

Creating a Native Pollinator Garden

Tilling a lawn to make a garden results in non-native grasses and weeds outcompeting the desired plants or lots of work eliminating weeds. "Solarization" / covering the garden area with a layer of plastic for a whole summer may work but takes a longer period and the appearance or the plastic cover may not be acceptable. So here I will describe a method that has been proven to work and requires fairly little effort to control weeds.

1. Select an area that will receive full sun and ideally can be easily watered when needed.
2. Mow the area and remove stumps and roots of any unwanted woody plants.
3. Order "3-way" soil mix needed to cover the desired area with an average of 6-inches of soil. A "3-way" soil mix is more like native soil which has a good amount of clay and loam that retains moisture and drains well.
Example calculation for determining amount of soil needed: For a 20 ft x 10 ft area covered with a half a foot of soil
 $(10' \times 20' \times 0.5') / 27$ cubic feet per cubic yard = 3.7 cubic yards. Order 4 to 5 "yards" of soil mix.
4. Cover the area with brown cardboard that has all tape removed. Overlap the cardboard pieces 4-6 inches to make a solid barrier to block weeds and light. The cardboard will break down in a few months. Ideally cover an extended area so that the perimeter can be mulched to slow the encroachment of grass and other weeds. Covering the center of the area is optional because 6-8 inches of soil alone should suppress most weeds roots and seeds.
5. For large projects, ideally a truck would dump the soil in the center of the cardboard covered area. If that is not the case, use wheelbarrows and buckets to move the soil and place it on the cardboard while making sure the cardboard stays in place and few gaps exist. Just dump piles and rake it level after enough soil has been placed. The whole area should be raked fairly level, with the soil thicker in the middle and at least 4 inches thick at the edges.
6. Ensure that the edge has good cardboard coverage. More cardboard can be added for a mulched perimeter now or after planting.
Example calculation for determining amount of mulch needed: For a 2-foot-wide perimeter around 20 ft x 10 ft area that will be covered with a half a foot of mulch.
 $\{(2 \times 12' \times 0.5') + (2 \times 22' \times 0.5')\} / 27$ cubic feet per cubic yard = 1.3 cubic yards. Order 1.5 to 2 "yards" of mulch. I like "fine dark mulch".
7. Planting -- For more control over spacing and arrangement plant large seedlings or year-old plants in mid-April. This will get the benefits of a month or so of spring rains to get them established. You could sow some annual seeds at that time too. This could be done in fall too. Another option is to sow a whole variety of seeds in fall. Seeds of some species need an extended cold and moist period to germinate.
8. Weeding --- Use a knife to remove invasive weeds. Get some help to identify what are weeds and what are desired seedlings. Do not disturb the soil any more than necessary. The garden is not mulched because that allows seedlings to grow from the seeds the plants produce.
9. Watering -- The first couple years and in extreme drought the garden will benefit from watering a few times from mid-June to early August. Water well, but infrequently to promote deep roots that better survive drought.
10. Maintenance -- Leave all or most old stalks. They are habitat and have nutrients that will return to the soil. Some species spread and self-seed aggressively. Dig out the extras and use them for planting elsewhere.

Example plant list in size groups with quantities for 300 sqft bed

Quantity	Plant	Bloom Height		Bloom time
3	Canada goldenrod	48--60 Inches	extra-large	late summer
3	Bigleaf lupine	36--48 Inches	extra-large	May
5	Riverbank lupine	60 Inches	extra-large	May
5	Puget gumweed	8--40 Inches	extra-large	late summer
2	Short-styled thistle	3--8 feet	large	June - July
5	Douglas aster	39 Inches	large - (spreads by rhizomes)	late summer
3	Pearly everlasting	36 Inches	medium - large	
5	Oregon sunshine	24 Inches	medium	
5	Showy fleabane	39 Inches	medium	
3	Cascades pentstemon	12--24 Inches	medium	
5	Great Camas	24--48 Inches	medium	
5	Roemer's fescue	12 Inches	medium	
2	Yarrow	12--24 Inches	medium	
3	Red Columbine	6--48 Inches	medium	
3	Nodding onion	12-2-4 Inches	small	
5	Tufted hair grass	36 Inches bloom	medium-small	
3	Blue-eyed grass	8--24 Inches	small	
5	Common camas	8--28 Inches	small	
1	Coyote mint	12--18 inches	medium-small	
3	Oregon stonecrop	1--6 Inches	small, use in foreground with rocks	

Plus, seeds to sow for annuals. Medium size. Will reseed for next year

Clarkia amoena, *Gilia capitata* , *Collomia grandiflora*

Design Considerations

The plant layout could be a formal style with like plants grouped together for a mass of color when in bloom, or an informal style with a more random placement of different type plants. But for either style the size of each species needs to be considered so the smaller species are not hidden by the growth of larger species. Typically, shorter species are placed in the foreground where they are easily seen. The large plants can be in one or three groups that are the main focal points in the design. For artistic asymmetry in an informal style the group(s) of large plants would not be in the center of the bed or regularly spaced within the bed. If the bed could only be viewed from one side the taller plants would be placed at then very back of the bed. For all sizes of plants consider blooming time so that blooms are distributed across the bed for all seasons. For a large, planted area a path through the middle can be included so the viewers can explore the full scope of the planting without causing damage.

Species diversity is important when benefiting wildlife is the goal. Woody plants such as tall Oregon grape can be added. Besides adding height to the design, it is evergreen and has late winter blooms. Native grasses are essential food for many pollinators and provide support blooming plants. There are small, low growing plants like Oregon stonecrop that are perfect for a rock garden on the edge of a bed or for planting in a very small area.



Bloom color may be important for a formal design, but for an informal, more naturalistic style you are free to mix them up.



Last but not least consider the habitat. Most pollinator gardens are in full sun with well-draining soil, but there are many plants that grow best in moist to wet conditions. So, if you have an area that is soggy in late spring or even flooded consider plants like Douglas spirea,

Pacific ninebark, black twinberry, Cooley's hedgnettle, monkeyflower, and golden-eyed grass. Pollinators and other wildlife need native plants in wooded areas too. For those areas plant trilliums, fringe cup, alumroots, miterworts, Pacific waterleaf, false Solomon's seal, and many more, including ferns. These natives can be planted in mulched areas under existing trees and shrubs. To best prepare for them, spread some compost and a thick layer of woodchips.

Sketch for Planning Design

Here is an example of a simple drawing for plant placement. In this drawing Rh, Rm, and Lav are for existing shrubs (rhododendron, rosemary, and lavender), Each square is 2 foot wide, so you can see I expect the big leaf lupine, riverbank lupine, and Puget gumweed to get 6-feet wide. Do you have room for that? Double check your plant selection!

