

GET THE DIRT ON BALTIMORE: Studying urban soils

Community Update

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Baltimore Ecosystem Study: BES

WHY STUDY SOILS?

- Important things happen in the world hidden below our feet. Soil houses organisms that process nutrients, to make them available for plants.
- Soil stores matter that plays a vital role in moderating the below-ground environment.
- Microscopic organisms in soil affect the above-ground world too. They produce trace gases that influence the chemistry and physics of the atmosphere, air, and water.

HOW ?

- * Long-term monitoring of basic soil processes, in a series of permanent study plots.
- * Analyzing the living things in the soil - their community structure and function.
- * Studying accumulation and effects of soil pollutants.
- * Classifying and analyzing urban soil types.



What's happening in this hole?

BES soil studies look at how elements and nutrients function in the ground. The BES soil study categorizes urban soil types, and identifies key soil properties and how they relate to land use, both now and in the past. Land use change has affected how nutrients move through the soil - by increasing delivery of excess nutrients to the Chesapeake Bay, for example. Nutrients are important, but a nutrient overload can have negative effects. Soil needs to have the right chemical makeup to support life of all kinds - from worms to plants to people.

Soil is an important factor to consider for our water systems, how we use our yards and parks, and where and how we farm. By examining dirt in and around the Baltimore area, we gain an understanding of how the city affects the soil, and the soil affects the city.



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