Rain Gardens

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12,000 Rain Gardens

Much of the pollution entering Puget Sound is non-point source pollution, that is to say, pollution in stormwater run-off from places such as home gardens and city streets.

To address this, in 2011, WSU Extension and Stewardship Partners announced the goal of 12,000 rain gardens around Puget Sound by 2016 to clean up an estimated 160 million gallons of polluted stormwater run-off per year.

It all starts with stormwater
Stormwater is rain and snow melt that runs off impervious surfaces such as roofs, pavement, and compacted grassy areas. Fast moving, it erodes slopes, scours streambeds, and contributes to flooding. When it disappears down storm drains, it is lost to local groundwater systems.

On its journey, stormwater often picks up pollutants such as oil, fertilizers, pesticides, fine soil particles, and animal waste. Pollutants degrade water quality, sediment clogs the gills of fish, and excess fertilizer flushed from lawns and gardens fuels the growth of algae. Algal blooms raise water temperatures and rob water of oxygen, both detrimental to aquatic life.

Rain gardens slow down and clean up stormwater
A rain garden is a plant-filled depression that slows stormwater long enough to remove pollutants, reduce flooding and erosion, and recharge local aquifers—all while providing a burst of green buzzing with birds and beneficial insects in even the most depressingly gray urban or suburban spaces.

Rain gardens stand in for ecosystems lost to urban sprawl
Rain gardens replace vegetation stripped away in the course of development. Plants of varying heights slow down the rain as it falls; plants with roots of varying depths open spaces in the soil so water can be absorbed.

Mulch and leafy debris on the soil surface soften the impact of rain drops and cool soil to provide a healthy habitat for microbes, which work with plants to break down pollutants. Loose, uncompacted soil slowly releases treated stormwater into the local groundwater system.

Rain gardens work best on gentle slopes with well-draining soil
Rain gardens should be sited to receive and then release water—either into the ground or via an overflow.

A slope of at least 2% funnels rain water into the garden from an impervious surface, and an overflow lower than the inflow allows for a controlled flow of water out of the garden in heavy storm events. Permeable soil in the garden ensures the garden drains within 48 hours of a storm event.

Rain gardens should not be placed on steep slopes or near bluffs, over shallow utility lines or septic fields, or within 10 feet of building foundations—all places where saturated soils might cause a problem. Rain gardens should also not be placed at the bottoms of slopes or where water accumulates because of poor drainage.

If you have a potential site for a rain garden, winter is a great time to dig a hole to test how well the site drains. The handbook listed in the sidebar gives specific steps on how to do this.

Left: Rain gardens can intercept and process unfiltered storm water, which can carry chemicals, oil and waste directly into our creeks, lakes and rivers. *Photo by Christine Farrow / WSU Skagit County Master Gardeners*

Rain garden plants

Native plants are good choices for rain gardens, but many other plants work as well—providing beauty for the garden owner as well as habitat and food for wildlife.

Plants are chosen for drought tolerance during our dry summers and for their ability to survive saturation in the lower parts of the rain garden over the winter. The handbook listed in the sidebar lists plants suitable for the different zones of a rain garden in the Pacific Northwest.

Rain gardens are good for wildlife and lazy gardeners

Once established, rain gardens need little care other than replenishing mulch in fall, weeding in spring, and light pruning as required. Nutrients are released as mulch and plant debris decomposes, and mulch and dense plantings keep weeds at bay.

In this self-sustaining system, the gardener stays out of the garden as much as possible so as to not compact the soil--a bonus for both the gardener and the wildlife above and below the soil, which prefers to enjoy the garden undisturbed.

Rain gardens in Skagit County
WSU Skagit County Extension Master Gardeners provide maintenance advice at the David Brookings Rain Garden outside the County Commissioners building at 1800 Continental Place, Mount Vernon.

Master Gardeners are also helping compile a database of rain gardens. Home owners in Skagit County who register their rain gardens at www.12000raingardens.org/rain-garden-profiles.html can get a free 12,000 Rain Gardens sign. Just wait a few days for your garden to appear on the site, and then drop by the WSU Skagit County Extension office at 11768 Westar Lane in Burlington to collect your sign.


Above left: Rain gardens can intercept and process unfiltered storm water, which can carry chemicals, oil and waste directly into our creeks, lakes and rivers. **Above right:** Our native forests once filtered and absorbed most of the rain; now, impermeable surfaces on homes, driveways and lawns channel water into our waterways. *Photos by Christine Farrow / WSU Skagit County Master Gardeners.*

Where to Find More Information

To learn more about rain garden installation and plants, consult the Rain Garden Handbook for Western Washington Homeowners and watch the video at www.12000raingardens.org.

To find out about rain garden tours and workshops, follow 12,000 Rain Gardens and WSU Skagit County Master Gardeners on Facebook, or check the calendar on the WSU Skagit County Extension Master Gardener website at http://skagit.wsu.edu/MG.

To have a Master Gardener come out to your community or garden club to talk about rain gardens, call the WSU Extension office at 360-428-4270.

To ask specific questions about rain gardens, drop by our Master Gardener plant clinics in Anacortes and Burlington from April to October. See our website http://skagit.wsu.edu/MG for hours and locations.

RESOURCES:

- State of Washington, Department of Ecology on stormwater at http://www.ecy.wa.gov/programs/wq/stormwater
- NOAA Ocean Service Education tutorial on pollution at http://oceanservice.noaa.gov/education/tutorial_pollution/welcome.html
- *Rain Gardens: Sustainable Landscaping for a Beautiful Yard and a Healthy World* by Lynn M. Steiner and Robert W. Domm. Voyageur Press, 2012.
- *Creating Rain Gardens: Capturing the Rain for Your Own Water-Efficient Garden* by Cleo Woelfle-Erskine and Apryl Uncapher. Timber Press, 2012.