

# Water Quality Monitoring – Automatic River Water Monitoring

## Monitoring Purpose

The Metropolitan Council Environmental Services (MCES) operates an automatic river water monitoring network of six stations on the Mississippi, Minnesota, and Vermillion Rivers. The six stations continuously measure dissolved oxygen, temperature, pH, and specific conductance of the river water. These variables are good indicators of river water quality and the effectiveness of MCES wastewater treatment plant (WWTP) operations. Monitoring allows MCES to:

- Measure compliance with state water quality standards and criteria
- Meet National Pollutant Discharge Elimination System (NPDES) permit requirements, including those for effluent aeration at the Metropolitan and Seneca WWTPs
- Assess the performance and effectiveness of MCES wastewater treatment plants
- Obtain information on the water quality impacts of nonpoint source pollutants
- Document long-term trends and changes in water quality
- Project future water quality conditions



## Monitoring Sites

Automatic monitoring sites are located at:

- Mississippi River above the Metropolitan WWTP (river mile 836.8)
- Mississippi River near Newport (river mile 831.0)
- Mississippi River near Grey Cloud Island (river mile 826.7)
- Mississippi River above Lock & Dam No. 2 (river mile 815.3)
- Minnesota River near Fort Snelling (river mile 3.5)
- Vermillion River near Empire (river mile 15.6)

[View map of MCES river monitoring network](#)

## Monitoring Equipment

Each automatic monitoring site consists of a shelter where river water is continuously pumped and dissolved oxygen, temperature, pH, and specific conductance are measured using in-line meters and probes. Turbidity is also measured at the Minnesota River site.



## Monitoring Data and Reports

River automonitoring data from all six network stations are reported to the Minnesota Pollution Control Agency on a monthly basis, as required by NPDES permits.

Past river monitoring reports and river monitoring data can be found in the Metropolitan Council's Environmental Information Management System ([EIMS](#)).

For further information on automatic river water monitoring, please contact Scott Schellhaass via [email](#) or at 651.602.8341.