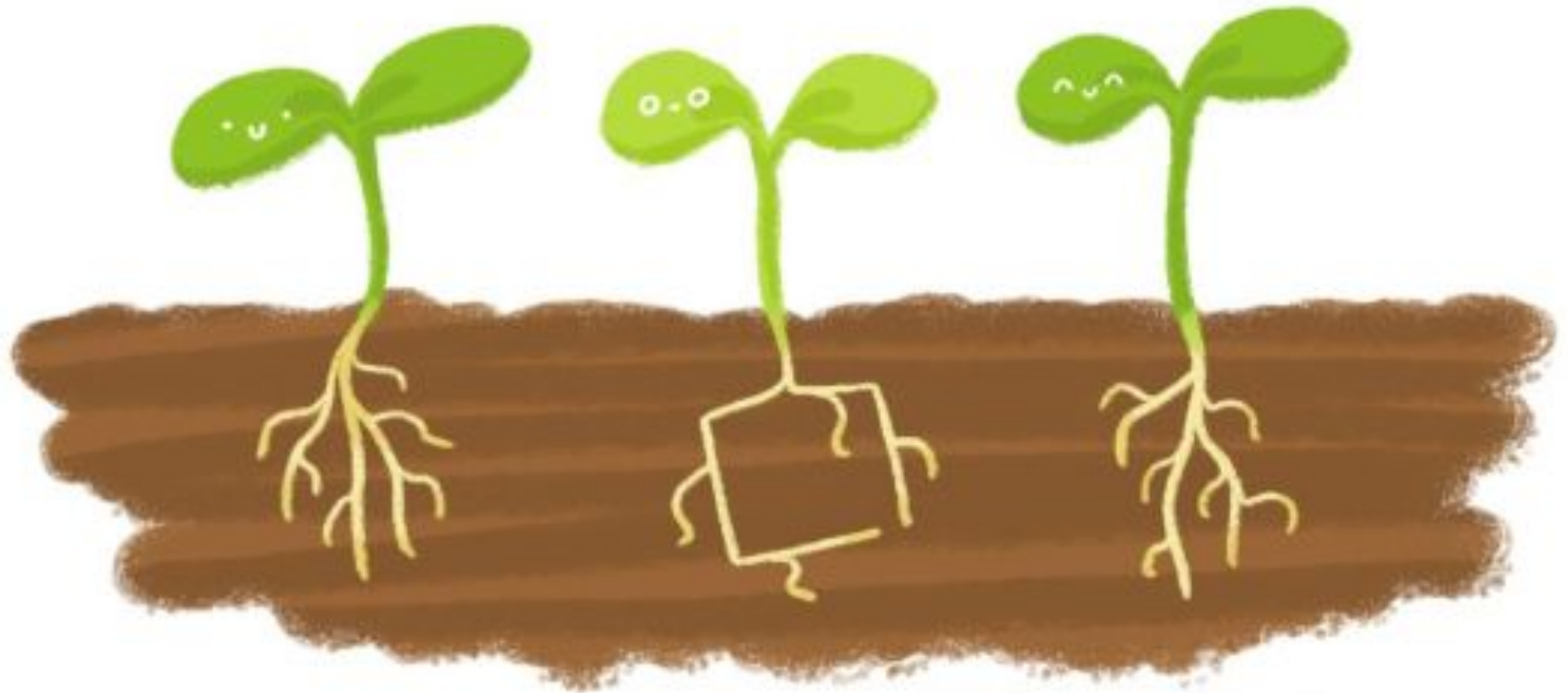
- **Miner's lettuce**
(12 birds)
- **Wood strawberry**
(13 birds, 3 mammals)
- **Red columbine**
(7 birds, 1 mammal)
- **Wood sorrel**
(9 birds, 1 mammal)
- **Slough Sedge**
(21 birds, 5 mammals)



Certification Visits - *The Math*

*Why do plants
hate math?*

It gives them
SQUARE ROOTS.



Calculating Plantable Area

Total Lot Size - Impervious Surface = Plantable Area

Impervious surfaces:

- house
- garage
- patio
- shed
- paved sidewalks

Example: 5,000 sf lot - 700 sf home - 100 sf paved patio =
4,200 plantable area

DON'T WORRY - THIS IS ABOVE YOUR PAY GRADE!

Plantable Area



Red = impervious

Not red = plantable

What about planting strips?



Photo Credit: Gaylen Beatty, Columbia Land Trust

Extra credit!

Not counted in
plantable area.

If naturescaped,
include in
naturescaped area
and/or as a native
pollinator meadow.

Measure it all in stride



[-----]

3 feet

Measure Area SF

Length of area: $10 \text{ steps} \times 3' = 30'$

Width of area: $5 \text{ steps} \times 3' = 15'$

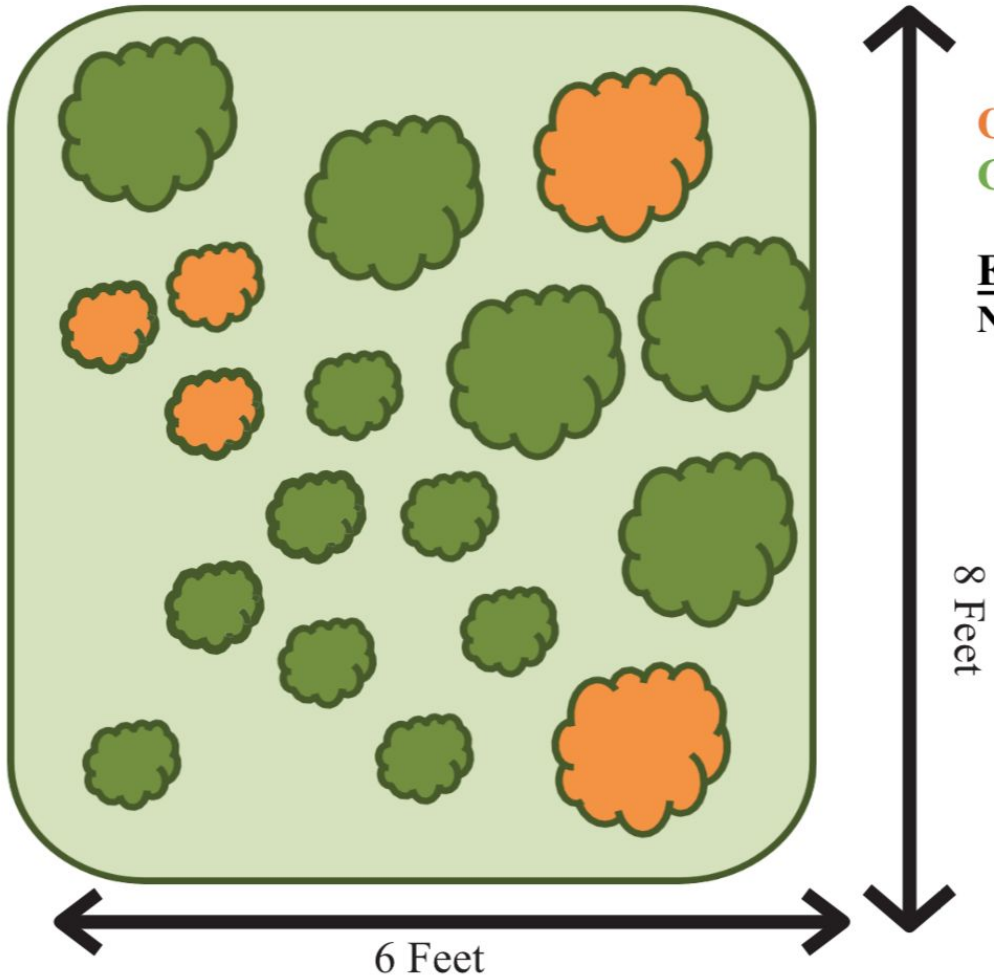
Total SF of naturescaped area: $30' \times 15' =$
 450 SF

How do I
calculate a
naturescaped
area?



Calculating Naturescaped Area

1. Count beds that are mostly (50% or greater) PPL Native Plants



Orange = Ornamental plant

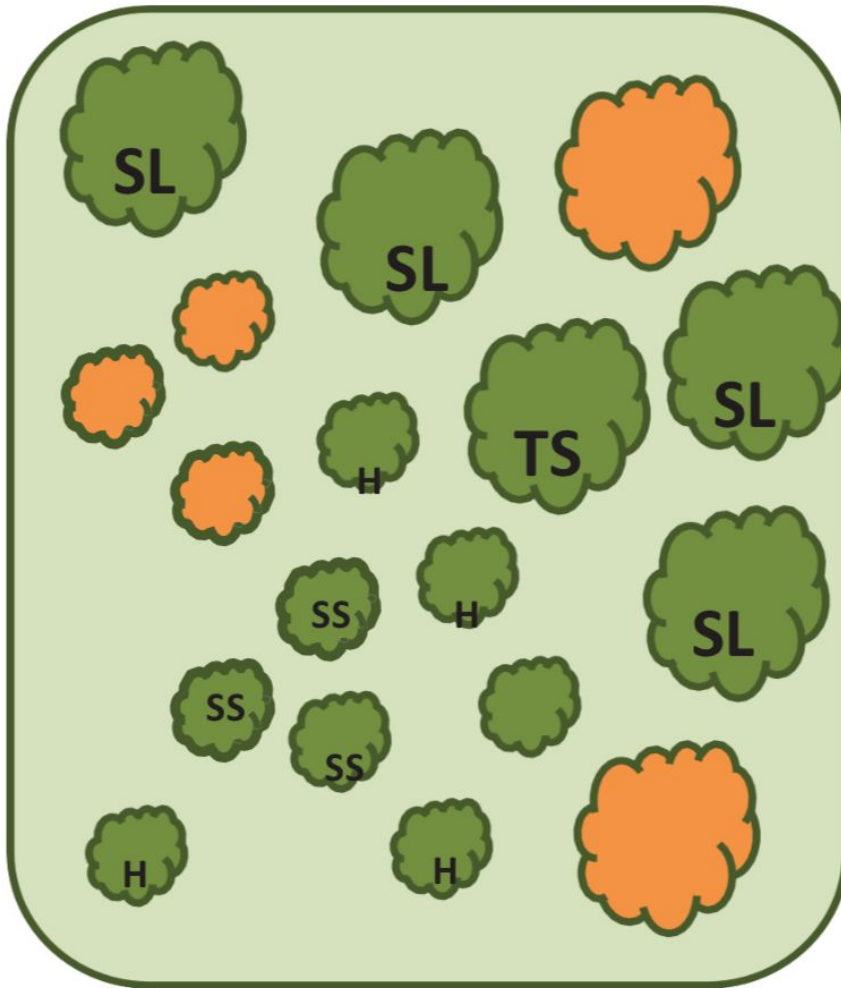
Green = Native plant

Example to the left:

Naturescaped area = 48 sq. ft (6ft x 8ft)

Calculating Naturescaped Area

2. Determine that 3 or more canopy layers are present in the area.

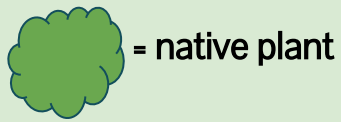


5 Canopy Layers include:

- H – Herbaceous Layer
- SS – Shrub, small
- SL – Shrub, large
- TS – Tree, small
- TL – Tree, large

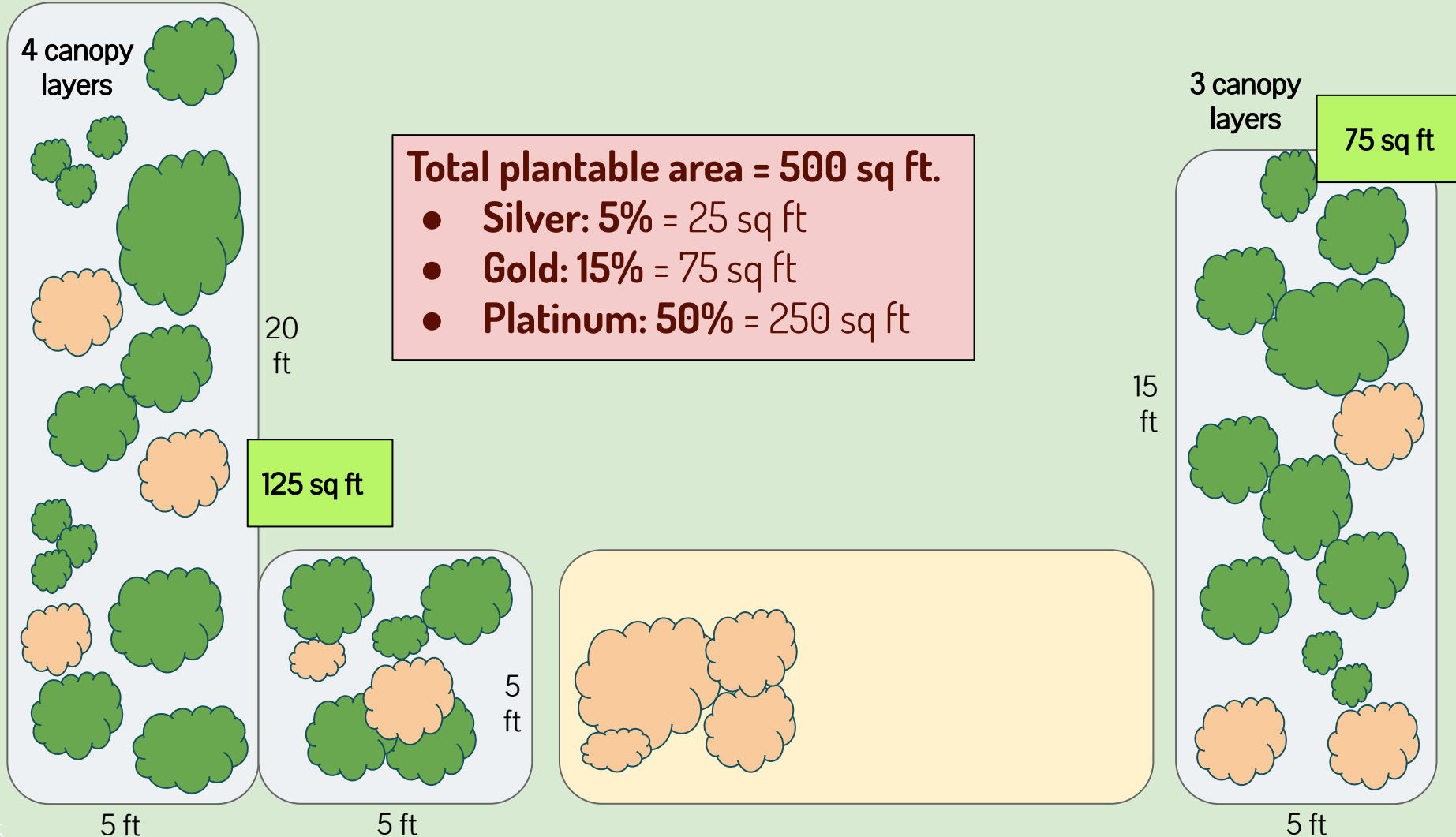
Example to the left:

4 canopy layers are present
(Herbaceous layer, small shrub, large shrub, & small tree)



Example A:

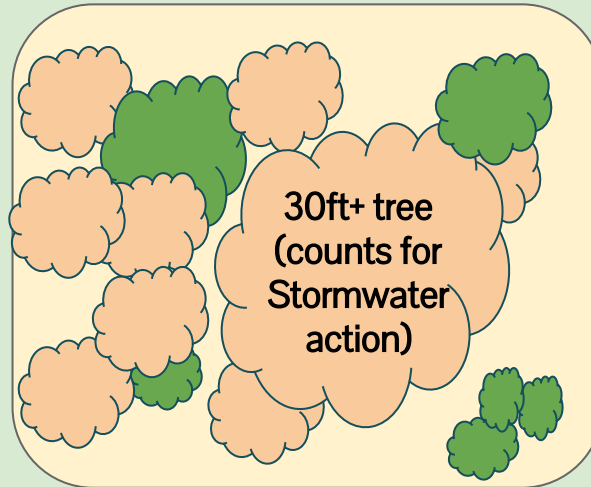
Calculating the Naturescaped Area



Example B:

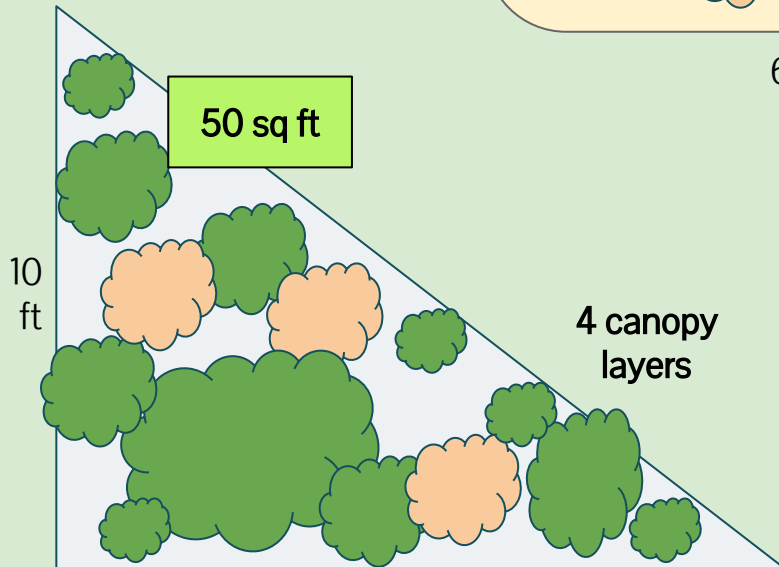
Total plantable area = 500 sq ft.

- **Silver:** 5% = 25 sq ft
- **Gold:** 15% = 75 sq ft
- **Platinum:** 50% = 250 sq ft



6 ft

5 ft



50 sq ft

4 canopy layers

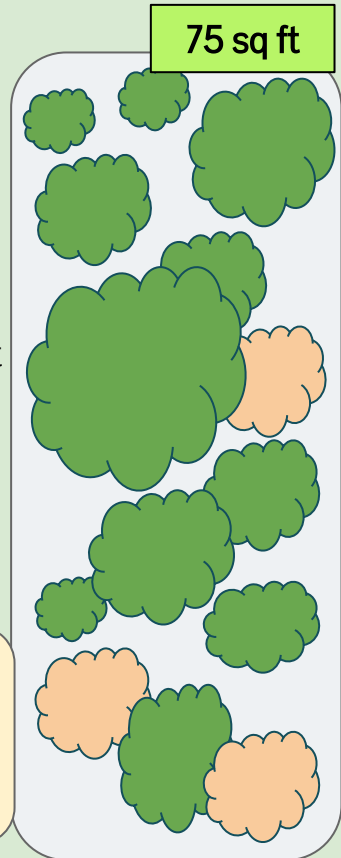
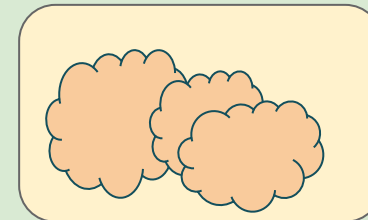
10 ft

10 ft

3 canopy layers

15 ft

75 sq ft



5 ft

Calculating Naturescaped Area:

Certification Determination Form

II. Naturescaping with Native Plants

1. Percentage Naturescaped:

Approximate naturescaped area (125 square feet) \div by total plantable area from Site Report (500 square feet), $\times 100 =$ 25 % Naturescaped

2. How many NATIVE trees and shrubs did the participant planted since enrolling in the program?

NATIVE trees added

3

NATIVE shrubs added

18

3. Any Oregon white oak (*Quercus garryana*) present in the property (any size)?

☐ No oak tree present

☐ Oak tree(s) present. No oaksclaping.

☐ Oak tree(s) present with oaksclaping.

4. Canopy Layers (3 needed for Silver, 4 for Gold, 5 for Platinum):

☒ Ground Cover

☒ Small/Medium Shrub

☒ Large Shrub

☒ Small Tree

☐ Large Tree



Phew. That's
a lot of info.
Now what?

Additional Learning Opportunities

- BHCP Online Resource Library
- **Classes (Native plant & noxious weeds)**
 - EMSWCD, TSWCD, etc
- **Willamette Valley native plant lists**
 - Willamette Valley Native Plants posters (easiest)
 - EMSWCD Native Plant Database
 - Metro's Native plants for Willamette Valley yards booklet
 - Portland Plant List (most comprehensive)
- **Books**
 - Plants of the Pacific Northwest Coast

Learning Opportunities Continued

- App for identifying plants
 - [PictureThis](#)
- Visit natural areas
 - Leach Botanical Garden, Portland Audubon, Hoyt Arboretum, Ridgefield Wildlife Refuge, PCC Rock Creek, etc
- Other
 - [BHCP Virtual Open Gardens tour](#)
 - Native plant nurseries
 - Native plant sales

Certification Volunteer Next Steps

- Mock Certification Training
- Q&A session
- Shadowing
 - Volunteers
 - Technicians
- Certification partner?
- Name tags



Combination of these two



Next Steps

- Register for Better Impact
(via link in follow up email)
- Complete Background Check
(you'll be invited by Portland Audubon via email)
- Review volunteer manual
- Review additional resources provided
- Share your feedback
- Stay tuned for emails from Megan with the plan for mock cert trainings

Questions?
Comments?





You can find us at

- www.BackyardHabitats.org
- Facebook
- Come to our table!