PROGRAM GOALS

• Collect high-quality, scientific data on the local waterways.
• Educated decision-makers and the public.
• Provide necessary data for state stormwater permit reporting.
• Engage members of the public in water resources & cultivate local water stewards.
• Identify impaired areas, provide evidence for funding.
Meet up in teams of 2–4 individuals.

Navigate to sites.

Collect water samples.

Measure in-stream water chemistry.

Record flow measurements.

Track water level changes.

Identify any areas of concern or illicit discharges.

Deliver samples to lab.
PARAMETERS MEASURED

- Nutrients: Phosphorus
- Sediments: Total Suspended Solids
- Bacteria: E. coli
- Dissolved Oxygen
- Temperature
- Conductivity
- Flow: Discharge
- Water Level
2019 Program Overview

- 35 Volunteers
- 13 Sites
- 476 Samples Analyzed
- 991 Data Records
- ~480 Volunteer Hours
- 37 Flow Measurements
Volunteer Engagement Review

40% ↑
Downriver Volunteers

20% ↑
Volunteer Hours

100%
Enjoyed the program

78%
Are likely to return to the program

95%
Are likely to recommend the program to others
What did Volunteers enjoy about the program?

- Meeting new people
- Spending time in nature
- Contributing to an important issue
- Exploring new areas
- Science and data collection
2019 WAYNE CO. MONITORING SITES

13 total sites
4 investigative sites
PHOSPHORUS IN THE ADW OVER TIME

Total Phosphorus (mg/l)

PHOSPHORUS TARGET =
TREND =
PHOSPHORUS TARGET =
PHOSPHORUS AT THE HURON RIVER IN ROCKWOOD

TREND =  
PHOSPHORUS TARGET =  
MEAN =  
MEDIAN =  

Total Phosphorus (mg/l)

Phosphorus at the huron river in rockwood
PHOSPHORUS AT BLAKELY CREEK

Total Phosphorus (mg/l)

TREND = green line
PHOSPHORUS TARGET = red line
MEAN = purple line
MEDIAN = blue line
PHOSPHORUS TRENDS IN THE ADW

- Statistically significant increase at Blakely Creek.
- No statistically significant change in concentrations at Frank & Poet, Brownstown, S. Ecorse, N. Ecorse, Woods, Silver, and Smith Creeks, nor at the Huron River site.
E. coli in the ADW over time

TREND = \[\text{line} \]
PARTIAL BODY CONTACT STANDARD = \[\text{line} \]
FULL BODY CONTACT STANDARD = \[\text{line} \]

E. coli (#/100 ml)
E. coli at Frank & Poet Drain

TREND =  
PARTIAL BODY CONTACT STANDARD =  
FULL BODY CONTACT STANDARD =  

E. coli (#/100 ml)
E. COLI AT BROWNSTOWN CREEK

E. coli (#/100 ml)

TREND =
PARTIAL BODY CONTACT STANDARD =
FULL BODY CONTACT STANDARD =
E. coli at N. Ecorse Creek

Trend = 
Partial Body Contact Standard = 
Full Body Contact Standard =
E. coli Trends in the AdW

- Statistically significant increases in E. coli at Frank & Poet, Brownstown, S. Ecorse, and N. Ecorse Creeks.
- No statistically significant change in concentrations at Blakely, Woods, Silver, and Smith Creeks and the Huron River.
- No declining trends.
Investigative differences at Frank & Poet Drain

ADW01
Long Term

19% difference in TP
-90% difference in E. coli

ADW30
Investigative
INVESTIGATIVE DIFFERENCES AT BROWNSTOWN CREEK

ADW03 Long Term

13% difference in TP

-92% difference in E. coli

ADW31 Investigative
INVESTIGATIVE DIFFERENCES AT BLAKELY CREEK

-32% difference in E. coli
43% difference in TP
54% difference in TSS
Investigative Differences at Silver Creek

-61% difference in E. coli
40% difference in TP
ADW33
2019 Investigative

-32% difference in E. coli
38% difference in TP
ADW26
2018 Investigative

ADW08
Long Term
Ecorse Creek Macroinvertebrates

Spring Stream Quality Index

Fall Stream Quality Index
COMBINED DOWNRIVER MACROINVERTEBRATES

Spring Stream Quality Index

Fall Stream Quality Index
NEXT STEPS

- Follow up on findings
- Develop online monitoring report.
- Prepare for upcoming season
- Identify new investigative sites.

2020 CHEMISTRY & FLOW MONITORING PROGRAM ORIENTATION

Saturday, March 28, 2020
2:00 to 3:30 PM
Riverview Veterans Memorial Library
REGISTER AT: hrwc.org/chemflow

PLEASE PROMOTE TO YOUR RESIDENTS!
QUESTIONS?