

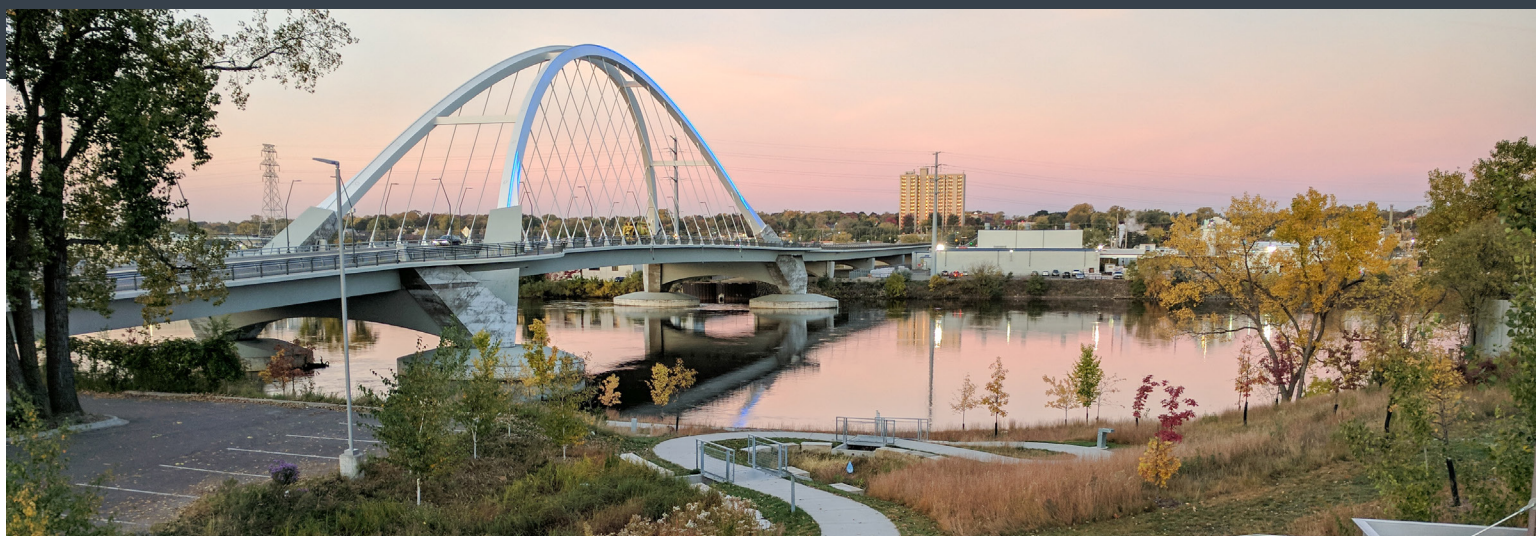


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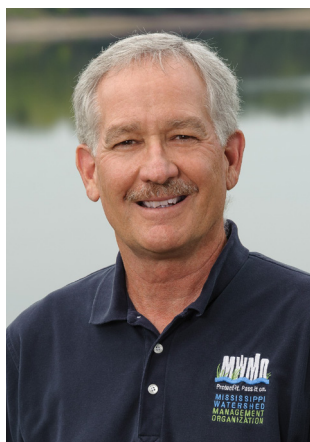


Hall's Island (see page 5)

2018 Magazine



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. 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.

The MWMO values our partnerships with our member cities and organizations, and with our community members who care deeply about our environment. In this past year, we have completed a number of joint projects and assessments that you can learn more about in the following pages.

In the upcoming year, the watershed will continue to focus on updating our data and meet with people to begin the required update of our comprehensive watershed management plan. 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 as we begin this critical work in 2019.

—Doug Snyder,
Executive Director

Message from the Board Chair

One of the most compelling features of the work of the MWMO is its commitment to youth education and development. The opportunities we offer and the resources we commit to our youth initiatives are tangible, far-reaching and comprehensive.



The Stormwater Park and Learning Center provides a singular experience to introduce community and youth to the impacts of stormwater in an urban setting. MWMO staff also coordinate with partners like the Minneapolis Park & Recreation Board, the Nature Conservancy and Urban Boatbuilders to offer youth employment and environmental programming such as the Mississippi River Green Team (*see page 10*) and the LEAF Program (Leaders in Environmental Action for the Future). At Edison High School, MWMO works with staff and students to integrate place-based water education into instruction utilizing the on-site stormwater management features.

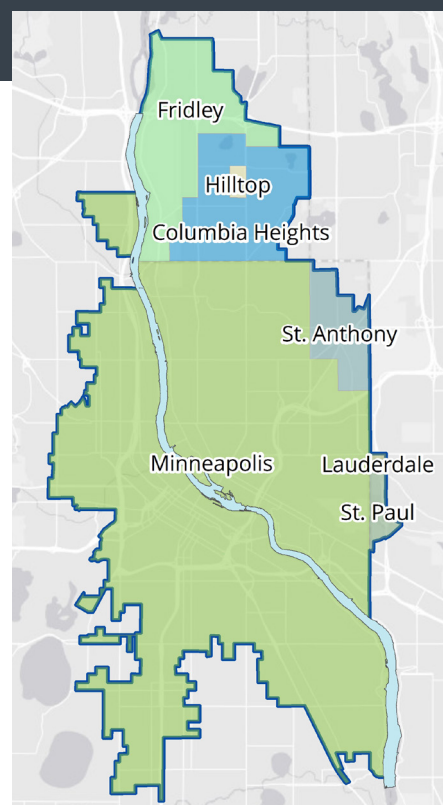
MWMO offers the youth involved in these programs unparalleled opportunities for hands-on sustainability education, workforce training and environmental career opportunities, ensuring a consistent stewardship of our water resources into the future.

—Chair Kevin Reich,
Board of Commissioners

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

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, the MWMO monitoring team staff aid in the collection of other scientific data, such as macroinvertebrate sampling and bathymetric mapping.

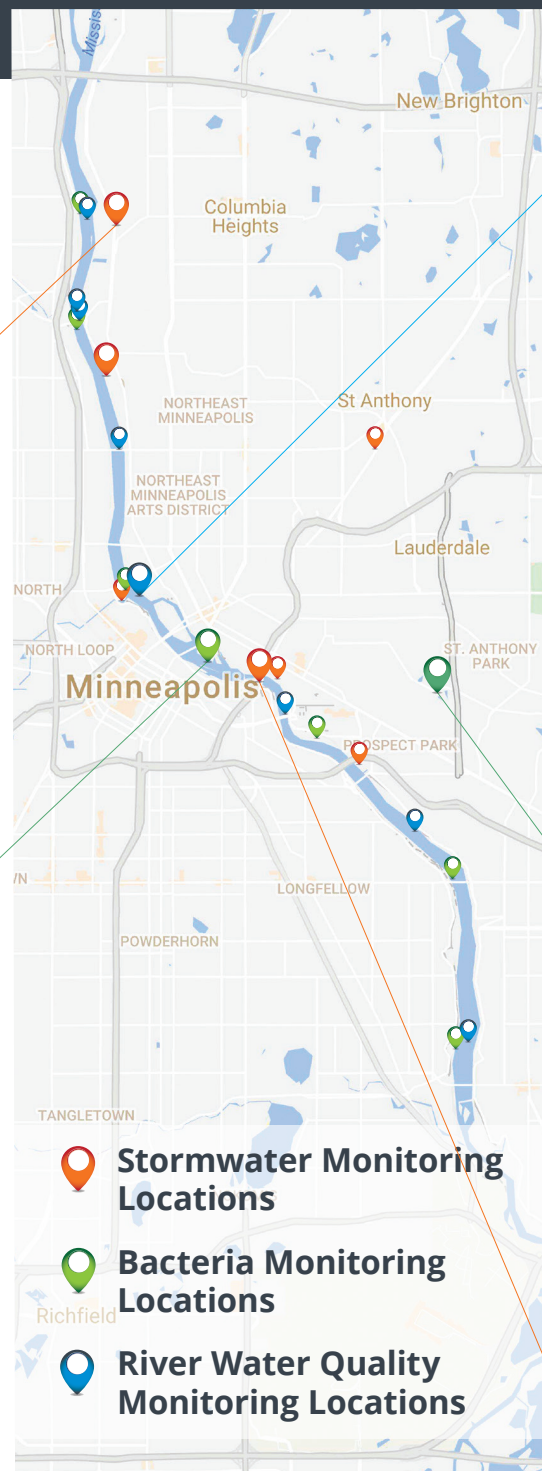
Automatic Sampling Equipment



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.

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.



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. The MWMO also collects data on water levels and conducts bathymetric (river bed) mapping.



Wetland Monitoring

The MWMO routinely monitors a small group of wetlands called the Kasota Ponds for water quality conditions. It also conducts biological monitoring in the ponds on a five-year schedule. In 2017, the monitoring team completed bathymetric mapping of all three Kasota Ponds. A newly released MWMO report outlines data, results and recommendations for the ponds.



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) and their accessibility.



CAPITAL PROJECTS

The majority of the MWMO's annual budget goes to support capital projects. These large-scale projects are designed to protect and improve water quality and habitat within our watershed, and/or to showcase innovative stormwater management.



Westminster Presbyterian Church

MWMO Funding: \$600,000

This 3,100-member church in downtown Minneapolis installed a stormwater reuse system that is among the first in the city to use recycled stormwater for flushing toilets. It also supplies water for landscape irrigation systems and a new fountain on the church plaza. Other stormwater features include a 10,000 square-foot green roof, more than 11,000 square feet of native plantings, and a permeable-paver plaza with a snowmelt system.

Hall's Island

MWMO Funding: \$1.5 Million

The MWMO joined with the Minneapolis Park & Recreation Board (MPRB) and other partners to reconstruct Hall's Island, which was destroyed by industrial development in the 1960s. The project re-separated the island from the mainland, established new shoreline and installed a diverse array of native plants and habitat. Part of MPRB's RiverFirst initiative, the restoration transformed a degraded industrial site into a rich source of wildlife habitat and a unique green space for public enjoyment.



IMPACTS

Benefits from these projects:

4,030 feet

of shoreline created/restored.

93,000 square feet

of habitat restored.

1.4 million gallons

of water captured/reused.*

**Estimated annual average.*



EcoVillage Apartments

MWMO Funding: \$160,000

This affordable housing complex in North Minneapolis features a stormwater treatment train that captures, cleans and reuses runoff. A storage tank beneath the playground holds runoff from the roof, which is used for irrigation. Excess runoff is filtered through a rain garden and underground filtration chambers. Other features include native plantings and a permeable paver driveway.

Riverfront Regional Park

MWMO Funding: \$28,120

The MWMO worked in partnership with Anoka County to stabilize the riverbank at this county park, which contains nearly 7,000 linear feet of Mississippi River shoreline. The project replaced a broken stormwater outfall and utilized bioengineering techniques to prevent further erosion along the river. A new rain garden near the boat launch treats polluted runoff. MWMO staff are conducting ongoing monitoring for shoreline erosion.



Cemstone Stormwater Reuse

MWMO Funding: \$150,000

Concrete and aggregate supplier Cemstone is reusing stormwater runoff to help make concrete at their North Minneapolis production facility. The MWMO provided funding to construct a 190,000-gallon underground storage tank — big enough to capture all of the site's runoff from a 10-year storm event. This will allow Cemstone to offset and conserve up to 1.2 million gallons per year of potable water.

GRANT TYPES

Mini Grants

Available for small projects that engage people in protecting water quality. Maximum \$3,000. No matching funds required.

Planning Grants

Available to plan for a project, significant in scope and cost. Maximum \$10,000. Some matching funds required.

Action Grants

Available to complete a project, significant in scope and cost. Maximum \$50,000. Some matching funds 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. Learn more at mwmoo.org/stewardshipfund.

Mill City Commons

Grant Types: Planning, Action

Mill City Church upgraded its shared community meeting space with an innovative, stormwater-friendly landscape. An engineered wetland captures water from the building's sump pump and conveys it slowly through the site using a system of layered aggregates. Separately, a new raingarden captures and treats runoff entering the site from adjacent properties.



Watershed Trash Can Mural

Grant Type: Mini

Local artist Rebecca Krueger partnered with the City of Columbia Heights to create and install artistic trash can containers at two litter-prone locations along Central Avenue. She engaged youth in the project through a youth summer camp at the Columbia Heights Library, where they learned about protecting water quality and helped paint a mural on one of the trash can containers.



Stevenson Elementary Raingarden

Grant Type: Mini

This Fridley elementary school partnered with environmental educator Heidi Ferris of Growing Green Hearts to create watershed-based learning modules for students and teachers. The project culminated with more than 600 students helping to plant the school's newly built raingarden. A Mini Grant helped fund the lessons, raingarden design and materials.



Youth Performance Company

Grant Type: Planning

Minneapolis-based Youth Performance Company (YPC) developed a 14-week theater program to teach fourth- and fifth-graders at New City School about protecting water quality in the Mississippi River. The MWMO provided a grant to help develop and teach the curriculum. The project culminated in an original play developed by the students, called "H2O Heroes!"

Marcy Open School Path to Peace/Terry Labyrinth

Grant Type: Action

Marcy Open Elementary School's Path to Peace and Terry Labyrinth were upgraded with stormwater-friendly landscape features. Planted swales and permeable pavers manage runoff on the site, while interpretive signs will help educate students and visitors about the relationship between land use and water quality.



COMMUNICATIONS AND OUTREACH

The MWMO works to raise awareness of water quality issues and promote voluntary actions that help protect and improve local water resources and habitat.



Art Exhibits at MWMO

The MWMO hosted a unique series of water-related art exhibits and community engagement activities in 2018. Exhibits included photos, video and iron works by sculptor Jim Brenner as well as *Upstream*, a collection of river stories told on handmade tea cups, by ceramicist and public artist Anna Metcalfe. Metcalfe and composer Joshua Clausen curated a full-day event in conjunction with Art-a-Whirl, which included water-focused “tea parties,” musical performances and boat-building demonstrations.

Good Neighbor Guide

In 2018, the MWMO launched the Good Neighbor Guide, a colorful and graphic-filled booklet showcasing residential stormwater best management practices. The MWMO’s outreach team developed a summer outreach campaign around the guide, bringing it to neighborhood and civic groups across the watershed.



Share the River Northeast

The MWMO hosted its third annual Share the River Northeast paddling event in 2018. Visitors enjoyed a free introductory canoe ride on the Mississippi River and a free cookie from North Minneapolis-based nonprofit Cookie Cart. The MWMO partners with Mississippi Park Connection, the National Park Service and Wilderness Inquiry to stage the event, which is designed to connect residents to the river and the local watershed.



Mississippi River Green Team

The Mississippi River Green Team is a two-year employment and conservation program for Minneapolis teens. Now in its 11th year, the program is designed to help diversify the environmental workforce by providing youth from underserved communities with a mentored job experience.

In 2017, the MWMO and the Minneapolis Park & Recreation Board, who co-founded the program, commissioned Wilder Research to do a program evaluation. Highlights of their findings include:

- 100 percent of alumni expressed caring more about environmental issues;
- 75 percent of alumni said that they learned “a lot” about environmental jobs from the program;
- of the 11 alumni who were enrolled in college as of fall 2017, eight indicated plans to major or minor in something related to the environment; and
- nearly 40 percent of alumni have held a seasonal job related to the environment.



Sharing Knowledge in India

In October 2017, MWMO staff joined with University of Minnesota faculty to help organize and deliver a three-day workshop at Mizoram University in Aizawl, India. The event included classroom training on the basics of watershed management as well as field training on installing and collecting data from monitoring equipment. MWMO staff then presented a pair of papers at the Natural Resources Management for Sustainable Development and Rural Livelihoods International Conference, also held at the university.

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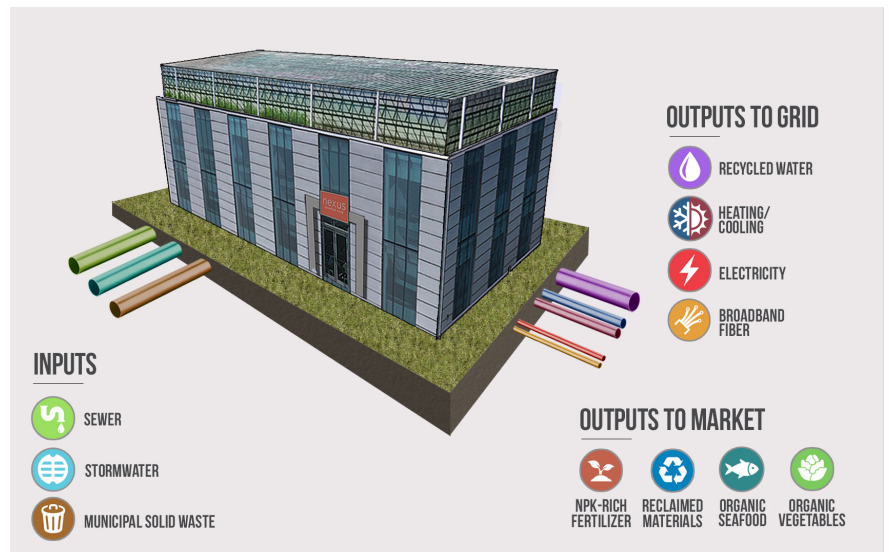
PLANNING

The MWMO is a driver in advancing opportunities for innovative stormwater treatment that fits with the desired land use. These efforts result in designs that serve multiple purposes — infrastructure that reduces flooding while also improving water quality and habitat. Planning typically starts three to five years ahead of construction.

Restorative Development

The MWMO is working to build a public-private partnership to secure funding for a restorative development initiative in Minneapolis. This restorative model is designed to invest any profits generated back into the community it serves in the form of additional social, environmental and economic benefits. The proposed concept is to build an Integrated Utility Hub (IUH) facility that would combine on-site management of stormwater, sanitary sewer, municipal waste, energy generation and food production. The

IUH would use an anaerobic digester to process a city's organic and sanitary sewer wastes. Current IUH concepts are designed to: support affordable housing tenants through free electricity and grocery expenses; create 30 full time jobs; generate 5.1 megawatts of electricity annually; generate 250,000 gallons of recycled water per day; and much more.



(Image courtesy The Yorth Group)



District Stormwater Expands

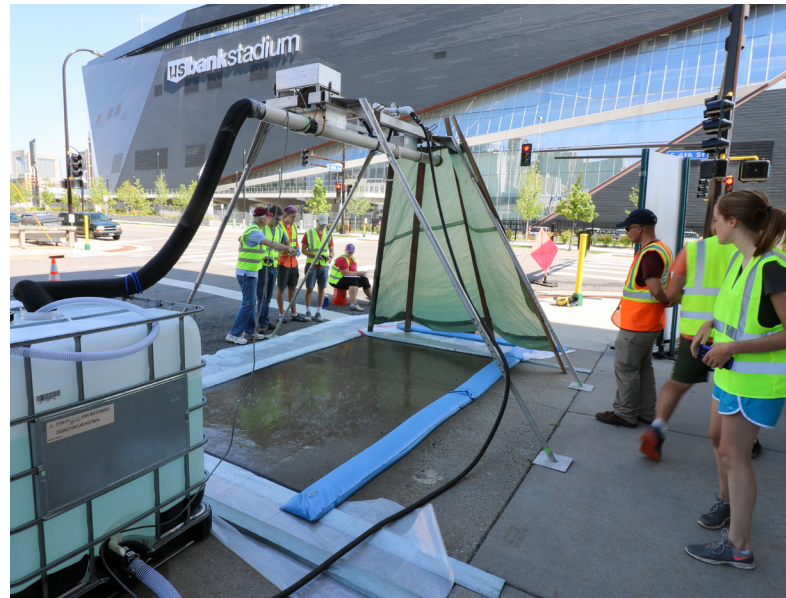
The District Stormwater System at Towerside, the MSP Innovation District, is continuing to expand. The reuse system completed in 2016 will now supply water to two additional properties (for a total of six) as development in the area continues. The MWMO has also been refining maintenance procedures for the system, testing its water quality and working with community partners to make upgrades to its infrastructure.

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.

Downtown Runoff Study

The MWMO and University of Minnesota ran a series of experiments designed to document the type and amounts of pollutants coming off of four distinct types of downtown surfaces: streets, sidewalks, parking lots and rooftops. Results of this work will be combined with our understanding of how much water runs off these surfaces during storm events, and used to design pollution reduction strategies, targeting those areas that are the dirtiest. By gathering more detailed information on pollutant loading from downtown surfaces, we'll be able to better target pollution mitigation strategies in the most urbanized portion of the MWMO.



Northeast Stormwater Initiative

The MWMO is collaborating with the City of Minneapolis, the Minneapolis Park & Recreation Board and other partners on a project to mitigate flooding, prevent polluted runoff and improve the ecology in Northeast Minneapolis. Coordinating with other infrastructure improvements, the partners used detailed computer models to help prioritize a number of potential projects to mitigate stormwater problems in the area. These include updated stormwater infrastructure, the addition of stormwater best management practices at Columbia Park and Columbia Golf Course, and distributed green infrastructure. These projects have the potential to capture and treat more than 600 acres of previously untreated area, and to reduce the impact of flooding.





MWMO staff in August 2018.

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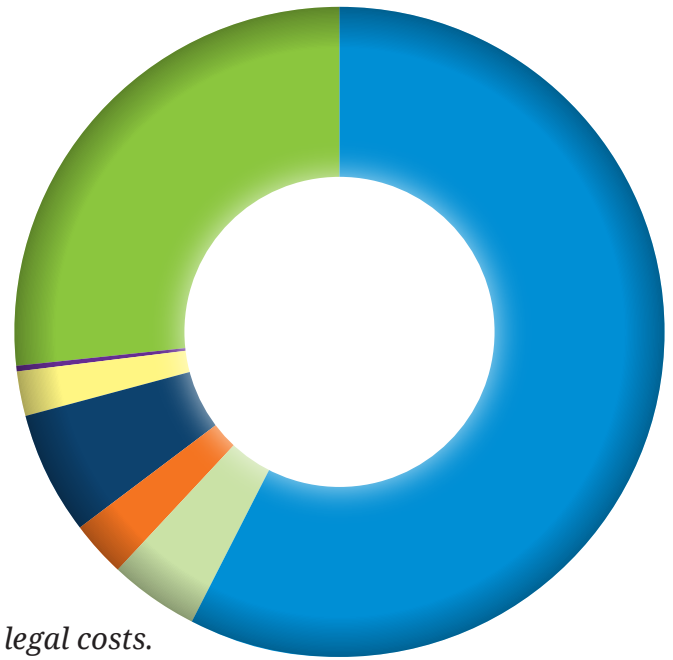
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*Includes permanent staff only.
 Current as of August 2018.*

BUDGET

Annual Expenditures (5-Year Average)

Projects	\$3,010,661
Monitoring	\$227,470
Stewardship Fund	\$148,520
Watershed Assessment	\$323,467
Outreach	\$109,377
Planning	\$19,200
Administrative*	\$1,382,823



**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.



Mississippi River Paddle Share is a first-of-its-kind kayak sharing program created by the National Park Services and Mississippi Park Connection. The MWMO hosts one of several Paddle Share stations, where visitors can rent kayaks like these. In 2018, poet and MWMO artist-in-residence Moheb Soliman utilized the Paddle Share kayaks to lead a series of guided paddles (pictured) on the Mississippi River with artists, scientists and others to spark conversations about environmental issues.



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Protect it. Pass it on.

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