



MCES Water Resources 2017 Update

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BCWMC 4-19-18



The Water Resources group of Metropolitan Council Environmental Services (MCES) strives toward clean, healthy, and sustainable water resources in the seven-county Twin Cities region. Our work ensures the Council and other organizations can make informed decisions to protect our region's water resources.



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This *2017 Update* highlights our work last year and shares some of our plans for the coming year. It covers our monitoring efforts and highlights some of our contributions supporting water resource management across the region. Feel free to contact us with any questions about the Water Resources group.



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ATTENTION WATER PROFESSIONALS!

Announcing the Twin Cities Water Monitoring and Data Group

Recently, we responded to a growing need for communication and collaboration between water professionals in the region. We teamed up with other organizations to launch the Twin Cities Water Monitoring and Data Assessment Group (TC-WaMoDaG). This group provides the opportunity for public-sector professionals to come together and discuss water resource issues.

The first official meeting was in December 2017, with 58 people from 35 organizations attending. The participants shared information about their monitoring and assessment programs and discussed common issues they face.

Moving forward, TC-WaMoDaG plans to hold two meetings a year. Each meeting will have a theme related to water monitoring, analysis, or data management. To get involved, please visit the TC-WaMoDaG website at <https://sites.google.com/view/tc-wamodag/>. There, you can find more information about the group and the steering team guiding the effort, sign up for the email communication list, and join the discussion forum. Participation in TC-WaMoDaG is limited to employees of public entities or consultants representing a specific public entity.



PLANNING FOR THE FUTURE

Local Water Management Plans

Cities and townships in the seven-county Twin Cities region must update their comprehensive plans every 10 years, according to the Metropolitan Land Planning Act. This includes a local water management plan, which addresses water quality and quantity issues. Minnesota Rules Chapter 8410 requires that all local water management plans must be updated anytime in 2017 or 2018. The local water management plan is reviewed by the Council and is approved by the appropriate watershed organization(s). As of March 2018, 36 of an expected 182 plans have been submitted and reviewed. More information and resources about updating the plan can be found at <https://metro council.org/Handbook.aspx>.

Important Notes

- Updated local water management plans are due in 2017 or 2018
- Plans should be sent to the Council for review at the same time they are submitted to the watershed(s)

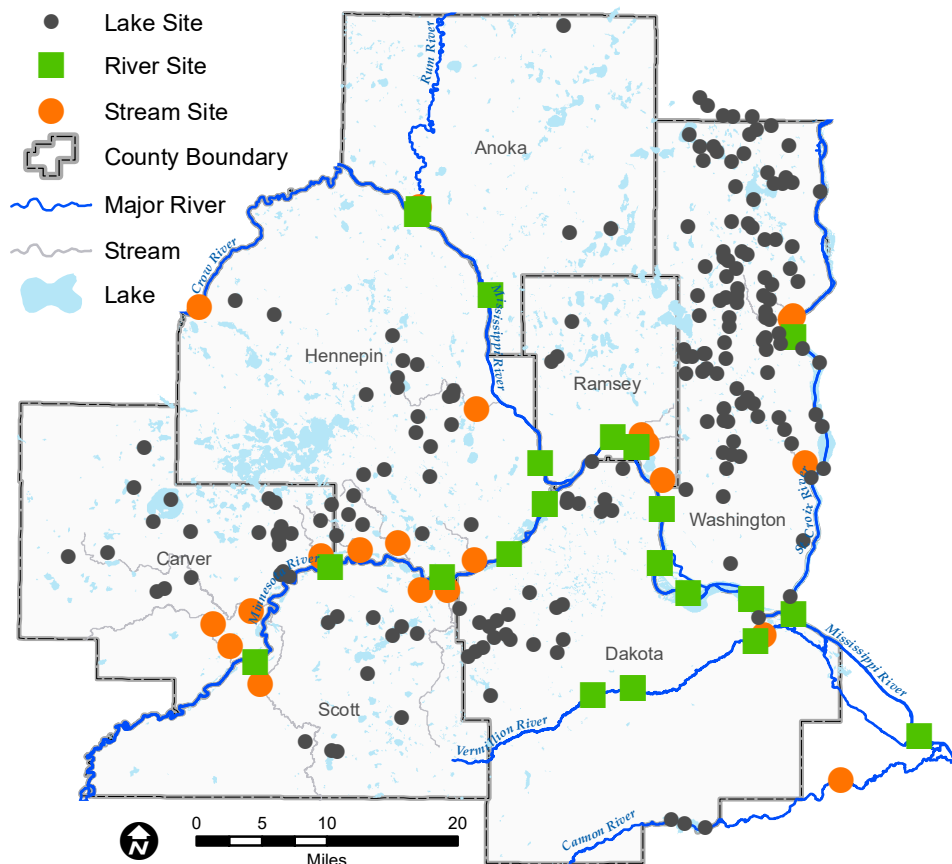
UNDERSTANDING OUR WATER RESOURCES

Water Monitoring

In 2017, we continued our long-term monitoring programs and sampled 243 locations in 210 lakes, rivers, and streams across the region, often with the help of other organizations and citizens. We collected discrete and continuous water quality data, stream flows, and stream and river biological data. The data are used to understand the current water quality conditions and for a variety of other reasons, such as evaluating compliance with water quality standards, identifying pollution sources, calculating trends, and aiding in water resource management decisions. For more information about our monitoring programs, visit: <https://metro council.org/Wastewater-Water/Services/Water-Quality-Management.aspx>.

In response to feedback from our partners, we set a goal this year to publish our data earlier than we have in previous years. The release dates of the data are shown below. Finalized water quality and flow data are available to download at: <https://eims.metc.state.mn.us/>. Please contact us to request biology data.

MCES 2017 Surface Water Monitoring

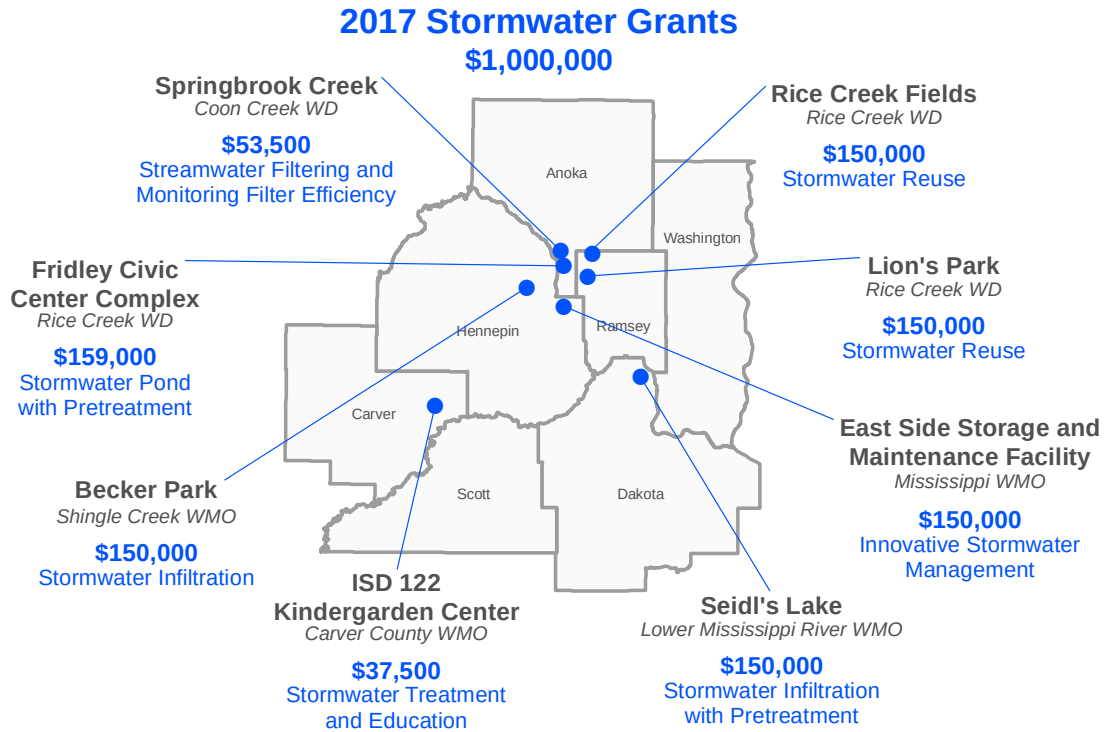


	Lakes	Major Rivers	Streams
Monitored Waterbodies	186	5	19
Sampling Sites	202	21	20
Date of Data Availability	Water Quality: 2-26-2018	Water Quality: 2-9-2018 Biology: 2-13-2018	Water Quality: 2-6-2018 Flow: 2-16-2018 Biology: 2-21-2018

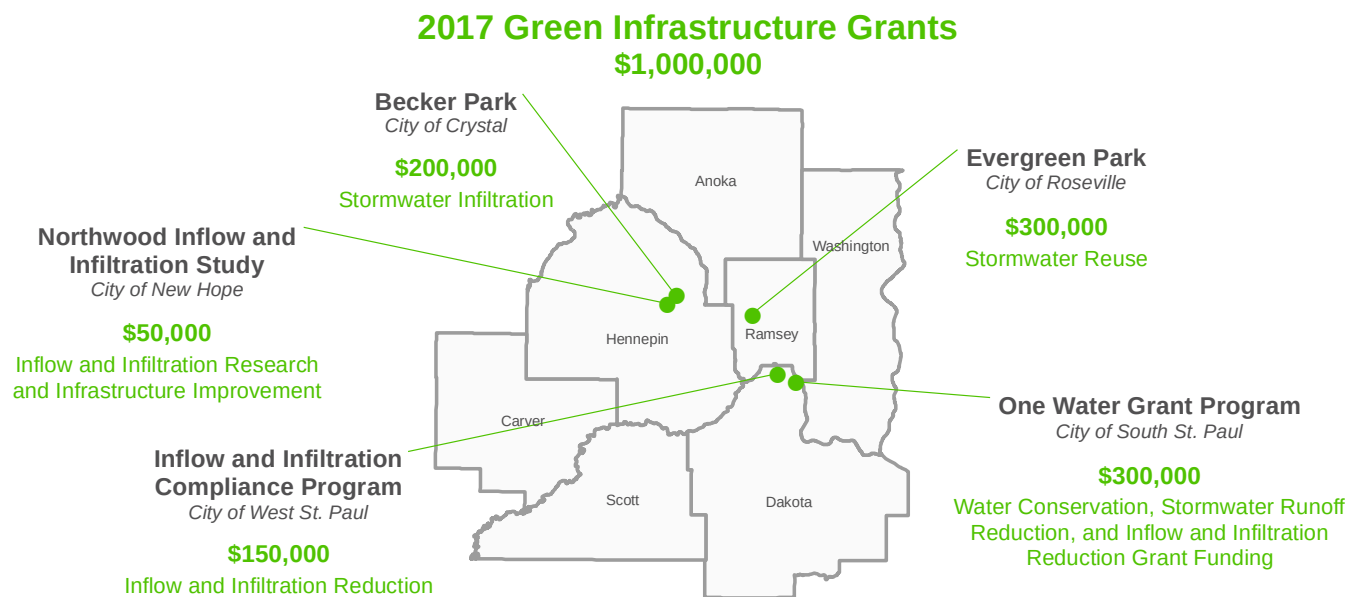
SUPPORTING INNOVATION

Stormwater and Green Infrastructure Grants

The Council approved two grant programs to help fund water-related projects across the metro area in 2017. The Council awarded \$1 million in stormwater grants for eight projects that featured innovative ways to treat or manage stormwater. The stormwater grants will not be available in 2018.



The Council awarded another \$1 million in green infrastructure grants for five projects that solve water-related problems with an integrated approach, which is a method that considers multiple impacts of a project. These projects address water issues such as water reuse, stormwater management, and inflow and infiltration. The green infrastructure grants will not be available in 2018.



MONITORING GREEN INFRASTRUCTURE

Innovative Stormwater Management at Empire Wastewater Treatment Plant

Since 2014, the Council has installed several innovative environmental projects at its Empire Wastewater Treatment Plant in Empire Township. They include habitat improvement in the Vermillion River, restoration of a 50-acre wetland, and construction of a stormwater treatment train, which is a chain of infiltration basins (rain gardens), a green roof, permeable pavers, and swales.

The projects were installed for their environmental benefits but also to demonstrate how well they work in an industrial setting. We recently monitored some of the projects to see how they have been performing. In fall 2017, we measured if the permeable pavers and rain gardens successfully infiltrated stormwater into the ground as designed or if they had become clogged. This information allows us to prioritize areas that need maintenance and learn how to improve any future installations at other locations.

We followed a standard method to test the drainage of the permeable pavers. Some areas of pavers drained well, but others, especially those in high traffic areas, were almost completely clogged. To measure the infiltration rates in the rain gardens, we purchased an MPD infiltrometer from Upstream Technologies (pictured, right). We found that the infiltration capacity varied within each rain garden, but each had areas with high infiltration rates to accommodate the property's stormwater drainage.



STARTING A CONVERSATION

The 25 by 25 Initiative

In 2017 the Council joined six state agencies to support Governor Dayton's 25 by 25 initiative, an effort to improve water quality in Minnesota 25 percent by 2025. The initiative did not add new regulations, but instead was a call for Minnesotans to think about their water values and the improvements in water they'd like to see.

Minnesotans provided feedback by attending meetings held throughout the year. More than 2,000 people attended one of 10 townhall meetings held across the state, more than 500 participated online and at community water meetings, and hundreds of fourth-graders interacted with 25 by 25 at the annual Children's Water Festival. Special sessions were also held for water professionals from public agencies. Water Resources and other Council staff were heavily involved with planning these meetings and organizing the feedback.

The initiative produced more than 3,500 diverse comments on water quality goals and actions. The most common themes were the need for improvements in education, communication, and engagement; reducing runoff by holding water on the land; working together across levels of government and with the public to solve water quality problems; and locally led watershed planning efforts to protect and improve water quality. Leaders from state agencies and Metropolitan Council worked together to summarize these key ideas into priority actions that will make a real difference to water quality. These priority actions are now being considered by the Governor's Office.

LOOKING AHEAD

Planned work in 2018

Publish a River Trend Assessment

We will publish a river trend assessment report in 2018. This report documents changes in water quality of the Mississippi, Minnesota, and St. Croix Rivers in the metro area from 1976 to 2015. It also explores recent water quality in the rivers and identifies long-term changes of several key parameters using the model QWTREND.



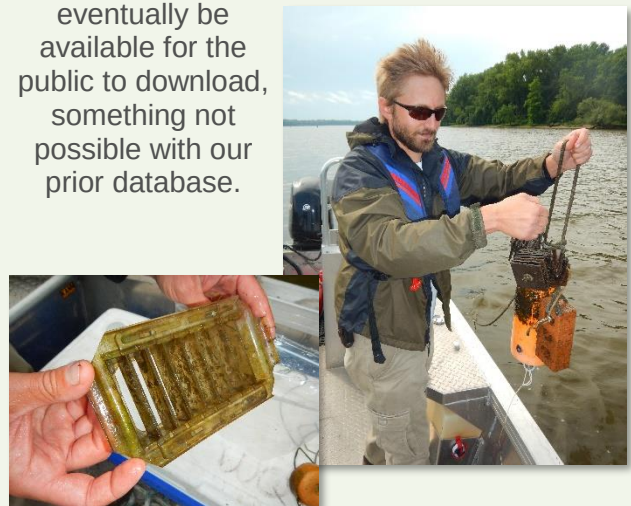
Transition to a New Database

In 2017, we purchased the Water Information System by KISTERS (WISKI) to improve the management of our data. Much of 2018 will be spent transitioning data from our previous internally-developed database into WISKI and exploring the opportunities the new software provides. Our data portal (EIMS) will continue working as normal throughout the transition process.

Process Biology Data

Last year, we continued biological monitoring in streams and resumed biological monitoring in the major rivers after a seven-year break.

We will continue this monitoring in 2018, process and assess the data, and continue refining our programs. Additionally, we will enter our biology data into the new WISKI database so it will eventually be available for the public to download, something not possible with our prior database.



Revise Our Strategic Plan

In 2018, we will update our strategic plan for the Water Resources group. We aim to collect internal and external feedback on the work we do and use that feedback to improve and align our services to maximize their value. If you are interested in talking to us about the work we do or learning more about this effort, contact Judy Sventek at 651-602-1156 or judy.sventek@metc.state.mn.us.

Update the CAMP Program

Changes to the Citizen Assisted Monitoring Program (CAMP) are coming in 2018 and 2019. These changes are designed to address the program's efficiency, to improve the timeliness and availability of final data and reports. Detailed information was sent to CAMP sponsors in January 2018. The main changes for the 2018 monitoring season focus on maintenance of the monitoring kits and sample management. Additionally, we plan to create an online program to provide information and training for CAMP volunteers. For the 2019 monitoring season, the participation fees will be increased to cover the increased costs to run the program after a 16-year flat rate. Please contact Brian Johnson at Brian.Johnson@metc.state.mn.us with any questions.