Slug: Ask the Master Gardener
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Traditionally, native forests have kept Puget Sound free of pollutants. The soft forest floor with its dense vegetative cover readily absorbs rainfall, keeping pollutants and sediments from contaminating the clear, cool waters of Puget Sound.

Once trees are cleared and homes and roads are built, instead of being absorbed into the forest floor, rainwater flows over rooftops and across asphalt, eroding stream banks, adding silt to clear waters, and dumping excess nutrients and toxic materials into salmon habitat.

There are five steps the home gardener can consider to reduce damaging run-off from his or her property:

- Minimize bare soil areas;
- Reduce water demand;
- Reduce lawn area;
- Choose plants suited to specific garden conditions; and
- Manage fertilizer and pesticide use.

To minimize bare soil areas, plant dense groundcovers that will shade out weeds and capture sediment that might otherwise run off the property. If you are using mulch, keep loose material like bark away from slopes where it might wash into storm drains.

To reduce water demand, terrace slopes to encourage water retention; add organic content to soil to increase its water-holding capacity; mulch beds to cut down on evaporation; group plants according to their water needs; and install timed underground drip irrigation systems instead of overhead sprinklers.

To reduce lawn area, consider groundcovers rather than lawn in shady areas where grass does not thrive. Aerate what lawn you have left and remove thatch to encourage water to penetrate to the grass roots. In western Washington, lawns require an inch of water a week on average during the growing season and up to two inches during hot, dry spells. Don't give the lawn more water than it needs, and monitor irrigation to ensure water is not missing the lawn and running off down driveways and along hard surfaces.

Choose plants that are suited to the conditions in your garden. Sun-loving plants will sulk in shade; plants that like rich, well-drained soil will wither away if their roots are trapped in clay soil that drains poorly. Well-chosen plants are less likely to get diseased and attract insect pests. Research plant needs, avoid plants that have well-known disease problems, and search out disease-resistant cultivars.

For help managing fertilizer use, visit http://ext.wsu.edu and follow the "Educational Materials" link for a free download of Extension Bulletin1971E, *Home Gardeners Guide to Soils and Fertilizers.* Fertilizers promote healthy plants, but if over applied excess nitrogen and phosphorus may run off into streams, where they promote the growth of algae. Algae blooms rob water of oxygen and prevent sunlight from reaching useful aquatic plants and fish.

To manage pesticide use, consider hand weeding the occasional dandelion and identify areas of the lawn that can be less formal and require less fertilizer or herbicides. For planting beds, keep plants vigorous by building healthy soil, and add plants that attract beneficial insects to help control garden pests. Many predatory insects will do a fine job of keeping pest populations low.

For both lawns and gardens, evaluate how much pest control is necessary. Healthy plants can tolerate certain levels of pests and diseases and some competition from weeds, so to save money, time, and effort, consider living with a yard that tolerates some intruders.

If the decision is made to apply pesticides, first identify the pest, then read all labels carefully and mix up no more pesticide than absolutely necessary. If unsure of how much is needed, make the application with a clean container using water only first. Calculate the amount of water used, and then mix upon appropriate amount of pesticide.

For more information on disease-control in the home garden, visit http://pep.wsu.edu/hortsense for fact

sheets for managing plant problems with Integrated Pest Management, including recommended cultural controls and Washington-registered pesticides.

This column is written by Washington State University/Skagit County certified Master Gardeners. Questions may be submitted to WSU/Skagit County Extension, 306 S. First Street, Mount Vernon, WA 98273-3805.