Item 7D.
BCWMC 1-21-21

2021

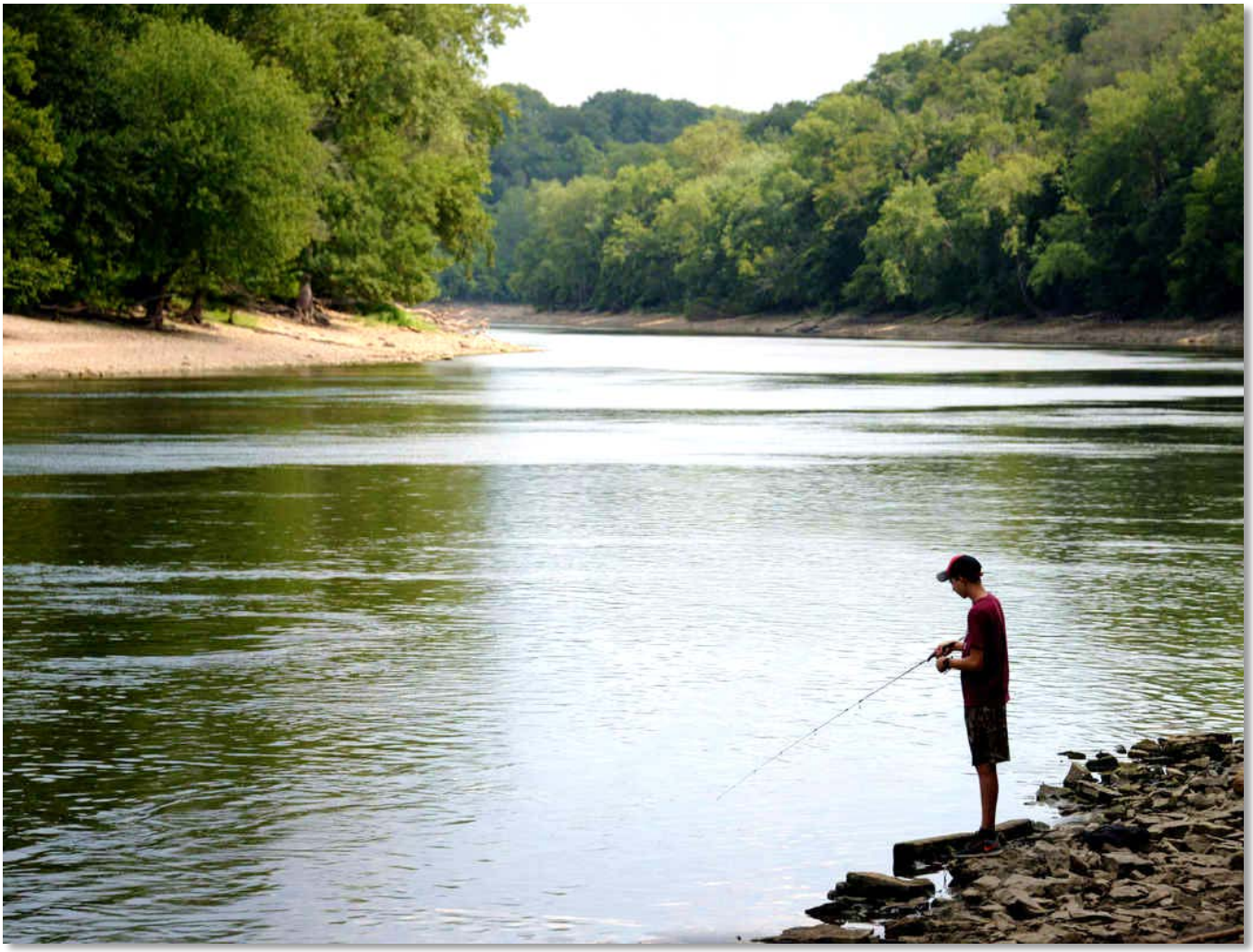
Water Resources Update

Water Resources staff in Metropolitan Council Environmental Services division strive toward clean, healthy, and sustainable water resources in the seven-county Twin Cities region. Our work ensures the Met Council and other organizations can make informed decisions to protect our region's water resources.

This *Update* highlights our group's recent water monitoring, assessment, and planning efforts across the region. Please contact us with any questions.

Judy Sventek Manager
Judy.Sventek@metc.state.mn.us
651-602-1156 Office
612-723-4599 Cell

Dan Henely Assistant Manager
Daniel.Henely@metc.state.mn.us
651-602-8085 Office
651-491-4304 Cell



Surface Water Monitoring during COVID-19

The Water Resources group monitors several waters in the Twin Cities region, including surface water (rivers, streams, lakes), groundwater at our facilities, and wastewater effluent toxicity. The COVID-19 pandemic impacted our monitoring efforts throughout 2020. The status of each program is summarized in the timeline below.

2020

March 13: Minnesota's Stay-at-Home Order announced

Non-permit related monitoring paused

All monitoring was paused, except for data required by National Pollutant Discharge Elimination System permits, such as dissolved oxygen monitoring on the Mississippi River and whole effluent toxicity monitoring. Before going to the river locations, staff calibrated the dissolved oxygen sensors from their homes which allowed monitoring to continue while following Stay-at-Home guidance.

May 18: Stay-at-Home order lifted

Some monitoring with social distancing practices resumed

River, stream, and groundwater monitoring resumed, but river biomonitoring and lake monitoring performed by Met Council staff was canceled for 2020 because of limitations of social distancing in the small boats and canoes used for these programs. This followed a similar decision made by the Minnesota Pollution Control Agency.

Late May: Volunteer lake monitoring starts

The Citizen Assisted Monitoring Program (CAMP) for lakes started a few weeks later than usual due to delays caused by the Stay-at-Home guidance. CAMP monitoring continued in 2020 because most volunteers for each lake could practice social distancing during monitoring activities. Additionally, CAMP sponsors with monitoring staff were encouraged to practice social distancing following the Centers for Disease Control and Prevention guidelines and according to their organization's policies, procedures, and interpretation.

August and September: Stream biomonitoring performed

We collected our annual stream biological samples using social distancing. The picture on the right shows a bryozoan colony found in Minnehaha Creek.

2021

2021: Plan to resume all monitoring

Pending the COVID-19 situation, we plan to restart large river biomonitoring and employee-led lake monitoring in 2021.

Preliminary results from our lake, river, and stream monitoring programs are available soon after they are collected on **our data portal**. Reviewed and finalized chemistry data are expected to be available on the portal in February 2021. Please contact us to request continuous or biological data. For more information about our monitoring programs and how the data are used, please go to our **Water Quality Management web page.**

Monitoring Improvements

We are making strides to improve our water monitoring programs by providing more timely and accurate data. Here are four examples of how we are improving our services.

Automatic River Monitoring

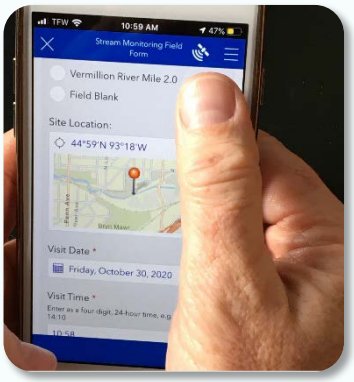
We are exploring a new method to collect more accurate water quality data in the Minnesota and Mississippi rivers. At one of our sites, we installed a sensor directly in the water (pictured right) to measure dissolved oxygen, temperature, and conductivity every 15 minutes, instead of pumping water to a shelter with sensors on the riverbank. This setup will be rolled out to other river monitoring sites if it produces more accurate and reliable data.

Lake Monitoring Training

We launched an online training course for the **CAMP** volunteers. The course provides instructor-led training to demonstrate the methods and safety protocols of the program through a combination of audio clips, videos, images, text, and quizzes, as well as a glossary, transcript, and links to important resources. The course prepares volunteers to collect reliable data and helps save time and resources compared to in-person training. **See a partial demonstration of the training course.**

Electronic Data Collection

Using paper and pencil is a reliable way to record water quality data but converting the information from paper to a digital format is time-consuming and risks mistakes. To streamline the process, last year we started using the software “Survey123” to enter data digitally with tablets, laptops, or phones directly from the monitoring site. Our stream monitoring partners also started using this process in 2020. We plan to make a similar option available to CAMP lake volunteers in 2021.



Stream Data Transfer

We use modems at our stream monitoring sites to transfer continuous readings, such as temperature and flow, from the field to our database. We replaced land-line modems with cellular modems at several sites to improve the data transfer speed and reliability.

Assessment

Chloride Pollution in Streams

Chloride (i.e., salt) pollution continues to be a growing problem for Minnesota's waters. We are currently writing memos for our partners to provide information on chloride pollution and help inspire action to protect and improve regional water quality.

These memos summarize two decades of stream chloride data. They also describe a statistical trend analysis showing changes over time and provide information about chloride sources.

The memos will be available in early 2021. Read more about stream monitoring and assessment at the Met Council on our **website.**

Revisiting the Lake Grading System

Each year, the Metropolitan Council calculates lake grades to summarize the water quality of lakes across the region (**summary of the 2019 report - PDF**). We plan to revisit and update the lake grading system, originally developed in the late 1980s.

This effort will use newer data, explore categories of lakes (e.g., shallow vs. deep lakes), investigate the use of more indicators of lake quality, and engage with stakeholders. These changes will fine-tune and improve the lake grade calculations.

Policy

One of the Metropolitan Council's roles is regional planning. Here are three current efforts focused on improving water resource planning for the region:

Water Resources Planning

The Twin Cities region has implemented regional water management and planning for nearly 40 years. The Met Council and the Minnesota Board of Water and Soil Resources have entered into a partnership to evaluate the current local water planning framework.

This effort will engage local government stakeholders (watershed districts, watershed management organizations, cities, and townships) to identify and evaluate which planning processes and requirements are successful and which could use improvement. The goal is to update the process and requirements before the next round of plans are due at the end of 2028.

Water Values

The Met Council is sponsoring a project with the University of Minnesota to examine how Twin Cities residents value water and perceive water issues. It will also look at how residents view water systems, those that manage water systems, and the value of those services. This work will help inform water management and planning across the region. It is expected to be completed in late 2021.

Prioritized Waterbodies

The metro area has more than 950 lakes and hundreds of miles of streams and rivers. We are developing a list to prioritize waterbodies based on their use and benefit for the region. This list will update the Met Council's current priority lake list and expand it to include streams and rivers. The Met Council will use this list to determine how to use limited resources to maintain and improve the region's water resources. This list will be integrated into the Council's **Water Resource Policy Plan.**