



Criteria for Incorporating Transparency Tube Readings into Turbidity Assessment

Water Quality/Citizen Stream Monitoring #1.07 • January 2007

Introduction

The Minnesota Pollution Control Agency (MPCA) used transparency tube data to assess streams and rivers for compliance with the state turbidity standard for the first time during creation of the 2006 Impaired Waters list. The majority of transparency tube readings used in assessments are collected as part of the Citizen Stream-Monitoring Program. This fact sheet describes the criteria that must be met to use transparency tube data for assessments.

Criteria

If sufficient turbidity measurements exist, only turbidity measurements will be used to determine impairment. If there are not sufficient turbidity measurements, any combination of independent turbidity, transparency, and total suspended solids observations may be combined to meet the outlined criteria for assessment.

If there are multiple observations of a single parameter in one day, the mean of the values will be used in the assessment process.

If there are observations of more than one of the three parameters in a single day, the hierarchy of consideration for assessment purposes will be turbidity, then transparency, then total suspended solids.

A waterbody is in **violation** of the turbidity standard if:

- A transparency tube reading is less than 20 centimeters.

A waterbody is **impaired** if:

- There are at least 20 independent observations, from a minimum of 2 years over the 10 year assessment period.
and
- Observations are distributed across years and months so as to be representative of the open water season (typically April – September).
and
- At least 3 observations and 10% of observations are in violation of the standard.
and
- Volunteer collected observations are corroborated by the judgment of MPCA staff, and by local resource and / or watershed project staff, if available.

For more information on Impaired Waters and Stream and River Water Quality Assessments visit:

<http://www.pca.state.mn.us/water/tmdl/index.html>

For more information on the Citizen Stream-Monitoring Program contact: csmp@pca.state.mn.us (email), or the MPCA at 651-296-6300 (Twin Cities Metro Area), 800-657-3864 (Greater MN)