



Protect it. Pass it on.

MISSISSIPPI
WATERSHED
MANAGEMENT
ORGANIZATION

2019 Annual Activity & Financial Report





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2019 Annual Activity & Financial Report

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2019 Annual Activity & Financial Report

Mississippi Watershed Management Organization

Abstract

All metro-area watershed management organizations are required to annually submit an activity report, financial report and financial audit within 120 days of the end of the organization's fiscal year.

This report meets the requirements of the Metropolitan Water Management Act ([MS 103B.231](#)) and [Minnesota Rules 8410.0150](#). The intent of an activity and financial report is to provide an annual snapshot or record of where this organization is in meeting its mission, goals and objectives, and what its goals and objectives are for next year. This record is important — not only to meet rule requirements, but also for future organization board and staff members to understand why past decisions were made and directions were taken.

Key components of the required reporting are:

- Budgets and expenditure information
- Annual workplan and evaluation of past workplan
- Status of local water management plan adoption
- Summary of monitoring data
- Permit and enforcement activity
- Status of wetland plans and banking

This report is organized by MWMO areas of expertise and activity. The workplan description is delivered at an area of activity or expertise level, rather than at an individual staff level. Individual workplans are adjusted quarterly to reflect and meet the ever-changing work environment of the MWMO, while areas of activity and expertise needs are driven by annual budget processes of the watershed and its members.

This report may be updated periodically throughout the year. The most recent version will be available on the MWMO's website at www.mwmo.org.

Table of Contents

Abstract . . . . .	.i
Organizational Summary	1
Formation and History.	1
Key Events in the History of the Organization	1
Vision and Mission Statements	3
Summary of 2019 Services and Operations	3
Board of Commissioners	3
Commissioners	4
Alternate Commissioners	4
Citizen Advisory Committee.	5
CAC Positions	5
Staff	6
2019 MWMO Staff.	6
2019 Shared Staff	8
Consultants	8
Accounting.	8
Financial Audit.	8
Engineering	9
Payroll and Financial Services	9
Banking and Investments	9
Legal	10
Information Management and Technology	10
Other Service Providers	10
Communications/Website	10
Capital Project Grants	11
Purpose	11

Objectives . . . . .	.11
2019 Implementation . . . . .	.12
2020 Workplan . . . . .	.18
Communications and Outreach	21
Purpose . . . . .	.21
Objectives. . . . .	.21
2019 Implementation . . . . .	.22
Monitoring.	33
Purpose . . . . .	.33
Objectives. . . . .	.33
2019 Implementation . . . . .	.34
2020 Workplan . . . . .	.37
Planning	39
Purpose . . . . .	.39
Objectives. . . . .	.39
2019 Implementation . . . . .	.40
2020 Workplan . . . . .	.43
Watershed Assessment	44
Purpose	44
Objectives.	44
2019 Implementation . . . . .	.45
2020 Workplan . . . . .	.48
Financial Information	50
Policy . . . . .	.50
Budget. . . . .	.50

List of Tables

Table 1. Capital Project Grants Implementation 16

Table 2. Capital Project-Related Watershed Management Plan Goals and Measures Achieved 17

Table 3. Snapshot of MWMO Email Communications 25

Table 4. Snapshot of MWMO Social Media Followers 26

Table 5. Stewardship Fund Grants 28

Table 6. MWMO Website Traffic Overview 30

Table 7. Communications and Outreach Implementation 31

Table 8. Communications and Outreach-Related Watershed Management Plan Goals and Measures Achieved 31

Table 9. Water Quality Monitoring Implementation 37

Table 10. Monitoring-Related Watershed Management Plan Goals and Measures Achieved 37

Table 11. Planning Implementation 42

Table 12. Planning-Related Watershed Management Plan Goals and Measures Achieved 42

Table 13. Watershed Assessment Implementation 48

Table 14. MWMO Budget. 51

Table 15. Certification of Apportioned Levies 52



Figure 1. MWMO permanent and seasonal staff in July 2019. *Standing, from left:* Marta Wichman, Udai Singh, Marcy Bean, Nick Busse, Michaela Neu, Doug Snyder, Bethany Chaplin, Jim Rudolph, Tammy Schmitz, Dan Kalmon, Brittany Faust, and Stephanie Johnson. *Sitting, from left:* Abby Moore, Max Dalton, Charlie Yunker, Brett Eidem, Alyssa Gregory, and Lea Davidson.

Organizational Summary

Formation and History

The MWMO encompasses 25,543 acres (39.9 square miles) of fully-developed urban lands and waters within the Minneapolis—Saint Paul metropolitan core area. The original members included the cities of Falcon Heights, Lauderdale, Minneapolis, Saint Anthony Village and Saint Paul, the Minneapolis Park and Recreation Board and the University of Minnesota.

Key Events in the History of the Organization

The first draft of the MWMO Plan was published in December 1986. The 1986 plan was prepared to meet the then-current Minnesota Chapter 509 requirements. The 1986 plan addressed surface water quality and quantity, land use and identified significant point and nonpoint source pollution in the MWMO. It also noted significant groundwater pollution problems from past industrial and commercial practices and storm sewer drainage, but was never approved by the Board of Water and Soil Resources (BWSR) or the MWMO Commission.

During second-generation planning (1997-2000, adopted in 2001), the MWMO acknowledged

the limits of its member communities to incur additional financial expenses. Consequently, the MWMO developed strategies for new funding mechanisms. The MWMO sought inclusion on the list of Special Taxing Districts ([MS 275.066](#)) and, in 2001, the MWMO became the first joint powers WMO to receive an ad valorem levy authority necessary to implement plan goals and objectives. Falcon Heights and the University of Minnesota left the organization. In September of 2002, the MWMO hired its first two full-time staff members to implement the plan.

The current plan, approved in May 2011, uses information and data from past studies and actions to address a variety of issues deemed significant by the MWMO Citizen Advisory Committee (CAC), the MWMO Technical Advisory Committee (TAC) and the MWMO Board of Commissioners.

The Mississippi River is the MWMO's natural resource focus, nexus of the urban area we know as the Twin Cities. The river itself provides important water-based ecosystem advantages and facilitates many other beneficial activities and services, including: hydroelectricity; barge access; habitat, wildlife corridors and recreational water-related amenities; industrial, commercial and residential land uses; public drinking water; and stormwater and municipal wastewater discharge. Within the boundaries of the MWMO, surface water either flows directly overland or drains through pipes to the river. All groundwater generally flows toward the river as well.

The MWMO is one of several entities that has developed plans to address critical watershed issues within the MWMO. The MWMO believes coordination of these plans and the entities that drafted them are imperative to successful watershed management. The complex network of private and public (federal, state, regional, municipal and local) agencies involved in water and natural resource management and land-use planning and development must work together to achieve mutual goals. To put financial and human resources to best use, land use and environmental policies, projects and programs stemming from those agencies must be implemented in a complementary, non-duplicative manner.

In 2011, Six Cities Watershed Management Organization was dissolved. The Cities of Columbia Heights, Fridley and Hilltop became members of the MWMO in July 2012, joining the Cities of Minneapolis, Saint Paul, Lauderdale and Saint Anthony Village, and the Minneapolis Park and Recreation Board. These entities entered into a new, revised joint and cooperative agreement (i.e., Joint Powers Agreement under [MS Section 471.59](#)) that now form the MWMO.

The MWMO Watershed Management Plan was amended to include the area within the new member cities. In 2014, the MWMO went through a staff reorganization to better meet the goals of the organization and to support and coordinate implementation with its members to achieve water quality, water quantity and habitat goals. Depending on the season, the MWMO may have up to 20 staff members across all employment categories—full-time employees, temporary or seasonal employees and interns.

Vision and Mission Statements

Vision Statement: To lead, to inspire, to act, to educate, and to create a shared vision for a river system with ecological integrity.

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.

Summary of 2019 Services and Operations

Number of Employees (including seasonal and interns) . . . . .	.26
Number of FTEs . . . . .	.14
FTE Average Length of Service	6 years
FTE Turnover Rate.	14 percent
Capital Improvements and Initiatives Revenue	\$3,555,000
Capital Asset Replacement Revenue . . . . .	.\$270,000
Operating Revenue	\$1,875,000
Total Levy . . . . .	.\$5,700,000

Board of Commissioners

The governing body of the MWMO is its commission, which consists of seven voting commissioners. All appointments to the commission are made in accordance with [Minnesota Statutes 103B.227](#) and Articles III and IV of the MWMO Joint and Cooperative Agreement. These statutes and articles together lay out the appointment process and powers of the Board of Commissioners of the MMWO.

Notices of all vacancies and appointments shall be published at least 15 days prior to filling a vacancy in a legal publication of the member’s community seeking a commissioner. The council of each member shall appoint one commissioner to represent the member to the commission. Each commissioner shall serve until his or her successor is appointed.

Member councils may select and appoint alternates to the commission in the same manner as commissioners. In the absence of a member’s commissioner, the designated alternate may vote and act in the commissioner’s place. The alternate shall serve a term concurrent with the member’s commissioner. The council of each member shall determine the eligibility and qualifications of its commissioner and alternate.

Commissioners

Commissioner Kevin Reich, City of Minneapolis, Chair

350 South 5th Street, Room 307, Minneapolis, MN 55415
612-673-2201

Commissioner Jeffrey Dains, City of Lauderdale, Vice-Chair

2522 Marshall Street NE, Minneapolis, MN 55418-3329
612-746-4970

Commissioner Donna Schmitt, City of Columbia Heights and City of Hilltop, Treasurer

2522 Marshall Street NE, Minneapolis, MN 55418-3329
612-746-4970

Commissioner Steve Eggert, City of Fridley

2522 Marshall Street NE, Minneapolis, MN 55418-3329
612-746-4970

Commissioner Jerry Faust, City of Saint Anthony Village

3301 Silver Lake Road, Saint Anthony, MN 55418
612-782-3301

Commissioner Chris Meyer, Minneapolis Park and Recreation Board

2522 Marshall Street NE, Minneapolis, MN 55418-3329
612-746-4970

Commissioner for City of Saint Paul

Open

Alternate Commissioners

Alternate Commissioner Steve Fletcher, City of Minneapolis

350 South 5th Street, Room 307, Minneapolis, MN 55415
612-203-1459

Alternate Commissioner Mary Gaasch, City of Lauderdale

2522 Marshall Street NE, Minneapolis, MN 55418-3329
612-746-4970

Alternate Commissioner Kale Severson, Minneapolis Park and Recreation Board

2117 West River Road, Minneapolis, MN 55411
612-230-6443

Alternate Commissioner Bertha Risdahl, City of Hilltop and City of Columbia Heights

2522 Marshall Street NE, Minneapolis, MN 55418-3329

612-746-4970

Alternate Commissioner Randy Stille, City of Saint Anthony Village

3301 Silver Lake Road, Saint Anthony, MN 55418

612-782-3301

Alternate Commissioner Tom Tilberry, City of Fridley

2522 Marshall Street NE, Minneapolis, MN 55418-3329

612-746-4970

Alternate Commissioner for City of Saint Paul

Open

Citizen Advisory Committee

The MWMO Citizen Advisory Committee (CAC) meets at the request of the MWMO Board of Commissioners to assist in managing the water resources of the MWMO. The scope of responsibilities for the CAC include: reviewing funding proposals (Stewardship Fund Grants, Capital Improvement Projects, etc.), reviewing the MWMO's annual capital budget and participating in planning for the watershed. Other responsibilities may be assigned to the CAC by the Board of Commissioners as needed. The CAC provides review and feedback in the form of recommendations to the Board of Commissioners.

Applications are accepted year-round, and open positions are filled throughout the year. Applications submitted to replace incumbents are due by December 15. Appointments are for one year and are renewable annually. Up to two at-large positions may be filled by people who live outside of the MWMO boundaries. All CAC members may be contacted through the MWMO office.

CAC Positions

Columbia Heights (one)

Connie Buesgens

Fridley (one)

Nick Olberding

Hilltop (one)

Open

Lauderdale (one)

Open

Saint Anthony Village (one)

Lona Doolan

Saint Paul (one)

Charlene Brooks

Minneapolis (five)

Shiela Wiegman	Downtown
Nicole Menard	North
Perry Dean	Northeast
Craig Larson	South
Ann Lewandowski	Southwest

At-Large Positions (five)

P. Victor Grambsch	Minneapolis
Anne Wilkinson	Minneapolis
Phyllis Carol Hejl	Minneapolis
William Risse	Saint Anthony Village
Andrew Dickhart	Minneapolis-Southwest
Joe Handtmann	Minneapolis-Southwest

Staff

The MWMO Board of Commissioners first hired staff in September of 2002. The Board of Commissioners first established, and now maintains, personnel policies and structures to attract and retain qualified personnel to implement MWMO activities. This is accomplished by encouraging continual performance improvement through a well-administered training, salary and performance-review programs. In addition to its own full-time employees, the MWMO shares employees with the City of Saint Anthony Village in the areas of human resources and financial management, and the MWMO hires part-time regular and seasonal employees and interns as needed to complete its annual plan of work.

2019 MWMO Staff

Executive Director

Douglas Snyder
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612-746-4971

Projects and Outreach Director

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612-746-4978

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Project Planning and Implementation
Specialist
Brett Eidem
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612-746-4983

Water Resources Specialist
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Monitoring and Instrumentation Specialist
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612-746-4985

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

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

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

Capital Projects and Stewardship Specialist
Marcy Bean

Administrative Specialist
Max Dalton

Administrative Assistant
Christine Gilbert

Administrative Assistant
Alyssa Gregory

Stewardship and Community Outreach
Specialist
Tammy Schmitz

Capital Projects Intern
Bethany Chaplin

Communications Intern
Emma Keiski

Water Quality Intern
Kyle Blazek

Water Quality Intern
Lea Davidson

Water Quality Intern
John Mueller

Water Quality Intern
Rikita Patel

Communications and Outreach Intern
Lauren Schultz

Capital Projects Intern
Jackelyn Seamans

Mississippi River Green Team Alumni Intern
Akia Vang

Water Quality Intern
Marta Wichman

2019 Shared Staff

The MWMO shared the following staff with the City of St. Anthony Village in 2019:

Accountant

Ka Vue

ka.vue@ci.saint-anthony.mn.us

612-782-3334

Human Resources Coordinator

Charlie Yunker

charlie.yunker@ci.saint-anthony.mn.us

612-782-3315

Finance Director

Shelly Rueckert

shelly.rueckert@ci.saint-anthony.mn.us

612-782-3316

Consultants

In accordance with Minnesota Statutes [Section 103B.227](#), subdivision 5, the MWMO sends out requests for proposals for legal, professional and technical (engineering) and consultant services at least once every two years (in the fall of even-numbered years). At its annual business meeting in January, the MWMO Board of Commissioners reviews and approves a list of approved consultants. The Board reserves the right to alter the list at any point in order to meet the needs of the organization.

The following is a list of organizations that provided services to the MWMO in 2019:

Accounting

City of Saint Anthony Village

3301 Silver Lake Rd.

St. Anthony, MN 55418

651-782-3301

Financial Audit

Redpath and Company

55 E. Fifth St., Ste. 1400

St. Paul, MN 55101

651-426-7000

Engineering

Barr Engineering
4700 W. 77th St.
Minneapolis, MN 55435-4803
952-832-2600

Emmons and Olivier Resources
651 Hale Ave. N.
Oakdale, MN 55128
651-203-6001

HGA
420 N. 5th Street
Minneapolis, MN 55401
612-758-4000

Houston Engineering, Inc.
6901 East Fish Lake Rd., Ste. 140
Maple Grove, MN 55369-5400
763-493-4522

Inter-Fluve
2121 Randolph Ave., Ste. 200
St. Paul, MN 55105
651-243-9700

RESPEC
1935 County Rd. B2 West, Ste. 230
Roseville, MN 55113
651-305-2280

TKDA
444 Cedar St., Ste. 1500
UBS Plaza
St. Paul, MN 55101
651-292-4400

Stantec
2335 West Highway 36
St. Paul, MN 55113
651-636-4600

Wenck Engineering
P.O. Box 249
1800 Pioneer Creek Center
Maple Plain, MN 55359
763-479-4201

WSB and Associates, Inc.
763-541-4800
701 Xenia Ave. S., Ste. 300
Minneapolis, MN 55416

Payroll and Financial Services

City of St. Anthony Village
3301 Silver Lake Rd.
St. Anthony, MN 55418
651-782-3301

Banking and Investments

4M Fund
5298 Kyler Ave. NE
Albertville, MN 55301
763-497-1490

Multi-Bank Securities, Inc.
1000 Town Center, Ste. 2300
Southfield, MI 48075

Northeast Bank
77 Broadway St. NE
Minneapolis, MN 55413
612-379-8811

Pershing, LLC
1 Pershing Plaza
Jersey City, NJ 07399

Legal

Kennedy and Graven, Chartered
470 Pillsbury Center, 200 S. 6th St.
Minneapolis, MN 55402
612-337-9215

Smith Partners
400 2nd Ave. S.
Minneapolis, MN 55401
612-344-1400

Information Management and Technology

City of Roseville Management Information
Services — Metro-INET
2660 Civic Center Dr.
Roseville, MN 55113
651-792-7092

Other Service Providers

Ruth Murphy
442 Summit Ave.
St. Paul, MN 55102

Fortin Consulting
215 Hamel Rd.
Hamel, MN 55340
763-478-3606

MMC Associates
1312 Portland Ave.
St. Paul, MN 55104
651-647-6816

St. Anthony Falls Laboratory, University of MN
2 Third Ave. SE
Minneapolis, MN 55414
612-624-4363

Three Rivers Park District
3000 Xenium Ln. N.
Plymouth, MN 55441
763-694-7651

Freshwater Society
2424 Territorial Rd., Suite B
St. Paul, MN 55114
651-313-5800

Wilderness Inquiry
808 14th Ave. SE
Minneapolis, MN 55414
612-676-9400

Communications/Website

Dogtooth Design
755 Montana Ave. E.
St. Paul, MN 55106
612-547-6461

Windmill Strategy
1227 Tyler St. NE #180
Minneapolis, MN 55413
612-521-4286



Figure 2. An aerial view of the underground stormwater infiltration gallery under construction at the East Side Storage and Maintenance Facility on August 15, 2019. The new City of Minneapolis public works facility includes a number of stormwater best management practices (BMPs).

Capital Project Grants

Purpose

The MWMO's capital project grants fund projects that protect and improve the water quality and ecosystem health of water resources within the MWMO watershed. These projects provide unique and innovative solutions for stormwater management in highly developed urban areas. They also provide opportunities for community partnerships to build understanding, knowledge and initiative related to water, habitat and natural resource issues and solutions.

Objectives

- Encourage the integration of the stormwater system with other infrastructure systems, e.g. energy, water supply and reuse, and wastewater treatment to create greater efficiencies of all infrastructure systems.
- MWMO staff actively participate as members of the project team from ideation through design and implementation.

- Build the MWMO's CIP list with opportunities to collaborate on capital projects that meet both MWMO and member organization goals.
- Strengthen our ability to reach key audiences by leveraging other MWMO activity areas.
- Leverage funding sources to acquire key parcels of land within the MWMO that will lead to establishment of water quality and habitat improvements.

2019 Implementation

The MWMO completed, entered into, or continued agreements in 2019, or allocated capital funds, for the following capital projects:

2333 Jackson Street NE Blue-Green Roof

The MWMO provided a Capital Project Grant for a smart blue-green roof system at “JAX Apartments,” a 0.4-acre multifamily housing development in Northeast Minneapolis. This project features a multi-tiered roof that allows for a unique approach to stormwater volume reduction, monitoring and reuse. Through smart valve controls, and utilizing real time weather data, the system can open and close roof drains. This, in turn, can detain precipitation, thus minimizing runoff from entering into a sewer system during storm events. The project includes a blue roof to hold and retain water, a green roof on a lower floor, and a modular underground reuse system that holds filtered water to be used for irrigation. Through smart valve interactions from drains/sensors in the blue roof and the hybrid roof, the total system is designed to manage the equivalent of just less than a static 70,000-gallon cistern. This project is the first blue/hybrid roof system in the Twin Cities metro area. The system will be monitored for at least five years, and MWMO will have access to the data to monitor effectiveness and learn about how well these types of systems perform in Minnesota, and what further benefits they provide.

26th Avenue Overlook

The Minneapolis Park and Recreation Board (MPRB) is building a river overlook at 26th Avenue North. Also known as the Great Northern Greenway Overlook, the project consists of a large beacon and cantilevered viewing platform to connect North Minneapolis residents to the river. The overlook, beacon and plaza will be an iconic and dynamic community place that serves as a catalyst for future park development to follow.

The MWMO is partnering with MPRB to enhance restoration of the site. This includes minor grading, soil amendments and native plants to capture site runoff, while adding pollinator habitat within the Mississippi River Corridor Critical Area (MRCCA). It also includes further slope stabilization through bioengineering techniques, which will take place within the 100-

year floodplain. The project will incorporate cultural and historical interpretive opportunities in collaboration with the community and Juxtaposition Arts.

4th Street SE Landscape for Habitat

An extension of the Towerside District Stormwater System, a habitat-rich landscape was installed in the public right-of-way as part of a reconstruction of 4th Street SE near the University of Minnesota's East Bank Campus. This innovative approach to the urban landscape will be maintained by the Towerside district developers and irrigated by reusing stormwater from the district system. The extra-wide boulevard planting beds are depressed, and the surrounding impervious walkways were installed to drain into them. The installation included soil amendments and native pollinator plants with robust root systems to further filter stormwater and promote infiltration. These expanded right-of-way plantings were installed late in 2019 and will be monitored through 2022 to ensure that they continue to function and flourish.

8th Street Stormwater Planters

The MWMO partnered with the City of Minneapolis to construct five stormwater planters along a one-block stretch of South 8th Street in downtown Minneapolis. These bioinfiltration basins will capture and treat runoff from the street, sidewalks and nearby alleys. These best management practices, part of a pilot project with the Downtown Improvement District, will remove an estimated 200 pounds of total suspended solids and 1 pound of total phosphorus annually. MWMO will also be monitoring these planters to collect data on infiltration rates and total volume captured. In 2019, four of the five planters were installed. Final soil amendments and planting will happen early in 2020.

More details are available at mwmoo.org.

East Side Storage and Maintenance Facility

This new City of Minneapolis Public Works facility will house multiple city departments and create space for city vehicle storage and maintenance areas. With a highly visible location, the project provides opportunities to demonstrate green infrastructure practices to a key user group — public works maintenance staff, who have the potential to impact our water resources through their work. The 9-acre site has been designed to capture and hold nearly 90 percent of the runoff (and its pollutants) from a 1.25-inch rain event. The project includes underground storage, permeable pavers and a series of connected raingardens. The majority of the building and stormwater BMPs were constructed in 2019. The planting of the site's raingardens and installation of interpretive signage in the spring/summer of 2020 will complete the project.

More details are available at mwmoo.org.

Edison Safe Routes to School

In 2019, the City of Minneapolis reconstructed Monroe Street NE between 20th and 22nd Avenues NE. This two-block area borders the west side of Thomas Edison High School and runs between the school its adjacent athletic complex. In combination with the roadwork, the city partnered with the school via the Safe Routes to School Program to also add bumpouts at each of the intersections.

In partnership with the MWMO, the city identified an opportunity to pursue above-and-beyond stormwater management as part of this 2019 work. Stormwater improvements included adding bioinfiltration features to the bumpouts and an underground infiltration tank on the east side of the road. Stormwater runoff from Monroe Street will be directed into the stormwater bumpouts. Overflow from the bumpouts will be directed into the underground storage and infiltration tank. These features were designed to capture and treat up to the first 1.25 inches of runoff from this two-block area.

The project is an exciting add-on to previously installed stormwater management systems at the school (aka the [Northeast Green Campus](#)). Staff will look for opportunities to include these new BMPs in the outreach, education and monitoring activities that are ongoing at the site.

Fridley Smart Salting BMPs

As part of their new public works facility, the City of Fridley purchased a Cargill AccuBatch 800 brine maker for use in their winter maintenance activities. The MWMO provided a grant to the city to support retrofitting a portion of their existing snowplow fleet with equipment that allows them to use this brine in snow removal operations. Brine application systems, GPS units for tying into a web-based tracking software, and road temperature sensors were installed. Funds were also used to purchase an anti-icing trailer system. The city is committed to upgrading the rest of its fleet as new vehicles are purchased and will use lessons learned from the outfitting of these initial four vehicles to inform future decisions.

Hiawatha Collegiate High School Stormwater Reuse

Hiawatha Collegiate High School's new campus was built with a stormwater reuse system capable of irrigating the school's new soccer field and adjacent landscaping. The underground storage tank will capture an estimated 700,000 gallons of stormwater each year for reuse. The school plans to leverage the educational potential of the system to help teach the students about conservation and sustainability.

[More details are available at mwmo.org.](#)

Towerside District Stormwater System

This project is part of a larger redevelopment effort that seeks to establish an urban innovation district. This district stormwater demonstration project will model the difference between a conventional stormwater system layer that provides a singular treatment and conveyance function and an integrated district stormwater system that manages stormwater as a valued resource and redesigns stormwater infrastructure at a net savings to public spaces. The stormwater park, district infrastructure, and reuse tank have all been installed. In 2020, the system will all be connected and brought online, including the pumps, UV treatment, and re-use lines going back to each of the individual properties.

[More details are available at mwmoo.org.](https://mwmoo.org)

Water Works Stormwater Reuse System

The Minneapolis Park and Recreation Board (MPRB) is leading the creation of a new park along the Mississippi River at a highly visited area adjacent to the Stone Arch Bridge in Downtown Minneapolis. Part of the River First initiative, the project will implement a long-term vision for the area, integrating historical features of the city with park space, green infrastructure, and stormwater reuse within its park pavilion. The MWMO is funding a stormwater reuse system that will collect and treat roof runoff from the existing rooftops of adjacent buildings. This water will be used for irrigation at the Water Works site and toilet flushing in the pavilion. The 100,000-gallon storage tank is projected to conserve and reuse up to 956,000 gallons a year. The stormwater reuse system was installed in 2019, and MWMO staff will be working with the MPRB on getting the system online in 2020, as well as adding interpretive signage and outreach for the project.

[More details are available at mwmoo.org.](https://mwmoo.org)

Westminster Stormwater Reuse Demonstration Project

This 3,100-member church in downtown Minneapolis installed a stormwater reuse system that uses recycled stormwater for flushing toilets and urinals, irrigating the exterior landscape, and running a stormwater reuse demonstration fountain in the church's new main plaza. The MWMO and the Metropolitan Council co-funded the stormwater reuse system, which is among the first in the city to use recycled stormwater in interior plumbing.

[More details are available at mwmoo.org.](https://mwmoo.org)

Table 1. Capital Project Grants Implementation

Implementation Table	2018	2019	2020
CIP Budget	\$2,500,000	\$2,500,000	\$2,500,000
2333 Jackson Street NE Blue Roof	--	\$200,000	--
26th Avenue Overlook	--	--	\$50,000
4th Street SE Landscape for Habitat	--	\$500,000	--
8th Street Stormwater Planters	--	\$350,000	--
Cemstone Stormwater Reuse	\$150,000	--	--
East Side Storage and Maintenance Facility	--	\$550,000	--
Fridley Smart Salting BMPs	--	\$80,000	--
Hall's Island Reconstruction	\$1,500,000	--	--
Hiawatha Collegiate High School Stormwater Reuse	\$162,000	\$18,000	--
Hoyer Heights Tree Trenches	--	--	\$390,000
Islands of Peace Park Restoration	--	--	\$140,000
Metro Transit Bus Garage	--	--	\$400,000
Northeast Green Campus, Phase II	\$23,000	--	--
NorthPoint Health and Wellness Center Expansion	--	--	\$350,000
Northern Columbia Golf Course and Park Stormwater BMPs	--	--	\$2,000,000
Old Bassett Creek Tunnel Phase II Cleanout	--	--	\$165,000
Towerside District Stormwater System	--	\$315,000	--
Water Works Stormwater Reuse System	--	\$800,000	\$100,000
Westminster Stormwater Reuse Demonstration Project	\$550,000	\$50,000	--

On the following page is an evaluation of progress made towards MWMO's Watershed Management Plan Goals via capital projects implemented.

Projects implemented in 2017 included: the 24th Avenue SE Infiltration Project; Fridley Street Reconstruction (2015); Hawthorne EcoVillage Apartments; and the Westminster Stormwater Reuse Demonstration Project.

Projects implemented in 2018 included: Cemstone Stormwater Reuse; Fridley Street Reconstruction (2017); Hall's Island Reconstruction; Hiawatha Collegiate School Stormwater Reuse; Old Bassett Creek Tunnel Phase I Cleanout; and the Riverfront Regional Park Restoration.

Projects implemented in 2019 included: 2333 Jackson St NE Blue Roof; 26th Avenue Overlook; 4th Street SE Landscape for Habitat; 8th Street Stormwater Planters; East Side Storage and Maintenance Facility; Edison Safe Routes to School; Waterworks Stormwater Reuse System.

Table 2. Capital Project-Related Watershed Management Plan Goals and Measures Achieved

Water Quality and Quantity	2017	2018	2019
Total Number of Projects	4	6	7
Total Annual TSS Removed (lbs)	14,857	1,870,864	2,860
Total Annual P Removed (lbs)	44.26	450	15.65
Total Volume Reused (gal)	155,872	1,900,000	1,100,000
Total Volume Infiltrated (cf)	70,943	51,035	836,604
Urban Stormwater Management	2017	2018	2019
Types of BMPs Installed			
Infiltration Basin	21	2	1
Cistern	2	2	3
Filtration Basin	3	0	8
Permeable Pavement	3	0	0
Iron-Enhanced Sand Filter	0	0	0
Pretreatment	2	0	0
Streambank Stabilization	0	2	1
Habitat Restoration	0	1	2
Ecosystem Health	2017	2018	2019
SF Vegetation Added	10,046	92,610	29,833
Trees Added	4	61	87

2020 Workplan

Several projects were underway in 2019 that will be finalized and reimbursed in 2020. Those projects include:

- 2333 Jackson Street NE Blue-Green Roof
- 26th Avenue Overlook
- 4th Street SE Landscape for Habitat
- 8th Street Stormwater Planters
- East Side Storage and Maintenance Facility
- Metro Transit Bus Garage

In addition, several new capital projects will get underway in 2020, including:

Hoyer Heights Tree Trenches

As the second project to be generated by the Northeast Stormwater Management Initiative, a series of stormwater-absorbing tree trenches will be constructed in Hoyer Heights (part of Minneapolis' Waite Park neighborhood). The City of Minneapolis is reconstructing the streets and utility lines in the area. Three of the roads, which are currently wider than typical residential streets, will be narrowed, providing an ideal opportunity to install new stormwater BMPs in the expanded boulevard space. The City held three open-house meetings regarding the project in general and contacted the individual homeowners on the streets where the tree trench BMPs will be constructed. Current designs call for curb cuts that will allow stormwater runoff to feed directly from the street into the tree trenches, which then filter out pollutants. The pilot project is intended to improve water quality and flood resiliency in the neighborhood, which drains through the Columbia Golf Course and Columbia Park. It will also help the city and the MWMO evaluate the effectiveness of tree trenches as a stormwater BMP, assess their maintenance needs, and determine their life cycle costs. Construction is scheduled to begin in summer 2020.



Islands of Peace Park Restoration

The MWMO will work with Anoka County Parks to stabilize riverbank and restore habitat at Islands of Peace County Park in Fridley. The project will use bioengineering techniques to stabilize shoreline, and increase the diversity of the native plant community to be more

beneficial to pollinators and other wildlife that inhabit the park and larger natural space in the area. The project will restore 7 acres of habitat in the Mississippi River Corridor Critical Area (MRCCA). Anoka County Parks is reconstructing trails and culverts at the park; this will result in a 34 percent reduction of impervious surfaces on the island. The project will also include enhancements to a back-channel for improved fish passage. A start date has not been set, but the project is expected to be completed next year. The MWMO previously worked with Anoka County Parks on a similar stabilization/restoration project at Riverfront Regional Park.

Metro Transit Bus Garage

The MWMO is working in partnership with Metro Transit to create a stormwater reuse system for their planned Heywood Bus Garage. The building will be constructed in 2020 on the corner of North 7th Street and Lyndale Avenue in North Minneapolis, adjacent to the current Metro Transit hub. The new bus garage will not only house the buses, but will also have a floor for maintenance and bus washing, as well as one for parking for staff. Metro Transit and MWMO have been collaborating over the last three years to design a system that can reuse stormwater in the bus-washing system. This capture, filtration and reuse of the water will conserve roof runoff, as well as offset a continuous potable water demand. The innovative system will have the ability to reuse/replace up to 2.5 million gallons of water per year. The system will feature a 40,000-gallon cistern a robust filtration system to ensure that the reuse of stormwater will not damage the buses. Project funding was approved in 2019, and construction is set to begin in spring 2020.

Northern Columbia Golf Course and Park Stormwater BMPs

Following extensive outreach and engagement in 2019, the MWMO and its partners are gearing up to install new stormwater best management practices (BMPs) at the Columbia Golf Course and Columbia Park. The project will expand an existing wet stormwater pond and construct one dry pond and one bioinfiltration basin at the golf course and nearby park, along with the necessary stormsewer improvements to convey the stormwater in and out of them. Part of the Northeast Stormwater Management Initiative, these upgrades will improve water quality, restore habitat, enhance the playability of the golf course, and improve the flood resiliency of the park, golf course and upstream neighborhoods. Construction and habitat restoration work is expected to continue into early next year.



More details are available at mwmo.org.

NorthPoint Health and Wellness Center Expansion

Construction of a stormwater-friendly landscape for the expanded NorthPoint Health and Wellness Center in North Minneapolis will take place in 2021. A water reuse system and a series of infiltration gardens will be constructed to manage stormwater from a portion of the new building, the plaza, and new parking lot.

Old Bassett Creek Tunnel Phase II Cleanout

Phase 2 cleanout of the Old Bassett Creek Tunnel (OBCT), which is a 1.5-mile stormwater tunnel that extends under the North Loop, Near North and Harrison Neighborhoods of Minneapolis. The tunnel contains several decades' worth of accumulated sediment and debris that could potentially be mobilized and flushed into the Mississippi River. Since 2012, the MWMO has been working with the City of Minneapolis to study and ultimately remove these potential pollutants from the tunnel. A first-phase cleanout of the OBCT was completed in the summer of 2018, when contractors removed 935 tons of sediment and debris from a 1,080-foot-long section of the upper portion of the tunnel. In January 2020, the MWMO Board of Commissioners approved funding for a second-phase cleanout of the tunnel, which is expected to remove 1,100 tons of sediment from a different, 810-foot section of the tunnel. The project is currently out for bid and should begin in summer 2020.



Figure 3. Volunteers staff a table during a community cleanup event in the Longfellow Neighborhood of Minneapolis on August 20, 2019. The MWMo launched a new program offering cleanup kits and resources to organizations that would like to host their own community cleanup events. ([Learn more at mwmo.org.](https://www.mwmo.org))

Communications and Outreach

Purpose

The MWMo's communications and outreach initiatives provide information, training, educational opportunities, financial resources and other services to promote community partnerships and good stewardship of water and natural resources.

Objectives

- Provide services and products to inform and educate the watershed community using a variety of methods and media.
- Create and support opportunities for public participation and involvement.
- Collaborate with other professionals, networks and communities to develop partnerships, leverage funding and increase the reach and effectiveness of watershed education.

- Inform and educate land use decision-makers about the relationship between land use and natural resource protection/conservation.
- Develop cultural competencies to directly reach diverse communities of the MWMO.
- Provide training and certificate programs for the evaluation, development and use of new technologies and management practices.
- Promote and host workshops and training opportunities for MWMO staff, staff of member organizations, Master Water Stewards, Citizen Advisors, community volunteers and other entities involved in water resources management.
- Support and promote local stewardship initiatives, community leadership and citizen involvement.
- Create demonstration sites to inform and educate the watershed community.

2019 Implementation

The MWMO carried out the following communications and outreach activities in 2019:

Annual Magazine

Since 2017, the MWMO has produced a 16-page annual magazine that serves as a snapshot of the organization's programs, projects and impacts. The photo-rich publication serves as an overview of the organization and a plain-language supplement to the more comprehensive Annual Activity and Financial Report. The publication is produced entirely in-house by MWMO communications staff. Print copies are made available at MWMO tabling events and the MWMO Stormwater Park and Learning Center. In 2019, for the first time, a limited number of copies were mailed to key stakeholders and elected officials. A digital version is also available on the MWMO website.

Community Outreach

In response to evaluation results of the 2018 Good Neighbor Guide pilot program, a coordinated campaign was designed to promote community water stewardship in the form of MWMO Community Cleanups. Goals of the campaign included building volunteer knowledge about the importance of preventing pollution from entering stormdrains and empowering them to conduct their own future cleanups. To support these goals, the MWMO created clean up supply kits that volunteers could use in their own neighborhood clean-up efforts. The MWMO website included a reservation form that connected volunteers to kits and staff to make a more seamless process. MWMO interns and administrative staff were essential in

coordination of lending these materials out and aligning staff or Master Water Stewards to support volunteers' efforts.

In partnership with Master Water Stewards and other volunteers, 11 neighborhood-led cleanups were conducted to continue building residents' water stewardship. Six of these were held in targeted neighborhoods to reach underserved groups. One hundred and five people participated, collecting 90 bags of trash and 798 pounds of trash/debris. In addition, these volunteers cleaned 58 stormdrains. Participants were surveyed after each cleanup. Ninety-four percent felt the cleanups were important to providing a healthier environment, increasing teamwork and its impact in their neighborhood (89 percent), and others indicated they now understood the connection between stormdrains and the Mississippi River better. The pollutants they most commonly found were cigarettes, plastic, leaves, grass, and paper products. When asked what future action they would be willing to take, 65 percent said they would help with future cleanups and 41 percent said they would adopt a stormdrain. The MWMO also posted a weekly social media messages and monthly email newsletters acknowledging volunteer efforts to promote further Good Neighbor actions like these.

In other outreach, the MWMO partnered on 31 community events, providing exhibits and/or activities for participants. More than 1,180 visitors engaged with staff or MWMO volunteers during these activities to learn about actions they could take to protect water quality and gain resources to empower them. Updates were made to the MWMO Good Neighbor Guide display in response to staff observations of public interactions with the 2018 display. These included adding clear jars of pollutants and a mock stormdrain scenario that provided visitors with additional hands-on opportunities to learn how to be a good neighbor to waterbodies.

East African Outreach

In order to learn how the MWMO could help the East African community engage in water stewardship, it joined partners in three projects this year. The first involved a partnership with the staff of Daryel, a local non-profit, who acted as cultural liaisons, youth chaperones and event coordinators, bringing East African community members together for five educational events they recommended. Events included a training for their team, a workshop for 14 East African community leaders, and three youth workshops which involved more than 20 youth.

At Daryel's request, the MWMO funded a short video, produced and published by Somali TV on its Facebook page. In the video, leaders at the community workshop encouraged Somali residents to engage in water stewardship. During events, and in pre- and post-event surveys, participants showed an increased knowledge about the need to protect water bodies and ways to do so. They also provided feedback to the MWMO about culturally relevant content and ways to deliver it to East African residents. Topics of interest included protecting tap water through proper disposal of trash and unused medicine, recycling, conserving water and protecting habitat. They were also fascinated by the drinking water treatment process, jobs in the water resources field and how various water management systems work (tap water, waste water and stormwater). Project participants asked the MWMO to continue providing education of this sort for the East African community to build water stewardship. To address some of their questions, the MWMO created a brochure, "Resources to Explain Water Management," and is currently testing it at pertinent outreach events.

To follow up on requests from Daryel project participants, the MWMO joined the East African Specialist for Minneapolis Community Education to provide a presentation at the Cedar-Riverside Opportunity Center. Participants in the Community Education class echoed similar educational interests in future stormwater education as MWMO heard from participants in Daryel events.

The third project was a Mini Grant the MWMO funded for Mixed Blood Theatre to bring East African residents from the Cedar Riverside neighborhood on a tour of the MWMO Stormwater Park and Learning Center. Participants shared water stories that expressed an appreciation for the cleanliness and availability of Minnesota water compared to situations in Somalia. Some visitors expressed an interest in gardening and farming and nostalgia over the loss of this opportunity in their current living situation. Concerns about the safety of public water offered in Somalia were raised and it became clear how this has created skepticism for some of them about tap water provided by cities in the United States.

Email Communications

Email communications are a key part of the MWMO's overall communication strategy. The MWMO provides a quarterly email newsletter, as well as periodic email bulletins on a variety of topics which can be chosen individually by MWMO email subscribers. In 2019, the MWMO launched a new monthly email newsletter, the "Good Neighbor News," focused on community cleanups and DIY stormwater best management practices. This newsletter was designed to support community outreach efforts (see "Community Outreach," above.)

The MWMO uses the GovDelivery/Granicus platform for its mass emails, and has experienced consistent growth in both the number of subscribers as well as the engagement rate since implementing the platform and providing regular email newsletter content beginning in 2017. Email referrals accounted for at least 14 percent of MWMO website traffic in 2019.

Table 3. Snapshot of MWMO Email Communications

Metric	2016	2017	2018	2019
Number of Bulletins	26	106	135	118
Impressions	(?)	30,100	42,600	70,000
Engagement Rate	22.2%	38.8%	45.7%	53.8%
Total Subscribers	2,073	3,628	5,016	6,129

Master Water Stewards

The Master Water Stewards program increases knowledge and awareness of water quality and creates a base of volunteers who are able and comfortable to work within their communities to effect change. In 2019, the fourth cohort of three Master Water Stewards completed their coursework and installed stormwater BMPs at one location in North Minneapolis for their capstone project. With four cohorts of certified stewards, the MWMO worked closely with the stewards and with Freshwater to develop a volunteer leadership structure to maximize engagement and provide relevant continuing education and volunteer opportunities. Beginning in summer 2019, the MWMO Master Water Stewards Steering Team, consisting of five stewards and one MWMO staff member, was formed and began to meet regularly to plan and lead meetings, trainings and social events to support and engage Master Water Stewards throughout the watershed and beyond.

Mississippi River Green Team

The Mississippi River Green Team is a two-year employment and conservation program for teens from North and Northeast Minneapolis. In 2019, 18 youth were employed. The Green Team was co-created by the Minneapolis Park and Recreation Board (MPRB) and the MWMO as an opportunity for youth to have a mentored job experience, learn about environmental careers and acquire new skills. Typical daily activities include working to prevent water pollution, removing invasive species, building raingardens, planting trees and prairie plants, and assisting in citizen science projects. Youth have the chance to participate in the Mississippi River Green Team for two years.

After those two years, they are a part of a supportive network that works with them to help secure jobs to expand their skills and get them ready for the future. At least nine Mississippi River Green Team alumni found jobs in environmental fields at local organizations such as MPRB, the City of Minneapolis and Mississippi Park Connection.

Professional Workshops and Trainings

Again in 2019, the MWMO sponsored and facilitated trainings on turfgrass maintenance and smart salting. More than 168 winter and summer maintenance professionals, property owners, and supervisors in the public and private sectors attended a total of six trainings held

in 2019. These trainings are a part of a voluntary maintenance certification program through the Minnesota Pollution Control Agency and were subsidized by a PCA/EPA 319 grant.

Also this year, the MWMO continued its partnership with Augsburg University, the University of Minnesota, Fairview Health Services, and Sherman Associates (Riverside Plaza) as the Cedar-Riverside Water Quality Community of Practice (CoP). This CoP emerged from a series of workshops in 2018 focused on managing stormwater, creating sustainable landscapes, and finding funds and support large-scale water quality protection projects. The CoP aims to support ongoing stormwater management with an emphasis on collaboration among property owners for maximum impact. Each property has outlined long-term goals for landscape and/or behavioral changes, suggested timelines, and potential funding sources.

The MWMO continued providing education and engagement for elected officials through a series of events entitled “Watershed Workshops for Elected Officials.” These two-hour workshops each focus on a single topic related to watershed management and include time for activities and networking in addition to a presentation. One workshop was held in 2019, and 15 elected officials and staff participated.

Social Media

The MWMO maintains an active social media presence on Twitter, Facebook, LinkedIn, Instagram, Flickr and YouTube. Content is generally posted every day, and the MWMO uses a social media management platform, Coschedule, to optimize post times and automatically repost evergreen content. Generally speaking, the MWMO is a leader among its peer organizations in the area of social media engagement.

In 2019, MWMO social media channels once again experienced steady growth in both user engagement and overall numbers of followers. Facebook and Twitter in particular are among the MWMO’s most impactful communication platforms, with some individual posts reaching tens of thousands of users over the course of a few days. Social media referrals also accounted for at least 10 percent of MWMO website traffic in 2019.

Table 4. Snapshot of MWMO Social Media Followers

Channel	2015	2016	2017	2018	2019
Facebook	556	881	1,163	1,624	2,100
Instagram	N/A	133	269	650	972
LinkedIn	23	59	89	134	242
Twitter	511	720	945	1,178	1,346



Figure 4. Partners gather to dedicate a series of stormwater improvements at the Islamic Cultural Community Center in Northeast Minneapolis on Friday, October 11, 2019. An MWMO Stewardship Fund Grant was combined with state and county grants to fund the project. *From left:* Metro Blooms Landscape Design Director Rich Harrison, ICCB Board Chair Abdulwahab Asamarai, Minneapolis Ward 1 City Council Member and MWMO Board Chair Kevin Reich, and MWMO Executive Director Doug Snyder. ([Learn more at mwmo.org](https://www.mwmo.org).)

Stewardship Fund Grants

MWMO Stewardship Fund Grants provide financial assistance to community-led projects and educational efforts to improve and conserve water and natural resources in the watershed.

Financial assistance is provided through four types of Stewardship Fund Grants. Mini Grants offer up to \$3,000 in funding for short-term or smaller-scale water quality projects. Planning Grants offer up to \$10,000 in funding to plan projects that are significant in scope and cost; they are used to assess the potential success of a project or develop the details required to make a project actionable. Action Grants offer up to \$50,000 in funds for the implementation of fully-designed projects that are significant in scope and cost. Master Water Steward Grants are offered to certified stewards who wish to accomplish projects that will improve and/or protect water quality.

All proposals are reviewed by MWMO staff. Planning and Action Grants are also reviewed by the MWMO Citizen Advisory Committee and approved by the MWMO Board of Commissioners.

Grants are awarded based on a project's ability to:

- **Develop partnerships with community organizations.**
Projects create partnerships and build community understanding with organizations and people wanting to proactively engage in clean water issues, demonstrate new methods, and extend the MWMO's ability to protect clean water and improve water quality, and protect and restore habitat and natural resources through building community knowledge and stewardship.
- **Protect or improve the quality of water, habitat, and natural resources.**
Projects reduce pollution entering our streams, wetlands, lakes, river and groundwater, and projects that prevent flooding, lessen the effects of drought, retain water on site and/or restore and maintain habitat.
- **Build community understanding, knowledge, and initiative related to water, habitat, and natural resource issues and solutions.**
Projects engage and educate people in the community about water quality issues. These projects will result in awareness of water issues and changed behaviors that protect water. Organizations receiving grants will increase their ability to lead and promote clean water efforts.

Note: Stewardship Fund Grants may be used to create new external programs, but are not intended to sustain ongoing efforts. Projects must benefit people who live, learn, and/or work in or near the MWMO watershed. Physical projects must also lie within the MWMO watershed boundaries or drain to receiving water bodies within the watershed.

Table 5. Stewardship Fund Grants

Stewardship Fund Grants	2018	2019	2020
Total no. awarded (no. proposed)	20 (34)	20 (27)	--
Master Water Steward Grants	2 (2)	1 (1)	--
Mini Grants (<i>Total; breakdown by season below</i>)	9 (14)	10 (16)	--
Spring	3 (6)	4 (8)	--
Summer	6 (8)	6 (8)	--
Planning Grants	5 (9)	4 (4)	--
Action Grants	4 (9)	5 (6)	--

Stormwater Park and Learning Center

The MWMO's Stormwater Park and Learning Center hosted several exhibits in 2019. All exhibits were tied to water quality and environmental stewardship. This year's exhibits included Riverlines, a collection of river-related abstract paintings by artist Annie Hejny; Pollinator Pathways, by the Sustainable Communities Partnership Program at the University of St Thomas; and Riding the River, an artistic collaboration between youth from Juxtaposition Arts and Urban Boatbuilders.

In addition to the exhibits, Stormwater Park and Learning Center also hosted The Elm Tree Story Booth, an immersive storytelling experience from the Natural Heritage Project, as well as a performance of the Theater of Public Policy focused on the story of the Mississippi River before and after the Clean Water Act.

Facility tours, programming associated with exhibits, and community events such as Share the River Nordeast brought 430 people from across the watershed into the building and exposed them to the work of the MWMO.

Further development of experiences with the stream table, watershed model, and a free-standing exhibit unit with rotating seasonal displays have enhanced the interpretive space for group programming.

Story Map and 'Path to the River' Tool

In 2016, the MWMO developed a pilot Story Map that featured an interactive "Travel Time Application." This tool used outputs from the MWMO's watershed modeling work to show users that path that stormwater runoff takes from any given point on the landscape to the Mississippi River. Feedback on these tools was excellent and, in 2018, the MWMO began a project to update and expand the pilot Story Map and Travel Time Application.

In 2019, the MWMO and its development partners finalized the new, expanded story map and the Travel Time Application tool (which has been renamed as the "Path to the River" tool). Both tools were published online and linked to the MWMO website in late 2019. In 2020, the MWMO plans to fully integrate both tools into its website and feature them prominently as part of their educational content. The intent of publishing these online, interactive tools is to utilize a novel and interactive format for telling the story of unseen infrastructure and the MWMO's role in managing stormwater.

Website

The MWMO website serves as the main hub for information about MWMO projects and programs. Updates made to the website in 2019 included combining all news content (blog posts, news releases, newsletter content, etc.) into a single, unified news feed, and updating

the navigation menu to include new visual cues that indicate to users where sub-menus are located. The MWMO also began using a website optimization tool (Monsido) that allows it to find and fix broken links and spelling errors, identify accessibility issues, and monitor for web hosting problems.

In 2019, approximately one-third of the MWMO's website visitors accessed the site using a tablet or mobile device.

Table 6. MWMO Website Traffic Overview

Metric	2015	2016	2017	2018	2019
Pageviews	44,929	85,499	98,357	96,610	101,827
Sessions	15,568	30,634	37,634	44,080	48,551
Users	9,049	17,641	23,232	29,418	34,580

Youth Outreach

The MWMO's Stormwater Park and Learning Center hosted 16 groups for "Stormwater 101" programs, the MWMO's signature outreach programming, which utilizes a watershed floor map, a stream table, a watershed model, and on-site stormwater BMPs. More than 330 visitors engaged with staff during these programs to learn about the Mississippi River, stormwater, and water quality.

In partnership with Juxtaposition Arts (JXTA), the MWMO worked with JXTA youth apprentices to build longboards and design river-inspired art that was screen-printed on the boards as part of a project inspired by JXTA's recently completed Skate-Able Art Plaza (an MWMO Action Grant project). The MWMO partnered with Urban Boatbuilders to bring this experience to the apprentices, who are also responsible for the maintenance of the installed raingardens in the plaza. The custom boards and designs were displayed at the MWMO's Stormwater Park and Learning Center, and a community event was held to highlight the project.

In addition to hosting programming, the MWMO partnered on 25 youth events, including Children's Water Festival, the Mde Maka Ska Canoe Festival and MPS STEM and Career Exploration Expo, engaging approximately 760 youth.

Table 7. Communications and Outreach Implementation

Implementation Table	2018	2019	2020
Communications, Outreach and Stewardship Fund Budget	\$250,000	\$250,000	\$250,000
Stewardship Fund Grants Budget	\$250,000	\$250,000	\$250,000
Community Outreach	\$4,074	\$3,112	--
East African Outreach	--	\$6,901	--
Master Water Stewards	\$68,970	\$23,000	--
Mississippi River Green Team	\$11,414	\$26,390	--
Professional Workshops and Trainings	\$11,589	\$13,211	--
Share the River Nordeast	\$2,453	\$2,702	--
Stormwater Park and Learning Center	\$3,035	\$20,412	--
Story Map and Path to the River Tool	\$2,700	\$62,367	
Video Production	\$41,278	--	--
Website	\$14,962	\$5,716	--
Youth Outreach	\$6,442	\$7,918	--

Table 8. Communications and Outreach-Related Watershed Management Plan Goals and Measures Achieved

Number Engaged (by Audience)	2017	2018	2019
Professional	160	170	225
Community	1,452	1,311	1,250
Youth	820	826	1,137

2020 Workplan

- Outreach at community events will continue offering residents resources to take water-friendly actions at home and in their community, including opportunities to make eco-friendly cleaners. Sites will be selected strategically to build relationships with new, underserved, and/or other target audiences, such as those near MWMO-funded projects.
- The MWMO will continue to fund Stewardship Fund Mini Grants, Planning Grants, and Action Grants. Efforts to assist grantees from targeted populations will continue as opportunities to deepen these relationships are growing.
- New Citizen Advisory Committee members will be trained and supported through upcoming Planning and Action Grant reviews as they learn their role. Strategic recruitment of CAC members from underserved populations will continue.

- Information and networking sessions will be offered to volunteers. The framework for implementing volunteers, tracking their hours and recognizing their efforts will be further developed.
- The MWMO will host the Master Water Stewards program to certify and support community leaders.
- The MWMO will host art exhibits that will be on display throughout the year.
- Additional exhibits will be permanently installed at the Stormwater Park and Learning Center.
- The MWMO will pilot a program to educate and engage local policy-makers and community leaders.
- The MWMO will offer training opportunities for professional audiences whose work directly impacts water quality.
- The Mississippi River Green Team will enter its eleventh year, with expanded support and partnerships.
- The MWMO will work to strengthen youth outreach and education within MWMO activity areas and create place-based stewards of water resources.
- The MWMO will work with web developers to continue improving the usability and functionality of its website.
- The MWMO will refine and continue implementing its content strategy using blog posts, email campaigns and social media engagement to reach key audiences.
- An interpretive signage master plan for MWMO project sites will be developed and implemented using MWMO graphic standards.
- The MWMO will launch a new printed product, the “Good Neighbor Guide,” which is designed to educate homeowners and other residents about stormwater BMPs. An outreach campaign will accompany the launch of the product.



Figure 5. MWMO Water Resources Specialist Brittany Faust, *right*, collects a water sample while Monitoring Intern John Mueller uses an electronic sonde to collect data from the Mississippi River on September 5, 2019.

Monitoring

Purpose

The MWMO's water quality monitoring efforts provide a scientific basis for identifying and tracking water quality and quantity issues, and provide information to aid in the selection of projects and evaluate the success of those projects. The MWMO is charged with protecting water quality within the watershed, pursuant to Minnesota Statutes Chapter 103B.201 and Minnesota Rules Chapter 8410.003, which established a Joint Cooperative Agreement among the MWMO's member organizations. Minnesota Rules Chapter 7050 requires that all water bodies comply with water quality standards. Furthermore, section 303d of the Federal Clean Water Act requires states to develop total maximum daily loads (TMDLs) for waters with impaired uses.

Objectives

- Monitor physical, chemical and biological parameters of surface and groundwater resources in the watershed.

- Monitor water quality within the watershed.
- Develop a record of baseline data to characterize water quality and identify pollutants that exceed water quality standards.
- Assess pollutants listed on the Minnesota Impaired Waters list for the TMDL process.
- Collect rate and volume data for the Mississippi River and key subwatersheds.
- Monitor performance of stormwater management practices.
- Collaborate with stakeholders to identify and apply a standardized data collection and assessment approach.
- Develop partnerships and collaborate with other organizations and/or agencies both inside and outside the watershed boundaries to improve water quality in the Mississippi River.
- Assess land use impacts on water quality.
- Participate in the technical development and update of statewide monitoring databases.
- Make data accessible to the public, other organizations, and MWMO staff.
- Develop emergency monitoring plan in case of emergencies affecting water resources.

2019 Implementation

Best Management Practice (BMP) Inspection, Operation, Maintenance and Monitoring

MWMO monitoring staff continued to inspect, operate, maintain, and monitor the St. Anthony Regional Stormwater Treatment and Research System. Biannual inspections were conducted and adjustments were made to the system to improve its functioning. In June 2019 (for the second year in a row), deposited sand and sediment were removed from the system's diversion structure. The quantity and quality of water entering and exiting each component of the facility were monitored in order to assess the treatment systems' effectiveness.

Monitoring continued at the Edison High School Green Campus BMPs, including assessment of water quantity into a reuse tank from various surfaces as well as the amount of water reused for irrigation. Water quality data from the reuse tank was also collected. A parking lot tree-trench was monitored for stormwater flows in and out of the trench. Data were provided to MWMO outreach staff to share with educators at Edison High School.

Other BMP monitoring activities included:

- Precipitation and tank level monitoring continued at the Towerside District Stormwater System.
- Data continue to be collected at BMPs within the MWMO's Stormwater Park and Learning Center site.
- MWMO monitoring staff performed infiltration tests using a Modified Philip Dunne infiltrometer at a number of project sites to assess stormwater management projects' pre-installation infiltration capabilities.

Data Management, Reporting, and Outreach

MWMO monitoring staff started the in-house operation, maintenance, and management of the MWMO's remote monitoring data network in 2018 and all monitoring data are now stored and managed together in one database. MWMO staff continued to collaborate with several other metro-area organizations using the same database software. Monitoring staff also reached out to and met with member cities to assess their monitoring needs and develop monitoring plans.

Water quality data collected by the MWMO are submitted annually to the Minnesota Pollution Control Agency's (MPCA) EQuIS database and summary data are reported on the [monitoring pages of the MWMO website](#). Other data are available upon request to monitoring staff.

Lake and Wetland Monitoring

The MWMO continued to monitor water levels in the Kasota Ponds Wetlands. Water quality and biological sampling will occur on a five-year schedule, with the next round in 2021. In 2019, the MWMO [released a report summarizing data](#) from the past 10 years of monitoring activities at three Kasota Ponds Wetlands.

The MWMO contracts with Anoka Conservation District (ACD) to monitor lake levels and water quality of Sullivan (Sandy) and Highland (Unnamed) lakes. In 2019, the lake levels were recorded weekly and data were submitted to the Minnesota Department of Natural Resources (DNR) LakeFinder database. ACD staff submitted water quality data to the MWMO for the 2019 season.

River Monitoring

Water quality samples were collected twice per month between April and October and once per month from November to February at eight sites on the Mississippi River within MWMO's jurisdiction. Water samples were also collected on bi-weekly basis from eight sites on the Mississippi River for E. coli analysis, specifically for continuing the data collection for the Upper Mississippi River Bacteria TMDL. Staff gauges at six locations along the river were

visited on a weekly basis to track river level changes throughout the year. Bathymetry data were collected in the Mississippi River upstream of the Upper St. Anthony Lock and Dam to a railroad bridge at North 41st Avenue in Minneapolis. This data will be combined with previous and future years' bathymetric data to assess any changes to the river bottom that may be occurring as a result of the Upper St. Anthony Falls Lock Closure in summer of 2015.

Special Projects

Monitoring staff installed and monitored staff gauges in a number of ponds on the Columbia Golf Course in Minneapolis to support a watershed assessment study investigating groundwater flow in and around the golf course for the purpose of determining BMP placement.

Continuing a long-term partnership with the City of Minneapolis Health Department, MWMO monitoring staff worked with interns hired for erosion and sediment control inspections to generate reports and a map of all inspections completed throughout the summer of 2019.

Stormwater Piped and Precipitation Monitoring

The MWMO continued to monitor seven long-term stormwater piped monitoring sites in 2019. At five of those sites, a combination of area/velocity sensors and automated samplers were used to collect water quantity and quality data throughout the year. Those data are used to calculate stormwater runoff volume and annual pollutant loads for the piped areas. Summaries of stormwater runoff volume and other monitoring data is [available on the MWMO website](#).

Additional stormwater pipes throughout the watershed were equipped with flow monitoring equipment to provide stormwater runoff flow data for the calibration and validation of Hydraulic and Hydrologic ("H&H") modeling efforts further discussed in the Watershed Assessment section of this report.

MWMO monitoring staff also worked with staff from the City of Minneapolis to survey for and sample potential illicit discharges from stormwater outfalls emptying into the Mississippi River. Precipitation data were also collected at several manual and automatic gauge sites throughout the watershed.

Table 9. Water Quality Monitoring Implementation

Implementation Table	2018	2019	2020
Monitoring Budget	\$200,000	\$200,000	\$150,000
Bathymetry Project	\$1,400	\$2,500	\$2,500
Data Management Software	\$8,000	\$8,000	\$8,000
Edison High School BMP Monitoring	--	\$1,000	\$1,000
EnviroDIY Datalogging system	--	\$15,000	\$5,000
Laboratory Analysis	\$95,000	\$115,000	\$100,000
Minneapolis Illicit Discharge Monitoring	\$325	\$1,000	\$1,000
Monitoring Equipment	\$30,500	\$35,000	\$25,000
Monitoring Related Training	\$1,300	\$2,000	\$1,000
MWMO's outdoor filter media laboratory Instrumentation	--	--	\$2,500
Real-Time Data Management	\$2,233	\$10,000	\$1,500
St. Anthony Regional Treatment Monitoring	\$255	\$5,500	\$2,500
U of M Impervious Surface Study (Lab and permit costs only)	\$13,884	\$5,000	--

Table 10. Monitoring-Related Watershed Management Plan Goals and Measures Achieved

Monitoring	2017	2018	2019
Number of Stormwater Monitoring Sites	7	7	7
Number of Wetland Monitoring Sites	3	3	3
Number of River Sample Locations	8	7	7
Number of BMPs Monitored	4	5	6

Note: The MWMO is currently gathering long-term trend data. For more detailed monitoring information, visit the [MWMO website](#) or contact [Water Resources Director Udai Singh](#).

2020 Workplan

The 2020 work plan for the MWMO's monitoring program includes:

New Monitoring Initiatives for 2020

- Install additional equipment at the MWMO Stormwater Park and Learning Center's outdoor filter media laboratory to use the instrumented facility for research.

- Work with West Mississippi WMO to monitor the water quantity and water quality at their 65th Avenue stormwater outfall site.
- Assist with updating MWMO's 10-year (2021-2031) Watershed Management Plan.
- Install two stormwater outfall monitoring stations at stormwater tunnels near Hwy 694 in Fridley.
- Complete installation of monitoring equipment at Jackson Pond and start collecting water quality samples to monitor the effectiveness of the Iron-Enhanced Sand Filter BMP.
- Install data loggers to monitor 8th Street Stormwater Planters BMP in Downtown Minneapolis.
- Delineate catchments and investigate connections and groundwater flow, etc., at the Kasota Ponds Wetlands.
- Update the MWMO's long-term monitoring program outlook, including monitoring for emerging issues.

Ongoing Monitoring Efforts

Many of the monitoring activities conducted in 2019 will be continued in 2020, including: stormwater and precipitation monitoring at long-term monitoring sites; Mississippi River monitoring for water quality, bacteria, and bathymetry; continuing inspection, operation, maintenance and monitoring data collection at the St. Anthony Regional Stormwater Treatment and Research System; and monitoring BMPs at the Edison High School Green Campus and selected other sites throughout the watershed. MWMO monitoring staff will continue to work with Anoka Conservation District for monitoring Highland and Sullivan Lakes, and will continue to work with member cities to assess and assist in accomplishing their monitoring needs.

The MWMO will continue to work with the MPCA and other federal, state and local agencies on projects as they arise, including existing Total Maximum Daily Load (TMDL) studies work. Monitoring data will be submitted to the MPCA's EQuIS database, published on the MWMO website, and will be available upon request to MWMO staff, member organizations and researchers.



Figure 6. Restorative Development Summit participants take part in a group exercise on October 4, 2019.

Planning

Purpose

Planning provides direction to the MWMO's activities. Our planning efforts clarify and integrate the MWMO's goals, responsibilities and future courses of action. Through planning, we coordinate implementation of MWMO standards and goals by member organizations, and maintain involvement with Mississippi River regional working groups.

Objectives

- Develop and maintain the MWMO's role in water management.
- Keep the MWMO's Watershed Management Plan current to address new circumstances and changing priorities.
- Develop plans for new watershed initiatives.
- Review and approve local management plans and amendments that impact water and

natural resources.

- Develop consensus among stakeholders for managing resources in the watershed.
- Work with member organizations on the implementation of ordinances, standards, plans, and enforcement.
- Participate in regional working groups for protection and improvement of the Mississippi River.

2019 Implementation

The MWMO completed, continued or began the following planning initiatives in 2019:

A Blue/Green Framework for the Creative Enterprise Zone and Towerside Innovation District

This study initiated by the MWMO and Capitol Region Watershed District (CRWD) is developing a framework for stormwater storage, reuse, and habitat corridors (aka “Blue/Green Infrastructure Systems”) across 700 acres of the Creative Enterprise Zone (CEZ) and Towerside Innovation District (TID). This study uses a large-scale base drawing to help translate various district vision documents and schematic diagrams as it works with responsible parties/property owners to develop specific stakeholder actions, roles and responsibilities for each “Focus Area and Project Opportunity” within the study area. Results from this study will continue to promote district values and district system approaches with a strong focus on project implementation.

Ecological System Plan

The MWMO and the Minneapolis Park and Recreation Board (MPRB) further developed the Ecological System Plan in 2019. The plan provides a framework for how environmental considerations can be addressed in ongoing planning efforts at MPRB, as well as how and where the organization can look to partner with other local, regional and statewide planning organizations to achieve shared environmental goals. As of the end of 2019, the plan has solidified goals and created a series of maps establishing a solid baseline for data associated with stormwater runoff, existing green spaces, vegetation types and habitat corridors, carbon sequestration, and urban heat island effect. The plan should be completed in 2020, and will be utilized as MPRB implements its masterplans for all of the neighborhood and regional parks.

Member City Local Water Plans

In 2019, MWMO staff met with the Cities of St. Anthony Village and Fridley to finalize any requested changes to their plans. The meetings concluded with all cities agreeing to meet the content requirements stated in the MWMO's Watershed Management Plan and approval of their plans by the MWMO Board of Commissioners.

Restorative Development Partnership (Integrated Utility Hub)

In October, the MWMO organized a summit where multiple partner organizations that have been working with the MWMO since 2017 came together to form a partnership that would take a role in advancing a city-wide feasibility study for a restorative development pilot project in Minneapolis. See the [Restorative Development website](#) for more on the expectations and responsibilities of the partners.

Towerside District Stormwater and Reuse System Administration and Committee Membership

In 2019, the MWMO worked to improve the quality of water for reuse in the Towerside District Stormwater System by adding an ultraviolet (UV) treatment system. The MWMO, Minneapolis Park and Recreation Board (MPRB), and Prospect Properties established ownership, operational and reuse agreements that resulted in the shared design and construction of a shelter that provides a public park amenity and allows visitors to learn more about UV treatment and reuse in the new Towerside Park.

The MWMO also worked with the developers Aeon and Oppidan to plug in to the Towerside District Stormwater System and begin reusing water from the system. It also provided all owners an annual report on operations and maintenance (O&M) expenses and fees paid into the owners O&M escrow.

The MWMO continued its membership on the Towerside Technical Advisory Committee, which consists of a mix of experts on stormwater, energy, zoning, affordable housing, architecture, public realm, restorative systems, etc., who will provide support services for the neighborhood review committees that approve development projects in the area prior to the plans advancing to the cities.

Towerside District Stormwater System and Habitat Initiatives

In 2019, this project transitioned from Planning to Watershed Assessments. (See the "Towerside District Stormwater Phase II: Shared Concept Design" in the Watershed Assessments section.)

Table 11. Planning Implementation

Implementation Table	2018	2019	2020
Planning Budget	\$50,000	\$50,000	\$150,000
A Blue/Green Framework for the Creative Enterprise Zone and Towerside Innovation District	--	\$40,000	--
Ecological System Plan	\$78,480	--	--
Member City Local Water Plans	--	--	--
Restorative Development Partnership (Integrated Utility Hub)	--	--	\$35,000
Towerside District Stormwater and Reuse System Administration and Committee Membership	--	--	--

Below is an evaluation of progress made towards MWMO's Watershed Management Plan goals via planning initiatives undertaken.

Table 12. Planning-Related Watershed Management Plan Goals and Measures Achieved

Planning	2017	2018	2019
New Initiatives and Related Studies Started	7	7	5
New Initiatives Resulting in CIP Outcome	4	--	1
New Initiatives Resulting in Policy Change	1	--	--
New Initiatives Resulting Partnership Agreements	1	3	1
Amendments Completed to Maintain WMP Relevance	--	3	2

2020 Workplan

In 2020, the MWMO will:

- Continue working with the Minneapolis Park and Recreation Board (MPRB) on the Ecological System Plan. The goals and strategies have all been revised, and MPRB is writing the final plan language. The MWMO and the MPRB hope to finalize and adopt the plan in 2020, utilizing it in future planning initiatives shortly thereafter.
- Continue working with member cities on implementing ordinances equal to the standards in the MWMO's Watershed Management Plan.
- Continue to work with members of the Restorative Development Partnership to advance the Minneapolis-wide Restorative Development feasibility study. Partners will work together to submit joint grant applications, and contribute content to the feasibility via individual and full partnership virtual meetings.
- Finalize a fourth amendment to the Owners Stormwater Declaration and Easement Agreement for the addition of the ultraviolet (UV) treatment facility in the new Towerside Park, which will result in an operational UV treatment system that provides water to the park's irrigation system and community gardens. The MWMO will also start a fifth amendment to the Owners Stormwater Declaration and Easement Agreement to document changes to the system due to 2019 construction activities.
- Complete the Blue/Green Framework for the Creative Enterprise Zone and Towerside Innovation District, using science and engineering to continue building out a system of stormwater storage, reuse, and habitat corridors in this region by collaborating with Capitol Region Watershed District (CRWD), the City of Minneapolis, the Minneapolis Park and Recreation Board (MPRB), developers and other key stakeholders.



Figure 7. Paddlers near the Upper Harbor Terminal redevelopment site during the MWMO's annual Share the River event on June 26, 2019. The MWMO is working with member organizations and community partners to develop a district stormwater plan for Upper Harbor Terminal.

Watershed Assessment

Purpose

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.

Objectives

- Conduct assessments within the watershed to define the ecological, physical, biological, cultural, social, economic, organizational and political characteristics of the MWMO.
- Conduct project-based diagnostic and feasibility studies.
- Provide information to support other MWMO projects and activity areas.

- Provide watershed information to organizations both inside and outside the MWMO's boundaries.

2019 Implementation

The MWMO completed the following Watershed Assessment activities in 2019:

1NE Watershed Stormwater Management Planning and Preliminary Design

The MWMO has continued its partnership with the City of Minneapolis and Minneapolis Park and Recreation Board (MPRB) to improve stormwater management, increase flood resiliency, reduce pollutant loading to the Mississippi River, and improve ecological function within the 1NE Watershed. Following an in-depth evaluation of different stormwater management options, a 50-percent design was completed in 2019 for a series of stormwater best management practices (BMPs) on the Columbia Golf Course and Columbia Park in Northeast Minneapolis. These BMPs will treat polluted runoff from a previously untreated 612-acre drainage area. In addition to keeping pollutants out of the nearby Mississippi River, the project will help to reduce flooding and will enhance the area's ecology.

Analysis of Runoff from Impervious Surfaces in Downtown Minneapolis

The runoff response of urban watersheds is dominated by impervious surfaces. Understanding the entrainment and transport of potential contaminants on urban surfaces is necessary for the development and implementation of sound water-management practices. An analysis of runoff from impervious surfaces study project was undertaken beginning in 2016. The project goals are to gather and analyze data from four impervious surface types (streets, sidewalks, parking lots, and rooftops) in downtown Minneapolis.

In 2017, rainfall simulations and subsequent runoff sampling was conducted on three sites each for street, sidewalk, and parking lot locations in downtown Minneapolis during both the summer season (July and August) and the fall season (October). Automated sampling equipment was installed at two rooftop sites in downtown Minneapolis to collect samples during actual rainfall events. Due to the outdoor plumbing at one site, equipment had to be removed during winter, while the other site was left in operation to collect melt samples from the rooftop. In 2018, sampling continued at all roof runoff sites during spring, and final sets of field experiment data were collected.

In 2019, the data collected during the study was organized and evaluated by principal investigators from University of Minnesota and a final report was submitted to the MWMO. The MWMO's staff reviewed the final report and made it available on MWMO website. MWMO staff continues to work with University of Minnesota researchers to determine next steps with the study.

Columbia Golf Course Field Investigations

As part of the MWMO's work to improve stormwater management, increase flood resiliency, reduce pollutant loading to the Mississippi River, and improve ecological function within the 1NE Watershed, the MWMO and the Minneapolis Park and Recreation Board (MPRB) have continued their partnership to collect groundwater and surface water data in the southern portion of Columbia Golf Course. These efforts are meant to help the partners better understand the groundwater-surface water interactions in this portion of the Golf Course, which is a former lakebed. Results of the work will be used to inform future planning and engineering of stormwater management techniques in the southern portion of the 1NE Watershed.

Islands of Peace and Riverfront Regional Park Feasibility Study

Staff worked with Anoka County Parks (ACP) to conduct a feasibility study in 2019 to look at potential bank stabilization and habitat restoration opportunities at both Riverfront Regional and Islands of Peace (IoP) Parks. ACP is reconstructing IoP in the summer of 2020. The study developed a restoration plan that could align with the IoP construction schedule. The IoP project will stabilize the riverbanks of the park with bioengineering, as well as use adaptive management of the vegetation on the island to be more beneficial to pollinators and other wildlife that inhabit the park and larger natural space in the area.

The MWMO will use the feasibility study to inform future stabilization techniques used to stabilize the banks at Riverfront Regional Park as well. There, MWMO has been monitoring the erosion through bank pins. The study further identified high risk areas to prioritize stabilization work. Access may be difficult, but there is also great opportunity to achieve long-term bank stabilization on the 7,000 linear feet of shoreline of the Mississippi River.

Restorative Development Feasibility Study: Integrated Utility Hub

In 2019, the MWMO wrote grants and met individually with Minneapolis leadership to generate support for a Restorative Development Feasibility Study. These meetings and additional grant writing resulted in \$445,000 in grants from the Minneapolis Department of Sustainability, the McKnight Foundation, and the MWMO. In October, the MWMO organized a summit where multiple partner organizations came together to form a partnership that is advancing a city-wide feasibility study for a restorative development pilot project in Minneapolis.

Towerside District Stormwater Phase II: Shared Concept Design

In 2019, the MWMO, Minneapolis Park and Recreation Board and Wall Development Company advanced the design alternatives to a single shared concept design that included privately owned public spaces, an extensive district stormwater system with habitat corridors, and

a regional linear park system. Following reviews by UMN's Facilities Management and Minneapolis Public Works, the MOU team decided to continue with a more detailed design that includes opportunities for future energy, water, and food closed-loop systems.

Upper Harbor Terminal District Stormwater Feasibility Study

The MWMO met with the City of Minneapolis, the Upper Harbor Terminal development team, the Minneapolis Park and Recreation Board (MPRB), and neighborhood representatives to develop content for a preferred district stormwater plan that meets MWMO and partner goals at Upper Harbor Terminal. The plan will be the basis for a final 30-percent design and cost/benefit analysis. This integrated district stormwater system will also treat regional stormwater and improve habitat connectivity between the Mississippi River and surrounding neighborhoods

Watershed-Scale H&H and Water Quality 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 its member communities to better understand the functioning of our stormwater systems, as well as prioritize the placement and design of future capital projects.

The MWMO is divided into multiple project areas for this effort. The following areas had modeling projects ongoing in 2019:

- Como Tunnel and SEMI-URP Area of Minneapolis (2,300 acres) and a portion of the University of Minnesota Campus 417 acres). The MWMO worked with the City of Minneapolis to create an H&H model of this area in 2019, which will be finalized in 2020.
- East Minneapolis Region: a 4,300-acre portion of Minneapolis. The MWMO worked with the City of Minneapolis in 2019 to create a P8 water quality model of this area, which will be finalized in 2020.
- Northern Columbia Heights, Fridley and Hilltop Region: a 2,300-acre area covering the northern-most subwatershed of the MWMO. The MWMO worked to create both H&H and water quality models of this area, which was completed in 2019.

Table 13. Watershed Assessment Implementation

Implementation Table	2018	2019	2020
Watershed Assessment and Research Program Budget	\$775,000	\$500,000	\$200,000
1NE Watershed Stormwater Management Planning and Preliminary Design Project	\$128,767	\$89,383	--
Analysis of Runoff from Impervious Surfaces in Downtown Minneapolis	\$47,178	--	--
Columbia Golf Course Field Investigations	--	--	--
Islands of Peace and Riverfront Regional Park Feasibility Study	--	--	--
Lincoln School Playground Stormwater Feasibility Study	\$4,500	--	--
Nicollet Island Upland Restoration Plan	\$2,800	--	--
NorthPoint Health and Wellness Center Expansion Feasibility Study	\$33,250	\$33,845	--
Restorative Development Feasibility Study: Integrated Utility Hub	--	\$112,361	--
Towerside District Stormwater Phase II: Shared Concept Design	--	\$10,000	--
Upper Harbor Terminal District Stormwater Feasibility Study	\$44,999	\$55,427	\$18,000
Watershed-Scale H&H and Water Quality Modeling	\$358,035	\$114,825	\$420,000

2020 Workplan

In 2020, the MWMO will:

- Continue work on the H&H and water quality modeling projects that are underway.
- Continue sponsoring studies to explore the feasibility and potential benefit of capital projects, as needed.
- Continue to work with Minneapolis Park and Recreation Board (MPRB) and Wall Development Company on the Towerside District Stormwater Phase II Shared Concept Design, bringing additional partners to the table to assist with seeking grants and providing funding to advance the existing shared concept design to a 30-percent design. The partners will maintain focus on creating an integrated district system that includes privately owned public spaces, an extensive district stormwater system with habitat corridors, a regional linear park system, and opportunities for future energy, water, and food closed-loop systems.

- Work with the City of Minneapolis, the Upper Harbor Terminal development team, the Minneapolis Park and Recreation Board, and neighborhood representatives to develop a shared public / private district stormwater plan and 30-percent design that meets the community, MWMO, and partner goals at Upper Harbor Terminal. This integrated district stormwater system will also estimate onsite regional stormwater treatment and options for habitat connectivity between the Mississippi River and surrounding neighborhoods.
- Complete Phase I of the Restorative Development Feasibility Study and seek \$550,000 in additional funding to complete Phase II of the feasibility study. Results of the Feasibility Study's Phase I will provide the information needed to advance to Phase II, which can begin as soon as sufficient funds are raised. This will allow the Partnership to make decisions on financing, governance, proposed restorative development lines of production, technical performance outputs, community services and benefits, integration of development with surrounding natural systems, and integration of development with the city's existing infrastructure. See the [Restorative Development website](#) for details.
- In collaboration with the University of Minnesota's Department of Bioproducts and Biosystems Engineering and the University of Minnesota—Duluth's Natural Resources Research start a research study at the MWMO's outdoor filter media laboratory to study the comparative effectiveness of Iron, Iron Enhanced Sand Filter, and Biochar filter media to reduces pollutants from urban stormwater runoff.
- Collaborate with University of Minnesota's Department Bioproducts and Biosystems Engineering on improving the design of cost-effective and easy-to-operate monitoring instruments and equipment to monitor water quantity and quality of stormwater runoff from impervious surfaces in watershed.

Financial Information

Policy

During plan development (1997-2000), the MWMO acknowledged the limits of its member communities to incur additional financial expenses and therefore developed strategies for new funding mechanisms. The MWMO sought inclusion on the list of Special Taxing Districts (MS Chapter 275.066); and, in 2001, MWMO became the first joint powers WMO to receive levy authority. This funding is necessary to implement plan goals and objectives of the watershed management plan. Taxes are levied in accordance with procedures specified in the Joint and Cooperative Agreement (JCA) and Minnesota Statutes 103B.201 – 103B.255 and the Metropolitan Surface Water Management Act (Act), and are subject to limitations set forth in Minnesota Tax Statutes, the Act, the JCA and the Watershed Management Plan. It is the Board of Commissioners' policy to use funds raised in the most effective and efficient manner possible. The MWMO completed an update to its comprehensive plan in 2011 which changed the way projects are selected for inclusion on the CIP. This was amended in May 2015 with a minor CIP Schedule update occurring in September 2016.

The MWMO will continue to coordinate its CIP with those of its members. Projects are required to have feasibility studies completed that describe estimated water quality and quantity benefits and habitat or resource protection and improvement prior to the MWMO committing funds to the construction of the project. This means anyone wishing to partner with the MWMO will need to invite the watershed to the table early in project design and assessment. The MWMO believes this will improve the project selection process and allow for better budgeting.

Budget

In general, the MWMO follows the following process to set its annual budget and select capital projects to which grant funding is allocated:

- Seek and receive project proposals from members by May of the prior year.
- Submit a draft budget and amended CIP at the July board meeting.
- Select proposed projects for the next fiscal year at the September board meeting.
- Submit a preliminary budget to counties by September 30.
- Make the updated CIP final and approve a final budget at the November board meeting.
- Submit a plan amendment, if needed, to the Minnesota Board of Water and Soil Resources.
- Submit final levy documents to Anoka, Hennepin and Ramsey Counties by December 15.

Table 14. MWMO Budget**2019 Budget**

Projects and Initiatives	\$3,500,000
Capital Asset Replacement Fund	\$270,000
Administration	\$1,875,000
Subtotal Budget	\$5,645,000
Contingency 1.0% (Uncollected Levy)	\$55,000
Total Budget	\$5,700,000

Capital Projects and Initiatives	\$3,500,000
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Capital Projects	\$2,500,000
Annual CIP Grants and Projects (Per Plan Adoption)	\$150,000
Greening ROW	\$700,000
Saint Anthony Lane South Industrial Park	\$250,000
Gauvitte Park Area Water Quality Improvements and Flood Protection	\$500,000
Huset Park Water Reuse and Water Quality Improvements	\$900,000

Initiatives	\$1,000,000
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Communications and Outreach	\$250,000
Planning	\$50,000
Monitoring	\$200,000
Watershed Assessments (Research, Hydrologic and Hydraulic Studies)	\$250,000
Stewardship Grant Fund	\$250,000

Administration	\$1,875,000
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Staff Salary and Benefits	\$1,600,000
Commissioner Expenses	\$5,000
Office Admin: Energy, Repair, Equipment, and Supplies	\$110,000
Service Providers - Legal, Engineering, IT, Auditor	\$160,000
Operating Reserve (additional funds are not needed in 2017)	\$0

Line items in the 2019 budget with no money raised in the current fiscal year does not mean there is no money available to the line item. Rather, it means additional funds did not need to be raised in the current fiscal year. For additional financial information, including the 2019 audit, go to mwmo.org or contact [Douglas Snyder, Executive Director](#).

Each year the MWMO receives a Certification of Apportioned Levies from the Minnesota Department of Revenue. This chart is then used by the three counties in the MWMO to apportion the levy. The following table represents the estimated breakout of levies for each county within the MWMO for 2019.

Table 15. Certification of Apportioned Levies

**District 072 - Middle Mississippi River Watershed Management Organization
Certification of Apportioned Levies
Payable 2019**

(1) Payable 2017 Property Tax Levy		\$5,700,000	
County	(2) Payable 2016 Taxable Net Tax Capacity	(3) Net Tax Capacity Percent Distribution	(4) Apportioned Payable 2017 Levy (1x3)
ANOKA COUNTY	\$19,099,962	6.2287%	\$355,039
HENNEPIN COUNTY	\$285,920,097	93.2423%	\$5,314,810
RAMSEY COUNTY	\$1,622,079	0.5290%	\$30,152
WATERSHED TOTAL	\$306,642,138	100.0000%	\$5,700,000

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