

WNPS Komo Kulshan Sustainable Landscaping presentation

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UNDERSTANDING CLIMATE & YOUR GARDEN MICROCLIMATE:

2023 USDA Hardiness Zone Map <https://planthardiness.ars.usda.gov/>

How to Determine your Garden Microclimate available at:

<https://pubs.extension.wsu.edu/gardening>

TRACK THE SUN

Do this activity early summer after trees have fully leafed out.

Note areas of shade at 9:00 am - 11:00 am - 2:00 pm - 4:00 pm

How to interpret your shade findings:

If at least 3 of your maps/notes show no shade, consider the area full sun.

If at least 3 of your maps/notes show shade, consider the area shady.

And if it's half and half, consider the area partly shady.

The terms used to describe a plant's sun requirements aren't perfectly consistent. Here are some examples of definitions according to several respected resources.

Source	Most Sun 			Least Sun
Great Plant Picks	Full Sun: 6 or more hours of direct sunlight each day	Light Shade: 4-6 hours of direct sun	Open Shade: An area exposed to the sky but with little to no direct sunlight such as in shadow of a building.	Deep Shade: Little to no direct sunlight
WSU Extension	Sun: At least 5 to 6 hours of direct sunlight	Partial Sun: 4-5 hours of direct sunlight	Partial Shade: 2-4 hours Direct or filtered sun	Shade: Only filtered light for the entire day
Sunset Western Garden Guide	Full Sun: Sunlight all day except for an hour or two at beginning or end of a summer day	Partial Shade: Shade for half the day or for at least 3 hours during the hottest part of the day		Shade: Little or no direct sunlight

FIRE RESILIENT LANDSCAPING

Fire-resistant Plants for Home Landscapes – provides a nice visual overview of landscaping considerations <https://extension.oregonstate.edu/catalog/pub/pnw-590-fire-resistant-plants-home-landscapes>

Wildfire Preparedness <https://www.whatcomcd.org/wildfire> The Whatcom Conservation District offers homeowner assistance. Look for “Fire Resistant Plants and Landscaping” in the resources section.

SPECIFIC QUESTIONS & PROBLEM SOLVING

WSU Whatcom County Extension Master Gardener Plant Clinic. Master Gardeners are available to help you learn how to control common and noxious weeds as well as insect pests and plant diseases via the Plant Clinic. <https://extension.wsu.edu/whatcom/hg/hg-plant-clinic/>

UNDERSTANDING YOUR SOILS:

Test Soil Drainage

1. Dig a 1-foot-deep hole that is between 4 and 12 inches wide.
2. Fill the hole with water and let it drain. (if the soil is very dry, you may need to fill the hole and let it drain again before proceeding to the next step).
3. Fill it with water again.
4. Secure a ruler or yardstick in the hole. Record the water depth.
5. Measure the depth again in 1 hour.

Soil conditions can vary from place to place in your yard. Repeat this test wherever you have questions about soil drainage.

Drainage Rates and what they mean for Plant Selection

- Less than 1-inch per hour: *Inadequate drainage for most plants. Use plants adapted to wet soil.*
- 1-3 inches per hour: *Good drainage for healthy growth of most garden plants.*
- Greater than 4-inches per hour: *Does not retain adequate moisture for most plants. Use plants adapted to dry soil.*

Determining Soil Texture by Hand, Dr. Craig Cogger
https://puyallup.wsu.edu/soils/video_soiltexture/

Checking soil organic matter (From OSU's Improving Garden Soils Organic Matter
(<https://extension.oregonstate.edu/catalog/ec-1561-improving-garden-soils-organic-matter>)

“Here are some simple ways to assess organic matter content of your soil.

- Use your eyes. Soils with adequate organic matter content are dark in color, both because they have more hummus, which is dark, and because they hold more water.
- Look for puddling and standing water. Soils rich in organic matter content and with good tilth allow water to percolate below the surface.
- Use your fingers. Look for aggregated soils. If you rub the soil between your fingers, the soil will seem to contain "crumbs" made up of mineral and organic particles. The crumbs are examples of aggregation and are the result of sticky substances released by soil bacteria after feeding on organic matter. Aggregation generates soil structure.
- Use your nose. Soils with adequate organic matter content have the rich smell of earth. Soils that have poor air circulation, a result of reduced organic matter content, may smell sour.”

How much compost should you apply? From “A Home Gardener’s Guide to Soils and Fertilizers,” and “Organic Soil Amendments in Yards and Gardens, How Much is Enough?”

- For a new garden or landscape bed, add 1 to 3 inches of compost to build soil organic matter. Apply 2-3 inches if the soil lacks organic matter (typically light colored and poor physical properties).
- Permanent landscape beds don’t need organic soil amendments after the initial application. Decomposition of leaf litter and organic surface mulches will help maintain organic matter, creating an environment similar to soil found in forests.
- If growing annuals, add about one-half inch of compost each year.
- If your soil has adequate organic matter, or if salts are a concern, add less (or none at all).
- And if soil testing shows high levels of phosphorus, stop adding compost and grow cover crops instead.

WSU Extension, “A Home Gardener’s Guide to Soils and Fertilizers”

<https://pubs.extension.wsu.edu/a-home-gardeners-guide-to-soils-and-fertilizers-home-garden-series>

WSU Extension, “Organic Soil Amendments in Yards and Gardens: How Much is Enough?”

<https://pubs.extension.wsu.edu/organic-soil-amendments-in-yards-and-gardens-how-much-is-enough-home-garden-series>

DRIP IRRIGATION:

Drip Irrigation for the Yard and Garden, WSU Extension Fact Sheet.

<https://pubs.extension.wsu.edu/drip-irrigation-for-the-yard-and-garden>

Use a Soaker Hose Correctly <https://www.seattlechannel.org/misc-video?videoid=x21610>

HOW TO USE A SOIL PROBE:

“Water, water, everywhere... “ The Garden Professors Blog. <https://gardenprofessors.com/water-water-everywhere/>

LAWN CARE:

Natural Lawn Care for Western Washington

<https://www.seattle.gov/documents/Departments/SPU/EnvironmentConservation/Landscaping/NaturalLawnCare.pdf>

Natural Yard Care videos. Snohomish County website.

<https://snohomishcountywa.gov/3758/Natural-Yard-Care-Videos>

SPECIAL GUIDANCE FOR THE LAKE WHATCOM WATERSHED:

City of Bellingham Approved Soil, Mulch, and Compost for Use in the Lake Whatcom Watershed

<https://drive.google.com/file/d/14ZqBXZdoOpbSVKZBxpNMS2KkE10c19xw/view>

Guidelines for Gardening Materials and Practices in the Lake Whatcom watershed

<https://www.cob.org/wp-content/uploads/materials-and-practices-guidelines.pdf>

PLANTING TECHNIQUE

Planting Trees and Shrubs in the Landscape

<https://pubs.extension.wsu.edu/planting-trees-and-shrubs-in-the-landscape-home-garden-series>

“Save the plant, (learn how to) plant a tree.” Garden Professors Blog

<https://gardenprofessors.com/save-the-planet-learn-how-to-plant-a-tree/>

MAINTENANCE:

Manage Weeds Naturally – Tips for Managing Common Weeds and a Weeding Calendar can be found at the City of Bellingham’s Manage Weeds Naturally webpage

<https://cob.org/services/environment/stormwater/reduce-pollution/weeds>

WSU Hortsense webpages for weed management <https://hortsense.cahnrs.wsu.edu/>

Washington State Noxious Weed Board <https://www.nwcb.wa.gov/>

Whatcom County Noxious Weed Fact Sheets- <https://www.whatcomcounty.us/930/Noxious-Weed-Fact-Sheets>

The Weed Identification garden at Hovander Homesteader Park is a great resource
<https://extension.wsu.edu/whatcom/hg/hg-mgdemo/>

ADDITIONAL RESOURCES

Whatcom Water Alliance Rebates on Irrigation Controllers
<https://www.whatcomwateralliance.org/rebates>

Whatcom County's Neighborhood Native Plant program
<https://www.whatcomcounty.us/4231/Neighborhood-Native-Landscaping-Program>

Save the Stems Xerces Society <https://xerces.org/publications/brochures/save-the-stems>

WSU Whatcom County Extension sustainable landscaping website:
<https://extension.wsu.edu/whatcom/nr/sustainable-landscaping/>

Gardening Green Courses in Sudden Valley and Birch Bay begin February 28, 2026.
Live online course begins April 2, 2026. To learn more or register:
<https://extension.wsu.edu/whatcom/nr/gardening-green/>

Gardening Green "Into the Weeds" newsletter – You can subscribe by visiting either of the above websites or emailing Cheryl Lovato Niles: clniles@wsu.edu