



MISSISSIPPI
WATERSHED
MANAGEMENT
ORGANIZATION



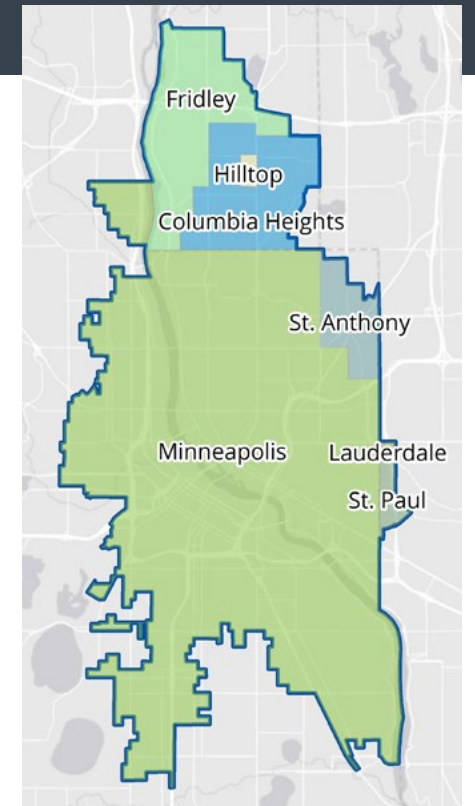
2017 Magazine



WHO WE ARE

The Mississippi Watershed Management Organization works to protect and improve water quality, habitat and natural resources in an urban watershed that drains directly into the Mississippi River. We are a joint-powers local government unit and one of approximately three dozen watershed organizations in the Twin Cities metropolitan area.

We partner with our member communities to invest in green infrastructure that captures, cleans and reuses stormwater runoff. Our team monitors and tracks water quality in the watershed and conducts education and outreach to promote active environmental stewardship among residents.



MWMO Watershed Boundaries

Message from the Executive Director



The Mississippi Watershed Management Organization (MWMO) manages water and natural resources in the urban core of the seven-county Twin Cities metropolitan area. Our primary goal is to protect and improve water quality and habitat. In the following pages, you will see multiple examples of how we achieve this: through science, innovation, collaborative partnerships, and a variety of initiatives and projects designed to produce measurable results.

As a watershed management organization, our greatest strength is our partnerships with our member cities and organizations, and with our community members who care deeply about our environment. We all have a role to play in protecting our natural resources, and the MWMO is here to support all those who endeavor to achieve this worthwhile cause.

Our staff are experts in their fields and can be called on to provide advice, guidance, and training on stormwater issues. Whether you have an idea for a project or a question about how you can help protect and improve our urban watershed, please do not hesitate to reach out to us.

—Doug Snyder,
Executive Director

Message from the Board Chair



The Mississippi River is one of the great resources of our community and our region, and it is the duty and the privilege of the MWMO and its partners to protect, enhance and celebrate it. The river cuts across borders and unites all who are impacted by it, including our eight member communities and all who live, work and play within the watershed.

The MWMO represents valuable partnerships working cross-jurisdictionally to support water resources. The goals we have achieved over the past several years working in conjunction with the watershed communities have been inspiring: a new headquarters that serves as a learning laboratory and locus for engagement as it creates a new access point to the Mississippi River; a new emphasis on education and outreach on both sides of the river, engaging young people in workshops and internship programs like the Mississippi River Green Team; and expanded monitoring activities that support environmental justice and ensure that our river is renewed.

Our river is a precious resource, and the work of our organization is dedicated to preserving its health and its vitality.

—Chair Kevin Reich,
Board of Commissioners

Member City or Organization	Area of MWMO	Square Miles within MWMO
Columbia Heights	7.92 %	3.16
Fridley	9.51 %	3.80
Hilltop	0.32 %	0.13
Lauderdale	0.16 %	0.06
Minneapolis	73.26 %	29.27
Minneapolis Park & Recreation Board	5.42 %	2.17
Saint Anthony Village	2.55 %	1.02
Saint Paul	0.85 %	0.34



Mission Statement

“To lead, and to foster stewardship of the watershed with actions that promote civic ownership and responsibility and through measures that achieve diverse and functional ecosystems.”

WATER QUALITY MONITORING

One of our most important functions at the MWMO is to monitor and track changes in the water quality of the Mississippi River. Our monitoring team conducts year-round sampling of water in the river itself as well as from the local stormdrain systems. The data we collect provides a scientific basis for identifying and tracking water quality issues over time.

The MWMO's monitoring efforts help inform public policy as well as prioritize the selection of projects to control pollution and improve water quality. In addition to water quality indicators, MWMO monitoring team staff aid in the collection of other scientific data such as macroinvertebrate sampling and bathymetric mapping.

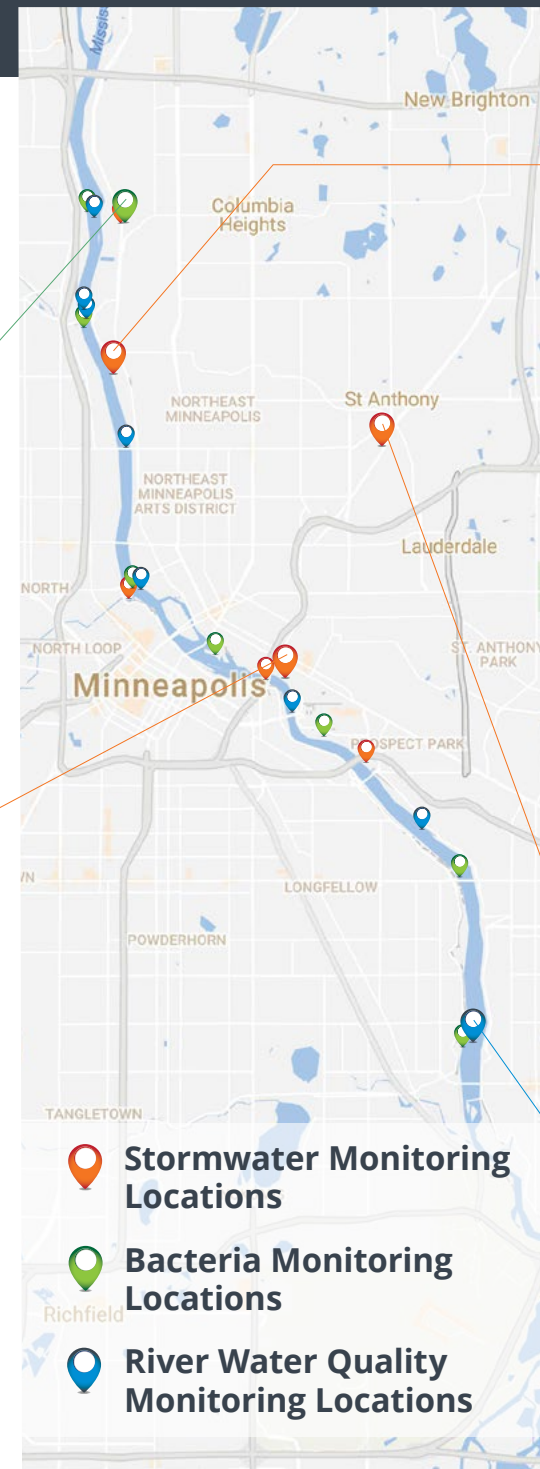
Bacteria Monitoring



The MWMO monitors for *Escherichia coliform* bacteria (also known as *E. coli*), which is an indicator of fecal contamination within a waterbody. The team samples for *E. coli* levels at seven locations along the river as well as five stormwater outfalls.

Automatic Sampling Equipment

Several of our stormwater monitoring sites feature automated sampling equipment and sensors. Installed at strategic locations, these automatic samplers help create a more accurate, comprehensive picture of how local stormwater runoff is impacting water quality in the river.



Stormwater Monitoring

The MWMO monitors the quantity and quality of the stormwater runoff that drains through the network of local stormsewers and flows into the Mississippi River. Seven monitored locations were selected based on the size of their drainage systems (pipesheds)



SA Treatment System Monitoring

The monitoring team recently finished instrumenting the St. Anthony Regional Stormwater Treatment and Research System (see page 5). Data can now be collected on the effectiveness of various treatment methods used in the system.

River Water Quality Monitoring

The MWMO monitors water quality in the Mississippi River to establish baseline data that can be used to help manage this precious resource. The team takes water quality measurements and samples one to two times per month at eight selected locations along the river.



CAPITAL PROJECT GRANTS

The MWMO's capital project grants are designed to support large-scale, innovative stormwater management projects that protect or improve water quality and habitat within our watershed.

These projects go above and beyond the typical stormwater management required by cities and other regulating authorities. The MWMO also funds habitat improvement and restoration, riverbank stabilization and erosion control projects.

St. Anthony Regional Stormwater Treatment and Research System

Located on the border of Minneapolis and St. Anthony Village, this system captures and treats an estimated 169 million gallons of polluted stormwater runoff flowing into the Mississippi River each year. It also serves as a testbed for new urban stormwater treatment technologies. Monitoring equipment allows researchers to determine which treatment methods are most effective.



Edison High School Green Campus

A multi-year project transformed Thomas Edison High School in Northeast Minneapolis into a model "green campus," with state-of-the-art stormwater and energy-efficiency features. In addition to capturing and treating an estimated 1.5 million gallons of runoff each year, the new features are designed to be incorporated into the school's academic programming.



IMPACTS

Benefits from these projects (estimated annual averages):

190 pounds of total phosphorus removed.

82,300 pounds of total suspended solids removed.

5.8 million gallons of water captured/reused.*

*Does not include the Towerside District Stormwater System.



Minneapolis Sculpture Garden

The newly reopened Minneapolis Sculpture Garden features a unique water reuse system that captures and stores overflow from the famous *Spoonbridge and Cherry* pond to irrigate the surrounding landscape. The MWMO also funded new landscaping featuring deep-rooted native plants and engineered soils that improve the drainage and stability of the site.

Towerside District Stormwater System

The Towerside District Stormwater System captures, treats and stores runoff draining from a roughly two-block area next to the Prospect Park light rail station. The first-of-its-kind project involved four private landowners who voluntarily agreed to manage their stormwater jointly rather than separately. The main bioretention basin doubles as a community green space and hosts an underground storage tank holding more than 200,000 gallons of reusable stormwater.



Columbia Heights Library

Columbia Heights' new library incorporates a variety of landscape features that capture and treat polluted runoff. These include biofiltration basins and permeable pavers as well as a tree trench, grit chamber and snowmelt system. The site also features interpretive signs that illustrate how each of these stormwater best management practices work.



GRANT TYPES

Mini Grants

Available for short-term or small-scale water quality projects. The grant amount may not exceed \$3,000. No matching funds are required.

Planning Grants

Available to plan for a project, significant in scope and cost. The grant amount may not exceed \$10,000. Some matching funds are required.

Action Grants

Available to complete a project, significant in scope and cost. The grant amount may not exceed \$50,000. Some matching funds are required.

STEWARDSHIP FUND GRANTS

Stewardship Fund Grants support public efforts to manage stormwater, control pollution and improve water quality and habitat. The MWMO offers three types of Stewardship Fund Grants for eligible applicants, with grant awards ranging from a maximum of \$3,000 to \$50,000, depending on the nature of the project.

Eligible applicants include nonprofits, business and professional associations, officially recognized neighborhood groups, schools and local units of government located within the MWMO watershed. Full eligibility requirements can be found at mwmo.org/stewardshipfund.

Children's Dental Services

Grant Types: Mini, Planning and Action

Children's Dental Services, a local nonprofit, replaced its aging asphalt parking lot with 4,200 square feet of permeable pavers. Beneath the new parking area, a pair of infiltration cells captures, stores and infiltrates nearly all of the site's stormwater runoff, including water diverted from the building's roof. A Mini Grant funded soil testing and analysis, a Planning Grant funded the design and an Action Grant helped fund the construction.



Fourth Street Guild

Grant Types: Planning, Action

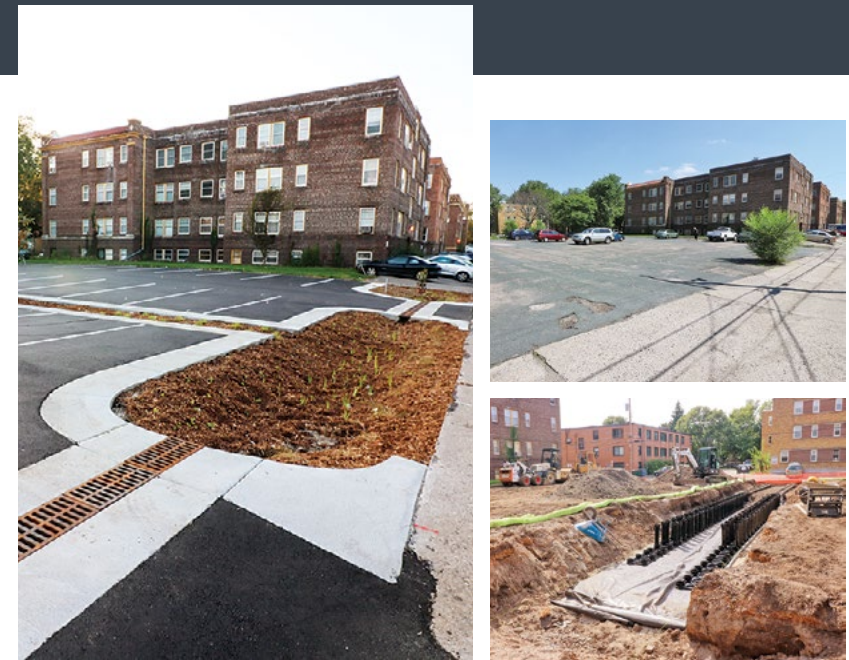
The Fourth Street Guild, a woodworking cooperative, sought to turn its new North Minneapolis site into a model of green infrastructure. A pair of 1,500-gallon cisterns capture roof runoff, while permeable pavers and infiltration basins with native plants filter the parking lot runoff. The guild also intends to use the site to educate craftspeople, the neighborhood and the community at-large about managing stormwater.



First Universalist Church of Minneapolis

Grant Type: Action

First Universalist Church's new parking lot is surrounded by landscape features that capture and treat the site's stormwater runoff. The pavement is sloped in various directions toward a center bioswale and five separate raingardens designed to absorb rainwater and snowmelt and filter out pollutants that would otherwise drain to the Mississippi River.



Lincoln Playground

Grant Type: Planning

A coalition of partners has joined together to create a new collective vision for the Lincoln Playground, located next to a decommissioned public school in North Minneapolis. In 2015, an MWMO Planning Grant funded a series of three community-based workshops to gather input for future improvements to the site. This was the first stepping stone toward a larger outreach and feasibility initiative. A concept design will be chosen in 2017.

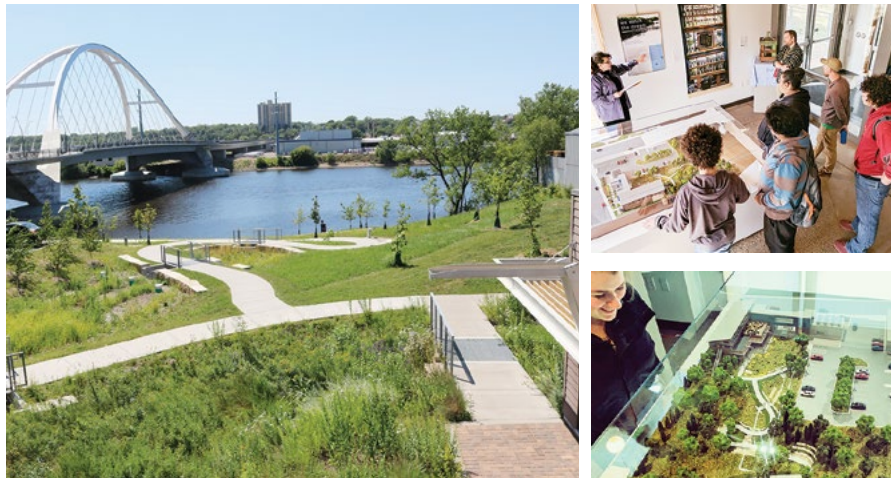
Locus Architecture

Grant Type: Mini

Locus Architecture and the Kingfield Neighborhood Association partnered with the MWMO to install a raingarden in the front of the architecture firm's building. The raingarden captures and treats stormwater runoff from the roof and shows the public how businesses can add functional and beautiful green spaces to their sites.



COMMUNICATIONS AND OUTREACH



Stormwater Park and Learning Center

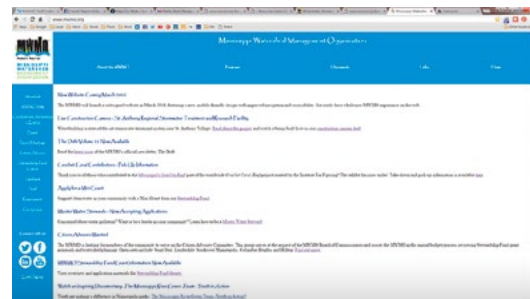
The MWMO's Stormwater Park and Learning Center offers visitors the chance to experience a living laboratory of green infrastructure along the Mississippi River. Visitors can connect with the river, learn how they can prevent pollution, and experience a variety of rotating art and interpretive exhibits.



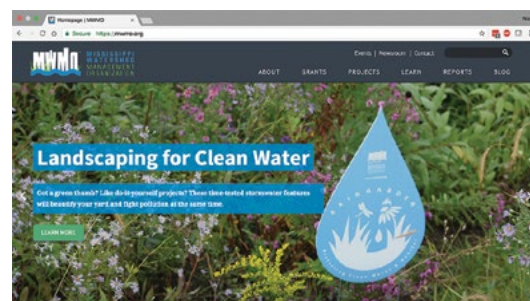
On July 13, 2016, the MWMO held "Share the River Nordeast," a successful event that offered newcomers the chance to appreciate the Mississippi River, take an introductory canoe ride and get free ice cream. A second annual "Share the River Nordeast" was held on June 28, 2017.

Website redesign and award

The MWMO launched a redesigned website in 2016, featuring improved navigation and accessibility features, a mobile-friendly design, and exciting new interactive content. Within a year, website traffic more than doubled, and peer organizations looked to the MWMO's website redesign as a model. In 2017, the Minnesota Association of Government Communicators awarded the project its "Best of Show" Northern Lights Award.



The old MWMO website.



The redesigned MWMO website.



Mississippi River Green Team

Summer 2017 marks the 10th anniversary of the Mississippi River Green Team! For 10 years, these teens from North and Northeast Minneapolis have been restoring parkland, protecting water quality, removing invasive species, planting trees and making the city a better place to live.

The MWMO and the Minneapolis Park & Recreation Board created the Mississippi River Green Team as a special unit of MPRB's Teen Teamworks. Participants have a mentored job experience, learn about environmental careers and acquire new skills. Learn more at mwmoo.org/greenteam.



Master Water Stewards

In 2016, the MWMO welcomed its first graduating class of Master Water Stewards. The Master Water Stewards program is designed to equip residents with the knowledge and skills they need to address water pollution in their communities. The Freshwater Society launched the program in 2013, modeling it after the successful Master Gardener program offered through many university extensions. The MWMO's second class began their coursework in late 2016, and is expected to graduate in October 2017.



"I've always loved being outside, and the Mississippi River Green Team was my first real job. I enjoyed all the work we did, and seeing the results when we were finished. That's when I realized I really loved working outdoors. As time went on, I was informed every year of new job opportunities thanks to the MWMO. Many doors were opened for me."

—Aaron McCalip,
MRGT Member, 2011-2013

SUBSCRIBE TO
EMAIL UPDATES

Visit our website to sign up for email updates on topics of your choice. We offer a quarterly email newsletter as well as updates on specific projects, home and garden tips and more. Visit mwmoo.org to subscribe.

PLANNING

The Mississippi Watershed Management Organization is committed to protecting, managing and improving water resources and habitat within our watershed. Our planning initiatives start two to three years ahead of construction. We proactively seek out future opportunities for stormwater treatment that fits with the desired land use of the redevelopment occurring. These efforts result in designs that serve multiple purposes and maximize the efficiency and effectiveness of our work to reduce flooding and improve water quality and habitat.



Upper Harbor Terminal

The MWMO will work with the design team on the master plan for redeveloping the 48-acre Upper Harbor Terminal site. The MWMO will lead a feasibility study to better understand stormwater management opportunities and identify areas to preserve and enhance the Mississippi Riverbank and its related wildlife habitat.

Ecosystem Services Plan

The Minneapolis Park & Recreation Board and the MWMO are working together to create the Ecological System Plan. This plan will set a vision for making parks and public lands friendlier to the environment. Ecological System Plan topics include air quality issues, urban heat island effect, carbon sequestration, biodiversity and habitat quality, habitat connectivity, stormwater runoff and sustainable energy generation.

Towerside Phase II

The MWMO is investigating a Phase II Towerside District Stormwater System (see page 6) that would manage an estimated 11 million gallons of stormwater runoff from more than 21 acres in the Malcolm Yards development. This initial system concept would manage a 100-year storm event while simultaneously expanding habitat benefits, reducing heat island effect, building a direct connection for residents to engage with water, and transforming stormwater into an asset.

WATERSHED ASSESSMENT



The MWMO's watershed assessment and research activities seek to develop a scientific base of knowledge that characterizes physical, chemical, cultural, historic, biological, social, economic, organizational and political resources of the MWMO to guide planning and management decisions in the watershed.

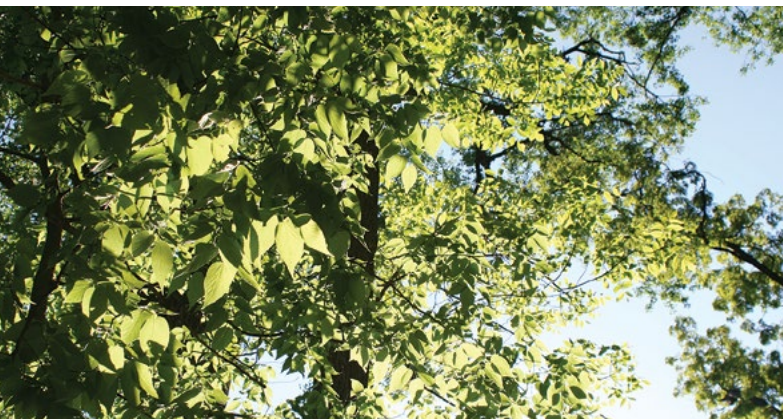
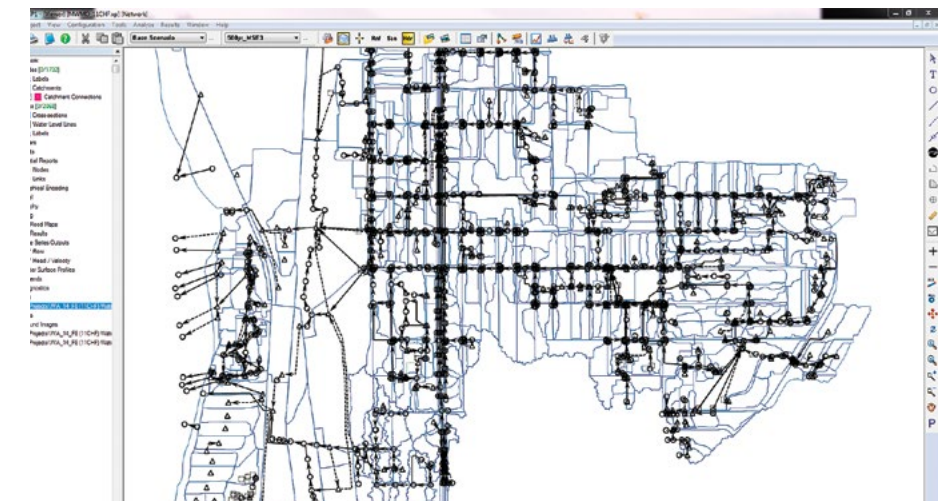
Old Bassett Creek Tunnel Study

The MWMO and the City of Minneapolis are collaborating on a study of the Old Bassett Creek Tunnel, a former streambed that is now encapsulated within a stormtunnel that runs beneath the streets of downtown Minneapolis. The purpose of the study is to better understand the tunnel's structural condition, characterize the amount and nature of sediment and debris deposited within it, and come up with solutions to remove the material before it washes out into the Mississippi River. The city will use the results of the study to plan for necessary tunnel repairs, while the MWMO will use it to seek opportunities to prevent pollutants from entering the River.

Watershed Modeling

The MWMO is undertaking a major initiative to create detailed hydrology and hydraulic (H&H) and water quality models across our jurisdiction. The H&H models are being used to simulate and inform the management of flooding throughout the MWMO, while the water quality models are used to estimate pollutant loading from the landscape and into MWMO waterbodies.

Results of the modeling initiative will be used to help the MWMO and our member communities to better understand the functioning of our stormwater systems, as well as prioritize the placement and design of future capital projects.





MWMO staff in September 2016.

MWMO STAFF

Executive Director
Douglas Snyder
 dsnyder@mwmo.org
 612-746-4971

Projects & Outreach Director
Stephanie Johnson, PhD, PE
 sjohnson@mwmo.org
 612-746-4978

Water Resources Director
Udai B. Singh, PhD, PE
 usingh@mwmo.org
 612-746-4980

Communications Principal
Nick Busse
 nbusse@mwmo.org
 612-746-4974

Planning Principal
Dan Kalmon, AICP
 dkalmon@mwmo.org
 612-746-4977

Capital Projects & Stewardship Specialist
Marcy Bean
 mbean@mwmo.org
 612-746-4979

Administrative Specialist
Max Dalton
 mdalton@mwmo.org
 612-746-4976

Project Planning & Implementation Specialist
Brett Eidem
 beidem@mwmo.org
 612-746-4983

Environmental Specialist
Brittany Faust
 bfaust@mwmo.org
 612-746-4992

Monitoring & Instrumentation Specialist
Brian Jastram
 bjastram@mwmo.org
 612-746-4985

Water Resources Specialist
Jen Keville
 jkeville@mwmo.org
 612-746-4986

Training & Community Learning Specialist
Abby Moore
 amoore@mwmo.org
 612-746-4981

Youth & Community Outreach Specialist
Michaela Neu
 mneu@mwmo.org
 612-746-4975

Environmental Specialist
Jim Rudolph
 jrudolph@mwmo.org
 612-746-4987

Stewardship & Community Outreach Specialist
Tammy Schmitz
 tschmitz@mwmo.org
 612-746-4988








Administrative Assistant
Shannon Skally
 sskally@mwmo.org
 612-746-4972

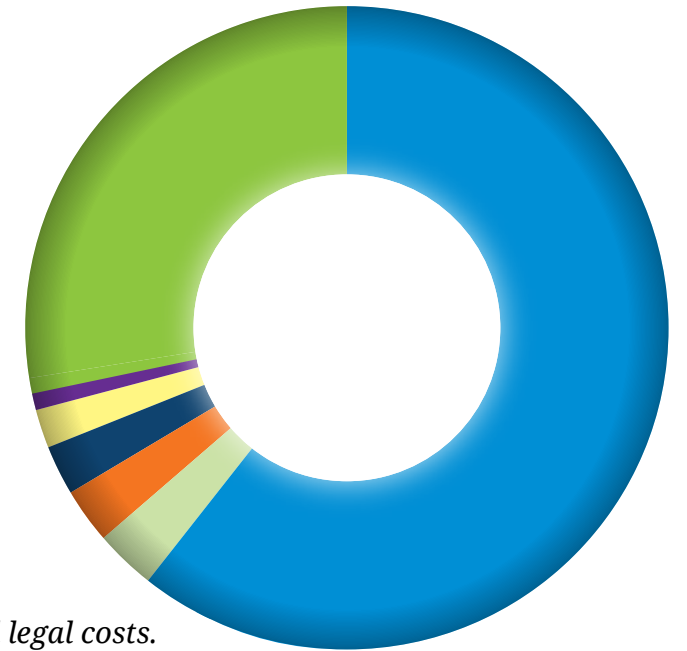
Human Resources Coordinator
Charlie Yunker
 Charlie.yunker@ci.saint-anthony.mn.us
 612-782-3315

Current as of August 2017

BUDGET

Annual Expenditures (5-Year Average)

	Projects	\$2,701,614
	Monitoring	\$168,746
	Stewardship Fund	\$137,317
	Watershed Assessment	\$112,395
	Outreach	\$90,885
	Planning	\$39,121
	Administrative*	\$1,276,772



*Includes staff salaries and benefits, HR, accounting, and legal costs.



Internship Program

MWMO interns work with staff and partner organizations to implement MWMO programs in nonpoint source pollution prevention, source water protection, integrated water resource planning and outreach and education. The MWMO accepts applications for internships on an ongoing basis. For more information, visit mwmo.org/employment.



Sculptor James Brenner held a public water-and-fire spectacle in the MWMO's backyard Oct. 1, 2016. The event was the culmination of Hydro-Illuminata, a three-month long community art project about water sustainability.



BOARD OF COMMISSIONERS

Kevin Reich, Chair

City of Minneapolis

James Saefke, Vice-Chair

City of Fridley

Mary Gaasch, Treasurer

City of Lauderdale

Jerry Faust

City of Saint Anthony Village

Cailin Rogers

City of Saint Paul

Donna Schmitt

City of Columbia Heights & City of Hilltop

Scott Vreeland

Minneapolis Park & Recreation Board

CITIZEN ADVISORY COMMITTEE

At-Large Positions

Mark Apfelbacher
(Minneapolis)

P. Victor Grambsch
(Minneapolis)

Carol Hejl
(Minneapolis)

Anne Wilkinson
(Minneapolis)

William Risse
(St. Anthony Village)

Columbia Heights

Connie Buesgens

Fridley

Nick Olberding

Hilltop

Open

Lauderdale

Open

Minneapolis

Charlene Brooks
(Downtown)

Nicole Menard
(North)

Perry Dean
(Northeast)

Craig Larson
(South)

Ann Lewandowski
(Southwest)

Saint Anthony Village

Lona Doolan

Saint Paul

Open



Protect it. Pass it on.

MISSISSIPPI
WATERSHED
MANAGEMENT
ORGANIZATION

2522 Marshall St. NE, Minneapolis, MN 55418-3329

612-746-4970 • contacts@mwm.org • mwm.org