



# Citizen Stream Monitoring Program

## 2009 Individual Site Report: CSMP1253

### Introduction

Thank you for participating in the Citizen Stream Monitoring Program (CSMP)! The MPCA appreciates the important work you do. This report summarizes CSMP data collected during 2009 at the site listed above.

### 2009 Site Data Summary

Page two includes location information for your site, 2009 summary statistics, and a chart of transparency and rain data throughout the 2009 monitoring season.

### Watershed and Trend Summary

Page 3 includes pie charts that compare transparency readings at your site to readings within your site's major river basin.

Water quality assessment information found on page 3 shows if your stream meets guidelines set to protect Aquatic Life in your stream.

"Transparency at your site over time" shows whether transparency at your site is significantly increasing or decreasing, or not changing. Results are based on statistical linear regression analysis of data for sites with a minimum of 5 years and at least 40 total readings. A red trend line is included if there is an increasing or decreasing trend.

### How transparency relates to turbidity

Transparency tube data you collect are used in the Impaired Waters Assessment to help determine where streams are polluted by sediment due to high turbidity. Turbidity is caused by suspended soil particles or algae that scatter light, making water appear cloudy. High turbidity can harm aquatic life. When stream turbidity is high, transparency is low. By establishing a scientific link between the two, transparency can be used as a surrogate for turbidity, allowing the water quality of more streams to be assessed using citizen help. A transparency tube reading less than 20 centimeters indicates a violation of the state's turbidity standard.

The "Data summary" section on page 2 shows how many transparency readings at your site were less than 20 cm (Readings <20cm), and therefore in violation of the turbidity standard.

### For more information

A complete summary of all 2009 CSMP data is available in the CSMP Statewide Annual Report. More information on the transparency categories from "Poor" to "Excellent" can be found in the "Guide to Interpreting Transparency Readings." Both documents are available on the MPCA Web site at:

[www.pca.state.mn.us/csmp](http://www.pca.state.mn.us/csmp)

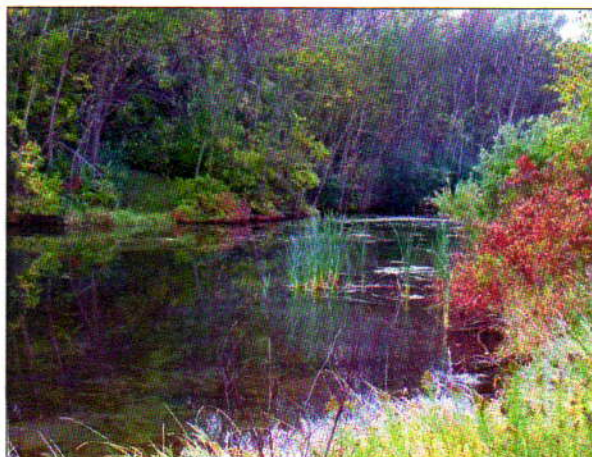


Photo by Andrew Murray, CSMP volunteer on tributary to the Cannon River, Rice County

For more information on Impaired Waters and the complete 2010 Impaired Waters List, go to:

[www.pca.state.mn.us/water/tmdl/index.html](http://www.pca.state.mn.us/water/tmdl/index.html)

If you have questions or comments on this report, please contact Laurie Sovell, Johanna Schussler, or Miranda Nichols at 1-800-657-3864 (Greater MN) or by email at [csmp@pca.state.mn.us](mailto:csmp@pca.state.mn.us)



# CSMP individual site report

2009 site summary

## Site information

Volunteer: Rick Schubert

Stream Name: Flute Reed R @ CR-88, "R1"

Site: CSMP1253

County: Cook

Watershed Code: 04010101

Watershed Name: Lake Superior (North)

Years of data at this site:

4

## Data summary April 21, 2009 to October 27, 2009

### T-Tube

Total Readings: 17

Rain event: 1

<20cm: 1

Avg T-Tube (cm): 61

Min: 9

Max: 100

### Suitability / Appearance

Average recreational suitability score: GOOD

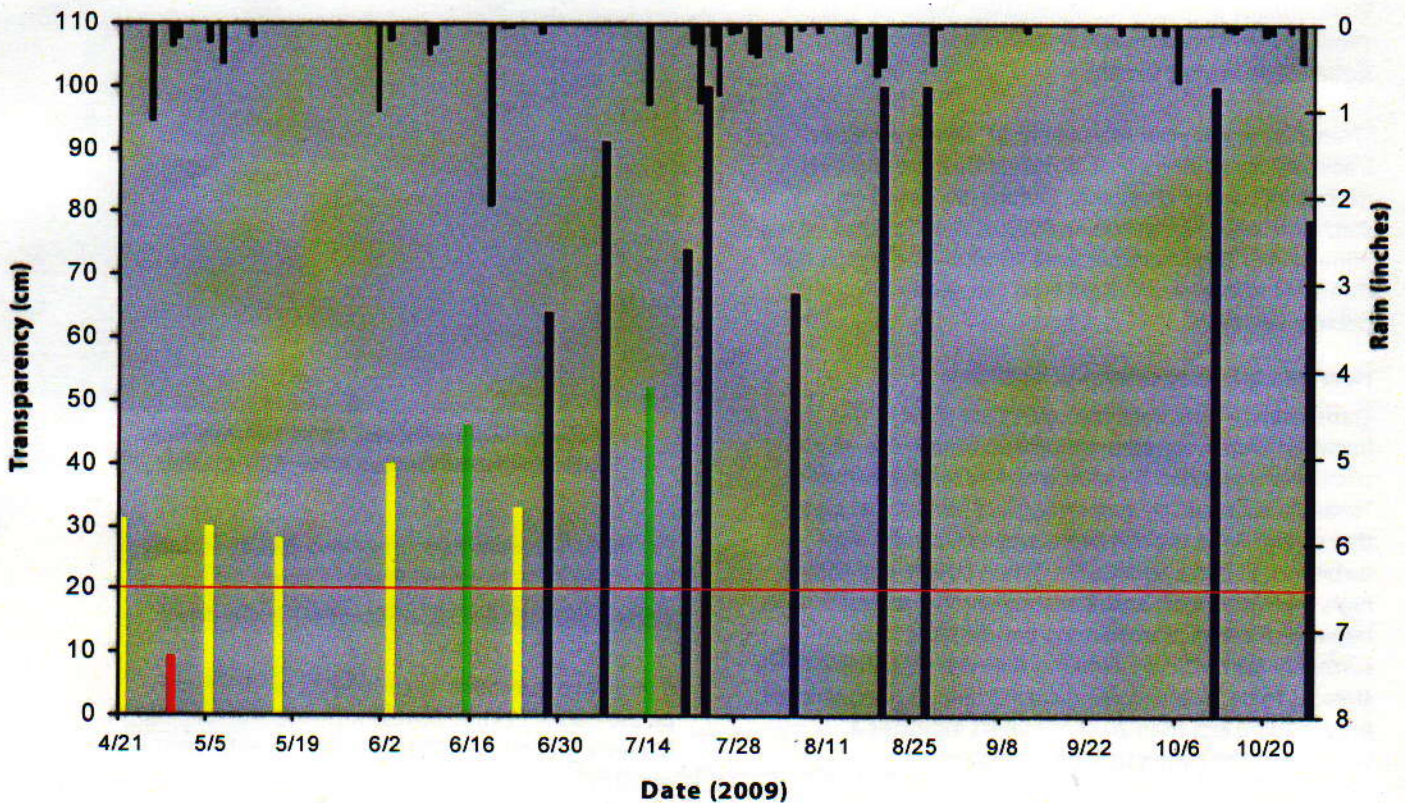
Average physical appearance: TEA-COLOR

### Rain

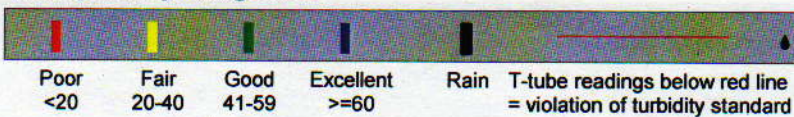
Total (inches): 15.2

Readings: 45

## Transparency and rainfall data



### Transparency categories:



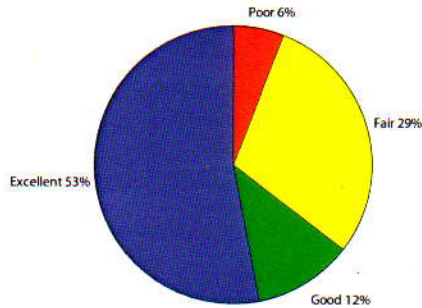
# CSMP individual site report

2009 basin comparison and assessment summaries

## 2009 comparison to major river basin

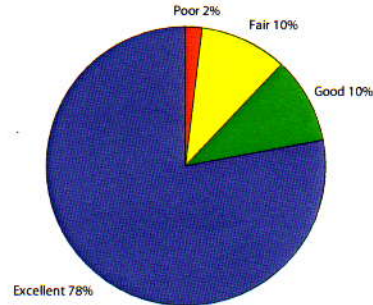
Percent transparency readings in categories poor / fair / good / excellent

### Your Site: CSMP1253



17 Transparency readings

### Lake Superior Basin



872 Readings from 45 sites

2009 Data

## Water quality assessments

The federal Clean Water Act requires states to identify, list, and restore polluted or "impaired" waters. A water body is identified as impaired if it fails to meet one or more of Minnesota's water quality standards. Standards exist for pollutants such as turbidity, which is directly related to transparency: when transparency is low, turbidity (e.g. murkiness) is high.

### Assessment Description

**Turbidity** The state uses CSMP transparency data to help determine if streams meet the state water quality standard for turbidity. Turbidity levels indicate the ecosystem's ability to support Aquatic Life.

### Stream assessment summary

This stream segment was listed for turbidity in 2010

### Basin assessment summary

Lake Superior Basin	
Total Reaches Assessed for Turbidity	Impaired
39	12

## Transparency at your site over time

The following chart shows changes in stream transparency at your site over time. For sites with sufficient data, the chart includes a red trend line if transparency is significantly increasing or decreasing over time.

