

SOIL QUALITY IMPROVEMENT AND MAINTENANCE

Fact Sheet SDM-2

Also known as: Soil amendments, engineered soils

DESCRIPTION

The quality of existing soils on a project site can be improved by implementing soil amendments that alter the physical, chemical, and biological characteristics of the soil. Soil amendments can help restore disturbed soils by increasing organic matter content and reducing compaction. Amendments can also make soils with high clay content (i.e. hydrologic soil groups [HSG] C and D) more suitable to receive and filter/infiltrate site runoff. Soil amendments consist of humus such as compost and aged manure; fibrous materials such as peat, wood chips, and hardwood bark; inorganic materials such as vermiculite and perlite; and other soil conditioners and fertilizers as appropriate. The practice can increase infiltration rates, plant survival rates and health, enhance root growth, provide erosion stabilization, and decrease need for irrigation and fertilization.



Photo Source: CDM Smith

INSPECTION AND MAINTENANCE REQUIREMENTS

A maintenance plan shall be provided with the SWQP. The maintenance plan shall include recommended maintenance practices, state the parties responsible for maintenance and upkeep, specify the funding source for ongoing maintenance, and provide a site specific inspection checklist. At a minimum, maintenance shall include the following:

Soil should be planted and mulched after installation. No part of the site should have bare soil exposed.

Compaction of amended soils should be avoided.

Amended soils should be inspected annually for signs of compaction, waterlogging, loss of vegetated cover, or erosion.

Corrective actions include application of additional amendments and mechanical aeration.

If applicable, contact the proprietary product manufacturer for specific maintenance requirements.

REFERENCES

Low Impact Development Center, Inc. 2010. Low Impact Development Manual for Southern California: Technical Guidance and Site Planning Strategies. Available online at: <https://www.casqa.org/resources/lid/socal-lid-manual>

U.S. Environmental Protection Agency. 2007. The Use of Soil Amendments for Remediation, Revitalization, and Reuse. Available online at: <http://nepis.epa.gov/Exe/ZyPDF.cgi/60000LQ7.PDF?Dockey=60000LQ7.PDF>