

Energy and Environmental Design Project

Green Infrastructure

Mission Statement

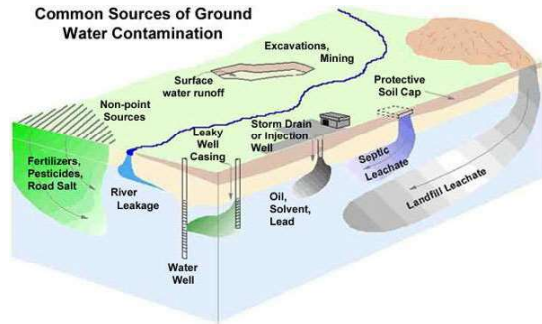
To produce a versatile electrode probe kit which records water infiltration systems to monitor the success of green infrastructure for the United States Geological Survey (USGS)

Synopsis

The project keeps a record of water reclamation by soil that is introduced to the soil by green infrastructure. Examples of green infrastructure that do this are permeable pavement, bioswales, rain gardens and green roofs. This issue is very important for the environment and for the health and safety of people. In Connecticut and many other parts of the world, global warming has caused fewer rain falls, but the rain that we do get is often more intense and of a greater volume. This often means that streams and rivers can be over flooded.

Also, do to large amounts of areas covered by roads, parking lots and buildings there is no way for water to be introduced to the soil where it lands. By having water enter the soil early, our rivers and streams will not be inundated and our aquifers will be replenished. We depend on ground water for a steady supply of water and it is important that aquifers be replenished by rainfall seeping through soil.

A working prototype of a tubeless and a tube design was fabricated. Resistivity data of both designs in gravel and beach sand was collected.. We received immediate feedback on the gravel readings and slower results with the sand and potting soil. The data from the tube design showed the more reliable sensor data.



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