



What to do about....

Hillside Seeps

In a few areas of Marion County landowners have found that a seep has developed along or just below a hillside. These seeps are often found in soil types which otherwise typically would be well drained such as Miami soil, and sometimes are along the edge of two soil types and changes in elevation.

The cause of seeps is often the change in depth of glacial till, an impervious layer that remains extremely compacted due to the weight of the glaciers which once covered our part of the state. The glacial till varies in depth from location to location. Groundwater flows through the topsoil layer but when it hits the glacial till it can no longer drain through it and instead flows along the top of the glacial till until it pops out along the hillside. Seeps can pop out in various locations and will often continue to flow well into the drier times of the year. Seeps can cause traffic and pedestrian safety issues when they are located near a sidewalk or drain into a street, especially in the winter when this water freezes. It also can cause cracks to develop in the pavement. It is therefore sometimes necessary to divert seeps to a better location.

General Guidelines: If there is a drainage outlet available that is deep enough, seepage water can be diverted underground through the use of perforated drainage tile and clean gravel. In order for drainage tile to intercept the seep it must be installed well into the impervious glacial till layer and the trench backfilled with pea gravel or clean #8's.

The tile should be located above (uphill) from where the seepage is coming out and the length extend well beyond the wet area. Test holes should be drilled in order to determine the depth of the glacial till layer. Testing can be done by using muriatic acid to test the soil – test various depths until you encounter a strong effervescence indicating the glacial till. Dig the trench 18-24 inches wide and one foot into the glacial till (at a minimum of 3 feet deep). A 4 or 6 inch perforated tile is usually sufficient to handle most seeps. Backfill the trench with clean #8 or pea gravel. Set the tile on at least 0.2% grade and take the tile to an adequate outlet. If you are using a storm sewer inlet box as your outlet you will need a licensed & bonded contractor to install the tile. If you outlet the tile into a ditch, use schedule 40 PVC pipe for the last 10 feet and install an animal guard on the end.

You may need a drainage permit and possibly a Right of Way permit from the office of Business & Neighborhood Services in order to do this project. Be sure to have all utilities marked before doing any digging. If you are on a septic system please have the seepage tested before diverting it.

**For more information contact the Marion County Soil & Water Conservation District
(317)786-1776 www.marionswcd.org**