BROCHURE # 57

POST-CONSTRUCTION SOIL QUALITY AND DEPTH

What is Post Construction Soil Quality and Depth?

Native and undisturbed soil and vegetation provide important stormwater management functions such as treatment of pollutants and water infiltration.

Construction and development activity is hard on soils. Those stormwater management functions are largely lost when development damages, compacts, or removes native soil and vegetation. Since lawns and landscaping are subject to pollutants such as fertilizers, pesticides, and pet waste, restoring damaged soils after construction is particularly important.

The first choice is to leave undisturbed vegetation and soil alone as much as possible. Fence-off areas with native vegetation that will not be stripped, logged, or graded to protect them during construction. These undisturbed areas do not require soil amendment.

Where soil and vegetation will be damaged, managing Post Construction Soil Management and Depth is a way to ensure those stormwater functions are restored after construction.

As a bonus, the Post Construction Soil Management and Depth requirements will help you grow a healthier lawn and healthier landscaping plants.

Soil amendment is required for the following:

- All projects that result in over 2,000 square feet of new plus replaced hard surface area such as driveways, parking areas, sidewalks, patios, storage areas, or walkways (gravel or paved).
- All projects that disturb over 7,000 square feet of soil or vegetation.

It applies to all disturbed areas on a project site except:

- The building footprint
- Hard surface areas such as driveways, parking areas, sidewalks, patios, storage areas, or walkways (gravel or paved)
- Areas within the drip line of existing trees where tilling may damage roots
- Slopes greater than 33 percent (3.3 feet of rise over 10 feet of length)
- Wetland soils high in organic matter (non-mineral)

University of Washington Test Plot.
Mineral soil with 30 percent compost amendment.
Up to 50 percent less runoff. Turf still healthy after 4 years.

University of Washington Test Plot.
Mineral soil with no amendment.
High in runoff. Poor turf quality.

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Disturbed areas include (but are not limited to) those areas where:

- Any activity results in movement of earth, a change in the existing soil cover (both vegetative and non-vegetative), or a change in the existing soil topography
- Grading, filling, trenching or excavation has occurred
- Ground-breaking activity has occurred
- Woody vegetation (including shrubs and understory) or stumps have been removed
- Soils have been moved or stockpiled
- Soils have been compacted by vehicles or equipment (wheeled or tracked)

I Need to Amend My Soils. Now What?

You may use a pre-approved soil amendment method or a custom soil amendment.

Custom soil amendment must meet the requirements of the Kitsap County Stormwater Design Manual (Volume 2, Section 5.4.1, page 5-22) and the Stormwater Management Manual for Western Washington (Volume 5, BMP T5.13, page 5-8).

Pre-approved soil amendment is easier and is usually a simpler choice for single family residences.

You may:

- Purchase compost from off-site sources and till it into existing soil.

OR

- Stockpile, protect, and reuse existing soil and forest duff and till it into existing soil.

OR

- Chip and stockpile wood waste from site clearing and till it into existing soil.

OR

- Import topsoil of sufficient organic content and depth to meet the requirements below.

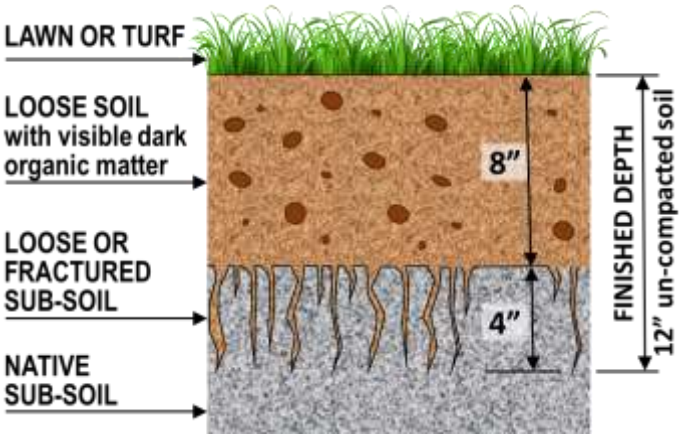
OR

Use any combination of the above.

In planting beds and landscaped areas, till existing soil to a 9 inch depth. Place and rototill 3 inches of amendment into the top 5 inches of soil for a finished depth of 12 inches of un-compacted soil.

In lawn or turf areas, till existing soil to a 10 inch depth. Place and rototill 1.75 inches of amendment into the top 6 inches of soil for a finished depth of 12 inches of un-compacted soil.

These quantities are minimums. You may use more amendment if desired for your landscaping needs.



A list of permitted composting facilities is maintained by the Washington State Department of Ecology. For an up-to-date listing of local permitted composting facilities please visit the DOE website: http://www.ecy.wa.gov/programs/swfa/organics/soil.html

What Information Do I Provide to the County?

A completed Post-Construction Soil Quality and Depth Worksheet (Document #5401D) is required as part of your building or site development permit application. Also, you must show on your site plan the edge of all ground and vegetation that will be disturbed by your project

Photos: Doug Howie, Washington State Department of Ecology
Graphics: Kitsap County Department of Community Services

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