SOIL QUALITY MANAGEMENT AND RESTORATION METHODS

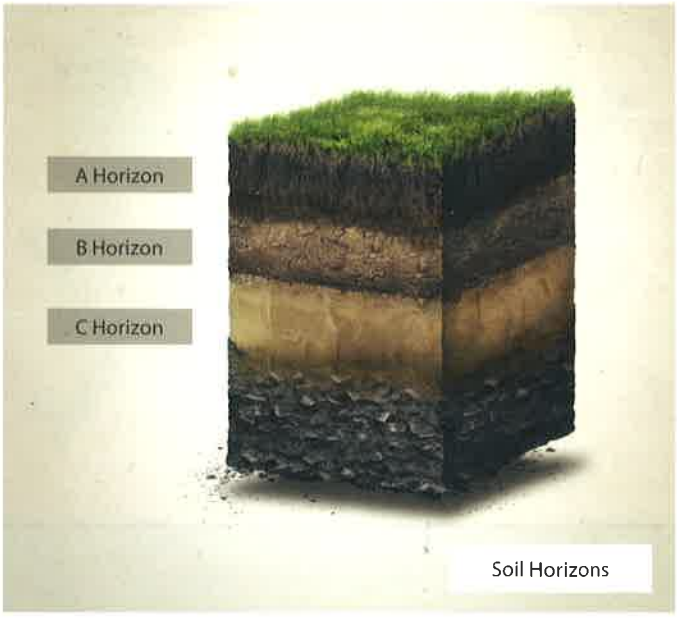
The goal of soil management and restoration is to protect and/or restore eight inches of healthy soil. There are two soil management and six soil restoration methods.

The methods are grouped based on whether your site can be protected from disturbance, if there is adequate topsoil, whether additional amendments are needed, or if there is an existing lawn. Keep in mind that you may need to choose a variety of methods depending on the site.

METHODS 1 AND 2

Use this method if the goal is to protect healthy soil area(s) on a construction site from disturbance.

Healthy Topsoil



Soil Horizons

Method 1

Protect areas from disturbance if site has 8 inches of healthy soil and has an intact B and C Horizon.

- **No Soil Disturbance**
- **Protect Existing Healthy Soil**

Method 2

Protect areas from disturbance if site has good healthy soil, but less than 8 inches. This may be found on sites with sandy or timber soils (not common). Intact B and C Horizon required.

- **No Soil Disturbance**
- **Protect Existing Healthy Soil**

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For additional details, refer to Chapter 5 of the Iowa Stormwater Management Manual.

May 2022

METHODS 3 and 4

Use if there are 8 inches of topsoil on site (no off site topsoil needed).

Method 3

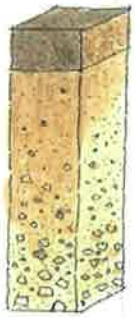
Site has 8 inches of compacted topsoil **IN PLACE**. Use tillage to de-compact existing topsoil.

- **Partial Soil Disturbance**
- **De-compact Existing 8" of Soil**

Method 4

Site has 8 inches of topsoil **ON SITE.** Topsoil is stripped, stockpiled, and re-spread 8 inches thick.

- **Partial Soil Disturbance**
- **Re-spread 8" of Topsoil That Has Been Stripped and Stockpiled On-Site.**



Stockpile and Protect Soil

De-compact

Re-spread Topsoil

METHODS 5, 6, and 7

Use if additional organic materials are needed to create an 8-inch healthy soil layer. These methods rely on tillage and the incorporation of topsoil, compost, or a combination. The use of compost may be limited to those sites that are close to a compost facility.

Method 5

Use if topsoil is readily available. Combine 4-7 inches of topsoil with tillage to create 8-inch soil profile. Till soil and then incorporate topsoil. Minimum application of 4 inches of topsoil required.

- ✓ **Total Soil Disturbance**
- ✓ **Tillage + New Topsoil = 8" Healthy Soil Profile**

Method 6

Use if you don't want to rely solely on topsoil or compost, or if there is not an adequate amount of either material. Till 6 inches and then incorporate a blend of 1 inch of topsoil and 1 inch of compost.

- ✓ **Total Soil Disturbance**
- ✓ **Tillage + New Topsoil/Compost Mix = 8" Healthy Soil Profile**

Method 7

Use if compost is readily available. Till 6 inches, add 2 inches of compost, then incorporate compost into the soil.

- ✓ **Total Soil Disturbance**
- ✓ **Tillage + New Compost = 8" Healthy Soil Profile**

Compost

Spreading soil/compost mix

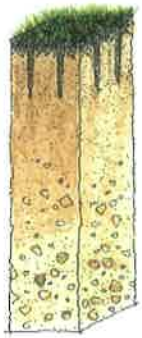
METHOD 8

Use if there is lawn or green space area where existing turf will remain.

Method 8

Use deep-tine aeration (minimum 4 inches deep) followed by application of ½ to ¾ inch of compost. Seed may be added if the lawn has lots of bare spots.

✓ **Sub-Soil Disturbance**



✓ **Enhancing Existing Yards and Green Space Areas**

Deep-Tine Aeration


Aerated Patchy Lawn


Compost on Existing Turf


Spreading Compost