

Prepare our communities for mega-rain events

Challenge

Minnesota continues to see more extreme rain events. There were more than twice as many mega-rain events in the past 20 years compared to the previous 27 years. In 2012, the Duluth area saw 7.24 inches of rain within 48 hours causing the St. Louis River to rise 10 feet in 24 hours resulting in \$100 million in damage to the city's public infrastructure. In 2016, the Willmar area recorded 9.74 inches of rain



within 48 hours and flooded the Kandiyohi County Fairgrounds. Southeastern Minnesota has experienced several mega rain events since 2010, including a mega rain event in 2019 that forced Highway 52 to close. Minnesota is expected to receive more precipitation and more mega rain events as the atmosphere responds to warming temperatures and additional moisture in storms.

Currently, there are significant gaps in funding available for local governments and tribes to protect community spaces and public infrastructure from these mega rain events and climate impacts. Upgrading community infrastructure with climate-smart design while making improvements to our natural landscape and water storage practices that reduce flood risk will protect these vital shared spaces from destruction.

Proposal

MPCA

The Governor recommends \$55 million in FY23 and \$1 million in FY24 and FY25 for grants to plan, design, and implement community preparedness projects with local and Tribal governments. These projects will have four primary focus areas:

- Engineering and construction projects to upgrade shared spaces like community buildings, parks, libraries, and other publicly owned facilities to withstand more frequent and intense localized flooding and erosion.
- Streambank and shoreline restoration to reduce flooding risk through enhancements that will provide erosion.
- Construction and landscape updates to reduce excessive heat including tree planting for

shading and design improvements to keep buildings cooler.

- Technical assistance for resiliency planning including planning and design support, and development of resiliency metrics.

Benchmarking from other states with similar community preparedness action grants shows that individual awards for projects have ranged from \$175,000 to \$2 million.

BWSR

This proposal also includes a request from the Board of Water and Soil Resources (BWSR) for \$15 million in FY23 and \$167,000 in FY24 and FY25 for the Accelerated Water Storage initiative. The 2021 legislative session created a water storage program and policy. Through this new request, BWSR will accelerate the implementation of water storage projects. Acceleration of funding will expand the geographic area of the program to demonstrate the benefits and effectiveness of this work.

Why it's important

Today, there are 155,269 residential properties, 29,473 miles of roads, 13,680 commercial buildings, and 515 critical infrastructure facilities in Minnesota at risk of severe flooding.

According to the EPA, the average 100-year floodplain is projected to increase 45 percent by the year 2100, while the annual damages from flooding are predicted to increase by \$750 million. Making community infrastructure more resilient has a benefit-cost ratio of at least 6 to 1. By reducing the damage from stormwater flooding and other climate driven extremes, Minnesota communities can save millions of dollars.

Water storage projects are engineered to slow down or temporarily hold back water from reentering a stream or river. For example, during a storm, water is directed into a wetland, holding basin, or soil in a farm field and then is slowly released downstream. Implementing water storage projects in priority locations will protect public and private property and provide a wide range of environmental benefits by adapting to our changing climate.

For more information

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