

# Healthy Soils After Construction (BMPL613)

## Field Guide to Soils After Construction & Permit Inspections

### Healthy Soils

Native and undisturbed soils help keep plants healthy, let water soak into the ground, and serve important stormwater management functions to reduce runoff and provide pollutant removal. Healthy, uncompact soils have space to hold air and water. This supports healthy plant and lawn growth, minimizing the need for fertilizers.

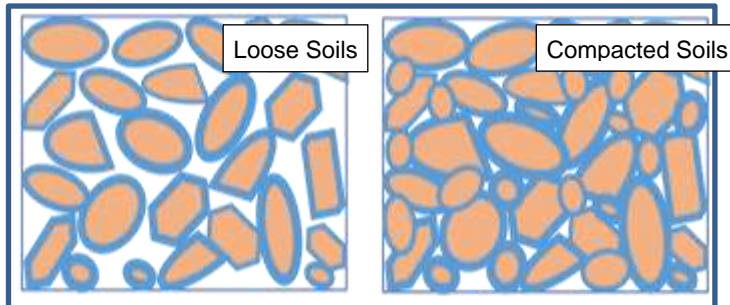


Figure 1-Loose, un-compacted soils have room for air and water  
(image credit [www.agrilife.org](http://www.agrilife.org))

### Construction Activity Compacts Soil

An active construction site with heavy equipment can compact soils, leaving them squished together with no room to hold water or air. Without these important open spaces, soils cannot soak up water and plant survival is compromised. After construction is complete, it is important to restore disturbed soils to a healthy condition.

### Restore Soils to Meet Permit Requirements

Restoration of soil health – BMP L613 – is required where ground has been disturbed when the project met the following thresholds:

- Installation of 2,000 square feet or more of new/replaced hard surfaces such as driveways, sidewalks, patios, roofs, or walkways (gravel or paved), or
- Disturbed 7,000 square feet or more of soil or vegetation.

### Options For Restoring Healthy Soils

When soils cannot be left undisturbed, they must be amended with compost after construction, or new soils brought in to restore healthy soil functions.

Use the soil management options that best-fit your site:

<b>Option 1</b>	Leave native vegetation and soil undisturbed, and protect from compaction during construction.
<b>Option 2</b>	Amend existing site topsoil or subsoil.
<b>Option 3</b>	Stockpile existing topsoil during grading. Amend and replace it prior to planting.
<b>Option 4</b>	Import topsoil mix of sufficient organic content and depth to meet the requirements.



Figure 2 - Healthy soils support healthy plant roots  
(photo credit: USDA NRSC)

### Methods and Materials

Where soils are disturbed, there are two steps to restoring soil health before planting or installing turf:

#### Step 1 - Loosen the Existing Soils

When applying Options 2 or 3 to amend the existing soils, first loosen the soils by ripping to a 12-inch depth. Be careful not to re-compact these soils.

If choosing Option 4 and topsoil will be imported, loosen only the top 4 inches of existing soils.

**Note: This Tip Sheet does not substitute for codes and regulations.**

**The property owner is responsible for compliance with all codes and regulations, whether or not described in this document.**

**More information: City of Tacoma, Site Development Group | [www.tacomapermits.org](http://www.tacomapermits.org) (253) 591-5760**

To request this information in an alternative format or a reasonable accommodation, please call 253-591-5030 (voice).

TTY or STS users please dial 711 to connect to Washington Relay Services.



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### Step 2 - Adjust Organic Content

The restored soil must have a minimum organic matter content of 10% in planting beds, 5% in turf areas, and pH of 6.0-8.0. If the existing soils do not meet these requirements, amend the soil by:

- Turf areas: till 2" of compost into the top 6" of the loosened soils
- Planting bed: till 3" of compost into the top 6" of the loosened soils



Figure 3 - Organic-rich, loose soils  
(photo credit USDA NRCS)

When choosing to import topsoil, check for proper organic content and import enough to make an 8" layer of fresh, loose soil on top of the loosened subsoil.

**Don't Forget the Mulch!** Mulch all landscape beds after planting. After it settles, the mulch layer should be 3" deep or more. Do not push the mulch up next to the plant base or tree trunk – leave space between it and the mulch ring.

### Resources and Contacts

For more information on the healthy soil requirements of BMP L613 – Post Construction Soil Quality and Depth, please review Tacoma's Stormwater Management Manual Volume 2, Section 4.1.

To find a composting facility permitted by Ecology, visit: <https://ecology.wa.gov/>

### Practical Information on Soil Management

[www.buildingsoil.org](http://www.buildingsoil.org)

[www.soilsforsalmon.org](http://www.soilsforsalmon.org)

[www.nrcs.usda.gov](http://www.nrcs.usda.gov)

### What the Inspector Is Looking For

**Prior to final approval**, the Inspector will check the planting areas and turf to verify soils are adequate and match the approved plans. The Inspector will look for:

- Loose, uncompact soils at least 12" deep
- Organic content mixed in with the soil
- Mulch layer in planting beds
- Truck tickets or bag tags for imported soils
- Plants match approved planting plan

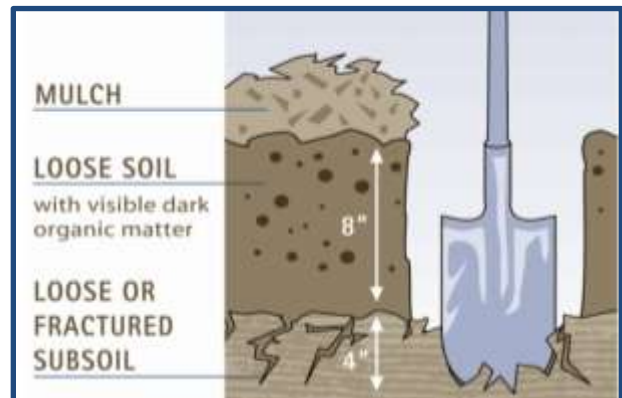


Figure 4 – Layers of healthy, restored soil  
(image credit Washington Department of Ecology)

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