Illinois-Indiana Sea Grant 2018-2019

Hydrogeologic soil research for green stormwater infrastructure planning and design: new methods for adapting urban coastal communities

aka “Soils-based GI Planning & Design - for the Calumet”

Awarded Fall 2017, Start date Feb 1, 2018, Two-year study

Research Team
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Involvement/support partners
• Calumet Stormwater Collaborative
• Center for Neighborhood Technology
• Chicago Metropolitan Agency for Planning
• Metropolitan Planning Council
• National Resources Conservation Service
• Municipalities **Opportunity to participate**
Soils-based GI Planning & Design - for the Calumet

**Purpose & Goals** *(Putting Things Together)*

**Soils** Create a Calumet region geologic soils database
- gathering existing data (multiple sources)
- new data sampling

**Hydrology** Model hydrologic performance
- soil samples
- under climate scenarios

**Urban Design** Identify where GI can take advantage of this data
- target impervious and urban design issues

**Outreach** Disseminate findings to further advance stormwater planning & design in affected area *[with 2-3 municipalities]*

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Study Area - Calumet region municipalities

Robbins
Blue Island
Calumet Park
Riverdale
Dolton
Calumet City
Midlothian

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Why Participate / Goals & Benefits for Municipalities

Increase knowledge about soils
  • targeted soil mapping for the municipality

Increase knowledge about infiltration potential
  • hydraulic modeling on drilled soil samples

Disseminate findings
  • overlay data to refine GI recommendations and to prioritize projects

Integrate with existing stormwater planning
  • ecological, social and especially economic benefits of working with native soil
  • for use in communicating project benefits, grant applications, et cetera
  • ideally, develop ‘proof of concept’ for pilot projects
Participation timeline

- Two year project 2018-2019
- Three activities for municipal partner engagement & benefit

Soils Collection and Mapping, Creation of Regional Database

Hydrologic Modeling

GI Urban Analysis & Recommendations

Municipal Partnership

*Identify pilot projects

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Steps and Initial Timeline:
- Let us know if you want to learn more/participate (see Sign-up sheet)
- First meeting this Spring
- Soil sampling this Summer / Fall

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