



Soil Erosion and Compaction

Eroded soil is the top water pollutant in the Huron River watershed, by volume. As it settles, sediment can smother fish eggs and bottom-dwelling organisms, and destroy aquatic habitat. Suspended sediment can interfere with the respiration and digestion of aquatic animals. Other pollutants, such as metals and nutrients are often attached to soil particles as they enter a waterway. Finally, sediment can clog stormwater management systems, leading to higher maintenance costs and flooding.

Construction activities can also cause soils to become seriously compacted. Compacted soils prevent stormwater from filtering into the ground, increasing the volume and velocity of runoff. Since infiltration removes pollutants from stormwater, compacted soils ultimately reduce water quality.

PRESERVING VEGETATION IS THE FIRST STEP

Vegetation is the best way to prevent erosion. It also helps to filter pollutants from stormwater. It is important to preserve existing vegetation on a construction site, whenever possible.

Maintaining a vegetated buffer zone along pond and stream banks is especially important for the health of our waters. Vegetated buffers should be at least fifteen feet wide since, the wider the buffer, the more plants will be able to slow and filter stormwater before it enters the receiving waterway.



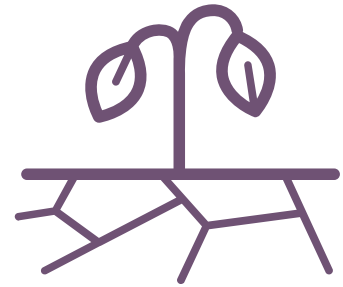
LIMIT EXPOSED SOILS

In areas that must be cleared, limit the amount of disturbed area and the length of time that soils are exposed. This can be accomplished by:

- Designing projects to retain as much undisturbed space as possible.
- Prohibiting clearing and grading along streambanks.
- Taking steps to stabilize sites as soon as possible.

PREVENTING SOIL COMPACTION

Removing, storing, and replacing the original topsoil on-site can destroy the natural structure of the soil. Mixing compost into the sub-soil, or scarifying the subsoil before replacing the topsoil can dramatically improve the soil's ability to store and filter stormwater. To help prevent soil compaction, concentrate construction traffic patterns as much as possible and rope off the areas that are designated for traffic.



TOOLS TO HELP CONTROL SEDIMENT

Examples of Soil Erosion Control Measures include:

- Stone
- Fabric
- Straw Mats
- Mulch
- Windbreaks
- Perennial Crops
- Geocells
- Hydro-seed

Soil erosion control measures are used to keep any soil that does erode on-site. These important tools aid in the removal and filtration of soil from stormwater.

Soil Erosion control measures also help to reduce the velocity of stormwater leaving the site which allows particles to settle out.

Frequently inspect erosion and sedimentation controls to make sure they are working. This is especially important right before and after rainstorms.

For more information about how to choose and install sedimentation controls, contact the Washtenaw County Soil Erosion and Sedimentation Control Program.

Local clearing and grading laws vary. Before clearing any land, check with the State, County and Township in which the property is located to find out about restrictions and permit requirements.