Minnesota Stormwater Research Council

Research Funding Support Request
Join us as a financial partner to achieve or surpass the 2021 goal of
$175K

The Minnesota Stormwater Research Council (Council) in partnership with the University of Minnesota Water Resources Center (WRC) is soliciting funds to complete collaborative applied research to address priority stormwater management needs for Minnesota.

Over the past four years, more than $493K was contributed and pooled together from watershed units, cities, organizations and private businesses. These were then leveraged with Clean Water Legacy funds to support 23 research projects and support the use of that information by professionals, practitioners, and policy makers. This collective and collaborative work helps prevent, minimize and mitigate the impacts of urban stormwater runoff across Minnesota.

The accompanying **Program Highlights** summarizes the research completed and recognizes the partners that have made it possible.

Why contribute?

These investments in research result in discoveries that help Minnesota professionals, practitioners, and policymakers across cities, watersheds, counties, and private businesses

- Evaluate and design more effective stormwater practices
- Manage urban runoff to prevent or reduce impacts to lakes, streams, rivers and groundwater
- Maintain investments in stormwater infrastructure for continued effective operation.

Your organization's financial contribution to the Council directly supports research important to you. Pooling resources adds up and provides a mechanism for completing work together.

Join the growing list of watersheds, cities, private businesses and organizations supporting urban stormwater research.

Use the online form HERE to indicate your organization's financial support by October 31st.

How your contribution will be invested in the future

Your 2021 contribution to the research funding pool will support a new suite of research projects to be solicited in late 2021 and chosen in early 2022. A competitive application process is used to solicit proposals.

About the Minnesota Stormwater Research Council

Learn more about how cities, watersheds, consultants, state agencies, and research institutions are coming together to guide stormwater research in the *Minnesota Stormwater Research Council Framework*.

Management and use of funds

- ✔ The use of pooled applied research funds will be managed by the Advisory Board of the Council in partnership with the Water Resources Center.
- ✔ Submissions and projects will be reviewed, ranked, and awarded as determined by the Advisory Board of the Council and by the Center.
- ✔ All researchers, professionals, and experts from Minnesota will be invited to submit proposals. Organizations contributing funds and their staff are eligible to apply.
- ✔ Acknowledgement of funding partners is required by the researchers for each project and on Center and Council reports, website and other publications.

Please contact one of the following Council Advisory Board Members for more information.

Ross Bintner, City of Edina	RBintner@edinamn.gov	952-903-5713
Lisa Volbrecht, City of St. Cloud	Lisa.Vollbrecht@ci.stcloud.mn.us	320.650.2834
Bob Fossum, Capitol Region Watershed District	bob@capitolregionwd.org	651-644-8888
Rena Weis, WENCK/Stantec	rweis@wenck.com	763-252-6889.
John Bilotta, Water Resources Center	jbilotta@umn.edu	612-624-7708

This letter is distributed on behalf of the Minnesota Stormwater Research Council Advisory Board.

Minnesota Stormwater Research Council
&
Minnesota Stormwater Research Program

2021 **HIGHLIGHTS**

Advancing science, technology and management of stormwater in Minnesota by investing in and facilitating research to prevent, minimize, and mitigate the impacts of runoff from the built environment.

wrc.umn.edu/stormwater

The Stormwater Research Program in partnership with the Minnesota Stormwater Research Council

This collaboration pools financial resources to support research, shares research outcomes and engages stakeholders to determine research needs.

Visit wrc.umn.edu/msrc to learn more, view the Advisory Board members, and subscribe to our mailing list.

CURRENT STORMWATER RESEARCH PROJECTS

Can spent lime from water treatment facilities be used to control phosphorus release from urban stormwater ponds?

How can soil mixes in biofiltration practices impact phosphorus capture and release and plant growth?

How prevalent are pathogens, viruses and bacteria in stormwater reuse systems?

Will city-specific climate change reports provide more precise information for future stormwater infrastructure planning and management?

Are underground sand filters performing as designed and what type of future maintenance is needed?

Will the addition of biochar help filter practices remove bacteria and dissolved contaminants?

How can we improve monitoring of the first flush and concentrations of pollutants?

At what level are gross organic solids contributing to stormwater pollutant loading?

Can we combine stormwater monitoring data from various cities, watersheds and agencies to more specifically characterize urban runoff quantity and quality?

Recent Achievements

COMPLETED RESEARCH PROJECTS

Final reports and additional project information can be found on our website.

Example discoveries...

- **Detecting phosphorus release from urban stormwater ponds**
  Discovered that many urban stormwater ponds are stratified, with low dissolved oxygen that may result in phosphorus release rather than phosphorus capture. The project also revealed that duckweed and wind sheltering by trees and vegetation are important pond characteristics that need to be considered for a complete picture of what is happening with phosphorus in stormwater ponds.

- **Developing a street sweeping credit for stormwater phosphorus source reduction**
  Discovered that higher tree canopies can be an indicator of mass and nutrient pollution loads on streets. The research was used by the team and the Minnesota Pollution Control Agency to develop a street sweeping credit calculator cities and other MS4s can use to determine phosphorus removal for their unique street sweeping practices.

- **Pathogens and antibiotic resistant genes in urban stormwater reuse systems**
  Discovered that some antibiotic resistant genes, virus, E.coli and other bacteria are making their way into stormwater reuse systems. Levels of detection occurred both before and after treatment. No seasonal dynamics were detected. More importantly this study revealed we need more data. Therefore phase II of this project is currently underway.

- **Inspiring Community Action for Stormwater Management**
  Discovered Minnesota water scientists, policymakers and managers can accelerate progress towards clean water by listening to new and diverse audiences and changing the way we discuss water with citizens.

The value for urban stormwater research discoveries

Discoveries from research help Minnesota professionals, practitioners and policymakers:

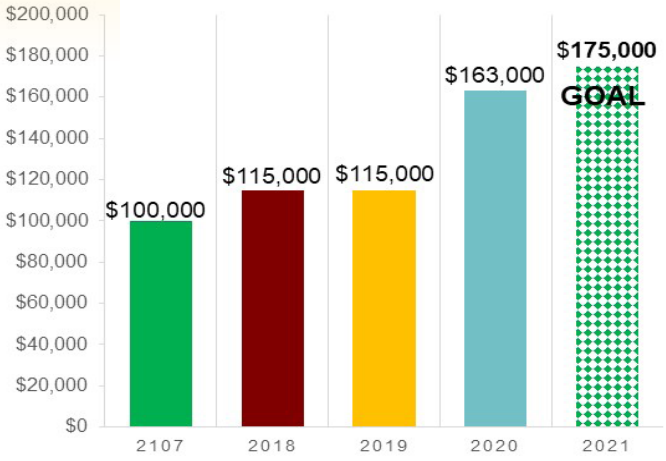
- ☐ *Evaluate and design more effective stormwater practices*
- ☐ *Manage runoff to prevent or reduce impacts to lakes, rivers, streams and groundwater*
- ☐ *Maintain investments in stormwater infrastructure for continued operation*

Financial Partners

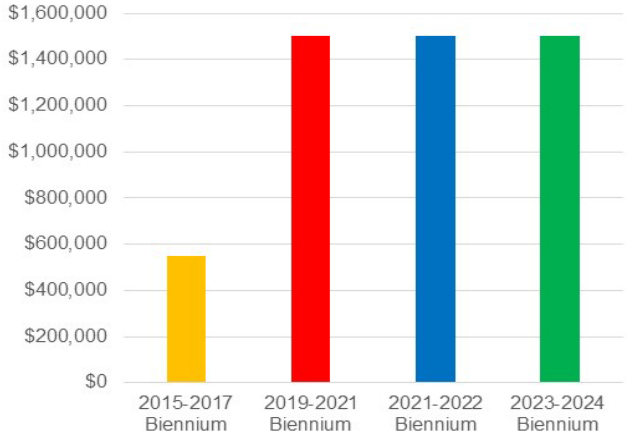
FINANCIAL SUPPORT for the Stormwater Research and Technology Transfer Program is provided by the Clean Water Fund from the State of Minnesota's Clean Water, Land and Legacy Amendment. Additional support comes from the Minnesota Stormwater Research Council and it's member cities, watersheds, private businesses, The University of Minnesota Water Resources Center, the College of Food, Agriculture, and Natural Resource Sciences, and the National Institutes for Water Resources funded by the US Geological Survey.

JOIN US as a financial partner to achieve or surpass this year's goal:

2021 GOAL
$175K



Pooled funds from watersheds, cities, organizations, and private industry.



Program funds from the Minnesota Clean Water, Land and Legacy Amendment.

CLEAN WATER LAND & LEGACY AMENDMENT

Thank you to the following cities, watershed organizations, and private sector businesses which provide, or have provided, financial support for the Program and Council beginning 2017:

- Barr Engineering Company
- Capitol Region Watershed District
- City of Bloomington
- City of Edina
- City of Minnetonka
- City of Woodbury
- Comfort Lake-Forest Lake Watershed District
- Minnesota Cities Stormwater Coalition
- Mississippi Watershed Management Organization
- Nine Mile Creek Watershed District
- Ramsey-Washington Metro Watershed District
- South Washington Watershed District
- Upper Mississippi River Source Water Protection Project
- Valley Branch Watershed District
- Wenck Associates

Contact:
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Water Resources Center
University of Minnesota
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