

City of Ann Arbor: Implementing Adaptation into Capital Planning

2014 GLISA Great Lakes Climate Assessment Grant

Letter of Interest

Request: \$50,000 - GLISA Emerging Action Grant to train design professionals to incorporate climate adaptation processes and measures into capital infrastructure design.

Problem:

For the past several years, the City of Ann Arbor has partnered with Great Lakes Integrated Sciences and Assessment (GLISA) and Great Lakes Adaptation Assessment for Cities (GLAA-C) projects to address integrating the best available climate science into city decision-making. The City has a history of reviewing each proposed capital project based on how it furthers sustainability framework goals. In addition, the City is a recognized leader in innovative stormwater design projects.

The City is presently exploring how to better integrate climate adaptation into this process. The City has a \$663 million Capital Improvements Plan (CIP) for the next six years. We believe that integrating climate science and adaptation into the design of the capital improvement projects planned in the CIP is key to making fiscally responsible and effective climate adaptation decisions.

To that end, as we begin asking City engineering staff whether the design of their projects furthers climate adaptation goals, we have recognized that there is no training available to acquaint them with effective ways to make such city capital projects more adaptive.

We are, therefore, proposing a project to develop a set of training tools for city engineers that will 1) highlight adaptive projects and designs that are known to be effective in the Great Lakes Region (e.g., white roofs, green streets) and 2) identify key research questions for infrastructure assets where adaptive measures are not well developed (e.g., heat island effects of asphalt vs. concrete for street reconstruction).

We anticipate submitting this proposal to the Urban Sustainability Directors Network (USDN) Innovation fund to leverage additional funds for this effort.

Deliverables:

1. Multimedia training for engineers on adaptive processes and designs (including, but not limited to a binder with printed materials, videos, PowerPoint presentations, tip cards, and review checklists)
2. Example infrastructure improvement project fact sheets with cost efficient adaptive design and implementation approaches
3. Evaluation to validate successful integration of adaptation into capital project design
4. List of priority research questions for key capital investment areas that would further integrating adaptation strategies and solutions into capital projects

Stakeholders:

We propose working with the core GLAA-C cities and inviting participation from a wider variety of Great Lakes cities through USDN. We have existing strong relationships with the sustainability directors in Chicago, Evanston, Cleveland, Dearborn, and Grand Rapids and would anticipate active participation from these cities.

The City of Ann Arbor is an active leader in the American Public Works Association (APWA), with roles in water resource administration and stormwater management. The project team will enhance these existing partnerships and collaborations with national professional societies that overlap municipal design and capital project planning.

We have already worked with GLISA and GLAA-C on a 40-person staff workshop to explore the risks to city systems. This project would build on this staff workshop to develop practical tools for staff to use when designing projects which arise through the CIP process. Ann Arbor's CIP process is one of the primary intervention points to introduce staff across city units to new concepts and collaborative opportunities. Using the CIP as a mechanism to introduce and further climate adaptation concepts and strategies will significantly further the adaptation work started at the staff workshop.

Since CIP planning occurs in all local governments, the products and priorities created are scalable to other communities. This project also creates an interesting research agenda for the University of Michigan (UM) and other university partners. We have the full support of the City of Ann Arbor CIP leadership.

Project Team:

City of Ann Arbor Staff:

- *Matthew Naud*, Environmental Coordinator: helped organize the staff workshop with GLAA-C and is already working with staff to incorporate climate adaptation into city decision-making.
- *Jamie Kidwell*, Sustainability Associate: helped organize the staff workshop with GLAA-C and previously has worked across city units to develop both the City's sustainability framework and sustainability action plan.
- *Nathan Geisler*, Energy Programs Analyst: developed the City's Climate Action Plan and consults to city units regarding both community and internal energy projects.
- *Jennifer Lawson*, Water Quality Manager: has led several adaptive stormwater projects at the City and has experience working with engineers at the City to incorporate stormwater into current projects.
- *Deborah Gosselin*, Systems Planning Engineer: oversees the CIP process and has initiated several discussions to better integrate adaptation into the CIP process.

Anticipated Data and Information Needs:

For this project, the City will need scalable climate data to incorporate into the decision-making models for the CIP. This will include both historical station data for Ann Arbor, as well as projections. The City will also seek available best practices of climate adaptation projects and adaptive design techniques from peer cities, or cities that have climate similar to Ann Arbor's projected climate changes.

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