

## 2015 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 2015, 17 stream stretches were monitored in the spring and/or fall. Data was gathered by more than 600 students from 23 classes and 16 schools, and students, teacher and chaperones donated more than 2,300 hours. Two sites were monitored in the Shingle Creek watershed in 2015. Shingle Creek at Lion's Park in Brooklyn Center was monitored by Calvin Christian High School led by James Van de Glind, and Shingle Creek at Park Center High School was monitored by PCHS students led by Cindy Jahnke.

### GRADING SCALE

The grading scales used in River Watch takes into account three major biotic indices used routinely in biological 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 and good water quality.
- EPT stands for Ephemeroptera (mayflies), Plecoptera (stoneflies), and Trichoptera (caddisflies). These three families include organisms that are the most sensitive to pollution. Higher scores indicate better water quality.
- The number of families measures the overall abundance of families or total diversity of family units. The higher the number indicates better ecosystem quality.

#### Stream grading scale

Grade	Family Biotic Index	EPT	Number of families
A	0.00 – 4.00	9.0 – 12.0	12.0 – 15.0
B	4.01 – 5.75	6.0 – 8.9	9.1 – 11.9
C	5.76 – 6.50	3.0 – 5.9	6.0 – 9.0
D	> 6.50	< 3.0	< 6.0

**Letter grading scale**

3.83 - 4.00	A	1.83 - 2.16	C
3.50 - 3.82	A-	1.50 - 1.82	C-
3.17 - 3.49	B+	1.17 - 1.49	D+
2.83 - 3.16	B	0.83 - 1.16	D
2.50 - 2.82	B-	0.50 - 0.82	D-
2.17 - 2.49	C+	0.00 - 0.49	F

**2015 Monitoring Groups and Results**

Site	School	2015 Grade	2014 Grade	Teacher	Years Monitoring
Shingle Creek at Lion’s Park, Brooklyn Center	Calvin Christian High School, Fridley	C	C-	James Van de Glind	6
Shingle Creek at Park Center High School, Brooklyn Park	Park Center HS, Brooklyn Park	C	D+	Cindy Jahnke	19

The direct link to the 2015 report is: <http://www.hennepin.us/~media/hennepinus/Business/work-with-hennepin-county/riverwatch/RiverWatch-Report-2015.pdf?la=en>