

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]**

Study Area - Calumet region municipalities

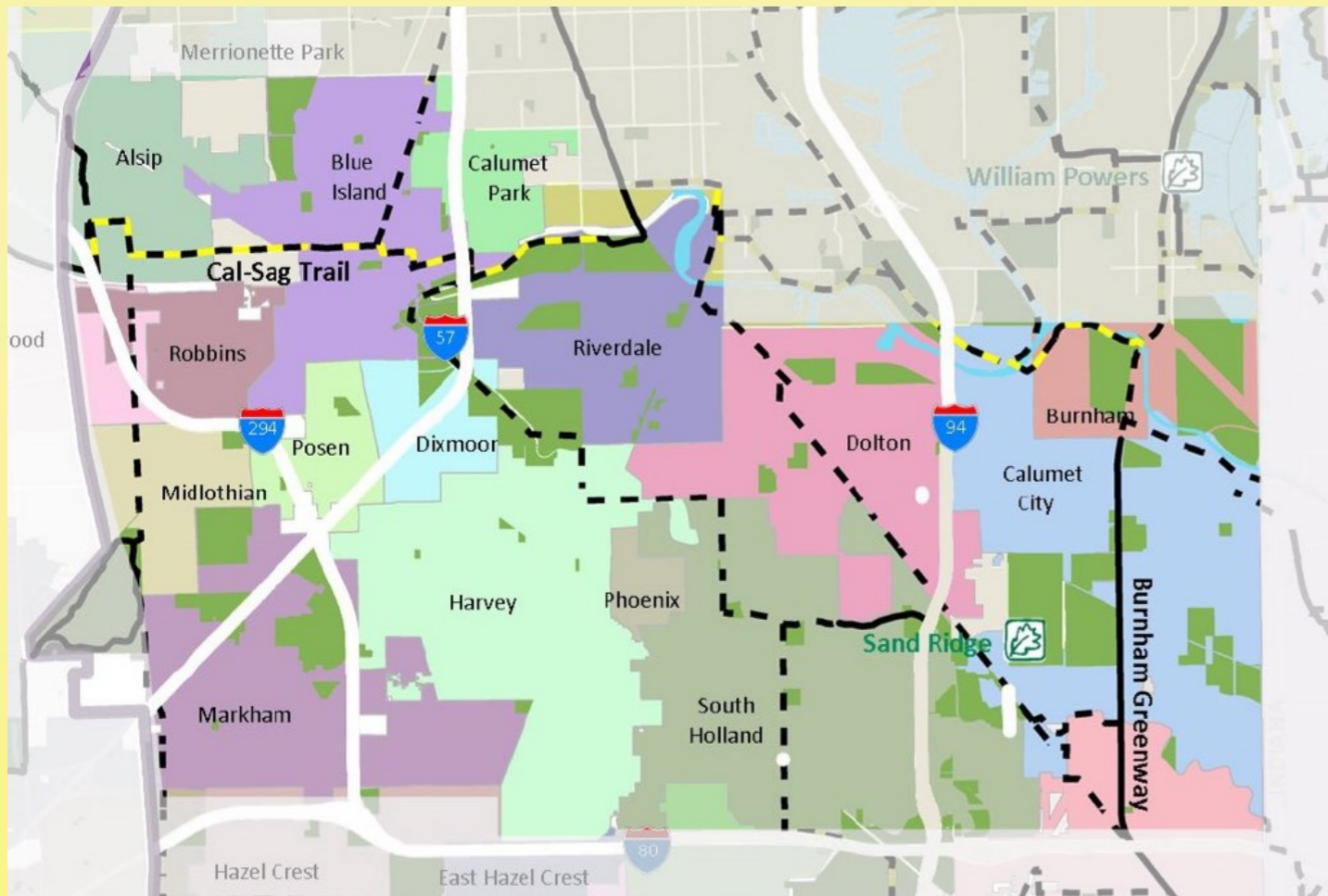
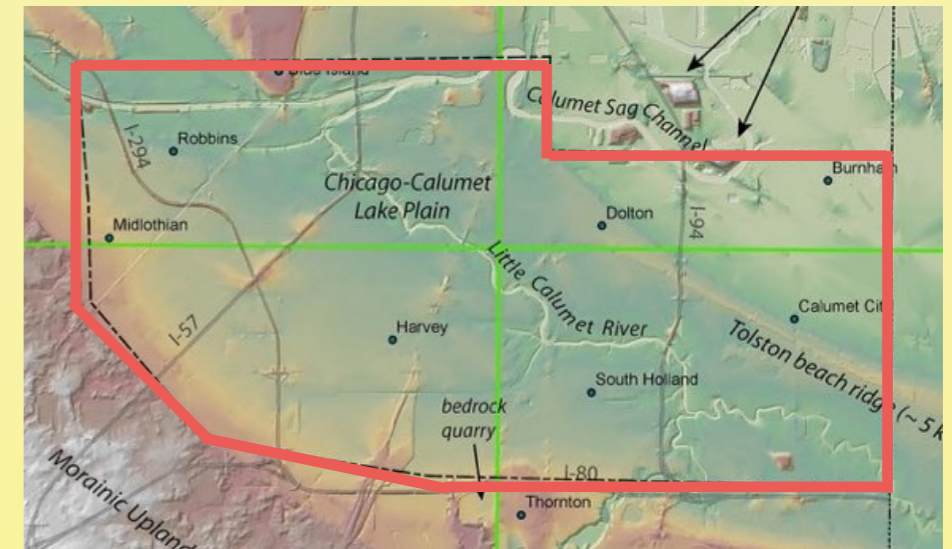
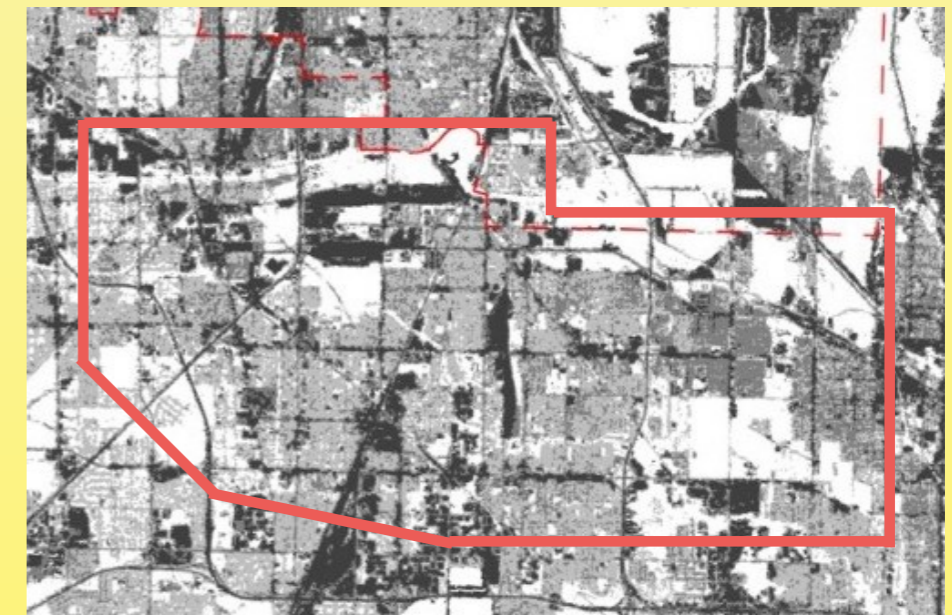


Image cropped from Millennium Reserve Lands

- Robbins
- Blue Island
- Calumet Park
- Riverdale
- Dolton
- Calumet City
- Midlothian



Lydar topography, 2012



Impervious cover, National Land Cover Database NLCD 2011

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

Soils-based GI Planning & Design - for the Calumet

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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