

Information Item: Water Resources Education & Outreach

Jennifer Kostrzewski, Principal Environmental Scientist
Casandra Champion, Principal Environmental Scientist

Environment Committee: December 10, 2019



Water Education & Outreach

3 Rivers
40 Streams
950 Lakes

Science is not finished
until it is communicated.

Sir Mark Walport, Chief Scientific Advisor to UK Government
2013-2017



Collaboration Outcomes

Education

Outreach

Collaboration

Advancing Sustainable Water Policy
Promoting Equitable Water Education
Preserving & Protecting Water Resources
Increasing Water Monitoring Capacity
Modeling Environmental Stewardship
Creating Informed Customers
Developing Future Workforce
Furthering Water Advocacy
Demonstrating Leadership
Cultivating Water Literacy
Using Resources Wisely
Engaging Stakeholders
Nurturing Relationships
Building Trust

Improved Water Quality

Student Engagement

Children's Water Festival

1,300 fourth graders gather at the State Fair grounds to learn about water resources how water connects all life on earth

Pollution Prevention Day

600 fourth graders gather at Rambling River Park in Farmington, MN to learn about water resources and preventing water pollution

Classroom Visits

Water Resources staff collaborate with teachers to design lessons to supplement classroom learning about the water cycle and water infrastructure

Wastewater Treatment Plant Visits

Water Resources staff provide information about STEM careers, water resources, water infrastructure, and the history of MCES to visiting students



Teacher Externship



A collaboration with Twin West Chamber of Commerce that sparks interest in Science, Technology, Engineering and Math (STEM) careers.



Water Resources staff provided real-life case studies and data sets to fit into high school classroom curricula.



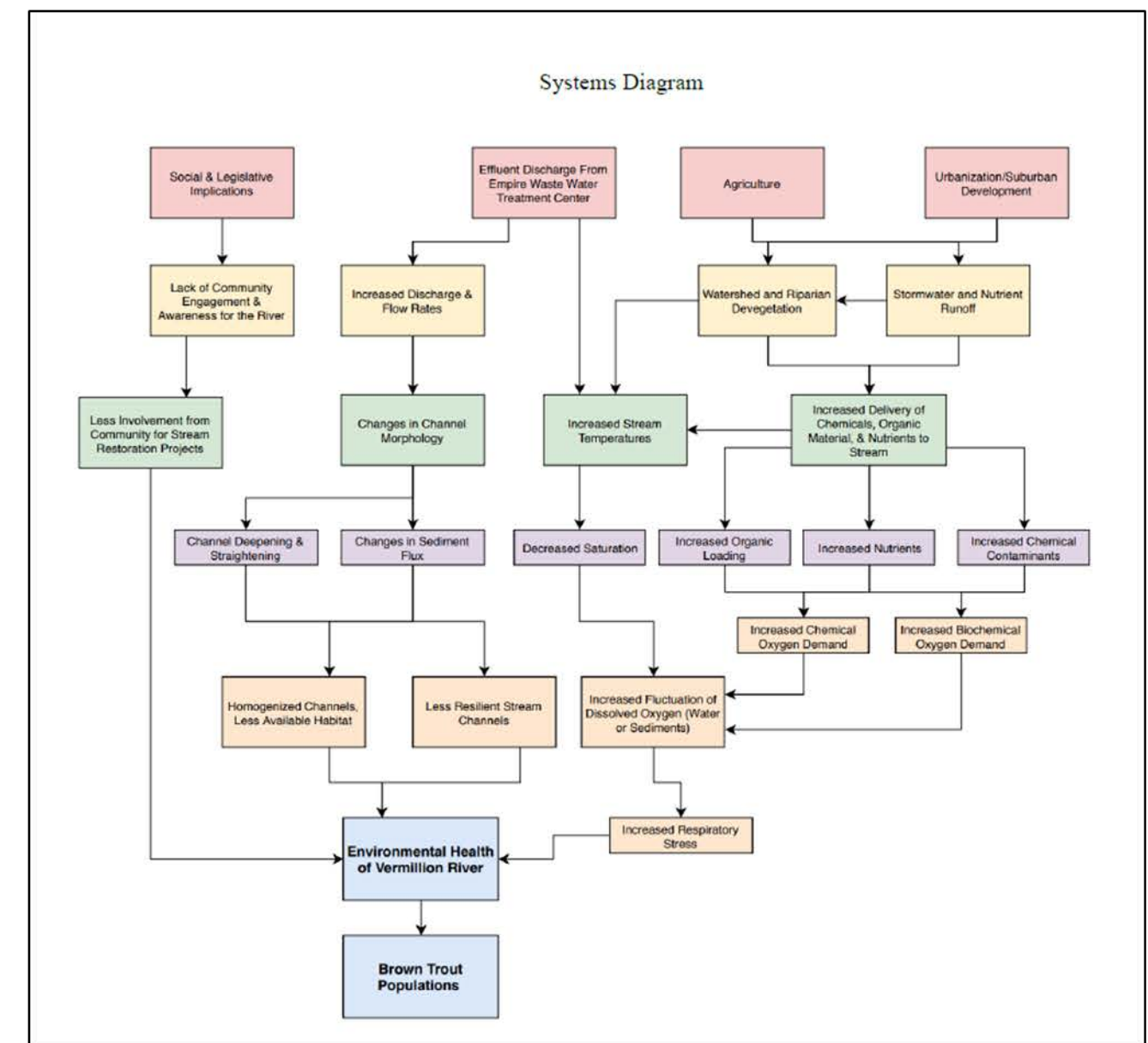
“...students want that real-world connection and visiting these different employers has helped me understand how I can incorporate that into the classroom.”

Rachel Bell, Math Teacher at Lionsgate Academy

Sustainable Communities Partnership



Water Resources staff developed and guided a student project for the University of St. Thomas. Students gained hand-on training in professional STEM techniques and principles. MCES gained unique information about our regional water resources.

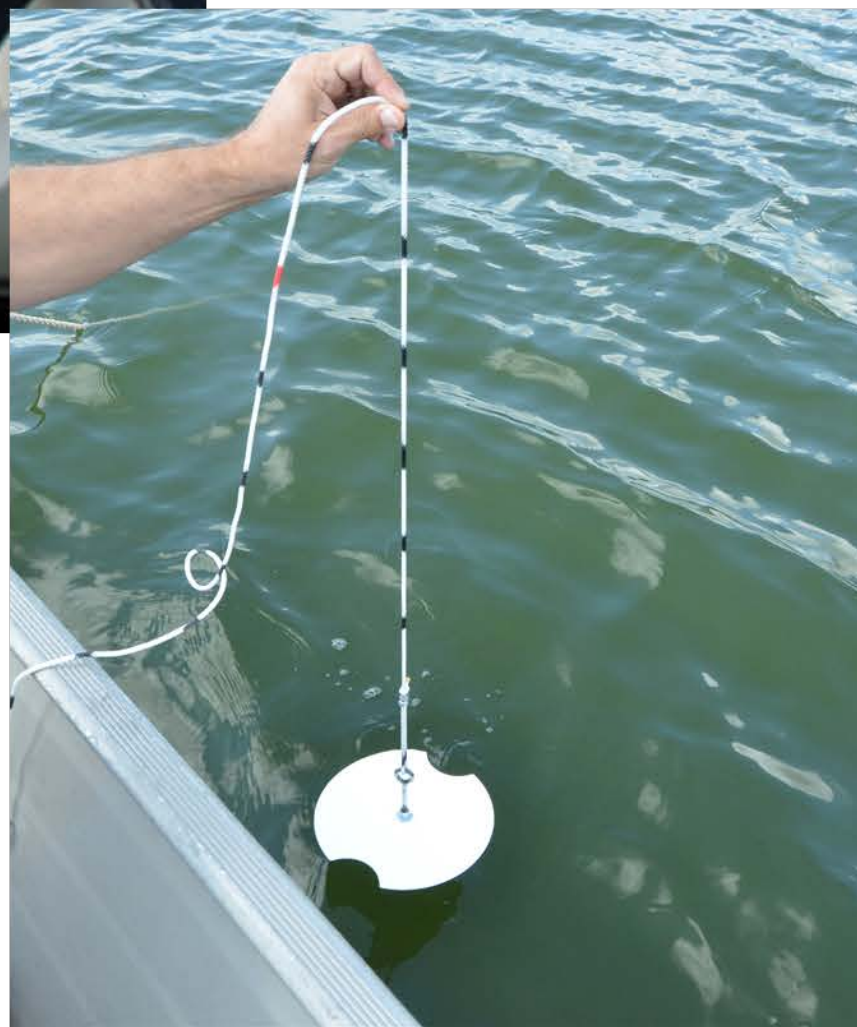


I am learning skills in professional environmental analysis and... how crucial it is for interdisciplinary thinking and communication when it comes to solving and addressing environmental problems from a business perspective

Jenna Abrahamson, UST Student

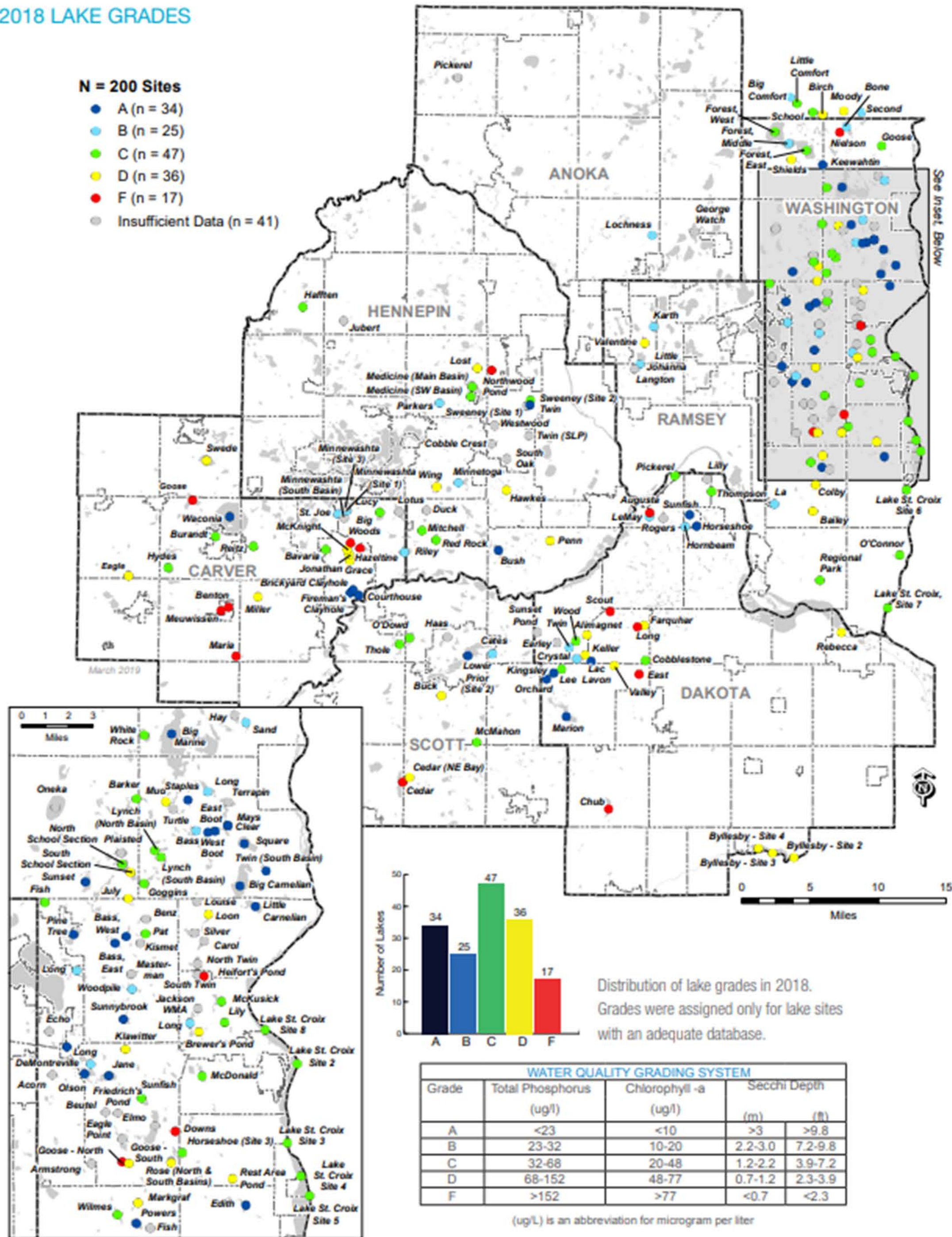
CAMP

The Citizen-Assisted Monitoring Program (CAMP) efficiently expands regional lake monitoring and addresses local priorities while engaging citizen scientists who advocate for water quality.



2018 LAKE GRADES

- N = 200 Sites**
- A (n = 34)
 - B (n = 25)
 - C (n = 47)
 - D (n = 36)
 - F (n = 17)
 - Insufficient Data (n = 41)



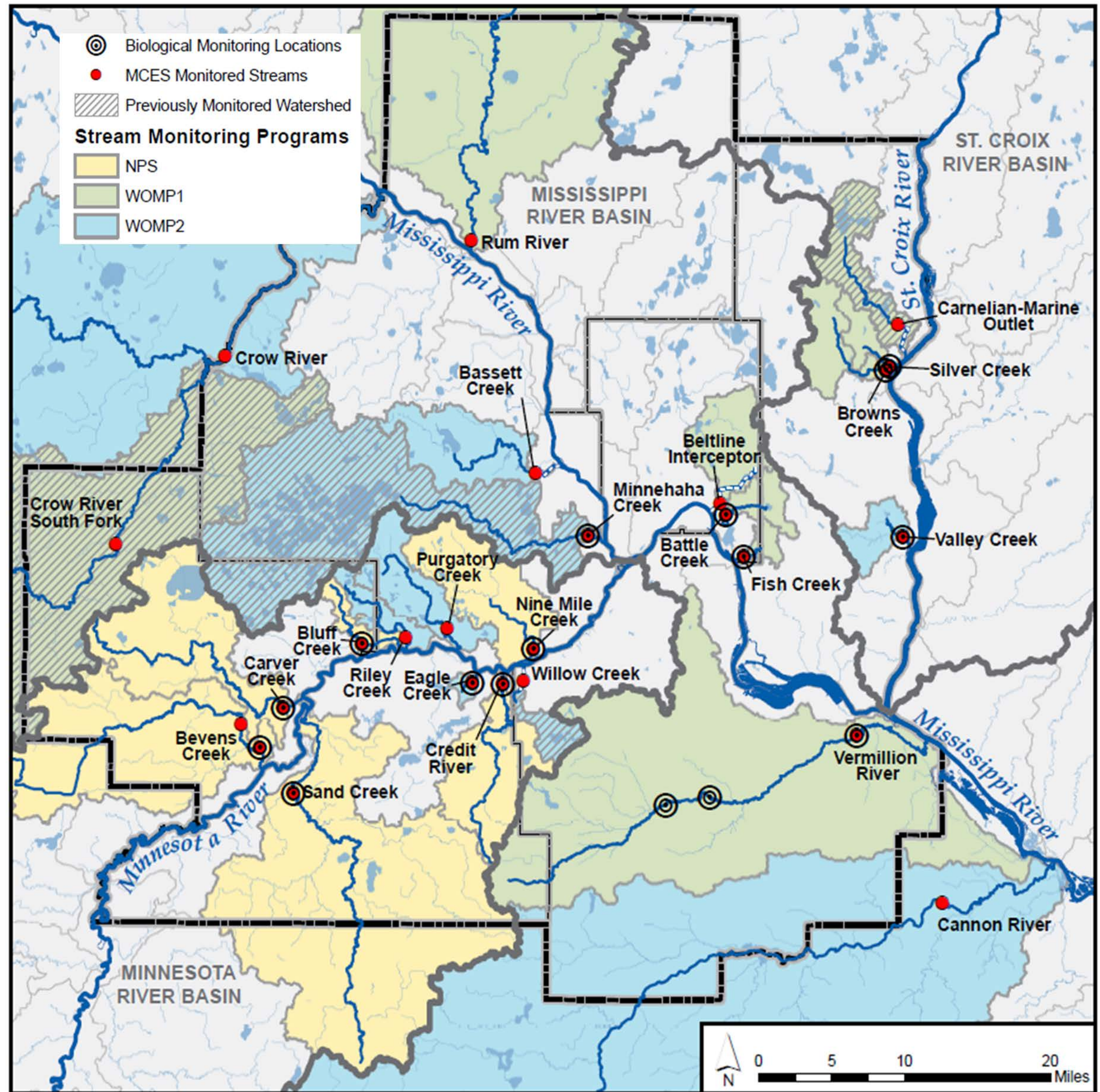
WOMP

The Watershed Outlet Monitoring Program (WOMP) efficiently expands regional stream monitoring by partnering with local agencies.

Partnering Organizations

- Minnesota Pollution Control Agency
- Anoka CD
- Barr Engineering
- Bassett Creek WMC
- Browns Creek WD
- Carnelian Marine WD
- City of Eden Prairie
- Dakota County SWCD
- Lower Minnesota River WD
- Ramsey-Washington-Metro WD
- Riley-Purgatory-Bluff Creek WD
- Scott County SWCD
- Valley Branch WD
- Washington CD
- Wenck
- Wright County SWCD

CD = Conservation District
 WD = Watershed District
 WMC = Water Management Commission
 SWCD = Soil & Water Conservation District



Monitoring Tours & Brown Bag Seminars

2019 Monitoring Tours

Water Services Association of Australia
 Environment Agency-England TEAM2100
 Council Members
 MCES Interns



2019 Brown Bag Seminars
 Metro Plant Air Quality
 Industrial Pre-treatment Incentive Program
 Metro Plant Stack Testing Tour
 History of the Clean Water Act

Media Engagement

Staff Appearances

- CBS Nightly News with Scott Pelley
- Minnesota Public Radio
- National Geographic
- Pioneer Press
- Woodbury Bulletin
- KARE11
- spnn

- StarTribune
- TPT
- Twitter



In Met Council study, Carver County has most dirty lakes but also clean ones

Water quality can differ even in close proximity, Met Council study finds.

By Katy Read Star Tribune | JUNE 8, 2019 — 11:38AM

CARLOS GONZALEZ
The water in Lake Waconia is clear -- but only because the lake is in

OUTDOORS Video: KARE 11

2018 metro lakes water quality report released

Sampling reveals that 37% of the lake sites received a grade of "A" or "B", meaning that they had relatively good water quality.

By ADRIANA DIAZ | CBS NEWS | July 23, 2015, 7:01 PM

The bane and benefit of mayflies

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01:18 / 01:54

Building community through media

YIP 2017 - Water Quality

MORE VIDEOS

5:42 / 11:26

ONE STRANGE ROCK

NATIONAL GEOGRAPHIC



TC-WaMoDaG (tee-see-wah-MOW-dag)

Water Resources staff developed and facilitate the nationally-recognized Twin Cities Water Monitoring and Data Assessment Group (TC-WaMoDaG); a unique partnership of public sector water resources practitioners. Staff provide organizational leadership and workshop content.



National Water Monitoring News



New Water Monitoring and Analysis Group in the Minneapolis-St. Paul Metro Area

There's a new resource for water professionals in the Minneapolis-St. Paul metro area. The Twin Cities Water Monitoring and Data Assessment Group (TC-WaMoDaG) is a partnership of public sector water resource practitioners collaborating to establish and promote standard practices for water monitoring, analysis, and data stewardship in the Twin Cities metro area. The goal of the group is to facilitate the production of quality information for the effective management, protection, and improvement of water resources. TC-WaMoDaG will host two events per year, provide a website with an online discussion forum, and co-sponsor workshops and trainings.

Fifty-nine water professionals attended the group's kickoff event on December 6, 2017, with city, county, soil and water conservation district, watershed, tribe, state, and federal agency representation. Nineteen professionals gave brief presentations on their monitoring and assessment program's purpose, outcomes, and challenges. The overlapping priorities and shared challenges identified in the presentations will guide the group's programming going forward. If you are a Twin Cities public sector water practitioner, please join the TC-WaMoDaG. Visit sites.google.com/view/tc-wamodag or contact Emily Resseger (emily.resseger@metc.state.mn.us) to learn more.



TC-WaMoDaG water professionals listen to a colleague present on their monitoring program (Credit: Emily Resseger)

NATIONAL WATER QUALITY MONITORING COUNCIL

acwi.gov/monitoring

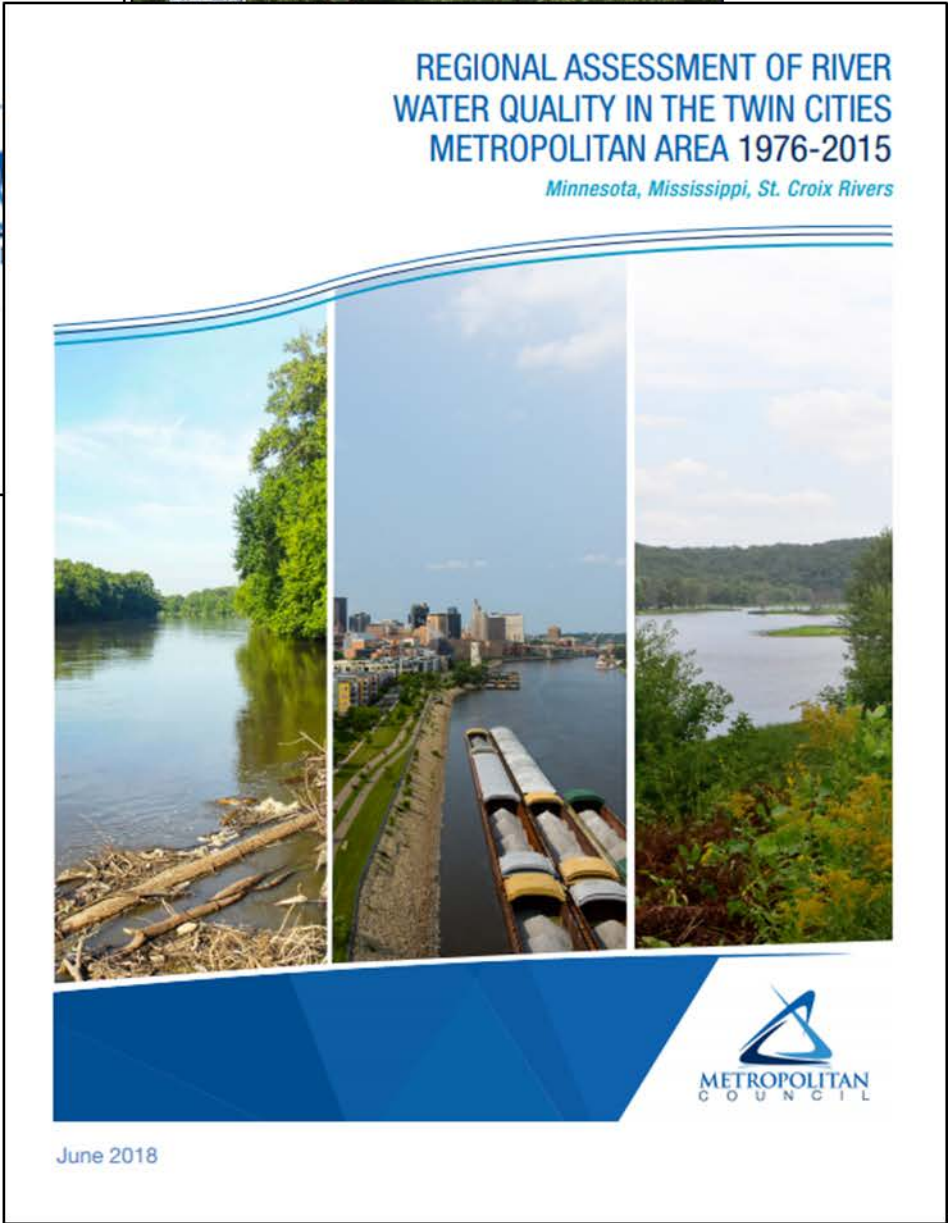
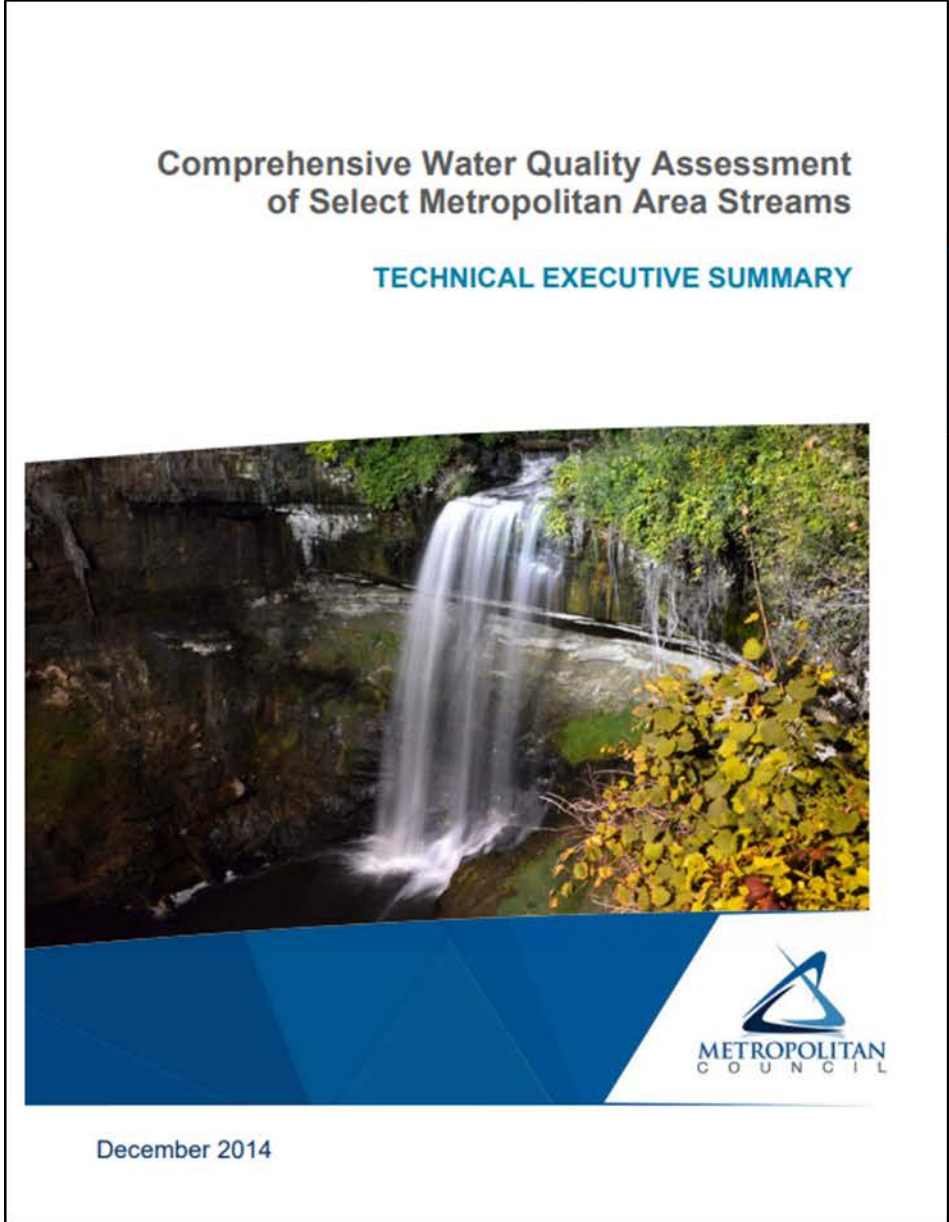
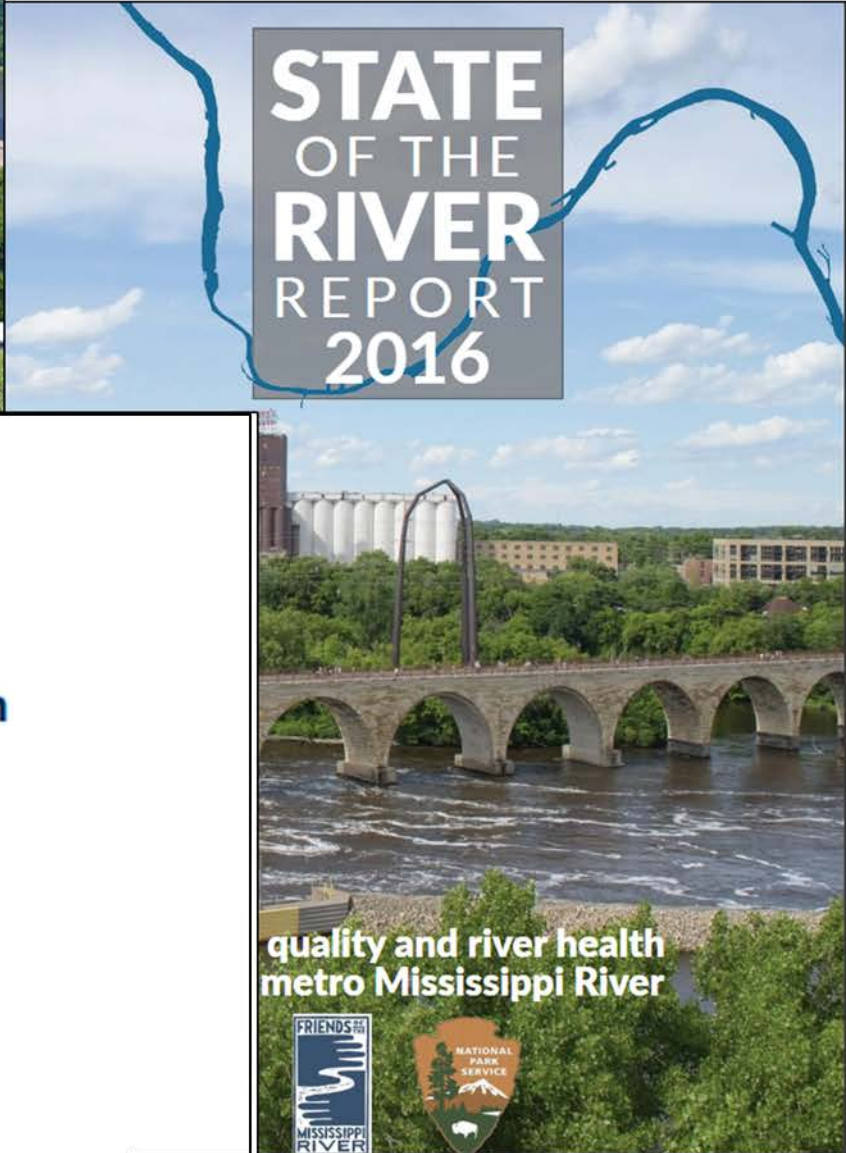
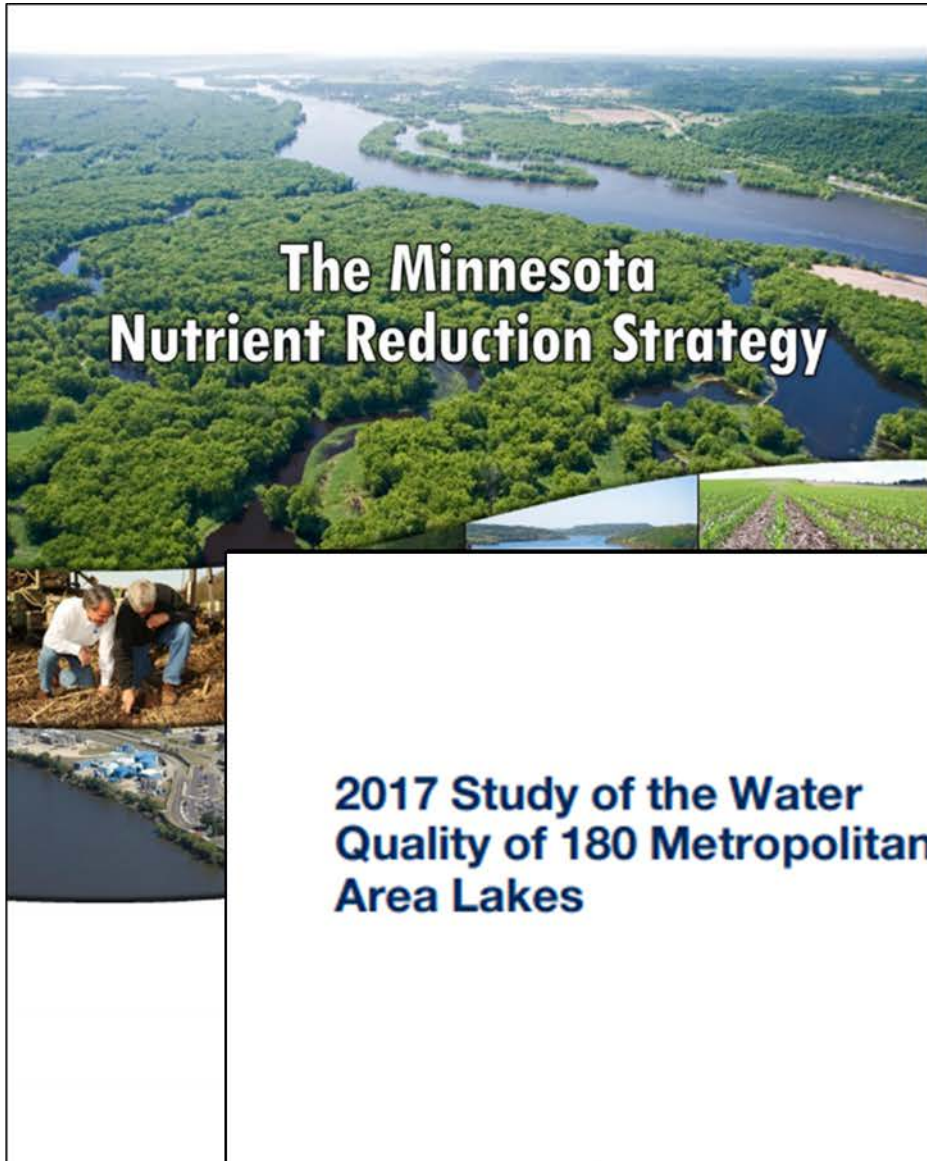
Spring 2018 10

Water Assessment & Reporting

Water Resources staff develop and collaborate on numerous data assessments and reports on our region's waters.

We partner with federal and state agencies, and water advocacy groups to understand and share our water knowledge.

Staff provide subject matter expertise, technical skills, and thought leadership to create report content.

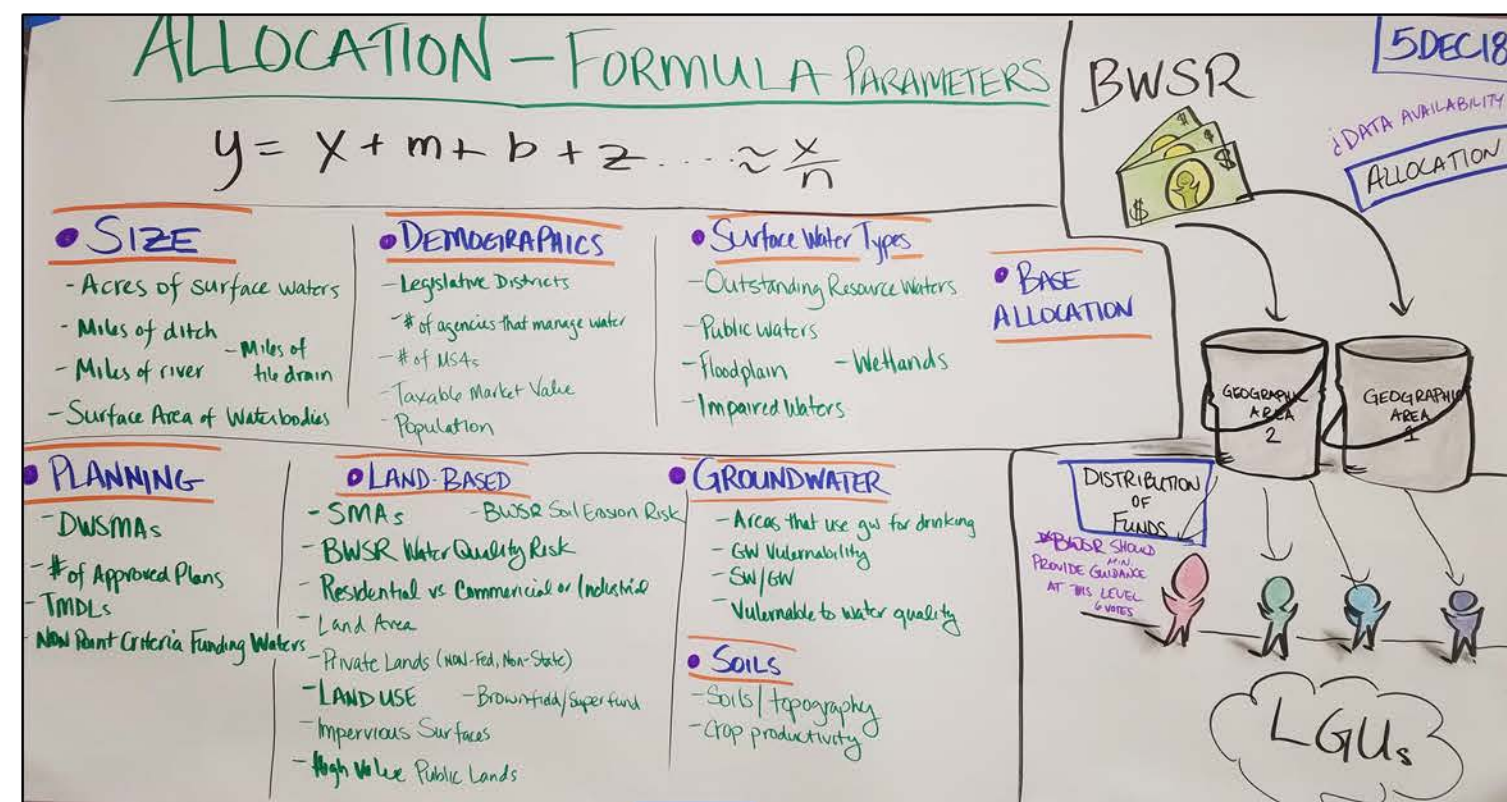


MCES & BWSR Collaboration

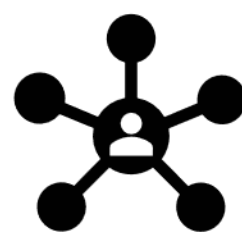


Metro Watershed Based Funding Local Governmental Unit Engagement

Water Resources staff facilitated the Metro Watershed Based Funding Engagement process on behalf of the Minnesota Board of Soil and Water Resources. Staff provided leadership and stakeholder engagement resources to develop consensus for regional program funding criteria.



5 Stakeholder Groups

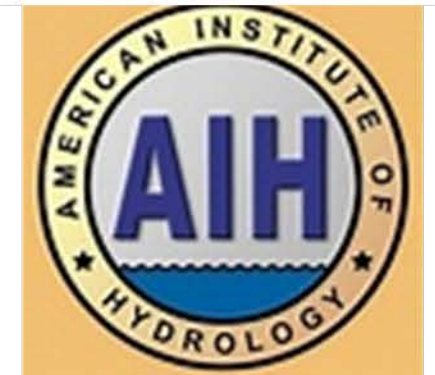


- Cities & Townships
- Counties
- Watershed Districts
- Watershed Management Organizations
- Soil Water Conservation Districts

Facilitated Conversation

MCES Facilitated  28 Hours

Professional Engagement



National Water Quality Monitoring Council
Working together for clean water



Questions

Casandra Champion

Principal Environmental Scientist

Casandra.champion@metc.state.mn.us

651-602-8745

Jennifer Kostrzewski

Principal Environmental Scientist

Jennifer.Kostrzewski@metc.state.mn.us

651-602-1078