

Engineered Infiltration Systems for Urban Stormwater Reclamation

Research Team Members:

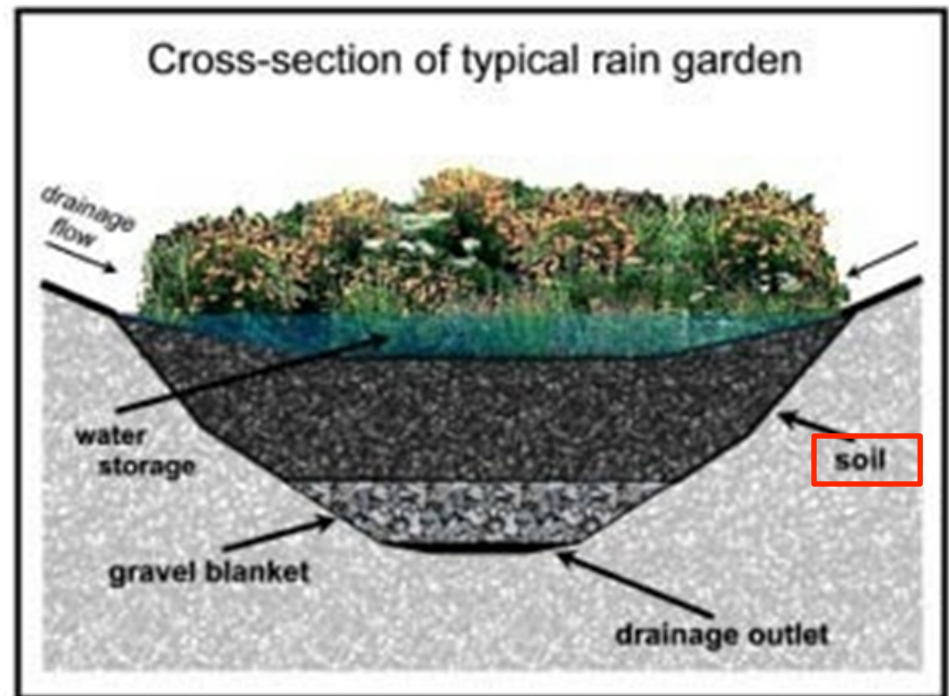
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- Participant: Hanna Dodd

Objective:

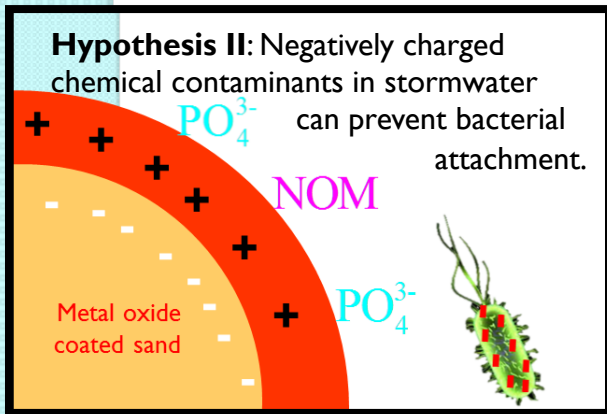
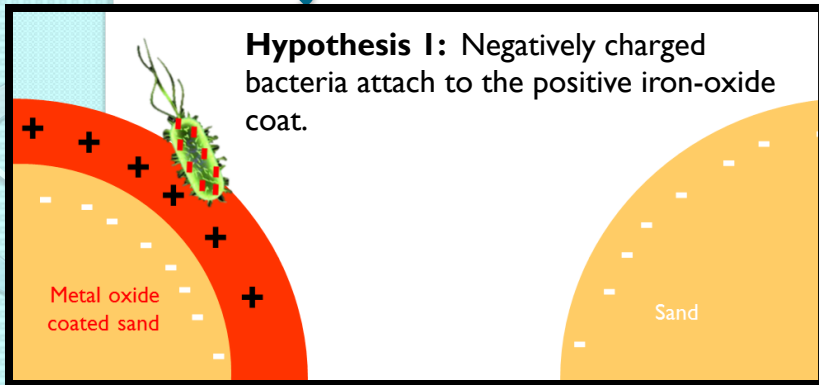
We are looking at the feasibility of using the soil/geomedia portion of rain gardens to remove pathogenic bacteria from stormwater.

Scope:

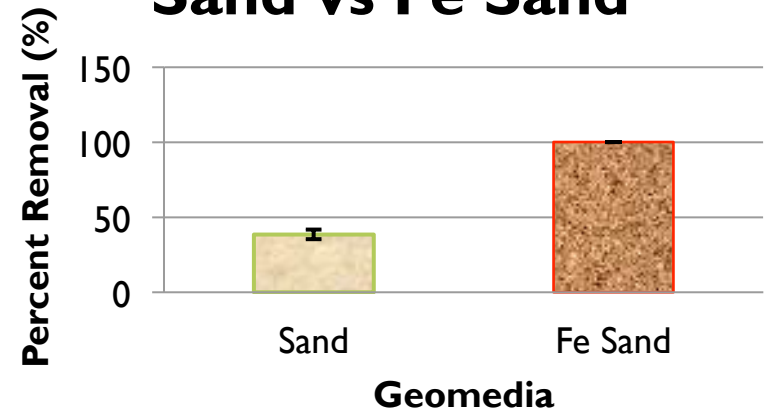
Specifically, we are seeing if stormwater bacteria attach to iron-oxide coated soil during batch experiments, thus removing the bacteria from the stormwater.



Major Outcomes



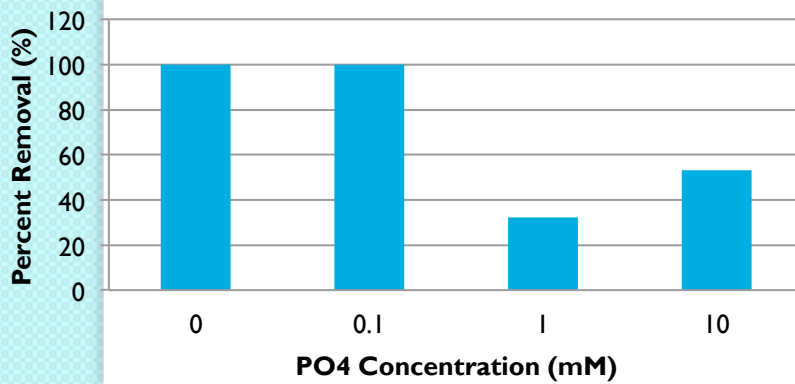
Sand vs Fe Sand



Conclusions:

- Iron-oxide coated sand, Fe sand, is effective at removing bacteria from stormwater.
- Chemical contaminants, like Phosphates (PO_4) and Natural Organic Matter (NOM), in stormwater have a negative effect on bacterial attachment to iron-oxide coated sand.

Effect of PO_4 on Attachment



Effect of NOM on Attachment

