Environment and Natural Resources Trust Fund
2014 Request for Proposals (RFP)

Project Title: **ENRTF ID:** **114-E**

Building Environmental and Community Resilience to Extreme Weather

Category: E. Air Quality, Climate Change, and Renewable Energy

Total Project Budget: $ 846,000

Proposed Project Time Period for the Funding Requested: 3 Years, July 2014 - June 2017

Summary:

Reducing environmental damage from extreme weather through practical investments, community engagement, outreach and grants to implement green infrastructure, conservation, urban forestry, building, and other adaptive practices while building community resilience.

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Sponsoring Organization: MN Pollution Control Agency

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Location

Region: Statewide

County Name: Statewide

City / Township:

_____ Funding Priorities	_____ Multiple Benefits	_____ Outcomes	_____ Knowledge Base
_____ Extent of Impact	_____ Innovation	_____ Scientific/Tech Basis	_____ Urgency
_____ Capacity Readiness	_____ Leverage	_____ Employment	_____ TOTAL _____%

PROJECT TITLE: Building Environmental and Community Resilience to Extreme Weather

I. PROJECT STATEMENT

Extreme weather poses a real threat to Minnesota's environment, economic vitality and public health. Recent flooding, drought, and storm events have caused costly and serious damage to environmental quality and natural habitat. Impacts include water pollution and erosion from heavy precipitation, impairment of air quality from extreme heat, decreases in water level from drought, and deposition of debris and habitat destruction from storms. While it's not possible to protect against all of the effects of extreme weather, there are steps that can be taken that can help to reduce this environmental damage.

This project will focus on assisting communities to become more resilient to damage from extreme weather by implementing a range of environmentally friendly practices. Practices will be promoted that offer significant co-benefits for environmental quality, economic viability, public health, and public safety, including the following among others:

Community action	Promotes resilience to:	Environmental and other benefits:
Urban trees	Extreme heat High precipitation events	Water quality, air quality, wildlife, public health, energy conservation
Soil conservation and erosion prevention	High precipitation events Seasonal flooding	Water quality, agricultural sustainability, economic benefits
Wetland restoration	High precipitation events Seasonal flooding	Water quality, wildlife, groundwater recharge, aesthetics
Stormwater best management practices	High precipitation events Extreme heat	Water quality, groundwater recharge, wildlife, aesthetics
Water conservation	Drought	Wildlife, less drawdown of natural water sources, energy conservation,
Preserving or restoring natural open space on flood plains	High precipitation events Seasonal flooding	Water quality, wildlife, economic benefits, public safety
Sustainable agriculture	Drought High precipitation events	Water quality, economic benefits
White roofs and other building practices	Extreme heat	Air quality, energy conservation

While practices such as these are increasingly well known, impediments and barriers to their use exist. In some cases, funding is not available for applications specific to environmental resilience. This project will work to increase implementation of resilience practices through community involvement and building a foundation of local capacity. Efforts will be targeted regionally, reflecting different risks facing various portions of the state.

During the three-year period, activities will include providing grants for implementing 12 demonstration projects statewide to help communities adapt to more extreme weather; community outreach and developing a range of informational resources related to extreme weather resilience and climate adaptation; and holding a series of regional workshops for community leaders. Project partners will also provide technical assistance to support implementation of resilience practices.

II. DESCRIPTION OF PROJECT ACTIVITIES

Activity 1: Twelve extreme weather resilience projects implemented Budget: $600,000

Grants will be competitively awarded within each of six regions statewide (SE, SW, NW, NE, Central, and Metro Area) to cities, counties, watershed districts, and other public entities in urban and rural areas to implement best management practices for extreme weather resilience while achieving environmental outcomes. Projects will serve as examples for other communities to follow, and will result in resilience practices being more broadly adopted statewide. Projects will be guided by agency and other partners, who will also provide technical assistance. Funding will be awarded in the first year. Results will be documented, shared statewide, and featured in regional workshops in the third year of the project.

Outcome: 12 communities better prepared for extreme weather while achieving environmental outcomes **Completion Date:** *Years 1, 2, 3*

Activity 2: Community and regional outreach on extreme weather resilience Budget: $206,000

Outreach and assistance will be provided to communities on environmentally-friendly resilience practices. Regional resource providers will provide a point of contact for assistance. Online, printed, and presentational informational tools will be developed and disseminated to address extreme weather and climate adaptation challenges, including webinars and other web-based materials, traveling exhibits, case studies, analysis tools, and printed documents.

Outcome: 10,000 members of the public learn about extreme weather resilience, and are able to adopt and foster implementation of adaptive practices in their communities

Completion Date: *Years 1, 2, 3*

Activity 3: Six regional workshops for community leaders Budget: $40,000

A series of six regional workshops on resilience to extreme weather and climate adaptation will be held for local elected officials, local government staff, and other community leaders and decision makers throughout the state in the third year of this project. These workshops will also highlight results to date of grants awarded, local case studies, and assistance resources available.

Outcome: 300 civic leaders learn about extreme weather resilience statewide, and are better able to implement adaptive practices **Completion Date:** *Year 3*

III. PROJECT STRATEGY

A. Project Team/Partners

While the Minnesota Pollution Control Agency (MPCA) is the lead applicant and fiscal agent, this initiative closely involves many other collaborators. Formal letters of support for this proposal have been submitted to LCCMR from the following: MN Departments of Agriculture, Commerce, Natural Resources, and Transportation; Metropolitan Council; League of Minnesota Cities; Science Museum of Minnesota; University of MN Regional Sustainable Development Partnerships; and University of MN Water Resources Center. Additional collaborators include MN Department of Public Safety - Division of Homeland Security and Emergency Management, MN Board of Water and Soil Resources, and Dr. Mark Seeley from the University of MN Department of Soil, Water and Climate.

B. Timeline Requirements

This is a three year project, since that will provide adequate time for achieving results at the community level as well as for building capacity and collaboration for assistance by project partners.

C. Long-Term Strategy and Future Funding Needs

The initiative will strengthen communities' abilities to become more resilient to and to prevent environmental damage from extreme weather impacts, and will support needed action on climate adaptation and community resilience in Minnesota. It is envisioned that this effort will seek to attract funding, including from foundations and federal grants, after the three year project period.

2014 Detailed Project Budget

Project Title: Building Environmental and Community Resilience to Extreme Weather

IV. TOTAL ENRTF REQUEST BUDGET- 3 years

BUDGET ITEM	AMOUNT
12 grants for extreme weather resilience projects statewide	$600,000
Contract support to develop online and printed informational tools to address extreme weather and climate adaptation. These will include webinars and other web-based materials, case studies, analysis tools, and printed documents.	$30,000
Contract support to provide regionally based outreach to communities on extreme weather resilience (0.1 FTE for three years in each of 6 regions statewide)	$126,000
Development of traveling exhibits on extreme weather resilience and climate adaptation by the Science Museum of Minnesota	$50,000
Contract support for planning and holding six regional workshops on extreme weather resilience for community leaders and decision makers	$40,000
TOTAL ENVIRONMENT AND NATURAL RESOURCES TRUST FUND $ REQUEST =	$846,000

V. OTHER FUNDS

SOURCE OF FUNDS	AMOUNT	Status
Other Non-State $ Being Applied to Project During Project Period: None		
Other State $ Being Applied to Project During Project Period: None		
In-kind Services During Project Period: *1 FTE professional staff (MPCA) for 3 years*	$ 300,000	*TBD*
Remaining $ from Current ENRTF Appropriation (if applicable): None		
Funding History: None		

Building Environmental and Community Resilience to Extreme Weather

Reducing environmental damage from extreme weather through practical investments, community engagement, outreach and grants to implement green infrastructure, conservation, urban forestry, building, and other adaptive practices while building community resilience.

Environmental Damage	Recommended Practices	Resilience Benefits
 **Heavy Precipitation** • Water pollution • Soil erosion • Runoff instead of groundwater recharge	• Stormwater best management practices • Wetland restoration • Sustainable agriculture • Urban trees • Soil conservation/erosion prevention • Address Inflow and Infiltration • Stormwater reuse	• Helps groundwater recharge • Water quality improvement • Aesthetics • Wildlife habitat • Reduced demands for groundwater supplies
 **Extreme Heat** • Damage to temperature sensitive ecosystems • Air quality degradation • Wildfires	• Urban trees • White roofs • Green roofs • Stormwater best management practices • Appropriate building orientation • Community wildfire protection planning	• Water quality improvement • Air quality improvement • Public health • Wildlife habitat • Energy conservation • Noise reduction • Social benefits • Public safety
 **Drought** • Damage to aquatic and terrestrial ecosystems • Surface water and groundwater level declines • Wildfires • Soil erosion	• Water conservation • Sustainable agriculture • Wastewater recycling and reuse	• Economic benefits • Less need to expand drinking and wastewater systems • Energy conservation
 **Storms** • Water pollution • Debris deposition • Habitat destruction • Soil erosion	• Wetland restoration • Soil conservation/erosion prevention • Preserving or restoring natural open space on flood plains • Appropriate building siting • Address Inflow and Infiltration	• Water quality improvement • Public safety • Economic benefits

Building Environmental and Community Resilience to Extreme Weather

Project Manager Qualifications and Organization Description:

The Minnesota Pollution Control Agency (MPCA) is an executive branch state agency that has been protecting our state's air, land, and water since 1967. The MPCA's mission is to protect and improve the environment and enhance human health. Comprised of over 900 staff, MPCA possesses significant experience and capabilities across a comprehensive array of disciplines within the environmental field, including working with communities, businesses, and volunteers. The MPCA has the ability to meet legislative expectations for outcomes. In addition to our role as a key environmental regulatory agency, MPCA also has experience in establishing and supporting assistance and outreach programs. MPCA has coordinated the state's Interagency Climate Adaptation Team since 2009.

Paul Moss has been working in Minnesota state government for 23 years for the Minnesota Pollution Control Agency and predecessor environmental agencies. He has extensive experience with providing community sustainability financial and technical assistance as well as outreach. Moss has completed degrees in Biology, Agronomy, and Marketing, and has recently received Emergency Management Certification from the Minnesota Department of Public Safety – Division of Homeland Security and Emergency Management. The majority of Moss' current work is dedicated to climate adaptation, and he coordinates the Interagency Climate Adaptation Team.

While Moss will serve as project manager, additional coordination will be provided by other MPCA environmental staff assigned to carry out this project. MPCA is comprised of a wide range of experienced professionals who are skilled at assessing the environmental needs of Minnesota communities, and crafting cost-effective assistance strategies to accelerate efforts to improve environmental quality.