One block at a time: equitable adaptation through green infrastructure

Climate Intersections Conference | July 13, 2022

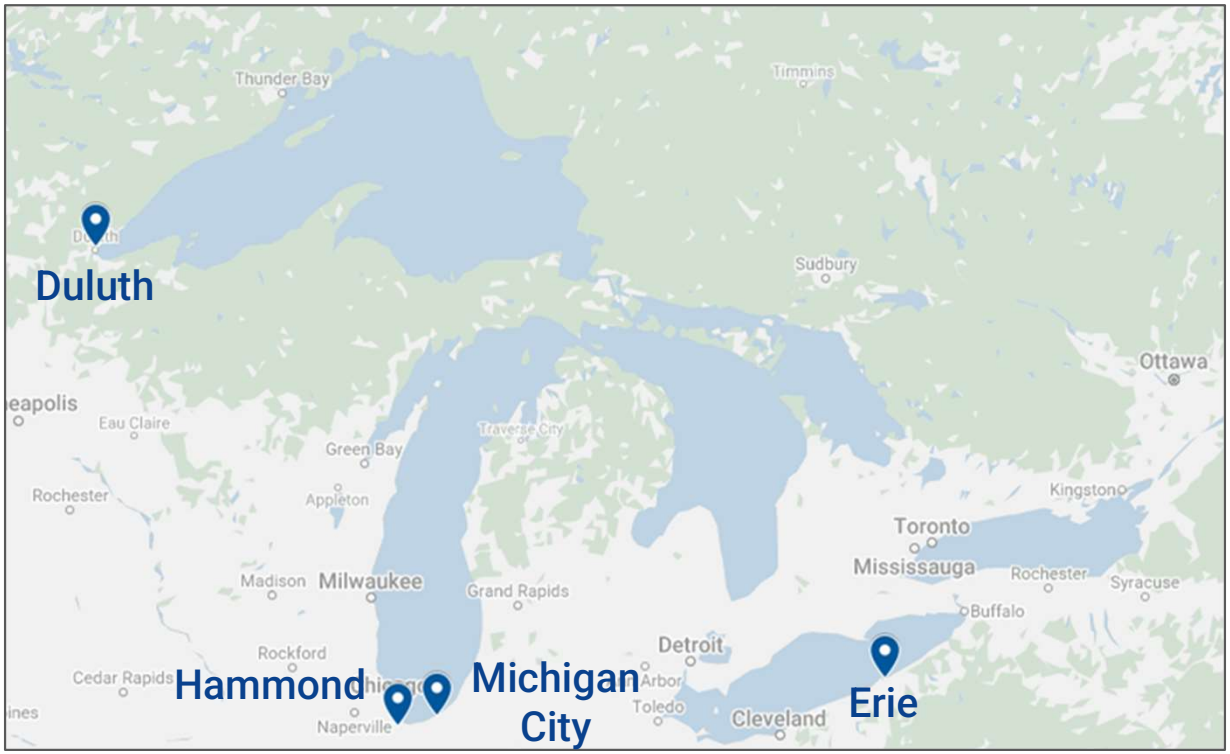
Sea Grant

Photos: MN Pollution Control Agency

Project team

- Madison Rodman (MN)
- Kara Salazar (IN)
- Tiffany Sprague (MN)
- Sara Stahlman (PA)
- Sara Winnike McMillan (IN)

\+ Larger local project teams in each community



Sea Grant Minnesota

Sea Grant ILLINOIS-INDIANA

Sea Grant Pennsylvania

Objectives

- Form a collaborative, **multi-community work team**
- Identify and **support 4 frontline communities** in Duluth, Erie, Hammond, and Michigan City
- Provide **educational and professional development opportunities** through university students and AmeriCorps program
- Develop a community assessment and engagement **toolkit** to scale concept across Great Lakes communities

Implementation

3

Implementation of multi-benefit green infrastructure project (as appropriate based on community)

Community Visioning

2

Equitable, community-driven listening and visioning sessions to prioritize future opportunities to address hazards

Background Assessment

1

Identification of current hazards and vulnerabilities for each community

Ready for Rain One Block Framework[1]

- Pilots achievable community-planned green and gray infrastructure projects
- Benefits to framework:
  - Visible
  - Concentrated
  - Multi-beneficial
  - Mix of public and private
  - Scalable
  - Reproducible

Photo: MN Pollution Control Agency

[1]Adapted by MNSG from the Center for Neighborhood Technology's RainReady™ Approach

Deliverables

- Community assessment and engagement **toolkit**
  - Resources used in background assessments
  - Process agendas for community engagement events
  - Examples of surveys and focus group questions
  - Findings and lessons learned
  - Recommendations for replication
- One-page **community summaries** highlighting outcomes

Minnesota component: Building resilience to water challenges through community-driven visioning and leadership, workforce development, and multi-benefit GI implementation

Visit Morgan's poster to learn more!

Madison Rodman, Tiffany Sprague, Morgan Bliss

Sea Grant Minnesota

Natural Resources Research Institute

University of Minnesota Duluth

Driven to Discover℠

Duluth project team

THE CITY OF DULUTH MINNESOTA

Eco3

Natural Resources Research Institute
University of Minnesota Duluth
Driven to Discover

Sea Grant Minnesota

LOVE YOUR BLOCK DULUTH

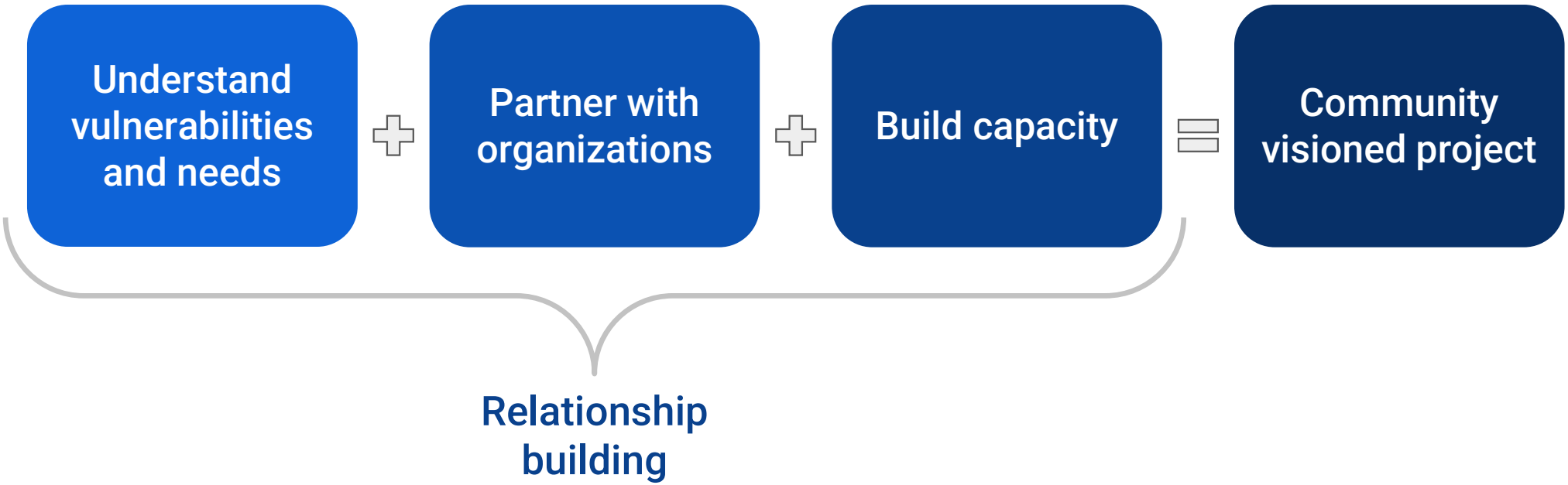
AmeriCorps

Udac
CHALLENGE. CREATE. CULTIVATE.

Duluth Superior Area Community Foundation

The Lincoln Park neighborhood faces compounding vulnerabilities

Our formula for working with the Lincoln Park neighborhood:



Pennsylvania component: Building resilience in Erie through community networking, 3D visioning, and identification of a one block demonstration site

Sara Stahlman and the Community Resilience Action Network of Erie (CRANE)

Our Mission

To engage the community using education and collaboration to identify climate vulnerabilities and implement proactive responses that preserve a vibrant and resilient region.

CRANE

Community Resilience Action Network of Erie

Project Team

- Pennsylvania Sea Grant
- Erie County Planning Department
- The City of Erie
- The Department of Conservation and Natural Resources
- The Pennsylvania Department of Environmental Protection
- Erie County Conservation District
- Penn Future
- Penn State Erie, the Behrend College

Pennsylvania project phases

Background Assessment

- How do we engage our most hardest hit communities?
- Compiling existing documents, data, plans and review demographic and hazard data
- Form initial community connections
- Develop 3D hazard visualizations

Community Visioning

- What struggles are these communities facing?
- Build trusted connections and relationships with underserved communities
- Host listening sessions to understand needs, barriers, and priorities

Identification of Implementation Site

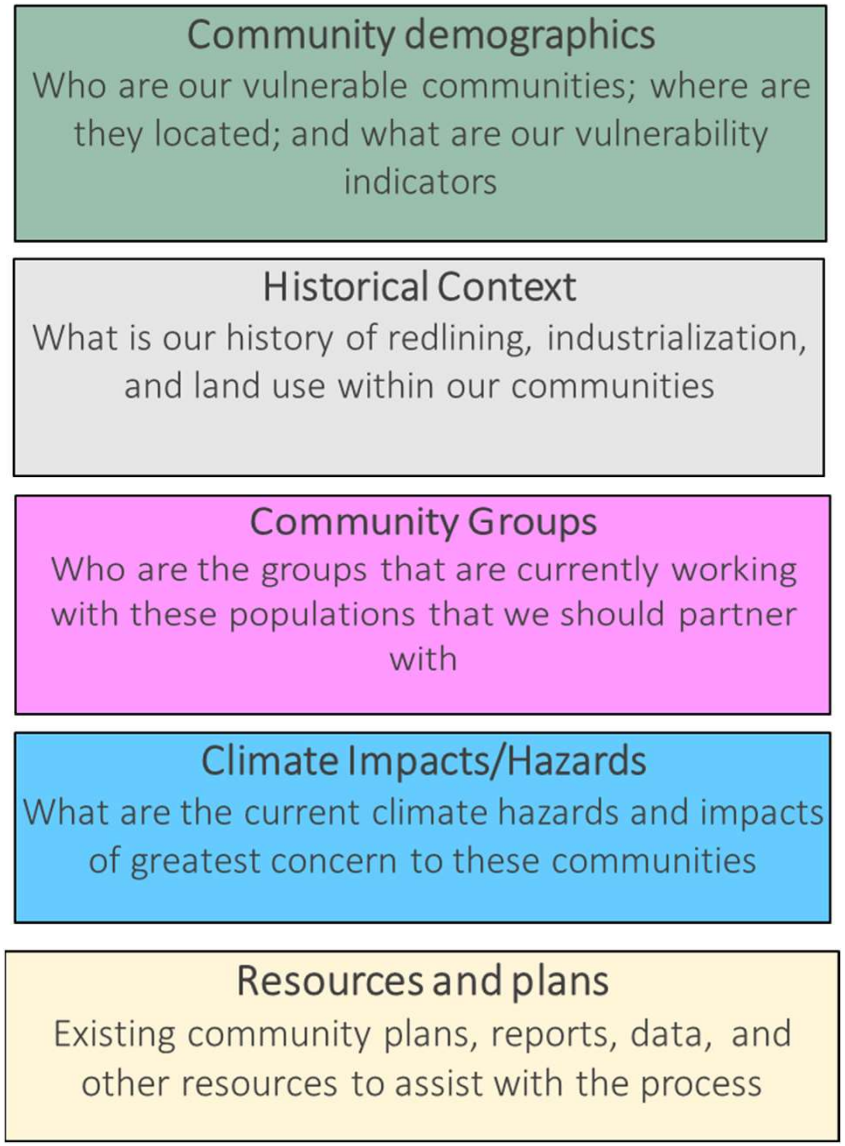
- Identify possible sites and solutions
- Choose the appropriate pilot site to fit community needs
- Prepare for project implementation at pilot site
- Learn from the work being done in Minnesota and Indiana.

Cohort with Minnesota and Indiana communities

- Quarterly support and sharing meetings
- Development of toolkit for repeatability and scalability
- One page community summaries

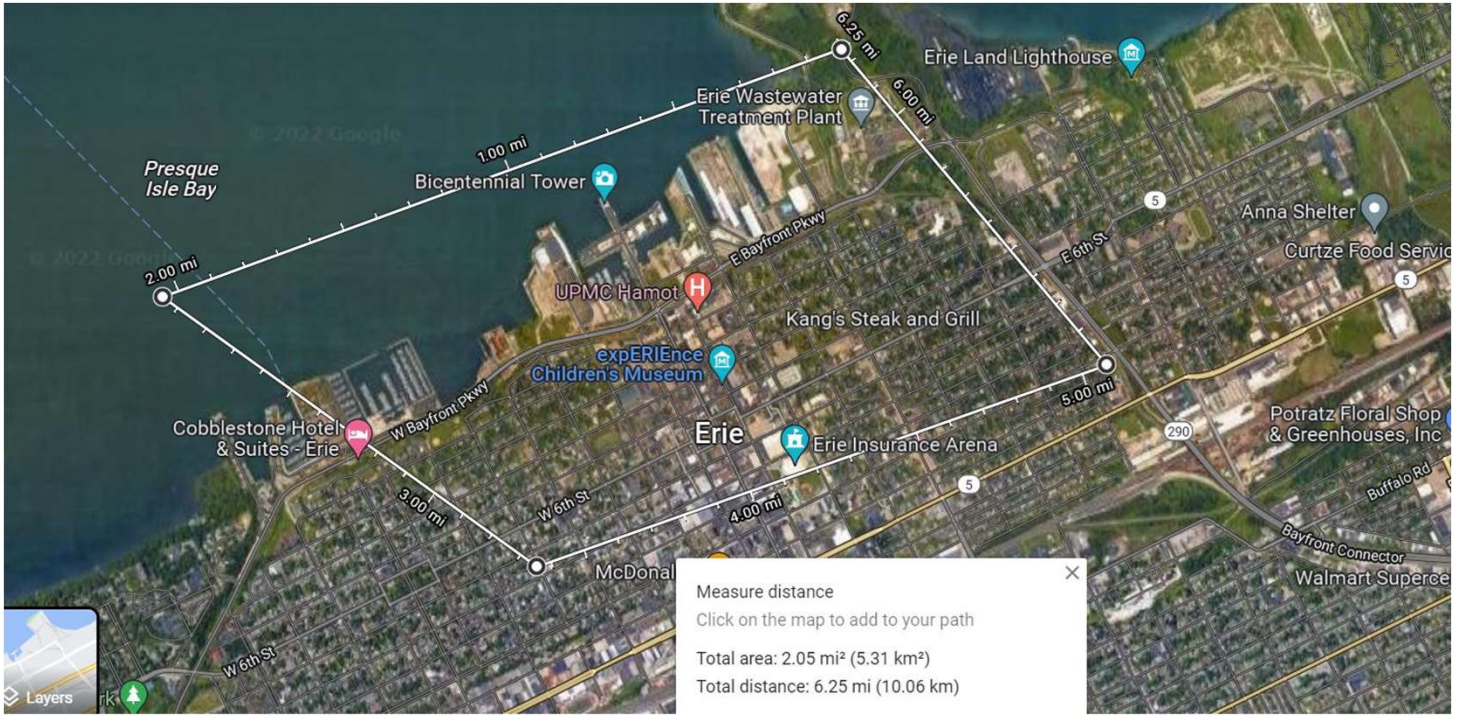
What we've done so far

- Background Assessment
- CEI Intern and Climate Resilience one-year fellow
- Final completion target date August 2022



Hazard Visualizations

- Working with Penn State Landscape students to develop hazard visualizations and models



Community Connection

- Identification of community groups and partners working with marginalized and vulnerable communities

United Way of Erie County

MULTICULTURAL COMMUNITY RESOURCE CENTER
Providing Hope and Opportunity for the ESL Community

Community Shelter Services
A pathway to housing, help, and hope

GECAC community Action
GREATER ERIE COMMUNITY ACTION COMMITTEE
Helping People. Changing Lives.

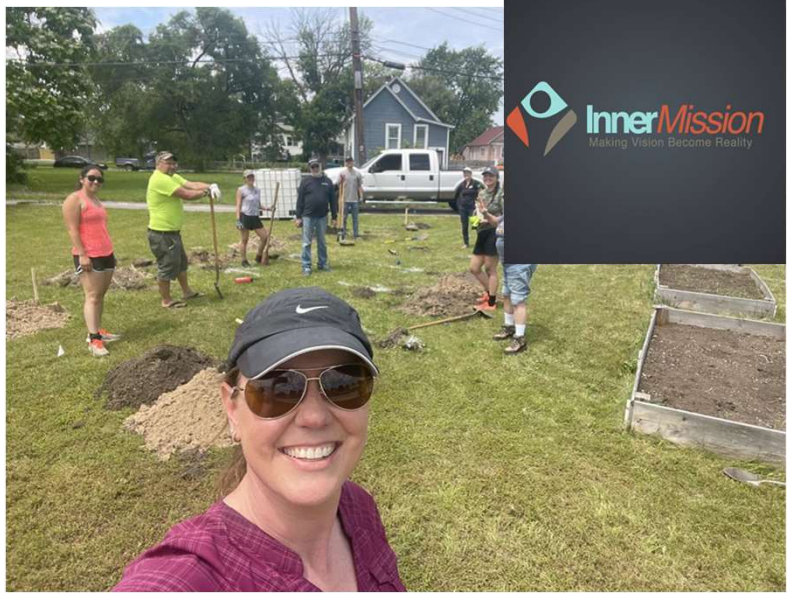
Indiana component: Enhancing neighborhood resilience through integrating green infrastructure and rainwater harvesting practices into community gardens - Michigan City and Hammond, IN

Kara Salazar, Sara Winnike McMillan, Caroline Arnett, Mary Foell, Rebecca Koetz, Aaron Thompson, Daniel Walker

Kryztof Davis, Hanna Fulford, Payton Ginestra, Sebastian Stambaugh

PURDUE UNIVERSITY

Sea Grant ILLINOIS-INDIANA



Community Collaborators
Brian Thomas, SMRT Center
Angelica Navarro &
Victor Roman, Inner Mission

Community Garden Outcomes

- Co-design & implement on-site rainwater harvesting, water quality protection measures, and irrigation
- Design and build rain garden for cistern overflow
- On-site education and engagement

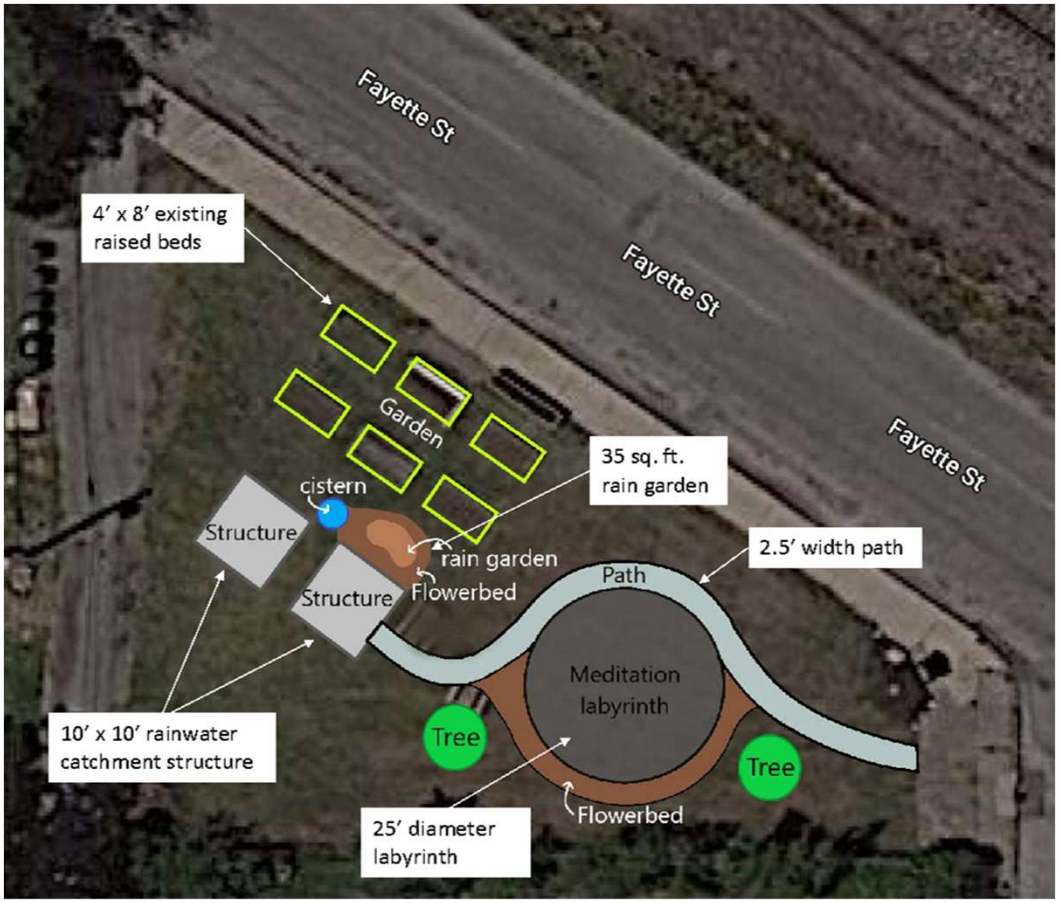
Project Sites

SMRT Community Center
(Hammond, IN)

Inner Mission Community Farm
(Michigan CIty, IN)

Site Co-Design and Layout

- Current conditions
  - Topography, surfaces, soils, constraints, past uses
- Project components
  - Desired placement of key features
  - Visual preferences
  - Access and use
- Surrounding area
  - Views to and from the site
  - Adjacent land uses
  - Location of utilities (water, sewer, and electrical)
- Connections
  - Water AND people



Zoning Considerations

- Building and installation permits and/or approvals
- Structures (garden beds, sheds, cisterns) typically have height restrictions and setbacks
- Signage ordinances provide guidance on placement location and size
- Sale of produce or free to communities
- Parking & walk-up access
- Animal control ordinances

Proactive planning and communication can prevent future unexpected changes and costs

More to come...

- Complete shelter and remaining site components at Inner Mission
- Rainscaping education
- Maintenance plan and design tweaks to support toolkit finalization
- Water and soil testing throughout the growing season
- Interviews to uncover pinch points and successes

Stay informed about our work: **z.umn.edu/OneBlock**

One Block at a Time

- Community Resilience Program
  - Coastal Hazards of Superior - Community of Practice
  - Great Lakes One Water Resilient Future
  - **One Block at a Time**
  - The Watershed Game
  - Twin Ports Climate Conversations

Rain barrel.
Image credit: Waldemar Brandt on Unsplash.

The goal of the Minnesota Sea Grant project One Block at a Time is to increase community resilience to climate hazards, particularly the impacts of flooding, in vulnerable frontline communities across the Great Lakes.

Expand all

Thank you!

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