

A Forest-based Perspective on Urban Ecohydrology

Roundtable on Urban Ecohydrology Science and Practice
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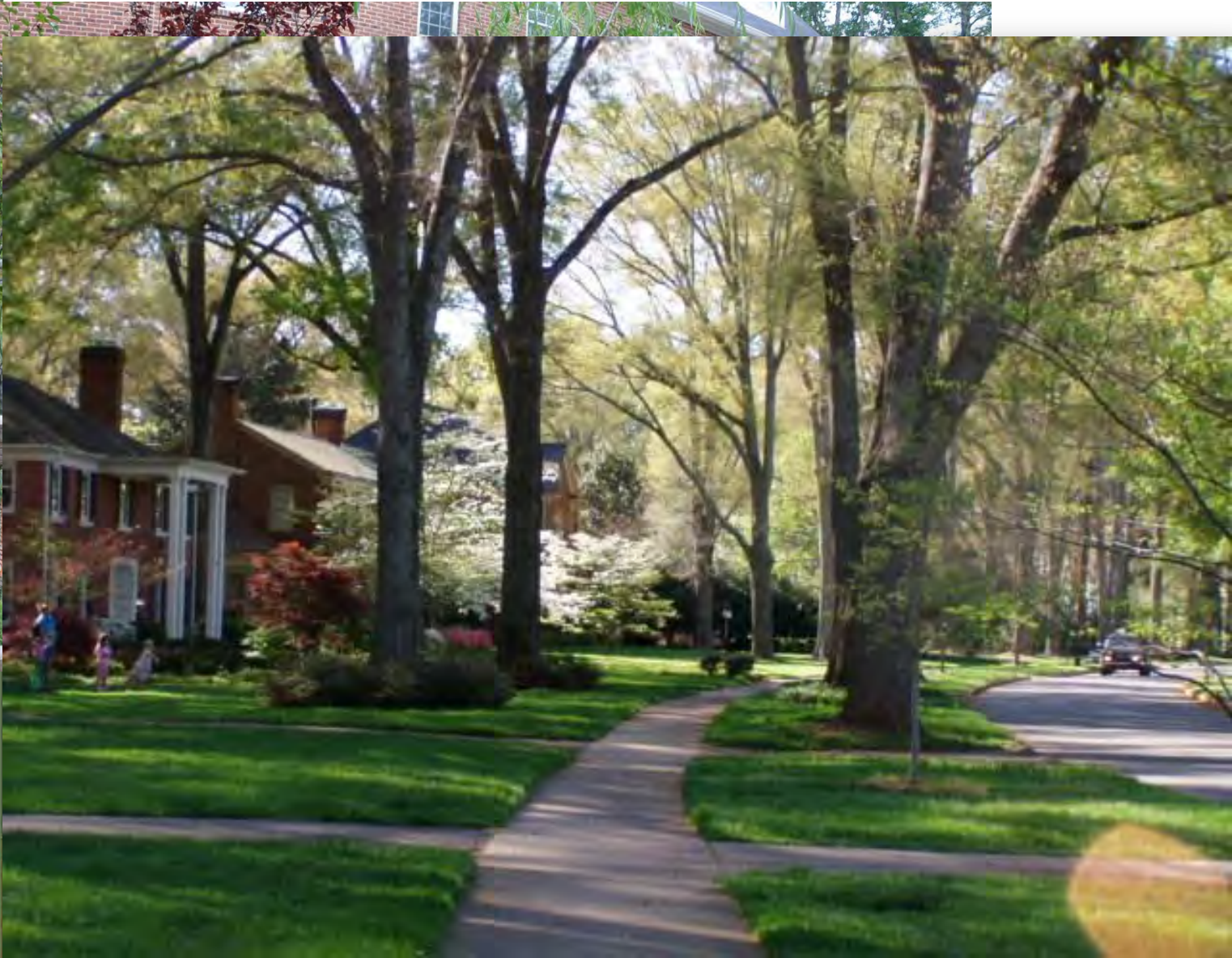




***Should research and practice connect
the small scale (a site, or BMP) to the
larger scale (catchment)?***



Issue 1: How can we relate BMPs to the larger ecosystem? Can they blend?



Research implications:

- *Monitoring of entire site and interrelations among elements.*
- *Modelling more closely linked to interrelations/geospatial patterns rather than presence and absence?*



Issue 2: How does BMP installation affect soil health and overall site productivity?



Research implications:

- *More detailed knowledge of soil management required: effects on hydrology as well as phys/chem/biol conditions.*
- *Social and management issues to be addressed. Example: SITES™*





This Building uses
70% Less Energy
Yours Could Too

STRUC
Building



(540) 77
Structure

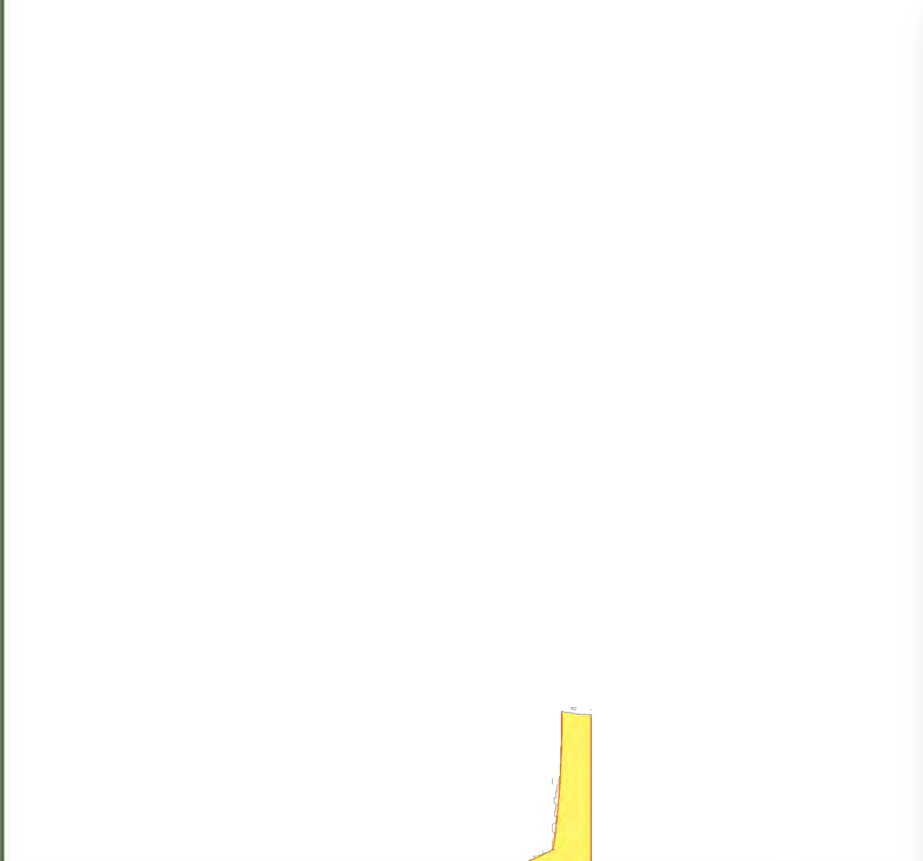


Photo: Rachel M. Layman

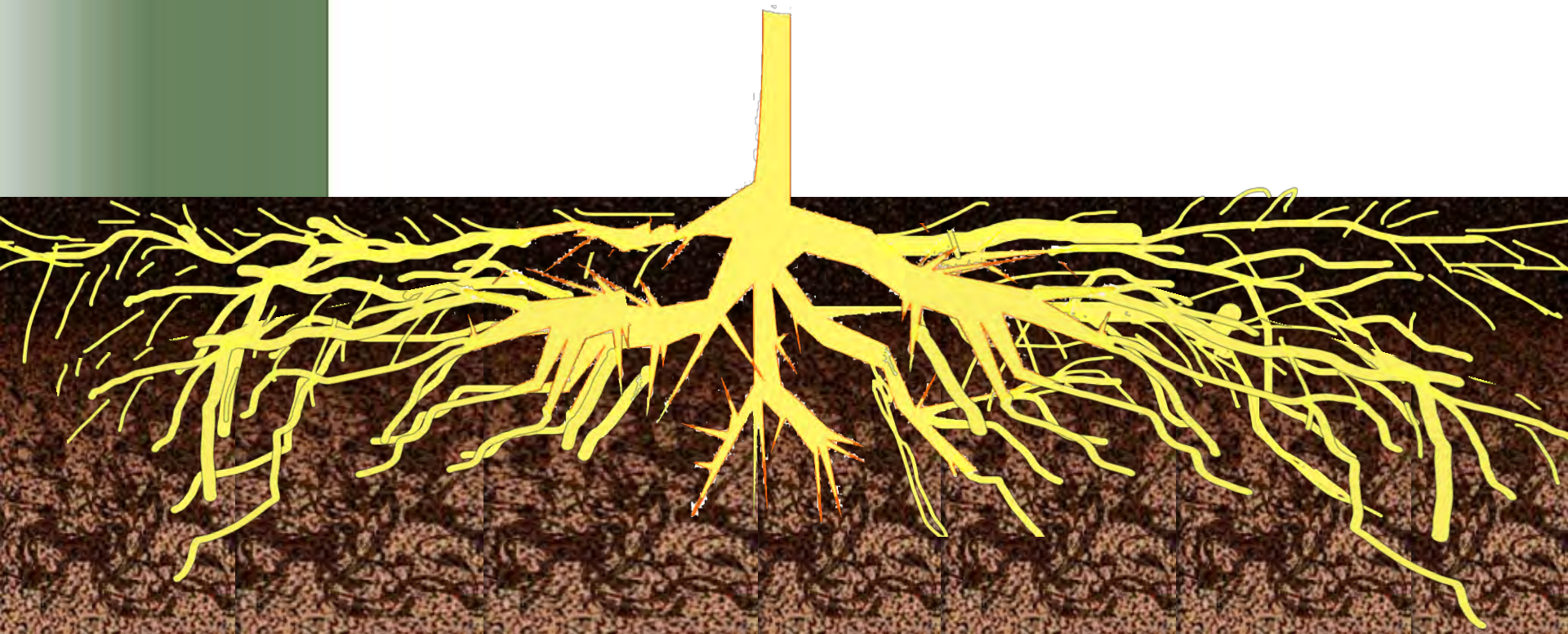
Agricultural silt loam profile

- **Shottower Silt Loam**





- Root growth
- Microbial activity
- Carbon storage
- **Permeability**





trees and low impact development

Facilitating Tree Use in Landscapes



Trees and LID

Welcome to our research project website.

The Survey

We are surveying an array of professionals involved in stormwater management to assess their views and knowledge of trees and how they are incorporated into low impact development stormwater management strategies

Survey Results

Survey results will be available on this site in August or September 2012.

About

This website follows the progress of a Virginia Tech research project to uncover and resolve conflicts between trees and stormwater best management practices.

Resources

Case Study

Sponsors

Tree Fund
Department of Horticulture
Department of Forest Resources and Environmental Conservation

Research Personnel



Photo: Thomas Martin

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Issue 3: Plant construction conflicts. What are they? Plants as disposable tools (heavy metal uptake, for example) vs. long-term components of ecosystem.



Research/Management implications:

- *Evaluation of plants for particular purposes.*
- *Risk of de-valuing other plants and overall biodiversity/ecosystem function.*
- *Risk of focusing too much on the performance of a particular plant, not the system.*



Summary

- **Retain context of overall ecosystem health/function**
- **Integrate scales from micro on up**
- **Trees as potentially large long-lived organisms—implications**
- **Soil as part of greeninfrastructure**

