

## 2016 RIVER WATCH

### INTRODUCTION

The River Watch Program has provided hands-on environmental education opportunities for students throughout Hennepin County since 1995. Every spring and fall, students and teachers venture into Hennepin County streams with waders securely fastened and dip nets in hand to collect aquatic macroinvertebrates, or bottom-dwelling, spineless organisms including mayflies, stoneflies, snails and beetles. Macroinvertebrates are influenced by physical and chemical properties of streams, so monitoring those 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.

In 2016, 16 stream stretches were monitored in the spring and/or fall. Data was gathered by more than 750 students from 32 classes and 15 schools, and students, teacher and chaperones donated more than 5,000 hours. Three sites were monitored by two classes in the Elm Creek watershed in 2016. Rush Creek at 101st Lane in Maple Grove was monitored by Kaleidoscope Charter School, where the students garnered a family biotic index (FBI) of 6.60 (fairly poor) as compared to 4.50 (good) in 2015. Elm Creek at Elm Creek Golf Club and at Peony Lane near Wayzata High School were monitored by WHS students. An FBI of 4.8 (good) was garnered at the high school site in 2015, in 2016 the site was under construction. An FBI of 6.1 (fair) was garnered at the Peony Lane site compared to 5.7 (fair) in 2015. Kaleidoscope students have participated in River Watch for 10 years, the WHS students for 18 years.

### Data Analysis

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

### Historical Data

Historical 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 [hennepin.us/riverwatch](http://hennepin.us/riverwatch).