

2019 River Watch



Students from Kaleidoscope Charter School, Otsego, monitoring Rush Creek in Maple Grove

Introduction

The River Watch Program has provided hands-on environmental education to students throughout Hennepin County since 1995. Every spring and fall, students and teachers venture into streams with waders securely fastened and dip nets in hand to collect aquatic macroinvertebrates, or bottom-dwelling, spineless organisms such as mayflies, stoneflies, snails and beetles. Macroinvertebrates are influenced by physical and chemical properties of streams, so monitoring these organisms helps assess water quality. River Watch is an eye-opening experience for all participants, and the resulting data helps us understand the health of our streams.

2019 highlights

In 2019, 15 stream stretches were monitored in the spring and/or fall. Data was gathered by more than 500 students from 23 classes and 11 schools. Students, teachers and chaperones donated more than 1,300 hours.

Data Analysis

The grading scale used in River Watch is based on the Hilsenhoff Family Biotic Index, one of the most common metrics used for data analysis in citizen stream monitoring programs. The Family Biotic Index measures the overall community of invertebrates and their tolerance to pollution levels. The scale ranges from 0 to 10 with the lower values indicating high sensitivity to pollution and good water quality.

Hilsenhoff Family Biotic Index

Family Biotic Index	Water Quality	Degree of Organic Pollution
0-3.50	Excellent	No apparent organic pollution
3.51-4.50	Very Good	Possible slight organic pollution
4.51-5.50	Good	Some organic pollution probable
5.51-6.50	Fair	Fairly significant organic pollution likely
6.51-7.50	Fairly Poor	Substantial pollution likely
7.51-8.50	Poor	Very substantial pollution likely
8.51-10.0	Very Poor	Severe organic pollution likely

The 2019 monitoring groups and results are shown below.

Elm Creek Watershed					
Site	School	Teacher	2019 score	2018 score	Years
Rush Creek, western side of 101 st Lane, Maple Grove	Kaleidoscope Charter School, Otsego	Carrie Lynch	6.2 Fair	5.12 Good	14
Rush Creek, eastern side of 101 st , Maple Grove	Vantage Group Minnetonka High school	Dawn Norton	5.9 Fair	5.47 Good	2
Elm Creek at Peony Lane	Wayzata High School	Suzie Newman	6.4 Fair	5.12 Good	22

Historic data

Historic data for the monitored sites is available on the River Watch interactive map. The map also includes site photos, information about watersheds and land cover data to help investigate how land use may impact water quality. The map is available at www.hennepin.us/riverwatch.