

building healthy soil













Healthy landscapes start from the ground up.

Healthy soil is the foundation of a healthy landscape.
Healthy soils support plant growth, grow nutritious food, fight climate change, and hold more water, which saves on irrigation needs and soaks up rainwater.

The easiest way to grow healthy soil is to incorporate compost, add mulch to the surface, and if you need to fertilize, use organic fertilizers that will release nutrients slowly as plants need them.



Compost works!

- **Recycles yard and food waste, keeping it out of the landfill**
- **Reduces the need for chemical fertilizers and pesticides in the garden**
- **Builds the soil, removing carbon dioxide from the atmosphere and storing it as soil organic matter**

1 Mulch existing plantings

Mulch is organic material that is placed on top of the soil surface to regulate soil temperatures, conserve water, limit weed growth, and prevent soil erosion.

- **Spread mulch over all bare soil.**
- **Keep mulch away from woody stems and tree trunks.**
- **Reapply mulch annually, or as needed to keep soils covered.**

HOW TO MULCH

GARDEN AREA	DEPTH TO APPLY	MULCH CHOICES
Vegetable gardens and flower beds	1 to 3 inches, or 2½ to 7 centimeters	• Fall leaves • Compost • Straw • Grass clippings
Trees, shrubs, and perennials	2 to 4 inches, or 5 to 10 centimeters	• Wood chips • Fall leaves • Coarse bark
Lawn	¼ to ½ inch, or ½ to 1¼ centimeters	• Fine-textured-compost • Mulch mow (leave the clippings)

2 Add compost to your soil before planting

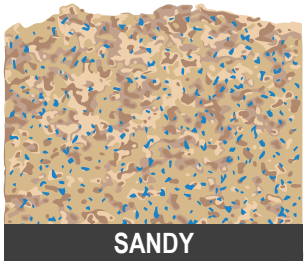
The best and easiest way to improve the soil is to add compost to the entire area before planting.

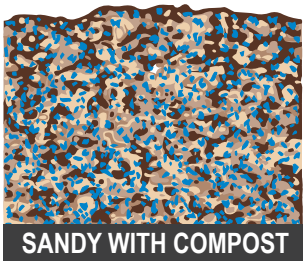
- Mix 2 - 3 inches (5 – 8 cm) of compost into garden beds, and 1 – 2 inches (3 – 5 cm) of compost to lawn areas before planting.
  Do not place compost directly in the hole when planting trees and shrubs because this can harm plant roots.
- Compost supplies nutrients to plants, and it improves the soil structure; it will loosen clay soils and help sandy soils hold more water.
- Do not try to fix poor soil conditions by bringing in new topsoil to a site. This can often make poor soil conditions even worse. Instead, add compost which can help a broad range of soil problems.





Compost helps loosen clay soil, allowing air and water to penetrate.





Compost helps sandy soils hold more water and nutrients.

3 Use organic fertilizers

Flowers, vegetables, and lawns sometimes need extra nutrients. Look for the words “organic” or “slow-release” on the fertilizer label. These products are released slowly by soil organisms, they supply nutrients to the plants throughout the growing season, and they are less likely to wash off into streams and lakes.

Rather than fertilizing on a schedule, observe plants to look for signs of deficiency and/or get your soil tested. Contact the Thurston Conservation District ***thurstoncd.com*** to learn more about soil testing. Testing is easier and less expensive than most people think.

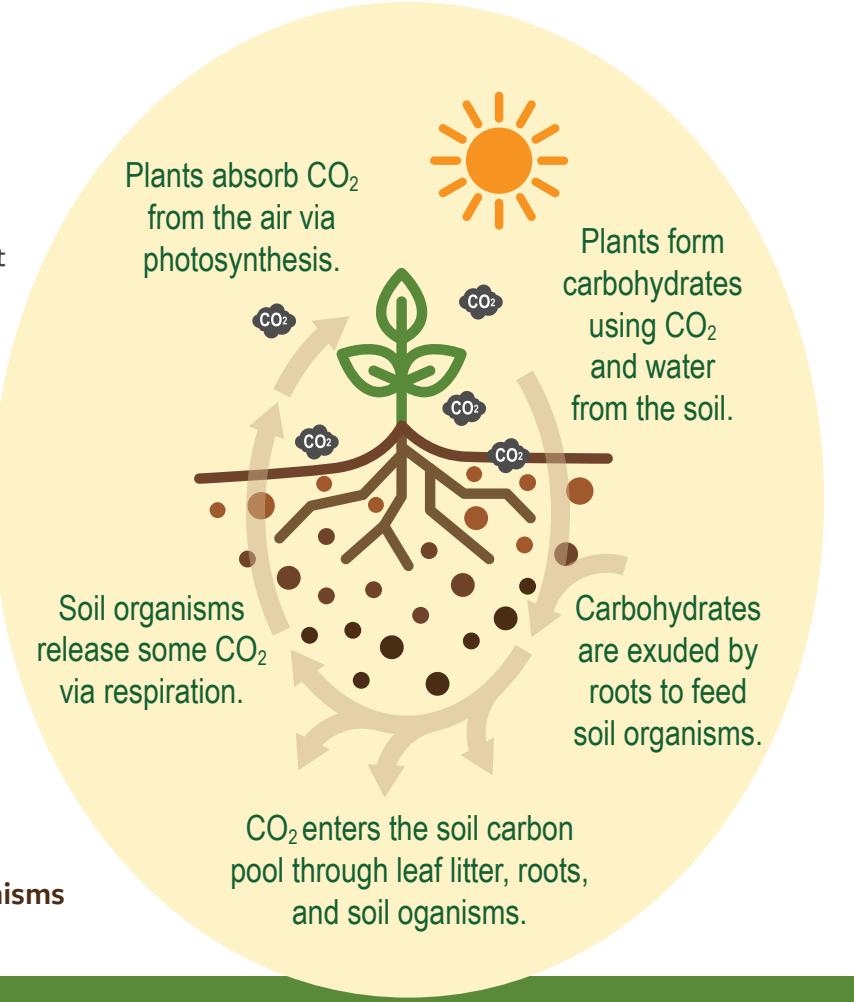
SIGNS OF COMMON NUTRIENT DEFICIENCIES

NUTRIENT	NUTRIENT DEFICIENCY		HEALTHY PLANTS
Nitrogen	Leaves turning yellow		
Phosphorus	Leaves turning purple		
Potassium	Leaf edges looking burned		
Any nutrient	Stunted growth and decreased vigor		

Carbon Farming

Carbon farming practices draw carbon dioxide from the atmosphere and store it in the soil, a process called carbon sequestration.

Carbon farming not only helps fight climate change, but it also creates thriving landscapes that are more resilient to drought and flooding.



To farm carbon and create healthy soil, follow these steps:

1. **Feed your soil with compost**
2. **Plant trees and shrubs**
3. **Cover bare soil with mulch**
4. **Minimize tilling and disturbing the soil**
5. **Avoid synthetic fertilizers, pesticides, and herbicides, which harm the soil microorganisms**

Questions?

Contact the Thurston County Healthy Home and Yard Program at 360-867-2674 or visit thurstoncountywa.gov/phss/healthy-home-and-yard

Learn more

Natural lawn & garden care:

thurstoncommunitygardens.org

ecoprocertified.org

naturalyardcare.org

thurstoncd.com

Detailed soil information:

nrcs.usda.gov

Soils.org/about-soils

Alternative Formats Available
Call 206-633-0224 or TTY: 711

Thank you to Seattle Public Utilities and King County Hazardous Waste Management Program for creating this guide and sharing it with neighboring communities in Washington.

Seattle Public Utilities

Hazardous Waste Management Program

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