

HENNEPIN COUNTY
MINNESOTA

River Watch 2021 Report



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.

2021 highlights

2020 was a difficult year for all of us, but even more so for our teachers and their students. After a year hiatus because of COVID, we were once again able to assist and support educators in getting out and monitoring! It was a welcome sight to see kids out again learning about their resources and enjoying the streams.



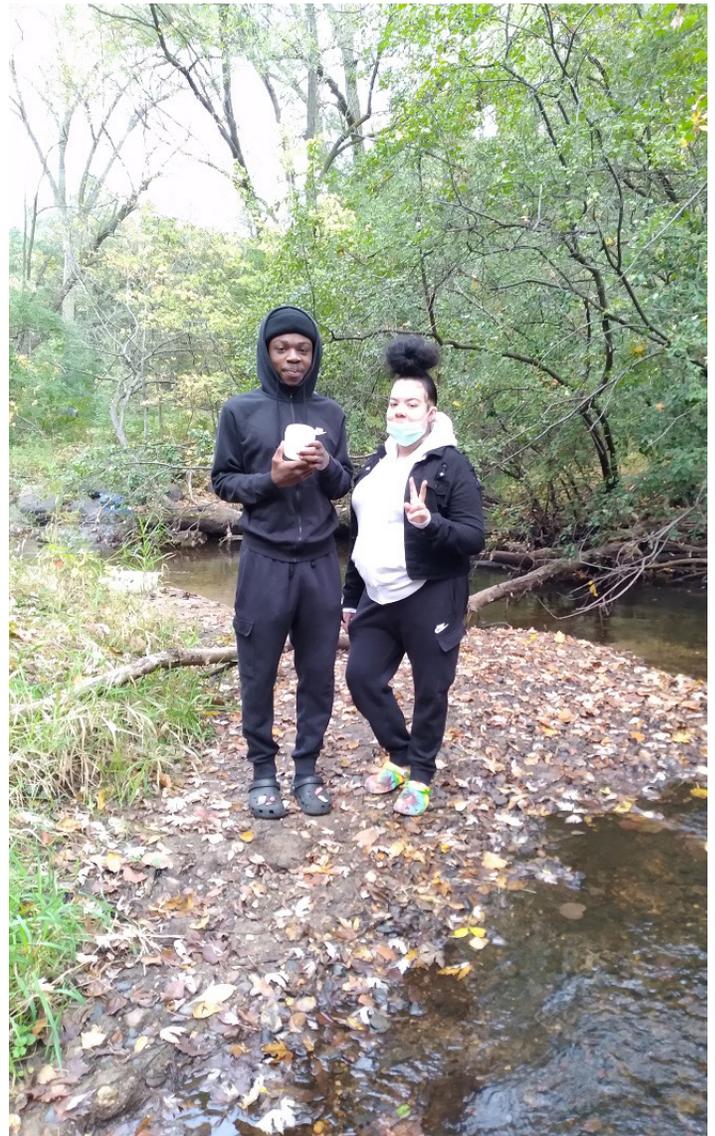
Edina High School

Data analysis

The grading scale used in River Watch is based on the Hilsenhoff Family Biotic Index, which is one of the most common metrics used for data analysis in citizen stream monitoring programs. The Hilsenhoff 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



Richfield College Prep



Benilde St. Margaret



Hopkins High School

2021 monitoring groups and results

School of Environmental Studies

Martha Hovde

Bassett Creek Watershed

Bassett Creek at Bassett Nature Area

2018 Score	2019 Score	2021 Score
5.76 Fair	N/A	7.61 Poor

School of Environmental Studies



West Lutheran School

Plymouth | Steve Merten

Elm Creek Watershed

Crow River

2018 Score	2019 Score	2021 Score
N/A	N/A	4.58 Good

West Lutheran School



2021 monitoring groups and results

Kaleidoscope Charter School

Otsego | Carrie Lynch

Elm Creek Watershed
Rush Creek at 101st

2018 Score	2019 Score	2021 Score
4.3 Very Good (spring)/ 6.0 Fair (fall) *stoneflies found in spring	5.9 Fair (spring)/ 6.6 Fairly Poor (fall)	7.0 Fairly Poor

Kaleidoscope Charter School



Hopkins School

Evangeline Holly

Minnehaha Creek
Burwell House

2018 Score	2019 Score	2021 Score
6.3 Fair	5.7 Fair	6.9 Fairly Poor

Hopkins High School



Benilde St. Margaret

St. Louis Park | John Porisch

Minnehaha Creek
Utley Park

2018 Score	2019 Score	2021 Score
5.0 Good	4.3 Very Good	6.4 Fair

Benilde St. Margaret



2021 monitoring groups and results

Edina High School

Allison Ronglein

Nine Mile Creek

Nine Mile Creek at Nordic Circle

2018 Score	2019 Score	2021 Score
6.2 Fair	7.1 Fairly Poor (spring)/ 7.3 Fairly Poor (fall)	7.04 Fairly Poor

Edina High School



Avail Academy

Minneapolis | James Vande Glind

Shingle Creek

Below the falls

2018 Score	2019 Score	2021 Score
4.5 Good	4.3 Very Good	4.5 Good

Avail Academy



Working Differently in 2021



After a year-long hiatus due to COVID in 2019, staff were able to carefully plan a return in the fall of 2021. Following state and federal guidelines a plan for resuming direct support of River Watch groups was approved including in-field support outside. But because of restrictions, staff were not allowed to meet with students in the classroom yet. Creative thinking went into effect and solutions were developed.

While field work was possible in 2021, many groups took advantage of our new option of remote ID assistance. Staff worked with each group via remote link to identify organisms in the classroom.

Some classes, such as Richfield College Prep, were able to take advantage of field work without need to do additional work in the classroom. Staff facilitated this with a streamside survey. This activity includes collecting invertebrates but identifying them right at the streamside. The group gets an overall view of water quality in the stream without the extra time spent in the classroom. Staff was hands-on to provide guidance and ID assistance.



Looking Ahead



Planning for 2022 is underway! We will continue to follow COVID guidelines and offer in-person support where possible. We will also continue to improve and update all of our remote offerings and hope to have some new activities to share with you all soon. Keep watching the River Watch space!

Thanks to:

Heartfelt thank you goes to all the students and teachers who participated this year! It was great to see you again! Many thanks to Katie Farber from Fortin Consulting. All photos by Katie Farber; Avail Academy photos by James Vande Glind and Benilde photos by John Porish.