

**Project Title:** Long-term climate information and forecasts supporting stakeholder-driven adaptation decisions for urban water resources

**CFDA:** 11.431, Climate and Atmospheric Research

**Funding Opportunity Title:** Fiscal Year 2011 Climate Program Office

**Funding Opportunity Number:** NOAA-OAR-CPO-2011-2002561

**Competition ID:** 2202405

**Competition Title:** CSI-Water - Urban Water Resources Planning

**Award Number:** FNA11OAR4310120

**Project Tme Period:** June 1, 2011 through May 31, 2013

**Project Duration:** Two Years

**Prime Contractor:** Syntectic International  
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### Project Progress Report

For period ending: 6/30/2012

The project is proceeding on schedule, with few challenges to-date. Core investigators have gelled into a team, with strong working relationships, and respect for one another's expertise and perspectives. The disparate geographic location of investigators has not hampered achievement of project milestones. Significant milestones in technical and outreach activities have been achieved, as outlined below. Examples of to-date project results accompany this report. We anticipate continued success at meeting project milestones and objectives.

**Impact:** The project is having significant impact on the local and regional communities. Outreach communication activities have generated significant interest in both the project, as well as the need to adapt to long-term climate projections. Favorable coverage in the statewide newspaper The Minneapolis Star-Tribune is also promoting awareness of these issues. An extreme rainfall event in the State's second largest city, Duluth, in late-June prompted further visibility for the project, as an example of efforts being conducted within the State to adapt. The City and State, although innovative and progressive in the implementation of stormwater management methods such as Low Impact Development, has performed little, or no, studies of vulnerability and response to long-term climate projections. A summer, 2013, regional symposium organized by the project will empower professionals to employ the same local-scale vulnerability and adaptation protocol developed in this project. As a result of all of the above, this study is anticipated to serve as a significant jump-start to such efforts, so that project impact is expected to extend significantly beyond the immediate study sites.

Project milestones achieved to-date:

- Formulation of the full project team, including core investigators named on the funding proposal, and additional key partners;
- Selection of two subwatershed study sites within the MCWD watershed;
- Development of a project timeline, with milestones and deliverables;
- Establishment of a project management infrastructure, including a project management website, and monthly project status team conference calls;

Technical activities:

- Hydrologic/hydraulic models completed for both study sites;
- Response curves of system adequacy, across an arbitrary range of precipitation values, developed for each study site, and individual components and pipesheds within each site;
- Historical records of daily rainfall obtained for 50 stations proximate to the study sites, from the National Climate Data Center (NCDC);
- Partial completion of fitting historical data to statistical distribution;
- Long-term climate projections downloaded for CMIP3 datasets, for the GFDL and PCM models, for the A1fi and A1b scenarios. Projections downloaded for the CMIP5 dataset, for the GFDL model, for the RCP 4.5, 6.0, and 8.5 scenarios;
- Strategy meetings held for cost estimation methodology;

Outreach activities:

- Identified approximately 650 candidate stakeholders;
- Invited a subset of high-value stakeholders to the first public forum;
- In mid-May, 2012, held the first public forum. Approximately 70 stakeholders attended, including the Minnesota State Climatologist; local elected officials, planners, and public works managers; local civil engineers; and a reporter from the State's largest daily newspaper. A local celebrity meteorologist gave the keynote presentation;
- Solicited, and obtained, stakeholder participation in the four workgroups established from the mid-May forums, that will examine local vulnerability, capacity, and solutions for stormwater systems adaptation to long-term climate and land-use change;
- Published a project factsheet and the first project newsletter;
- Received mention on two different occasions in newspaper articles about regional planning for climate change impacts.

Project website:

<http://www.minnehahacreek.org/projects/studies/weather-extreme-trends>

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