Do-it-Yourself Manual



About Pollinator Parkways

Destruction and fragmentation of habitat is a leading causes of extinction. Converting sections of our property into wildlife habitat helps ease the pressure placed on wildlife. A parking strip is a great place to start!

This manual can help you choose plants most likely to survive in a tough parking strip habitat. It also takes into account the following:

- Extreme temperatures (e.g. full sun) and drought tolerance
- Blooming times so pollinators have food (flowers) for as long as possible!
- Biodiversity to support and attract many species
- Host plants for butterflies and moths (they were all caterpillars, once!)
- <u>Native</u> plants to support <u>native</u> species
- Host plants, such as grasses, that provide nesting materials and add beauty to your parking strip in the winter when flowers go dormant
- Access from road to sidewalk and visibility concerns for pedestrians and cars

Note: This manual is a compilation of research provided by local Portland organizations such as East Multnomah Soil and Water Conservation District, the Audubon Society's Backyard Bird Habitat, the Xerces Society, neighbors, and Eileen Stark, author of "Real Gardens Grow Natives." This manual is a work in progress, in that it is a third edition, and we expect it to improve with experience and your feedback. *Thank you to my husband for his tireless support (from dinner to weeding) in this project.*

Share your feedback, suggestions, and projects! Email pollinatorparkways@gmail.com

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Why Native Plants?

They're adapted to this local climate, and once established, can be easier to maintain.

They support native pollinators (there are nearly 4,000 species of native bees in the US!), increase biodiversity, also help establish a healthy insect population, which can help manage pests and provide food for birds.

The Willamette Valley has many gorgeous flowering native plants, so you need not sacrifice beauty for function!

How to Use This Manual

This guide should help you make clever plant decisions with your curb strip. Keep in mind **these plants have been chosen for the Willamette Valley in Oregon.**

Latin names for each plant are listed on the back page.

- Choose a *minimum* of one plant (ideally more) for each of the three listed bloom times.
- Each plant should be in groupings of *at least* 3 square feet to make them easier for pollinators to find. Refer to individual planting instructions for proper spacing between plants.
- The more species you plant, the higher variety of pollinators you'll support.
- Due to limited space in the manual, a "broad" strip will have all of the same plants as a "skinny" strip (the numbers will match) and will include additional, larger plant options.



When designing your strip, print a piece of graph paper and equate one square to one foot. Measure your space and mark down where you would like pathways (2-3 ft wide).

- If you back out of your driveway or have other visibility concerns, mark that on your graph paper and choose low-growing plants.
- Make sure your plant choices cross all three bloom times and have a little evergreen winter interest. (Some plants on the shade list do well in full sun, too!)
- Planting in swaths of 1 and 3 looks more natural. Putting the tallest plants in the center of your strip and staggering down to the shortest plants near the edge and pathways is most visually appealing.

Consider adding a tree to your parking strip! There are several native varieties that help pollinators and other wildlife, even if they don't bloom. See page 11 for more.

Key:
H = Height range
W = Width range
E = Evergreen
BT = Bloom time
P = Spring
S = Summer
F = Fall

Keep your Strip Happy

Your new parking strip will need some love and attention once it's all been planted so it stays weed-free and your fresh plantlings survive.

It is critically important that you do not use pesticide on your pollinator habitat. Otherwise, it will attract and then kill the pollinators you are trying to protect. Additionally, choose wildlife friendly nurseries that do not use neonicotinoids. (Visit www.pollinatorparkways.org to find a list of bee safe nurseries in Portland)

Before:

- Whether sheet-mulching or digging up sod, be sure your replacement soil/ compost is free of seeds and weeds.
- Planting October-February can help dormant plants get established before the rains stop, but earlier is better. Planting in fall preserves soil structure and gives plants more time to establish strong root systems under ground while they're dormant above ground.

After:

- "Drought-tolerant" doesn't mean no water. Your new plants will need slow, deep watering (to encourage deep roots) the first 1-3 years to ensure they establish a healthy root system. Healthy plants resist disease and pests, flower more, and grow quickly.
- Many of the plants chosen for this guide attract other beneficial wildlife! A wide variety of insects, arachnids, and birds eat garden pests, eliminating a need for chemicals through *integrated pest management*.
- Mulching with straw, woodchips, leaves, etc. around your new plants will help them retain moisture and keep weeds at bay (don't let mulch touch stems).
 Once the plants are established they should shade out most weeds.

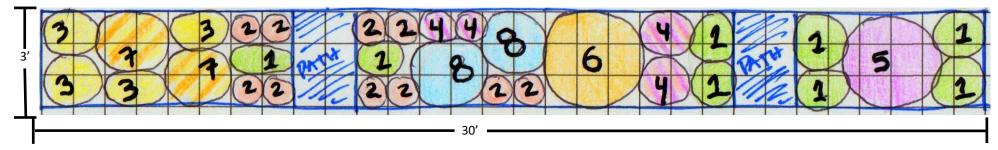


Access and Year-Round Interest

Stepping Stones, rock/pebble paths, cut wood circles, tiles – there are many creative ways to help people cross your parking strip.

Many of the plants will go dormant in the winter. Adding driftwood, glass baubles, large rocks, etc. can add interest year-round. Disease-free logs and fallen wood can create safe nesting places for bees and beneficial insects and add a beautiful woodland feel to your strip.

Sunny "skinny" strip planting plan

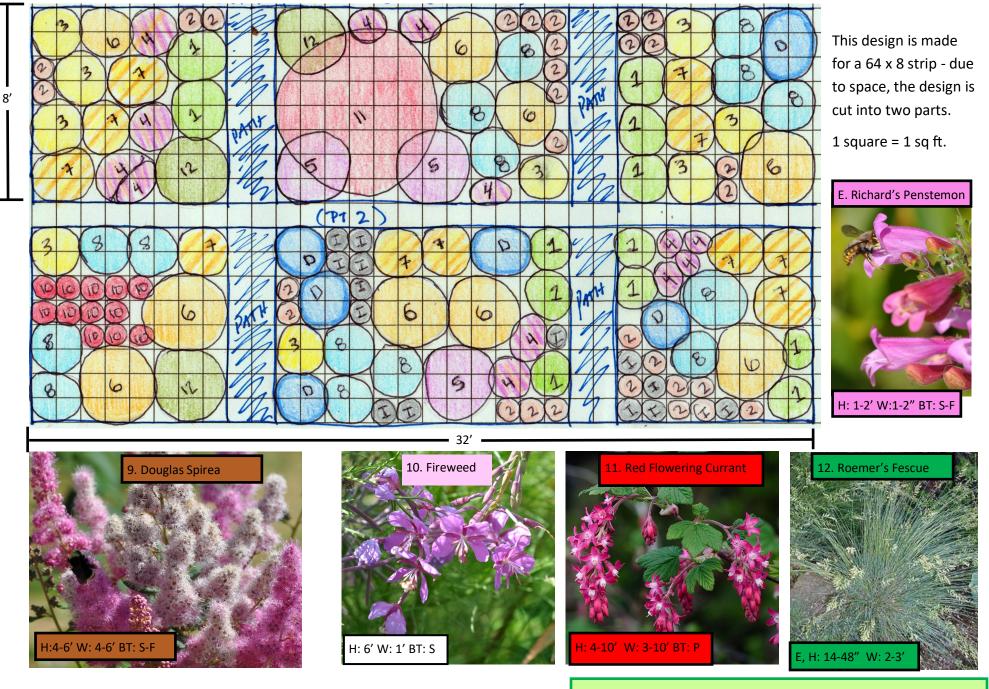


1 square = 1 sq ft.



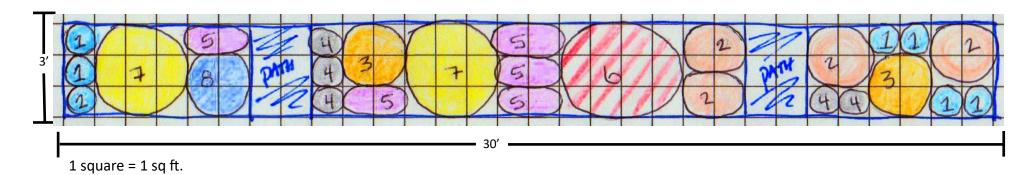
Stonecrop can be tucked into any empty spaces. Just break little pieces off and stick them in the ground!

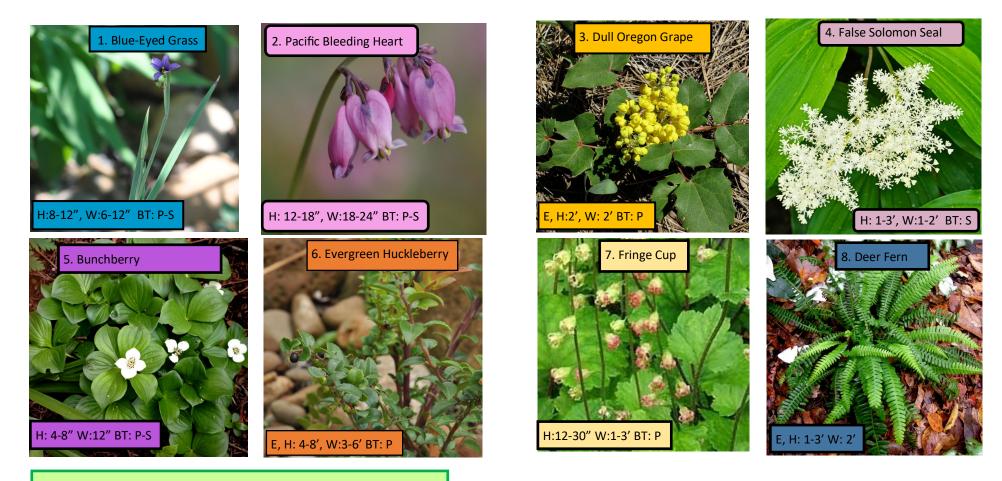
Sunny "broad" strip planting plan



Stonecrop can be tucked into any empty spaces. Just break little pieces off and stick them in the ground! It spreads quickly but is easy to pull.

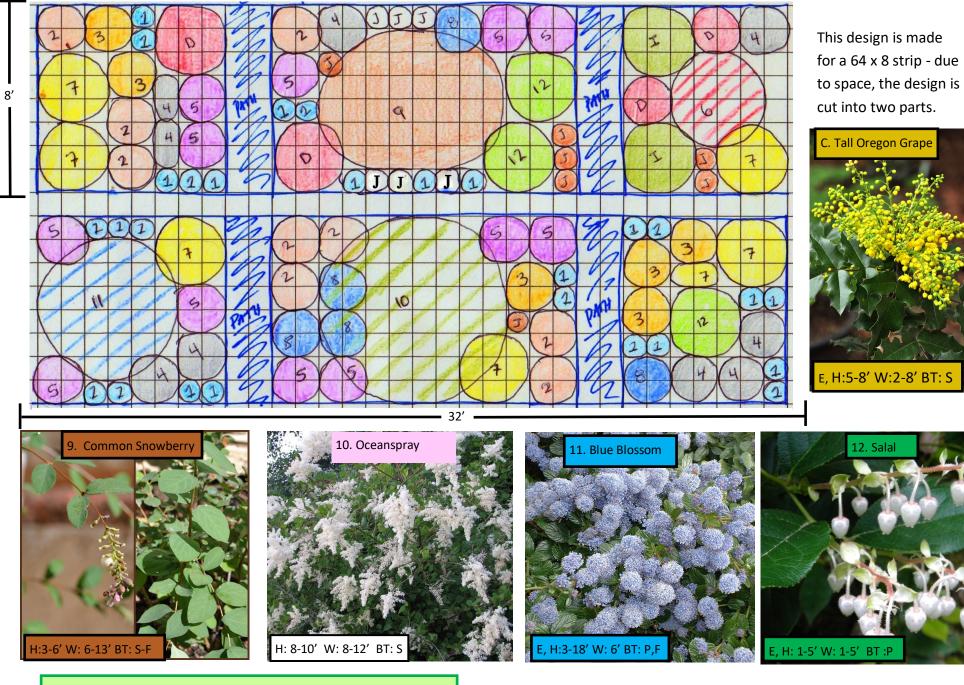
Shady "skinny" strip planting plan





Stonecrop can be tucked into any empty spaces. Just break little pieces off and stick them in the ground!

Shady "broad" strip planting plan



Stonecrop can be tucked into any empty spaces. Just break little pieces off and stick them in the ground! It spreads quickly but is easy to pull.

Kill the Grass!

Grass is not "green." It provides no shelter, no food, and no service to wildlife. It requires more water than most plants to stay green in the summer, and a gas-mower produces a startling amount of pollution. (One hour of mowing is equivalent to four hours of driving, on average.)

When you dig, you may have to get creative in disposing of your sod. The City of Portland doesn't want you filling your compost bin with it.

- Compost it on-site by flipping upside-down and covering it/creating berms, in your home bin, in large piles, or dig trenches and bury it
- Call Metro 503.234.3000 to ask about sod disposal. You can also try posting it on Craigslist.

Mechanical Removal

So you're impatient and like to exercise? Me too.

It's easiest to wait until the rainy season when your grass has had a good, thorough soaking.

- Take a flat shovel and plunge it straight into the ground a few times, creating a 90 degree edge, then pop up the edge with the leverage.
- 2. Once you have a gap to work with, you can run the shovel horizontally just under the root line and peel it back

You can also use a sod-cutter.

Avoid using a roto-tiller as this will chop grass and weeds into you your soil and your new plantings will have competition.

Once you have removed the sod, replace with fresh compost/ top soil that is free of weeds and has good drainage.

Sheet Mulching

Hate back-breaking labor? Me too.

- 1. Cut down the grass as short as possible
- 2. Thoroughly wet down the sod, and dig a border a few inches from the edge (the edge is where it comes back!)
- 3. Lay down cardboard (no tape) or several layers of newspaper, overlapping. Wet this down too.
- 4. Lay down a couple of inches of compost
- 5. Lay down at least 4 inches of mulch (straw, leaves)

The sod will biodegrade quickly once thoroughly smothered in this way. Within 6-8 wet weeks you should be able to plant directly into the ground. It may take longer in the summer if the mulching is not kept damp.

This will raise your ground level by a good 8 inches or so. It will sink down in time, but you may need to use some rocks or branches as a border to keep everything in place for the first year.

Plant Full Names - Sunny

Latin names for the plants in the plans	Other beautiful options	Size and Bloom Time
1. Oregon Stonecrop (Sedum oreganum)	A. Broadleaf Stonecrop (Sedum spathulifolium)	H: 3-6" W: 18" BT: P-S
2. Sea pink (Armeria maritima)	B. Western Columbine (Aquilegia formosa)	H: 3' W: 1-2' BT: P-S
3. Yarrow (Achillea millefolium)	C. Common Camas (Camassia quamash)	H: 30" W:6-12" BT: P
4. Showy Milkweed (Asclepias speciosa)	D. Seaside Daisy (Erigeron glaucus)	H: 1-2' W:2' BT: P-F
5. Large Leaf Lupine (Lupinus polyphyllus)	E. Richard's Penstemon (Penstemon richardsonii) H: 1-2' W: 2' BT: S-F
6. Canada Goldenrod (Solidago canadensis)	F. Blanketflower (Gaillardia aristata)	H: 1-3' W:2' BT: S
7. Oregon Sunshine (erophyllum lanataum / leucophyllum)	G. Riverbank Lupine (Lupinus rivularis)	H: 3' W:1-2' BT: P-S
8. Douglas Aster (Symphyotrichum subspicatum)	H. Kninnikinnick (Arctostaphylos uva-ursi)	E, H: 5-8" W:2-15' BT: P
9. Douglas Spirea (Spiraea douglasii)	I. Nodding Onion (Allium cernuum)	H: 6-20" W: 12-18" BT: S
10. Fireweed (Chamerion augustifolium)	J. Meadow Checkermallow (Sidalcea malviflora)	H:2-6' W: 8-12"BT:S
11. Red Flowering Currant (Ribes sanguineum)	K. California Fescue (Festuca californica)	E, H: 2-3' W:3' BT: N/A
12. Roemers Fescue (Festuca roemeri)	L. Halls Aster (Symphyotrichum hallii)	H: 2-5' W: 2' BT: S-F
	M. Birched-Leaved Spirea (Spiraea butulofolia)	H: 3' W: 2' BT: S
	N. Pearly Everlasting (Anaphalis margaritacea)	H: 1-3' W:18-24" BT: S-F









Plant Full Names - Shady

Latin names for the plants in the plans

- 1. *Western Blue-Eyed Grass (Sisyrinchium bellum)
- 2. Pacific Bleeding Heart (Dicentra formosa)
- 3. Dull Oregon Grape (Mahonia nervosa)
- 4. False Solomon's Seal (Maianthemum racemosum)
- 5. Bunchberry (Cornus unalaschkensis)
- 6. *Evergreen Huckleberry (Vaccinium ovatum)
- 7. Fringe Cup (Tellima grandiflora)
- 8. Deer Fern (Blechnum spicant)
- 9. *Common Snowberry (Symphoricarpos albus)
- 10. Oceanspray (Holodiscus discolor)
- 11. *Blue Blossom (Ceanothus thyrsiflorus)
- 12. Salal (Gaultheria shallon)

Otl	ner beautiful options	Height and Bloom Time
A.	Starry False Solomon's Seal (Maianthemum stellatum)	H: 1-2' W: 1' BT: P-S
B.	Baldhip Rose (Rosa gymnocarpa)	H: 5' W:2-8' BT: P
C.	Tall Oregon Grape (Mahonia aquifolium)	H:5-8' W:2-8' BT: S
D.	Oregon Redwood Sorrel (Oxalis oregana)	H: 8″ W:2-3′ BT: S
E.	Inside-Out Flower (Vancouveria hexandra)	H:8-16" W: 2' BT:P
F.	*Golden-Eyed Grass (Sisyrinchium californicum)	H: 8-12" W: 6-12" BT: S
G.	*Early Blue Violent (Viola adunca)	H: 4" W:18" BT: P-S
н.	*Meadow Checkerbloom (Sidalcea campestris)	H:2-6' W: 8-12"BT:S
١.	*Richardson's Penstemon (Penstemon richardsonii)	H: 2-3' W: 1-2' BT: S
J.	Oregon Iris (Iris tenax)	H: 8-18" W: 10-20" BT:P
К.	Nootka Rose <i>(Rosa nutkana)</i>	H: 6-10' W:3-4' BT: P-S
L.	Sword Fern (Polystichum munitum)	E, H: 2-5' W: 2-4'









* Takes full sun as well

"Grow a forest. Protect it from axes that hack." - The Lorax

Trees are great in parking strips

You may be surprised at how many pollinators, beneficial insects, birds, and other wildlife a single tree can support, even when it doesn't flower. Visit https://www.portlandoregon.gov/trees/65368 for more about the permitting process, or go through a program like Friends of Trees or the City of Portland Urban Forestry Program for more help.

Trees also hold large amounts of stormwater on their surface. As a result, the City of Portland has a "Treebate" program to help cover the cost of a new tree! Learn more: www.portlandoregon.gov/bes/article/314187

Skinny Strips

There aren't many native options. We grow our trees big out here in the Pacific Northwest.

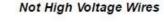
3-5.9 ft strips with or without high voltage powerlines overhead

• Cascara (Rhamnus purshiana)

4-5.9 ft strips **without** high voltage powerlines overhead:

• Pacific Madrone (Arbutus menziesii)

High Voltage Wires







*Photo Courtesy of Urban Forestry Program

Broad Strips

6ft+ with high-voltage power lines

• Cascara (Rhamnus purshiana)

6-8.5 ft strips without high voltage powerlines

- Oregon Ash (Fraxinus latifolia)
- Douglas-Fir (Pseudotsuga menziesii)
- Pacific Madrone (Arbutus menziesii)
- Oregon White Oak (Quercus garryana)
- Ponderosa Pine (Pinus ponderosa)
- Western Redcedar (Thuja plicata)
- Hogan Redcedar (Thuja plicata 'Hogan')

8.5 ft strips without high voltage powerlines overhead

- (same list as above)
- Western Hemlock (Tsuga heterophylla)
- Bigleaf Maple (Acer macrophyllum)