ROUGE RIVER COLLABORATIVE PUBLIC EDUCATION PLAN (PEP) 2024-2025 PROGRESS REPORT

Prepared by:

Alliance of Rouge Communities
OURS TO PROTECT
Working together, restoring the river

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A. Purpose

This report summarizes the activities undertaken to implement the Rouge River Collaborative Public Education Plan (Plan) which was approved by the Michigan Department of Environment, Great Lakes and Energy (EGLE) in March 2017. The Plan is part of the municipal separate storm sewer system (MS4) permits for several communities in the Rouge River watershed. The report includes activities implemented by or on behalf of members of the Alliance of Rouge Communities (ARC) from January 1, 2022, through December 31, 2023. The permittees participating in the Plan during the reporting period are listed below.

Participating Permittees

Beverly Hills, Village of
Bingham Farms, Village of
Birmingham, City of
Bloomfield Hills, City of
Bloomfield Township
Canton Township
Dearborn Heights, City of
Farmington, City of
Farmington Hills, City of
Franklin, Village of
Garden City, City of
Henry Ford College
Inkster, City of
Lathrup Village, City of
Livonia, City of
Melvindale, City of
Northville, City of
Northville Township
Novi, City of
Oakland County*
Oak Park, City of
Orchard Lake Village
Plymouth, City of
Plymouth Township
Redford Township
Schoolcraft College
Southfield, City of
Troy, City of
University of Michigan-Dearborn*
Walled Lake, City of
Wayne, City of
Westland, City of
West Bloomfield Township
Wayne County Airport Authority
Wayne County*
Wixom (added in 2025)

Participating in the Plan, but their complete efforts will be reported in their individual progress reports.

B. Action Strategy Status

The status of each action strategy includes a description of each activity, progress made during the reporting period and status of each metric.

PEP #1: Distribute pollution prevention literature on various topics through brochures, educational materials, and other media

Description

ARC members will be provided copies of materials to be displayed at their facilities or used at community events or will be provided electronic material to use on their community website. With ARC oversight, Wayne County and ARC staff will facilitate the selection, procurement and distribution of various watershed restoration and pollution prevention public education materials to support ARC member public education permit compliance. Other or additional copies of some handout materials are available at cost through the Wayne County Publication Clearinghouse. Materials will also be available

to view on the ARC's website. The ARC will also promote its message using electronic media outlets which could include cable TV, social media and billboards.

Goal

- Create at least 2 brochures/materials during permit cycle including one to educate commercial/industrial/educational & institutional entities
- Develop at least 24 Facebook posts
- Materials available at ARC member facilities

Assessment

METRIC	STATUS
Number of materials distributed/topic/location/event name	• 2025 - created two new brochures to educate construction contractors and plumbers/carpet cleaners/power washers doing work in the Rouge River watershed. • 2025 – received, in conjunction with SEMCOG's One Water Campaign, 3,000 native pollinator seed packets for distribution to ARC members beginning in 2026. • 2024 – more than 24,600 materials distributed. • 2025 – more than 7,400 materials distributed. • 2025 – the Waterfront Wisdom brochure was updated to reflect current information • See Appendix A – Material Distribution Report for detailed breakdown
Number of posts/views on ARC Facebook	• 2024 – 39 created posts • 2025 – 43 created posts • See Appendix B – Electronic Media Report for detailed breakdown
Viewer numbers from electronic (tv, billboard etc.) media when used	• No activities during the reporting period

PEP #2: Coordinate and distribute community articles and ad graphics on pollution prevention and watershed restoration and stewardship

Description

With ARC oversight, ARC staff will facilitate the selection (based on an annual theme) and distribution of various articles and/or ad graphics that support watershed restoration and pollution prevention public education themes. Other existing articles or ad graphics will be made available upon request by ARC members. Articles and ad graphics will also be posted on the ARC's website and through social media. ARC members will repost articles and ad graphics to their own social media outlets.

Goal

- Coordinate/distribute existing articles/ad graphics
- Develop 1 new article/1 new ad graphic per year (total of 5 during permit cycle)
- Increase in ARC website traffic and Facebook views

Assessment

METRIC	STATUS
List of articles/ad graphics with title, topic and date	See Appendix C – Articles/Ad Graphic Report for copies of: • 2024 –We Can All Reduce Flooding in the Rouge River (article completed in October) • 2024 – Reduce Flooding (graphic completed in October) • 2025 –When it Comes to Illegal Dumping, You are the "Eyes & Ears" in Your Community! (article completed in August) • 2025 – Illegal Dumping (graphic completed in August)
List of articles/ad graphics promoted on ARC website/Facebook	• 2024 – We Can All Reduce Flooding in the Rouge River (article/graphic) • 2025 – When it Comes to Illegal Dumping, You are the "Eyes & Ears" in Your Community! (article/graphic)
Number of views on ARC website/Facebook	• 2024 – increased number of website visitors with more than 11,200 views • 2025 – increased number of website visitors with more than 13,700 views. • 2024 – Facebook page reach of more than 22,500 • 2025– Facebook page reach of more than 54,900 • See Appendix B – Electronic Media Report

Comment:

In 2024 and 2025 ARC Staff continued developing individual pages for each of the ARC's grant-funded restoration projects.

PEP #3: Provide static displays and posters on pollution prevention and watershed restoration and stewardship

Description

Wayne County has various pollution prevention and/or watershed awareness displays available for loan to ARC members. The ARC plans to update existing and/or create new static displays during the permit cycle. The ARC may create new static displays using SEMCOGs "What You Can Do . . ." series or other topic that will be made available for loan to ARC member communities to use at their facilities or community events in each of the subwatersheds. ARC staff may also oversee displays at community events. ARC staff may create new displays if a particular topic is deemed necessary. The ARC is also creating seasonal posters covering a variety of the PEP topics which will be provided to ARC members for display in their facilities.

Goal

- Distribute 4 seasonal posters, post and rotate seasonally at least 3 out of 5 years during permit cycle.
- Update/create at least 3 static displays and use at 3-4 ARC member community events per year during the permit cycle with a minimum of 2 events in each of the 7 subwatersheds during the permit cycle.

Assessment

METRIC	STATUS
Report of static display/date/location and title of events where displays were used *(4 events per year, 2 events in each subwatershed during permit cycle)*	• 2024 – banners at 69 events • 2025 – banner at 78 events • Banners have been at 2 events in each of the 7 subwatersheds during the permit cycle • See Appendix D – Poster/Banner Report
Number of posters distributed and location *(rotate 3 out of 5 yrs. of permit cycle)*	• All Collaborative Plan participants have displayed the posters at least 3 years during the permit cycle. • 1,074 copies of seasonal posters were distributed at community events during the reporting period • 2024 - A mailing went out to libraries in the Rouge River Watershed offering the ARC's seasonal posters and posters were also distributed at Cranbrook's Environmental Education Outreach event on 8/12/24. • 2025 - A mailing of the ARC's seasonal posters went to community centers, recreation centers and senior centers in the Rouge Watershed • 27 permitees displayed posters in both of the reporting years and 3 displayed them in 1 of the reporting years in their buildings • See Appendix D – Poster/Banner Report
Number of static displays created *(3 over permit cycle)*	• 2024 – a separate brochure display was purchased to be displayed with each banner that includes the corresponding brochure and also the ARC's general brochure. • 2025 – designed a new banner which educates the public on reporting illegal dumping called "You are the eyes and ears of the Rouge River Watershed."

Comment

The ARC's static display banners have far exceeded the permit requirement of 2 events in each management area as shown below:

	Main 1-2	Main 3-4	Upper	Middle 1	Middle 3	Lower 1	Lower 2
Times in management area during permit cycle	30	6	34	34	14	15	14

32 ARC Member communities displayed the seasonal posters 4 or more years during the permit cycle which exceeded the goal.

PEP #4: Promote environmental hotlines to educate the public on illicit discharges and promote public reporting of illicit discharges and improper disposal of materials into the MS4

Description

The environmental hotline numbers and collection/disposal information will be advertised by ARC members through available outlets such as the ARC website, county and local community websites, social media, through hotline brochure distribution, as well as being displayed on other topical brochures, distributed at display events and training sessions, electronic media, and other outlets.

Goal

- Distribute materials annually with hotline referenced
- Promote on ARC and ARC member community website and Facebook

Assessment

METRIC	STATUS
Number of materials distributed annually	• 2024 – 8,298 brochures distributed with hotline and collection/disposal information referenced (Waterfront Wisdom, Watershed Wisdom, Jar Opener, Business BMP, How Watersheds/Water Quality Work) • 2025 – 1,135 brochures distributed with hotline and collection/disposal information referenced (Waterfront Wisdom, Watershed Wisdom, Jar Opener, Business BMP, How Watersheds/Water Quality Work) • 2025 – designed a new banner, newsletter article and ad graphic which educates the public on reporting illegal dumping called "You are the eyes and ears of the Rouge River Watershed" which includes the hotline numbers. • "How Watersheds and Water Quality Work" banner and "Have a Business in the Rouge River Watershed" banner include hotline numbers.
Number of views on ARC website and Facebook	• 2024 and 2025 – Brochures and specific content added to website that reference the hotline and collection/disposal information. https://www.allianceofrougecommunities.com/illdump.html and https://www.allianceofrougecommunities.com/rougeHHW.html • See Appendix B – Electronic Media Report

PEP #5: Distribution of "homeowner" materials to promote the importance of pollution prevention and watershed restoration and stewardship

Description

Homeowner educational materials will be available to ARC members and the public through the ARC website and Facebook. A homeowner educational brochure will be distributed and made available to ARC members to use as part of their welcome to the community new resident packets.

Goal

- Develop homeowner materials within 1 year of permit approval.

Assessment

METRIC	STATUS
Completion of brochure	• Metric completed previously
Number of materials distributed annually	• 2024 – 1,004 copies of "Watershed Wisdom for Homeowners – Healthy Habits for Clean Water" and 1,655 jar openers • 2025 – 500 copies of "Watershed Wisdom for Homeowners – Healthy Habits for Clean Water" and 155 jar openers
Number of materials distributed to new homeowners by ARC member communities	• Distributed at community buildings, public meetings, presentations and workshops • See Appendix A – Material Distribution Report for detailed breakdown
Number of views on ARC website and Facebook	See Appendix B – Electronic Media Report

PEP #6: Develop and promote educational workshops and presentations

Description

With ARC oversight, Friends of the Rouge (FOTR) and ARC staff will determine the topics, coordinate content, and present 6 workshops during the permit cycle. Workshop topics will vary based on annual education themes and/or needs as determined by the ARC. Workshops and presentations to business associations, chamber of commerce, business organizations, and focus groups could also be included. ARC members may host and participate in these workshops and presentations.

Goal

- Conduct six workshops/presentations during the permit cycle, 1 or more per year and at least 1 per subwatershed.
- Each event will average at least 15 participants.
- ARC member communities will promote and/or host events
- One or more will target businesses

Assessment

METRIC	STATUS
Number and topics of materials handed out and presented	• This metric has been completed. • 2024 - ARC held a grand opening for the Fish Hatchery Park AOC restoration project in Northville Township on September 6, 2024. The event was attended by Senator Stabenow, Congresswoman Dingell, Wayne County Commissioner Marecki, Crawford White from EPA GLNPO and several other City of Northville and Township elected officials. The event was covered by WWJ radio, WXYZ and WDIV television. The ARC banners were displayed and public education materials were distributed at the event • 2024 - ARC attended the MWEA 2024 Watershed & Stormwater Seminar on December 10, 2024, and participated in the "Shed Talks" on behalf of the Rouge River Watershed

	• 2025 – ARC conducted a Stewards of the Rouge Workshop on October 22, 2025. There were 28 people registered and unfortunately due to extreme weather only 7 people attended the workshop • 2025 - ARC planned and coordinated information sessions with RRAC at the following Wayne County Parks Naturalist Programming events: Lola Valley Wetlands Restoration walk May 15, 2025, the Rouge Fishway walk on May 29, 2025, the Nankin Mills Bugtopia event on July 19, 2025, and the Wilcox Lake Restoration event on August 21, 2025 • 2025 – ARC hosted a HOW-funded bus tour that was held on August 21, 2025. The tour included stops at the Henry Ford Estate Fishway and Wilcox Lake. ARC public education materials were distributed to attendees • 2025 - ARC hosted EPA Region V Administrator Vogel, Teresa Seidel EPA Great Lakes Program Office Director, and Melanie Foose, EGLE on a visit to the "Rouge" in the fall of 2025. In addition, students from The Henry Ford Academy attended. The tour included stops at the Oxbow at The Henry Ford, the Rouge River Concrete Channel, and the Fishway project sites • 2025 - ARC attended and presented posters of the ARC's work at the EPA Area of Concern Cross-Agency Partnership Summit on September 16-18, 2025
Workshop sign-in sheets with number of attendees and survey results when collected	See Appendix E – Workshop/Volunteer Report
Report of ARC member communities promoting/hosting events	See Appendix E – Workshop/Volunteer Report and Appendix B – Electronic Media Report for additional activities that were hosted or promoted by ARC communities

PEP #7: Promote and support volunteer activities

Description

The ARC members, Wayne, Oakland and Washtenaw County, FOTR and other partners will promote and implement Rouge River awareness and restoration projects such as Rouge Rescue, River Day, workdays, water festivals and green schools programs through websites, social media, distribution of materials and presentations. In addition, four (4) workdays may be organized and coordinated to implement watershed restoration stewardship activities at new or existing green infrastructure project sites during the permit cycle. ARC members are encouraged to promote FOTR's Rouge Rescue and workdays that are held throughout the watershed.

Goal

- Coordinate 4 workdays during permit cycle
- ARC member communities will promote, participate or host volunteer and other watershed events

Assessment

METRIC	STATUS
Workday sign-in sheets documenting volunteer attendance	• Metric completed previously
Workday survey results	• Metric completed previously

Report of ARC member communities that hosted, participated or promoted events	ARC member communities hosted, participated or promoted events 435 times during the reporting period. (See Appendix E – Workshop/Volunteer Report)
Number of views on ARC website and Facebook annually	See Appendix B – Electronic Media Report

PEP #8: Promotion of and support for volunteer monitoring activities within the Rouge River Watershed

Description

The ARC and Oakland and Washtenaw County will promote and support Wayne County and the Friends of the Rouge to implement a watershed-wide volunteer monitoring program through websites, social media, distribution of materials, and presentations. ARC members will actively promote public and business participation and lend support to FOTR as appropriate. ARC members will host monitoring activities at their facilities when appropriate.

Goal

- Conduct 1 winter stonefly search, 1 bug hunt and 2 other volunteer monitoring training exercises annually
- ARC member communities will promote, participate or host volunteer events

Assessment

METRIC	STATUS
Monitoring events	Completed annually, see Appendix E – Workshop/Volunteer Report
Number of views on ARC website and Facebook	Monitoring events are promoted through the ARC Facebook account See Appendix B – Electronic Media Report
Sign-in sheets showing number of volunteers (when available)	See Appendix E – Workshop/Volunteer Report
Survey results (when available)	
Report of ARC member communities that hosted, participated, or promoted events	

PEP #9: Rouge River Watershed Signage

Description

Watershed signage will continue to be made available to ARC members including River/Road Crossing signs, Don't Feed the Geese/Waterfowl signs, and Grow Zone signs. ARC Staff will create one new sign and/or sticker for community use during the permit cycle regarding disposal practices of animal waste or other pollution prevention topic. ARC Staff, with assistance from Wayne County, Oakland County and ARC member communities, surveyed the watershed to 1) document current signage to determine if maintenance is needed, and 2) document where future signage placement would be beneficial. This activity helps to educate and increase public awareness about the interconnectedness of the watershed and the storm sewer system.

Goal

- Develop at least 1 new sign or sticker during permit cycle

- During first 2 years survey watershed signage for maintenance and future sign needs
- Create map during permit cycle documenting survey results
- Implement maintenance and/or new signage at high-priority locations during the permit cycle

Assessment

METRIC	STATUS
Complete at least 1 new sign/sticker or other item during permit cycle	• Metric completed previously
Number of signs/stickers or other items distributed annually	• Metric completed previously
Survey results, map and recommendations during permit cycle	• Metric completed previously
Number of signs maintained and new signage installed during permit cycle	• Metric completed previously

C. Overall Effectiveness

This report summarizes the effectiveness of the Rouge River Collaborative Public Education Program (Plan.) The ARC analyzes survey results from workshops, presentations, workdays and other activities and makes necessary adjustments to the information presented at the ARC supported workshops and presentations during the permit cycle. The ARC continues to participate in regional partnership activities which assist with implementing and improving the PEP.

Appendix A

Material Distribution Report

ARC 2024 PIE Materials Distribution Report

Community	Name/Location of Event	Event Date	Pet Waste Container	Spring Poster	Summer Poster	Fall Poster	Winter Poster	Detention Pond	Member Brochures	Waterfront Wisdom	Watershed Wisdom Homeowners	Business BMP Brochure	Homeowner Septic System	How Watersheds/ Water Quality Work	Chemical Brochures	FOG Brochure	Clips	Jar Openers 5,000	Kneeling Pad	Vehicle Magnets 500	Bookmark	ARC Fact Flyer	Value of Trees	Black Eyed Susan Card	SE MI Partner DVD	Working for CW DVD	Pet Tip Card	Storm Drains Tip Card	Fertilize Tip Card	Chemical Tip Card	Car Care Tip Card
			PET BAGS	ALL SEASONS POSTERS				MANUALS									GIVEAWAYS				HANDOUTS/TIPCARDS/BANNERS										
Auburn Hills	ARC Distribution/Member Request													100								50									
Beverly Hills	ARC Distribution/Member Request		50								50			150								50	50								50
Beverly Hills	Citizen Request									4	4																				
Bingham Farms	ARC Distribution		100	1	1	1	1							100								50	100								
Birmingham	ARC Distribution													100								50									
Birmingham	Open house/bring child to work	May-24	500	1	1	1	1									100	500	500			500		100								
Birmingham	Baldwin Public Library Display			1	1	1	1																								
Bloomfield Hills	ARC Distribution													100								50									
Bloomfield Twp	ARC Distribution													100								50									
Bloomfield Twp	BT Public Library Display			1	1	1	1																								
Canton	ARC Distribution													100								50									
Commerce Twp	ARC Distribution		150					50		50	50		150	100	100	75	50	50				150								50	75
Dearborn Heights	ARC Distribution													100								50									
Farmington	ARC Distribution/Farmers Market	11/2/2024	100	3	3	3	3							100		100	45	100			100	50									
Farmington Hills	ARC Distribution													100								50									
Farmington Hills	Earth Day at Heritage Park	4/22/2024	100								100	100			100	100	100	20	20			100									
Franklin	ARC Distribution													100								50									
Garden City	ARC Distribution			1	1	1	1				50	50		120		20	30					150	20								
Henry Ford College	ARC Distribution													100								50									
Inkster	ARC Distribution													100								50									
Lathrup Village	ARC Distribution/Member Request													100								50									
Livonia	ARC Distribution		100					100		100	100			200	100	100		100				150	100						100		100
Melvindale	ARC Distribution													100								50									
Northville	ARC Distribution													100								50									
Northville Twp	ARC Distribution/Member Request													100								50									
Novi	ARC Distribution													100								50									
Novi	HOA breakfast & MSU Tollgate Pumpk	10/5/2024	100														100	100													
Oak Park	ARC Distribution/Member Request													100		500						50	500								
Oakland County	ARC Distribution/Member Request		300											100	100		216	300				50									
Orchard Lake	ARC Distribution									20				120								100									
Plymouth	ARC Distribution/Member Request	og license	300											100								50									
Plymouth	ELC Plymouth Farmers Market	6/15/2024	300														150														
Plymouth	Plymouth District Library Display			1	1	1	1																								
Plymouth Twp	ARC Distribution/Member Request		300											100								50									
Plymouth Twp	Arbor Day Event	4/26/2024																					100								
Redford Twp	ARC Distribution													100								50									
Rochester Hills	ARC Distribution													100								50									
Romulus	ARC Distribution	Library Display	30	3	3	3	3				50	50		150	100		50	20			100	100	50						30	30	30
Schoolcraft College	ARC Distribution		24			12	12							125			24					50									
Southfield	ARC Distribution													100								50									
Troy	ARC Distribution													100								50									
UM Dearborn	ARC Distribution													100		100					100	50									
Van Buren Twp	ARC Distribution		15					15		15				100			15	15				65									
Walled Lake	ARC Distribution									25	25			150	20		100				100	50	25						50	50	50
Washtenaw County	ARC Distribution							25						100			25					50									
Wayne County	ARC Distribution		200	4	4	4	4			10	100		50	150	100	100	216	125			100	150				1					100
WCAA - Willow Run	Member Request								20						20	20						20									
Wayne	ARC Distribution/Member Request		350											100		400	36	50			100	50				1	1			100	100	100
West Bloomfield Twp	ARC Distribution													100								50									
Westland	ARC Distribution													100								50									
Wixom	ARC Distribution													100								50									
Wilcox Phoenix **(DISPLAYED GENERAL BANNERS)**	Publc Meeting	3/28/2024	25	4	4	4	4			50	50	50			50	50	40	50			50	50	50	15								
Cranbrook **(DISPLAYED GENERAL BANNERS)**	Cranbrook Spring into Science After Dark	3/28/2024	25	4	4	4	4			50	50	50			50	50	40	50			50	50	50	15								
Cranbrook **(DISPLAYED GENERAL BANNERS)**	Environmental Education outreach Te	8/12/2024	25	20	20	20	20	25		25	25			25		25	25	25				25	25								
Rouge Concrete Channel Restoration **(DISPLAYED GENERAL BANNERS)**	Public Meeting	9/4/2024	50								50			50	50	50	50														
Northville **(DISPLAYED GENERAL BANNERS)**	Fish Hatchery Celebration	9/6/2024	50								50				50	50	50	50			50	50									
Oakland Cty LTU **(DISPLAYED GENERAL BANNERS)**	Stormwater Summit	10/3/2024	100					50		50	50	50		100	100	100	100	50			100	100	100								
Rouge Concrete Channel Restoration - ACCESS Workforce Development Event	City of Dearborn of Arabic Community	11/15/2024	20								50			50	50	50	20	50			50										
MWEA Watershed & Stormwater Summit **(DISPLAYED GENERAL BANNERS)**		12/10/2024	50	20	20	20	20				50	50			50	50	30				50	50									
EGLE Requirement for Banners Display x5										50	100	50		50	50							250									
		TOTAL	**3364**	**64**	**64**	**76**	**76**	**265**	**20**	**449**	**1004**	**450**	**200**	**4740**	**1090**	**2040**	**2012**	**1655**	**20**	**0**	**1450**	**3260**	**1270**	**30**	**1**	**2**	**0**	**0**	**280**	**230**	**505**
		TOTAL OF ALL MATERIALS														**24617**															

Total Items distributed: 24,617

ARC PIE MATERIALS DISTRIBUTED/REQUESTED 2025

Community	Name/Location of Event	Event Date	Spring Poster	Summer Poster	Fall Poster	Winter Poster	Detention Pond	ARC Fact Flyer	Member Brochures	Waterfront Wisdom*	Watershed Wisdom Homeowners	Business BMP Brochure*	Homeowner Septic System	How Watersheds/ Water Quality Work*	Chemical Brochures	FOG Brochure	Bookmark	Clips	Pet Waste Container	Jar Openers	Value of Trees	Black Eyed Susan Card	SE MI Partner DVD	Working for CW DVD	Car Care Tip Card
			SEASONAL POSTERS				BROCHURE HANDOUTS										GIVEAWAYS				Misc Tip Cards/DVDs				
Auburn Hills	ARC Distribution/Member Request																								
Beverly Hills	ARC Distribution/Member Request									30	30							10	20						
Bingham Farms	ARC Distribution																								
Birmingham	Member Request/DPS Open House	5/17/2025																216	250	30					
Bloomfield Hills	ARC Distribution																								
Bloomfield Twp	ARC Distribution																								
Canton	ARC Distribution																								
Canton	Citizen Request						6																		
Commerce Twp	ARC Distribution																	120							
Dearborn Heights	ARC Distribution																								
Farmington	Member Request/EGLE Audit	2/11/2025					100	100			100	100			100	100	100		20						
Farmington	Member Request														50	50	50	25	50	25					
Farmington Hills	ARC Distribution																								
Franklin	ARC Distribution																								
Garden City	ARC Distribution																								
Henry Ford College	ARC Distribution																								
Inkster	Member Request		5	5	5	5		100	50		50				100										
Lathrup Village	ARC Distribution/Member Request																								
Livonia	ARC Distribution																	100							
Melvindale	ARC Distribution																								
Northville	Member Request/EGLE Audit		1	1	1	1																			
Northville Twp	ARC Distribution/Member Request																								
Novi	Novi Comm Fest/HOA Picnic	6/5/2025																100	100	50					
Oak Park	ARC Distribution/Member Request		1			1												170							
Oakland County	ARC Distribution/Member Request										50			50					216	50					
Orchard Lake	ARC Distribution																								
Plymouth	Member Request/Farmers Market																		300						
Plymouth Twp	ARC Distribution/Member Request																	100							
Plymouth Twp	HOA Leadership Meeting	9/25/2025					50									100									100
Redford Twp	ARC Distribution																								
Rochester Hills	ARC Distribution																								
Romulus	ARC Distribution																								
Schoolcraft College	Member Request		2	2	2	2	3										100	30	30						
Southfield	ARC Distribution																								
Troy	ARC Distribution																								
UM Dearborn	Member Request/UM Earth Day	4/23/2025																50	100						
Van Buren Twp	ARC Distribution																								
Walled Lake	ARC Distribution																								
Washtenaw County	Member Request										10							50	25						
Wayne County	Member Request/Keep MI Beautiful Luncheon							30									100		30						
Wayne County	EPA Habitat Projects Tour	10/10/2025									10				10	10	10								
Wayne	ARC Distribution/Member Request																	50							
West Bloomfield Twp	ARC Distribution																								
Westland	ARC Distribution																								
Wixom	ARC Distribution																								
Misc:																									
Community Centers, Rec Centers, Senior Centers	ARC Distribution (32 Centers total)	6/4/2025	128	128	128	128																			
Proposal Interview (Tonya Lew)			2	2	2	2		15									15	15	15						
BANNERS DISPLAYED AT EVENTS ***(See what banners displayed on PIE Banner Reservations 2024-2031 file)***																									
Cranbrook	Spring into Science After Dark	3/27/2025	20	20	20	20	50	50			50			50	50	50	100	50	50		50				
Wayne County	WCP Bugtopia Event	7/18/2025	10	10	10	10											100	30	30						
ARC GLRI HOW Project Habitat HOW Tour	HOW Tour (UMD)	8/20/2025	10	10	10	10		100			100			100	100	100	100		100						
Rouge Concrete Channel Restoration	Public Mtg - Dearborn	10/1/2025	10	10	10	10					50			50	50	50		50	50						
LTU-Oakland County	Regional SW Summit	10/10/2025								50							50	50	50						
ARC Stewardship Workshop - Livonia	Stewardship Workshop	10/22/2025	10	10	10	10		50		50	50		50		50	50	100	50	50						
			199	**198**	**198**	**199**	**209**	**445**	**50**	**130**	**500**	**100**	**50**	**250**	**510**	**510**	**825**	**1266**	**1486**	**155**	**50**	**0**	**0**	**0**	**100**

Total Items distributed: 7,400

Alliance of Rouge Communities

OURS TO PROTECT

Working together, restoring the river

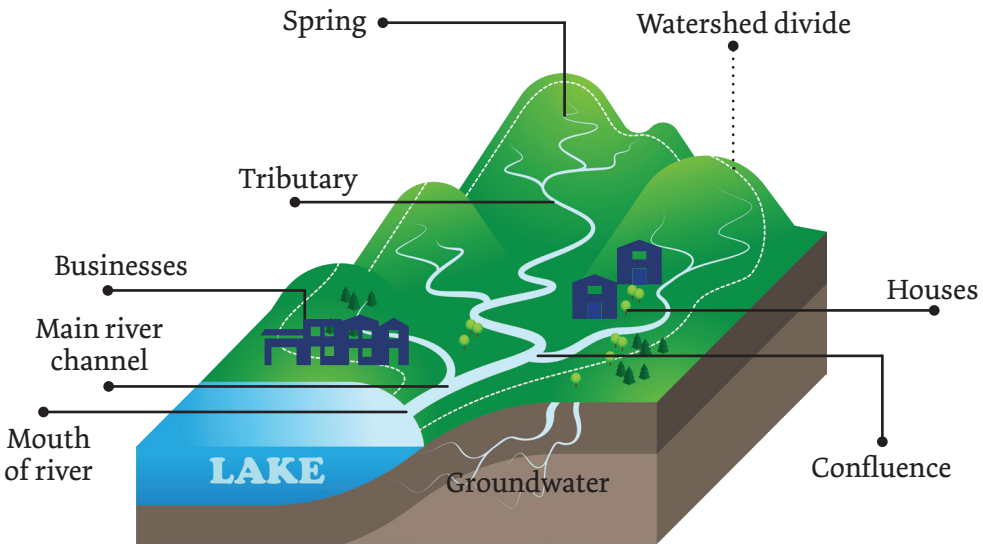
What to Know if you Are a Contractor in the Rouge River Watershed

An introduction on permits & best management practices (BMPs) for construction contractors working in the Rouge River Watershed

In Michigan, contractors need to follow specific regulations and BMPs to protect stormwater from construction-related pollution. These requirements are in place to protect the water quality of the Rouge River.

A *watershed*, also referred to as a drainage basin, is the land area that delivers rain and snow/ice melt to a stream or lake. Every contractor working in Michigan is in a watershed!

When it rains, stormwater flows over a construction site, picking up pollutants like sediment, debris, and chemicals from that loose soil and transport them to nearby storm drains or directly into rivers or lakes. Used water from power washing or carpet cleaning, if discharged to the ground or into a storm drain, can carry chemicals and pollution directly to our rivers and lakes. Even if the work you are contracted to do is not "next to the river," your actions still have an impact on the water quality in the Rouge River watershed.



As a contractor, securing the correct permits and ensuring stormwater pollution prevention BMPs are in place prior to working will have a positive impact on your profits, employees, customers, the communities you work in, the Rouge River and ultimately one of our Great Lakes - Lake Erie!

www.allianceofrougecommunities.com

Construction Contractors

IMPORTANT: *Contact Michigan's Department of Environment, Great Lakes, and Energy (EGLE), the county, and the local authority for complete requirements and regulations as this brochure is an introduction and does not cover all information.*

In Michigan, contractors need to adhere to specific regulations and practices to protect stormwater from construction-related pollution. These requirements are primarily aimed at preventing soil erosion and sedimentation, which are major threats to water quality.

Construction activity includes earth-disturbing activities such as clearing, grading, and excavating land and other construction-related activities that could generate pollutants. Construction projects disturbing one acre or more of land, or part of a common plan that will ultimately disturb one acre or more, require a Clean Water Act permit for stormwater discharges.

Enforcement is generally through state, local or county agencies that may have more stringent requirements. Contact the local authority for complete requirements and regulations.

Permits & Plans

- National Pollutant Discharge Elimination System (NPDES) Permit: Construction projects disturbing one acre or more, or part of a larger development disturbing one acre or more, require a NPDES permit for stormwater discharge.
- Soil Erosion and Sedimentation Control (SESC) Permit: Projects disturbing one acre or more, or within 500 feet of a lake or stream, typically require an SESC permit from the local enforcing agency or designated Authorized Public Agency (APA).
- Permit-by-Rule: For sites disturbing one to five acres, automatic stormwater coverage may be granted upon obtaining a Part 91 SESC permit, but the contractor must still adhere to Permit-by-Rule requirements. In addition, regular inspection by a Certified Stormwater Operator is required.

- Notice of Coverage (NOC): Sites disturbing five acres or more with a point source discharge to surface waters require submitting an NOC to EGLE through their MiEnviro portal. In addition, regular inspections by a Certified Stormwater Operator are required.
- Erosion and Sediment Control Plan: A detailed plan outlining the measures to prevent and control erosion and sediment runoff must be developed and implemented before starting on-site activities.
- Stormwater Pollution Prevention Plan (SWPPP): For industrial activities, including certain construction sites, a SWPPP must be developed.

MORE INFORMATION: *Visit allianceofrougecommunities.com/business.html or scan this QR code for more information and links to county and state websites for construction contractors working in the Rouge River Watershed.*

Best Management Practices (BMPs) for Construction Contractors

- **Soil Erosion Control:** Implement measures like silt fences, stone check dams, and access drives to prevent soil from leaving the site.
- **Minimizing Disturbance:** Limit disturbed areas and soil compaction, especially in environmentally sensitive zones, by designing with existing topography and protecting natural areas.

- **Low Impact Development (LID):** Consider implementing LID practices such as rain gardens, permeable pavements, and vegetated swales to manage stormwater runoff.
- **Maintaining Vegetated Areas:** Preserve and maintain vegetated areas to help filter pollutants and reduce runoff.
- **Reducing Impervious Surfaces:** Minimize impervious surfaces like asphalt and concrete to increase infiltration and reduce runoff volume.

- **Channel Protection:** Implement controls to minimize impacts on stream channels and ensure they can handle stormwater flow.
- **Permanent Stormwater Controls:** Install permanent post-construction stormwater controls designed to manage the increased runoff from new development and redevelopment projects.
- **Operation & Maintenance Plan:** Develop a plan for the ongoing maintenance of stormwater control measures.
- **Identifying Pollutant Sources:** Identify potential pollutant sources on the site, including materials and activities exposed to stormwater runoff.
- **Spill Prevention and Response:** Implement procedures for spill prevention and response to prevent contaminated runoff.
- **Record Keeping:** Maintain documentation of inspections, permits, and other stormwater management activities.

- **Employee Training:** Provide training to employees on proper stormwater management practices.

Why Implement BMPs on Construction Sites?

Construction activities have a direct effect on the water quality in the Rouge River watershed. Training your employees and following regulations and the BMPs discussed in this brochure will improve the quality of the stormwater runoff on your sites in a cost-effective manner.

Water Quality Terms

As a business and important member of your community, you should understand the frequently used terms below connected to water quality.

- **Non-Point Source** - Businesses in the Rouge River watershed can contribute to poor water quality through "non-point" sources, pollution which occurs when runoff picks up trash and debris on the land and discharges it to a water body.

- **Sanitary Sewer vs. Storm Drain** - Businesses should know the difference between sanitary sewer and storm drain systems. The water in the sanitary sewer comes from the sinks, floor drains and toilets in a business and is treated before being released back into a waterway. While water in the storm drains consists of runoff from rain and snow and sometimes groundwater which is not treated before entering the Rouge River or other waterways. Therefore, any materials and debris on your construction site can damage waterways.

Report Illicit Discharges or Illegal Dumping

An illicit discharge is any discharge containing polluting material, such as sediment, nutrients, oil and bacteria. These discharges can drain to lakes and streams via storm drains. The communities in Southeast Michigan are required to prevent illicit discharges from entering stormwater. It is also important for your employees to report any of the below signs of potential illicit discharges or dumping to a storm drain or water body. These discharges can be reported to your local department of public works or to the State and counties using the numbers below.

Things to Report:

- Discolored water in lakes, rivers and streams.
- Spills and contamination to lakes, rivers and streams.
- Suspicious dumping to catch basins or waterways.
- Unusual discharges from pipes.
- Sewage on the ground or draining to surface water.
- Large number of dead fish in waterways.
- Failing or leaking septic systems.
- Polluted runoff from storage piles or dumpsters to catch basins or waterways.
- Sewage, detergent, chemical, petroleum or rotten egg odors.
- Soil erosion from construction sites.

REPORT ILLEGAL DUMPING	
Michigan's Pollution Alert System	800-292-4706
Macomb County	877-679-4337 or IDEP@macombcountymi.gov
Oakland County	248-858-0931
St. Clair County	277-504-SWIM
Washtenaw County	734-222-6860 or https://washtenaw.org/196/Report-an-Issue
Wayne County	888-223-2363

Alliance of Rouge Communities

The Alliance of Rouge Communities, or ARC, is a 501(c)(3) non-profit organization consisting of local municipalities, counties, educational institutions and stewardship groups working together to improve the Rouge River. Founded in 2005, the ARC is funded by membership dues from local governments and supported by grants. The ARC and its partners work cooperatively to protect the Rouge River while meeting water quality requirements mandated by the State's stormwater permit and restoring beneficial uses, such as canoeing, fishing and other recreational activities, to the Rouge River.

Alliance of Rouge Communities

OURS TO PROTECT

Working together, restoring the river

BE THE SOLUTION ~ NOT THE POLLUTION

STORM DRAINS AREN'T GARBAGE CANS!

ALLIANCEOFROUGECOMMUNITIES.COM

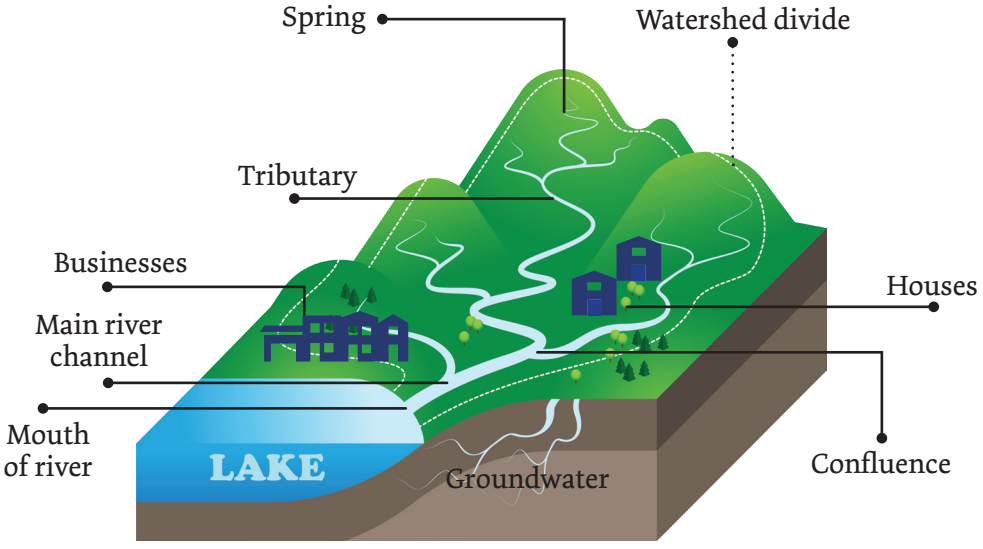
What to Know if you Are a Plumber, Carpet Cleaner or Power Washer in the Rouge River Watershed

An introduction on permits & best management practices (BMPs) in the Rouge River Watershed

In Michigan, plumbers, carpet cleaners and power washers need to adhere to regulations and BMPs to prevent water pollution and manage drainage. These requirements are in place to protect the water quality of the Rouge River.

A *watershed*, also referred to as a drainage basin, is the land area that delivers rain and snow/ice melt to a stream or lake. Every contractor working in Michigan is in a watershed!

When it rains, stormwater flows over a construction site, picking up pollutants like sediment, debris, and chemicals from that loose soil and transport them to nearby storm drains or directly into rivers or lakes. Used water from power washing or carpet cleaning, if discharged to the ground or into a storm drain, can carry chemicals and pollution directly to our rivers and lakes. Even if the work you are contracted to do is not "next to the river," your actions still have an impact on the water quality in the Rouge River watershed.



As a contractor, securing the correct permits and ensuring stormwater pollution prevention BMPs are in place prior to working will have a positive impact on your profits, employees, customers, the communities you work in, the Rouge River and ultimately one of our Great Lakes - Lake Erie!

Carpet Cleaners, Power Washers & Plumbers

IMPORTANT: *Contact EGLE, the county, and the local authority for complete requirements, regulations, and discharge guidance as this brochure is an introduction and does not cover all information.*

MORE INFORMATION: *Visit allianceofrougecommunities.com/business.html or scan this QR code for more information and links to county and state websites for contractors working in the Rouge River Watershed.*

Carpet Cleaners

In Michigan, carpet cleaning wastewater must be disposed of into the sanitary sewer system, not into a storm drain. Storm drains empty into local rivers and lakes without treatment, and carpet cleaning waste contains pollutants that can harm aquatic life. Improper disposal can lead to fines and environmental damage.

BMPs

- Inspect site to determine disposal options.
- Contain all washwater and use controls to prevent spills.
- Filter all wastewater before discharging to sanitary sewer to remove solids.
- Follow manufacturer instructions for all chemicals.
- Train employees on proper disposal procedures.
- Discharge wastewater into an indoor drain that leads to a sanitary sewer. If a sanitary sewer is not available, collect the wastewater in a vehicle tank and dispose of it properly at your facility or designated wastewater disposal site.
- Discharge to the ground may be an option if a groundwater discharge permit is obtained.

Power Washers

Power washers in Michigan need to prevent contaminated wash water from flowing into streets, ditches, or storm drains. Storm drains empty to local rivers and lakes without treatment, and power washing runoff can contain pollutants that harm water quality. Contact EGLE and the local authority to determine if a wastewater or groundwater discharge permit is needed.

BMPs

- Before starting, sweep, mop or use absorbents to remove debris, grease and dirt to reduce the amount of contamination in wash water.
- Use containment equipment like berms and mats, drain covers and plugs, absorbent materials, or wet vacuums.
- If using plain water, discharge to an indoor sanitary sewer drain or sink with property owner's and local sewer authority's approval.
- If wash water contains hazardous materials like oil, chemicals, or heavy metals, it must be treated as hazardous waste and requires proper disposal and may require a wastewater management plan and discharge permit with EGLE or the local authority.

Plumbers

Plumbers working in Michigan must follow specific plumbing codes, obtain the correct permits, prepare pollution prevention plans when needed, and use appropriate techniques to prevent pollution and manage drainage. Coordination with the State and local authority is necessary to prevent environmental contamination and protect water quality.

BMPs

- Follow Michigan's code for pipe materials, slope, and depth when working on storm drainage systems to ensure adequate flow and to prevent back-ups and flooding.
- Dispose of waste materials and chemicals properly to ensure they don't enter the storm drain.
- Implement erosion and sediment control measures like silt fences on construction sites.
- When providing downspout extensions, direct roof runoff away from paved areas and toward landscaped areas.
- Become knowledgeable about advanced techniques that provide sustainable drainage solutions when working with French drains, dry wells, or permeable pavers.

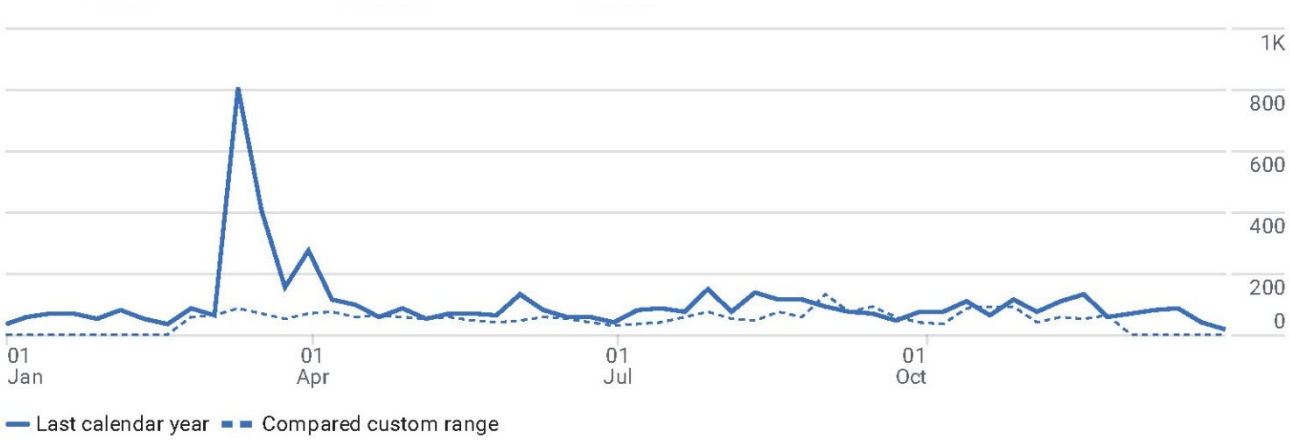
Appendix B

Electronic Media Report

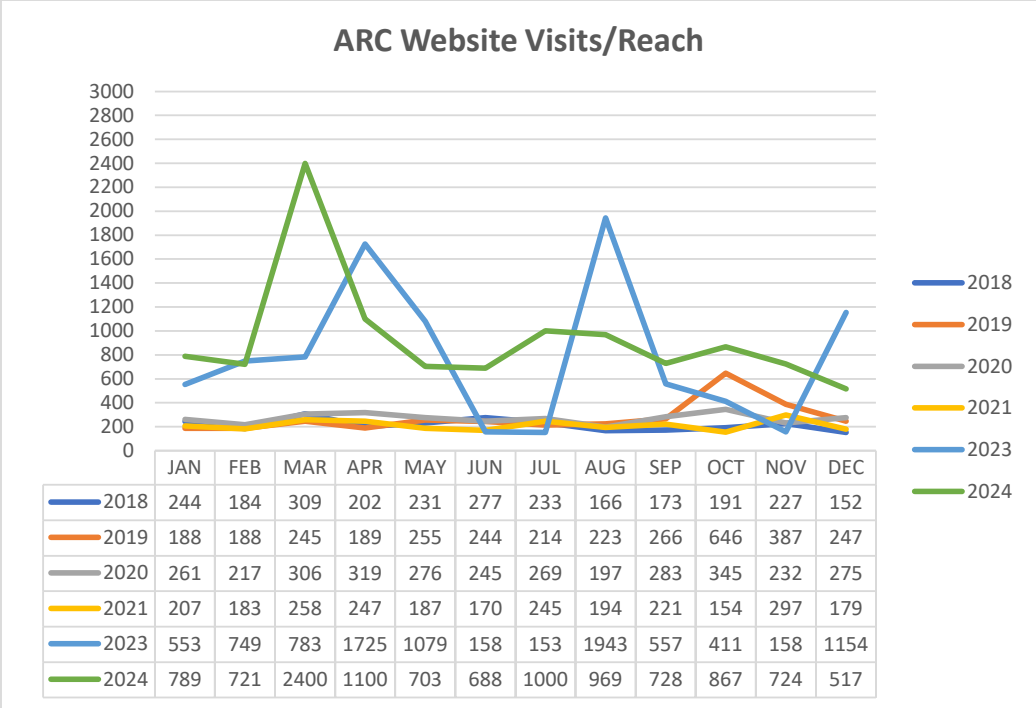
2024 ARC ELECTRONIC MEDIA REPORT

ARC WEBSITE TRAFFIC (Views)

The ARC's website had 11,206 views in 2024



**Solid line – 2024, Dashed line - 2023*



	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2018	244	184	309	202	231	277	233	166	173	191	227	152
2019	188	188	245	189	255	244	214	223	266	646	387	247
2020	261	217	306	319	276	245	269	197	283	345	232	275
2021	207	183	258	247	187	170	245	194	221	154	297	179
2023	553	749	783	1725	1079	158	153	1943	557	411	158	1154
2024	789	721	2400	1100	703	688	1000	969	728	867	724	517

**Note: In 2022 traffic information was not available because the website was moved from one hosting company to another so a full year of data was not available.*

ARC FACEBOOK ACCOUNT

- The ARC created 26 Facebook posts and shared 13 partner posts for a total of 39
- The Facebook page had a reach of over 22,500 in 2024
- The Facebook page had more than 4,600 likes in 2024
- The Facebook page had a total of 595 followers in 2024, this is an increase of 230 from 2023
- The Facebook page has a total of 504 likes in 2024, this is an increase of 71 from 2023

2024 Facebook Posts

Title	Date published	Views	Reach	Viewers	Interactions	Likes and reactions	Comments	Shares
This post has no text Photo • Alliance of Rouge Communities	Jan 26, 2024	--	9	--	0	0	0	0
This post has no text Photo • Alliance of Rouge Communities	Jan 26, 2024	--	8	--	2	2	0	0
Habitat improvements are coming soon to ... Photo • Alliance of Rouge Communities	Feb 27, 2024	--	83	--	20	19	0	10
The ARC's 35 member communities are bei... Photo • Alliance of Rouge Communities	Mar 6, 2024	--	11	--	3	3	0	1
The Alliance of Rouge Communities funds t... Photo • Alliance of Rouge Communities	Mar 6, 2024	--	28	--	4	4	0	4
Let's hear your voice about our Rouge Rive... Alliance of Rouge Communities	Mar 8, 2024	--	8	--	1	1	0	0
This post has no text Photo • Alliance of Rouge Communities	Mar 11, 2024	--	53	--	8	8	0	5
Spring is here (well maybe not this week . . .... Alliance of Rouge Communities	Mar 18, 2024	--	15 1,673 from ads	--	5 3 from ads	4 2 from ads	0 0 from ads	2 1 from ads
"What is that thing?" As you pass by Wayn... Photo • Alliance of Rouge Communities	Mar 26, 2024	--	19	--	17	15	2	3
Don't forget to come learn more about the ... Photo • Alliance of Rouge Communities	Mar 27, 2024	--	10	--	0	0	0	1
This post has no text Photo • Alliance of Rouge Communities	Mar 27, 2024	--	8	--	2	2	0	1
Do you know where the rainwater goes onc... Photo • Alliance of Rouge Communities	Mar 28, 2024	--	28 365 from ads	--	28 5 from ads	15 5 from ads	5 0 from ads	11 0 from ads
What an awesome improvement for our Ro... Photo • Alliance of Rouge Communities	Apr 8, 2024	--	10	--	7	7	0	0
Rouge River Watershed residents in Washt... Alliance of Rouge Communities	Apr 25, 2024	--	9	--	0	0	0	0
Major milestone alert! A permit application ... Photo • Alliance of Rouge Communities	Apr 29, 2024	--	34	--	18	12	4	3
An aerial view of the Henry Ford Estate ... Photo • Alliance of Rouge Commun...	Apr 29, 2024	--	2	--	40	29	5	5

2024 Facebook Posts

Title	Date published	Views	Reach	Viewers	Interactions	Likes and reactions	Comments	Shares
More great things coming for the Rouge Ri... Photo • Alliance of Rouge Communities Boost	Apr 29, 2024	--	9	--	1	1	0	0
Drinking Water Week Webinar May 7, 2024,... Photo • Alliance of Rouge Communities Boost	May 6, 2024	--	11	--	0	0	0	0
The dredging work at Wilcox Lake in the Cit... Photo • Alliance of Rouge Communities Boost	Jun 4, 2024	--	146	--	65	29	5	28
Report Illegal Dumping - You are the eyes a... Photo • Alliance of Rouge Communities Boost	Jun 5, 2024	--	15	--	4	4	0	0
If you are out and about in the Rouge River ... Photo • Alliance of Rouge Communities Boost	Jun 25, 2024	--	24	--	23	19	0	3
Shoreline improvements are underway at ... Multi media • Alliance of Rouge Comm... Boost	Jul 12, 2024	--	63	--	26	18	0	7
After being planted a year ago, native grass... Multi media • Alliance of Rouge Comm... Boost	Jul 13, 2024	--	29	--	7	6	0	1
After being planted a year ago, native grass... Multi media • Alliance of Rouge Comm... Boost	Jul 14, 2024	--	31	--	14	5	5	3
Construction is underway at Riverview Par... Photo • Alliance of Rouge Communities Boost	Jul 15, 2024	--	83	--	20	13	2	5
A huge congratulations to ARC Member W... Alliance of Rouge Communities Boost	Jul 30, 2024	--	27	--	6	3	0	3
If you live in the Rouge River Watershed yo... Photo • Alliance of Rouge Communities Boost	Aug 2, 2024	--	16	--	1	1	0	1
The U.S. EPA Region 5 (Great Lakes Regio... Photo • Alliance of Rouge Communities Boost	Aug 8, 2024	--	236 1,154 from ads	--	126 113 from ads	67 65 from ads	31 28 from ads	27 19 from ads
Get involved and help keep our Rouge Rive... Photo • Alliance of Rouge Communities Boost	Aug 21, 2024	--	21	--	4	3	1	0
Rouge River Watershed residents in Wayne... Photo • Alliance of Rouge Communities Boost	Aug 27, 2024	--	20	--	1	1	0	1
A special thank you to Senator Debbie Sta... Photo • Alliance of Rouge Communities Boost	Sep 10, 2024	--	86	--	8	4	0	4
Alliance of Rouge Communities update... Photo • Alliance of Rouge Commun... Create ad	Sep 10, 2024	--	1	--	7	5	2	0

2024 Facebook Posts

Title	Date published	Views	Reach	Viewers	Interactions	Likes and reactions	Comments	Shares
 The Detroit River Public Advisory Council i... Multi media • Alliance of Rouge Comm... Boost	Sep 13, 2024	--	62	--	4	3	0	1
 If you were unable to attend the kickoff pu... Alliance of Rouge Communities Boost	Sep 26, 2024	398	189	--	2	2	0	1
Look at you Detroit River! Just amazing Fri... Photo • Alliance of Rouge Communities Boost	Oct 4, 2024	179	80	--	2	2	0	0
 You can help reduce flooding and protect w... Photo • Alliance of Rouge Communities Boost	Oct 31, 2024	1,239	781	--	5	2	0	3
 As part of the ARC's "Rouge River AOC Ha... Multi media • Alliance of Rouge Comm... Boost	Nov 5, 2024	799	460	--	5	3	0	3
 Excavation is nearing completion for the cr... Photo • Alliance of Rouge Communities Boost	Nov 6, 2024	547	280	--	2	2	0	1
This post has no text Photo • Alliance of Rouge Communities Boost	Nov 11, 2024	159	65	--	2	2	0	0
 It might be cold outside - but the Rouge Ri... Text • Alliance of Rouge Communities Boost	Dec 12, 2024	146	68	--	1	1	0	0

ARC FACEBOOK POSTS

2024 Posts

2/27/24

Habitat improvements are coming soon to Wilcox and Phoenix Lake in **City of Plymouth**, **Plymouth Township** and **Northville Township - Government**! The Alliance of Rouge Communities (ARC) is excited for these projects in **Wayne County Parks** which will create and enhance habitat in and around each lake through placement of substrate used for fish spawning, shoreline stabilization, habitat structure installation, dredging (Wilcox Lake only), treatment and removal of invasive species, and native plantings. As temperatures improve, workers will mobilize to begin invasive species treatment and site preparation so that construction can begin this spring. This effort is part of the ARC's "Rouge River AOC Habitat Restoration - Wilcox/Phoenix Implementation" project funded by a grant from the **U.S. EPA Region 5 (Great Lakes Region)**, Great Lakes Restoration Initiative (Grant# GL-00E03267-0). For more information visit **https://www.allianceofrougecommunities.com/wilcox.html**

3/6/24

The ARC's 35 member communities are being represented by the ARC's Executive Director in Washington DC for **#GreatLakesDay** this week starting with the **Great Lakes Commission** meeting and ending with the Congressional Breakfast later this week. The ARC's Executive Director, John O'Meara, will be discussing and supporting important issues to the Great Lakes, particularly the Great Lakes Restoration Initiative (GLRI) that has funded many restoration projects within the Rouge River Watershed! Learn more about the ARC at **www.allianceofrougecommunities.com**

3/6/24

The Alliance of Rouge Communities funds two **Friends of the Rouge** volunteer monitoring events, the Winter Stonefly Search which is held in January and the below Spring Bug Hunt scheduled for April 20, 2024. Come out and get involved with your Rouge River!

3/8/24

let's hear your voice about our Rouge River Watershed and other waters of the Great Lakes in a poll developed by the **IJC - International Joint Commission**.

ijc.org

Now Online: 2024 Great Lakes Regional Poll | International Joint Commission

3/11/24

Join us for an update on the Rouge River Area of Concern (AOC) Habitat Restoration at Wilcox and Phoenix Lakes, public meeting scheduled for 3/28/24

3/18/24 - **BOOSTED**

Spring is here (well maybe not this week . . .) but we are getting ready for warmer weather and greener grass. Remember to sweep excess fertilizer off sidewalks and paved areas. This helps keep the fertilizer

from going down the storm drain and directly to the Rouge River. For more ways to protect water quality in the Rouge River visit www.allianceofrougecommunities.com

3/26/24

"What is that thing?" As you pass by **Wayne County Parks** Wilcox Lake in **City of Plymouth**, you may notice a new fixture. This is a floating barge, which will be used to support dredge equipment removing excess sediment from the lake. The dredge process will likely take several months, after which the barge will be removed. The dredging of excess sediment will create a deeper pocket, favored by resident fish populations. This effort is part of the ARC's "Rouge River AOC Habitat Restoration - Wilcox/Phoenix Implementation" project funded by a Great Lakes Restoration Initiative grant from the **U.S. EPA Region 5 (Great Lakes Region)**, (Grant# GL-00E03267-0). For more information visit **https://www.allianceofrougecommunities.com/wilcox.html**

3/27/24

Don't forget to come learn more about the **U.S. EPA Region 5 (Great Lakes Region)** Great Lakes Restoration Initiative funded activities happening at both Wilcox Lake and Phoenix Lake! Public meeting scheduled for Thursday 3/28 at 7:00 p.m. at **City of Plymouth**.

3/27/24

ICYMI: The Wayne County Department of Public Services has scheduled four household hazardous waste collection events in 2024, the first of which is on Saturday, April 6, in Belleville. For more information, call 734-326-3936.

3/28/24 - **BOOSTED**

Do you know where the rainwater goes once it trickles into a storm drain? If you guessed into the Rouge River - you are correct! In addition, any debris picked up from your driveway or chemicals that get dumped down it end up in the same place! Keep your storm drains clear and never dump anything down it. Learn more at **www.allianceofrougecommunities.com**

4/25/24

Rouge River Watershed residents in Washtenaw County - here is your opportunity to dispose of your household hazardous waste properly. Things accepted include old tires, chemicals like paint and fertilizer and even TV's and furniture. Visit the site below to make your appointment to do your part to protect water quality! For more info visit: **www.allianceofrougecommunities.com.**

4/29/24

Major milestone alert! A permit application has been submitted to the State for the Inkster Park restoration project in **City of Inkster - City Hall**. This project in **Wayne County Parks** will create and enhance habitat in the Rouge River floodplain through creation of wetlands, treatment and removal of invasive species, restoration of a storm drain in the park, and native plantings. This effort is part of the ARC's Wilcox, Inkster, Phoenix Habitat Design grant funded by the **U.S. EPA Region 5 (Great Lakes Region)**, Great Lakes Restoration Initiative (Grant# GL-00E02997-0). For more information visit: **https://www.allianceofrougecommunities.com/inkster.html**

6/4/24

The dredging work at Wilcox Lake in the **City of Plymouth** and **Plymouth Township** is nearing completion! Approximately 6,100 cubic yards of mucky sediments have been removed from Wilcox Lake to create a deeper pocket, favored by resident fish populations. This effort is part of the ARC's "Rouge River AOC Habitat Restoration - Wilcox/Phoenix Implementation" project funded by a grant from the **U.S. EPA Region 5 (Great Lakes Region)**, Great Lakes Restoration Initiative (Grant# GL-00E03267-0). For more information visit **https://www.allianceofrougecommunities.com/wilcox.html**

6/5/24

Report Illegal Dumping - You are the eyes and ears in your community! If you see someone dumping anything in the river, on the side of the road or even down the storm drain on your street, report it to your community's pollution hotline (or Michigan's Pollution Alert System - 800-292-4706). Things that should be reported include: dumping to lakes, rivers or streams; unusual discharges from pipes; foul odors; or even a large number of dead fish in waterways. For more information visit **https://www.allianceofrougecommunities.com/illdump.html**

6/25/24

If you are out and about in the Rouge River Watershed, check out Nankin Lake in **Livonia Community** and **City of Westland - Administration**. The below picture was taken recently and marks a year after major construction activities have been completed under an **U.S. EPA Region 5 (Great Lakes Region)** Great Lakes Restoration Initiative grant to **Wayne County Parks**. The lake was dredged, and sandy substrate was installed to create spawning areas for fish and other aquatic life. While native shrubs and grasses planted along the shoreline continue to grow, please keep only to designated access points for the lake. For more info on the project visit **https://www.allianceofrougecommunities.com/nankinlake.html**

7/12/24

Shoreline improvements are underway at Wilcox Lake in the **City of Plymouth** and **Plymouth Township**, largely in the form of "sticks and stones." Habitat logs, some with rootwads still intact, will provide basking locations for turtles and cover for fish and other aquatic life. Limestone slabs hold habitat logs in place and will allow park users to access the lake without contributing to shoreline erosion. In other locations, protected areas have been constructed, which will be the future home for aquatic plantings.

This effort is part of the ARC's "Rouge River AOC Habitat Restoration - Wilcox/Phoenix Implementation" project funded by a grant from the **U.S. EPA Region 5 (Great Lakes Region)**, Great Lakes Restoration Initiative (Grant# GL-00E03267-0). For more information visit **https://www.allianceofrougecommunities.com/wilcox.html**

7/13/24

After being planted a year ago, native grasses, shrubs, and trees are thriving in created wetland areas at Colonial Park (top photo) in the **City of Inkster - City Hall** and **City of Westland - Administration** and Venoy-Dorsey Park (bottom photo) in the **City of Wayne-Administration**. Both of these are in **Wayne County Parks**. A reminder: please stay out of habitat areas as native plants continue to establish themselves. This work is part of the Colonial Park and Venoy Park Habitat Restoration Project that was awarded to the Alliance of Rouge Communities through a **U.S. EPA Region 5 (Great Lakes Region)**, Great

Lakes Restoration Initiative (GLRI) grant (Grant GL-00E02830). For more information visit: **https://www.allianceofrougecommunities.com/colonial.html**

7/14/24

After being planted a year ago, native grasses, shrubs, and trees are thriving in created wetland areas in **Wayne County Parks** at Sherwood Park (top picture) in the **City of Westland - Administration**, Bell Creek Park, and Lola Valley Park (bottom picture) in the **Charter Township of Redford**. A reminder: please stick to gravel paths and mowed turf areas as native plants continue to establish themselves. The habitat restoration project, being conducted by the Alliance of Rouge Communities, is funded under a grant from the **U.S. EPA Region 5 (Great Lakes Region)** Great Lakes Restoration Initiative (GLRI) (GL-00E02896-0). For more information visit: **https://www.allianceofrougecommunities.com/sherwood.html**

7/15/24

Construction is underway at Riverview Park – also known as Levan Knoll – in **Wayne County Parks** in **Livonia Community** . This habitat restoration project includes the creation of new wetlands along the Middle Rouge River, and connection of existing wetland features. These wetlands will provide habitat for amphibians, birds, and pollinators while providing stormwater storage and filtration to aid in the reduction of damaging flood flows within the river itself. The project is being conducted by the Alliance of Rouge Communities and is funded under a grant from the **U.S. EPA Region 5 (Great Lakes Region)** Great Lakes Restoration Initiative (GLRI) (GL-00E02896-0). For more information visit: **https://www.allianceofrougecommunities.com/riverview.html**

7/30/24

A huge congratulations to ARC Member **Wayne County, Michigan** who was recognized with the **SEMCOG, Southeast Michigan Council of Governments**, 2024 Regional Showcase Award for the Ford Fair Lane Estate Fishway project that restored habitat and created recreational opportunities in the Rouge River through a grant from a **U.S. EPA Region 5 (Great Lakes Region)** Great Lakes Restoration Initiative (GLRI) grant (GL-00E02040-0). Watch the video about the project below and learn more about the project at: **https://www.allianceofrougecommunities.com/hfepassage.html**

8/8/24 - **BOOSTED**

The **U.S. EPA Region 5 (Great Lakes Region)**, in partnership with **U.S. Army Corps of Engineers, Headquarters** (USACE), is developing the design plans for ecosystem restoration along the Rouge River concrete channel that runs through **City of Dearborn Government**, **City of Allen Park - Government** and **City of Melvindale**, Michigan. Join the project team to learn more about this exciting design at our kick-off community meeting scheduled for September 4, 2024, from 6:00-8:00 p.m. at the **Dearborn Baptist Church** located at 16350 Rotunda Dr., in Dearborn. Building upon the restoration work that has been ongoing for 20+ years in the area, this current initiative will continue the effort to restore the river ecosystem and environment, without diminishing the effectiveness or function of the original Federal Flood Control Project (concrete channel). This design project is funded by the Bipartisan Infrastructure Law through the framework of the Great Lakes Restoration Initiative (GLRI). For more information visit: **https://www.allianceofrougecommunities.com/concretechanne...**

9/10/24

A special thank you to **Senator Debbie Stabenow** (left) and Congresswoman **Debbie Dingell** (right) shown here with ARC Executive Director, John O'Meara, for helping the ARC celebrate the **U.S. EPA Region 5 (Great Lakes Region)** GLRI-funded Johnson Creek Fish Hatchery Park restoration on Friday morning. The restored Rouge River can be seen in the background (left). The project restored the stream and pond to provide habitat for valuable fish and wildlife, improved fish passage between the pond and stream, and improved water quality within the Rouge River watershed. Learn more about the project at: **https://www.allianceofrougecommunities.com/johnson.html**

9/26/24

If you were unable to attend the kickoff public meeting on 9/4/24 for the Rouge River Concrete Channel Restoration Design project that runs through **City of Allen Park - Government**, **City of Dearborn Government** and **City of Melvindale** you can view the recording below. A special thank you to **Dearborn Baptist Church** for hosting the meeting and recording it! This exciting project is funded by the Bipartisan Infrastructure Law through the framework of the Great Lakes Restoration Initiative (GLRI). For more information about the project and future meetings visit the project website at: **https://www.allianceofrougecommunities.com/concretechanne...**

10/31/24

You can help reduce flooding and protect water quality at home! Visit **https://www.allianceofrougecommunities.com/steward.html** Slow Rainfall to Help Us All! Help reduce flooding in the Rouge River watershed

11/5/24

As part of the ARC's “Rouge River AOC Habitat Restoration - Wilcox/Phoenix Implementation” project funded by a grant from the **U.S. EPA Region 5 (Great Lakes Region)**, Great Lakes Restoration Initiative (Grant# GL-00E03267-0). Aquatic plantings were installed in shallow water littoral zones around Wilcox and Phoenix Lake (in **City of Plymouth**, **Plymouth Township** and **Northville Township - Government**) to create lacustrine wetland habitat for waterfowl feeding, fish spawning and nursery habitat, and nutrient sequestration. Ten unique plant species will be planted: bulrush, pickerel weed, common arrowhead, hardstem bulrush, softstem bulrush, American bur reed, floating leaf pondweed, yellow pond lily, white water lily and sago pondweed. Bright flags have been strung over planting areas to deter waterfowl and protect these native plantings while their roots establish. For more information visit **https://www.allianceofrougecommunities.com/wilcox.html**

11/6/24

Excavation is nearing completion for the creation of new wetland features at Riverview Park – also known as Levan Knoll – in **Wayne County Parks** in the **Livonia Community**. While this wetland is visible from Hines Drive, most are tucked back in the forested areas of the park to the south. These wetlands will provide habitat for amphibians, birds, and pollinators while providing stormwater storage and filtration to aid in the reduction of damaging flood flows within the Middle Rouge River. The project is being conducted by the Alliance of Rouge Communities and is funded under a grant from the **U.S. EPA Region 5 (Great Lakes Region)** Great Lakes Restoration Initiative (GLRI) (GL-00E02896-0). For more information visit: **https://www.allianceofrougecommunities.com/riverview.html**

ARC REPOSTS AND SHARES PROMOTING WORKSHOPS/PRESENTATIONS, VOLUNTEER ACTIVITIES/MONITORING

2024 Reposts

1/26/24

River Raisin Watershed Council
oeSptrodsn0 ff6hf4h55ucaf6r4ah1Jya51276n2af,m0u20c8fa1gu6 96 ·
We are so excited to announce we will be hosting two beekeeping courses, taught by Don Warner and Janet Tucker from **River Raisin Beekeepers Club**!
This class taught in within **Tecumseh** Michigan in the AJ Smith House on **City of Tecumseh Parks and Recreation** campus.
Register today for classes at: **https://www.riverraisin.org/upcoming-events**
Don't let financial constraints stop you from taking our classes! Apply for a scholarship at:
https://forms.gle/fP8Dd4DmGtHtaSMFA

1/26/24

Washtenaw County Conservation District
oeSptrodsn0 ff6hf4h55ucaf6r4ah1Jya51276n2af,m0u20c8fa1gu6 96 ·
The snow might no longer be fresh, but still fresh on our minds are all challenges getting around on the icy and snowy roads!
Here's an idea: Plant a Living Snow Fence!
https://www.michigan.gov/.../Roa.../Living-Snow-Fence.pdf...
Strategically planted windbreaks have many benefits along your home and roads:
reduced snow drift,
safer roads & less to plow,
beautiful landscape aesthetics,
increased wildlife habitat,
greater privacy,
noise reduction,
and even carbon sequestration!
Plenty of species we offer in the Spring Tree & Shrub sale will make for a great living fence.
Pre-order this weekend, pick-up April 26-27, while supplies last!
https://store.washtenawcd.org/.../2024-spring-tree-shrub...

4/8/24

What an awesome improvement for our Rouge River Watershed **Friends of Rouge Park**! Great work and great people! Overwhelmed by the 230 people who came out and are just about finished planting 100 trees! **The Greening of Detroit** **#FSUrbanConnections**

4/29/24

More great things coming for the Rouge River! Thank you to all working on this important project.

We just announced that dredging will soon start in the Lower Rouge River Area of Concern near Detroit. Contaminated sediments in the channel are toxic to invertebrates, fish, and other wildlife. They also present risks to human health and the environment. **https://www.epa.gov/.../epa-announces-84-million-great...**

5/6/24

Drinking Water Week Webinar
May 7, 2024, 9:00 - 10:00 AM
Know Your Drinking Water: The Safe Drinking Water Act and You
(Virtual, Free)
Join us for an informative webinar during Drinking Water Week as we celebrate 50 years of the Safe Drinking Water Act (SDWA). Learn all about the SDWA and how it affects the water we drink. Find out who helps make the SDWA rules and makes sure they're followed. Discover simple things you can do to make sure there is healthy drinking water in your home. Our team of water professionals from around the state will share useful information and answer your questions. Don't miss this chance to learn more about why clean drinking water is so important! Webinar link:
https://us06web.zoom.us/.../WN_InOuCIsIS_iTLFm3M-SEyQ...

8/2/24

If you live in the Rouge River Watershed you may have a septic system - attend this free webinar to learn about your system and how to maintain it to protect water quality! Learn more at
https://www.allianceofrougecommunities.com/septic.html
Michigan's residents rely on over 1.3 million septic systems to treat the wastewater generated in their homes. Proper septic system use and routine care are vital to protecting public health and preserving our highly valued groundwater, lakes, streams, and waterways. Learning about septic systems can help you avoid costly repairs.
The Department of Environment, Great Lakes, and Energy's (EGLE) Onsite Wastewater Program is kicking off SepticSmart Week [**https://www.epa.gov/septic/septicsmart-week**] with this 1-hour webinar, which will be recorded. While this event is targeted to homeowners served by a septic system, all interested persons are welcomed to attend. Webinar attendees will learn about:
* the basics of septic systems,
* septic system operation and maintenance tips, and
* a quick overview of Michigan's Septic Replacement Loan Program.
You'll leave this webinar with access to educational materials and a boost in your ability to manage your septic system. Mark your calendar and register today!
The SepticSmart program is a nation-wide initiative to share information on the proper care and maintenance of septic systems and encourage public stewardship in caring for these systems. For more information, visit **https://www.epa.gov/septic** .
Do your Part – Be SepticSmart!
REGISTER HERE: **https://us06web.zoom.us/.../WN_pNTJvqgjTkKL39Uk4bmlCA...**

8/21/24

Get involved and help keep our Rouge River healthy and happy!
Once a month during the summer, the Friends of the Rouge get together to maintain the Merriman Hollow Park Area on Hines Drive. They would love to have you volunteer to help their efforts to make the area pleasing to all visitors.
This Saturday the group will be working on cleaning up the area around the comfort station. This will include weeding, picking up trash, and other activities. If you are able to volunteer, come to the Hollow at 9am on Saturday. Be sure to dress appropriately for outdoor work and bring gloves, gardening tools, sunscreen, bug spray, and something to drink. If you have any questions, you can call 734-637-1284 or go to **www.therouge.org.**

8/27/24

Rouge River Watershed residents in Wayne County - get with the environmental program and get to the Household Hazardous Waste Collection event!
The Household Hazardous Waste Collection event will take place on Saturday, August 31, 2024 from 8:00 AM - 1:00 PM.

9/13/24

The Detroit River Public Advisory Council is hosting Community Forums (10/2, 10/16 & 10/24) for the public to learn more about the Detroit River Area of Concern (AOC), past AOC projects, and gather input on what future habitat restoration projects should look like. The forums will allow the community to ask questions and discuss future visioning for the Detroit River. The goals of the Community Forums are to provide opportunities to openly share community needs, visions, and help collaborate with the public in future restoration efforts.

10/4/24

Look at you Detroit River! Just amazing **Friends of the Detroit River**!
Sugar Island, a 33-acre island in the lower Detroit River between Grosse Ile and the Canadian border, was once home to an amusement park in the 1930s is now overgrown with shrubs and trees. The island's south end has experienced severe erosion, resulting in a 10-15 foot clay cliff and significant loss of shoreline and old-growth trees.
Sugar Island underwent a habitat restoration project led by the Detroit River Public Advisory Council and the Friends of the Detroit River. This project included constructing five sheltering shoals to protect the southern shoreline, creating a 10-acre calm area for native vegetation and aquatic life, and implementing various habitat features to support wildlife. This restoration effort, which wraps up a broader $50 million investment in habitat restoration in the Detroit River area, aims to address and mitigate the ecological damage caused by over 200 years of human impact.
"This is the perfect example, and embodiment, of the mission of the US Fish and Wildlife Service . . . 'to work with others to conserve, protect, and enhance fish, wildlife, and plants and their habitats for the continuing benefit of the American people.' This is certainly a project we would not have been able to complete without all the amazing partners." - Steve Dushane, Deputy Refuge Manager, Detroit River International Wildlife Refuge
#detroitriver #habitatrestoration #sugarisland #friendsofthedetroitriver

11/11/24

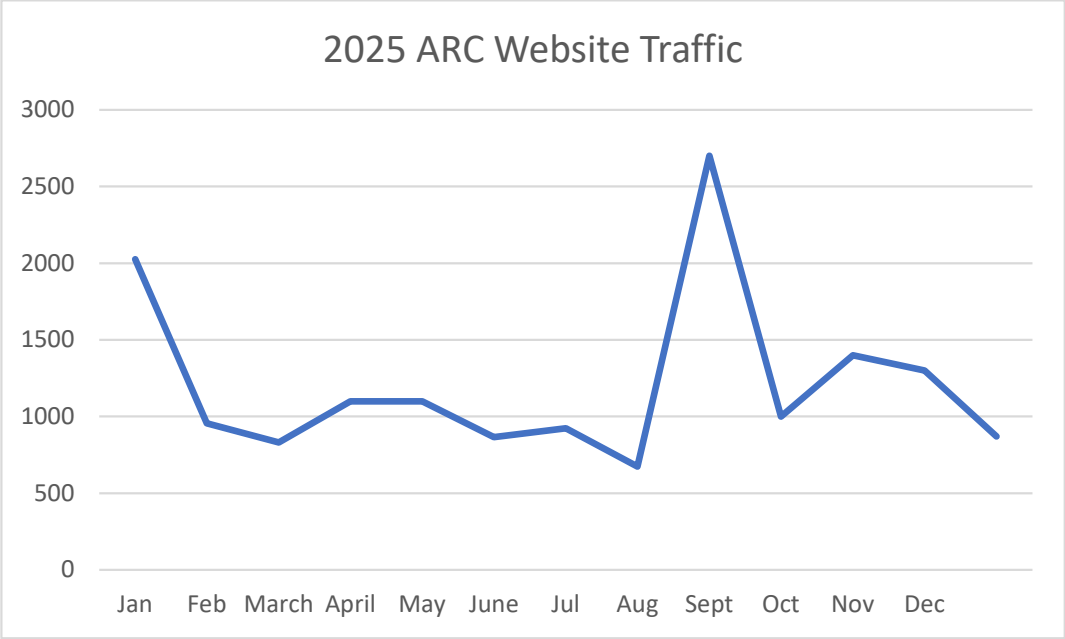
Looking to learn more about the Area of Concern (AOC) projects in the Rouge Watershed? The RRAC (Rouge River Advisory Council) has created a dashboard just for you! Visit:
https://www.allianceofrougecommunities.com/dashboard.html
On this Dashboard, you can click pins on the map to get more information on each project. You can also view the projects by category, including CSO Control and Wetland Restoration.
This project was created with funding provided through an AOC Great Lakes Restoration Initiative (GLRI) grant.
12/12/24

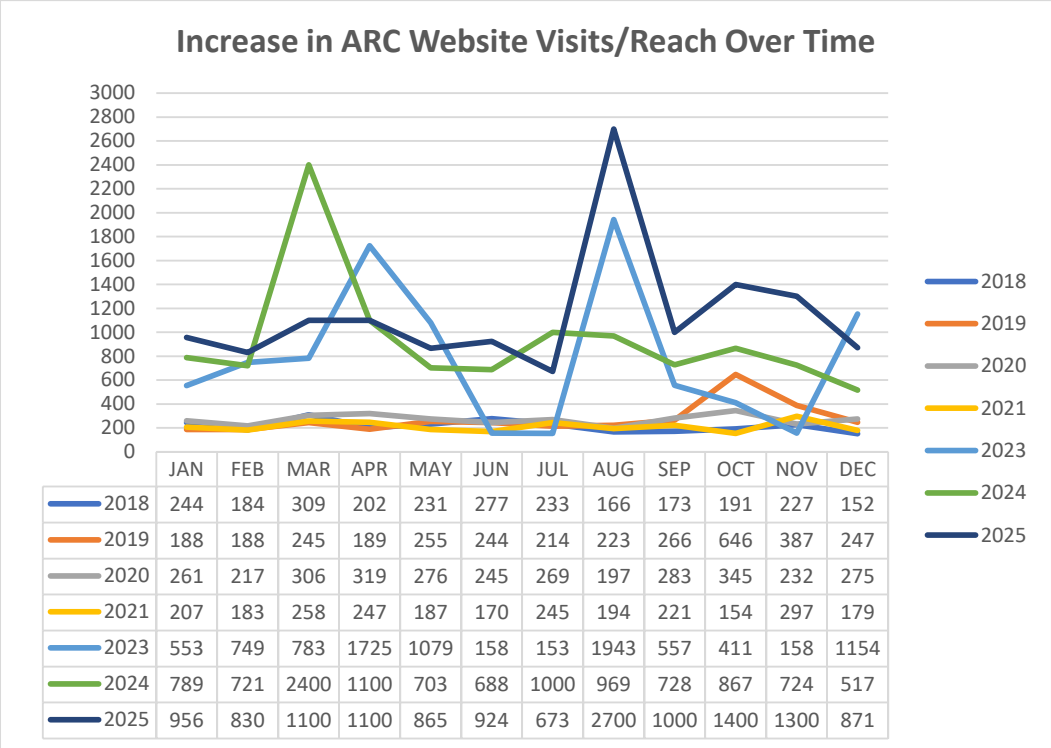
It might be cold outside - but the Rouge River still needs you! Get involved in the **Friends of the Rouge** 2025 Stonefly Search to help determine the water quality in the Rouge River!

2025 ARC ELECTRONIC MEDIA REPORT

ARC WEBSITE TRAFFIC (Views/Reach)

The ARC's website had more than 13,700 views in 2025





	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2018	244	184	309	202	231	277	233	166	173	191	227	152
2019	188	188	245	189	255	244	214	223	266	646	387	247
2020	261	217	306	319	276	245	269	197	283	345	232	275
2021	207	183	258	247	187	170	245	194	221	154	297	179
2023	553	749	783	1725	1079	158	153	1943	557	411	158	1154
2024	789	721	2400	1100	703	688	1000	969	728	867	724	517
2025	956	830	1100	1100	865	924	673	2700	1000	1400	1300	871

**Note: In 2022 traffic information was not available because the website was moved from one hosting company to another so a full year of data was not available.*

ARC FACEBOOK ACCOUNT

- The ARC created 26 Facebook posts and shared 15 partner posts for a total of 41
- The Facebook page had a reach of over 54,900 in 2025
- The Facebook page had more than 13,700 likes in 2025
- The Facebook page had a total of 644 followers in 2025, this is an increase of 49 from 2024
- The Facebook page has a total of 1,800 likes in 2025, this is an increase of 1,296 from 2024

2025 Facebook Posts

Title	Date published	Views	Reach	Viewers	Interactions	Likes and reactions	Comments	Shares
 Do you live in the River Raisin Watershed? ... Text • Alliance of Rouge Communities Boost	Jan 20, 2025	152	58	--	2	2	0	0
 Hey boaters! It is going to be almost 50 to... Alliance of Rouge Communities Boost	Feb 25, 2025	446	268	--	4	3	0	1
 The ARC, through continued grant support ... Photo • Alliance of Rouge Communities Boost	Feb 27, 2025	289	177	--	13	11	1	0
 The Alliance of Rouge Communities, repres... Photo • Alliance of Rouge Communities Boost	Mar 4, 2025	340	200	--	14	14	0	0
 The ARC's Executive Director John O'Mear... Photo • Alliance of Rouge Communities Boost	Mar 6, 2025	559	321	--	15	14	0	1
 Rouge River Watershed residents - get inv... Photo • Alliance of Rouge Communities Boost	Mar 11, 2025	2,574	1,567	--	15	9	0	6
 With funding from the U.S. EPA Region 5 (... Photo • Alliance of Rouge Communities Boost	Mar 14, 2025	1,379	756	--	27	16	3	6
 I know the weather today doesn't feel like s... Photo • Alliance of Rouge Communities Boost	Mar 24, 2025	746	413	--	9	9	0	1
 Design continues for Merriman Hollow (see... Photo • Alliance of Rouge Communities Boost	Mar 26, 2025	1,009	584	--	23	14	4	4
 Is this a kind of Milkweed on steroids that ... Photo • Alliance of Rouge Communities Boost	Mar 31, 2025	988	542	--	17	13	2	2
 Report illegal dumping like this that clearly ... Photo • Alliance of Rouge Communities Boost	Apr 10, 2025	4,828 1,423 from ads	3,444 1,376 from ads	--	326 309 from ads	293 286 from ads	3 2 from ads	29 20 from ads
 Join the Lola Valley hike lead by Nankin Mill... Text • Alliance of Rouge Communities Boost	Apr 16, 2025	170	85	--	0	0	0	0
 Get a better look at the ARC's U.S. EPA Re... Text • Alliance of Rouge Communities Boost	Apr 16, 2025	219	109	--	4	4	0	0
 The ARC was awarded a $3.5M U.S. EPA Gr... Photo • Alliance of Rouge Communities Boost	Apr 28, 2025	1,016	632	--	33	27	2	3
 The ARC was awarded a $400,000 U.S. EP... Photo • Alliance of Rouge Communities Boost	Apr 29, 2025	949	561	--	17	14	2	2
 If you walk around Inkster Park in the City o... Photo • Alliance of Rouge Communities Boost	Apr 30, 2025	1,586	893	--	36	28	3	4

2025 Facebook Posts

Title	Date published	Views	Reach	Viewers	Interactions	Likes and reactions	Comments	Shares
 Join Wayne County Parks for Fish Ladder ... Alliance of Rouge Communities Boost	May 22, 2025	384	257	--	1	0	0	1
 Those of you that live in the Rouge River W... Alliance of Rouge Communities Boost	Jun 18, 2025	563	279	--	3	2	1	1
 This post has no text Photo • Alliance of Rouge Communities Boost	Aug 15, 2025	6,120 1,253 from ads	3,678 1,028 from ads	3,645	181 155 from ads	131 121 from ads	4 2 from ads	45 31 from ads
 ARC and FDR share GLRI project success Reel • Alliance of Rouge Communities Boost	Aug 21, 2025	470	354	324	25	13	3	8
 ARC staff in partnership with the Rouge Ri... Photo • Alliance of Rouge Communities Boost	Aug 26, 2025	313	182	182	15	15	0	0
Keep those storm drains clean in your neig... Photo • Alliance of Rouge Communities Boost	Aug 27, 2025	152	83	83	2	2	0	1
 In the Rouge River watershed and have a s... Alliance of Rouge Communities Boost	Aug 29, 2025	461	222	222	4	3	0	1
 You're invited! Join us for the ARC's FREE ... Photo • Alliance of Rouge Communities Boost	Aug 29, 2025	10,547 2,065 from ads	4,754 1,394 from ads	4,873	299 284 from ads	264 263 from ads	0 0 from ads	32 20 from ads
 The Alliance of Rouge Communities has pa... Alliance of Rouge Communities Boost	Sep 15, 2025	904	406	396	20	14	2	5
 Join the design team on October 1, 2025 at... Photo • Alliance of Rouge Communities Boost	Sep 16, 2025	5,862 927 from ads	3,245 766 from ads	3,304	43 5 from ads	20 5 from ads	9 0 from ads	14 0 from ads
You can help minimize flooding by keeping ... Reel • Alliance of Rouge Communities Boost	Sep 18, 2025	157	100	87	7	6	1	0
 Alliance of Rouge Communities update... Photo • Alliance of Rouge Commun... Create ad	Sep 18, 2025	2	2	2	4	4	0	0
Come out on 9/25 at 6:00 p.m. and learn m... Photo • Alliance of Rouge Communities Boost	Sep 18, 2025	270	128	128	5	5	0	1
 This picture is not what you should do this f... Photo • Alliance of Rouge Communities Boost	Oct 7, 2025	1,299	679	671	21	17	0	4
A great way to get involved with your Roug... Photo • Alliance of Rouge Communities Boost	Oct 7, 2025	226	111	111	4	4	0	1
 Don't forget to join us for the ARC's FREE ... Photo • Alliance of Rouge Communities Boost	Oct 13, 2025	1,800	1,054	1,049	12	2	0	10

2025 Facebook Posts

Title	Date published	Views	Reach	Viewers	Interactions	Likes and reactions	Comments	Shares
 The Alliance of Rouge Communities wetlan... Boost ··· Photo • Alliance of Rouge Communities	Oct 17, 2025	1,292	631	632	16	11	0	3
 Come join the ARC, Wayne County Parks a... Boost ··· Photo • Alliance of Rouge Communities	Oct 17, 2025	198	112	112	2	1	0	1
 Good reminder from our friends Huron Riv... Boost ··· Text • Alliance of Rouge Communities	Oct 23, 2025	109	86	60	6	6	0	0
Looks like a great day in the Rouge River! Boost ··· Photo • Alliance of Rouge Communities	Oct 27, 2025	271	157	157	9	9	0	0
 The Alliance of Rouge Communities is excit... Boost ··· Photo • Alliance of Rouge Communities	Oct 30, 2025	497	315	310	15	12	1	1
 Happy Halloween from the Lawrence Tech... Boost ··· Photo • Alliance of Rouge Communities	Oct 31, 2025	576	306	314	2	1	0	1
 How exciting it is to see this Bald Eagle in t... Boost ··· Photo • Alliance of Rouge Communities	Nov 3, 2025	2,513	1,550	1,539	29	22	1	6
Thank you to the Fred and Barbara Erb Fa... Boost ··· Photo • Alliance of Rouge Communities	Nov 4, 2025	224	120	120	10	10	0	0
 Michigan weather can be unpredictable an... Boost ··· Photo • Alliance of Rouge Communities	Nov 26, 2025	4,281	2,627	2,516	9	2	0	7
 The temperature has to be better for the Fr... Boost ··· Alliance of Rouge Communities	Dec 5, 2025	235	131	131	6	6	0	0

ARC FACEBOOK POSTS

2025 Posts

2/25/25

Hey boaters! It is going to be almost 50 today . . . makes you think about getting out on the water in the Rouge River Watershed. Check out this video from Michigan Department of Environment, Great Lakes, and Energy to learn how you can stop the spread of invasive species throughout our lakes and rivers.

2/27/25

The ARC, through continued grant support from the **Fred and Barbara Erb Family Foundation**, will continue investigating where sanitary sewage is entering the Rouge River and provide training to municipal staff on how to comply with their stormwater permit. This important work will continue to improve the water quality in the Rouge River and educate municipal staff on their stormwater permit which will improve efficiency and save money! Thank you to the Erb Family Foundation for their continued grant support in the Rouge River Watershed!

3/4/25

The Alliance of Rouge Communities, represented by Executive Director John O'Meara, is excited to be in DC this week at the **Great Lakes Commission** meeting discussing topics important to all of us in the Rouge River Watershed and the Great Lakes region!

3/6/25

The ARC's Executive Director John O'Meara (shown here on the left), along with representatives from other Southeast Michigan watershed groups including **Friends of the Rouge**, **Huron River Watershed Council**, **Friends of the St. Clair River**, and **Healing Our Waters - Great Lakes Coalition**, was excited to meet with Senator Peters during Great Lakes Day in D.C. to thank him for his leadership on the Great Lakes Restoration Initiative (GLRI) and his support of the ARC's restoration efforts under this important initiative. Learn more about the ARC's projects by visiting **https://www.allianceofrougecommunities.com**

3/11/25

Rouge River Watershed residents - get involved! Become a Rouge Community Scientist with **Friends of the Rouge** by participating in their Spring Bug Hunt on Saturday, April 12. Registration required.

3/14/25

With funding from the **U.S. EPA Region 5 (Great Lakes Region)** Great Lakes Restoration Initiative (Grant GL-00E03452-1) the Alliance of Rouge Communities is designing wetland habitat adjacent to the Rouge River at Merriman Hollow and Wallaceville Parks (seen here in its current condition) in **Wayne County Parks**. Projected outcomes include increased habitat and plant diversity and connectivity to focus flood waters to the new wetlands. For More information visit: **https://www.allianceofrougecommunities.com/merriman.html**

3/24/25

I know the weather today doesn't feel like spring, but as you see the better temps coming and decide to get your green yard started remember to use a broom to sweep fertilizer and grass clippings back onto your yard. This helps keep it from washing into the storm drain which leads to the Rouge River! For more tips visit: **https://www.allianceofrougecommunities.com/steward.html**

3/26/25

Design continues for Merriman Hollow (seen here in its current condition) and Wallaceville Parks thanks to $365,000 in grant funding from the **U.S. EPA Region 5 (Great Lakes Region)** Great Lakes Restoration Initiative (Grant GL-00E03452-1) to the ARC. Portions of Merriman Hollow and Wallaceville Park are in the planning and design stage for environmental restoration. This work will include invasive species removal, log jam removal, and wetland restoration, helping to increase habitat for native plants and animals. For more information visit: **https://www.allianceofrougecommunities.com/merriman.html**

3/31/25

Is this a kind of Milkweed on steroids that will be used on the **U.S. EPA Region 5 (Great Lakes Region)** Great Lakes Restoration Initiative (GLRI) grant funded habitat restoration design at Merriman (**City of Westland - Administration**) and Wallaceville (**Dearborn Heights City Hall**) Parks? The flowers of this swamp milkweed are so much darker than its brother the common milkweed which can be found along the roadside and in people's yards. However, the swamp milkweed, as the name suggests, likes to have its feet wet and is always thirstily sucking up water. That means it's a good plant to have near our streams, rivers and lakes for their services to help filter the water and secure the riverbanks along the Rouge River. It is a native plant that is an important food source for the monarch caterpillars. Swamp milkweeds will be part of both the Merriman and Wallaceville projects' seeding plan to jump start the banquet for wildlife. Look out for the fleshy pink flowers in late summers to come! For more information visit: **https://www.allianceofrougecommunities.com/wallaceville.html**

4/10/25 - **BOOSTED**

Report illegal dumping like this that clearly shows someone dumped paint or some other substance down the storm drain - You are the eyes and ears in your community! Ask yourself these questions: Is it unusual? Does it smell? Does it look bad? Does it seem secretive? If your answer is yes report it to your community's pollution hotline (or Michigan's Pollution Alert System - 800-292-4706). Things that should be reported include: dumping to lakes, rivers or streams; unusual discharges from pipes; foul odors; or even a large number of dead fish in waterways. For more information visit **https://www.allianceofrougecommunities.com/illdump.html**

4/28/25

The ARC was awarded a $3.5M **U.S. EPA Great Lakes Region** Great Lakes Restoration Initiative grant to implement various habitat improvements in **Wayne County Parks** Lower Rouge Parkway within Inkster Park in the **City of Inkster - City Hall**. This restoration work will include 14 acres of habitat and 500 feet of stream, including wetland, wet meadow, and riparian areas that will benefit fish and wildlife populations in the Rouge River Area of Concern (AOC). For more information visit **https://www.allianceofrougecommunities.com/inkster.html**

4/29/25

The ARC was awarded a $400,000 **U.S. EPA Great Lakes Region** Great Lakes Restoration Initiative grant to design 4 acres of habitat improvement and 700 feet of stream restoration in **Wayne County Parks** Edward Hines Park within the Perrin Recreation Area in **City of Westland - Administration**. This work will include restoration of wetland, wet meadow, forested, and riparian areas. Once implemented these designs will provide benefits to the amphibians, reptiles, macroinvertebrates in the habitat zones and to all those that live and recreate in the Rouge River Watershed!

4/30/25

If you walk around Inkster Park in the **City of Inkster - City Hall**, you may not notice an unnamed tributary of the Rouge River, hidden amongst invasive shrubs. The tributary runs in a straight line, which is a good indication that it was historically created to function as a drainage feature. The ARC plans to remove the invasive shrubs and naturalize this tributary by re-meandering the stream, enhancing its usefulness for macroinvertebrates, amphibians, and small fish communities. This work and other habitat improvements are planned as part of the $3.5M **U.S. EPA Great Lakes Region** Great Lakes Restoration Initiative grant.

8/15/25 – **BOOSTED**

8/21/25

The Alliance of Rouge Communities and Friends of the Detroit River received funding from the National Parks Conservation Association (NPCA) and Healing Our Waters - Great Lakes Coalition (HOW Coalition) to host tours of Great Lakes Restoration Initiative (GLRI) funded projects in the Detrot River and Rouge River on August 20, 2025. The tours were attended by federal, state and local elected officials to promote the wonderful work done in southeast Michigan and to encourage support of future GLRI efforts!

8/26/25

ARC staff in partnership with the Rouge River Advisory Council (RRAC), **Plymouth District Library**, and **Wayne County Parks** held an information session and tour of the **U.S. EPA Great Lakes Region** Great Lakes Restoration Initiative (GLRI) funded Wilcox Lake habitat restoration project on Thursday, August 21. Thank you to all those that attended this informational session about this exciting habitat restoration project. To learn more visit **https://www.allianceofrougecommunities.com/wilcox.html**

8/29/25 - **BOOSTED**

You're invited! Join us for the ARC's FREE Stewards of the Rouge River Watershed Workshop on October 22, 2025, in Livonia Community from 6:00 p.m. - 8:00 p.m. RSVP at https://www.surveymonkey.com/r/stewardrouge

9/16/25 - **BOOSTED**

Join the design team on October 1, 2025 at 6:00 p.m. to learn more about the habitat restoration being planned for the Rouge River concrete channel that runs through City of Dearborn Government, City of Melvindale and City of Allen Park - Government. This project is being funded through the Great Lakes Restoration Initiative! Visit the project website to learn more information at http://www.allianceofrougecommunities.com/concretechannel...

10/7/25

This picture is not what you should do this fall with your pool! When winterizing your pool, spa, or fountain allow the chlorine to dissipate for several days before draining it to a landscaped area not a storm drain which leads to the Rouge River. Learn more ways to protect the water quality in the Rouge River on our website at **https://www.allianceofrougecommunities.com/steward.html**

10/13/25

Don't forget to join us for the ARC's FREE Stewards of the Rouge River Watershed Workshop on October 22, 2025, in **Livonia Community** from 6:00 p.m. - 8:00 p.m. RSVP at **https://www.surveymonkey.com/r/stewardrouge**

10/17/25

The Alliance of Rouge Communities wetland restoration project on the campus of **Lawrence Technological University** in the **City of Southfield, Michigan USA - Government** has just completed its second growing season. This site originally received 2,400 native grass and flower species, 250 shrubs, and 45 trees in the fall of 2023. Since then, all these native grasses and flowers have really filled in. Thank you to **U.S. EPA Great Lakes Region** Great Lakes Restoration Initiative for funding this project (Grant **#GL**-00E03268) and allowing this project to thrive. This image shows some black-eyed susan (yellow) and wild bergamot (lavender color) next to a wetland. For more information visit **https://www.allianceofrougecommunities.com/ltu.html**

10/17/25

Come join the ARC, **Wayne County Parks** and **Friends of the Rouge** for our second Inkster Park Design Project public input & design session on November 8, 2025, from 10:00 a.m. - noon at the Inkster Recreation Center (2025 Middlebelt Rd. in Inkster). Learn more about the ARC's Inkster Park Design Project funded through an **U.S. EPA Great Lakes Region** Great Lakes Restoration Initiative (GLRI) Grant (**#GL00E03702**).

10/30/25

The Alliance of Rouge Communities is excited to have our Executive Director, John O'Meara, attend the **Great Lakes Commission** Annual Meeting being held this week in Duluth! The ARC will have an important voice in topics vital to the Great Lakes and the Rouge River Watershed.

10/31/25

Happy Halloween from the **Lawrence Technological University** wetland restoration site! Did you know – There are two bat boxes installed along the fringes of the restored wetland to help support bat populations. Can you find them in this picture?

The bat boxes provide shelter while the restored wetland ecosystem provides habitat for insects, which help feed the bats. A great example of how connected ecosystems help species thrive in urbanized environments. This project was funded by an **U.S. EPA Great Lakes Region**Great Lakes Restoration Initiative (GLRI) grant to the Alliance of Rouge Communities. For more information visit **https://www.allianceofrougecommunities.com/ltu.html**

11/3/25

How exciting it is to see this Bald Eagle in the Rouge River Watershed at the boarder of **Canton Township Government** and Superior Twp. We have worked hard to bring them back, but as you can see by the trash to his left that we still have work to do! Pick up trash in your neighborhood to keep it from entering the Rouge River where it degrades water quality and can harm fish and wildlife. Find out other ways to help protect water quality by visiting our website at **www.allianceofrougecommunities.com**

11/26/25

Michigan weather can be unpredictable and these strong winds often cause recycling bins to tip over, scattering materials throughout neighborhoods, causing litter and potential pollution. To prevent this issue, if your scheduled recycling pickup is today or tomorrow, consider waiting until next week to place your recycling bin at the curb. This simple step helps keep our Rouge River clean and safe.

ARC REPOSTS AND SHARES PROMOTING WORKSHOPS/PRESENTATIONS, VOLUNTEER ACTIVITIES/MONITORING

2025 Reposts

1/20/25

Do you live in the River Raisin Watershed? Get involved in shaping the future of the River Raisin as the community develops a master plan which will outline a long-term vision for the River Raisin by focusing on four categories critical to protecting the river: Community, Education, Environment, and Equity/inclusion. This strategic document will prioritize community needs and provide action items to ensure enduring protection, stewardship, and engagement with the River Raisin.

4/16/25
Join the Lola Valley hike lead by **Nankin Mills Interpretive Center** naturalists to learn more about the Rouge River and it's flora and fauna along with the ARC's **U.S. EPA Region 5 (Great Lakes Region)** Great Lakes Restoration Initiative grant funded project Lola Valley Park Wetlands! Registration and small fee required: **https://wayneco.recpro-iframe.com/CourseActivities.aspx...**

4/16/25
Get a better look at the ARC's **U.S. EPA Region 5 (Great Lakes Region)** Great Lakes Restoration Initiative grant funded Henry Ford Estate dam fish passage and habitat restoration project by attending the fish ladder hike being hosted by **Nankin Mills Interpretive Center**! Registration and small fee required: **https://wayneco.recpro-iframe.com/CourseActivities.aspx...**

5/22/25
Join Wayne County Parks for Fish Ladder Hike on Thursday, May 29, from 7-8:30 p.m.
Hike along the Rouge River floodplain to learn about and enjoy nature and habitat improvements! Register at

6/18/25
Those of you that live in the Rouge River Watershed portion of Washtenaw County can now review the **Washtenaw County Water Resources Commissioner's Office** MS4 permit draft. It is up for Public Notice 6/12 through 7/12/25.

8/27/25
Keep those storm drains clean in your neighborhood to protect water quality!
Washtenaw County Water Resources Commissioner's Office
poSoertsdnuuf1ac99271Au,04c79g5ga5igt37i610hi0 shmi09m2hu2 a ·
Be your neighborhood H2O Hero and adopt a storm drain! Taking care of a storm drain is easy, and there are no strict timelines so you can volunteer whenever it is convenient for you.
Find out more from the **Huron River Watershed Council** at
https://www.hrwc.org/volunteer/adoptastormdrain/

8/29/25
In the Rouge River watershed and have a septic tank you don't know anything about? Plan to attend this EGLE webinar on September 15! For more information visit:
https://www.allianceofrougecommunities.com/septic.html

9/15/25
The Alliance of Rouge Communities has partnered with **Wayne County Parks**, **Friends of the Rouge** and the **City of Inkster - City Hall**, through a grant (GL00E03702) from the US Environmental Protection Agency (EPA) Great Lakes Restoration Initiative (GLRI) to design areas to connect key neighborhoods and communities with the parks and the habitat being restored. FOTR has developed an online survey with the goal to enhance programming and connectivity to Inkster Park while preserving existing community uses for Inkster residents and the surrounding communities. We need your input!

9/18/25

Come out on 9/25 at 6:00 p.m. and learn more about the ARC's Inkster Park Design Project funded through an **U.S. EPA Great Lakes Region** Great Lakes Restoration Initiative Grant (**#GL00E03702**) at **City of Inkster - City Hall**.

Friends of the Rouge
ortopdesnSh4 g0mumlgl2f8rS,7g1 6b2a17mg3m0teg9temuhh598p5le9 ·
📣Public Meeting Announcement!📣
Your voice is needed! Join Wayne County Parks and the Alliance of Rouge Communities for a public input event. Learn about potential habitat improvements to Inkster park and how the public will benefit. The focus of the Inkster Park Design project is to use the park areas to connect key neighborhoods and communities with the parks and the habitat being restored there.
When: Thursday September 25 from 6 - 8 PM
Where: Inkster City Hall, 26215 Trowbridge St, Inkster, MI 48141
Complete the public input survey here: **https://forms.gle/o8Cp4QfbaRcXjWt28**
Wayne County Parks, **City of Inkster - City Hall**, **Inkster Task Force**, **Alliance of Rouge Communities**

9/18/25
You can help minimize flooding by keeping your storm drain clear on your street! Check out what **Wayne County, Michigan** is doing to help!
Executive Warren C. Evans
pSodenostrpSe0h8745i8uf 9g fte1g5904h,a0lb3a8me05mrf6218i52c ·
Excited to see the progress we're already making with our stormwater management plan. Thanks to **Priya Mann** at **WDIV Local 4 / ClickOnDetroit** for having me on the show to talk about the great work we're doing to improve the quality of life for our Wayne County residents.
See comments to watch the full interview **@followers**

10/7/25
A great way to get involved with your Rouge River! Volunteer!
Plymouth Township
nsroeopdtS0cfcugg1oc2hrg1O115 egt7f5t708aafb85,tm2075 h621lc ·
The secret life of the Rouge is waiting to be discovered! This is your reminder that our 2025 Fall Bug Hunt is just around the corner on Saturday, October 11.
Pull on some boots and join us to find incredible aquatic insects, crayfish, and more. It's a hands-on adventure where you'll learn how these tiny creatures tell the big story of our river's health.
Perfect for families, scouts and anyone who loves nature! Spots are limited and registration is required, so don't wait!
Register Now: **https://therouge.org/Bug-Hunts**
Event: Friends of the Rouge Fall Bug Hunt
Date: Saturday, October 11, 2025
Time: 10 a.m. – 4 p.m.
Check-in Location: Plymouth Arts and Recreation Center, 650 Church St.

10/23/25
Good reminder from our friends **Huron River Watershed Council**! If you have a storm drain in front of your house - adopt it and care for it to help protect water quality!

Huron River Watershed Council
·
Following

Huron River Watershed Council · Original audio
It's fall! Which means leaves are falling! Which means you should go out and show your friendly neighborhood storm drain some love.
Storm drains lead directly to the Huron River and its creeks, without treatment or filtering. Keep the river clean by cleaning up trash and debris around storm drains. It also reduces street flooding to keep these drains clear!
Remember, only rain down the drain!
See less

10/27/25
Looks like a great day in the Rouge River!
Friends of the Rouge
rsdneopStor71289a7935hO20 8i0lh5lb2cou0f4,0m06 iummact2lceul ·
2025 Fall Bug Hunt Successful!
The Fall Bug Hunt was held on October 11th. With the help of our amazing volunteers, 15 teams were able to sample 29 sites, helping us to learn more about the long-term health of the Rouge River. We are deeply grateful for our participatory scientists' roles in helping us advance FOTR's mission to restore, protect, and enhance the Rouge River watershed through stewardship, education, and collaboration.
Keep a lookout for the summary report in the coming months! Mark your calendars for the Stonefly Search on January 24th, 2026.

Thank you to **Alliance of Rouge Communities** and the communities that sponsored bug hunt sites: **Washtenaw County Water Resources Commissioner's Office**, **City of Southfield, Michigan USA - Government**, **City of Troy Government**, **Village of Beverly Hills**, **Northville Township - Government**, **City of Plymouth**, **Plymouth Township**, **City of Novi - Government & Community Services**, **Livonia Community**, **City of Farmington, Michigan**, **City Government of Birmingham, MI**, **Michigan Department of Environment, Great Lakes, and Energy** , **U.S. EPA Great Lakes Region** Restoration Initiative.

11/4/25
Thank you to the **Fred and Barbara Erb Family Foundation** for supporting our efforts to assist the communities in the Rouge River Watershed!

12/5/25
The temperature has to be better for the **Friends of the Rouge** Winter Stonefly Search on January 24, 2026 right?? ☝️ Dress warm and help gauge the health of the Rouge River! Register and find out more information at

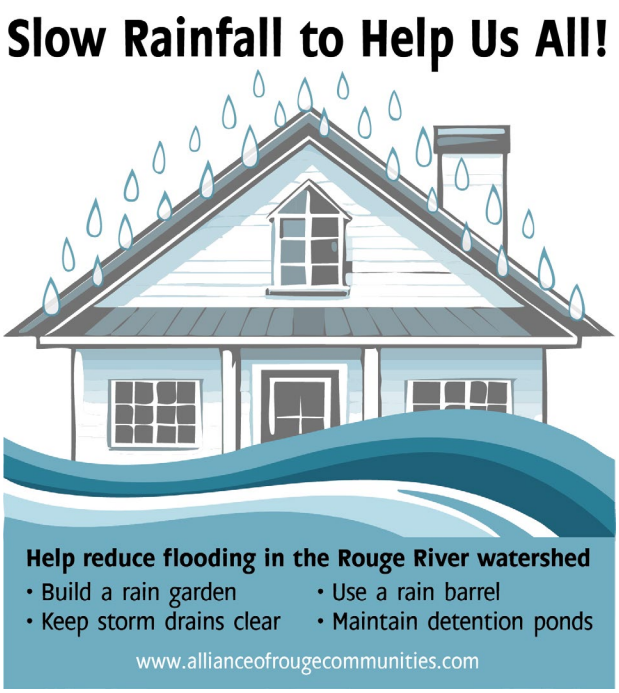
Appendix C

Articles/Ad Graphic Report

We Can All Reduce Flooding in The Rouge River

Have you noticed that our rain patterns have changed in Southeast Michigan? Those of you that have had your basement flood are saying "heck yes!" Climate change has significantly increased the frequency and intensity of flooding in the Rouge River watershed and Southeast Michigan. Warmer temperatures lead to more moisture in the atmosphere, resulting in heavier rainfall events and more frequent downpours. This overwhelms outdated drainage systems, leading to flooding. In addition, warmer winters cause snow to melt earlier, leading to rapid runoff and increased flows in the Rouge River. This can exacerbate flooding, especially when combined with heavy rainfall.

A lot of us know the consequences of the increased rainfall and flooding we have had over the last several years. These include significant damage to homes, businesses, and infrastructure; road closures and disruption to transportation and other essential services; damage to crops and disruption to supply chains which affect the local economy; and even an increase in breeding grounds for mosquitoes.



Communities within the Rouge River watershed are looking at ways to fund and invest in infrastructure upgrades, such as improved drainage systems and flood barriers. They are also looking at ways to improve ordinances and master plans. Additionally, sustainable land use practices and green infrastructure are being implemented. All of these are being incorporated to help reduce the impact of flooding across the watershed.

You can be part of the solution as well! If you live in a subdivision with detention ponds, making sure that they are maintained and working properly will reduce flooding in your neighborhood. Also make sure the storm drains on your street are clear of debris that could block the drain. Consider building rain gardens and planting trees in your yard, which help slow the rainfall, allowing it to soak into the soil instead of entering the storm drain system. Rain barrels are also a great way to reduce the amount of rain entering the Rouge River and provide the homeowner with free water for your yard and garden.

Visit the Alliance of Rouge Communities website to learn more ways you can reduce flooding and protect water quality in the Rouge River at: https://www.allianceofrougecommunities.com/steward.html

WHEN IT COMES TO ILLEGAL DUMPING, YOU ARE THE" EYES & EARS" IN YOUR COMMUNITY!

If you see someone dumping anything into the Rouge River, on the side of the road or even down the storm drain on your street, report it to your local community or to Michigan's Pollution Alert System at 800-292-4706. You play a crucial role because local and federal governments do not have the resources to monitor every location at all times. Your vigilance helps ensure that these issues are addressed quickly and effectively, protecting both the environment and public health.

If your answer to any of the below questions is "yes," you should report the location to your local municipality so they can investigate. Take pictures or videos of the pollution, and if it is safe to do so, get the license plate of any vehicle dumping along with the make and model.

IS IT UNUSUAL? Does the pollution seem "not the norm" and different from how things are typically disposed of?

DOES IT SMELL? Some chemicals, pesticides and fertilizers have a strong odor and may even burn your eyes, mouth, or nose. This is a sign of illegal dumping that should be reported.

DOES IT LOOK BAD? Do you see an odd-colored discharge or sheen from a pipe going into the river or do you see dead fish or animals in the vicinity of pollution? Is there dead grass or plants around the pollution? You may also see a pipe discharging foam or solids. These are all signs that should be reported to your local community for further investigation.

DOES IT SEEM SECRETIVE? Most people that dump things illegally know what they are doing and attempt to be secretive in their actions. You may hear or see a truck pouring something into a sewer, river or on the side of the road late at night. Have you seen someone dumping barrels, cans, or bags at a site where it should not go like an alley, river or empty lot and then driving away? Report these activities to your local community for follow-up.

To learn more about illegal dumpling and other ways you can help protect water quality in the Rouge River watershed, visit the Alliance of Rouge Communities website at https://www.allianceofrougecommunities.com/illdump.html.

Rouge in The News!

Here you can find information, press announcements on projects and pertinent articles and videos related to the Rouge River Watershed along with our partner organizations and watersheds in Southeast Michigan.

Exciting Things in & Around The Rouge River

- ARC Newsletter Article: When it Comes to Illegal Dumping, You are the "Eyes & Ears" in Your Community!
August, 2025
- The Detroit News: Lack of disposal space hampers dredging of toxic sediment in Detroit, Rouge Rivers
September 29, 2025
- CBS News Detroit: Rouge & Detroit Waterway HOW Tour
August 20, 2025
- The Detroit News: How the once polluted Rouge River is being reinvented as pathway for trails, recreation
November 29, 2024
- ARC Newsletter Article: We can all reduce flooding in the Rouge River
October, 2024
- Southeast Michigan Council of Governments (SEMCOG) - Regional Showcase Award: Wayne County recognized with SEMCOG's 2024 Regional Showcase Award, Ford Fair Lane Estate Fishway project restores habitat, creates recreational opportunities
July 1, 2024
- Dearborn Press and Guide: Great Lakes Restoration Initiative, Alliance of Rouge Communities talk about restoring waterways
October 15, 2023
- ARC Newsletter Article: Water Quality Solutions
December, 2023
- Detroit Free Press: A small, troubled, Henry Ford-created lake in Wayne County is getting a makeover
July 14, 2022
- ARC Newsletter Article: Business Owners - protect water quality inside, outside & under your building!
December, 2022
- C & G Newspapers: State Group Names Tamarack Creek Restoration Project of the Year
June 29, 2022
- GLRI Johnson Creek and Tamarack Creek Restoration in Rouge River Area of Concern
June 16, 2022
- WXYZ Channel 7 EPA Great Lakes Restoration Initiative Reforestation along the Lower Rouge For more info on the project check out this PDF
May 9, 2022
- C & G Newspapers: Southfield Tamarack Creek restoration project makes headway, to continue into 2022 For More info check out this PDF
December 9, 2021
- ARC Newsletter Article: Let's All Dispose of Fats, Oils & Grease (FOG) Properly
November 23, 2021

-

EGLE: Sediment sampling to begin in Detroit, Rouge rivers For More info check out this PDF
September 1, 2021

-

Greatlakesnow.org: Great Lakes Moment: Sugar Island is getting an ecological makeover
August 2, 2021

-

Hometown Life: What lurks in eerily-dark tunnel that guides 1,200 feet of river under Northville Downs?
March 26, 2021

-

GLRI: Oxbow Wetland Restoration Project Completed in Rouge River Area of Concern
February 23, 2021

-

ARC Newsletter Article: When It Comes to Household Chemicals – Change Is A Good Thing!
December 2020

-

City of Northville: Johnson Creek restoration at Fish Hatchery Park-Native plants, fish passage will make a difference
October 5, 2020

-

Northville Twp.: Million-dollar Makeover Begins on Johnson Creek at Fish Hatchery Park
August 18, 2020

-

GLRI: EPA announces $4.2 million for habitat restoration work at Rouge River Area of Concern
July 28, 2020

-

GLRI: Tlaib, Dingell Applaud EPA Funding of Rouge River Restoration
June 10, 2020

-

GLRI: EPA announces over $1.8 million for habitat restoration work at Rouge River Area of Concern
May 19, 2020

-

ARC Newsletter Article: Brine instead of Rock Salt to Protect Water Quality!
December 2019

-

ARC Newsletter Article: What is a Watershed & What Does it Have to do with Me?
December 2019

-

Detroit News: Officials celebrate restoration of southeast Michigan river systems
October 2019

-

Detroit News: Michigan's Senators Push for Hike in Great Lakes Cleanup Aid
August 2019

-

Tamarack Creek Slated for Restoration
December 2018

-

GLRI: More Success in the Rouge River AOC: Oxbow Restoration Phase 3
November 28, 2018

-

GLRI: Restoration of Fish Passage at the Henry Ford Estate Dam – Rouge River Area of Concern
November 2018

-

GLRI: Dredging the Lower Rouge River Old Channel to Begin in 2019
October 2018

-

US Army Corps of Engineers: Environmental cleanup to remove sediment, debris in Lower Rouge River will begin soon
October 2018

-

This Week in Dearborn with Mayor O'Reilly - Fishway Project at The Henry Ford Estate
August 3, 2018

-

Detroit Free Press: Rouge River fish to get exclusive freeway at Ford's Fair Lane Estate
July 3, 2018

-

Hometown Life: Stabenow visits Wayne to highlight success in improving waterways like the Rouge River
August 7, 2017

-

Issue Media Group: Battling pollution's legacy in metro Detroit's 'Areas of Concern' waterways
March 24, 2016

-

Aquatic Invasive Species Newsletters - Michigan's Invasive Species Program has developed a comprehensive website providing information about existing and potential invasive species threatening our natural resources. The website, a collaborative effort of the Michigan Departments of Natural Resources, Environmental Quality, and Agriculture & Rural Development, includes a catalog containing identifying photos and reporting information.
March 2016

-

Detroit News: Two Detroit area rivers get aid to restore habitats
August 21 2015

Phone | 734-768-2180

46036 Michigan Ave., Suite 126 | Canton, Michigan 48188

Appendix D

Poster/Banner Report

APPENDIX D
ARC POSTER REPORT

Permitee	Year Poster Displayed									Location Poster Displayed	
	2017	2018	2019	2020	2021	2022	2023	2024	2025	City/Twp. Office	Community Bldg.
Beverly Hills, Village of		1	1	1	1		1	1	1	X	
Bingham Farms, Village of		1	1		1	1		1	1	X	
Birmingham, City of	1	1	1				1	1	1	X	
Bloomfield Hills, City of				1	1	1	1	1	1	X	
Bloomfield Township		1	1	1		1	1	1	1	X	X
Canton Township		1	1	1	1	1	1	1	1	X	
Dearborn Heights, City of	1	1	1	1		1	1	1	1	X	
Farmington, City of		1	1	1		1	1	1	1	X	X
Farmington Hills, City of	1	1	1	1	1	1	1	1	1	X	X
Franklin, Village of					1	1	1			X	
Garden City, City of	1				1	1			1	X	
Henry Ford College	1	1	1			1					X
Inkster, City of	1	1	1	1	1	1	1	1	1	X	
Lathrup Village, City of		1	1	1	1		1	1	1	X	
Livonia, City of			1	1	1	1	1	1	1	X	X
Melvindale, City of		1	1	1	1		1	1	1	X	
Northville, City of		1	1		1	1	1	1	1	X	X
Northville Township		1	1	1	1	1		1		X	
Novi, City of			1		1	1	1	1	1	X	
Oakland County*	1	1	1	1	1	1	1			X	
Oak Park, City of						1	1	1	1	X	X
Orchard Lake Village (in as of 2022)						1	1	1	1	X	
Plymouth, City of	1	1	1	1	1	1	1	1	1	X	
Plymouth Township		1	1	1	1	1	1	1	1	X	
Redford Township		1		1	1	1	1	1	1	X	
Schoolcraft College					1	1	1	1	1	X	
Southfield, City of		1	1			1	1	1	1	X	X
Troy, City of		1	1	1	1	1	1		1	X	X
University of Michigan-Dearborn*						1	1			X	
Walled Lake, City of	1	1	1	1	1	1	1	1	1	X	X
Wayne, City of		1	1	1	1		1	1	1	X	X
Wayne County*											
Westland, City of		1	1		1		1			X	X
Wayne County Airport Authority (in as of 2022)						1	1	1	1		X
West Bloomfield Township		1	1	1	1		1	1	1	X	
Wixom (in as of 2025)								1	1	X	

*Participating but this plan is not part of their pending permit application

Banner (Static Display) Report

STATIC DISPLAY TOPIC	DATE DISPLAYED	COMMUNITY/ENTITY	LOCATION OR EVENT WHERE DISPLAYED	Rouge River Subwatershed						
				Main 1-2	Main 3-4	Upper	Middle 1	Middle 3	Lower 1	Lower 2
2024										
You can Protect Water Quality in the Rouge River!	2/12/24-2/19/24	Beverly Hills	Twp Hall	1						
Have a Business in the Rouge River Watershed?	3/11/24-3/25/24	Beverly Hills	Twp Hall	1						
When it Comes to Household Chemicals, Change is a Good Thing!	4/8/24-4/22/24	Beverly Hills	Twp Hall	1						
You can Protect Water Quality in the Rouge River!	5/6/24-5/13/24	Birmingham	DPS Open House 5/11/24	1						
How Watersheds Work!	5/6/24-5/13/24	Birmingham	DPS Open House 5/11/24	1						
How Watersheds Work!	8/12/24-8/19/24	Canton Twp	DPW				1		1	
You can Protect Water Quality in the Rouge River!	2/12/24-2/19/24	Farmington	City Hall	1		1				
Have a Business in the Rouge River Watershed?	2/12/24-2/19/24	Farmington	City Hall	1		1				
When it Comes to Household Chemicals, Change is a Good Thing!	2/12/24-2/19/24	Farmington	City Hall	1		1				
How Watersheds Work!	2/12/24-2/19/24	Farmington	City Hall	1		1				
How Watersheds Work!	11/4/24-11/11/24	Henry Ford College	Dearborn		1					
You can Protect Water Quality in the Rouge River!	10/14/24-10/21/24	Inkster	City Hall							1
Have a Business in the Rouge River Watershed?	10/14/24-10/21/24	Inkster	City Hall							1
When it Comes to Household Chemicals, Change is a Good Thing!	10/14/24-10/21/24	Inkster	City Hall							1
How Watersheds Work!	10/14/24-10/21/24	Inkster	City Hall							1
You can Protect Water Quality in the Rouge River!	11/4/24-11/11/24	Lathrup Village	Town Hall	1						
You can Protect Water Quality in the Rouge River!	3/11/24-3/18/24	Livonia	City Hall			1	1	1		
When it Comes to Household Chemicals, Change is a Good Thing!	3/11/24-3/18/24	Livonia	City Hall			1	1	1		
How Watersheds Work!	3/11/24-3/18/24	Livonia	City Hall			1	1	1		
How Watersheds Work!	4/8/24-4/15/24	Northville	City Hall				1			
You can Protect Water Quality in the Rouge River!	4/30/24-5/6/24	Northville TWP	Town Hall - EGLE Audit			1	1			

Banner (Static Display) Report

				Rouge River Subwatershed						
STATIC DISPLAY TOPIC	**DATE DISPLAYED**	**COMMUNITY/ENTITY**	**LOCATION OR EVENT WHERE DISPLAYED**	**Main 1-2**	**Main 3-4**	**Upper**	**Middle 1**	**Middle 3**	**Lower 1**	**Lower 2**
How Watersheds Work!	4/30/24-5/6/24	Northville TWP	Town Hall - EGLE Audit			1	1			
Have a Business in the Rouge River Watershed?	4/8/24-4/15/24	Novi	City Hall			1	1			
When it Comes to Household Chemicals, Change is a Good Thing!	11/4/24-11/11/24	Oak Park	City Hall	1						
You can Protect Water Quality in the Rouge River!	7/15/24-7/22/24	Plymouth	City Hall				1			
How Watersheds Work!	9/16/24-9/23/24	Plymouth	City Hall				1			
You can Protect Water Quality in the Rouge River!	4/8/24-4/15/24	Plymouth Twp	Twp Hall				1		1	
When it Comes to Household Chemicals, Change is a Good Thing!	6/10/24-6/24/24	Plymouth Twp	Twp Hall				1		1	
How Watersheds Work!	9/30/24-10/24/24	Redford Twp - EGLE Audit	Twp Hall		1	1		1		
Have a Business in the Rouge River Watershed?	9/30/24-10/24/24	Redford Twp - EGLE Audit	Twp Hall		1	1		1		
You can Protect Water Quality in the Rouge River!	3/11/24-3/1/24	Schoolcraft	Biomedical Building			1				
When it Comes to Household Chemicals, Change is a Good Thing!	5/6/24-5/13/24	Schoolcraft	Biomedical Building			1				
You can Protect Water Quality in the Rouge River!	10/14/24-10/28/24	Southfield - EGLE Audit	City Hall	1						
How Watersheds Work!	4/22/24-4/29/24	UM Dearborn	University Center		1					
When it Comes to Household Chemicals, Change is a Good Thing!	1/15/24-1/22/24	Walled Lake	City Hall				1			
You can Protect Water Quality in the Rouge River!	4/8/24-4/15/24	Walled Lake	City Hall				1			
Have a Business in the Rouge River Watershed?	5/6/24-5/13/24	Walled Lake	City Hall				1			
How Watersheds Work!	6/10/24-6/17/24	Walled Lake	City Hall				1			
You can Protect Water Quality in the Rouge River!	5/6/24-5/13/24	WCAA-Willow Run Airport	Admin Bldg						1	
When it Comes to Household Chemicals, Change is a Good Thing!	7/15/24-7/22/24	Commerce Twp	Town Hall			1				
How Watersheds Work!	7/15/24-7/22/24	Commerce Twp	Town Hall			1				
Have a Business in the Rouge River Watershed?	6/10/24-6/17/24	Romulus	Library							1
You can Protect Water Quality in the Rouge River!	7/15/24-7/22/24	Romulus	Library							1

Banner (Static Display) Report

				Rouge River Subwatershed						
STATIC DISPLAY TOPIC	**DATE DISPLAYED**	**COMMUNITY/ENTITY**	**LOCATION OR EVENT WHERE DISPLAYED**	**Main 1-2**	**Main 3-4**	**Upper**	**Middle 1**	**Middle 3**	**Lower 1**	**Lower 2**
How Watersheds Work!	7/29/24-8/5/24	Romulus	Library							1
When it Comes to Household Chemicals, Change is a Good Thing!	8/12/24-8/19/24	Romulus	Library							1
You can Protect Water Quality in the Rouge River!	6/10/24-6/17/24	West Bloomfield Twp.	Town Hall	1		1				
You can Protect Water Quality in the Rouge River!	11/4/24-11/11/24	Westland	City Hall					1		1
Number of times in subwatershed in 2024				**13**	**4**	**17**	**16**	**6**	**4**	**9**

Banner (Static Display) Report

STATIC DISPLAY TOPIC	DATE DISPLAYED	COMMUNITY/ENTITY	LOCATION OR EVENT WHERE DISPLAYED	Rouge River Subwatershed						
				Main 1-2	Main 3-4	Upper	Middle 1	Middle 3	Lower 1	Lower 2
2025										
You can Protect Water Quality in the Rouge River!	3/10/25-3/17/25	Farmington Hills	The Hawk Center	1		1	1			
You can Protect Water Quality in the Rouge River!	2/10/25-2/17/25	Farmington	City Hall	1		1				
You can Protect Water Quality in the Rouge River!	5/5/25-5/19/25	Birmingham	DPW Open House	1						
You can Protect Water Quality in the Rouge River!	4/14/25-4/21/25	Livonia	DPW			1	1	1		
You can Protect Water Quality in the Rouge River!	3/25/25-4/7/25	Northville	City Hall				1			
You can Protect Water Quality in the Rouge River!	8/11/25-8/18/25	Plymouth	City Hall				1			
You can Protect Water Quality in the Rouge River!	5/5/25-5/12/25	Oak Park	City Hall	1						
You can Protect Water Quality in the Rouge River!	7/14/25-7/21/25	Schoolcraft	Elite Dome			1				
You can Protect Water Quality in the Rouge River!	3/10/25-3/17/25	Troy	Community Center	1						
You can Protect Water Quality in the Rouge River!	6/16/25-6/23/25	Walled Lake	City Hall				1			
You can Protect Water Quality in the Rouge River!	6/16/25-6/23/25	West Bloomfield Twp.	Twp Hall	1		1				
When it Comes to Household Chemicals, Change is a Good Thing!	2/10/25-2/17/25	West Bloomfield Twp.	Twp Hall	1		1				
When it Comes to Household Chemicals, Change is a Good Thing!	1/13/25-1/20/25	Schoolcraft	Vista Tech			1				
When it Comes to Household Chemicals, Change is a Good Thing!	4/14/25-4/21/25	Livonia	DPW			1	1	1		
When it Comes to Household Chemicals, Change is a Good Thing!	3/10/25-3/17/25	Farmington	City Hall	1		1				
When it Comes to Household Chemicals, Change is a Good Thing!	10/13/25-10/20/25	Wixom	City Hall				1			
When it Comes to Household Chemicals, Change is a Good Thing!	1/13/25-1/20/25	Commerce Twp	Twp Hall			1				
When it Comes to Household Chemicals, Change is a Good Thing!	5/5/25-5/12/25	Canton Twp	Twp Hall				1		1	
When it Comes to Household Chemicals, Change is a Good Thing!	6/16/25-6/23/25	Garden City	DPW					1		1
When it Comes to Household Chemicals, Change is a Good Thing!	6/16/25-6/23/25	Plymouth Twp	Twp Hall				1		1	
When it Comes to Household Chemicals, Change is a Good Thing!	12/1/25-12/8/25	Van Buren Twp	Twp Hall						1	

Banner (Static Display) Report

				Rouge River Subwatershed						
STATIC DISPLAY TOPIC	**DATE DISPLAYED**	**COMMUNITY/ENTITY**	**LOCATION OR EVENT WHERE DISPLAYED**	**Main 1-2**	**Main 3-4**	**Upper**	**Middle 1**	**Middle 3**	**Lower 1**	**Lower 2**
When it Comes to Household Chemicals, Change is a Good Thing!	9/15/25-9/22/25	Plymouth Twp	Twp Hall				1		1	
Have a Business in the Rouge River Watershed?	1/13/25-1/20/25	WCAA-Willow Run Airport	WR Admin Building						1	
Have a Business in the Rouge River Watershed?	2/10/25-2/17/25	Canton Twp	Twp Hall				1		1	
Have a Business in the Rouge River Watershed?	5/5/25-5/19/25	Birmingham	DPW Open House	1						
Have a Business in the Rouge River Watershed?	4/14/25-4/21/25	Garden City	DPW					1		1
Have a Business in the Rouge River Watershed?	7/8/25-7/14/25	Inkster	City Hall							1
Have a Business in the Rouge River Watershed?	10/13/25-10/20/25	Redford Twp	Twp Hall		1	1		1		
Have a Business in the Rouge River Watershed?	12/1/25-12/8/25	Van Buren Twp	Twp Hall						1	
Have a Business in the Rouge River Watershed?	9/15/25-9/22/25	Livonia	DPW			1	1	1		
How Watersheds Work!	2/10/25-2/17/25	Walled Lake	City Hall				1			
How Watersheds Work!	4/16/25-4/21/25	UM Dearborn	APC Bldf; Earth Day		1					
How Watersheds Work!	9/15/25-9/22/25	Plymouth Twp	Twp Hall				1		1	
How Watersheds Work!	10/13/25-10/20/25	Orchard Lake Village	Village office	1						
How Watersheds Work!	11/3/25-11/17/25	Novi	City Hall			1	1			
How Watersheds Work!	4/14/25-4/21/25	Novi	City Hall			1	1			
How Watersheds Work!	9/15/25-9/22/25	Livonia	DPW			1	1	1		
How Watersheds Work!	3/10/25-3/17/25	Farmington	City Hall	1		1				
How Watersheds Work!	12/1/25-12/8/25	Van Buren Twp	Twp Hall						1	
How Watersheds Work!	7/14/25-7/21/25	Bloomfield Twp	Twp Hall	1						
How Watersheds Work!	4/10/25-4/17/25	Canton Twp	Twp Hall				1		1	
How Watersheds Work!	8/11/25-8/18/25	Auburn Hills	DPW	1						
How Watersheds Work!	1/13/25-1/20/25	Garden City	DPW					1		1

Banner (Static Display) Report

				Rouge River Subwatershed						
STATIC DISPLAY TOPIC	**DATE DISPLAYED**	**COMMUNITY/ENTITY**	**LOCATION OR EVENT WHERE DISPLAYED**	**Main 1-2**	**Main 3-4**	**Upper**	**Middle 1**	**Middle 3**	**Lower 1**	**Lower 2**
How Watersheds Work!	5/5/25-5/12/25	Wayne	City Hall							1
Eyes and Ears of Illegal Dumping!	12/1/25-12/8/25	Farmington	City Hall	1		1				
Eyes and Ears of Illegal Dumping!	9/15/25-9/22/25	Beverly Hills	Twp Hall	1						
Eyes and Ears of Illegal Dumping!	11/3/25-11/10/25	Bloomfield Twp	Twp Hall	1						
Eyes and Ears of Illegal Dumping!	12/1/25-12/8/25	Van Buren Twp	Twp Hall						1	
Eyes and Ears of Illegal Dumping!	10/13/25-10/20/25	Lathrup Village	Village office	1						
Number of times in subwatershed in 2025				**17**	**2**	**17**	**18**	**8**	**11**	**5**

Alliance of Rouge Communities
OURS TO PROTECT
Working together, restoring the river

YOU ARE THE EYES & EARS OF THE ROUGE RIVER WATERSHED!

Report Illegal Dumping

You are the "eyes & ears" in your community! If you see someone dumping anything in the river, on the side of the road, or even down the storm drain on your street report it to your community's pollution hotline.

You play a crucial role because local and federal governments don't have the resources to monitor every location at all times. Your vigilance helps ensure that these issues are addressed quickly and effectively, protecting both the environment and public health.

Things that should be reported include:

- Dumping to lakes, rivers or streams
- Unusual discharges from pipes
- Foul odors
- Large numbers of dead fish in waterways

If your answer to any of the below questions is "yes," you should report the location to your local municipality so they can investigate.

Is it unusual?

Does the pollution seem "not the norm" and maybe different from how things are typically disposed of?

Does it look bad?

Do you see an odd-colored discharge or sheen from a pipe going into a river, lake or stream or do you see dead fish or animals in the vicinity of pollution? How about dead grass or plants around the pollution? You may also see a pipe discharging foam or solids. These are all signs that should be reported to your local community for further investigation.

Does it smell?

Some chemicals, pesticides and fertilizers have a strong odor and may even burn your eyes, mouth or nose. This is a sign of illegal dumping that should be reported.

Does it seem secretive?

Most people that dump things illegally know what they are doing and attempt to be secretive in their actions. You may hear or see a truck pouring something into a sewer, river or on the side of the road late at night. Have you seen someone dumping barrels, cans or bags at a site where it should not go like an alley, river or empty lot and then driving away? These types of activities should be reported to your local community for follow-up.

Report Illegal Dumping!

- Michigan's Pollution Alert System: 800-292-4706
- Wayne County: 888-223-2363
- Oakland County: 248-858-0931
- Washtenaw County: 734-222-6860
- Macomb County: 877-679-4337
- St. Clair County: 277-504-SWIM

Report illegal dumping to your local community for follow-up or to Michigan's Pollution Alert System at 800-292-4706. Take pictures or videos of the pollution, and if it is safe to do so, get the license plate of any vehicle dumping, along with the make and model.

Alliance of Rouge Communities
OURS TO PROTECT
Working together, restoring the river

The Alliance of Rouge Communities, or ARC, is a non-profit organization consisting of local municipalities, counties, educational institutions and stewardship groups working together to improve the Rouge River.

www.allianceofrougecommunities.com

Find us on Facebook:
@allianceofrougecommunities

Appendix E

Workshop/Volunteer Report

APPENDIX E WORKSHOP VOLUNTEER REPORT

2024 ARC MEMBER COMMUNITIES HOSTING/PROMOTING WORKSHOPS & PRESENTATIONS/VOLUNTEER/MONITORING ACTIVITIES

				ROUGE RIVER SUBWATERSHED						
EVENT	TOPIC	DATE	ARC COMMUNITY	Main 1-2	Main 3-4	Upper	Middle 1	Middle 3	Lower 1	Lower 2
FOTR Spring Bug Hunt site 1	Volunteer monitoring	5/13/2024	Livonia			1		1		
FOTR Spring Bug Hunt site 2	Volunteer monitoring	5/13/2024	Livonia			1		1		
FOTR Spring Bug Hunt site 3	Volunteer monitoring	5/13/2024	Livonia			1		1		
FOTR Fall Bug Hunt site 1	Volunteer monitoring	10/28/2024	Livonia			1		1		
FOTR Fall Bug Hunt site 2	Volunteer monitoring	10/28/2024	Livonia			1		1		
FOTR Fall Bug Hunt site 3	Volunteer monitoring	10/28/2024	Livonia			1		1		
FOTR Winter Stonefly Search	Volunteer monitoring	1/20/2024	Livonia			1		1		
ARC Executive Committee meeting	ARC meeting	5/29/2024	Livonia			1		1		
ARC Executive Committee meeting	ARC meeting	11/18/2024	Livonia			1		1		
Full ARC Meeting	ARC meeting	12/2/2024	Schoolcraft College			1		1		
ARC Joint Technical PIE Committee meeting	ARC meeting	3/5/2024	Farmington Hills	1		1	1			
Southeast Michigan Flood Risk Management Study	Public input workshop	12/9/2024	Bloomfield Township	1		1				
Converting Your Lawn to Native Plantings	Educational workshop	6/15/2024	Bloomfield Township	1		1				
Open House	Public open house	10/13/2024	Bloomfield Township	1		1				
FOTR Winter Stonefly Search	Volunteer monitoring	1/20/2024	Bloomfield Township	1		1				
River Day	River cleanup	6/29/2024	Canton Township						1	
FOTR Spring Bug Hunt	Volunteer monitoring	5/13/2024	Canton Township						1	
IDEP Training	Illicit discharge training	9/23/2024	Canton Township						1	
IDEP Training	Illicit discharge training	11/13/2024	Canton Township						1	
FOTR Winter Stonefly Search	Volunteer monitoring	1/20/2024	Farmington	1		1				
FOTR Spring Bug Hunt	Volunteer monitoring	4/20/2024	Farmington	1		1				
FOTR Fall Bug Hunt	Volunteer monitoring	10/11/2024	Farmington	1		1				
Rain Barrels 101	Educational workshop	5/16/2024	Oak Park	1						
FOTR Fall Bug Hunt	Volunteer monitoring	10/12/2024	Oak Park	1						
Rouge Rescue	River cleanup	5/18/2024	Farmington Hills	1		1	1			
Heritage Park Nature Center Volunteer Days	Cleanup	6/15/2024	Farmington Hills	1		1	1			
Heritage Park Nature Center Volunteer Days	Cleanup	7/20/2024	Farmington Hills	1		1	1			
Heritage Park Nature Center Volunteer Days	Cleanup	8/17/2024	Farmington Hills	1		1	1			
Heritage Park Nature Center Volunteer Days	Cleanup	9/21/2024	Farmington Hills	1		1	1			
Heritage Park Nature Center Volunteer Days	Cleanup	10/19/2024	Farmington Hills	1		1	1			
Heritage Park Nature Center Volunteer Days	Cleanup	11/16/2024	Farmington Hills	1		1	1			
Native Plant Sale	Native plant sale	5/31/2024	Farmington Hills	1		1	1			
Arbor Day Lakeshore Park	Volunteer and education	4/27/2024	Novi				1			
Superhero Showcase Open House	Education	6/6/2024	Novi				1			
Oakland County Parks Plant Swap	Education	9/21/2024	Novi				1			
Household Hazardous Waste Collection	Collection event	10/5/2024	Novi				1			
Homeowners Association Breakfast	Education	10/5/2024	Novi				1			
MSU Tollgate Farms Pumpkinfest	Education	10/5/2024	Novi				1			
FOTR Spring Bug Hunt	Volunteer monitoring	4/20/2024	Plymouth Township				1			
FOTR Fall Bug Hunt	Volunteer monitoring	10/12/2024	Plymouth Township				1			
FOTR Winter Stonefly Search	Volunteer monitoring	1/20/2024	Plymouth Township				1			
Environmental Leadership Commission (ELC) booth at Farmers Market	Education	10/19/2024	Plymouth Township				1			
ELC booth at Farmers Market	Education	8/10/2024	Plymouth Township				1			
ELC booth at Farmers Market	Education	6/15/2024	Plymouth Township				1			
Rain Garden Cleanup	Volunteer cleanup	4/20/2024	Plymouth Township				1			
Rain Garden Cleanup	Volunteer cleanup	5/18/2024	Plymouth Township				1			
Pollinator gardens installed at Golfview Park	Volunteer planting	4/1/2024	Plymouth Township				1		1	
Arbor Day Celebration	Education	4/26/2024	Plymouth Township				1			
Household Hazardous Waste Collection	Collection event	5/6/2024	Plymouth Township				1			

2025 ARC MEMBER COMMUNITIES HOSTING/PROMOTING
WORKSHOPS & PRESENTATIONS/VOLUNTEER/MONITORING ACTIVITIES

				ROUGE RIVER SUBWATERSHED						
EVENT	TOPIC	DATE	ARC COMMUNITY	Main 1-2	Main 3-4	Upper	Middle 1	Middle 3	Lower 1	Lower 2
Household Hazardous Waste Collection	Collection event	5/17/2024	Plymouth Township				1			
Household Hazardous Waste Collection	Collection event	4/12/2024	West Bloomfield Township	1		1				
Household Hazardous Waste Collection	Collection event	4/13/2024	West Bloomfield Township	1		1				
Household Hazardous Waste Collection	Collection event	9/20/2024	West Bloomfield Township	1		1				
Household Hazardous Waste Collection	Collection event	9/21/2024	West Bloomfield Township	1		1				
Onsite Shredding	Recycling event	5/17-5/18/2024	West Bloomfield Township	1		1				
Onsite Shredding	Recycling event	9/27/2024	West Bloomfield Township	1		1				
Onsite Shredding	Recycling event	9/28/2024	West Bloomfield Township	1		1				
Earth Day Celebration	Education	4/22/2024	West Bloomfield Township	1		1				
Earth Day Celebration	Education	4/22/2024	Auburn Hills	1						
Arbor Day Celebration	Education	4/26/2024	Auburn Hills	1						
Fish Hatchery Park Celebration	Grand opening of restoration project	9/6/2024	Northville				1			
Rouge River Water Festival	Education	9/17-9/20/24	Cranbrook Institute of Science	1						
Environmental Education Outreach Expo	Education	8/12/2024	Cranbrook Institute of Science	1						
Spring into Science	Education	3/28/2024	Cranbrook Institute of Science	1						
OCWRC office Annual Regional Stormwater Summit	Education	10/4/2024	Southfield	1						
Open House/Bring Child to Work	Education	5/11/2024	Birmingham	1						
Arbor Day Event	Education	4/26/2024	Birmingham	1						
IDEP Training	Education	1/10/2024	Birmingham	1						
OCWRC Dirt Doctors Program	Education	in 2024	Bloomfield Hills	1						
OCWRC Dirt Doctors Program	Education	in 2024	Rochester Hills	1						
OCWRC Dirt Doctors Program	Education	in 2024	Southfield	1						
OCWRC Dirt Doctors Program	Education	in 2024	West Bloomfield	1						
OCWRC Enviroscape Watershed Model Program	Education	in 2024	Bloomfield Hills	1						
OCWRC Enviroscape Watershed Model Program	Education	in 2024	Rochester Hills	1						
OCWRC Enviroscape Watershed Model Program	Education	in 2024	Wayne County Parks locations		1	1	1	1	1	1
Onsite Sewage Disposal (Septic system) Maintenance	Workshop	in 2024	Oakland County	1		1	1			
FOTR Stonefly Search	Volunteer monitoring	12/19/2024	Southfield	1						
Earth Day Celebration	Education	4/22/2024	Southfield	1						
Rouge River Cleanup	Cleanup	5/16/2024	Southfield	1						
OCWRC Environmental stewardship event	Education	9/23/2024	Southfield	1						
FOTR Stonefly Search	Volunteer monitoring	1/20/2024	Plymouth				1			
Keep Plymouth Leafy Board Meeting	Education	2/8/2024	Plymouth				1			
Spring Artisan Market	Education	4/20/2024	Plymouth				1			
FOTR Spring Bug Hunt	Volunteer monitoring	4/20/2024	Plymouth				1			
Spring river cleanup day	Cleanup	5/4/2024	Plymouth				1			
Keep Plymouth Leafy Public Tree Inventory Meeting	Education	6/10/2024	Plymouth				1			
Keep Plymouth Leafy Public Tree Inventory Meeting	Education	9/16/2024	Plymouth				1			
FOTR Fall Bug Hunt	Volunteer monitoring	10/12/2024	Plymouth				1			
Master Rain Gardener Online Course (w/regional partners)	Rain garden education	1/25 - 2/22/24	Watershed wide	1	1	1	1	1	1	1
Rain Barrel Sale & Distribution - Washtenaw Conservation District	Community event	3/20/2024	Washtenaw County				1		1	
Home Toxics Collections	Collection event	4/24, 11/24	Washtenaw County				1		1	

2025 ARC MEMBER COMMUNITIES HOSTING/PROMOTING
WORKSHOPS & PRESENTATIONS/VOLUNTEER/MONITORING ACTIVITIES

				ROUGE RIVER SUBWATERSHED						
EVENT	TOPIC	DATE	ARC COMMUNITY	Main 1-2	Main 3-4	Upper	Middle 1	Middle 3	Lower 1	Lower 2
Rural Education Days	Education	4/23-4/25/24	Washtenaw County				1		1	
Master Rain Gardener Course (in-person)	Education	4/10-5/8/24	Washtenaw County				1		1	
Native Plant Expo & Marketplace - Washtenaw Conservation District	Community event	6/1/2024	Washtenaw County				1		1	
Wayne County HHW Event	Collection event	4/6/2024	Belleville/Van Buren Twp.						1	
Wayne County HHW Event	Collection event	6/26/2024	Dearborn		1			1		1
Wayne County HHW Event	Collection event	8/31/2024	Westland					1		1
FOTR Fall Bug Hunt	Volunteer monitoring	10/12/2024	Beverly Hills	1						
FOTR Fall Bug Hunt	Volunteer monitoring	10/12/2024	University of Michigan-Dearborn							1
FOTR Fall Bug Hunt	Volunteer monitoring	10/12/2024	Northville Twp.				1			
Garlic Mustard Pull	Volunteer event	5/4/2024	Northville Twp.			1	1			
FOTR Fall Bug Hunt	Volunteer monitoring	10/12/2024	Novi				1			
FOTR Fall Bug Hunt	Volunteer monitoring	10/12/2024	Southfield	1						
FOTR Fall Bug Hunt	Volunteer monitoring	10/12/2024	Troy	1						
FOTR Fall Bug Hunt	Volunteer monitoring	10/12/2024	Birmingham	1						
Superior Day	Community event	6/8/2024	Washtenaw County						1	
County Clean-Up Days @ Augusta	HHW event	6/15/2024	Washtenaw County				1		1	
County Clean-Up Days @ Northfield	HHW event	6/29/2024	Washtenaw County				1		1	
County Clean-Up Days @ Pittsfield	HHW event	7/27/2024	Washtenaw County				1		1	
County Clean-Up Days @ Ypsilanti	HHW event	8/24/2024	Washtenaw County				1		1	
Rain Barrel Sale & Distribution - Washtenaw Conservation District	Community event	9/20/2024	Washtenaw County				1		1	
Home Toxics Collections	Collection event	in 2024	Washtenaw County				1		1	
Earth Day Celebration	Education	4/22/2024	Farmington Hills	1		1	1			
Wicox/Phoenix Public Meeting	Public meeting	3/28/2024	Plymouth				1			
Garden Club Walk	Education	6/19/2024	Village of Franklin	1						
Rouge Concrete Channel Public Meeting	Public meeting	9/4/2024	Dearborn Heights					1		1
Rouge Concrete Channel Public Meeting at ACCESS	Public meeting	11/15/2024	Dearborn Heights					1		1
			Total in subwatershed:	53	3	39	55	16	20	7

2025 ARC MEMBER COMMUNITIES HOSTING/PROMOTING
WORKSHOPS & PRESENTATIONS/VOLUNTEER/MONITORING ACTIVITIES

				ROUGE RIVER SUBWATERSHED						
EVENT	TOPIC	DATE	ARC COMMUNITY	Main 1-2	Main 3-4	Upper	Middle 1	Middle 3	Lower 1	Lower 2
FOTR Spring Bug Hunt	Volunteer monitoring	4/12/2025	Northville Twp			1	1			
FOTR Stonefly Search	Volunteer monitoring	1/25/2025	Northville Twp			1	1			
FOTR 2026 Stonefly Search	Promoted	12/1/2025	Northville Twp			1	1			
IDEP Alert Observer Training	Training event	11/5/2025	Oakland County	1						
IDEP Investigator Training	Training event	11/5/2025	Oakland County	1						
IDEP Alert Observer Training	Training event	11/12/2025	Northville Twp.			1	1			
IDEP Investigator Training	Training event	11/12/2025	Northville Twp.			1	1			
Garlic Mustard Pull	Volunteer event	5/3/2025	Northville Twp.			1	1			
Outfall Screening Training	Training event	3/13/2025	Livonia			1	1	1		
Rouge Cleanup	Rouge Cleanup	5/17/2025	Southfield	1						
FOTR Spring Bug Hunt	Volunteer monitoring (2 locations)	4/12/2025	Southfield	1						
FOTR Fall Bug Hunt	Volunteer monitoring (2 locations)	10/11/2025	Southfield	1						
Mary Thompson Farm Native Prairie Planting	Volunteer event	5/15/2025	Southfield	1						
City Hall Park Services Rain Garden Planting	volunteer event	5/10/2025	Southfield	1						
Rain Garden Workshop; Southfield Library	Community event	4/3/2025	Southfield	1						
FOTR Spring Bug Hunt	Volunteer monitoring	4/12/2025	Livonia			1	1	1		
FOTR Fall Bug Hunt	Volunteer monitoring	8/1/2025	Livonia			1	1	1		
FOTR 2026 Stonefly Search	Promoted	12/1/2025	Livonia			1	1	1		
FOTR Frog and Toad Survey Meeting	Volunteer monitoring	2/22/2025	Livonia			1	1	1		
FOTR Plant sale/rain barrel pick up	Community event	5/17/2025	Livonia			1	1	1		
Stewards of the Rouge Workshop	Promoted	9/1/2025	Livonia			1	1	1		
Stewards of the Rouge Workshop	Educational workshop	10/22/2025	Livonia			1	1	1		
Canton River Day	Community event	6/7/2025	Canton Twp				1		1	
Canton Household Waste Day	Collection event	9/6/2025	Canton Twp				1		1	
Rain Garden Planting FOTR	Volunteer event	10/3/2025	Canton Twp				1		1	
Rain Garden Planting FOTR	Volunteer event	10/4/2025	Canton Twp				1		1	
Rain Garden Planting FOTR	Volunteer event	10/5/2025	Canton Twp				1		1	
Master Rain Gardener Online Course (w/regional partners)	Education	1/30/2025	Washtenaw County				1		1	
Rain Barrel Sale & Distribution - Washtenaw Conservation District	Community event	3/24/2025	Washtenaw County				1		1	
Rural Education Days	Education	4/21/2025	Washtenaw County				1		1	
Master Rain Gardener Course	Education	4/4/2025	Washtenaw County				1		1	
Native Plant Expo & Marketplace - Washtenaw Conservation District	Community event	6/7/2025	Washtenaw County				1		1	
Superior Day	Community event	6/14/2025	Washtenaw County				1		1	
County Clean-Up Days @ Northfield Twp	HHW event	6/28/2025	Washtenaw County				1		1	
County Clean-Up Days @ Pittsfield Twp	HHW event	7/26/2025	Washtenaw County				1		1	
County Clean-Up Days @ Augusta Twp	HHW event	8/9/2025	Washtenaw County				1		1	
County Clean-Up Days @ Ypsilanti	HHW event	9/27/2025	Washtenaw County				1		1	
2025 Washtenaw Field Day – Washtenaw Conservation District	Community event	9/5/2025	Washtenaw County				1		1	
Home Toxics Collections	Collection event (Saturdays)	in 2025	Washtenaw County				1		1	
FOTR Spring Bug Hunt	Volunteer monitoring	4/12/2025	Farmington	1		1				
FOTR Fall Bug Hunt	Volunteer monitoring	10/11/2025	Farmington	1		1				
27th Annual Greater Farmington Clean	Clean up	4/26/2025	Farmington	1		1				
Earth Day	Community event	4/22/2025	Westland					1		1
Invasive Pull at State Nature Center	Community event	4/9/2025	Troy	1						
FOTR Bug Hunt (survey)	Volunteer Monitoring	4/12/2025	Troy	1						
Invasive Pull at State Nature Center	Community event	4/22/2025	Troy	1						
Invasive Pull at State Nature Center	Community event	4/23/2025	Troy	1						

2025 ARC MEMBER COMMUNITIES HOSTING/PROMOTING
WORKSHOPS & PRESENTATIONS/VOLUNTEER/MONITORING ACTIVITIES

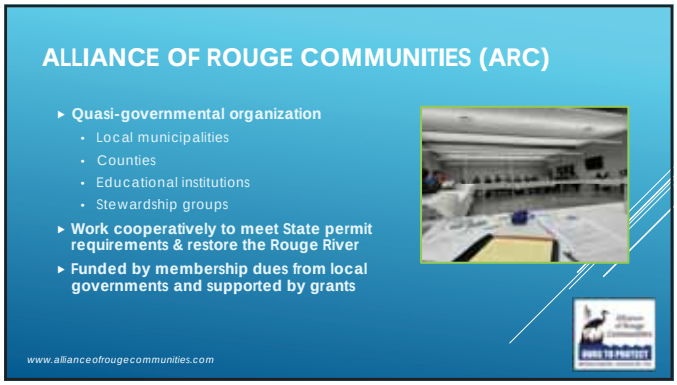
				ROUGE RIVER SUBWATERSHED						
EVENT	TOPIC	DATE	ARC COMMUNITY	Main 1-2	Main 3-4	Upper	Middle 1	Middle 3	Lower 1	Lower 2
Spring Invasive Pull at State Nature Center	Community event	4/26/2025	Troy	1						
Native Plant Sale	native plant sale	5/31/2025	Troy	1						
Invasive Pull at State Nature Center	Community event	6/5/2025	Troy	1						
Native Plant Sale	native plant sale	9/6/2025	Troy	1						
Conservation Goat Grazing	Invasisve species removal	9/8 - 9/22/25	Troy	1						
Invasive Pull at State Nature Center	Community event	9/12/2025	Troy	1						
Fall Invasive Pull at State Nature Center	Community event	9/20/2025	Troy	1						
FOTR Fall Bug Hunt	Volunteer Monitoring	10/11/2025	Troy	1						
FOTR Spring Team Leader Training	Training	4/5/2025	Plymouth Twp				1		1	
FOTR Spring Bug Hunt	Volunteer Monitoring	4/12/2025	Plymouth Twp				1		1	
FOTR Spring Bug Hunt	Promoted	4/12/2025	Plymouth Twp				1		1	
FOTR Workshop	Workshop	6/3/2025	Plymouth Twp				1		1	
FOTR Fall Team Leader Training	Training	9/27/2025	Plymouth Twp				1		1	
FOTR Fall Bug Hunt	Promoted	10/11/2025	Plymouth Twp				1		1	
Arbor Day	Community event	4/25/2025	Plymouth Twp				1		1	
Annual Residential Tree Planting	Community event	9/1/2025	Plymouth Twp				1		1	
Rain Garden installed at Golfview Park	Volunteer planting	5/31/2025	Plymouth Twp				1		1	
Rain Garden installed at Golfview Park	Volunteer planting	6/7/2025	Plymouth Twp				1		1	
Pollinator gardens installed at Golfview Park	Volunteer planting	4/1/2025	Plymouth Twp				1		1	
Rouge River Day	Community volunteer event	5/17/2025	Farmington Hills	1		1	1			
Rouge River Day	Community volunteer event	6/21/2025	Farmington Hills	1		1	1			
Rouge River Day	Community volunteer event	7/19/2025	Farmington Hills	1		1	1			
Rouge River Day	Community volunteer event	8/16/2025	Farmington Hills	1		1	1			
Rouge River Day	Community volunteer event	9/20/2025	Farmington Hills	1		1	1			
Rouge River Day	Community volunteer event	10/18/2025	Farmington Hills	1		1	1			
Rouge River Day	Community volunteer event	11/21/2025	Farmington Hills	1		1	1			
Plant and Seed Swap	Community event	3/6, 11/4	Farmington Hills	1		1	1			
Native Plant Sale	plant sale	5/30/2025	Farmington Hills	1		1	1			
Arbor Day Lakeshore Park	Volunteer and education	4/26/2025	Novi				1			
Novi Community Fest	Community event	6/5/2025	Novi				1			
Household Hazardous Waste	Collections event	10/4/2025	Novi				1			
Full ARC meeting	ARC member meeting	6/16/2025	UofM-Dearborn		1					1
Full ARC meeting	ARC member meeting	12/3/2025	Novi				1			
ARC Executive Committee meeting	ARC member meeting	5/13/2025	Livonia			1	1	1		
ARC Executive Committee meeting	ARC member meeting	11/20/2025	Livonia			1	1	1		
Joint PIE/Technical Committee meeting	ARC member meeting	3/6/2025	Farmington Hills	1		1	1			
Joint PIE/Technical Committee meeting	ARC member meeting	11/4/2025	Farmington Hills	1		1	1			
Arbor Day	Community Event	4/25/2025	Oak Park	1						
Rain Barrell Workshop	Workshop	5/15/2025	Oak Park	1						
Flower Sale	plant sale	5/25/2025	Oak Park	1						
Flower Exchange	plant exchange	8/25/2025	Oak Park	1						
Native Plant Sale	plant sale	9/21/2025	Oak Park	1						
FOTR Winter Stonefly Search	Volunteer monitoring event	1/23/2025	Wayne County				1			
FOTR Winter Stonefly Search	Volunteer monitoring event	1/25/2025	Wayne County				1			
FOTR Winter Stonefly Search	Volunteer monitoring event	1/29/2025	Wayne County				1			
Shiver on the River	Benthic Macro Display	2/1/2025	Wayne County-Detroit		1					
FOTR Spring Bug Hunt	Volunteer monitoring event	4/14/2025	Wayne County				1			
FOTR Spring Bug Hunt	Volunteer monitoring event	4/15/2025	Wayne County							1
FOTR Spring Bug Hunt	Volunteer monitoring event	4/16/2025	Wayne County							1
FOTR Spring Bug Hunt	Volunteer monitoring event	4/21/2025	Wayne County					1		
Bugtopia	Benthic Macro Display	7/19/2025	Wayne County Parks-Westland					1		1

2025 ARC MEMBER COMMUNITIES HOSTING/PROMOTING
WORKSHOPS & PRESENTATIONS/VOLUNTEER/MONITORING ACTIVITIES

				ROUGE RIVER SUBWATERSHED						
EVENT	TOPIC	DATE	ARC COMMUNITY	Main 1-2	Main 3-4	Upper	Middle 1	Middle 3	Lower 1	Lower 2
Household Hazardous Waste Day Collection	HHW collection event	6/28/2025	Wayne County-Dearborn		1					1
Household Hazardous Waste Day Collection	HHW collection event	8/3/2025	Wayne County-Westland					1		1
FOTR Team Leader Training	Training event	9/27/2025	Plymouth Twp				1		1	
FOTR Fall Bug Hunt	Volunteer monitoring event	10/1/2025	Wayne County							1
FOTR Fall Bug Hunt	Volunteer monitoring event	10/2/2025	Wayne County					1		
FOTR Fall Bug Hunt	Volunteer monitoring event	10/3/2025	Wayne County							1
FOTR Fall Bug Hunt	Volunteer monitoring event	10/6/2025	Wayne County					1		
FOTR Fall Bug Hunt	Volunteer monitoring event	10/8/2025	Wayne County				1			
FOTR Fall Bug Hunt	Volunteer monitoring event	10/11/2025	Wayne County				1			
FOTR Fall Bug Hunt	Volunteer monitoring event	10/16/2025	Wayne County		1					
SEMCOG Alert Observer/IDEP Investigator Training	Training event	11/12/2025	Wayne County-Northville Twp			1	1			
Rouge Presentation and Tour for EPA	Tour of restoration sites and education	10/10/2025	Dearborn Heights		1					1
HOW Presentation and Tour of GLRI funded sites	Tour of ARC GLRI restoration sites and education	8/21/2025	Dearborn Heights, Plymouth, Plymouth Twp.		1		1		1	1
Spring into Science	Education	3/27/2025	Cranbrook Institute of Science	1						
Rouge Concrete Channel Public Meeting	Public meeting	10/1/2025	Dearborn Heights					1		1
Wayne Co. Parks Naturalist Program	Public education - Lola Valley	5/15/2025	Wayne County			1				
Wayne Co. Parks Naturalist Program	Public education - HFE Fishway	5/29/2025	Wayne County		1					1
Wilcox Lake Restoration Presentation	Public education - Wilcox Lake	8/21/2025	Plymouth Twp., Plymouth				1		1	
Rain Garden Installations (2) Golfview Park	Volunteer	2025	Plymouth Twp.				1		1	
Pollinator Garden Plantings (2) Golfview Park	Volunteer	2025	Plymouth Twp.				1		1	
Inkster Public Meeting	EPA funded ARC Inkster Design Project	9/25/2025	Inkster							1
Inkster Public Meeting	EPA funded ARC Inkster Design Project	11/8/2025	Inkster							1
Nature explorer discovery days	Education every Wednesday	10/1/2025	West Bloomfield Twp.	1		1				
Onsite Shredding	Recycling event	5/23/2025	West Bloomfield Twp.	1		1				
Cleanup event	Volunteer event	9/27/2025	West Bloomfield Twp.	1		1				
Onsite Shredding	Recycling event	10/10/2025	West Bloomfield Twp.	1		1				
Household Hazardous Waste	Recycling event	9/19-9/20/25	West Bloomfield Twp.	1		1				
Household Hazardous Waste	Recycling event	5/2-5/3/25	West Bloomfield Twp.	1		1				
Bees Butterflies & Blooms: Pollinator Festival	Education	8/23/2025	West Bloomfield Twp.	1		1				
Native Plant Sale	Education	5/10/2025	West Bloomfield Twp.	1		1				
Earth Day	Education	4/22/2025	West Bloomfield Twp.	1		1				
FCA Park Spring Cleanup	Volunteer event	5/17/2025	Village of Franklin	1						
Household Hazardous Waste	Recycling event	5/3/2025	Orchard Lake Village	1						
FOTR Stonefly Search	Volunteer monitoring	1/25/2025	Plymouth				1			
Earth Day	Education	4/22/2025	Wixom				1			
Household Hazardous Waste Collection	Recycling event	4/5/2025	Wixom				1			
Household Hazardous Waste Collection	Recycling event	7/12/2025	Wixom				1			
Document shredding	Recycling event	3/18/2025	Wixom				1			
Document shredding	Recycling event	6/17/2025	Wixom				1			
Document shredding	Recycling event	9/16/2025	Wixom				1			
				51	7	41	78	17	33	15

Alliance of Rouge Communities
Stewards of the Rouge River Workshop
October 22, 2025

1



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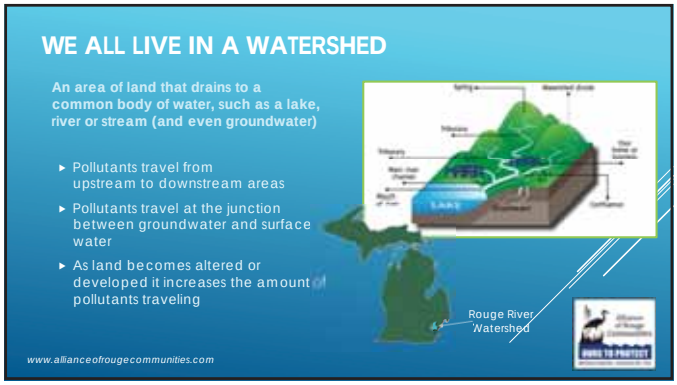

3

WHAT IS STORMWATER?

- Water that originates during rain events and snow/ice melt
- Carries the pollutants
- Travels over land or through storm drains, catch basins or pipes (called outfalls)
- Ends up untreated in our rivers, streams and lakes

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4

WHAT IS WASTEWATER?

- Water that has been used in the home, in a business, or as part of an industrial process
- Is treated before it is released back to the environment

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5

WHY PROTECT WATER QUALITY IN THE ROUGE RIVER?

- Understanding allows us to comprehend that we can have an impact on water quality far beyond our own back door

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6

IMPROVED WATER QUALITY MEANS

- Better habitat
- More aquatic species
- More canoeing and recreational activities
- More fishing and swimming
- Healthier Rouge River!

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7

QUESTIONS?

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8

WHAT YOU CAN DO . . .

- In your home
- In your yard
- With your vehicles
- In your community
- In your business

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9

IN YOUR HOME

- Minimize use of your washing machine, dishwasher or shower
- Pour greasy or oily food waste into a jar – not the sink
- Recycle your chemicals at a Household Hazardous Waste (HHW) collection event in you community

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10

IN YOUR HOME

- What can you take to a HHW event?

- Acids
- Aerosols
- Antifreeze
- Batteries (household & auto)
- Brake fluid
- Bug sprays
- Car wax
- Caulk
- Cell phones
- Computer equipment
- Cleaning solvents
- Drain cleaners
- Fertilizer/weed killer
- Floor care products
- Fluorescent light bulbs
- Oil & diesel fuel
- Gasoline
- Glue
- Ink cartridges
- Kerosene
- Light bulbs
- Lighter fluid
- Medicine
- Mercury waste
- Moth balls
- Oils (fuel, cooking & cutting)
- Paint
- Paint stripper & thinner
- Polishes (auto, furniture, metal & nail)
- Pool chemicals
- Primer
- Propane tanks (from grills)
- Rat poison
- Sealant
- Sharps (in metal/plastic containers)
- Smoke detectors
- Stereos/TVs
- Turpentine
- Varnish/Wood preservatives

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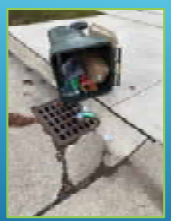
11

IN YOUR HOME

- Do not put “disposable wipes” down a drain or toilet
- Recycle your holiday greenery
- Windy the night before trash day? Wait until the morning to put your trash out so it doesn’t blow over to reduce litter and chance of things going into the storm drain



Neighborhood pipe clogged with “disposable wipes”

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12

IN YOUR HOME

- **Maintain your septic system**
  - Have it inspected every 3 years
  - Have your tank pumped every 3-5 years

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13

IN YOUR HOME

- **Why are we concerned about septic systems?**
  - Significant contributing source of pollution in the Rouge River Watershed
  - Often neglected and not routinely maintained after the initial installation
  - A malfunctioning system can contaminate our waterways and groundwater supply

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14

IN YOUR HOME

- **A properly functioning septic system will:**
  - Help protect and enhance the quality of surface and groundwater resources
  - Protect public health from disease causing organisms and nuisance conditions
  - Allow wastewater to be disposed of properly
  - Preserve the waterways, including the Rouge River, for recreational enjoyment
  - Save you money!

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15

QUESTIONS?

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16

IN YOUR YARD

- **Winterize your pool, spa or fountain**
  - Allow the chlorine to dissipate for several days
  - Drain it to a landscaped area

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17

IN YOUR YARD

- **Cut grass to a height of no less than 3 inches**
- **Don't over-water**
- **Mulch your grass and leaves**

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18

IN YOUR YARD

- Don't overuse fertilizer
- Use slow release, phosphorous-free fertilizer
- Use a broom to sweep fertilizer and grass clippings back onto your yard
- Avoid weed & feed products

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19

IN YOUR YARD

- Pick up after your pet (even in the winter)
- Don't feed the geese

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20

IN YOUR YARD

- Install a rain barrel to capture rainwater
- Winterize rain barrel to extend use
- Disconnect downspouts and direct them into your garden
- Install a compost bin

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21

IN YOUR YARD

- Use non-toxic cleaning alternatives such as white vinegar, baking soda and hydrogen peroxide
- During winter months shovel often to reduce salt use or choose an environmentally-friendly alternative

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22

QUESTIONS?

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23

IN YOUR YARD

- Use native trees and plants
  - Do not require fertilizers
  - Require less water
  - Provide wildlife habitat
  - Promote biodiversity
  - Reduce maintenance costs
  - Improved water quality

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24

IN YOUR YARD

- Install a rain garden to reduce stormwater runoff

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25

IN YOUR YARD

- Rain gardens
  - Filter runoff pollution
  - Recharge local groundwater/conserve water
  - Improve water quality/ protect rivers & streams
  - Remove standing water
  - Reduce mosquito breeding
  - Create habitat
  - Reduce potential home flooding

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26

IN YOUR YARD

- Protect waterfront property
- Create buffer zones to restore the shoreline

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27

IN YOUR YARD

- **Shoreline buffers**
  - Provide shade & moderate water temperature
  - Stabilize stream banks & reduce erosion
  - Filter & trap sediment from runoff
  - Absorb nutrients from runoff
  - Slow runoff & reduce flooding
  - Provide food & habitat for invertebrates, fish, & wildlife
  - Deter Canada Geese

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28

IN YOUR YARD

- **Michigan Native Plant Producers Association – www.mnppa.org**
  - Hidden Savanna Nursery – www.hiddensavanna.com
  - Michigan Wildflower Farm – www.michiganwildflowerfarm.com
  - Native Connections – www.nativeconnections.net
  - The Native Plant Nursery, LLC – www.nativeplant.com
  - Wetlands Nursery, Inc. – 231-848-4202
  - WILDTYPE Design, Native Plant & Seed, LTD – www.wildtypeplants.com
- **Check Friends of the Rouge's website (www.therouge.org) for native plant sales or your local community or county as well**

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29

IN YOUR YARD

- **Include pollinators**
  - Bees & butterflies
  - Essential to health of the environment
  - How plants reproduce & produce fruit
  - Great ecosystem health

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30

IN YOUR YARD

- **Planting trees**
  - Increases property values
  - Combats climate change
  - Improves air quality
  - Conserves energy
  - Conserves water
  - Reduces stormwater runoff
  - Improves habitat

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31

QUESTIONS?

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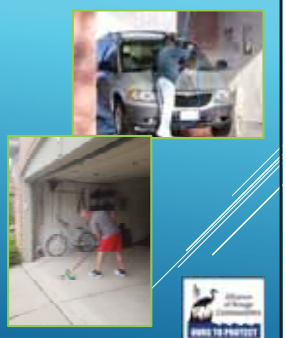
32

WITH YOUR VEHICLES

- **Use your local car wash so built-up road salt, oil and other pollutants don't go down storm drains**
- **When cleaning your garage, sweep it and dispose of it in the garbage**
- **Prevent fluid leaks from reaching paved surfaces**



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33

WITH YOUR VEHICLES

- **Boat owners**
  - Wash your boat to remove plants & aquatic animals after every use
  - Dump unused bait in the trash not the water
  - Drain water from equipment before transporting
  - Dispose of your boat waste properly
- **RV owners**
  - Dispose of sanitary waste at a drop-off location – never down a storm drain or roadside ditch

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34

QUESTIONS?

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35

IN YOUR COMMUNITY

- **Detention ponds**
  - Plant a variety of native species
  - Remove invasive species
  - Remove trash around detention ponds
  - Install bat boxes & bird houses
  - Regular inspections

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36

IN YOUR COMMUNITY

- Keep storm drains clear of debris
- Don't pour chemicals or other liquids down a storm drain

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37

IN YOUR COMMUNITY

- Report illegal dumping

Michigan's Pollution Alert System	800-292-4706
Macomb County	877-679-4337
Oakland County	248-858-0931
St. Clair County	877-504-SWIM
Washtenaw County	734-222-6860
Wayne County	888-223-2363

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38

IN YOUR COMMUNITY

EXPLORE—ROUGE RIVER WATER TRAIL

Friends of the Rouge

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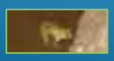
39

IN YOUR COMMUNITY

- **Explore together**
  - Bug hunts
  - Frog & toad survey
  - Restoration workdays





Friends of the Rouge

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40

IN YOUR COMMUNITY

RESTORE—RAIN GARDENS


Friends of the Rouge

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41

IN YOUR COMMUNITY

SPEAK UP FOR THE OUTDOORS!

- VOLUNTEER
- BECOME A MEMBER
- www.therouge.org

Friends of the Rouge

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42

IN YOUR BUSINESS

- Personal satisfaction whether you are the owner, employee or patron
- Easier and less costly to prevent pollution than to try to clean it up
- Get employees involved!

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43

IN YOUR BUSINESS

- May be polluting if businesses
  - Rinse washwater down a storm drain
  - Spill materials or wastes in parking lot without cleaning them up
  - Allow materials or wastes stored outside to leak

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44

IN YOUR BUSINESS

- Facility management
- Cleaning paved surfaces
- Cleaning up spills & leaks
- Storing & handling inventory
- Storing & disposing wastes
- Dumpster & loading dock maintenance
- Cleaning equipment
- Maintaining landscaped areas
- Employee training & education

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45

QUESTIONS?

Visit our website:
www.allianceofrougecommunities.com

Email us at:
info@allianceofrougecommunities.com

46

Alliance of Rouge Communities
OURS TO PROTECT
Working together, restoring the river

Stewards of the Rouge River Watershed Workshop
10/22/25

Name	City you live in	Email if you want more info or to attend future workshops
Luci Klinkhamer	Northville	lklinkha@gmail.com
Kathy Spillane * River Task Force	Northville	Kspillane2@comcast.net
Michael Nelson	Canton	mgnelson1713@gmail.com
Laura Jannke	Livonia	Lajannke@gmail.com
Chris O'meara	Canton	comeara@ectinc.com
Tennille Newsome	Canton	tnewsome@ectinc.com
Dan Moore	Livonia	dmoore@livonia.gov
The following pages show that we had 28 RSVPs to attend the workshop. Unfortunately, the evening of the workshop southeast Michigan had torrential rains which affected attendance.		

#1

COMPLETE

Collector:	Web Link 1 (Web Link)
Started:	Friday, August 29, 2025 7:55:12 PM
Last Modified:	Friday, August 29, 2025 7:55:47 PM
Time Spent:	00:00:35
IP Address:	24.192.124.248

Page 1

Q1

Yes, I will be attending the Stewardship Workshop.

Please RSVP below. We look forward to seeing you in Livonia on October 22!

Q2

Number of people attending.

2

#2

COMPLETE

Collector:	Web Link 1 (Web Link)
Started:	Saturday, August 30, 2025 11:14:48 AM
Last Modified:	Saturday, August 30, 2025 11:15:14 AM
Time Spent:	00:00:26
IP Address:	68.62.11.109

Page 1

Q1

Yes, I will be attending the Stewardship Workshop.

Please RSVP below. We look forward to seeing you in Livonia on October 22!

Q2

Number of people attending.

2

#3

COMPLETE

Collector: Web Link 1 (Web Link)
Started: Tuesday, September 02, 2025 12:14:19 PM
Last Modified: Tuesday, September 02, 2025 12:26:34 PM
Time Spent: 00:12:14
IP Address: 68.49.0.240

Page 1

Q1 **Yes, I will be attending the Stewardship Workshop.**

Please RSVP below. We look forward to seeing you in Livonia on October 22!

Q2

Number of people attending.

1

#4

COMPLETE

Collector: Web Link 1 (Web Link)
Started: Tuesday, September 02, 2025 12:39:15 PM
Last Modified: Tuesday, September 02, 2025 12:39:37 PM
Time Spent: 00:00:21
IP Address: 97.69.160.125

Page 1

Q1 **Yes, I will be attending the Stewardship Workshop.**

Please RSVP below. We look forward to seeing you in Livonia on October 22!

Q2

Number of people attending.

2

#5

COMPLETE

Collector:	Web Link 1 (Web Link)
Started:	Friday, September 05, 2025 3:57:43 PM
Last Modified:	Friday, September 05, 2025 3:58:19 PM
Time Spent:	00:00:35
IP Address:	97.209.249.186

Page 1

Q1 **Yes, I will be attending the Stewardship Workshop.**

Please RSVP below. We look forward to seeing you in Livonia on October 22!

Q2

Number of people attending.

1

#6

COMPLETE

Collector:	Web Link 1 (Web Link)
Started:	Tuesday, September 09, 2025 7:13:36 PM
Last Modified:	Tuesday, September 09, 2025 7:13:47 PM
Time Spent:	00:00:10
IP Address:	97.69.160.125

Page 1

Q1 **Yes, I will be attending the Stewardship Workshop.**

Please RSVP below. We look forward to seeing you in Livonia on October 22!

Q2

Number of people attending.

2

#7

COMPLETE

Collector: Web Link 1 (Web Link)
Started: Wednesday, September 10, 2025 11:58:18 AM
Last Modified: Wednesday, September 10, 2025 11:58:39 AM
Time Spent: 00:00:21
IP Address: 16.98.85.96

Page 1

Q1

Please RSVP below. We look forward to seeing you in Livonia on October 22!

Yes, I will be attending the Stewardship Workshop.

Q2

Number of people attending.

1

#8

COMPLETE

Collector: Web Link 1 (Web Link)
Started: Friday, September 12, 2025 7:38:56 PM
Last Modified: Friday, September 12, 2025 7:39:35 PM
Time Spent: 00:00:38
IP Address: 97.70.38.38

Page 1

Q1

Please RSVP below. We look forward to seeing you in Livonia on October 22!

Yes, I will be attending the Stewardship Workshop.

Q2

Number of people attending.

1

#9

COMPLETE

Collector: Web Link 1 (Web Link)
Started: Sunday, September 14, 2025 8:15:51 PM
Last Modified: Sunday, September 14, 2025 8:17:03 PM
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IP Address: 97.69.222.234

Page 1

Q1 **Yes, I will be attending the Stewardship Workshop.**

Please RSVP below. We look forward to seeing you in Livonia on October 22!

Q2

Number of people attending.

1

#10

COMPLETE

Collector: Web Link 1 (Web Link)
Started: Monday, September 15, 2025 8:15:40 AM
Last Modified: Monday, September 15, 2025 8:16:15 AM
Time Spent: 00:00:35
IP Address: 97.69.212.212

Page 1

Q1 **Yes, I will be attending the Stewardship Workshop.**

Please RSVP below. We look forward to seeing you in Livonia on October 22!

Q2

Number of people attending.

1

#11

COMPLETE

Collector:	Web Link 1 (Web Link)
Started:	Monday, September 15, 2025 12:13:50 PM
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Time Spent:	00:00:11
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Page 1

Q1 **Yes, I will be attending the Stewardship Workshop.**

Please RSVP below. We look forward to seeing you in Livonia on October 22!

Q2

Number of people attending.

3

#12

COMPLETE

Collector:	Web Link 1 (Web Link)
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Last Modified:	Wednesday, September 24, 2025 2:43:26 PM
Time Spent:	00:01:04
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Page 1

Q1 **Yes, I will be attending the Stewardship Workshop.**

Please RSVP below. We look forward to seeing you in Livonia on October 22!

Q2

Number of people attending.

1

#13

COMPLETE

Collector: Web Link 1 (Web Link)
Started: Thursday, September 25, 2025 9:56:00 AM
Last Modified: Thursday, September 25, 2025 9:57:20 AM
Time Spent: 00:01:19
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Page 1

Q1 **Yes, I will be attending the Stewardship Workshop.**

Please RSVP below. We look forward to seeing you in Livonia on October 22!

Q2

Number of people attending.

2

#14

COMPLETE

Collector: Web Link 1 (Web Link)
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Page 1

Q1 **Yes, I will be attending the Stewardship Workshop.**

Please RSVP below. We look forward to seeing you in Livonia on October 22!

Q2

Number of people attending.

1

#15

COMPLETE

Collector: Web Link 1 (Web Link)
Started: Tuesday, October 14, 2025 7:41:52 PM
Last Modified: Tuesday, October 14, 2025 7:42:02 PM
Time Spent: 00:00:10
IP Address: 97.70.154.72

Page 1

Q1

Please RSVP below. We look forward to seeing you in Livonia on October 22!

Yes, I will be attending the Stewardship Workshop.

Q2

Number of people attending.

1

#16

COMPLETE

Collector: Web Link 1 (Web Link)
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Last Modified: Friday, October 17, 2025 1:07:58 PM
Time Spent: 00:00:17
IP Address: 68.36.190.163

Page 1

Q1

Please RSVP below. We look forward to seeing you in Livonia on October 22!

Yes, I will be attending the Stewardship Workshop.

Q2

Number of people attending.

1

#17

COMPLETE

Collector:	Web Link 1 (Web Link)
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Last Modified:	Saturday, October 18, 2025 6:50:50 PM
Time Spent:	00:00:35
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Page 1

Q1 **Yes, I will be attending the Stewardship Workshop.**

Please RSVP below. We look forward to seeing you in Livonia on October 22!

Q2

Number of people attending.

1

#18

COMPLETE

Collector:	Web Link 1 (Web Link)
Started:	Monday, October 20, 2025 8:20:12 AM
Last Modified:	Monday, October 20, 2025 8:20:27 AM
Time Spent:	00:00:14
IP Address:	193.42.0.250

Page 1

Q1 **Yes, I will be attending the Stewardship Workshop.**

Please RSVP below. We look forward to seeing you in Livonia on October 22!

Q2

Number of people attending.

1

#19

COMPLETE

Collector: Web Link 1 (Web Link)
Started: Monday, October 20, 2025 8:22:55 AM
Last Modified: Monday, October 20, 2025 8:23:05 AM
Time Spent: 00:00:10
IP Address: 193.42.0.250

Page 1

Q1

Yes, I will be attending the Stewardship Workshop.

Please RSVP below. We look forward to seeing you in Livonia on October 22!

Q2

Number of people attending.

1

#20

COMPLETE

Collector: Web Link 1 (Web Link)
Started: Wednesday, October 22, 2025 4:25:52 PM
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IP Address: 68.60.57.89

Page 1

Q1

Yes, I will be attending the Stewardship Workshop.

Please RSVP below. We look forward to seeing you in Livonia on October 22!

Q2

Number of people attending.

1

#21

COMPLETE

Collector:	Web Link 1 (Web Link)
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Last Modified:	Wednesday, October 22, 2025 5:09:20 PM
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Page 1

Q1

Please RSVP below. We look forward to seeing you in Livonia on October 22!

Yes, I will be attending the Stewardship Workshop.

Q2

Number of people attending.

1

Stewards of the Rouge River Watershed Workshop Survey

Want to do the survey at home?
Scan the QR code or visit
https://www.surveymonkey.com/r/rougesteward

1. What community do you live in?

   Canton

2. How did you hear about tonight's workshop?

   ____ Community offices ____ Community website

   ____ Facebook ____ Handout/flyer

   ____ Friend/neighbor

   Other (please specify): Friends of the Rouge newsletter

3. Which type of presentation do you prefer?

   ____ Webinar X In-person workshop

4. Did you know what a watershed was before the workshop? X yes ____ no

5. Did you know where the rainwater/snow melt went before the workshop? X yes ____ no

6. Do you think over the last 15 years that the water quality of the Rouge River is getting better?

   X yes ____ no

7. How would you rate the water quality of the Rouge River?

   ____ Good X Fair ____ Poor

8. Did this workshop provide you with the information you were expecting? X yes ____ no

   If no, please explain _____

9. Did you learn anything new from this workshop? X yes ____ no

   If yes, please explain Yes, rain gardens and what impact I can have at home on the health of the watershed.

10. Based on tonight's workshop, do you intend to change your habits in your home, yard, business and with your vehicles?

X yes ___ no

If yes, please explain Rain garden, Rain water collection, mowing techniques and frequency

11. Are you interested in the ARC doing a workshop on any of the below topics in the future?

___ Septic system maintenance

X Benefits of green infrastructure including rain gardens and managing detention ponds and lake/river-front land to protect water quality

___ How business practices can protect water quality

___ Other topic _____

12. If you would like to receive FREE information on how you can protect water quality, please provide your address and we will mail you additional information.

Name: Michael Nelson

Address: 41955 Glen Arbor St.

City: Canton State: MI ZIP Code: 48188

PLEASE RETURN TO WORKSHOP STAFF

AND THANK YOU FOR COMING!

Alliance of Rouge Communities

OURS TO PROTECT

Working together, restoring the river

WWW.ALLIANCEOFROUGECOMMUNITIES.COM

Stewards of the Rouge River Watershed Workshop Survey

Want to do the survey at home?
Scan the QR code or visit
https://www.surveymonkey.com/r/rougesteward

1. What community do you live in?
   City of Northville
2. How did you hear about tonight's workshop?

   ____ Community offices ✓ Community website

   ____ Facebook ____ Handout/flyer

   ____ Friend/neighbor

   Other (please specify): _____

3. Which type of presentation do you prefer?

   ✓ Webinar ____ In-person workshop

4. Did you know what a watershed was before the workshop? ✓ yes ____ no
5. Did you know where the rainwater/snow melt went before the workshop? ✓ yes ____ no
6. Do you think over the last 15 years that the water quality of the Rouge River is getting better?

   ✓ yes ____ no

7. How would you rate the water quality of the Rouge River?

   ____ Good ✓ Fair ____ Poor

8. Did this workshop provide you with the information you were expecting? ✓ yes ____ no

   If no, please explain _____

9. Did you learn anything new from this workshop? ✓ yes ____ no

   If yes, please explain Rainscaping Website

10. Based on tonight's workshop, do you intend to change your habits in your home, yard, business and with your vehicles?

____ yes ✓ no

If yes, please explain I am already doing many of these

11. Are you interested in the ARC doing a workshop on any of the below topics in the future?

____ Septic system maintenance

____ Benefits of green infrastructure including rain gardens and managing detention ponds and lake/river-front land to protect water quality

____ How business practices can protect water quality

____ Other topic _____

12. If you would like to receive FREE information on how you can protect water quality, please provide your address and we will mail you additional information.

Name: _____

Address: _____

City: _____ State: _____ ZIP Code: _____

PLEASE RETURN TO WORKSHOP STAFF

AND THANK YOU FOR COMING!

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Stewards of the Rouge River Watershed Workshop Survey

Want to do the survey at home?
Scan the QR code or visit
https://www.surveymonkey.com/r/rougesteward

1. What community do you live in?
   City of Northville
2. How did you hear about tonight's workshop?

   ___ Community offices ✓ Community website

   ___ Facebook ___ Handout/flyer

   ___ Friend/neighbor

   Other (please specify): _____

3. Which type of presentation do you prefer?

   ✓ Webinar ✓ In-person workshop

4. Did you know what a watershed was before the workshop? ✓ yes ___ no
5. Did you know where the rainwater/snow melt went before the workshop? ✓ yes ___ no
6. Do you think over the last 15 years that the water quality of the Rouge River is getting better?

   ✓ yes ___ no

7. How would you rate the water quality of the Rouge River?

   ✓ Good ✓ Fair ✓ Poor depends upon what branch
8. Did this workshop provide you with the information you were expecting? ✓ yes ✓ no

   If no, please explain Good info on practices. Would have liked to hear about community education strategies
9. Did you learn anything new from this workshop? ___ yes ✓ no mostly

   If yes, please explain _____

   My goal was to hear how this could be used as a community education tool.

10. Based on tonight's workshop, do you intend to change your habits in your home, yard, business and with your vehicles?

____ yes ✓ no

If yes, please explain Already am doing these things

11. Are you interested in the ARC doing a workshop on any of the below topics in the future?

____ Septic system maintenance

____ Benefits of green infrastructure including rain gardens and managing detention ponds and lake/river-front land to protect water quality

____ How business practices can protect water quality

✓ Other topic shoreline/river edge protection native plants - promotion

12. If you would like to receive FREE information on how you can protect water quality, please provide your address and we will mail you additional information.

Name: Kathy Spillane

Address: 487 W. Cady St.

City: Northville State: MI ZIP Code: 48167

PLEASE RETURN TO WORKSHOP STAFF

AND THANK YOU FOR COMING!

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I would probably need to customize to make it more relevant to residents. C.S. we have very few septic systems

Stewards of the Rouge River Watershed Workshop Survey

Want to do the survey at home?
Scan the QR code or visit
https://www.surveymonkey.com/r/rougesteward

1. What community do you live in? Livonia

2. How did you hear about tonight's workshop?

   ___ Community offices ___ Community website

   ✓ Facebook ___ Handout/flyer

   ___ Friend/neighbor

   Other (please specify): _____

3. Which type of presentation do you prefer?

   ___ Webinar ✓ In-person workshop

4. Did you know what a watershed was before the workshop? ✓ yes ___ no

5. Did you know where the rainwater/snow melt went before the workshop? ✓ yes ___ no

6. Do you think over the last 15 years that the water quality of the Rouge River is getting better?

   ✓ yes ___ no

7. How would you rate the water quality of the Rouge River?

   ___ Good ___ Fair ✓ Poor

8. Did this workshop provide you with the information you were expecting? ___ yes ___ no

   If no, please explain _____

9. Did you learn anything new from this workshop? ___ yes ___ no

   If yes, please explain _____

10. Based on tonight's workshop, do you intend to change your habits in your home, yard, business and with your vehicles?

____ yes ____ no

If yes, please explain _____

_____

11. Are you interested in the ARC doing a workshop on any of the below topics in the future?

____ Septic system maintenance

✓ Benefits of green infrastructure including rain gardens and managing detention ponds and lake/river-front land to protect water quality

✓ How business practices can protect water quality

____ Other topic _____

12. If you would like to receive FREE information on how you can protect water quality, please provide your address and we will mail you additional information.

Name: Laura Jannika

Address: 29635 Munger

City: Livonia State: MI ZIP Code: 48154

PLEASE RETURN TO WORKSHOP STAFF

AND THANK YOU FOR COMING!

Alliance of Rouge Communities

OURS TO PROTECT

Working together, restoring the river

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Rouge River Watershed
2024 Winter Stonefly Search

www.therouge.org

Ninety-four people participated in Friends of the Rouge (FOTR)'s 2024 Winter Stonefly Search on January 20, 2024. To prepare participants, a virtual "Stonefly Primer" was held on Jan. 13 with 26 participants. The weather on January 20 was cold and snowy! Ice picks were needed at multiple sites as the river was mostly frozen over in many locations. Despite the cold, snowy conditions our fantastic volunteers did a wonderful job of searching for stoneflies throughout the watershed.

Stoneflies are sensitive indicators of healthy streams. Unlike other insects, winter stoneflies develop into adult flies in the winter. The Winter Stonefly Search is part of Friends of the Rouge's volunteer benthic macroinvertebrate monitoring program.

This report contains data for 34 sites (See Table 1 and map 1). Twenty-five sites were sampled by 14 teams during the Stonefly Search on January 20. Nine additional sites were sampled by Wayne County Department of Public Services, and Sue Thompson.

Stoneflies were found at fourteen of the thirty-four sites (41%) (map 1 and Table 1). All were found on the Lower, Middle and Upper branches. All but one of the sites had slender winter stoneflies (Capnids-family Capniidae). Sue found the only Perlodid (family Perlodidae) at the John8 site.

Team 4 at Fowler Creek

Lower Branch

Eleven sites were sampled on the Lower Branch: five on Fellows Creek, four on Fowler Creek and two on the main branch of the Lower. Four of the eleven (36%) sites had stoneflies, and all were slender winter stoneflies (Capnids). Stoneflies were found at one site in Fellows Creek (Fel6), two sites in Fowler Creek (Fowl1 and Fowl 4), and one site in the Lower Rouge (LR-8).

Middle Branch

Twenty sites were sampled on the Middle Branch: eleven on Johnson Creek, four on Tonquish Creek, and five on the Middle branch. Nine of the twenty sites (45%) of the sites had stoneflies and all but one (Mid 1 on the Middle Rouge) were on the Johnson Creek. All but one site had slender winter stoneflies (Capnidae). John8 had the only Perlodidae.

Team 7 at Johnson Creek

Team 6 at Johnson Creek

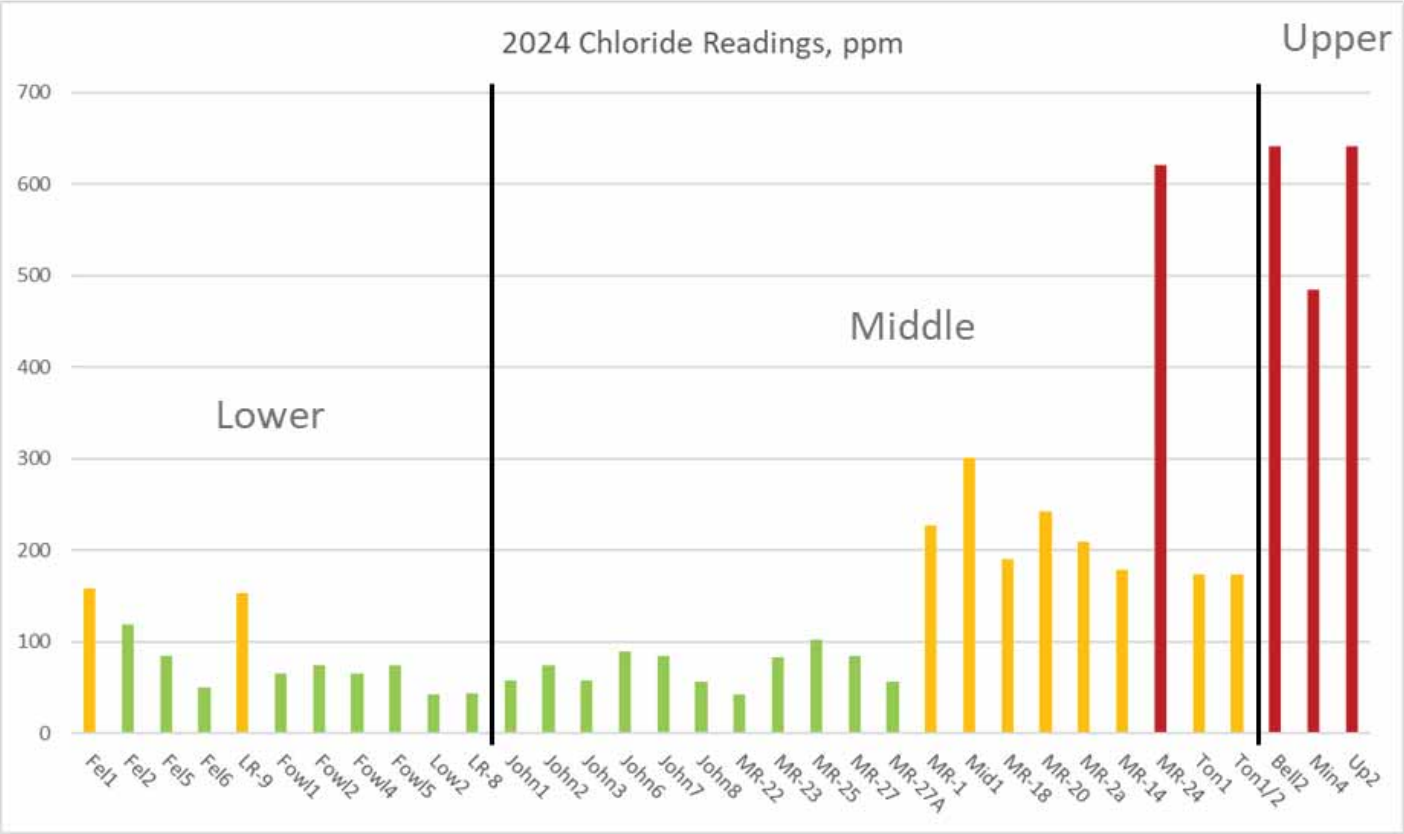
Team 8 at Middle Rouge

Upper Branch

Three Upper Branch sites were sampled including one site on Minnow Pond Creek, one site on Bell Creek, and one on the main Upper branch. Stoneflies were found at one of the three sites (33%) at Min4, and all were slender winter stoneflies (Capnids). Stoneflies are very rarely found in the Upper Branch.

Team 12 at Minnow Pond Creek

FOTR Stonefly Search teams have been testing sites for road salt (chloride) since 2020 through the Izaak Walton League's Salt Watch program. Chloride is measured in parts per million (ppm). Levels above150 ppm cause long-term impacts to aquatic life in the stream. Levels above 320 ppm are toxic (cause acute or short-term impacts) to aquatic life.



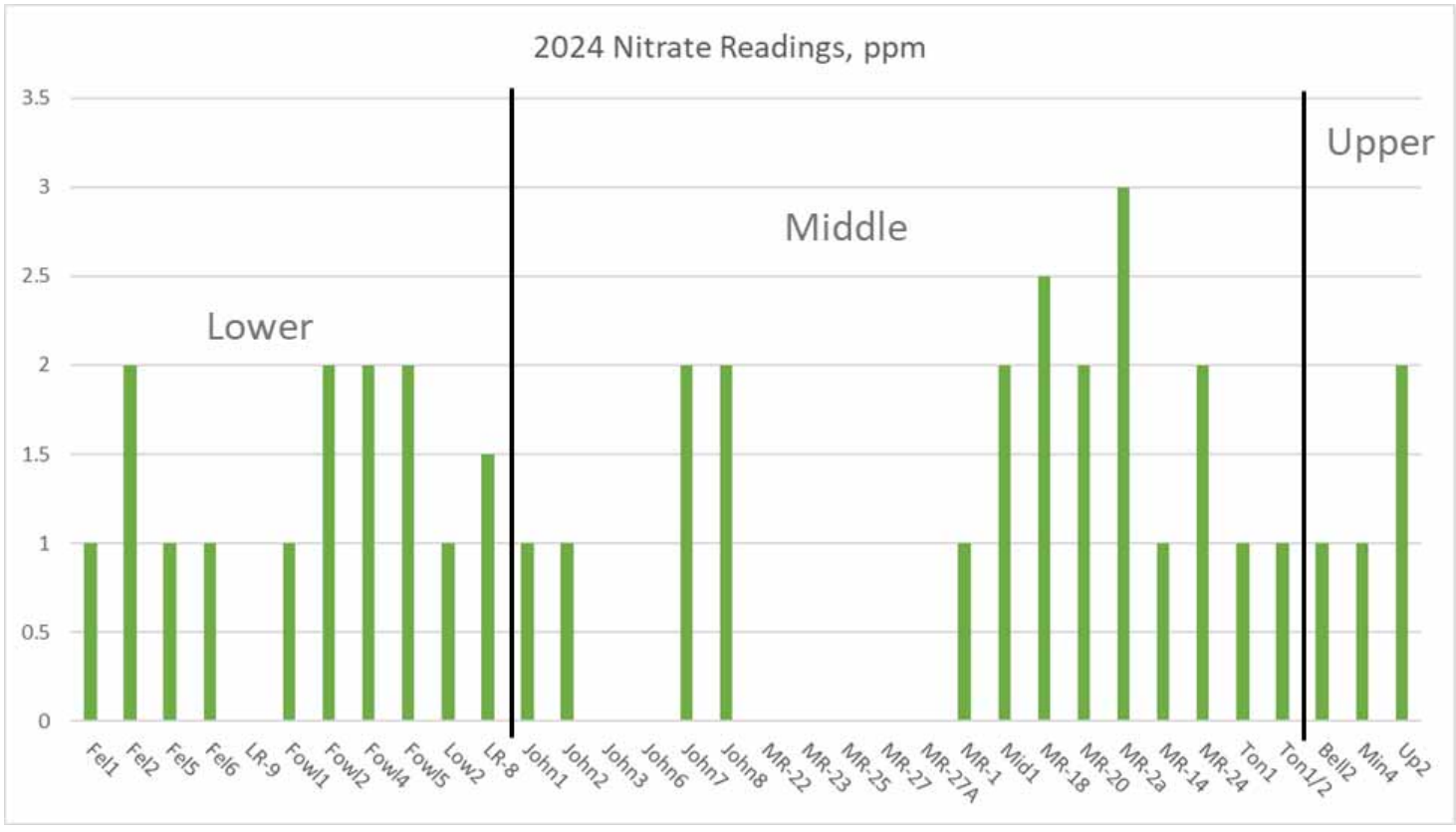
The 2024 chloride levels (see Chart above, Table 1 and map 2) varied by the branch. The Lower branch sites, which include Fellows and Fowler Creeks, were below 150 ppm, with the exception of two sites in Fellows Creek: Plymouth Township (Fel1) and near the Faith Baptist Church in Canton (LR-9). In the Middle branch, all the Johnson Creek sites were below 100ppm but downstream in the Middle Branch levels rose above 150 ppm: Northville Recreation Area (MR-1 and Mid 1), two sites downstream of Waterford Pond (MR-20 and MR-2a) and downstream on Phoenix Lake (MR-18). Sites in Tonquish Creek (Ton1, Ton1/2, MR-14, and MR-24) were all above 150ppm and the MR-24 site at Lion's Park had an extremely high level (620ppm). **All** three Upper branch sites were above 320 ppm (toxic level): Bell Creek (Bell2) at Schoolcraft College, Minnow Pond (Min4) at 14 mile in Farmington Hills, and Up2 at Shiawasee Park. Both the Bell2 and Up2 sites had readings beyond (higher) than the highest level on the strip.

The state of Michigan Department of Great Lakes and Energy (EGLE) only recently developed guidelines for chloride and identified two Rouge streams that exceeded the guidelines: Bishop Creek and the Upper branch. FOTR shares our data with the state and expect that the Middle branch will also be added to their "action" list. Once identified, a plan to reduce chloride will be developed but there is no timeline established as of yet.

FOTR also received a grant from the EGLE Nonpoint Source Unit with the goal of supporting ongoing assessment of the extent of chloride impairment in the Rouge River through targeted monitoring. The data will be collected using four different methods that include EGLE's required protocol for impairment designations so that waterbodies can be assessed for chloride impairment and potential listing.

NITRATE WATCH℠
IZAAK WALTON LEAGUE OF AMERICA

In addition to Salt Watch, Friends of the Rouge Bug Hunt volunteers have also been testing for nitrates in the past year through the Izaak Walton League's Nitrate Watch program. According to them "Nitrate is formed when nitrogen combines with oxygen in water. It comes from human-made sources, including fertilizers, animal feedlots, and sewage. Nitrate dissolves in water and can easily be carried by rainwater and melting snow until it reaches surface water or groundwater. When there are elevated levels of nitrate in a water source, that's almost certainly because of human-made contaminants. The drinking water standard for nitrate as nitrogen is 10 parts per million (ppm), as established by the EPA in the 1990s. While the EPA does not provide a standard for nitrate in lakes or streams, consistently high nitrate readings (over 10ppm) may be cause for concern in all surface waters."



Luckily, no elevated levels of nitrate were found at any Stonefly sites this year. Levels ranged from 0ppm-3ppm; the highest level (3ppm) was recorded at MR-2a which is a site located in the Middle Rouge downstream of Waterford Pond in Northville Township.

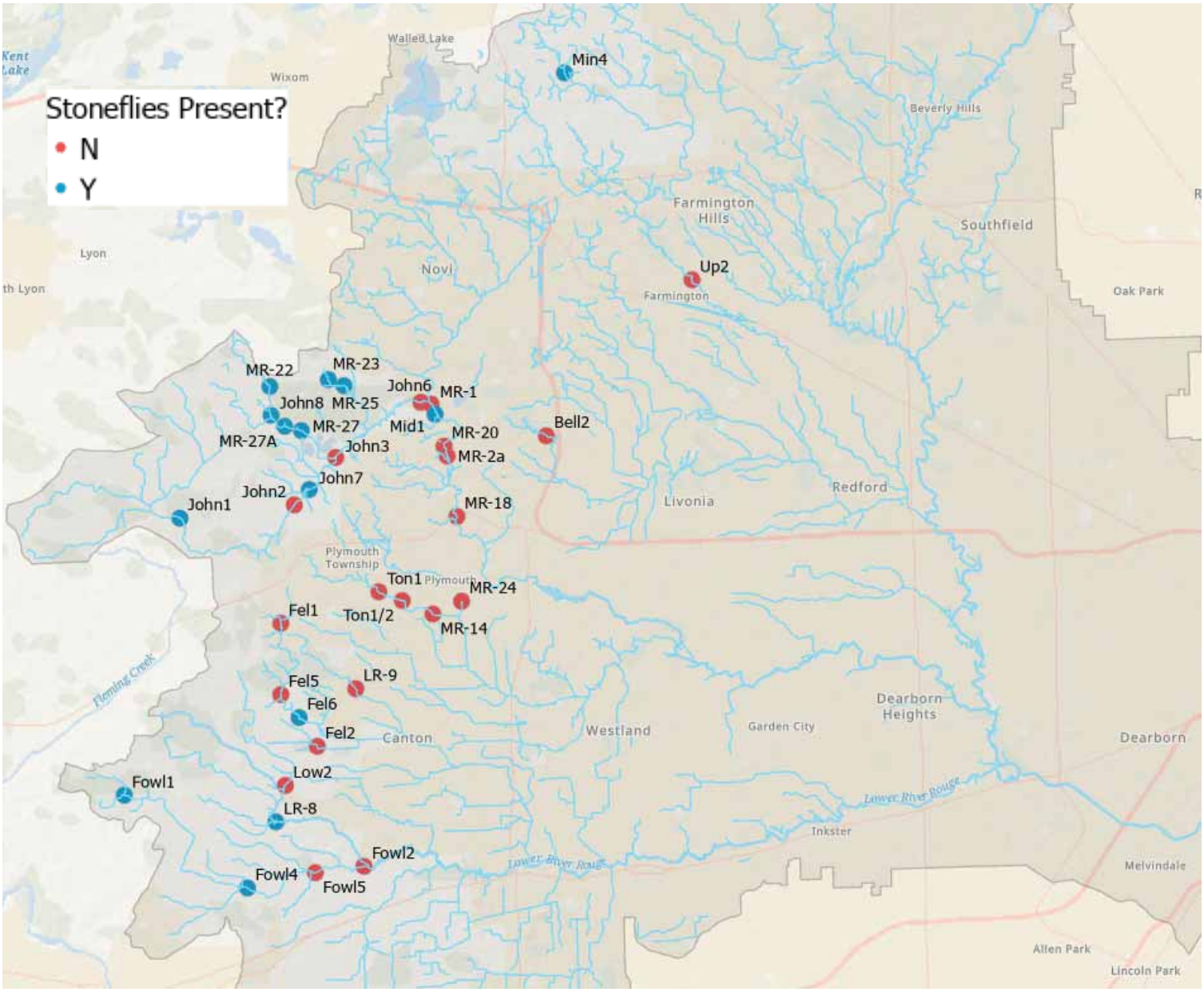
You can sign up for the Salt Walt program and/or the Nitrate Watch Program and receive free test strips to test stream sites during the winter on your own and are encouraged to do so. Check out their map of the salt results , map of nitrate results and see how the Rouge compares to other areas.

Thank you to all the volunteers, Team Leaders, Wayne County, and Sue Thompson for additional sampling. The Winter Stonefly Search is part of Friends of the Rouge's long-term volunteer monitoring program and is funded through the Alliance of Rouge Communities, Washtenaw County Water Resources Commission, the Erb Family Foundation, and individual donations.

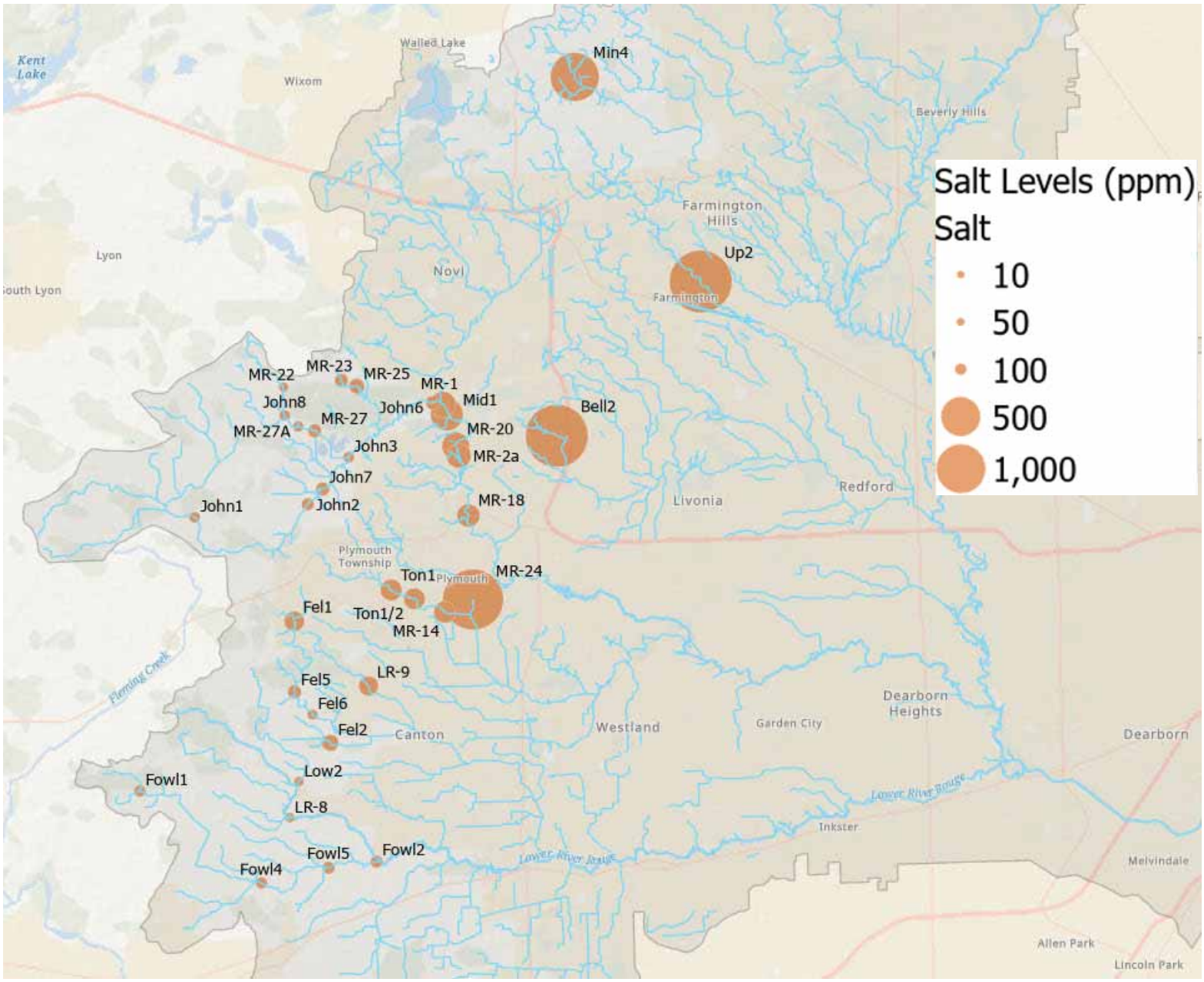
Table 1: 2024 Stonefly and Chloride Findings

BRANCH	Stream Name	FIELDID	Site Description	Stoneflies present?	ST24Family	Salt, ppm	Nitrate, ppm	Nitrite, ppm
Lower	Fellows Creek	Fel1	Top of Hill Ct	N		159	1	0.15
Lower	Fellows Creek	Fel2	Vintage Valley	N		119	2	0.15
Lower	Fellows Creek	Fel5	Warren Ridge	N		85	1	0.15
Lower	Fellows Creek	Fel6	Hanford	Y	Capniidae	50	1	0.15
Lower	Fellows Creek	LR-9	Fellows Beck Warren	N		154	0	0.15
Lower	Fowler Creek	Fowl1	Prospect	Y	Capniidae	66	1	0.15
Lower	Fowler Creek	Fowl2	Fowler Beck	N		75	2	0.15
Lower	Fowler Creek	Fowl4	Ridge Rd S of Geddes	Y	Capniidae	66	2	0.15
Lower	Fowler Creek	Fowl5	Fowler Denton	N		75	2	0.15
Lower	Lower Rouge	Low2	Cherry Hill	N		43	1	0.15
Lower	Lower Rouge	LR-8	Ridge Proctor	Y	Capniidae	44	1.5	0.15
Middle	Johnson Creek	John1	5M Salem	Y	Capniidae	58	1	0.15
Middle	Johnson Creek	John2	5M NV	N		75	1	0.15
Middle	Johnson Creek	John3	6M NV	N		58	0	0
Middle	Johnson Creek	John6	Hines	N		90	0	0
Middle	Johnson Creek	John7	Arcadia	Y	Capniidae	85	2	0
Middle	Johnson Creek	John8	Maybury Angell	Y	Perlodidae	57	2	0
Middle	Johnson Creek	MR-22	Maybury south	Y	Capniidae	43	0	0
Middle	Johnson Creek	MR-23	Maybury north	Y	Capniidae	83	0	0
Middle	Johnson Creek	MR-25	Maybury East	Y	Capniidae	103	0	0
Middle	Johnson Creek	MR-27	Ridge	Y	Capniidae	85	0	0.15
Middle	Johnson Creek	MR-27A	Florissant Dr.	Y	Capniidae	57	0	0
Middle	Middle Rouge	MR-1	Northville Rec W	N		227	1	0
Middle	Middle Rouge	Mid1	Northville Rec E	Y	Capniidae	301	2	0
Middle	Middle Rouge	MR-18	Springbrook Rec	N		190	2.5	0.15
Middle	Middle Rouge	MR-20	Waterford Bd	N		242	2	0.15
Middle	Middle Rouge	MR-2a	Reservoir Rd W	N		210	3	0
Middle	Tonquish Creek	MR-14	Smith Elem	N		179	1	0
Middle	Tonquish Creek	MR-24	Lion's Pk	N		620	2	0
Middle	Tonquish Creek	Ton1	Plym Twp Pk	N		174	1	0.15
Middle	Tonquish Creek	Ton1/2	Canton Ctr Rd	N		174	1	0.15
Upper	Bell Branch	Bell2	Schoolcraft College	N		641	1	0.15
Upper	Minnow Pond	Min4	14 Mile	Y	Capniidae	484	1	0.15
Upper	Upper Rouge	Up2	Shiawasee Park	N		641	2	0.15

Map 1: 2024 Stonefly Sites



Map 2: 2024 Chloride Readings



Friends of the ROUGE

Spring Bug Hunt

Surveying Since 1998

Become a Rouge Community Scientist!

Do you ever wonder about what lives in the river besides fish and turtles? Come to our 2024 Spring Bug Hunt and see for yourself the amazing variety of aquatic insects, crayfish, snails and clams that make up the bottom of the river food chain. Volunteers visit sites throughout the headwaters of the Rouge watershed and search for aquatic invertebrates. The presence or absence of these streambed creatures gives us valuable data on the quality of the river water and overall habitat.

Spring Bug Hunt

Saturday, April 20, 2024

10 a.m. – 4 p.m.

Meet at the Plymouth Cultural Center, 525 Farmer St., Plymouth

Registration Required by April 15th

No prior experience needed, but registration is required. Children eight and older are welcome when accompanied by a participating adult. Groups of six or less can sign up together.

Register Now

TheRouge.org/Bug-Hunts

Questions? Email Monitoring Manager, Lauren at leaton@therouge.org

Want to get more involved? Train to be a Team Leader – bank person or collector

Team Leader Training:
Sat. April 6, 2024 9am-1pm
Register Here: https://forms.gle/Ffu8j8jUcd63WqHV6

www.therouge.org
650 Church Street Suite 209
Plymouth, MI 48170
734-927-4904

Rouge River Benthic Monitoring Program
Spring 2024 Report

This report covers benthic macroinvertebrate monitoring at 44 sites on Rouge River tributaries and branches in the spring of 2024. Most sites were sampled during the Spring Bug Hunt on April 20, 2024 where 96 attendees sampled 26 sites in 13 teams. Wayne County staff sampled 3 additional sites, FOTR and volunteers sampled 13 additional sites and Trout Unlimited sampled 2 additional sites. Team Leader training was held on April 6, 2024 and 6 attendees were trained in sampling protocols. A Bug Identification Night was held for Team Leaders on May 9 and 7 people attended. FOTR staff identified the rest of the specimens with assistance from Sue Thompson.

FRIENDS OF THE ROUGE BENTHIC MONITORING PROGRAM

FOTR's benthic monitoring program was started in 2001 to involve a large number of volunteers in monitoring the health of the watershed by sampling the creeks of the Rouge River. The types and number of benthic macroinvertebrates found can be used to assess water quality. Each team of volunteers samples two sites under the direction of a trained team leader. Samples of each organism are collected and field identifications are verified in the lab.

Understanding Benthic Scores

Stream Quality Index (**SQI**) is determined by weighting each type and number of organisms found by their sensitivity ratings. SQI a measure of the degree of organic pollution that is calculated by rating and scoring organisms based on their sensitivity (sensitive, somewhat sensitive and tolerant) and frequency in the sample (rare or common). A higher proportion of sensitive organisms such as mayflies and caddisflies results in a higher **SQI**. A greater number of different organisms also results in a high **SQI**. Higher scores reflect better quality sites. The **SQI** has four different levels: **>48=EXCELLENT, 34-48=GOOD, 19-33=FAIR, <19=POOR**.

Number of taxa represents the number of different families of organisms. Like SQI, a higher number of taxa indicate a healthier site.

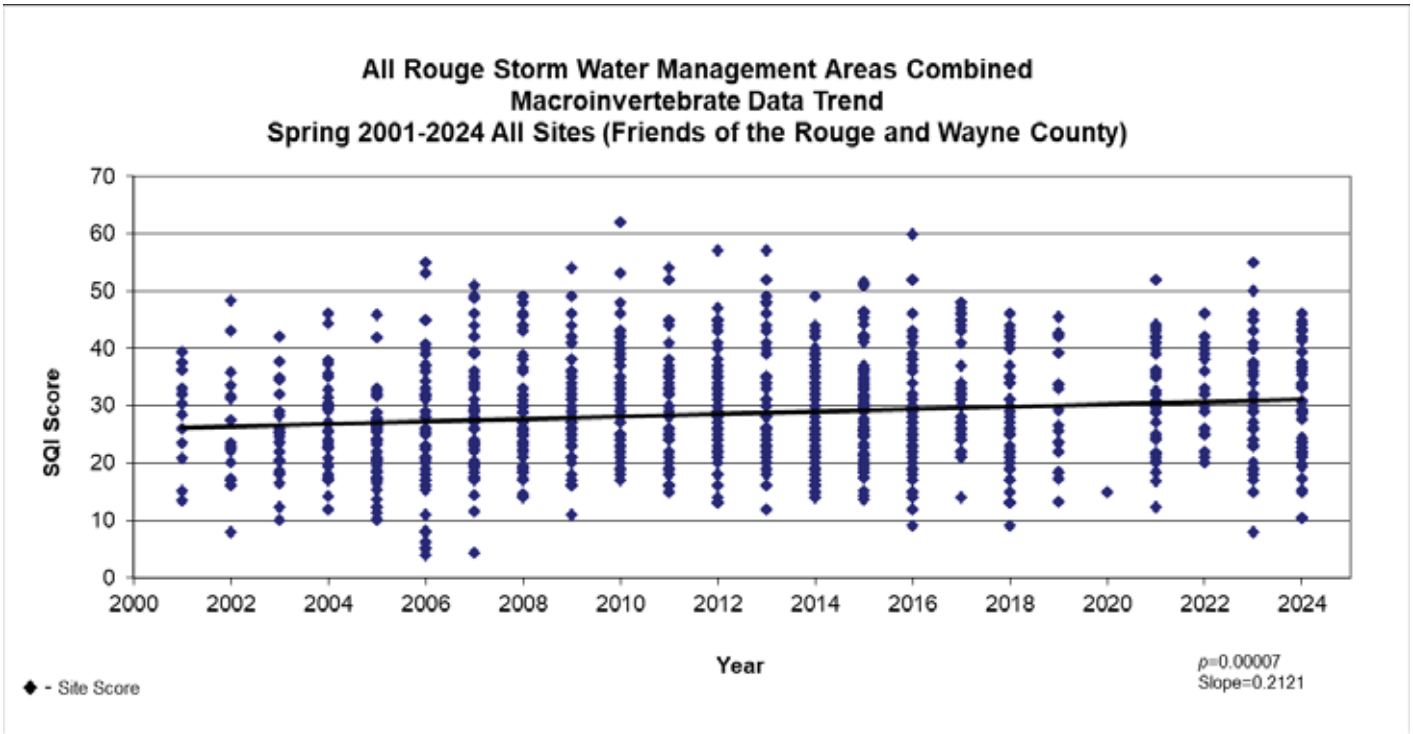
Number of insect taxa – insects are more sensitive than the non-insect taxa.

EPT refers to the number of mayfly, caddisfly and stonefly families found; these three orders contain some of the most sensitive organisms.

WQR – Water Quality Rating is a measure of the degree of organic pollution similar to SQI. Organisms are rated based on the Hilsenhoff Index of Biotic Integrity and scores are weighted by the number of individuals found. Unlike SQI, a LOWER score is indicative of less pollution. There are seven categories rather than four. 0.0-3.50=**Excellent**, 3.51-4.50=**Very Good**, 4.51-5.50=**Good**, 5.51-6.50=**Fair**, 6.51-7.50=**Fairly Poor**, 7.51-8-50=**Poor**, 8.51-10.0=**Very Poor**. WQR is calculated based on family level identification.

Overall Summary:

Stream Quality Index (SQI) averaged 29 or FAIR and the Water Quality Index (WQR) averaged 6.11 FAIR (map pg. 10-11, Table 4, and graph below). Taxa averaged 12 Families per site, EPT 2, and Chloride 169.75 (chronic level).
To compare trends over time, we analyzed the trends in SQIs. When all of the sites were compared, there was a small but significant upward trend in SQIs (see graph below).



SQI Summary:

Treated separately or together with the Middle 3 subwatershed, the Middle 1 subwatershed also had significant positive trends (Table 1, graphs pg. 22-23). No other subwatershed showed significant trends.

Table 1-FOTR and WC Spring Bug Hunt Summary 2001-2024 SQI					
Branch	**slope**	**p-value**	**True trend**	**Subwatershed average score**	**Stream Quality Index (SQI)**
Main 1-2	0.1674	0.0766	no trend	27	Fair
Main3-4*	-0.1351	0.7504	no trend	25	Fair
Upper	-0.0458	0.6410	no trend	24	Fair
Johnson Creek	0.0437	0.7207	no trend	38	Good
Middle 1	0.2787	0.0343	yes, positive	30	Fair
Middle 3*	0.4600	0.0218	yes, positive	20	Fair
Lower 1	0.0777	0.4749	no trend	30	Fair
Lower 2	-0.2394	0.1519	no trend	26	Fair
Middle 1 and Middle 3 combined	0.3950	0.0008	yes, positive	27	Fair

*no sites sampled in this subarea spring 2024

In addition to the trend analysis by subwatershed, a site-by-site analysis of all the sites was done (Table 2). The majority of sites had no trend. Seven sites had significant positive trends, and four sites had significant negative trends.

Table 2-Friends of the Rouge and Wayne County Spring Bug Hunt Data Trend 2001-2024 by site SQI					
Site	**slope**	***p*-value**	**Statistically significant trend**	**Site average score**	**Stream Quality Index (SQI)**
Main1	0.6376	0.0148	yes, positive	30	Fair
Main3	0.5302	0.0158	yes, positive	31	Fair
MR-23	-1.1124	0.0427	yes, negative	30	Fair
MR-25	-1.5221	0.0235	yes, negative	39	Good
John5	0.7528	0.0264	yes, positive	30	Fair
MR-14	-0.8890	0.0469	yes, negative	27	Fair
Bish2	0.6430	0.0257	yes, positive	24	Fair
Nton	0.6449	0.0013	yes, positive	21	Fair
Wall2	0.4781	0.0040	yes, positive	22	Fair
Fel2	0.5417	0.0133	yes, positive	29	Fair
Fel5	-2.1038	0.0165	yes, negative	33	Fair

WQR Summary:

In 2021, Michigan Clean Water Corps, the organization that oversees monitoring protocols for monitoring groups like ours in Michigan, developed a new scoring system for the bugs to replace the SQI. The new system called Water Quality Rating (WQR) should better reflect the pollution tolerance of the bugs found at the site. Since there is no way to convert SQI to WQR, FOTR continues to track SQI. This was the first season where we had sites with enough data to perform trend analyses for a small number of sites. There were no statistically significant trends in the subwatersheds (Table 3), but two sites demonstrated positive trends: John2, and Sprag (Table 4). Both of these sites had a GOOD WQR score.

Table 3-FOTR and WC Spring Bug Hunt Trend Summary 2022-2024 WQR

Branch	slope	p-value	True trend	Average score	Water Quality Rating (WQR)
Main 1/2	0.2800	0.3990	no trend	6.22	Fair
Upper	-0.5989	0.4209	no trend	7.16	Fairly Poor
Johnson Creek	0.3325	0.7445	no trend	5.63	Fair
Middle 1	-0.3450	0.2146	no trend	6.10	Fair
Lower 1	0.4125	0.4873	no trend	6.28	Fair

*No sites sampled in Main 3/4, Middle 3 in 2024

**No sites with three years of data in Lower 2

Table 4- Friends of the Rouge and Wayne County Spring Bug Hunt Data Trend 2002-2024 by site WQR

Site	slope	*p*-value	Statistically significant trend	Site average score	Water Quality rating (WQR)
Evan2	0.0000	1.0000	no trend	6.59	Fairly Poor
Main1	0.6900	0.2613	no trend	6.01	Fair
Nott	-0.0400	0.3980	no trend	7.02	Fairly Poor
Sprag	0.4700	4.25x10-16	yes, positive	5.1	Good
Bell1	-0.2450	0.9061	no trend	6.92	Fairly Poor
Bell2	3.12x10-16	1.0000	no trend	9	Very Poor
Bell3	-2.1450	0.1746	no trend	7.51	Poor
Up2	-0.0050	0.8790	no trend	5.21	Good
MR-22	0.5100	0.2707	no trend	5.5	Good
MR-23	-0.3850	0.6300	no trend	6.28	Fair
John1	-0.4300	0.2797	no trend	6	Fair
John2	0.5300	0.4155	yes, positive	5.44	Good
John3	0.3500	0.1041	no trend	5.68	Fair
John8	0.5600	0.3081	no trend	4.89	Good
Ing1	-0.3800	0.1518	no trend	5.92	Fair
Nton	-0.5200	0.6595	no trend	5.99	Fair
Ton1	-0.1350	0.8373	no trend	6.4	Fair
Fowl1	0.7600	0.5732	no trend	5.67	Fair
Low2	0.0650	0.8726	no trend	6.88	Fairly Poor

Since 2020, we have been testing sites for road salt (chloride) through the Izaak Walton League's Salt Watch program during the Stonefly Search and Bug Hunts. Salt we apply to our roads and sidewalks for snow and ice removal washes into our streams and is toxic to aquatic life when it reaches high levels. Recognizing this, the State of Michigan Department of Environment, Great Lakes and Energy (EGLE) set water quality values aiming to protect surface water from chloride, based on parts per million (ppm) concentrations.
These are:
150 ppm and above - causes long term effects to aquatic life (chronic)
320 ppm and above - causes acute effects to aquatic life (toxic)

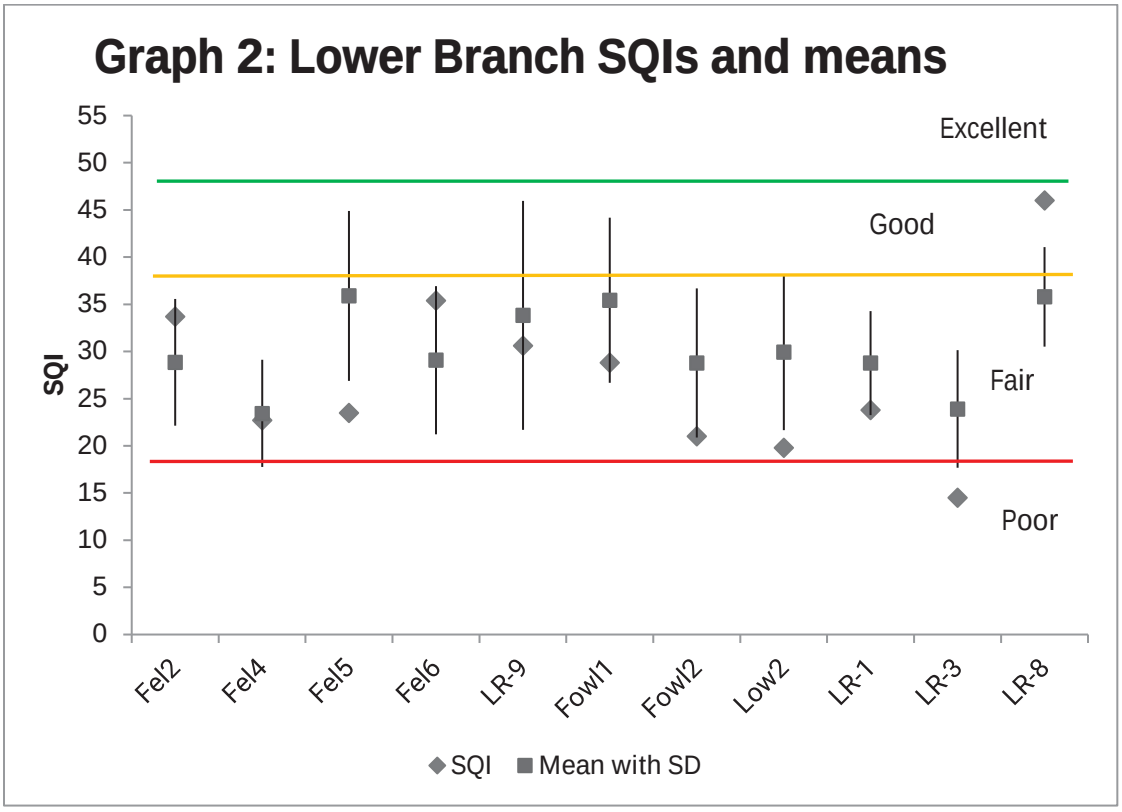
This spring, five site had toxic levels of chloride (table 5, map pg. 13). EGLE has already listed Bishop Creek as "impaired" due to high salt levels.

Table 5- Sites with Toxic Levels of Chloride (320 ppm and above)

Branch	Stream Name	FIELDID	Site Description	Chloride (ppm)
Middle	Bishop Creek	Bish2	Scarborough Rd	518
Main	Evans Creek	Evan2	LTU	346
Middle	Ingersoll Creek	Ing1	Brookfarm Park	346
Middle	Tonquish Creek	MR-24	Lion's Pk	535
Middle	North Tonquish	Nton	Evergreen St	453

Last fall, we also began testing for nitrate and nitrite throughout the watershed. High levels of nitrate in the water can be due to human impacts such as fertilizer application on the land or sewage outfalls/discharge. Too much nitrate in the water can also encourage the growth of algae which could result in algal blooms. In the 1990s, the Environmental Protection Agency created a drinking water standard for nitrate at 10 mg/L (equivalent to 10 parts per million). Research suggests that prolonged exposure to nitrate levels below 10 mg/L can still lead to increased health risks. There were no sites with elevated levels of nitrate this spring.

Lower Branch



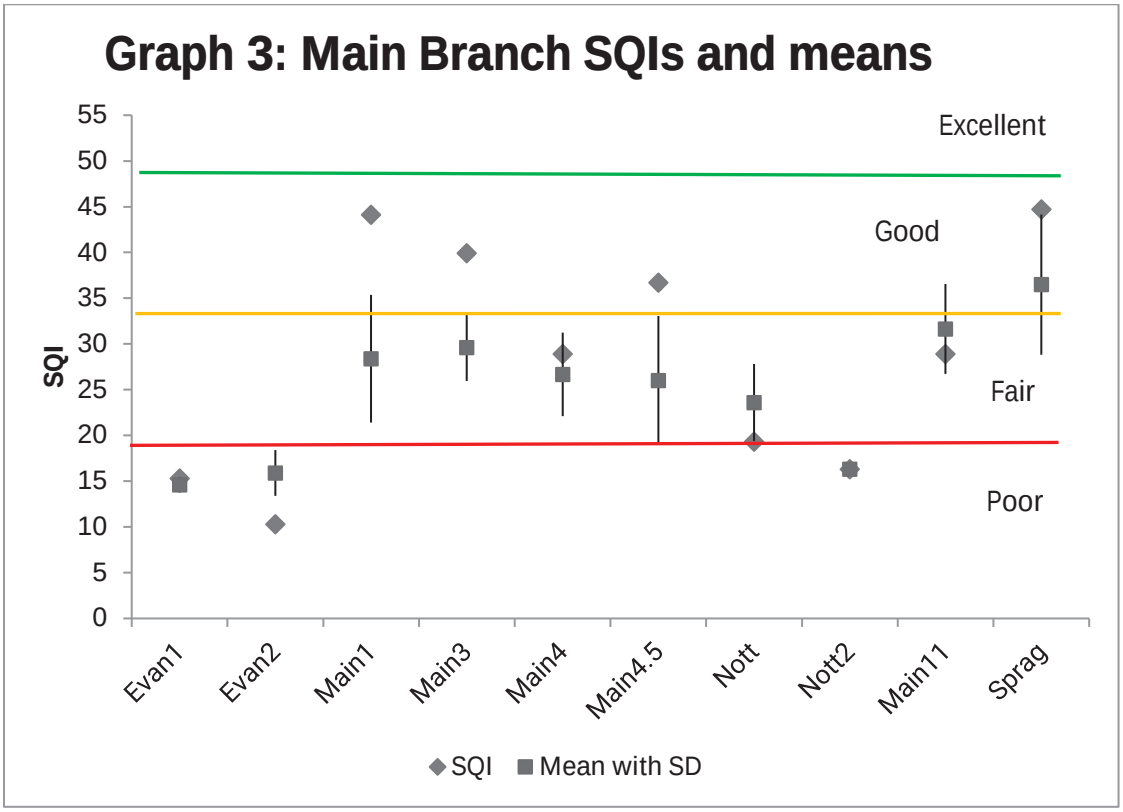
Eleven sites were sampled on the Lower Branch (Table 6, pg. 17), including two tributaries: Fellows and Fowler Creeks. SQIs averaged FAIR (27). Two sites had GOOD SQIs, eight sites had FAIR SQIs, and one site had a POOR SQI. Site scores calculated using the WQR system averaged fair (6.03). According to the WQR scoring, two sites were GOOD, six were FAIR, and three were FAIRLY POOR. Sites had an average of 12 taxa, and 2 EPT taxa.

Chloride levels ranged from a low of <31 ppm at Fel6 and Fowl1 to a high of 231 ppm at Fel5; two sites had chronic levels (Fel5 and LR-3) with no sites at the toxic level (Table 5, map pg. 13). There were no sites with elevated levels of nitrate this spring.

SQI scores were compared with past data (Graph 2). Nine were within a standard deviation of the average for the site, one was above (LR-8), and one was below (LR-3).

Long term trend analysis showed no significant trends for the Lower 1 and for all of the Lower when the subwatersheds are combined (Table 1, graphs pg. 20). Fel2 had a significant positive trend, and Fel5 had a significant negative trend (Table 2).

Main Branch

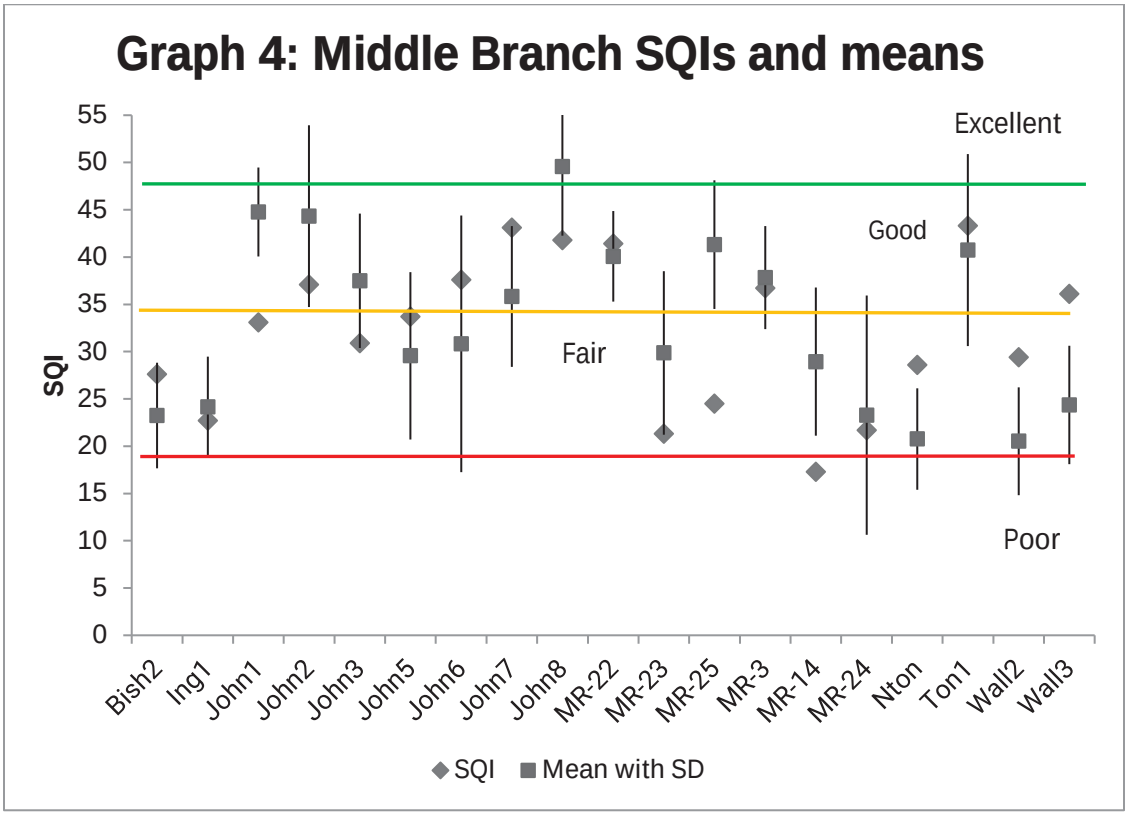


Ten sites on the Main Branch were sampled, including the following tributaries: Evans, Nottingham, Quarton, and Sprague Creek. SQIs averaged FAIR (28). Four sites rated GOOD, three FAIR, and three POOR. WQRs averaged FAIR (6.34). Five sites rated FAIR, and five sites rated FAIRLY POOR. Taxa averaged 13 and 2 EPT. Chloride levels averaged 179 ppm, and most sites were at the chronic effects level (>150 ppm), with one site at the toxic level (Evan2) (Table 5).

SQI scores were compared with past data (Graph 3). Four were within a standard deviation of the average for the site, four were above, and two were below.

Long term trend analysis shows no trends for the Main when the subwatersheds are combined (Table 1, graphs pg. 21). Main1 and Main3 had significant positive trends (Table 2).

Middle Branch

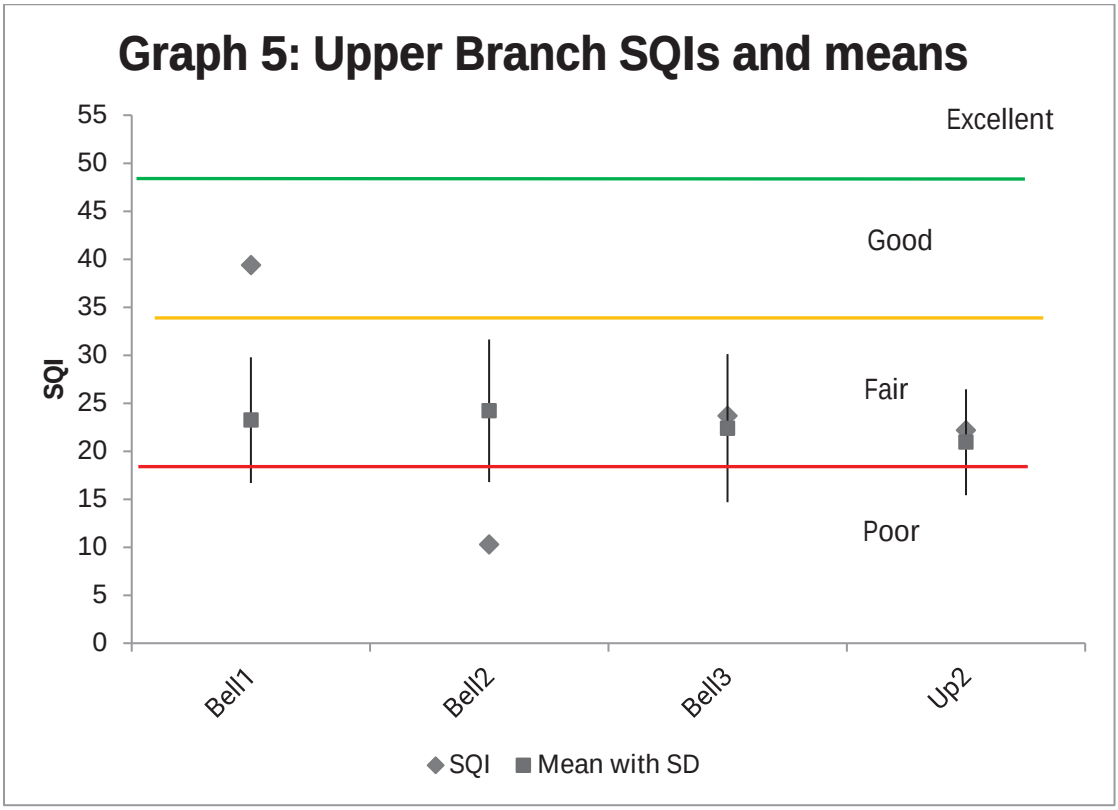


Nineteen sites were sampled on the Middle Branch and seven of its tributaries. Ten sites were sampled on Johnson Creek, one on Bishop Creek, four on Tonquish Creek, one on Ingersoll Creek, and two Walled Lake Drainage sites. The final site was in the Middle Rouge. SQI scores averaged FAIR (32). Eight site SQIs were GOOD, ten FAIR and one POOR. WQRs averaged fair (5.94). Seven sites had GOOD WQRs, 10 FAIR, one FAIRLY POOR, and one VERY POOR. Taxa averaged 14, 3 EPT.

In comparing averages and past data (Graph 4), the majority of sites (12) were within a standard deviation of the average for the sites. Three sites were above (Nton, Wall2, and Wall3) and four sites were below (John1, John8, MR-25, and MR-14). Chloride levels averaged 191 ppm (chronic) and four sites were at the toxic level (Table 5).

In long term trend analysis, the Middle 1 had a positive trend (Table 1). John5, Bish2, Nton, and Wall2 all had a positive trends when considered by site, and MR-14, MR-23, and MR-25 all had negative trends (Table 2).

Upper Branch



Four Upper branch sites were sampled including three sites on the Bell Creek tributary, and one on the Upper Rouge at Shiawasee Park. SQIs averaged FAIR (24). One site was GOOD, two were FAIR, and one was POOR. WQR averaged fairly poor (6.66). One site had a GOOD WQR, two were FAIR, and one was POOR. Taxa averaged 9, and 1 EPT.

In comparing averages and past data (Graph 5), one site was above a standard deviation of the average (Bell1), one was below (Bell2), and the rest were within the standard deviation of the average for a given site. Chloride levels averaged 271 ppm (chronic) and all four sites were at the chronic level (Table 6).

Long term trend analysis shows no trend for the Upper Branch (Table 1, graph pg. 24).

Dragonfly Diversity

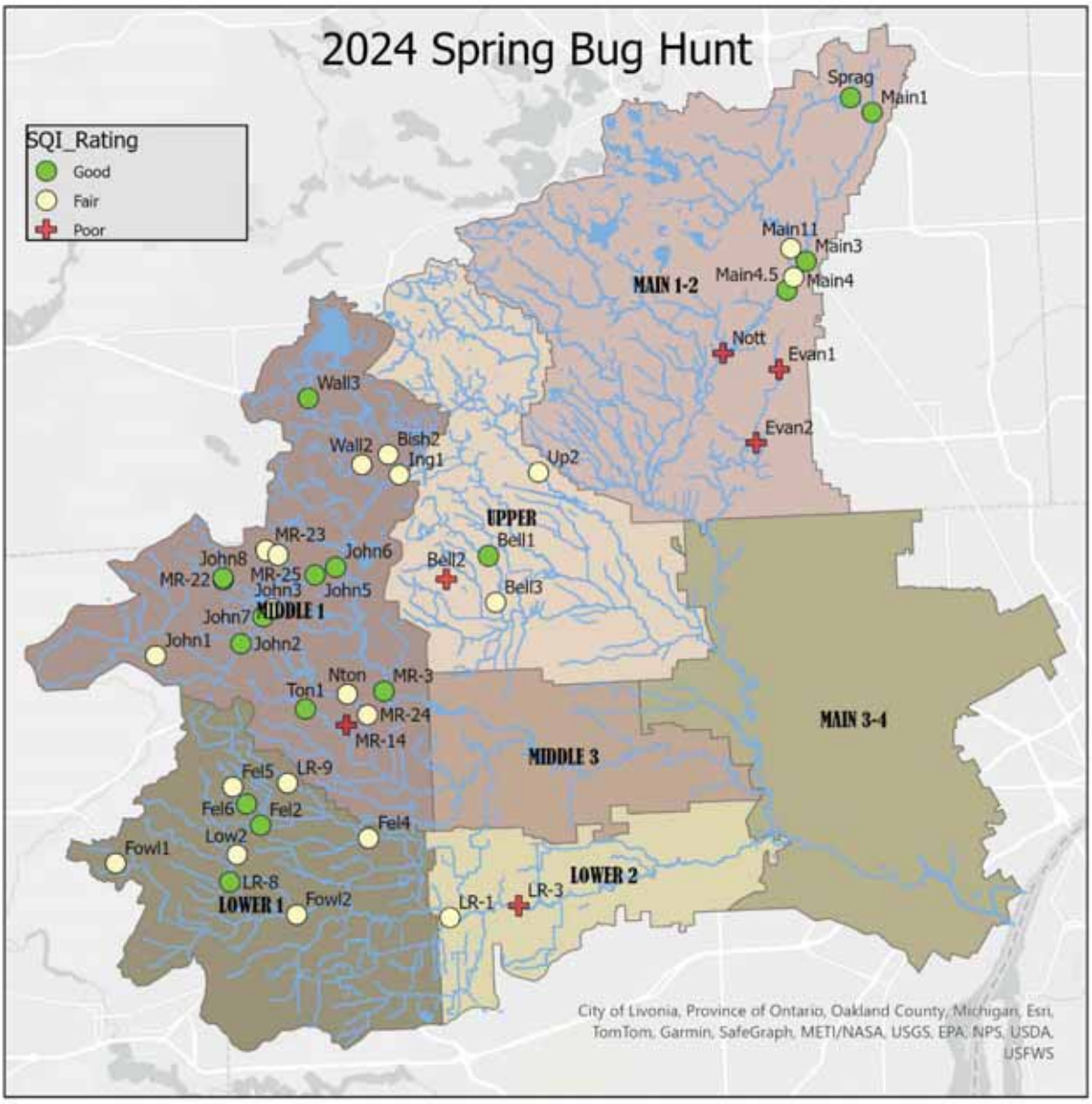
Since we regularly preserve specimens, we were able to gather more information about the dragonflies. We sent some specimens to our local dragonfly expert and adjunct curator of Odonata at MSU, Darrin O'Brien. Darrin and his wife, Julie Craves, have been identifying Odonates (dragonflies and damselflies) for many years. In 2021, they identified a Hine's emerald dragonfly, a federally endangered species, in Oceana County and Julie just published a paper on it (Craves, Julie A., et al. "A new locality and unexpected haplotypes of the federally-endangered Hine's Emerald dragonfly, Somatochlora hineana (Odonata: Corduliidae)." *Bulletin of American Odonatology* 13.2 (2022): 7-17).

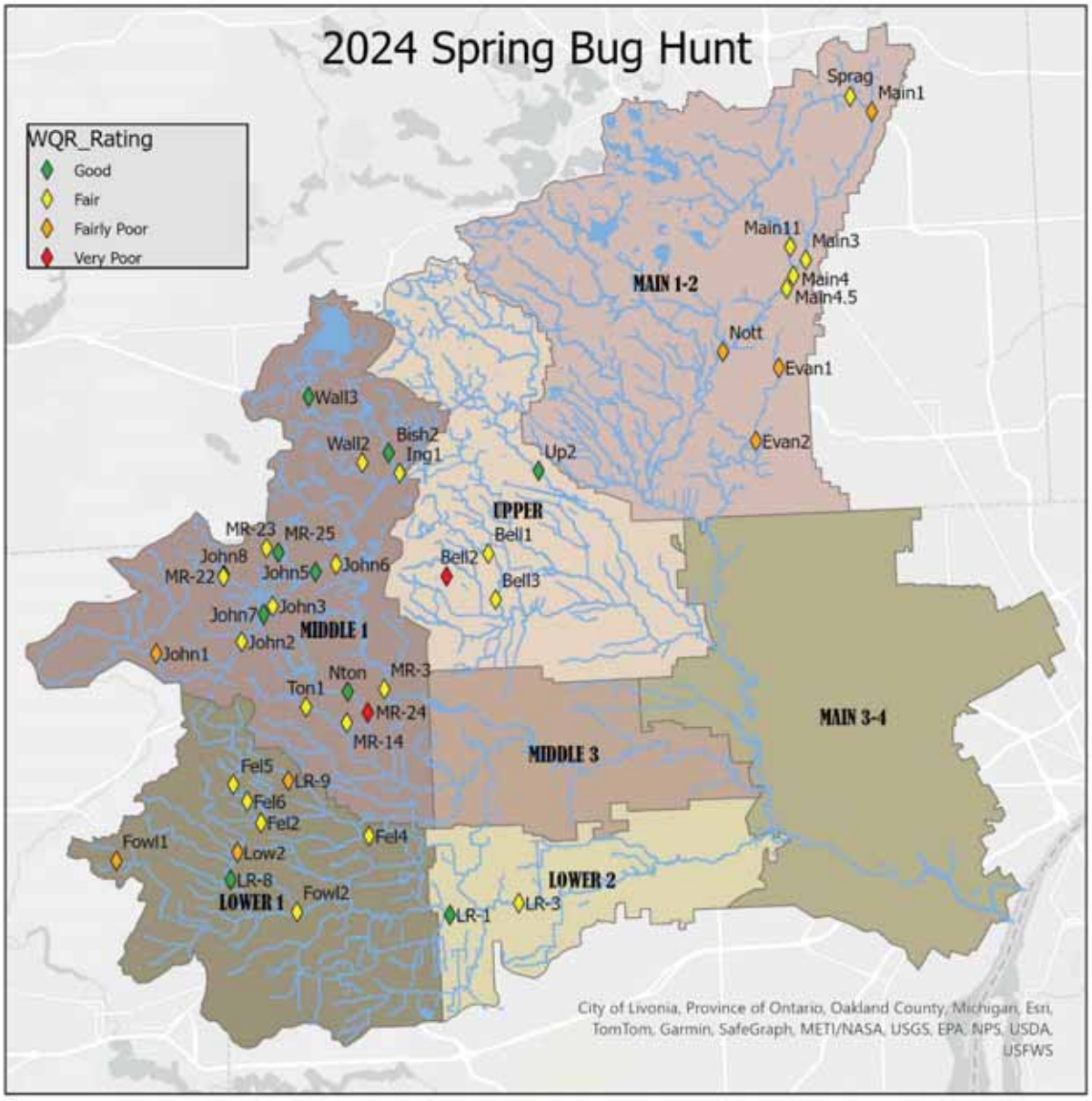
Thank you to Darrin and Julie for examining our specimens!
Darrin and Julie identified a Unicorn Clubtail (*Agrigomphus villospies*) the only dragonfly from the family Gomphidae found at our sites this spring. This organism can be found in slow moving streams with mud bottoms. This one was found at the Sprag site in Troy.

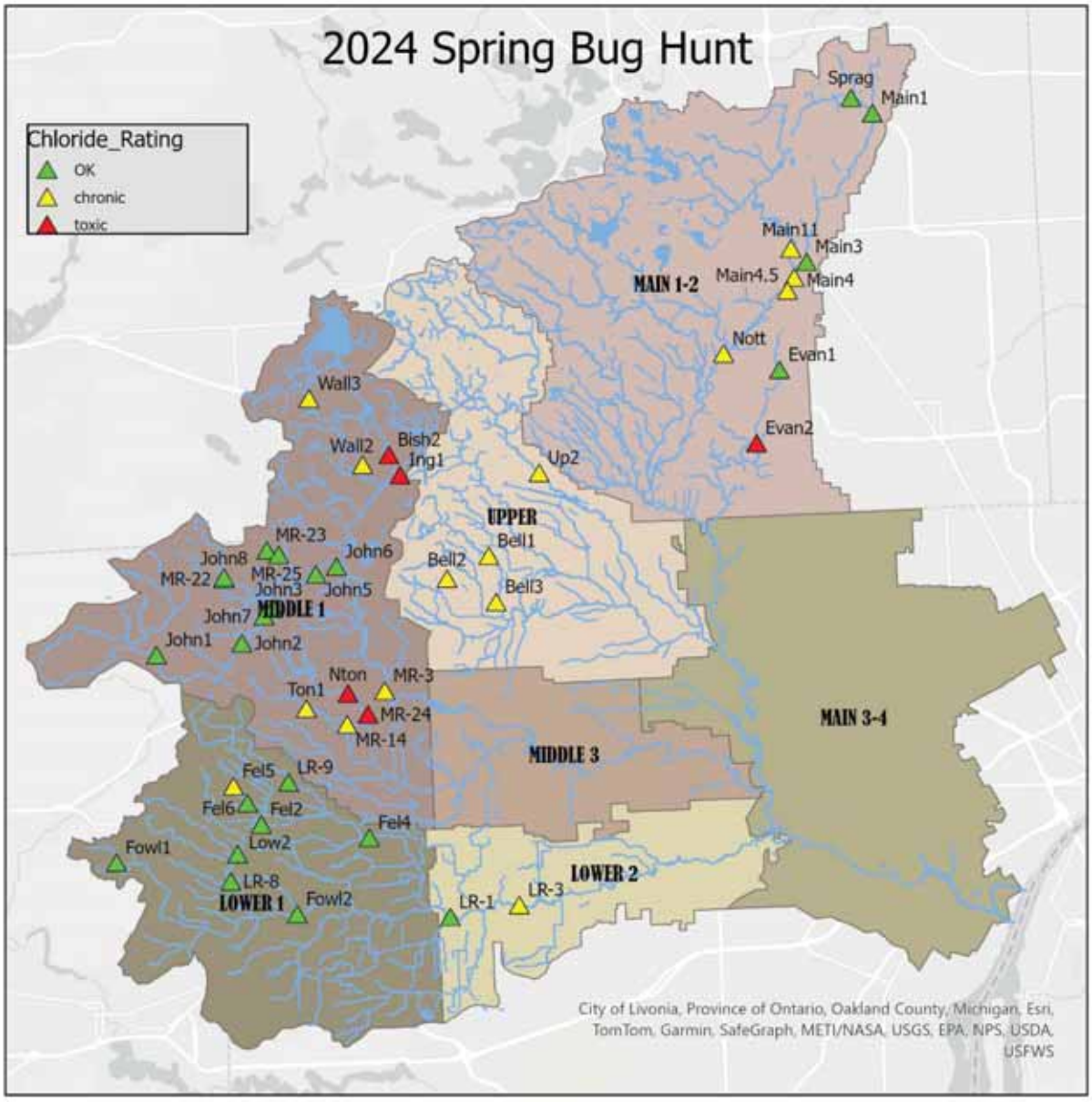
Unicorn Clubtail Dragonfly
Photo credit: Illinois DNR

They also identified a few Common Whitetail Skimmers (*Plathemis Lydia*) at the Evan1 site. Common Whitetails can tolerate degraded habitat, and are widespread throughout North America.

Common Whitetail Dragonfly
Photo credit: Wisconsin Odonata Survey


2024 Spring Bug Hunt
SQI_Rating
Good
Fair
Poor
Sprag
Main1
Main11
Main3
Main4.5
Main4
MAIN 1-2
Nott
Evan1
Evan2
Wall3
Wall2
Bish2
Ing1
Up2
UPPER
Bell1
Bell2
Bell3
MR-23
John8
John6
MR-22
MR-25
John3
John5
MIDDLE 1
John7
John1
John2
Nton
MR-3
Ton1
MR-24
MR-14
MIDDLE 3
MAIN 3-4
Fel5
LR-9
Fel6
Fel2
Fel4
Low2
Fowl1
LR-8
LOWER 1
Fowl2
LOWER 2
LR-1
LR-3
City of Livonia, Province of Ontario, Oakland County, Michigan, Esri, TomTom, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA, USFWS


2024 Spring Bug Hunt
WQR_Rating
Good
Fair
Fairly Poor
Very Poor
Sprag
Main1
Main11
Main3
Main4
Main4.5
MAIN 1-2
Nott
Evan1
Evan2
Wall3
Wall2
Bish2
Ing1
Up2
UPPER
Bell1
Bell2
Bell3
MR-23
MR-25
John8
MR-22
John5
John6
John7
John3
MIDDLE 1
John2
John1
Nton
MR-3
Ton1
MR-24
MR-14
MIDDLE 3
MAIN 3-4
Fel5
LR-9
Fel6
Fel2
Fel4
Fowl1
Low2
LR-8
LOWER 1
Fowl2
LOWER 2
LR-3
LR-1
City of Livonia, Province of Ontario, Oakland County, Michigan, Esri, TomTom, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA, USFWS


2024 Spring Bug Hunt
Chloride_Rating
OK
chronic
toxic
Sprag
Main1
Main11
Main3
Main4.5
Main4
MAIN 1-2
Nott
Evan1
Evan2
Wall3
Wall2
Bish2
Ing1
Up2
UPPER
Bell1
Bell2
Bell3
MR-23
John8
John6
MR-22
MR-25
John3
John5
John7
MIDDLE 1
John1
John2
Nton
MR-3
Ton1
MR-24
MR-14
MIDDLE 3
MAIN 3-4
Fel5
LR-9
Fel6
Fel2
Fel4
Low2
Fowl1
LR-8
LOWER 1
Fowl2
LR-1
LR-3
LOWER 2
City of Livonia, Province of Ontario, Oakland County, Michigan, Esri, TomTom, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA, USFWS

Thank you to all the **volunteers** and **Team Leaders, Wayne County Department of Public Services for providing bug hunt team leaders, sampling additional sites, and other technical support**, **Sue Thompson** for sampling additional sites and identifiying difficult specimens, and **Deirdre Devlin** and **Schoolcraft College** students for sampling one site.

Funding for the event was provided by the communities of Beverly Hills, Canton Township, Farmington, Livonia, Northville Township, Novi, Plymouth, Plymouth Township, Southfield, Troy, Birmingham, Washtenaw County Water Resources, Michigan Department of Environment, Great Lakes, and Energy and the United States Environmental Protection Agency's Great Lakes Restoration Initiative, the Alliance of Rouge Communities, and the Michigan Clean Water Corps.

Please join us for the Fall Bug Hunt
Oct. 12, 2024 10 am-4pm
Sign up online today (deadline Monday, September 30th, 2024)

https://forms.gle/vChsYYs8vPUQQ64r5

Volunteers meet at 10am at the Plymouth Cultural Center (525 Farmer St., Plymouth). There will be an indoor welcome from 10am-11am where volunteers will have a chance to meet their team, enjoy refreshments (coffee, juice, bagels, and donuts), and watch a short presentation before heading out to two sites throughout the watershed. Ending times for each team will vary, but most teams should be able to finish by 3pm.

Holding it this way means people can meet all of the rest of the volunteers and it makes it easier for us to make adjustments so that each team has enough volunteers. For those who would rather meet in the field, that can still be arranged.

Team Leader Training

Sat. Sept. 28, 2024 9am-1pm (must have participated in a previous event)

https://forms.gle/qLPZfKvJTQNDZftB8

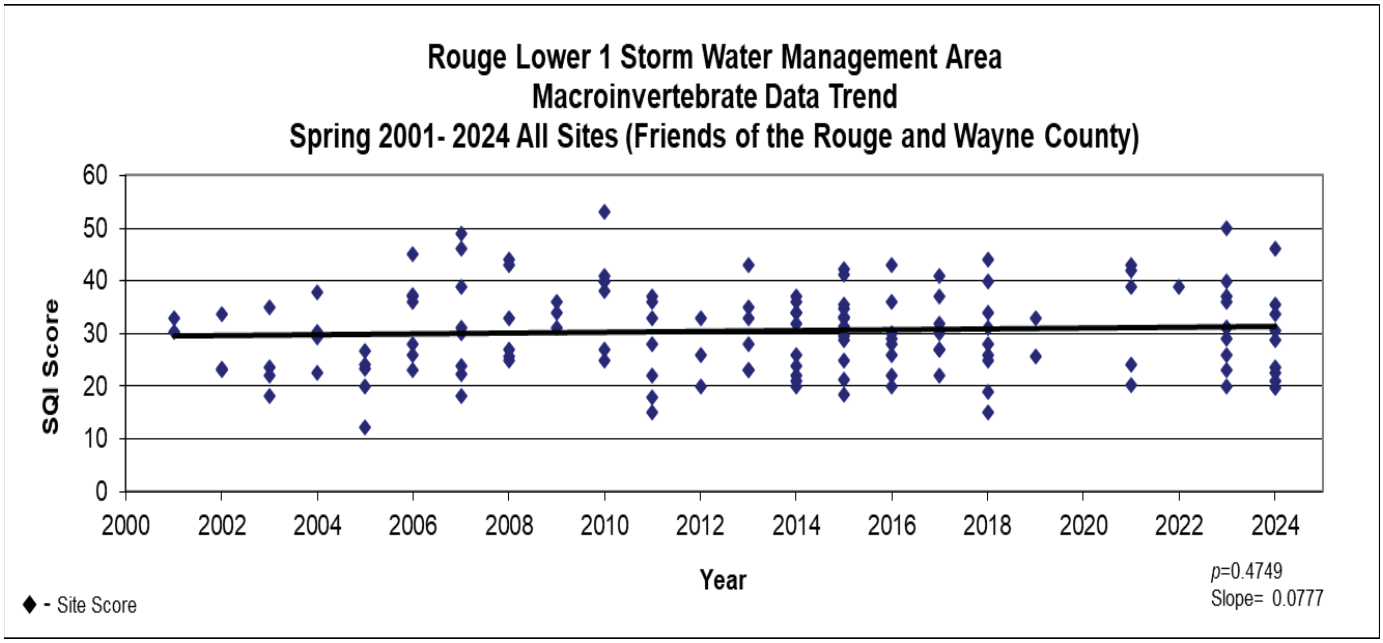
We are always in need of people willing to train and act as Team Teaders for Bug Hunts and Stonefly Searches. If you have attended an event before and would like to train to become a team leader, please sign up for the fall training.

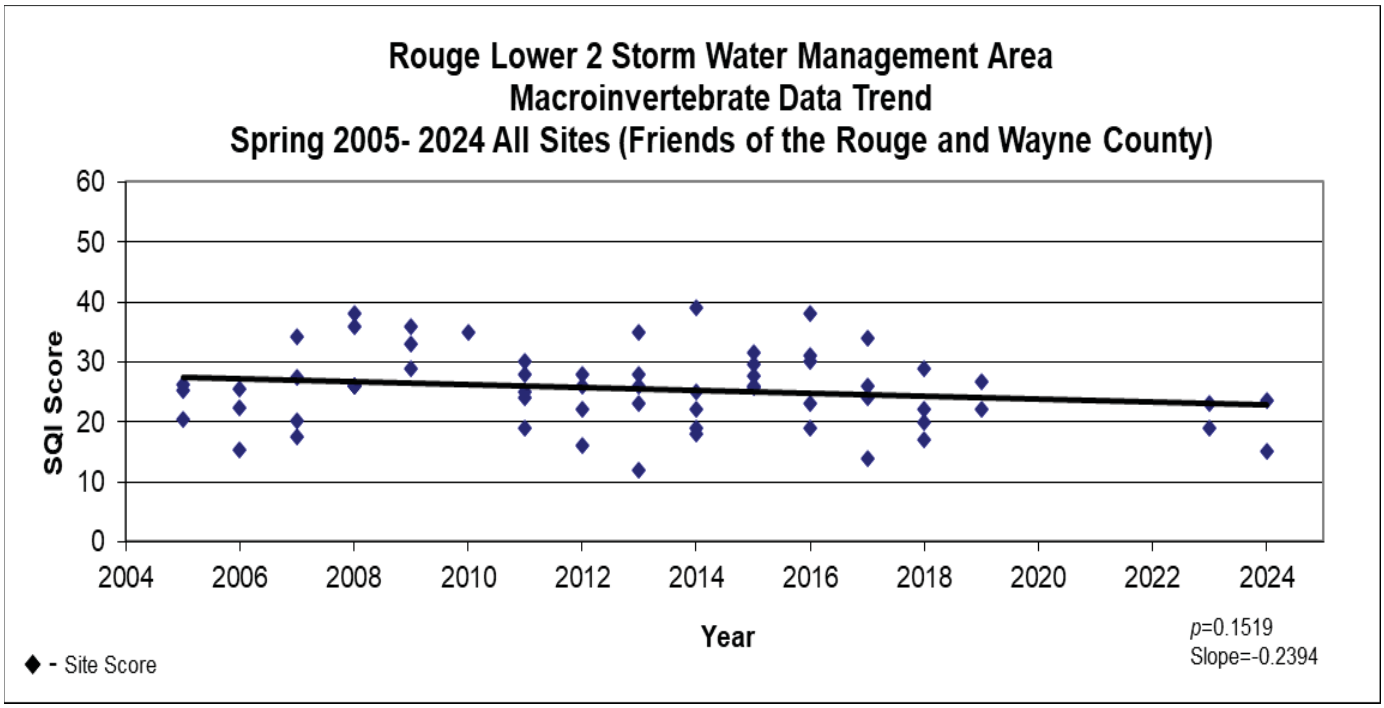
Table 6: 2024 Spring Bug Hunt Sampling Sites												
Lower Branch												
Stream Name	FIELDID	Site Description	WQR Rating	WQR	SQI	SQI Rating	Taxa	EPT	Chloride (ppm)	Chloride Rating	Nitrate (ppm)	Nitrite (ppm)
Fellows Creek	Fel2	Vintage Valley	Fair	5.51	33.7	FAIR	14	2	85	OK	1	0.15
Fellows Creek	Fel4	Flodin Pk	Fair	5.74	22.7	FAIR	11	1	119	OK	1	0.15
Fellows Creek	Fel5	Warren Ridge	Fair	5.74	23.5	FAIR	9	1	231	chronic	0	0
Fellows Creek	Fel6	Hanford	Fair	5.97	35.4	GOOD	15	2	<31	OK	0	0
Fellows Creek	LR-9	Fellows Beck Warren	Fairly Poor	6.63	30.6	FAIR	14	1	85	OK	N/A	N/A
Fowler Creek	Fowl1	Prospect	Fairly Poor	7	28.8	FAIR	14	4	<31	OK	0	0
Fowler Creek	Fowl2	Fowler Beck	Fair	5.92	21	FAIR	9	3	43	OK	2	0
Lower Rouge	Low2	Cherry Hill	Fairly Poor	7.13	19.8	FAIR	7	0	43	OK	N/A	N/A
Lower Rouge	LR-1	Commerce Ct	Good	5.44	23.8	FAIR	10	2	103	OK	4	0
Lower Rouge	LR-3	Goudy Park	Fair	5.73	14.5	POOR	6	1	151	chronic	4	0
Lower Rouge	LR-8	Ridge Proctor	Good	5.5	46	GOOD	19	3	43	OK	1	0.15
		Average	FAIR	6.03	27	FAIR	12	2	87	OK	1	0
Main Branch												
Stream Name	FIELDID	Site Description	WQR Rating	WQR	SQI	SQI Rating	Taxa	EPT	Chloride	Chloride Rating	Nitrate (ppm)	Nitrite (ppm)
Evans Creek	Evan1	Evans Green Spruce	Fairly Poor	6.8	15.3	POOR	9	0	106	OK	1	0.15
Evans Creek	Evan2	LTU	Fairly Poor	7	10.3	POOR	8	0	346	toxic	2	0.15
Main Rouge	Main1	Firefighters Park	Fairly Poor	6.72	44.1	GOOD	18	3	145	OK	1	0.15
Main Rouge	Main3	Quarton at Lakeside	Fair	6.06	28.9	FAIR	14	1	233	chronic	1	0.15
Main Rouge	Main4	Booth Park	Fair	6.14	39.9	GOOD	16	3	119	OK	1	0.15
Main Rouge	Main4.5	Birmingham	Fair	5.93	28.9	FAIR	14	1	190	chronic	1	0.15
Quarton Branch	Main11	Fairway Park	Fair	5.61	36.7	GOOD	16	1	190	chronic	1	0.15
Nottingham Creek	Nott	Country Day Middle School	Fairly Poor	7	19.3	FAIR	7	1	159	chronic	1	0.3
Nottingham Creek	Nott2	Nottingham-Main	Fairly Poor	6.61	16.3	POOR	11	1	159	chronic	1.5	0.3
Sprague Creek	Sprag	Lloyd Stage Nature Center	Fair	5.57	44.7	GOOD	17	4	145	OK	1	0.15
		Average	FAIR	6.34	28	FAIR	13	2	179	cronic	1	0

Table 6 continued: 2024 Spring Bug Hunt Sampling Sites												
Middle Branch												
Stream Name	FIELDID	Site Description	WQR Rating	WQR	SQI	SQI Rating	Taxa	EPT	Chloride	Chloride Rating	Nitrate (ppm)	Nitrite (ppm)
Bishop Creek	Bish2	Bishop Scarborough	Good	4.64	27.6	FAIR	11	1	518	toxic	1	0.15
Ingersoll Creek	Ing1	Brookfarm Park	Fair	5.59	22.7	FAIR	10	1	346	toxic	1	0.15
Johnson Creek	John1	5M Salem	Fairly Poor	6.55	33.1	FAIR	17	5	31	OK	0	0.15
Johnson Creek	John2	5M NV	Fair	5.99	37.1	GOOD	15	5	43	OK	N/A	N/A
Johnson Creek	John3	6M NV	Fair	6	30.9	FAIR	16	4	54	OK	0	0
Johnson Creek	John5	Fish Hatchery Park	Good	5.21	33.7	FAIR	15	4	66	OK	1	0
Johnson Creek	John6	7 Mile & Hines	Fair	5.86	37.6	GOOD	14	3	66	OK	1	0
Johnson Creek	John7	Arcadia Ridge subdivision	Good	5.5	43.1	GOOD	18	5	50	OK	0	0
Johnson Creek	John8	Maybury Angell	Good	5.28	41.8	GOOD	19	3	65	OK	0	0
Johnson Creek	MR-22	Maybury south	Fair	6.15	41.4	GOOD	16	2	49	OK	0	0
Johnson Creek	MR-23	Maybury north	Fair	6.23	21.3	FAIR	10	1	92	OK	1	0.15
Johnson Creek	MR-25	Maybury East	Good	5.29	24.5	FAIR	14	2	92	OK	1	0.15
Tonquish Creek	MR-14	Smith Elem	Fair	6.2	17.3	POOR	8	1	179	chronic	1	0
Middle Rouge	MR-3	Plym Riverside	Fair	5.81	36.7	GOOD	15	4	194	chronic	2	0
Tonquish Creek	Nton	S Evergreen St	Good	4.96	28.6	FAIR	10	2	453	toxic	0	0
Tonquish Creek	Ton1	Plym Twp Pk	Fair	5.97	43.3	GOOD	19	3	242	chronic	0	0
Tonquish Creek	MR-24	Lion's Pk	Very Poor	10	21.7	FAIR	6	1	535	toxic	2	0
Walled Lake Drainage	Wall2	10 Mile	Fair	6.22	29.4	FAIR	12	1	280	chronic	5	0.15
Walled Lake Drainage	Wall3	12 Mile/Taft	Good	5.32	36.1	GOOD	14	2	280	chronic	5	0.15
		Average	FAIR	5.94	32	FAIR	14	3	191	chronic	1	0
Upper Branch												
Stream Name	FIELDID	Site Description	WQR Rating	WQR	SQI	SQI Rating	Taxa	EPT	Chloride	Chloride Rating	Nitrate (ppm)	Nitrite (ppm)
Bell Branch	Bell1	Bicentennial Park	Fair	5.72	39.4	GOOD	13	3	301	chronic	1	0.15
Bell Branch	Bell2	Schoolcraft College	Very Poor	10	10.3	POOR	4	0	242	chronic	1	0.3
Bell Branch	Bell3	Livonia 6 Mile	Fair	5.71	23.7	FAIR	11	1	260	chronic	1	0.15
Upper Rouge	Up2	Shiawasee Park	Good	5.22	22.2	FAIR	8	1	280	chronic	5	0

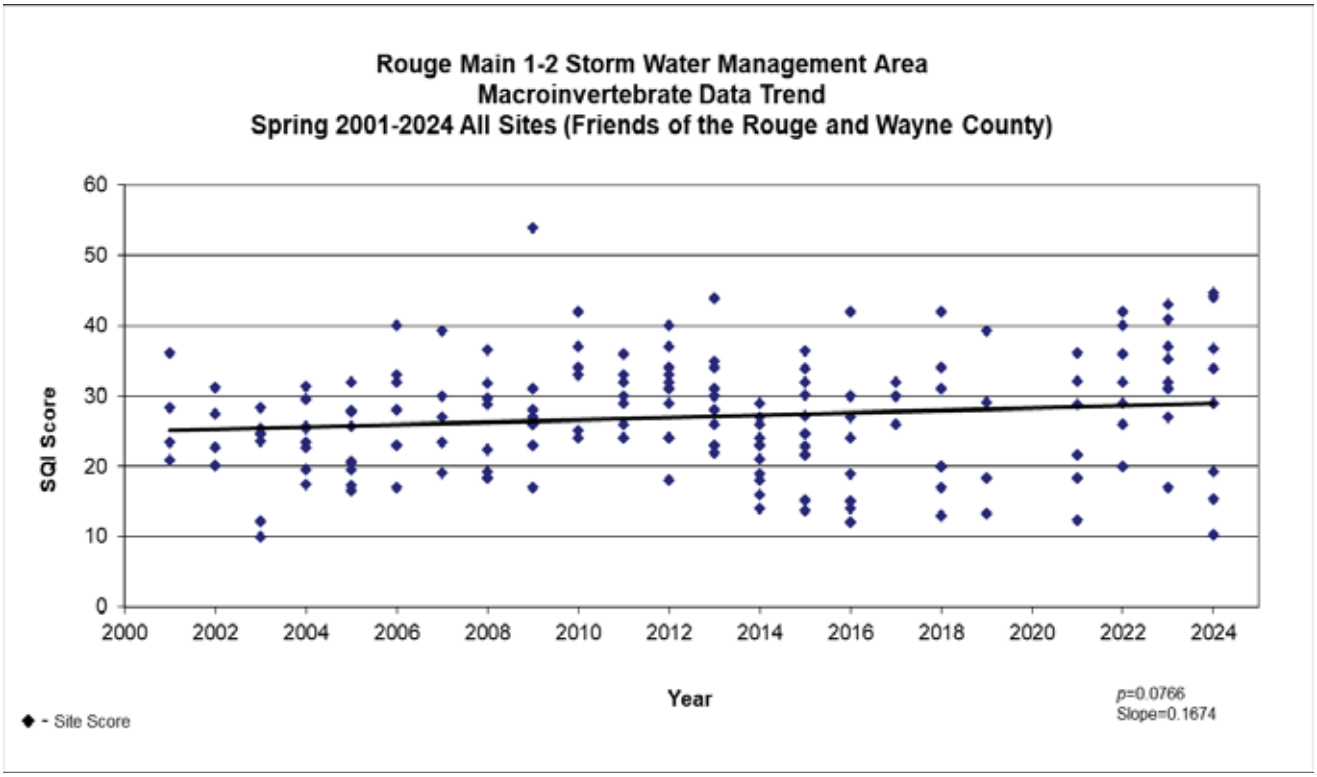
Trend Graphs

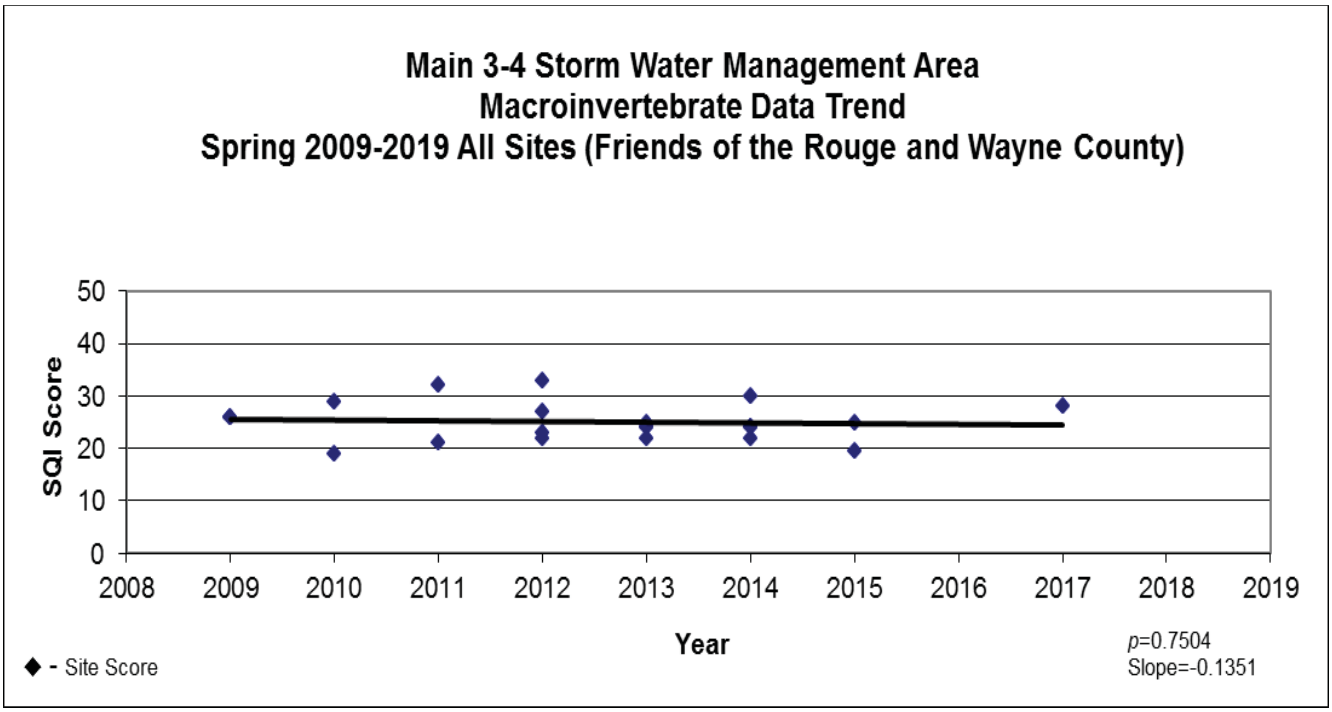
Lower Branch





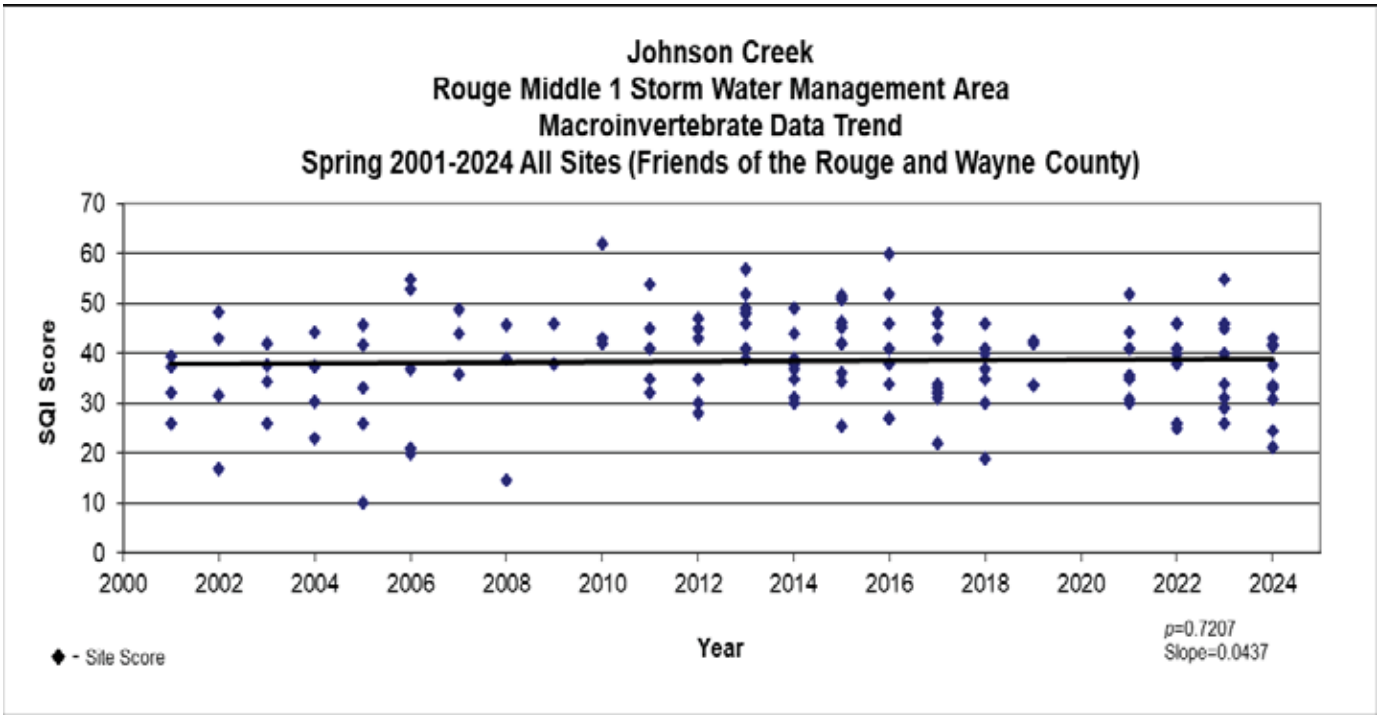
Main Branch

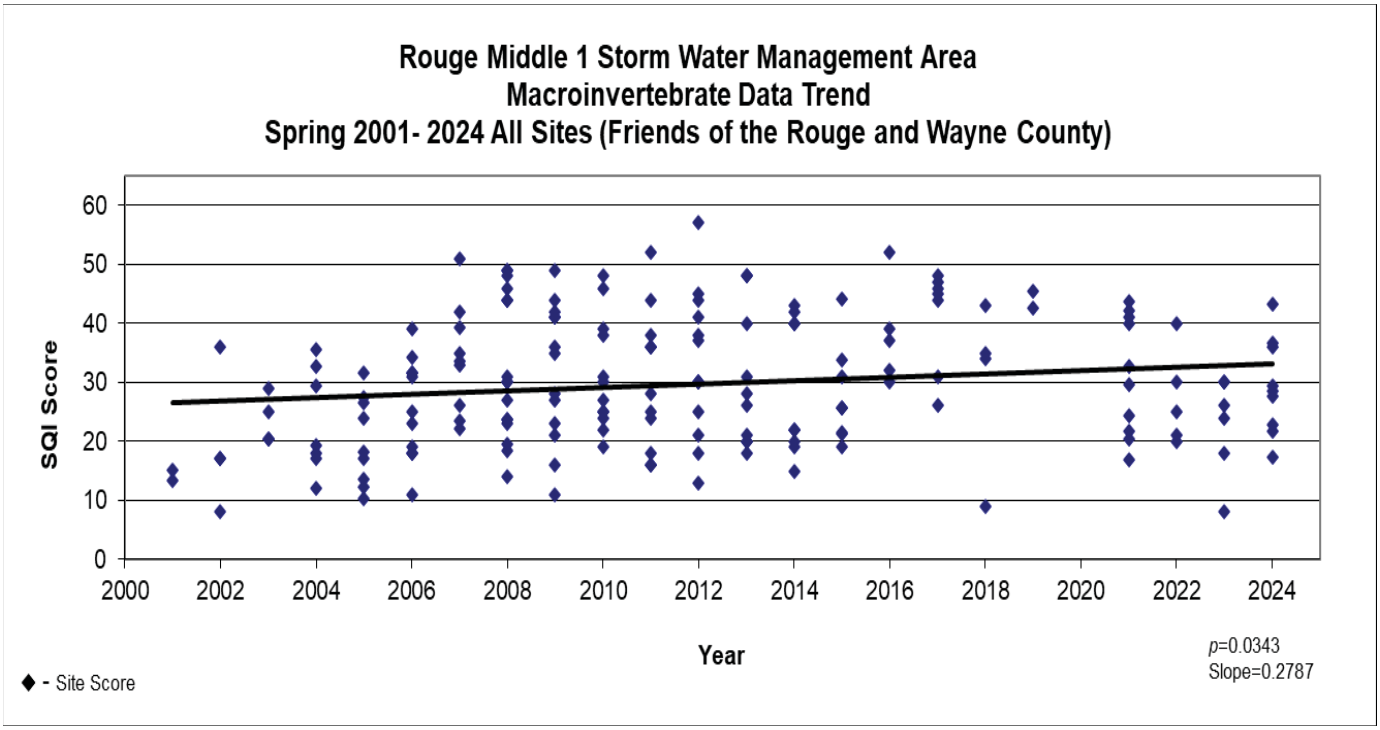


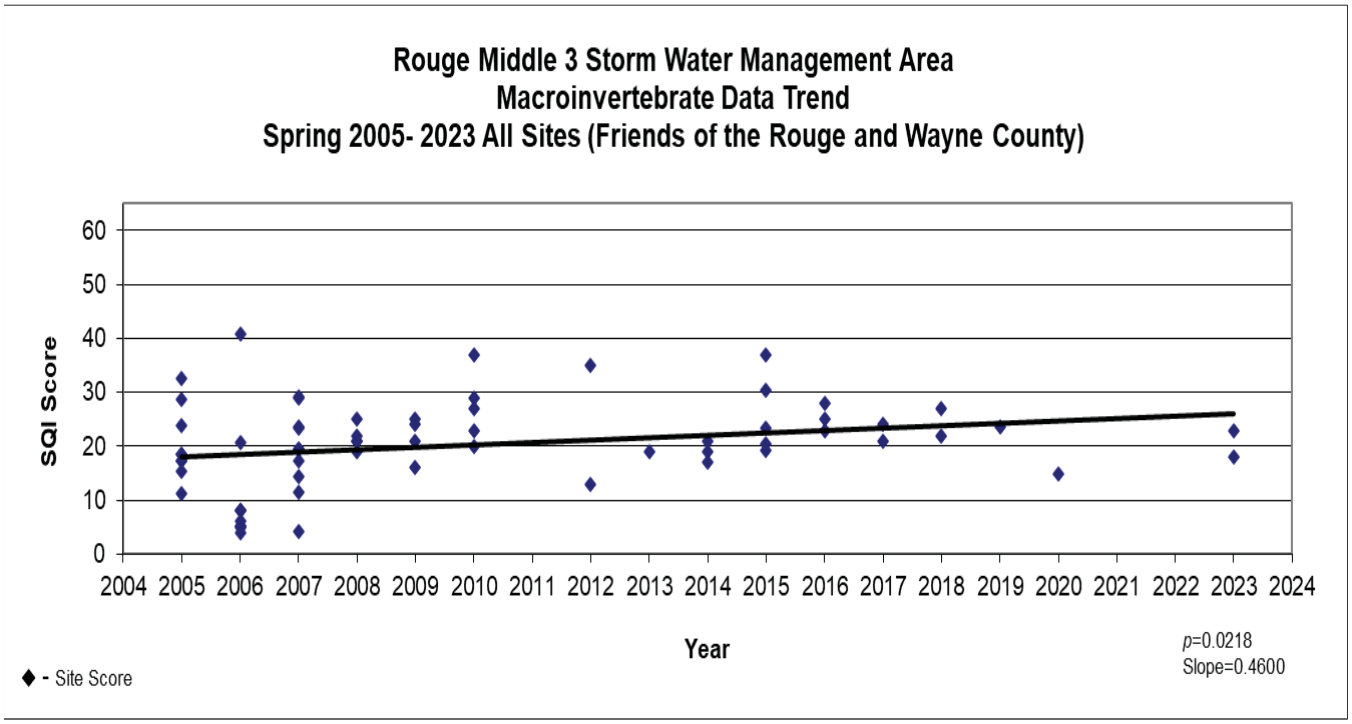


***no sites sampled in Main 3/4 in Spring 2018-2024**

Middle Branch

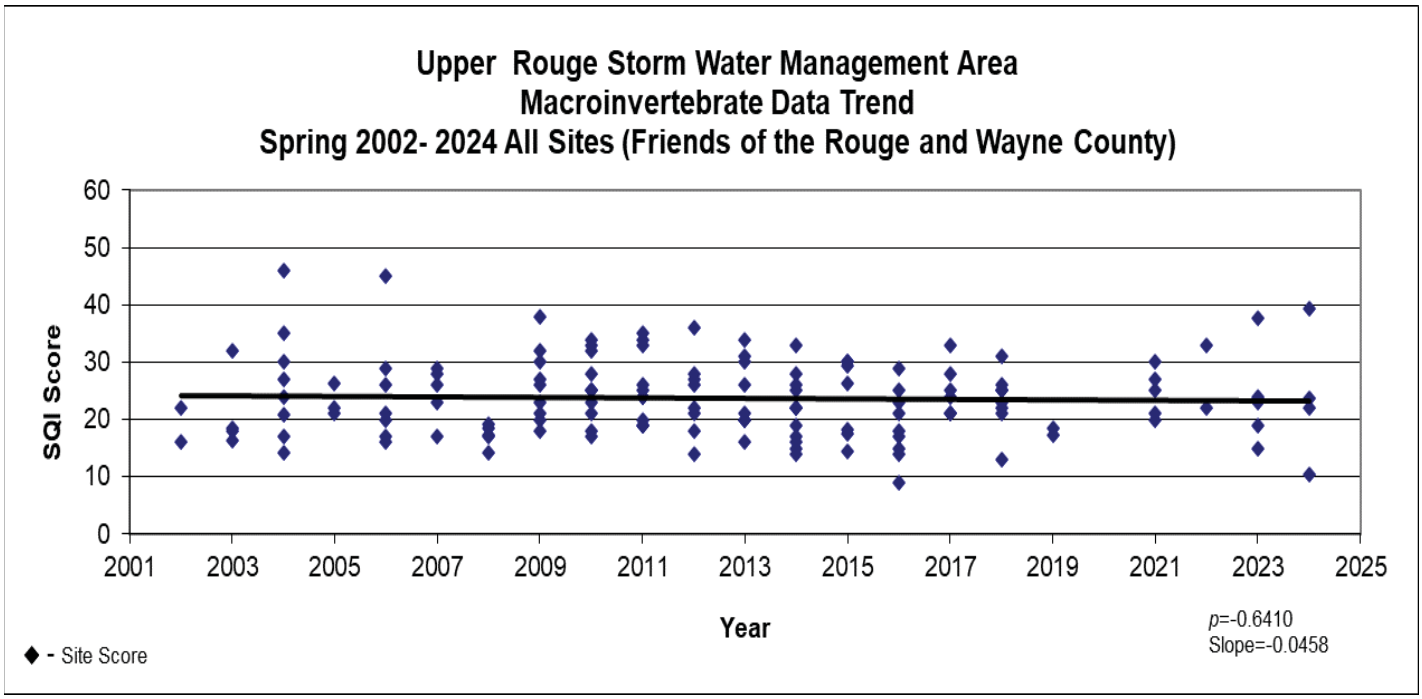






***no sites sampled in Middle 3 Spring 2024**

Upper Branch



www.therouge.org
650 Church Street Suite 209
Plymouth, MI 48170
734-927-4904

Rouge River Benthic Monitoring Program
Fall 2024 Report

This report contains benthic macroinvertebrate sampling results from 42 Rouge tributary and river sites. The Fall Bug Hunt on October 12, 2024 had 127 attendees that sampled 29 sites, and it was a beautiful fall day. Groups that participated included Lawrence Tech University's Environmental Alliance student group; Wayne State University; and the University of Michigan-Ann Arbor. Additional sites were sampled during the Team Leader Training, during a sampling day in which University of Michigan-Dearborn students participated at Shiawassee Park, and by Wayne County for a total of 42 sites. Funding for the monitoring was provided by the communities of Beverly Hills, Farmington, Livonia, Northville Township, Novi, Plymouth, Plymouth Township, Southfield, Troy, Birmingham, Washtenaw County Water Resources, Michigan Department of Environment, Great Lakes, and Energy (EGLE) and the United States Environmental Protection Agency's Great Lakes Restoration Initiative, and the Michigan Clean Water Corps.

FRIENDS OF THE ROUGE BENTHIC MONITORING PROGRAM

FOTR's benthic monitoring program was started in 2001 to involve a large number of volunteers in monitoring the health of the watershed by sampling the creeks of the Rouge River. The types and number of benthic macroinvertebrates found can be used to assess water quality. Each team of volunteers samples two sites under the direction of a trained team leader. Samples of each organism are collected and field identifications are verified in the lab.

Understanding Benthic Scores

Stream Quality Index (**SQI**) is determined by weighting each type and number of organisms found by their sensitivity ratings. SQI a measure of the degree of organic pollution that is calculated by rating and scoring organisms based on their sensitivity (sensitive, somewhat sensitive and tolerant) and frequency in the sample (rare or common). A higher proportion of sensitive organisms such as mayflies and caddisflies results in a higher **SQI**. A greater number of different organisms also results in a high **SQI**. Higher scores reflect better quality sites. The **SQI** has four different levels: **>48=EXCELLENT, 34-48=GOOD, 19-33=FAIR, <19=POOR**.

Number of taxa represents the number of different families of organisms. Like SQI, a higher number of taxa indicate a healthier site.

Number of insect taxa – insects are more sensitive than the non-insect taxa.

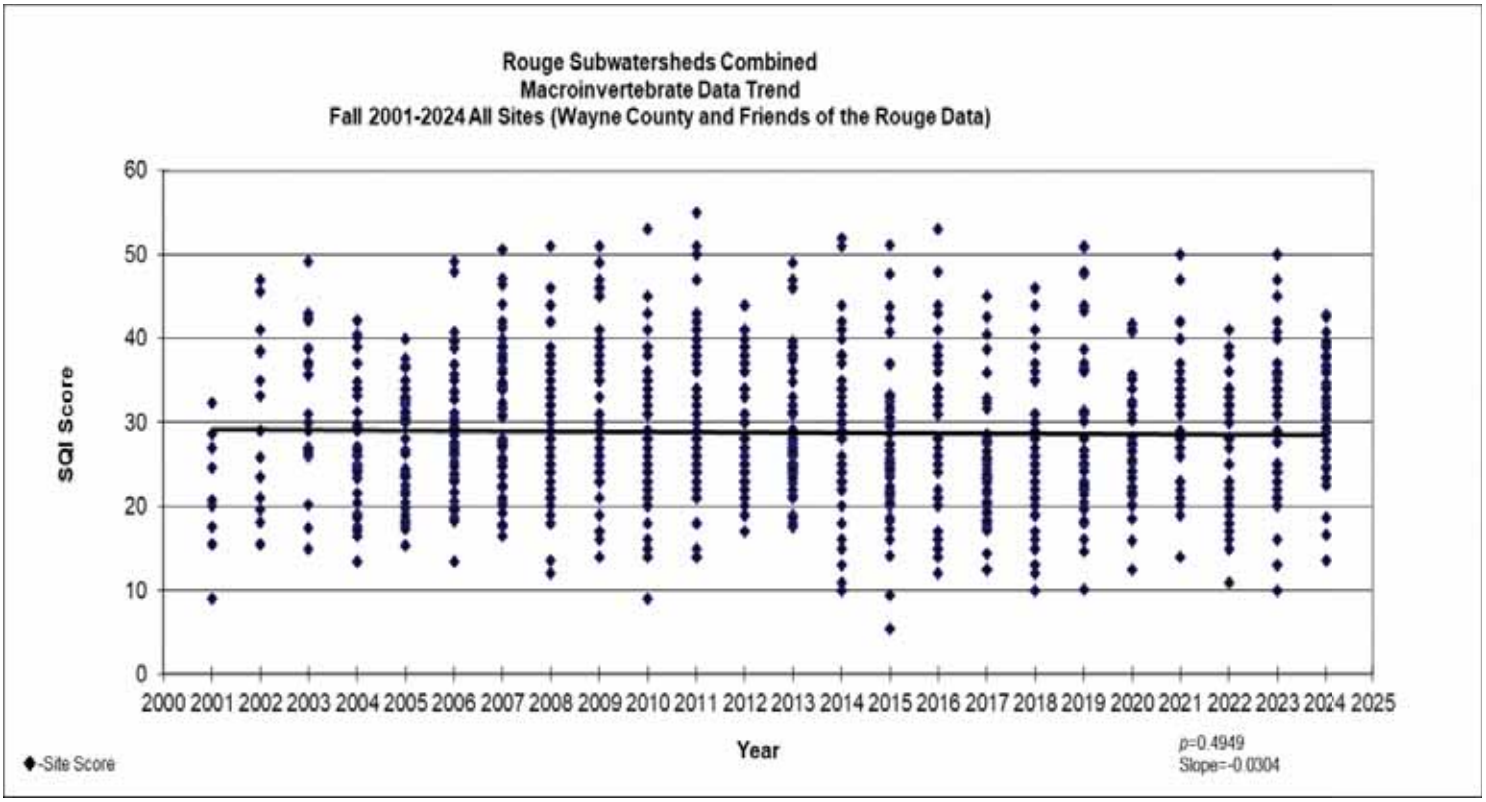
EPT refers to the number of mayfly, caddisfly and stonefly families found (Ephemeroptera, Plecoptera, and Tricoptera); these three orders contain some of the most sensitive organisms.

WQR – Water Quality Rating is a measure of the degree of organic pollution similar to SQI. Organisms are rated based on the Hilsenhoff Index of Biotic Integrity and scores are weighted by the number of individuals found. Unlike SQI, a LOWER score is indicative of less pollution. There are seven categories rather than four. 0.0-3.50=**Excellent**, 3.51-4.50=**Very Good**, 4.51-5.50=**Good**, 5.51-6.50=**Fair**, 6.51-7.50=**Fairly Poor**, 7.51-8-50=**Poor**, 8.51-10.0=**Very Poor**. WQR is calculated based on family level identification.

Overall Summary:

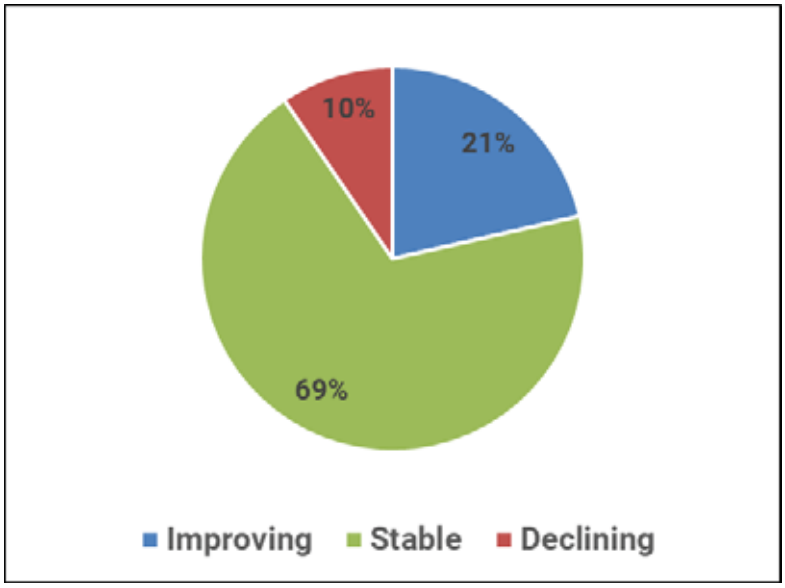
Stream Quality Index (SQI) averaged 29 or FAIR and the Water Quality Index (WQR) averaged FAIR (maps pg. 13-14, Table 2, and graph below). Taxa averaged 14.4 Families per site, EPT 2.3, and Chloride 156.8 (chronic level).

To compare trends over time, we analyzed the trends in SQIs. When all of the sites were compared, there was not a significant trend in SQIs (see graph below).



Data Trends

In comparison to past years, 69% of sites were stable, 21% of the sites improving and 10% declining.



To compare change over time, we analyzed the trends by subwatershed, with Johnson Creek analyzed separately as it is a coldwater tributary (Table 1 and graphs p. 17-26). The Middle 3 subwatershed had significant positive trends. The Main 1-2, and the Lower 1 subwatersheds had significant negative trends. These trends are similar to last year.

Table 1: Fall Bug Hunt Trend Summary All Sites 2001-2024

Subwatershed	slope	*p*-value	True Trend	Subwatershed SQI average score	Water Quality Rating
Main 1-2	-0.2068	0.0449	yes, negative	29	Fair
Upper	-0.1379	0.1028	no trend	25	Fair
Johnson Creek	0.1332	0.1688	no trend	35	Good
Middle 1	-0.1637	0.1054	no trend	31	Fair
Middle 3*	0.4571	0.0000	yes, positive	23	Fair
Lower 1	-0.2138	0.0348	yes, negative	28	Fair
Lower 2*	-0.0906	0.5451	no trend	26	Fair
Main3-4**	-0.4411	0.2203	no trend	27	Fair

* no sites sampled in Fall 2020-2021, **no sites sampled in Fall 2019-2024

The data was further analyzed for trends by tributaries and subareas. Table 2 contains a summary of this analysis; the graphs are on p. 17-26. When the upper and lower sections of the Main, Middle and Lower subwatersheds were combined, the trends were negative for the Main and Lower and positive for the Middle. When all the sites were combined, there was no significant trend.

Table 2: Fall Bug Hunt Trend Summary Branches/Tributaries 2001-2024

Branch	Slope	*p*-value	True Trend	Branch Average SQI Score	Water Quality Rating
Rouge All Subwatersheds combined	-0.0304	0.4949	no trend	29	Fair
Main (Main 1/2 and Main 3/4)	-0.2423	0.0133	yes, negative	29	Fair
Bell Creek only	-0.0662	0.6163	no trend	23	Fair
Upper only	-0.2129	0.1985	no trend	27	Fair
Middle (Middle 1 and Middle 3)	0.1184	0.1771	no trend	29	Fair
Tonquish Creek only	0.0252	0.8861	no trend	31	Fair
Johnson Creek and Middle (Middle 1 and Middle 3)	0.1839	0.0103	yes, positive	31	Fair
Sump Creek (Johnson Creek tributary)	-0.1788	0.6632	no trend	36	Good
Middle without Tonquish Creek	0.1491	0.1438	no trend	29	Fair
Lower 1 and Lower 2	-0.1878	0.0258	yes, negative	27	Fair

Individual sites were examined for long term trends (Table 3). Of the sites sampled in fall 2024, four had a significant trend: two negative and two positive.

Table 3: Friends of the Rouge and Wayne County Fall Bug Hunt Data Trend 2001-2024 by site

Site	slope	*p*-value	Statistically significant trend	Site average SQI score	Water Quality Rating
Main6	-0.3268	0.0398	yes, negative	33	Fair
Nott	-0.0462	0.0462	yes, negative	26	Fair
MR-4	0.5463	0.0252	yes, positive	31	Fair
Fel1	0.8631	0.0252	yes, positive	27	Fair

Friends of the Rouge

SALT WATCH™
IZAAK WALTON LEAGUE OF AMERICA

Since 2020, we have been testing sites for road salt (chloride) through the Izaak Walton League's Salt Watch program during the Stonefly Search and Bug Hunts. Salt we apply to our roads and sidewalks for snow and ice removal washes into our streams and is toxic to aquatic life when it reaches high levels. Recognizing this, the State of Michigan Department of Environment, Great Lakes and Energy (EGLE) set water quality values aiming to protect surface water from chloride, based on parts per million (ppm) concentrations.

These are:
150 ppm and above - causes long term effects to aquatic life (chronic)
320 ppm and above - causes acute effects to aquatic life (toxic)

This fall, two sites had toxic levels of chloride, and eighteen sites had chronic levels (table 4, map p. 15). This is particularly concerning as one would expect road salt applied last winter to be washed out of the system by October. EGLE has already listed Bishop Creek as "impaired" due to high salt levels, and more areas of the water may be listed in the future due to elevated chloride levels throughout the watershed.

Table 4: Sites With Elevated Chloride Levels

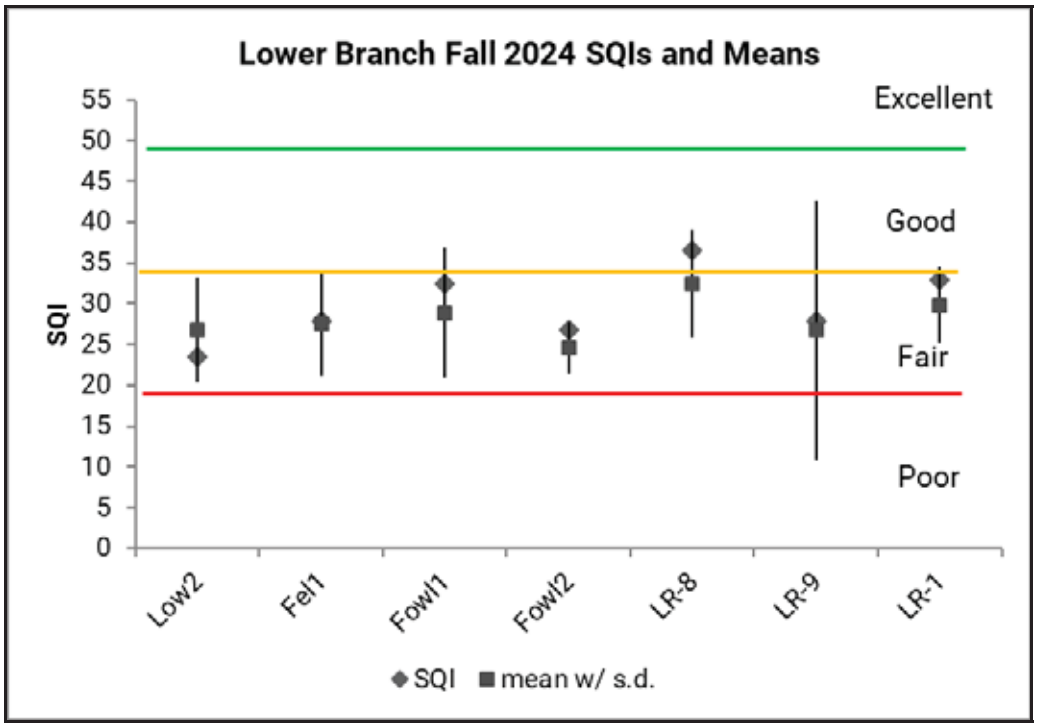
BRANCH	Stream Name	FIELDID	Site Description	Cl ppm	Cl Rating
Lower	Fellows Creek	LR-9	Fellows Beck Warren	166	chronic
Main	Sprague Creek	Sprag	Main Lloyd Stage	213	chronic
Main	Main Rouge	Main1	FF Pk	213	chronic
Main	Main Rouge	Main3	Booth Park	152	chronic
Main	Main Rouge	Main11	Quarton at Lakeside	231	chronic
Main	Main Rouge	Main4	Linden Park	213	chronic
Main	Main Rouge	Main4.5	Fairway Park	213	chronic
Main	Nottingham Creek	Nott	Country Day	166	chronic
Main	Main Rouge	Main6	Sfld Civic Ctr	181	chronic
Main	Evans Creek	Evan2	LTU	531	toxic
Middle	Walled Lk Drainage	Wall1	Rotary Pk	152	chronic
Middle	Walled Lk Drainage	Wall2	WL 10 M	213	chronic
Middle	Tonquish Creek	Nton	S Evergreen St	330	toxic
Middle	Middle Rouge	MR-4	Levan Knoll	194	chronic
Middle	Middle Rouge	MR-5	Valley View	211	chronic
Middle	Middle Rouge	MR-6	Sherwood	227	chronic
Upper	Upper Rouge	Up2	Shiawasee Park	304	chronic
Upper	Bell Branch	Bell1	Bicentennial Park	308	chronic
Upper	Bell Branch	Bell3	Livonia 6 Mile	287	chronic
Upper	Bell Branch	Bell2	Schoolcraft College	181	chronic

We also began tested nitrate levels throughout the watershed since high levels in the water can be due to human impacts such as fertilizer application on the land or sewage outfalls/discharge. Too much nitrate in the water can also encourage the growth of algae which could result in algal blooms. In the 1990s, the Environmental Protection Agency created a drinking water standard for nitrate which is nitrogen is 10 mg/L (equivalent to 10 parts per million), research suggests that prolonged exposure to nitrate levels below 10 mg/L can still lead to increased health risks. There was one site with elevated levels of nitrate this fall: Up2 (table 5).

Table 5: Sites With Elevated Nitrate Levels

BRANCH	Stream Name	FIELDID	Site Description	Nitrate ppm
Upper	Upper Rouge	Up2	Shiawasee Park	10

Lower Branch

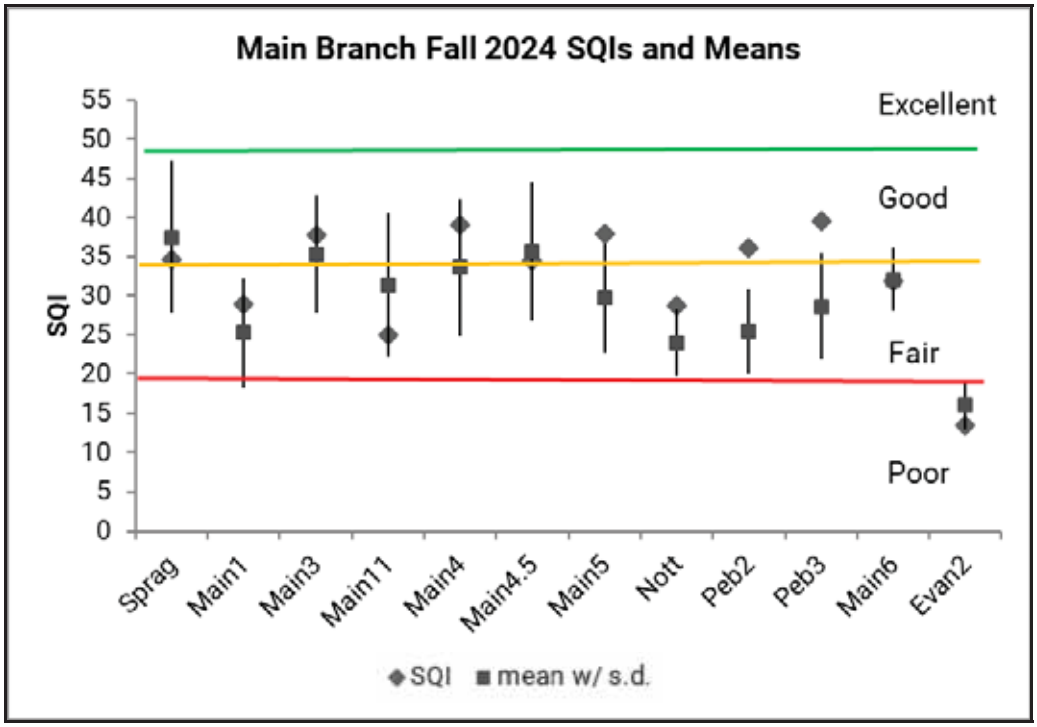


Seven sites were sampled on the Lower Branch (Table 6, p. 16), including two tributaries: Fellows Creek and Fowler. SQIs averaged FAIR (29). One site had a GOOD SQI score, and six had FAIR SQIs. In the new WQR system, sites averaged fair (5.79). Sites had an average of 13 taxa, 9 insect taxa and 2 EPT. Chloride levels ranged from a low of 30 ppm at Fowl2 to a high of 166 ppm at LR-9; one site had chronic levels (LR-9) with no sites at the toxic level (Table 6, p. 16). No sites had elevated nitrate levels.

SQI scores were compared with past data (chart above). All sites were within a standard deviation of the average for the site.

Long term trend analysis showed a significant negative trend for the Lower 1 and for all of the Lower when the subwatersheds are combined (Table 1 and 2, graphs p. 25-26). Fel1 had a significant positive trend (Table 3).

Main Branch

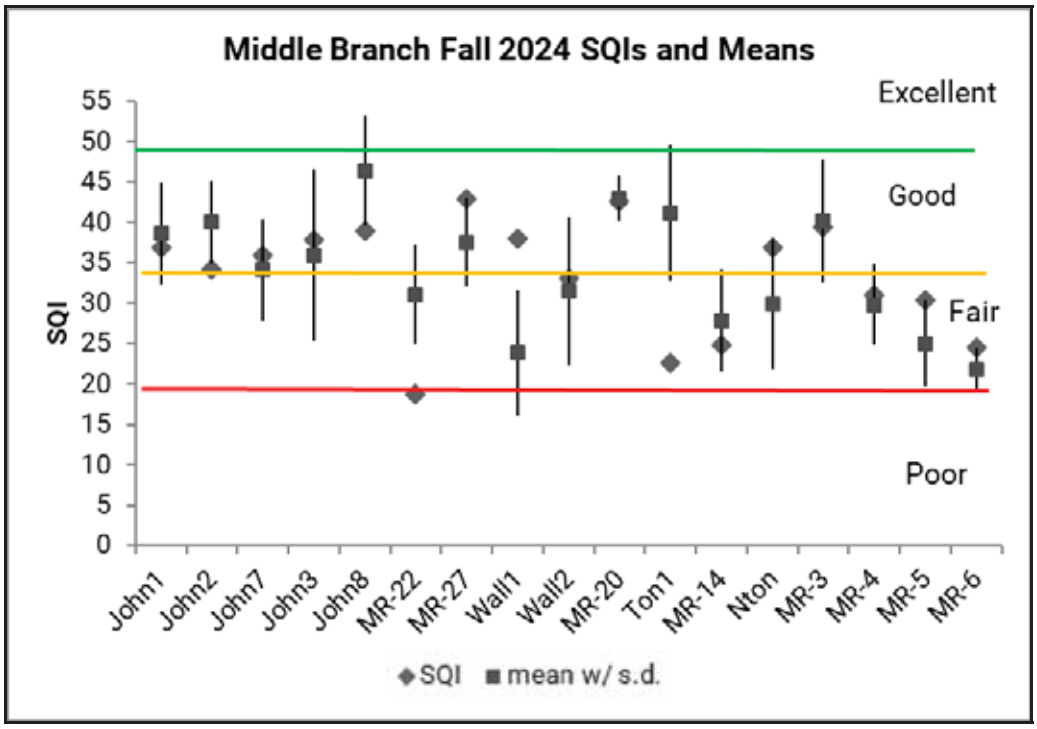


Twelve sites on the Main Branch were sampled, including the following tributaries: Evans, Nottingham, Pebble and Sprague Creek. SQIs averaged FAIR (32). Seven rated GOOD, four rated FAIR, and one rated POOR. WQRs averaged fair (5.7). Taxa averaged 14, 8 Insect taxa, and 3 EPT. Chloride levels averaged 202 ppm, and eight sites were at the chronic effects level (>150 ppm), with one site at the toxic level (Evan1) (Table 6, p. 16). No sites had elevated nitrate levels.

SQI scores were compared with past data (chart above). Eight were within a standard deviation of the average for the site and four were above.

Long term trend analysis shows a significant negative trend for the Main 1-2 subwatershed as well as for all of the Main when the subwatersheds are combined (Table 1 and 2, graphs p. 17-18). Nott and Main6 had significant negative trends when considered separately (Table 3).

Middle Branch

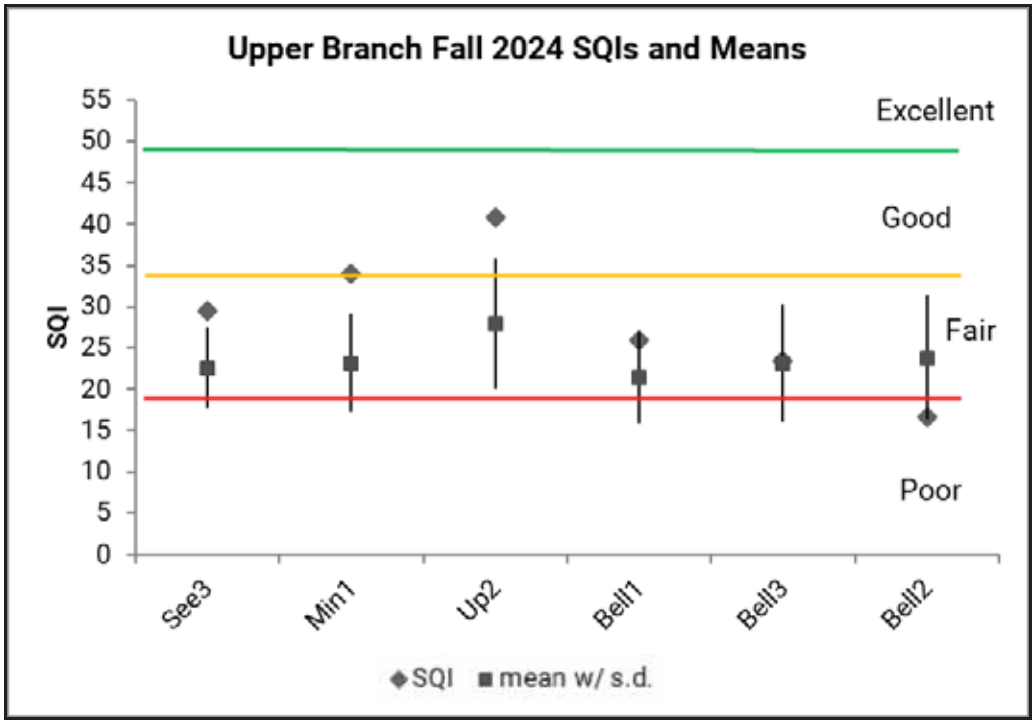


Seventeen sites were sampled on the Middle Branch; Johnson Creek had 7 sites, Tonquish Creek had 3 sites, the Walled Lake Drainage had two sites, and the final five sites were in the Middle Rouge. SQI scores averaged FAIR (33), with ten GOOD, and seven FAIR. WQRs averaged fair (5.56). Taxa averaged 16, 10 insect taxa and 3 EPT.

In comparing averages and past data (chart above), the majority of sites (11) were within a standard deviation of the average for the sites. Two sites were above (Wall1 & MR-5) and four sites were below (John2, John8, MR-22, and Ton1). Chloride levels averaged 143 ppm, with five sites at the chronic level, and one site at the toxic level: Nton (Table 6, p. 16). No sites had elevated nitrate levels.

In long term trend analysis, the Middle 3 had a positive trend (Table 1). When the Johnson Creek, Middle subwatersheds were combined, there was a significant positive trend (Table 2, graphs p. 21-24). MR-4 had a positive trend when considered by site (Table 3).

Upper Branch



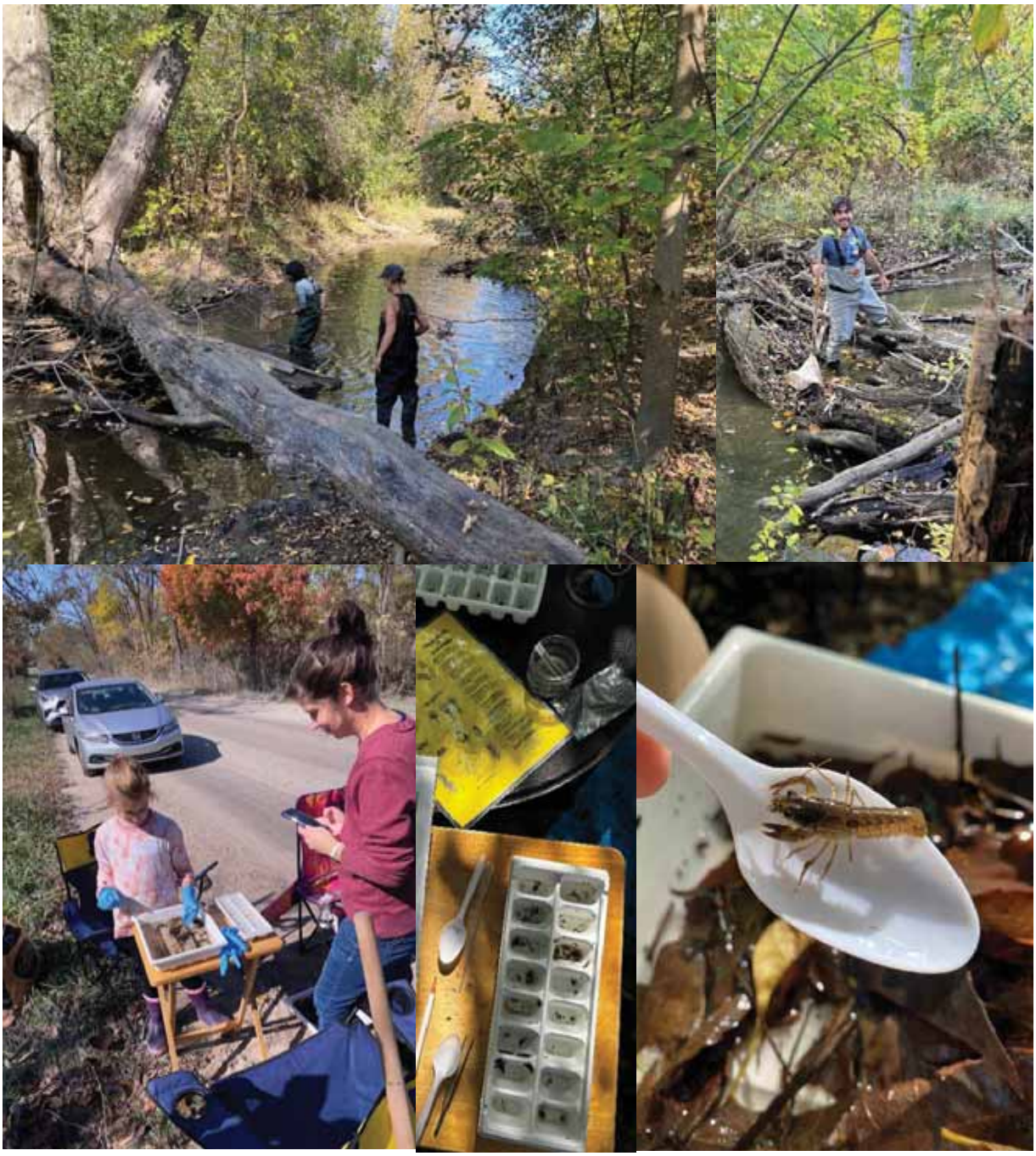
Six Upper branch sites were sampled including Seeley Creek, Bell Creek, and Minnow Pond, as well as the Upper Rouge at Shiawasee Park. SQIs averaged FAIR (28). Two sites were GOOD, three sites were FAIR, and one site was POOR. WQR averaged fair (6.42). Taxa averaged 13, 8 insect taxa and 2 EPT.

In comparing averages and past data (chart above), three sites were above a standard deviation of the average, and three were within the standard deviation of the average for a given site. Chloride levels averaged 197 ppm, with four sites at the chronic level. One site had elevated levels of nitrate: Up2 (Shiawassee Park) (Table 6, p. 16).

Long term trend analysis shows no significant trend in scores for the Upper Branch (Table 1 and 2, graphs p. 19-20).

THANK YOU!!!!!

Thank you to all the **volunteers** and **Team Leaders, Sue Thompson** for sampling additional sites, helping with identification, analyzing trends and reviewing the report. Funding for the event was provided by the communities of Beverly Hills, Farmington, Livonia, Northville Township, Novi, Plymouth, Plymouth Township, Southfield, Troy, Birmingham, Washtenaw County Water Resources, Michigan Department of Environment, Great Lakes, and Energy and the United States Environmental Protection Agency's Great Lakes Restoration Initiative, the Alliance of Rouge Communities, and the Michigan Clean Water Corps.



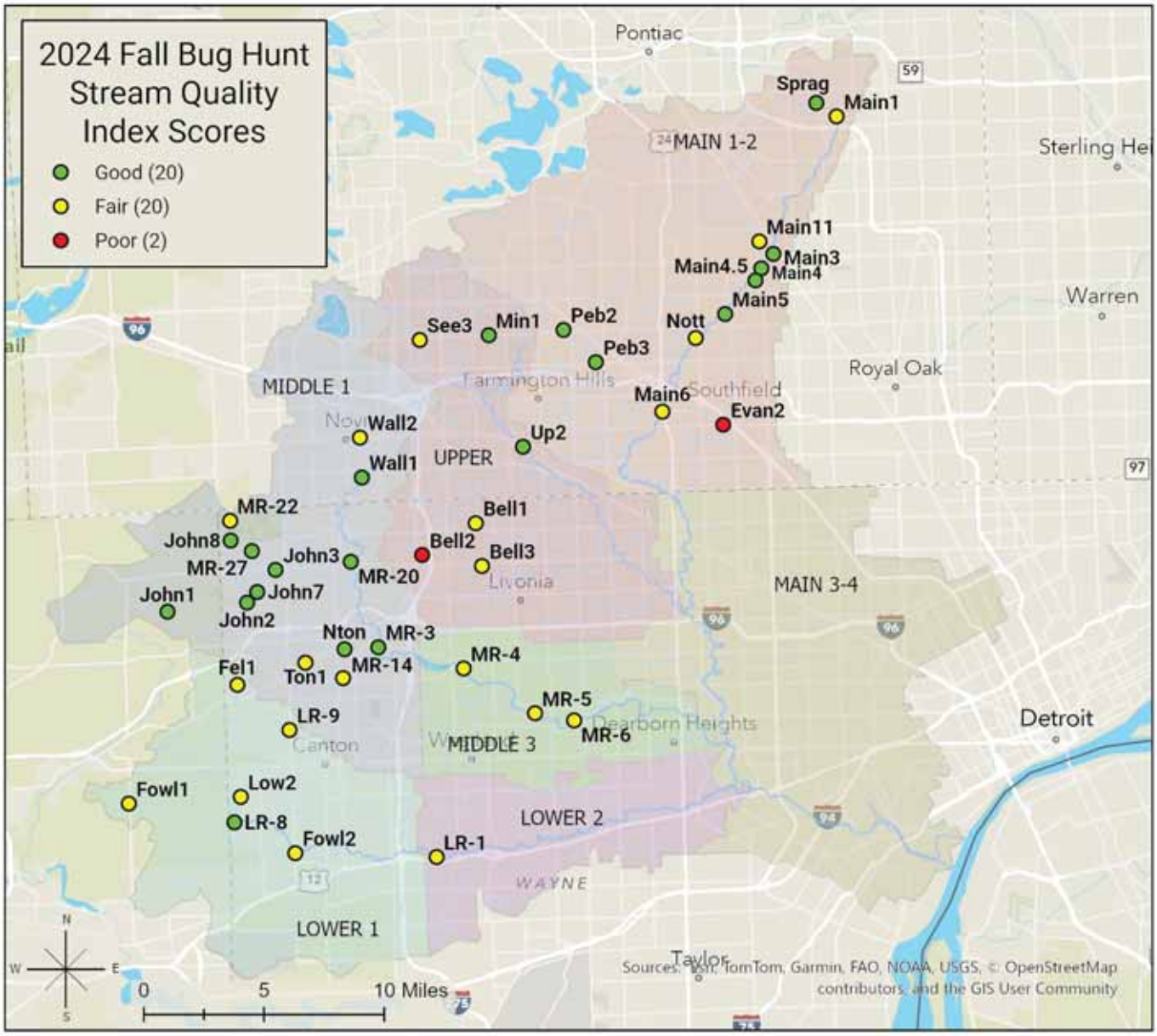
Friends of the Rouge

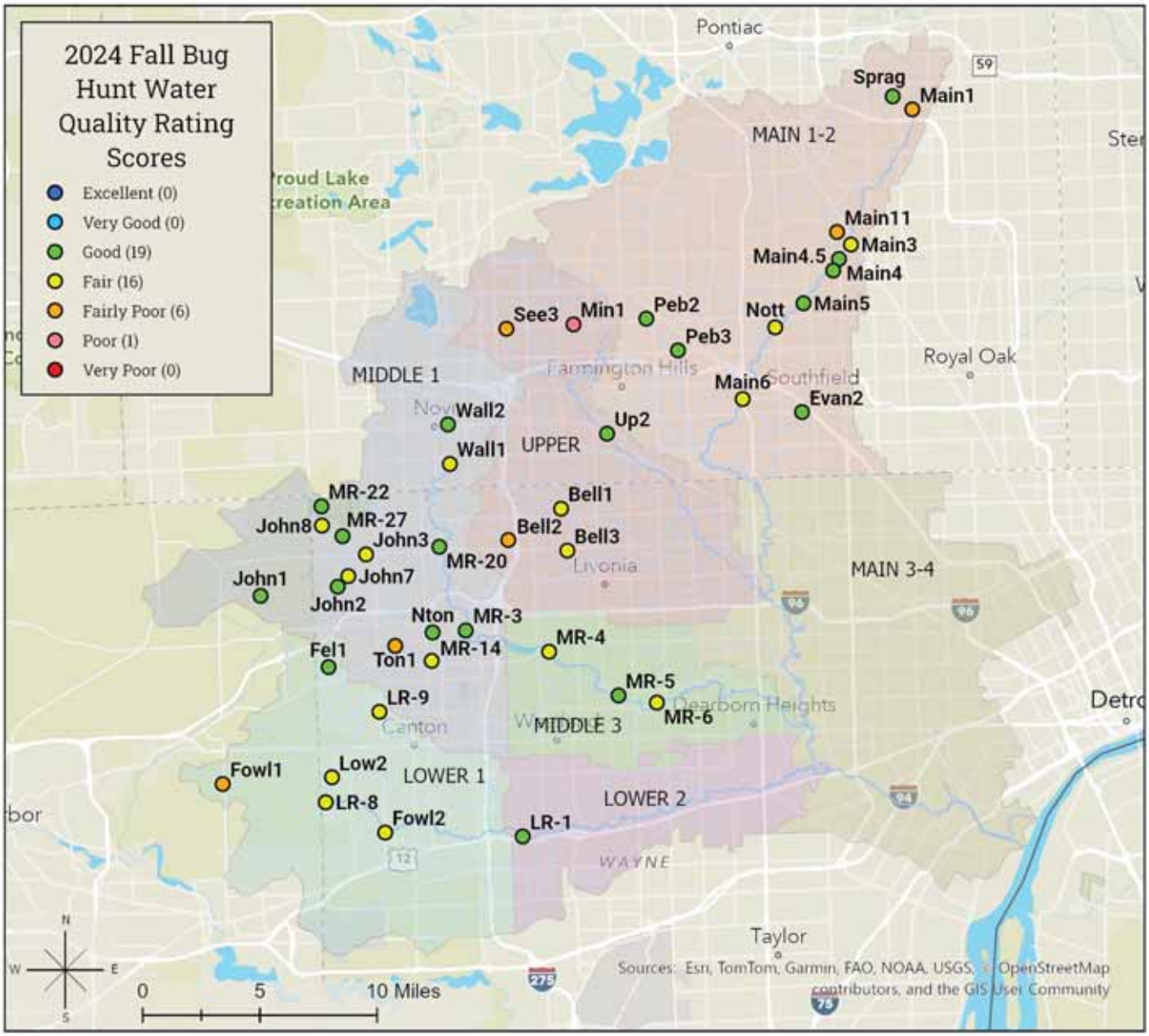
Join us for the Winter Stonefly Search
Sat. Jan. 25th, 2025 10 am – 3 pm
Deadline to register: January 15th

Register Here:
2025 Stonefly Search

Volunteers meet at 10am at the Plymouth Cultural Center (525 Farmer St., Plymouth). There will be an indoor welcome from 10am-11am where volunteers will have a chance to meet their team, enjoy refreshments (coffee, juice, bagels, and donuts), and watch a short presentation before heading out to two sites throughout the watershed. Ending times for each team will vary, but most teams should be able to finish by 3pm.

Holding it this way means people can meet all of the rest of the volunteers and it makes it easier for us to make adjustments so that each team has enough volunteers. For those who would rather meet in the field, that can still be arranged.


2024 Fall Bug Hunt
Stream Quality
Index Scores
Good (20)
Fair (20)
Poor (2)
Pontiac
Sterling Hei
Warren
Royal Oak
Detroit
Farmington Hills
Southfield
Livonia
Dearborn Heights
Canton
Taylor
MAIN 1-2
MIDDLE 1
UPPER
MAIN 3-4
MIDDLE 3
LOWER 2
LOWER 1
WAYNE
Sprag
Main1
Main11
Main3
Main4.5
Main4
Main5
Nott
See3
Min1
Peb2
Peb3
Main6
Evan2
Wall2
Wall1
Up2
MR-22
John8
John3
MR-27
MR-20
John1
John7
John2
Bell1
Bell2
Bell3
Nton
MR-3
MR-4
Fel1
Ton1
MR-14
MR-5
MR-6
LR-9
Fowl1
Low2
LR-8
Fowl2
LR-1
0
5
10 Miles
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community


2024 Fall Bug Hunt Water Quality Rating Scores
Excellent (0)
Very Good (0)
Good (19)
Fair (16)
Fairly Poor (6)
Poor (1)
Very Poor (0)
Pontiac
Sprag
Main1
MAIN 1-2
Main11
Main3
Main4.5
Main4
Main5
See3
Min1
Peb2
Nott
Peb3
Royal Oak
MIDDLE 1
Farmington Hills
Southfield
Main6
Evan2
Wall2
Up2
Wall1
UPPER
MR-22
Bell1
John8
MR-27
Bell2
Bell3
John3
MR-20
Livonia
MAIN 3-4
John1
John7
John2
Nton
MR-3
Fel1
Ton1
MR-14
MR-4
MR-5
LR-9
Dearborn Heights
MR-6
Canton
MIDDLE 3
Fowl1
Low2
LOWER 1
LOWER 2
LR-8
Fowl2
LR-1
WAYNE
Taylor
0
5
10 Miles
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

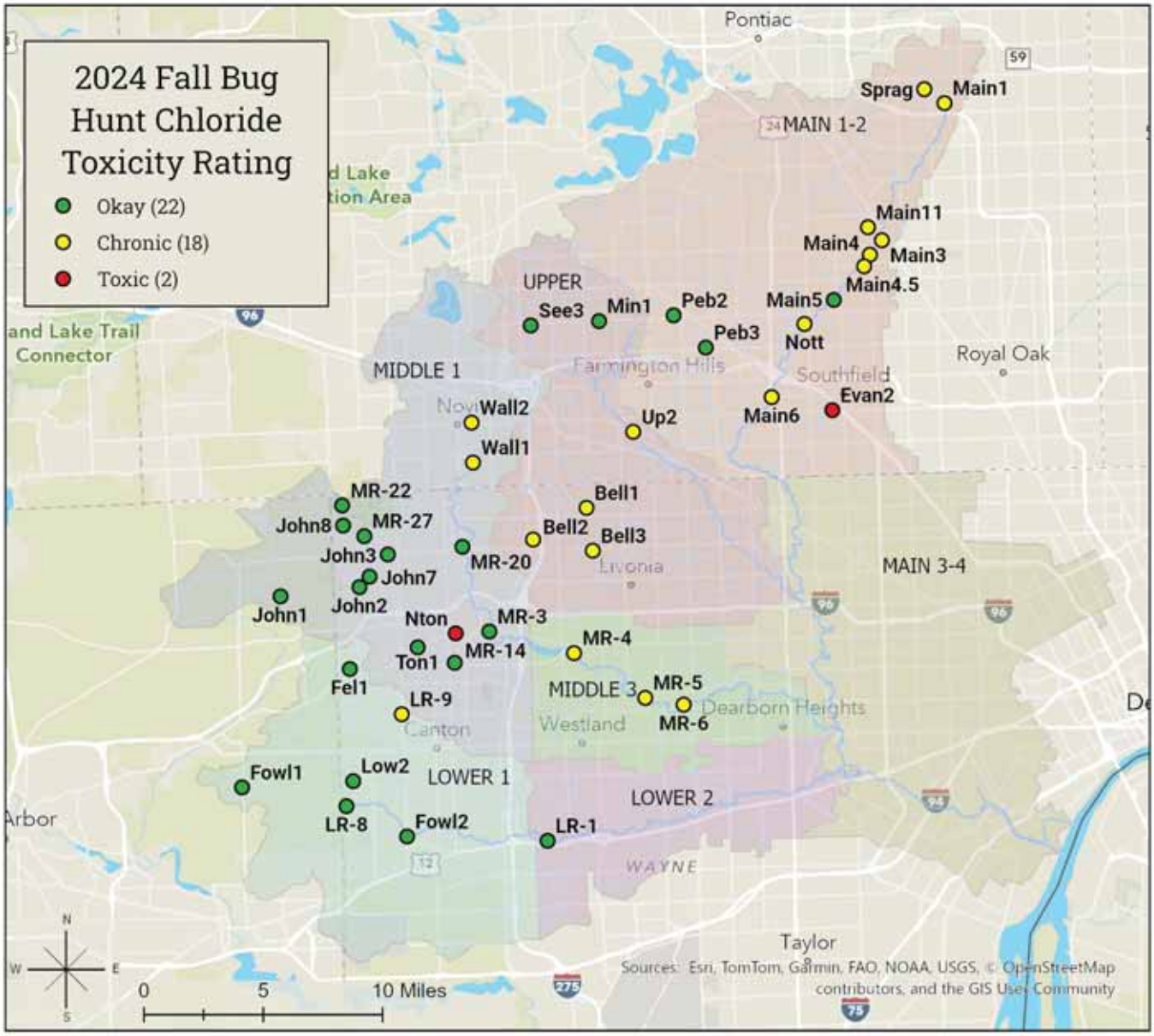
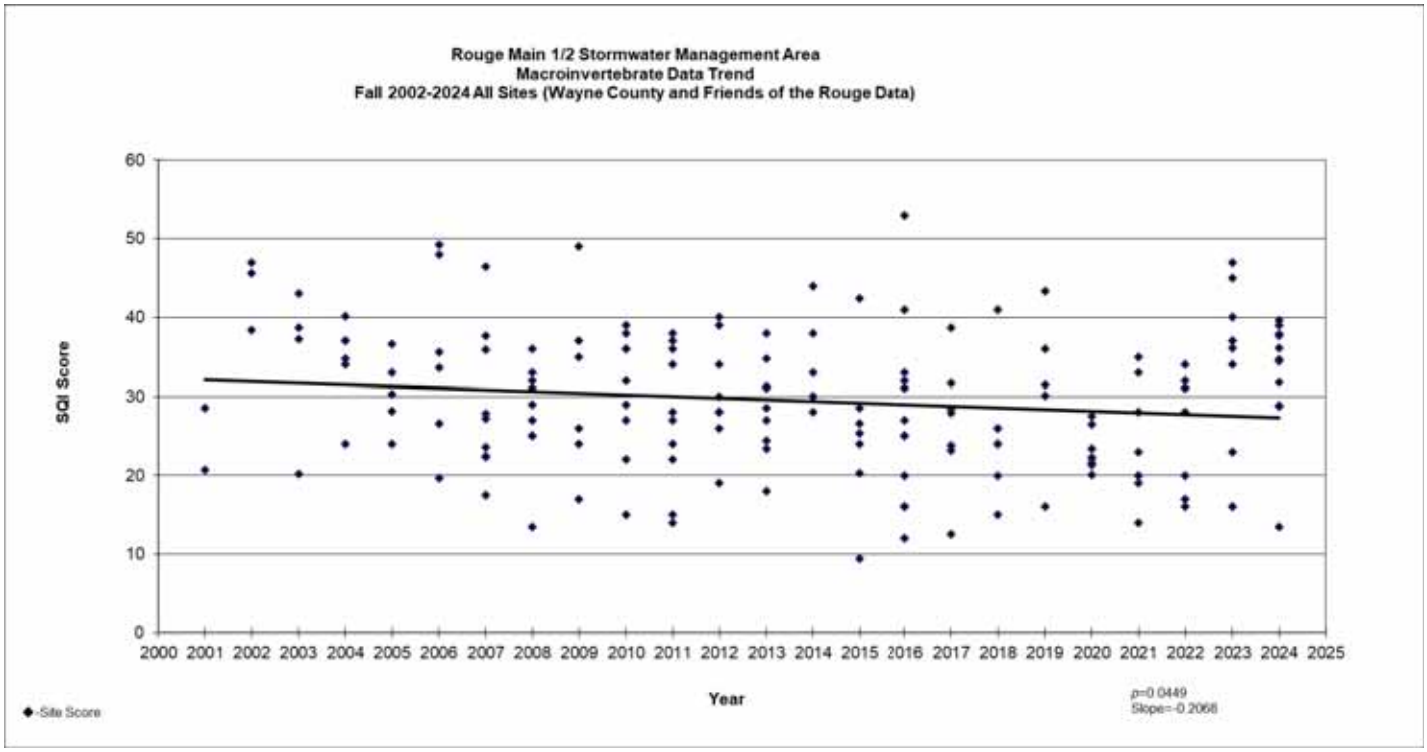
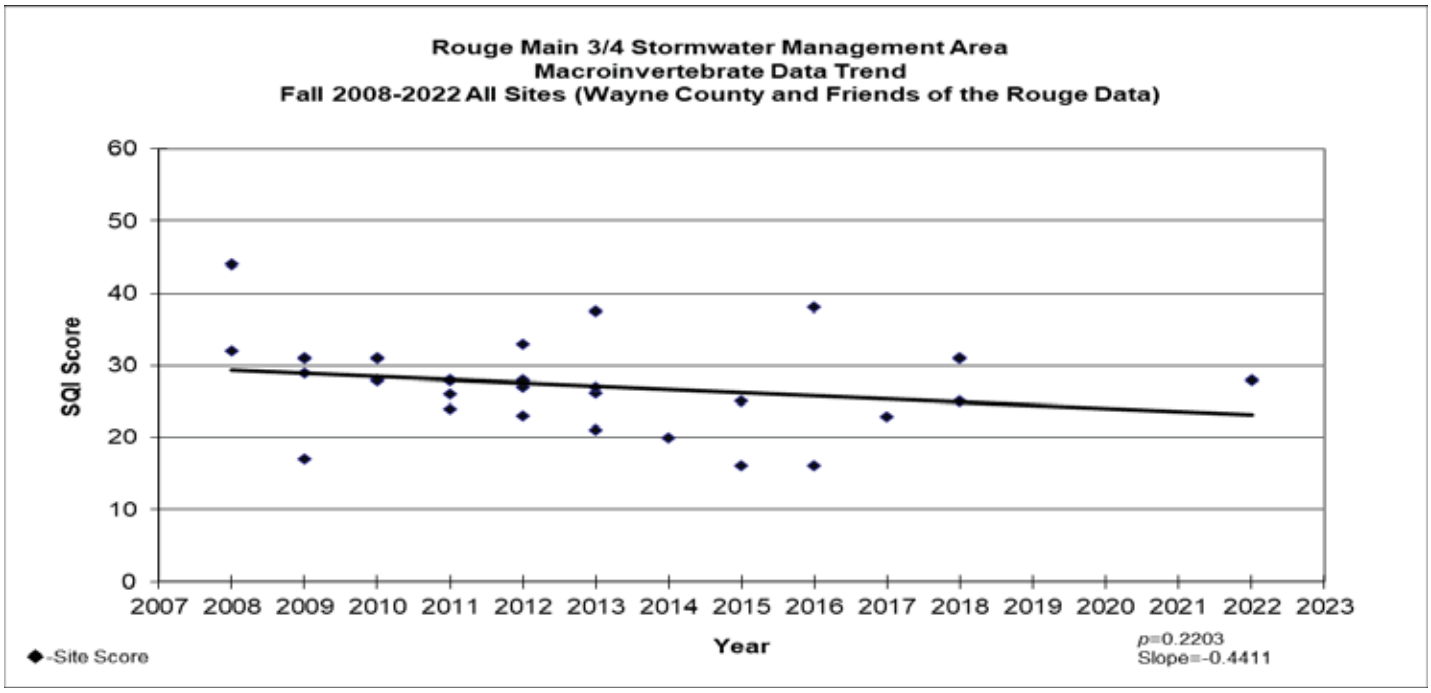

2024 Fall Bug Hunt Chloride Toxicity Rating
Okay (22)
Chronic (18)
Toxic (2)
Pontiac
Sprag
Main1
MAIN 1-2
Main11
Main4
Main3
Main4.5
UPPER
See3
Min1
Peb2
Main5
Peb3
Nott
Royal Oak
MIDDLE 1
Farmington Hills
Southfield
Evan2
Main6
Wall2
Up2
Wall1
MR-22
Bell1
John8
MR-27
Bell2
Bell3
John3
MR-20
Livonia
MAIN 3-4
John7
John2
John1
Nton
MR-3
MR-4
MR-14
Ton1
Fel1
MIDDLE 3
MR-5
LR-9
Dearborn Heights
MR-6
Canton
Westland
Fowl1
Low2
LOWER 1
LOWER 2
LR-8
Fowl2
LR-1
WAYNE
Taylor
and Lake Trail Connector
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
0
5
10 Miles

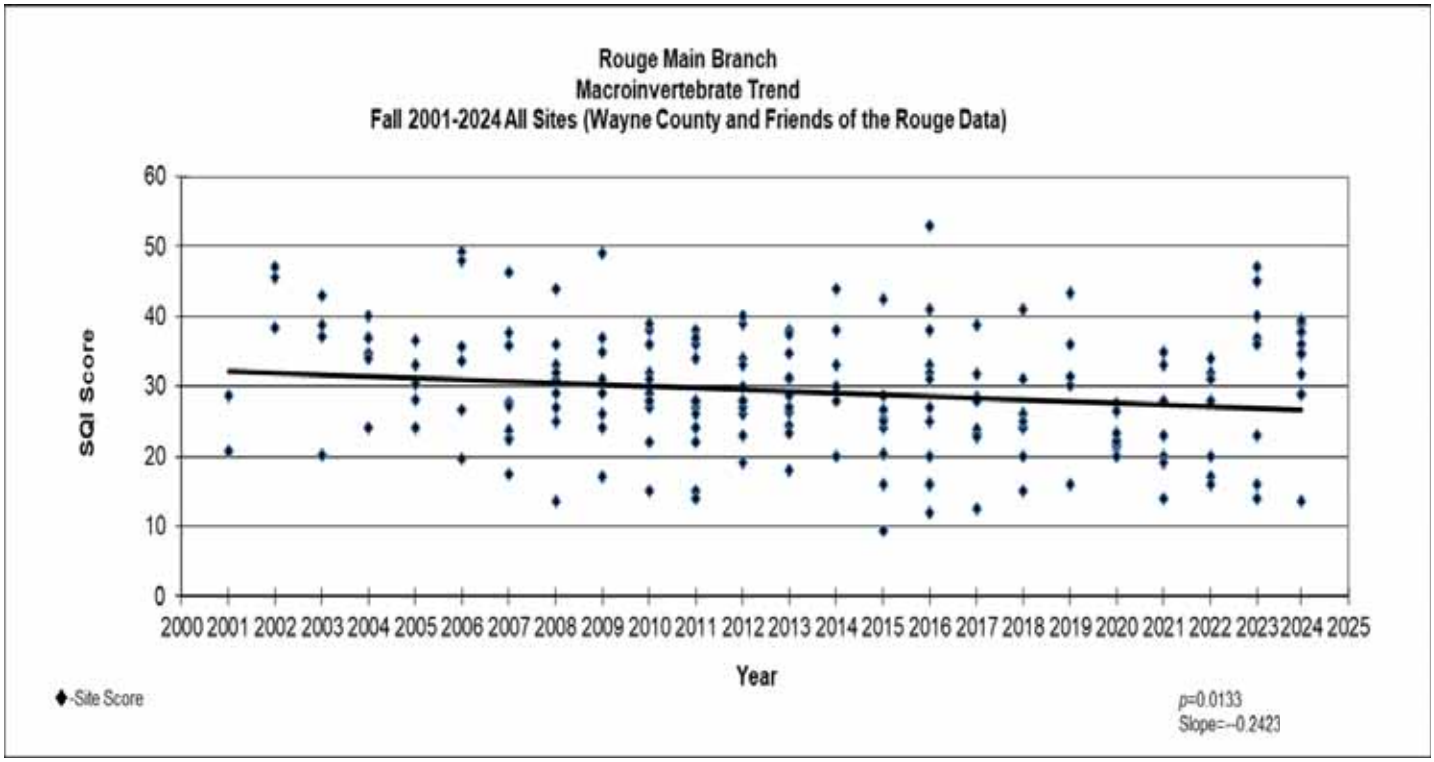
Table 6: Fall 2024 Data													
BRANCH	Stream Name	FIELDID	Site Description	SQI	SQI Rating	Taxa	Insect Taxa	EPT	WQR	WQR Score	Cl ppm	Cl Rating	Nitrate ppm
Lower	Lower Rouge	Low2	Cherry Hill	23	Fair	11	7	1	6.03	Fair	36	ok	1
Lower	Fellows Creek	Fel1	Top of Hill Ct	25	Fair	11	10	1	5.08	Good	92	ok	0
Lower	Fowler Creek	Fowl1	Prospect	32	Fair	15	11	2	7	Fairly Poor	50	ok	0
Lower	Fowler Creek	Fowl2	Fowler Beck	27	Fair	13	8	2	5.85	Fair	30	ok	0
Lower	Lower Rouge	LR-8	Ridge Proctor	37	Good	17	12	3	5.73	Fair	56	ok	1
Lower	Fellows Creek	LR-9	Fellows Beck Warren	28	Fair	13	9	1	5.82	Fair	166	chronic	0
Lower	Lower Rouge	LR-1	Commerce Ct	33	Fair	13	8	2	5.08	Good	124	ok	5
Main	Sprague Creek	Sprag	Main Lloyd Stage	35	Good	11	8	3	4.63	Good	213	chronic	0
Main	Main Rouge	Main1	FF Pk	29	Fair	14	7	4	7.23	Fairly Poor	213	chronic	0
Main	Main Rouge	Main3	Booth Park	38	Good	15	8	2	5.79	Fair	152	chronic	1
Main	Main Rouge	Main11	Quarton at Lakeside	25	Fair	11	6	1	7.13	Fairly Poor	231	chronic	1
Main	Main Rouge	Main4	Linden Park	39	Good	15	9	4	5.17	Good	213	chronic	1
Main	Main Rouge	Main4.5	Fairway Park	35	Good	12	8	4	5.07	Good	213	chronic	1
Main	Main Rouge	Main5	Douglas Evans	38	Good	15	10	4	5.26	Good	126	ok	0
Main	Nottingham Creek	Nott	Country Day	29	Fair	13	8	1	6.49	Fair	166	chronic	0
Main	Pebble Creek	Peb2	Pebble 13 Mile	36	Good	17	10	2	5.37	Good	102	ok	2
Main	Pebble Creek	Peb3	Pebble d/s Dam	40	Good	15	12	3	5.24	Good	82	ok	1
Main	Main Rouge	Main6	Sfld Civic Ctr	32	Fair	18	11	4	5.97	Fair	181	chronic	2
Main	Evans Creek	Evan2	LTU	14	Poor	10	4	0	4.99	Good	531	toxic	2
Middle	Johnson Creek	John1	5M Salem	37	Good	22	18	4	5.43	Good	73	ok	2
Middle	Johnson Creek	John2	5M NV	34	Good	19	16	5	4.87	Good	92	ok	1
Middle	Johnson Creek	John7	Arcadia	36	Good	16	10	3	5.62	Fair	82	ok	0
Middle	Johnson Creek	John3	6M NV	38	Good	17	12	3	5.74	Fair	87	ok	1
Middle	Johnson Creek	John8	Maybury Angell	39	Good	17	12	2	5.65	Fair	113	ok	0
Middle	Johnson Creek	MR-22	Maybury south	19	Fair	10	8	1	4.89	Good	137	ok	2
Middle	Johnson Creek	MR-27	Ridge	43	Good	18	12	5	4.76	Good	81	ok	1
Middle	Walled Lk Drainage	Wall1	Rotary Pk	38	Good	19	12	2	5.89	Fair	152	chronic	5
Middle	Walled Lk Drainage	Wall2	WL 10 M	33	Fair	15	10	2	5.4	Good	213	chronic	5
Middle	Middle Rouge	MR-20	Waterford Bend	43	Good	21	10	3	5.36	Good	137	ok	1.5
Middle	Tonquish Creek	Ton1	Plym Twp Pk	23	Fair	11	6	1	7.33	Fairly Poor	82	ok	0
Middle	Tonquish Creek	MR-14	Smith Elem	25	Fair	13	7	1	6.25	Fair	81	ok	0
Middle	Tonquish Creek	Nton	S Evergreen St	37	Good	16	10	3	5.06	Good	330	toxic	
Middle	Middle Rouge	MR-3	Plym Riverside	39	Good	15	9	4	4.81	Good	137	ok	1.5
Middle	Middle Rouge	MR-4	Levan Knoll	31	Fair	16	8	2	6.25	Fair	194	chronic	1.5
Middle	Middle Rouge	MR-5	Valley View	30	Fair	12	7	2	5.46	Good	211	chronic	1.5
Middle	Middle Rouge	MR-6	Sherwood	25	Fair	11	7	2	5.82	Fair	227	chronic	1.5
Upper	Seeley Creek	See3	Kennedy Ct	30	Fair	13	8	1	7	Fairly Poor	64	ok	2
Upper	Minnow Pond	Min1	Minnow 13 M	34	Good	15	10	2	7.56	Poor	36	ok	1
Upper	Upper Rouge	Up2	Shiawasee Park	41	Good	16	10	3	5.1	Good	304	chronic	10
Upper	Bell Branch	Bell1	Bicentennial Park	26	Fair	14	8	2	6.19	Fair	308	chronic	5.8
Upper	Bell Branch	Bell3	Livonia 6 Mile	23	Fair	10	6	1	5.6	Fair	287	chronic	1
Upper	Bell Branch	Bell2	Schoolcraft College	17	Poor	10	7	0	7.07	Fairly Poor	181	chronic	1

Data Trend Tables

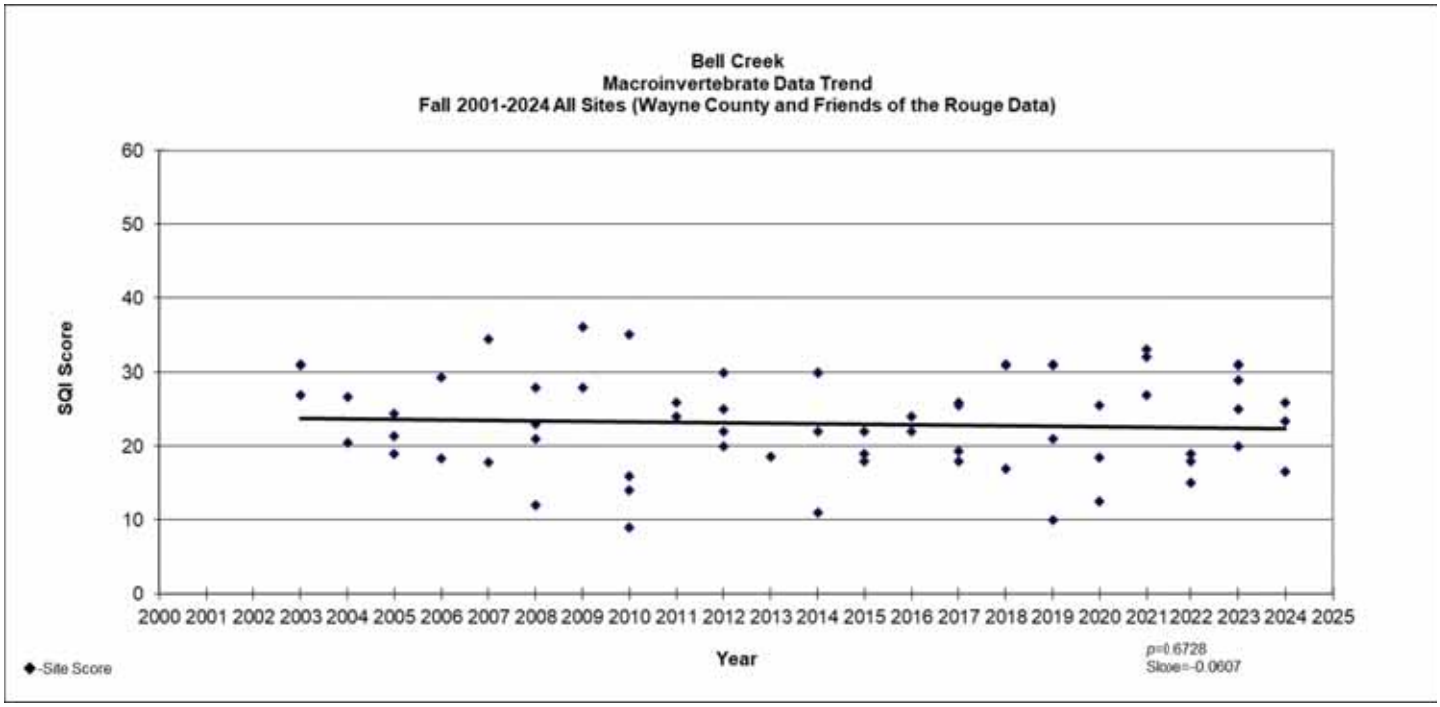
Main






Rouge Main Branch
Macroinvertebrate Trend
Fall 2001-2024 All Sites (Wayne County and Friends of the Rouge Data)
SQI Score
60
50
40
30
20
10
0
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025
Year
Site Score
p=0.0133
Slope=-0.2423

Upper


Bell Creek
Macroinvertebrate Data Trend
Fall 2001-2024 All Sites (Wayne County and Friends of the Rouge Data)
SQI Score
Year
Site Score
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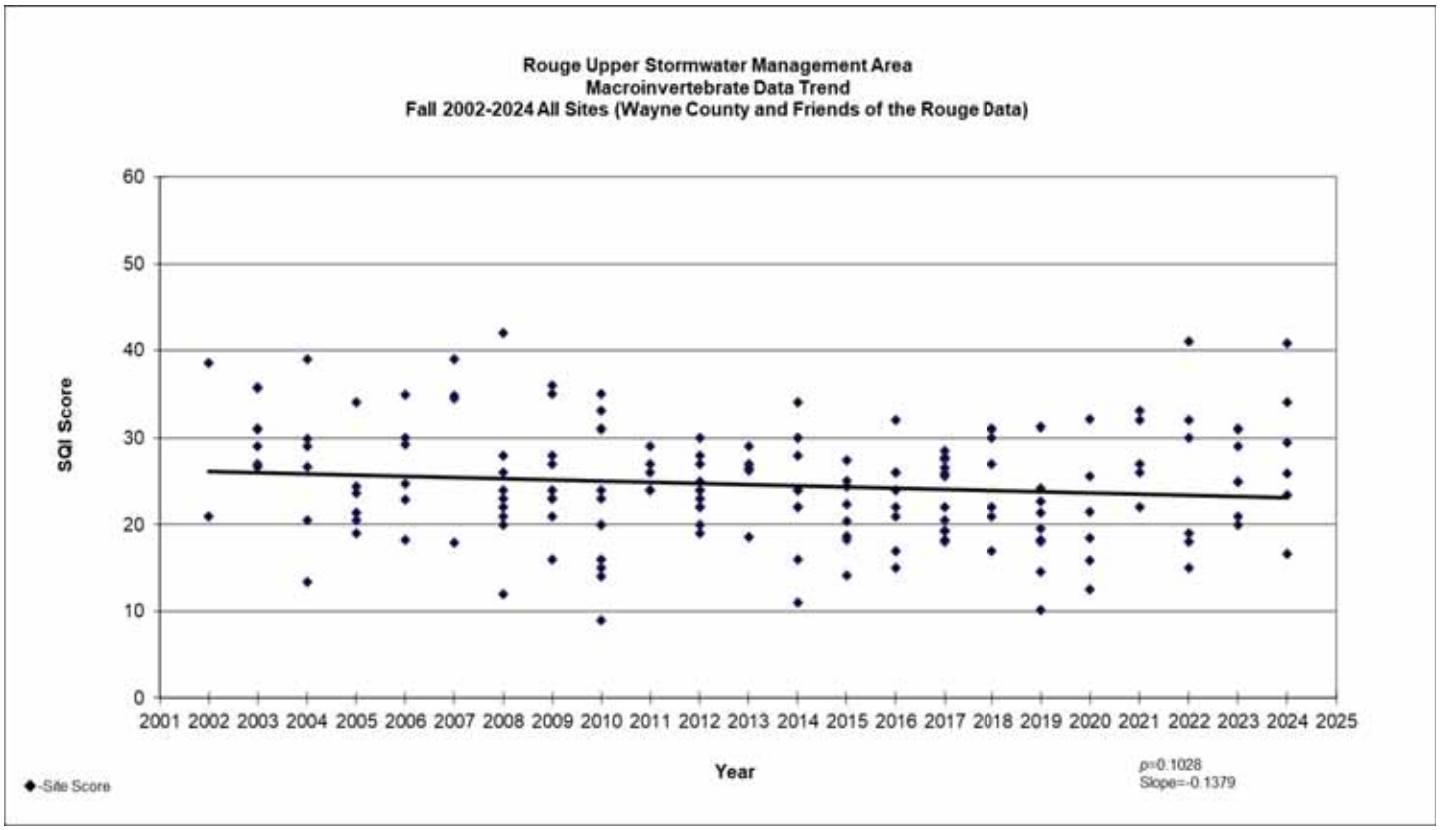
Rouge Upper Stormwater Management Area
Macroinvertebrate Data Trend
Fall 2002-2024 All Sites (Wayne County and Friends of the Rouge Data)
SQI Score
Year
Site Score
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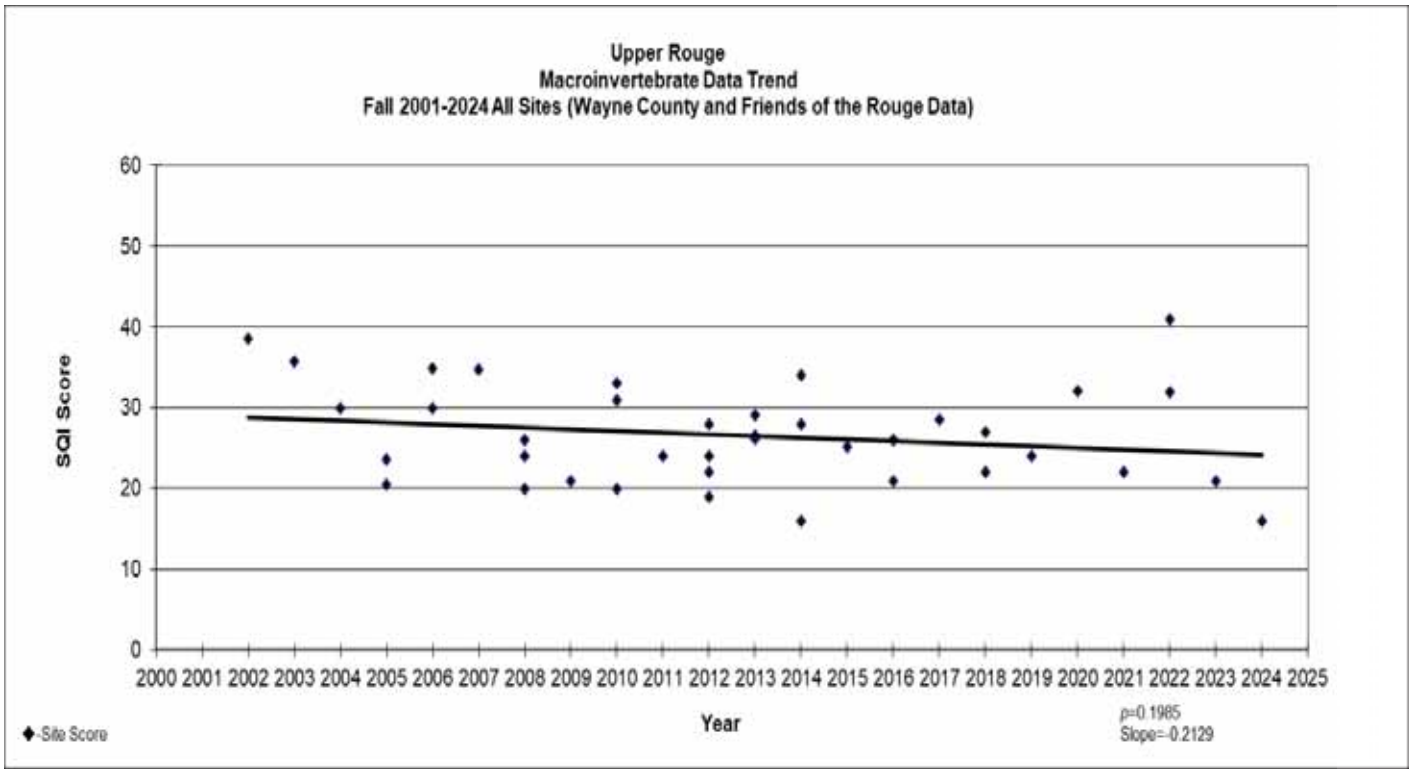
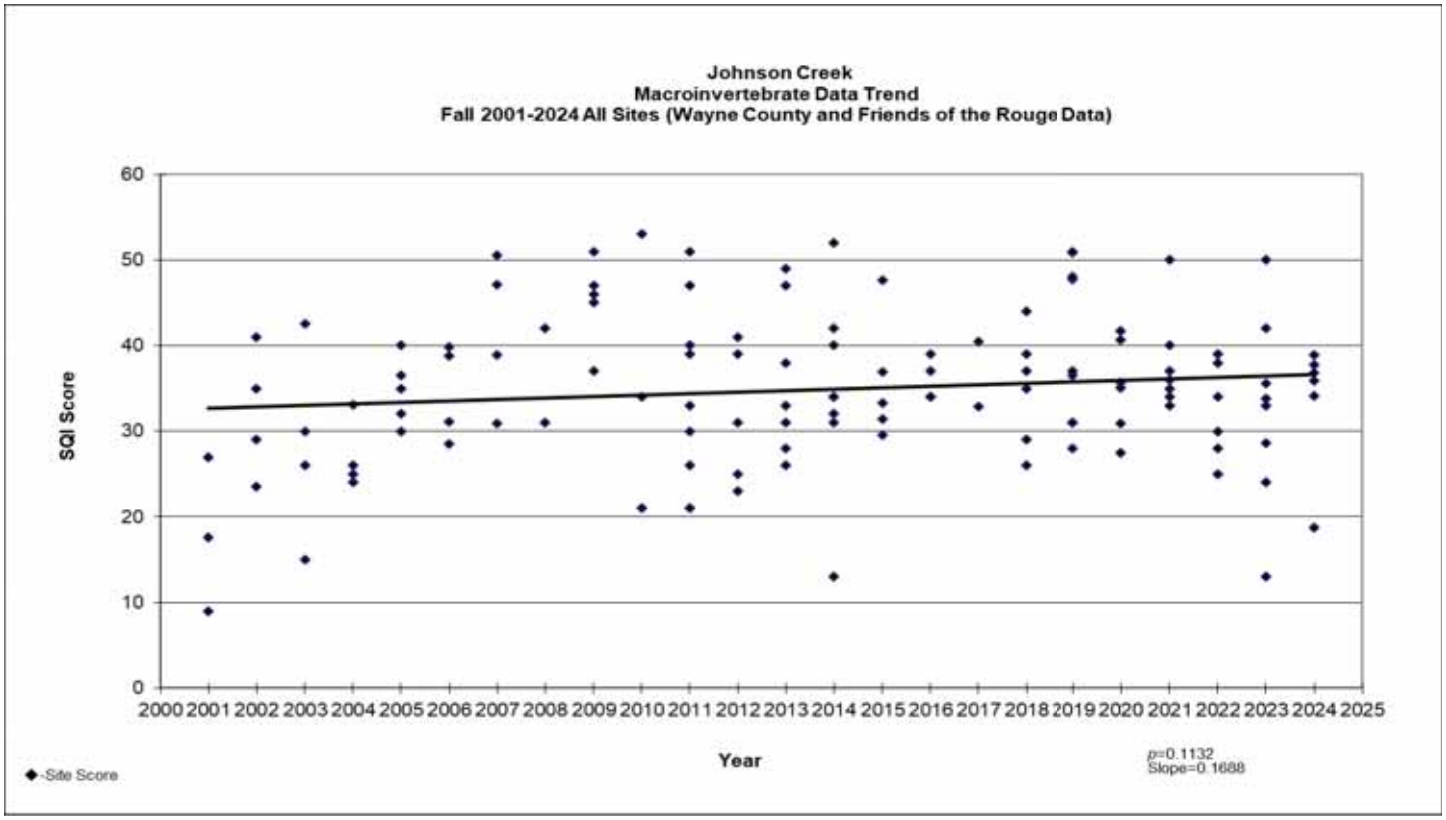
Upper with no tributaries



Middle


Johnson Creek
Macroinvertebrate Data Trend
Fall 2001-2024 All Sites (Wayne County and Friends of the Rouge Data)
SQI Score
Year
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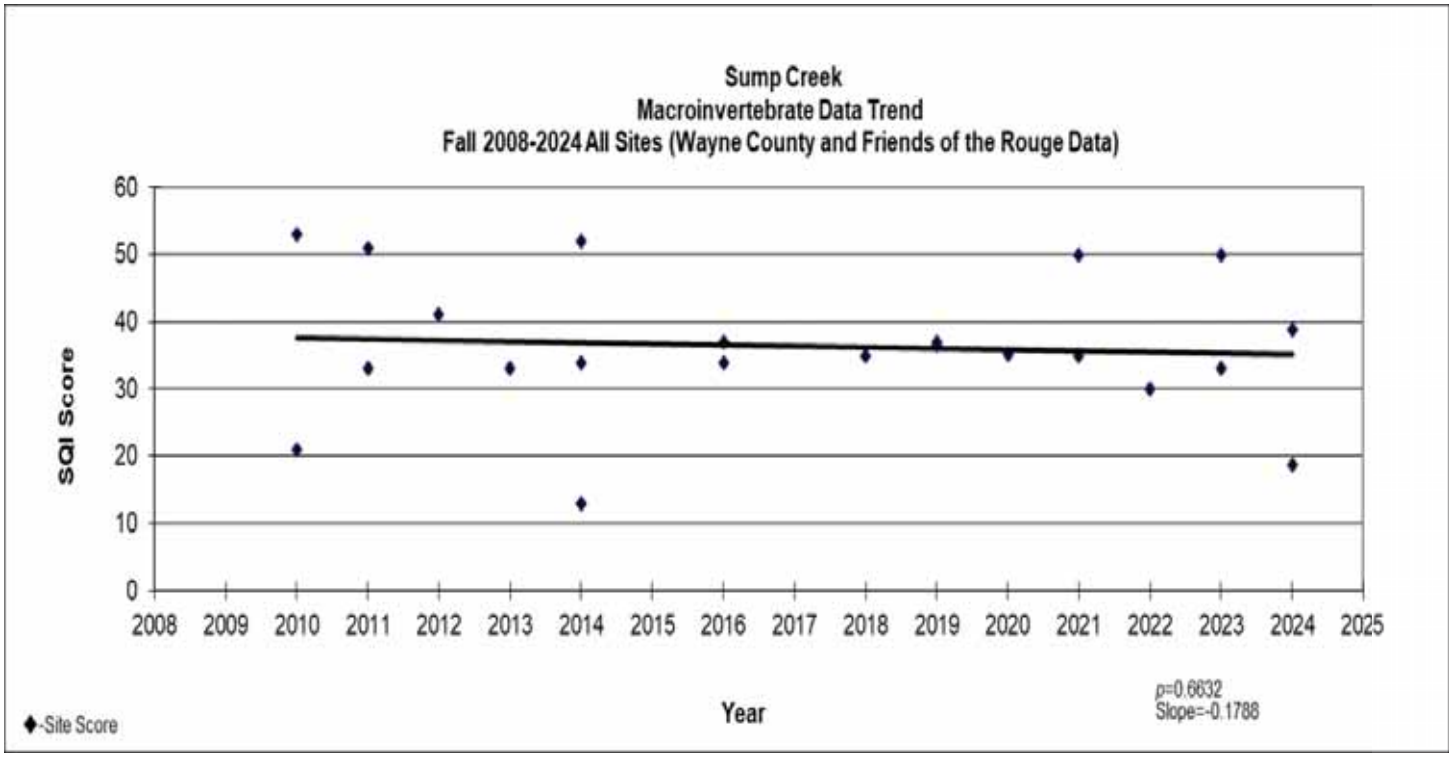
♦-Site Score


Sump Creek
Macroinvertebrate Data Trend
Fall 2008-2024 All Sites (Wayne County and Friends of the Rouge Data)
SQI Score
Year
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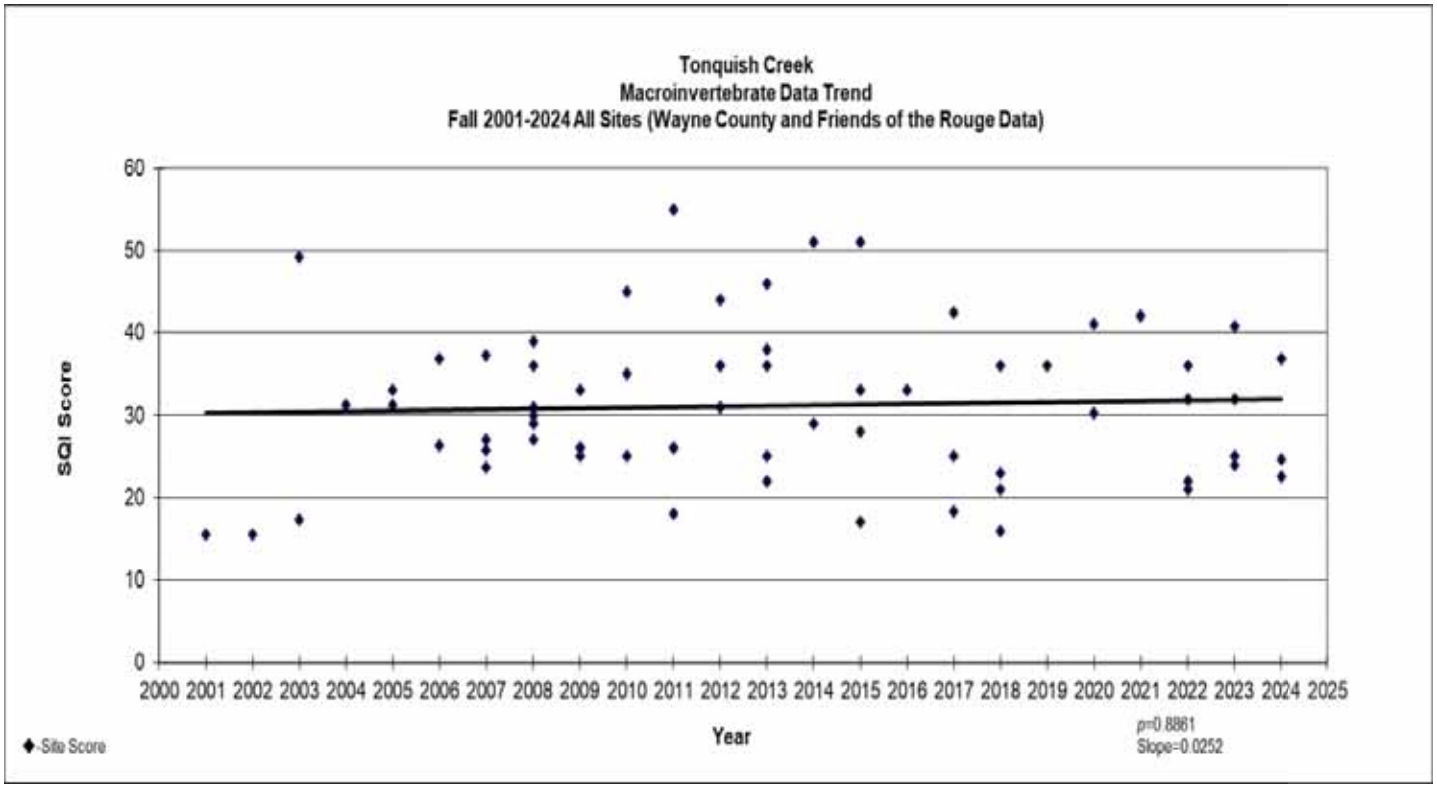
♦-Site Score


Tonquish Creek
Macroinvertebrate Data Trend
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SQI Score
Year
♦-Site Score
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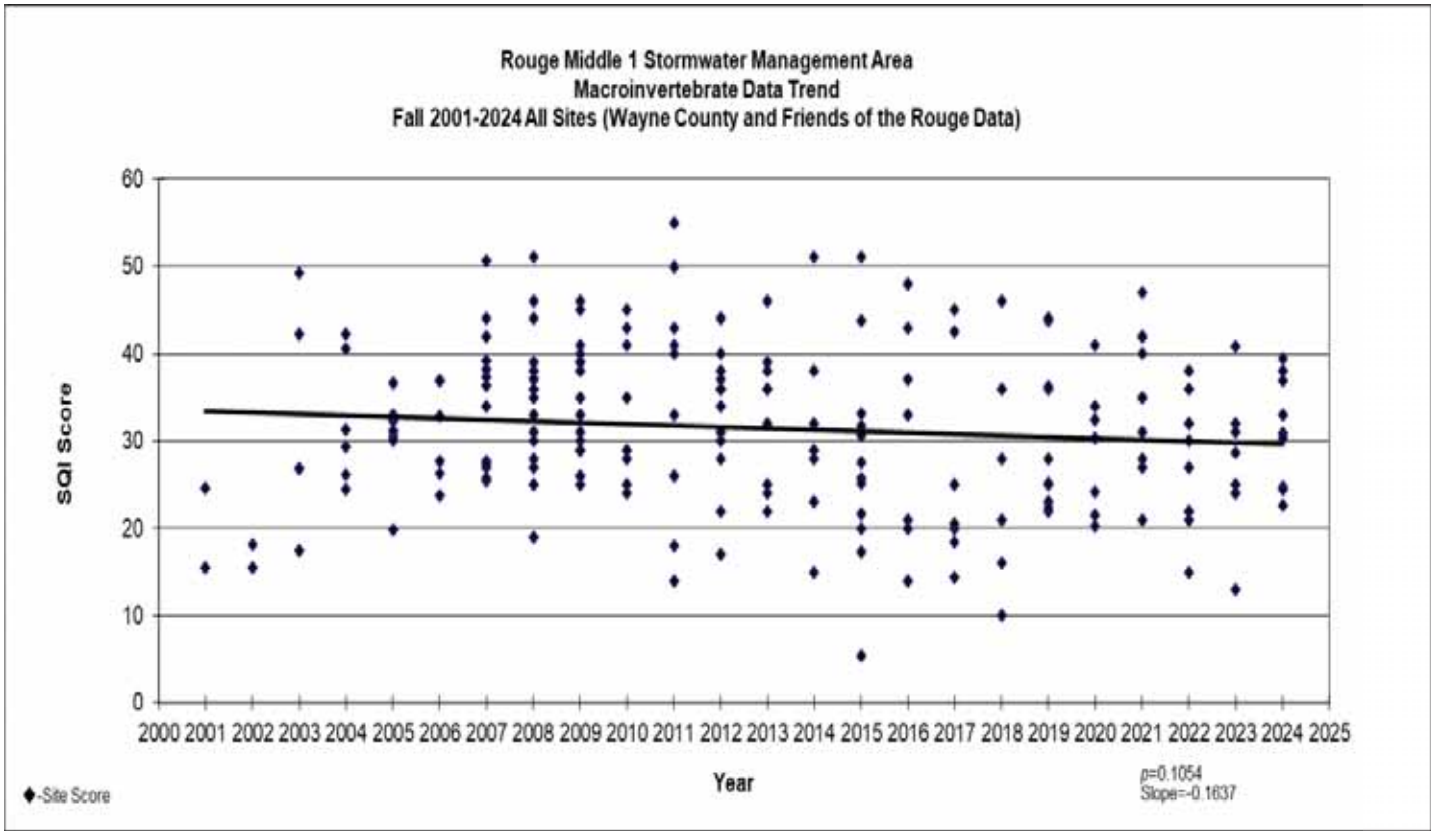
Slope=0.0252


Rouge Middle 1 Stormwater Management Area
Macroinvertebrate Data Trend
Fall 2001-2024 All Sites (Wayne County and Friends of the Rouge Data)
SQI Score
Year
♦-Site Score
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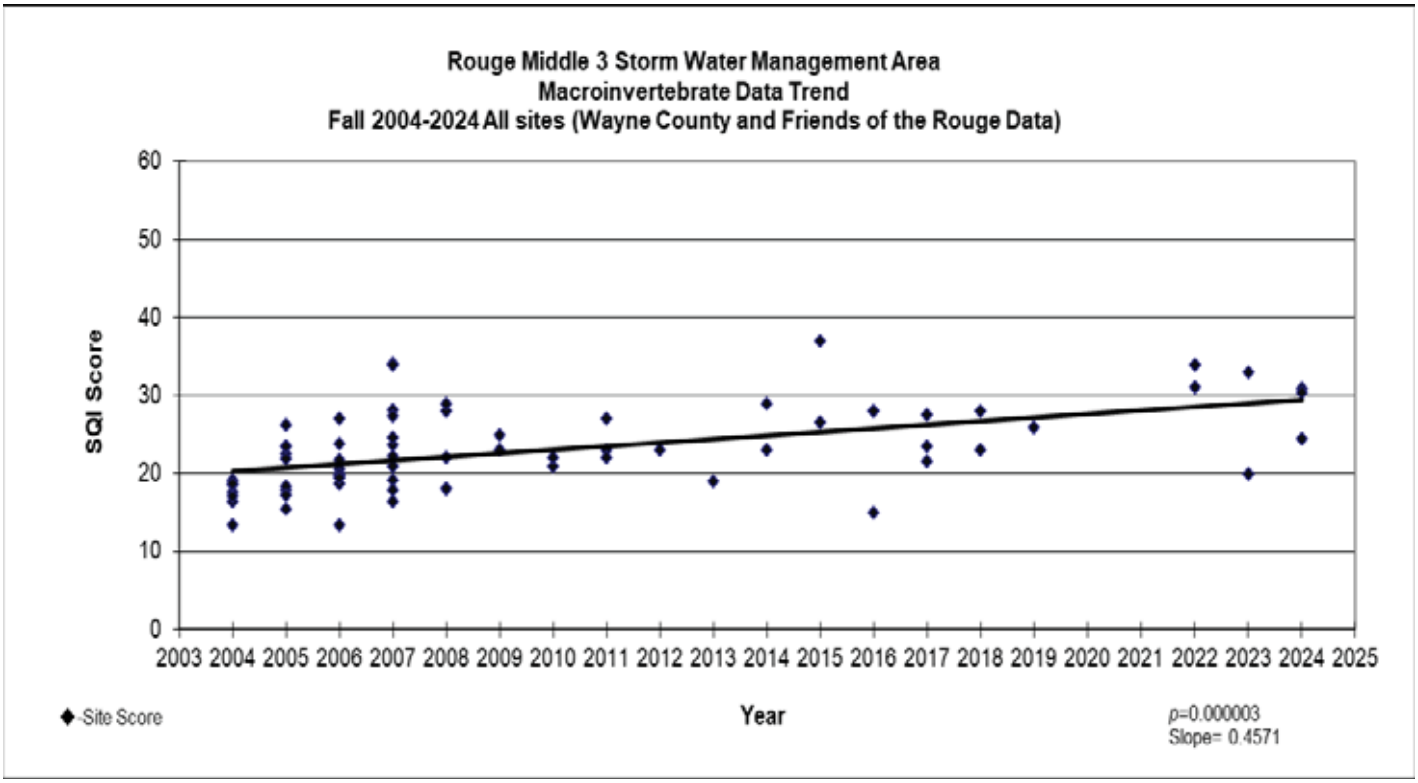
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Macroinvertebrate Data Trend
Fall 2004-2024 All sites (Wayne County and Friends of the Rouge Data)
SQI Score
Year
Site Score
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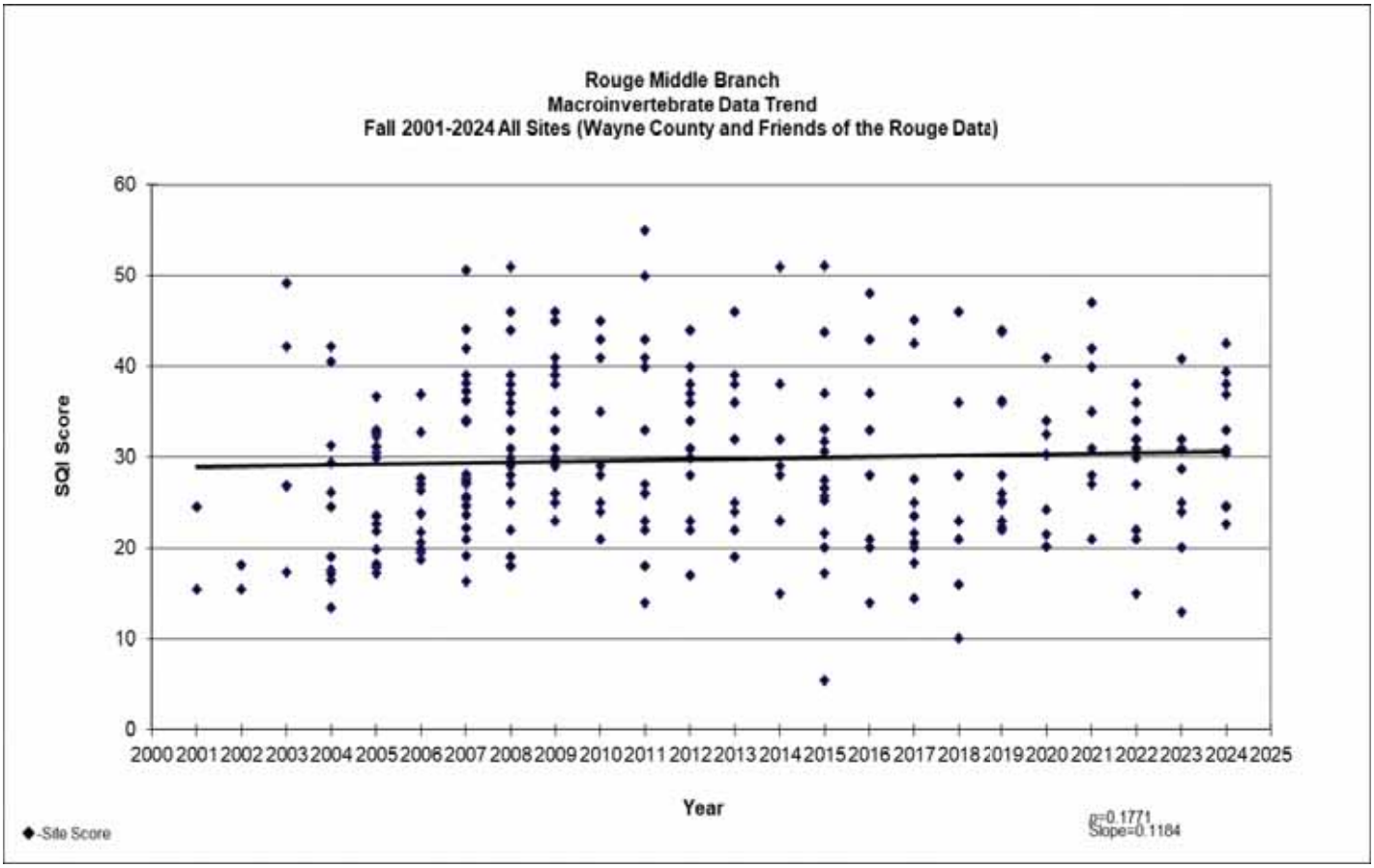
Rouge Middle Branch
Macroinvertebrate Data Trend
Fall 2001-2024 All Sites (Wayne County and Friends of the Rouge Data)
SQI Score
Year
Site Score
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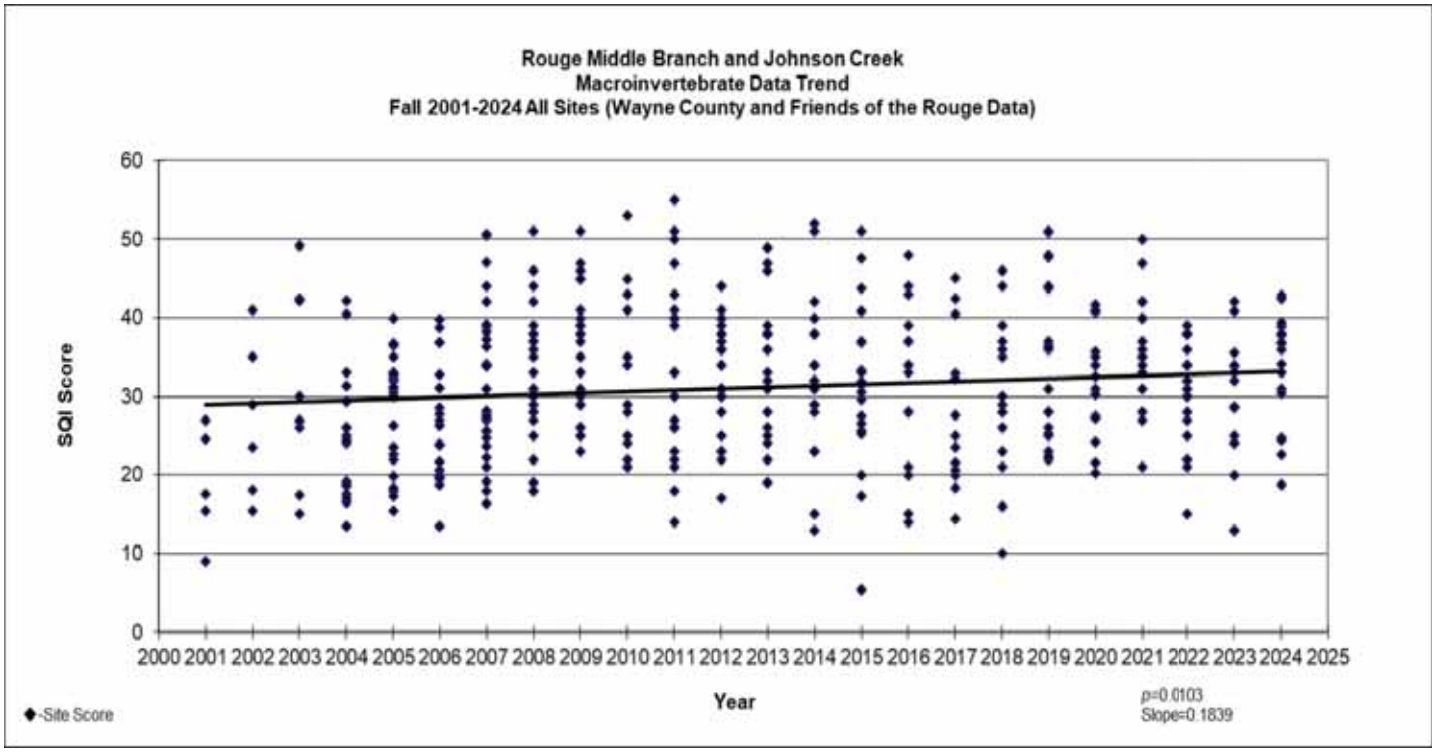
Slope=0.1184


Rouge Middle Branch and Johnson Creek
Macroinvertebrate Data Trend
Fall 2001-2024 All Sites (Wayne County and Friends of the Rouge Data)
SQI Score
Year
-Site Score
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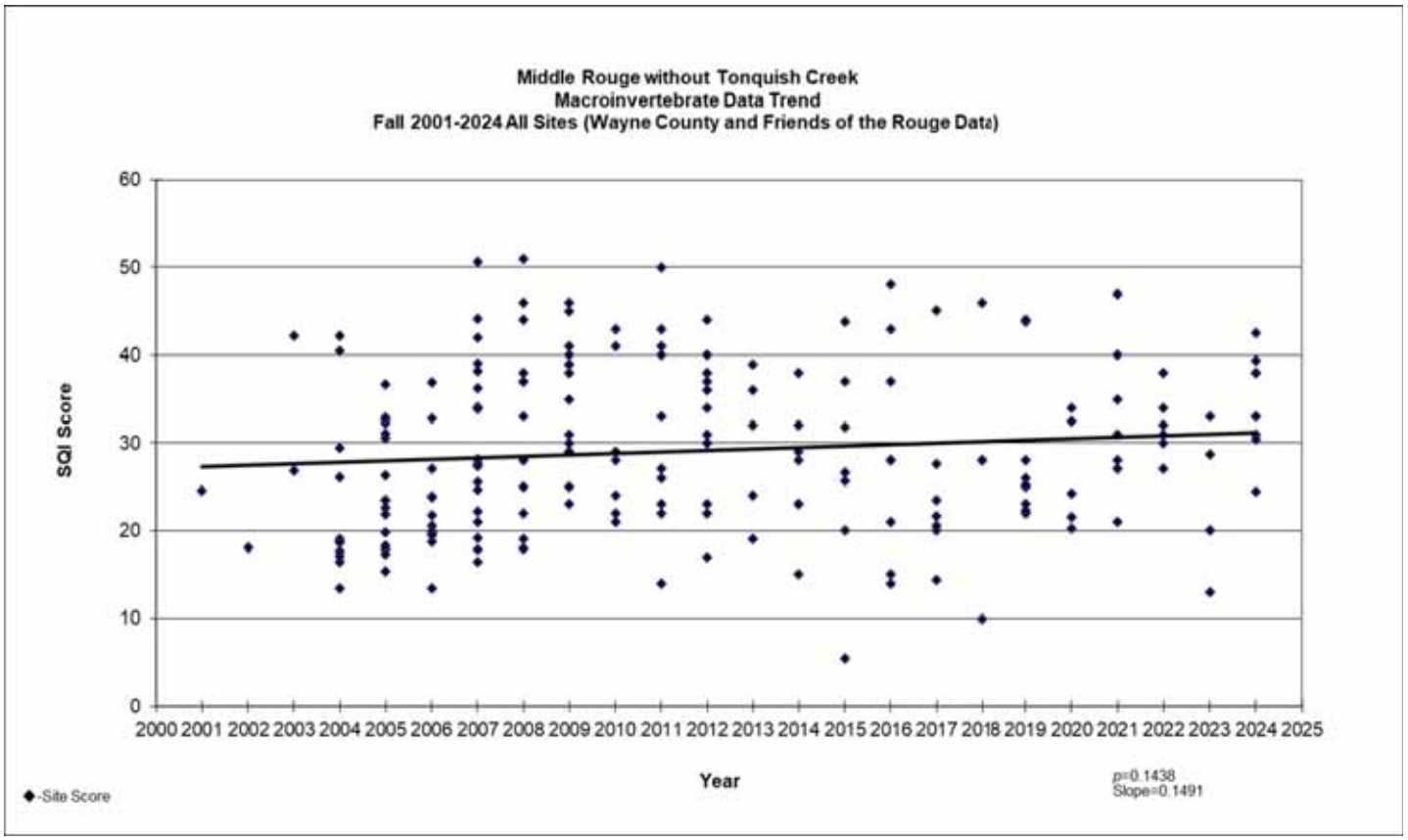
Slope=0.1839


Middle Rouge without Tonquish Creek
Macroinvertebrate Data Trend
Fall 2001-2024 All Sites (Wayne County and Friends of the Rouge Data)
SQI Score
Year
-Site Score
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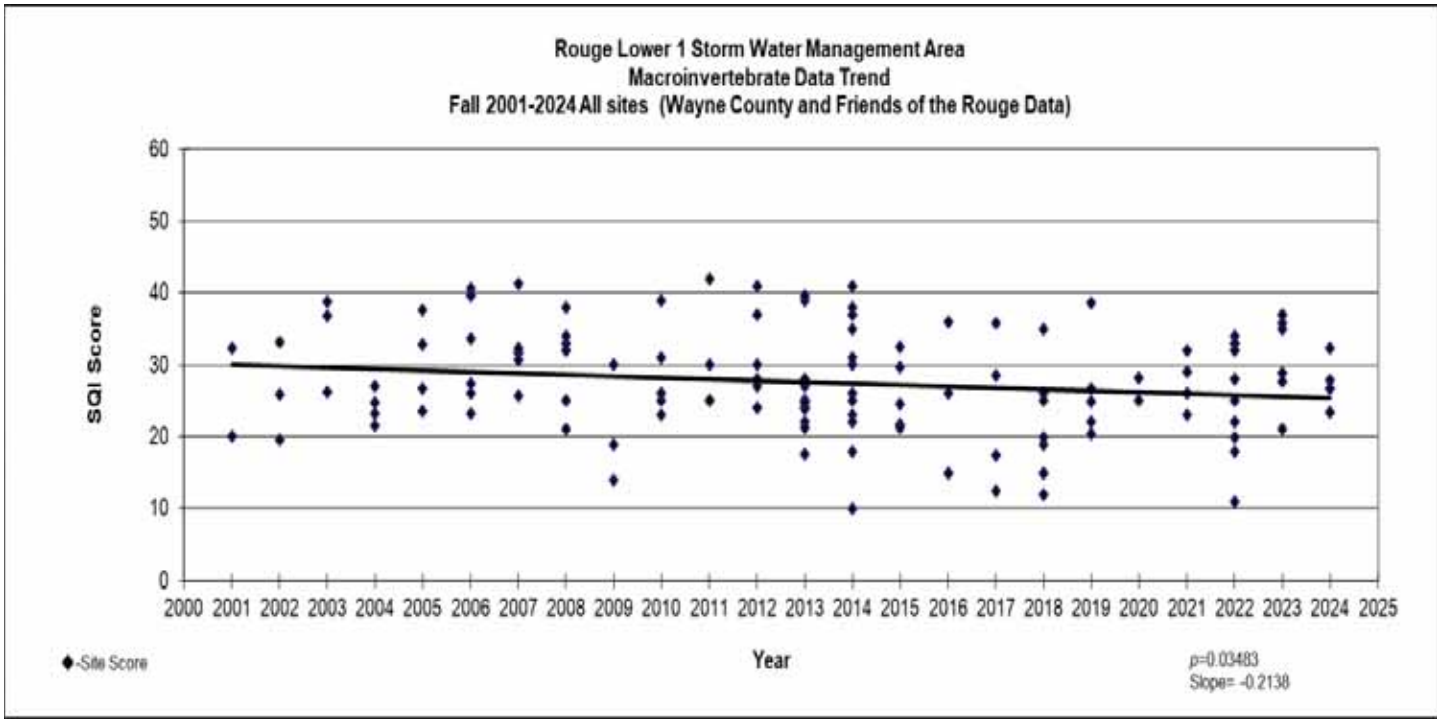
Slope=0.1491

Lower


Rouge Lower 1 Storm Water Management Area
Macroinvertebrate Data Trend
Fall 2001-2024 All sites (Wayne County and Friends of the Rouge Data)
SQI Score
Year
-Site Score
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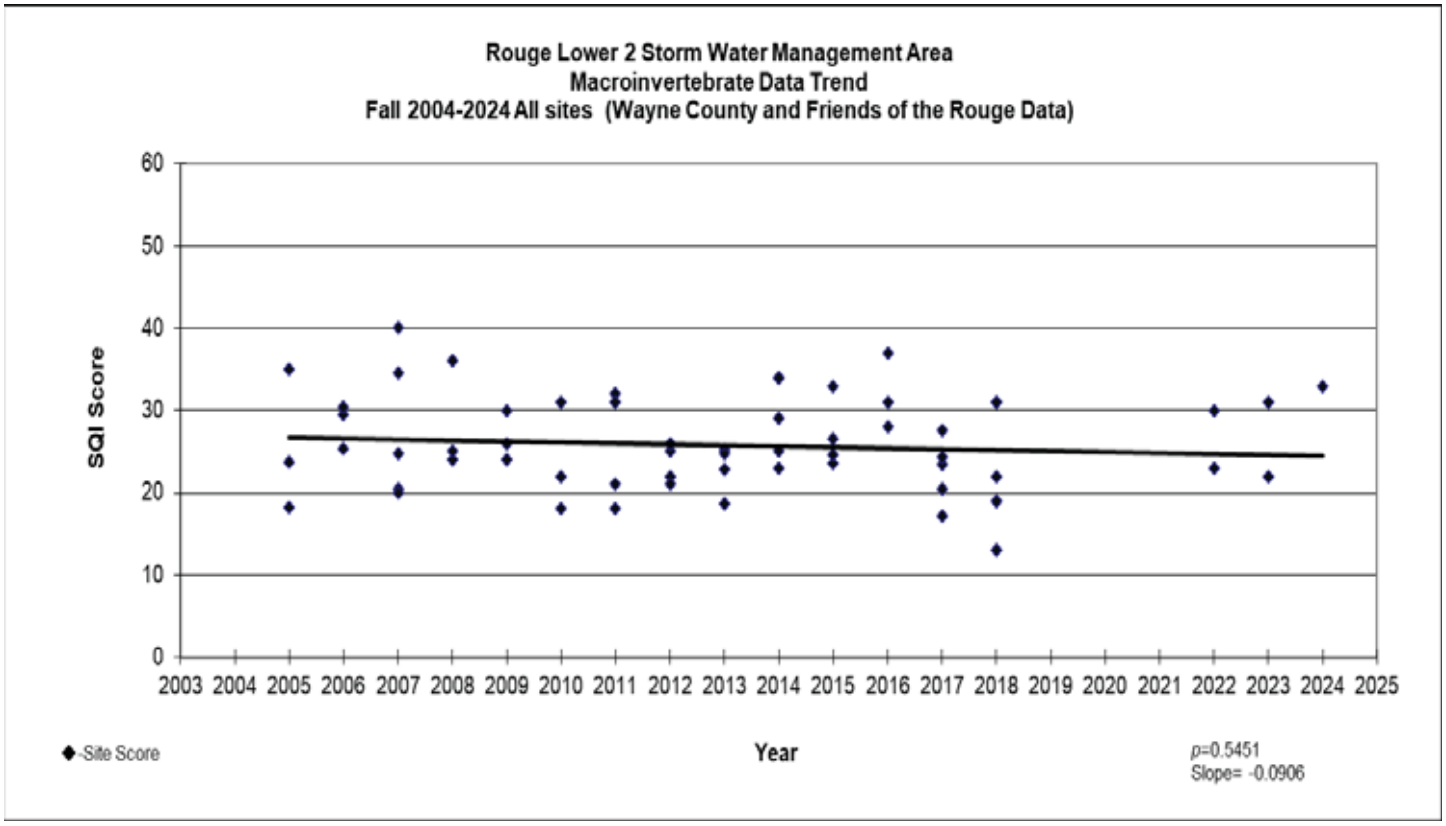
Rouge Lower 2 Storm Water Management Area
Macroinvertebrate Data Trend
Fall 2004-2024 All sites (Wayne County and Friends of the Rouge Data)
SQI Score
Year
-Site Score
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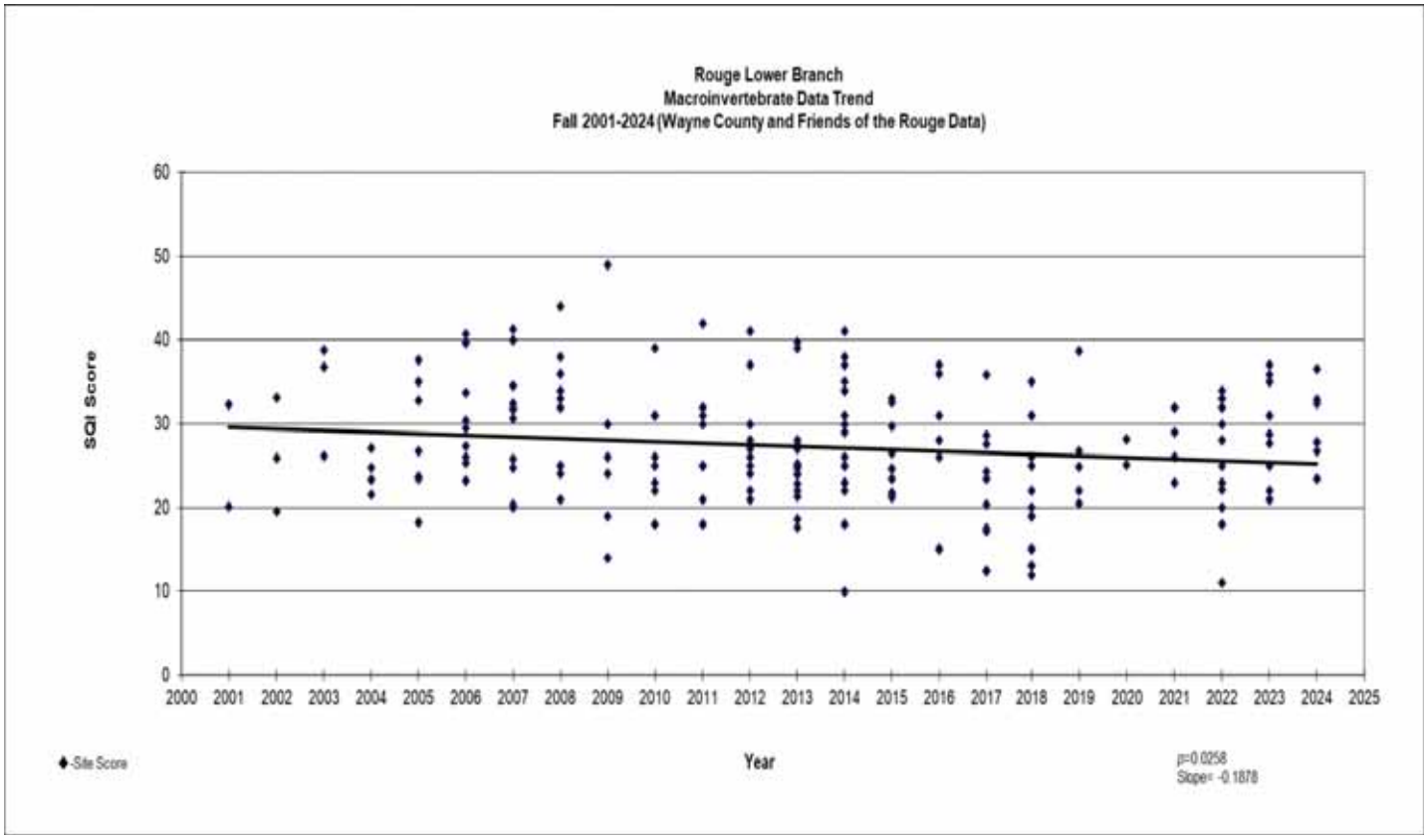

Rouge Lower Branch
Macroinvertebrate Data Trend
Fall 2001-2024 (Wayne County and Friends of the Rouge Data)
SQI Score
60
50
40
30
20
10
0
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025
Year
♦-Site Score
p=0.0258
Slope= -0.1878

Rouge River Watershed
2025 Winter Stonefly Search

www.therouge.org

Eighty people participated in Friends of the Rouge (FOTR)'s 2025 Winter Stonefly Search on January 25, 2025. The weather on January 25 was not too bad-the sun came out and the temperature rose above freezing, but the river at five sites was simply too frozen to sample! Team leaders employed ice picks, spuds, and pickaxes to successfully break the ice and sample in many locations. Despite the frozen conditions, our fantastic volunteers did a wonderful job of searching for stoneflies throughout the watershed.

Stoneflies are sensitive indicators of healthy streams. Unlike other insects, winter stoneflies develop into adult flies in the winter. The Winter Stonefly Search is part of Friends of the Rouge's volunteer benthic macroinvertebrate monitoring program.

This report contains data for 39 sites (Table 1 pg. 6 and map pg. 7). Fifteen teams visited twenty-nine sites, but only twenty-four were sampled since five of the sites were too frozen to sample, and at one of the mostly frozen sites they were able to test for chloride. The sampled sites include one at Schoolcraft College by faculty who collected samples, and one at Lawrence Tech University's team composed of Environmental Alliance Student Group (EASG) members. Five additional sites were sampled by Wayne County Department of Public Services, and five by Sue Thompson.

Stoneflies were found at eleven of the thirty-four fully sampled sites (32%) (map pg. 7 and Table pg. 6). All were found on the Lower and Johnson Creek, a Middle branch tributary. All but one of the sites had slender winter stoneflies (Capnids-family Capniidae). The only Perlodid stonefly (family Perlodidae) was at the John2 site.

Team 8 on the Lower Branch

Lower Branch

Twelve sites were visited, but only nine sampled on the Lower Branch: five on Fellows Creek, three on Fowler Creek and one on the main branch of the Lower. Two of the nine sites (22%) had stoneflies, and all were slender winter stoneflies (Capnids). Stoneflies were found at one site in Fowler Creek (Fowl 4), and one site in the Lower Rouge (LR-8).

Stonefly found at LR-8!

Middle Branch

Twenty-three sites were visited, but twenty-two were sampled on the Middle Branch: twelve on Johnson Creek, two on Tonquish Creek, and eight on the Middle branch. Nine of the twenty-two sites (41%) had stoneflies and all were on the Johnson Creek. All sites except John2 (which had the only Perlodidae plus Capniidae) had only slender winter stoneflies (Capniidae). A stonefly exoskeleton was found at John5 (Fish Hatchery Park). The stonefly molts (sheds their skin) several times before emerging as a winged adult. This is an indication that stoneflies were present at the site at one time, but since the team did not collect a stonefly larvae, the site is reported as having no stoneflies.

Team 6 at Johnson Creek

Team 9 at Johnson Creek

Team 7 at Johnson Creek

Main Branch

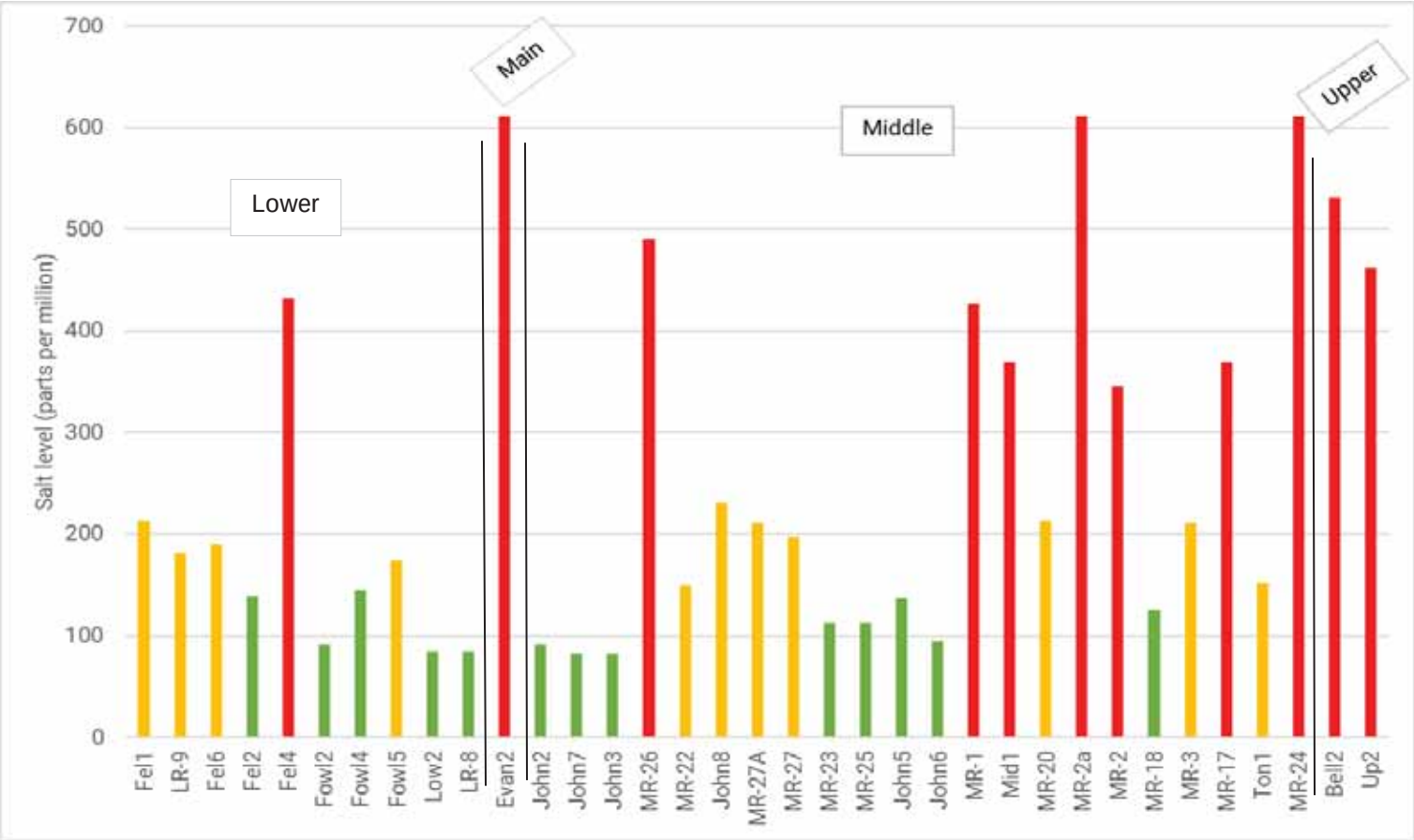
One site on the Main Branch was sampled. This was Evan2 at Lawrence Tech University. The newly formed EASG at LTU braved the chilly weather and sampled the site. No stoneflies were found at the Evan2 site.

EASG Sampling Evans Creek

Upper Branch

Three Upper Branch sites were visited, but only two were sampled. These sites included one site on Bell Creek, and one on the main Upper branch. No stoneflies were found at either of the sites in the Upper Branch. Stoneflies are very rarely found in the Upper Branch.

FOTR Stonefly Search teams have been testing sites for road salt (chloride) since 2020 through the Izaak Walton League's Salt Watch program. Chloride is measured in parts per million (ppm). Levels below 150 ppm are represented by the green bars. Levels above 150 ppm cause harmful impacts to aquatic life in the stream (chronic toxicity). These values are represented by the orange bars in the graph below. Levels above 320 ppm are toxic to aquatic life (acute toxicity). These are represented by the red bars in the graph below.



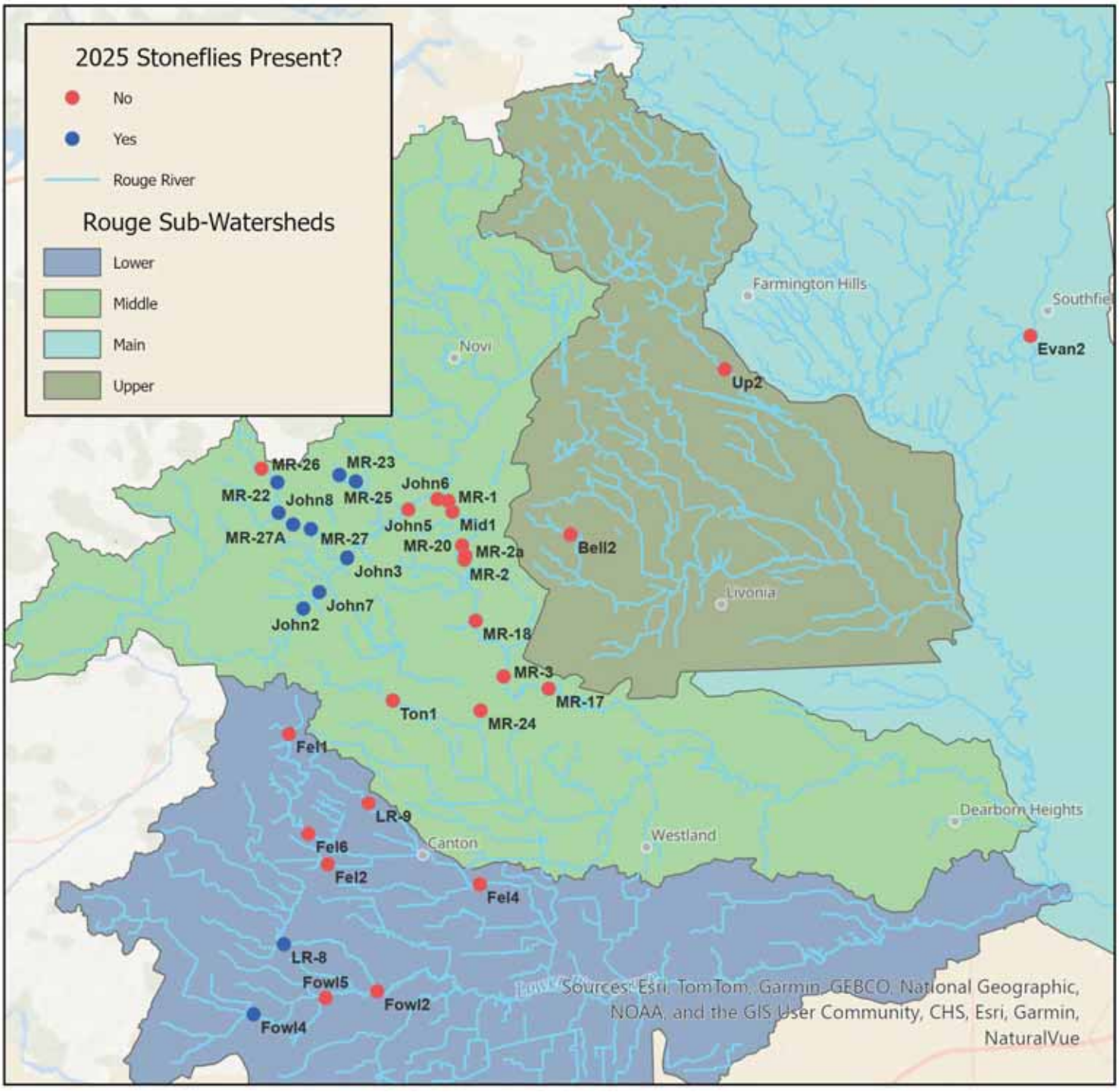
The 2025 chloride levels (see graph above, and Table pg. 6) varied by the branch. Half of the Lower Branch sites had salt levels greater than 150ppm. The highest was at Fel4 (Flodin Park). The single site sampled in the Main Branch (Evan2) had a level that exceeded the maximum value of the salt strip (>612 ppm), meaning they could possibly be higher. In the Middle branch, seven of the Johnson Creek sites were below 150ppm while five were above 150ppm. Downstream in the Middle Branch levels rose above 150 ppm: all sites except MR-18 (Springbrook Recreation Area) were greater than 150ppm. Two sites in the Middle, MR-2a on the Middle Branch, and MR-24 on Tonquich Creek, had salt readings meeting the maximum value of the test strip. Both Upper branch sites were above 320 ppm (toxic level): Bell Creek (Bell2) at Schoolcraft College, and Up2 at Shiawasee Park.

In 2024, FOTR received a grant from the EGLE Nonpoint Source Unit with the goal of supporting ongoing assessment of the extent of chloride impairment in the Rouge River through targeted monitoring. The data was collected using four different methods that included EGLE's required protocol for impairment designations so that waterbodies can be assessed for chloride impairment and potential listing. A report of our findings will be available shortly on our website, https://therouge.org/. You can sign up for the Salt Watch program and receive free test strips to test stream sites during the winter on your own and are encouraged to do so. Check out their map of the salt results , and see how the Rouge compares to other areas. There are also many great tips on how to reduce salt in your community on the Salt Watch website.

Thank you to all the volunteers, Team Leaders, Wayne County, and Sue Thompson for additional sampling. The Winter Stonefly Search is part of Friends of the Rouge's long-term volunteer monitoring program and was made possible by Mercedes-Benz financial services.

Mercedes-Benz Financial Services

Table 1: 2025 Stonefly and Chloride Findings						
BRANCH	Stream Name	FIELDID	Site Description	Stoneflies present?	ST25Family	Salt (ppm)
Lower	Fellows Creek	Fel1	Top of Hill Ct	N		213
Lower	Fellows Creek	LR-9	Fellows Beck Warren	N		181
Lower	Fellows Creek	Fel5	Warren Ridge	N/A		
Lower	Fellows Creek	Fel6	Hanford	N		190
Lower	Fellows Creek	Fel2	Vintage Valley	N		139
Lower	Fellows Creek	Fel4	Flodin Pk	N		432
Lower	Fowler Creek	Fowl1	Prospect	N/A		
Lower	Fowler Creek	Fowl2	Fowler Beck	N		92
Lower	Fowler Creek	Fowl4	Ridge Rd S of Geddes	Y	Capniidae	145
Lower	Fowler Creek	Fowl5	Fowler Denton	N		174
Lower	Lower Rouge	Low2	Cherry Hill	N/A		85
Lower	Lower Rouge	LR-8	Ridge Proctor	Y	Capniidae	85
Main	Evans Creek	Evan2	LTU	N		>612
Middle	Johnson Creek	John1	5M Salem	N/A		
Middle	Johnson Creek	John2	5M NV	Y	Capniidae, Perlodidae	92
Middle	Johnson Creek	John7	Arcadia	Y	Capniidae	82
Middle	Johnson Creek	John3	6M NV	Y	Capniidae	82
Middle	Johnson Creek	MR-26	Napier Rd	N		490
Middle	Johnson Creek	MR-22	Maybury south	Y	Capniidae	150
Middle	Johnson Creek	John8	Maybury Angell	Y	Capniidae	231
Middle	Johnson Creek	MR-27A	Florissant Dr.	Y	Capniidae	211
Middle	Johnson Creek	MR-27	Ridge	Y	Capniidae	197
Middle	Johnson Creek	MR-23	Maybury north	Y	Capniidae	113
Middle	Johnson Creek	MR-25	Maybury East	Y	Capniidae	113
Middle	Johnson Creek	John5	Fish Hatchery Pk	N		137
Middle	Johnson Creek	John6	Hines	N		95
Middle	Middle Rouge	MR-1	Northville Rec W	N		427
Middle	Middle Rouge	Mid1	Northville Rec E	N		370
Middle	Middle Rouge	MR-20	Waterford Bd	N		213
Middle	Middle Rouge	MR-2a	Reservoir Rd W	N		612
Middle	Middle Rouge	MR-2	Reservoir Rd	N		346
Middle	Middle Rouge	MR-18	Springbrook Rec	N		126
Middle	Middle Rouge	MR-3	Plym Riverside	N		211
Middle	Middle Rouge	MR-17	I-275 Clam Bar	N		370
Middle	Tonquish Creek	Ton1	Plym Twp Pk	N		152
Middle	Tonquish Creek	MR-24	Lion's Pk	N		612
Upper	Bell Branch	Bell2	Schoolcraft College	N		531
Upper	Minnow Pond	Min4	14 Mile	N/A		
Upper	Upper Rouge	Up2	Shiawasee Park	N		462


2025 Stoneflies Present?
No
Yes
Rouge River
Rouge Sub-Watersheds
Lower
Middle
Main
Upper
Farmington Hills
Novi
Livonia
Westland
Canton
Dearborn Heights
Evan2
Up2
Bell2
MR-26
MR-23
MR-22
John8
MR-25
John6
MR-1
John5
Mid1
MR-27A
MR-27
MR-20
MR-2a
MR-2
John3
John7
John2
MR-18
MR-3
MR-17
Ton1
MR-24
Fel1
LR-9
Fel6
Fel2
Fel4
LR-8
Fowl5
Fowl2
Fowl4
Sources: Esri, TomTom, Garmin, GEBCO, National Geographic, NOAA, and the GIS User Community, CHS, Esri, Garmin, NaturalVue

Friends of the ROUGE

Spring Bug Hunt

Surveying Since 1998

Become a Rouge Community Scientist!

Do you ever wonder about what lives in the river besides fish and turtles? Come to our 2025 Spring Bug Hunt and see for yourself the amazing variety of aquatic insects, crayfish, snails and clams that make up the bottom of the river food chain. Volunteers visit sites throughout the headwaters of the Rouge watershed and search for aquatic invertebrates. The presence or absence of these streambed creatures gives us valuable data on the quality of the river water and overall habitat.

Spring Bug Hunt

Saturday, April 12, 2025

10 a.m. – 4 p.m.

Meet at the Plymouth Cultural Center, 525 Farmer St., Plymouth

Registration Open Until Full

No prior experience needed, but registration is required. Children eight and older are welcome when accompanied by a participating adult. Groups of six or less can sign up together.

Program supported by:

Alliance of Rouge Communities

OURS TO PROTECT

Working together, restoring the river

This program is supported by Washtenaw County, the City of Southfield, the City of Troy, the Village of Beverly Hills, Northville Township, the City of Plymouth, Plymouth Township, the City of Novi, the City of Livonia, the City of Farmington, the city of Birmingham, donations and memberships.

Register Now

TheRouge.org/Bug-Hunts

Questions? Email Monitoring Manager, Lauren at leaton@therouge.org

Want to get more involved? Train to be a Team Leader – bank person or collector

Team Leader Training:

Sat. April 5, 2025 9am-1pm

Plymouth Twp. Park

Register Here

Friends of the ROUGE

SPRING BUG HUNT

DATA REPORT **2025**

Lauren Eaton,
Monitoring Manager
leaton@therouge.org
734-927-4916

Rouge River Benthic Monitoring Program
Spring 2025 Report

www.therouge.org
650 Church Street
Suite 209
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734-927-4904

This report covers benthic macroinvertebrate monitoring at 42 sites on Rouge River tributaries and branches in the spring of 2025. Most sites were sampled during the Spring Bug Hunt on April 12, 2025 where 113 attendees formed 15 teams and sampled 29 sites. Wayne County staff sampled 6 additional sites, and Sue Thompson sampled 4 additional sites. Team Leader training was held on April 5, 2025, and 8 attendees were trained in sampling protocols. A Bug Identification Night was held for Team Leaders on April 23rd, with 9 attendees. FOTR staff and Sue Thompson identified the remaining specimens. Funding for the monitoring was provided by the communities of Beverly Hills, Farmington, Livonia, Northville Township, Novi, Plymouth, Plymouth Township, Southfield, Troy, Birmingham, Washtenaw County Water Resources, Michigan Department of Environment, Great Lakes, and Energy (EGLE) and the United States Environmental Protection Agency's Great Lakes Restoration Initiative, and the Michigan Clean Water Corps (MiCorps).

FRIENDS OF THE ROUGE BENTHIC MONITORING PROGRAM

FOTR's benthic monitoring program was started in 2001 to involve a large number of volunteers in monitoring the health of the watershed by sampling the creeks of the Rouge River. The types and number of benthic macroinvertebrates found can be used to assess water quality. Each team of volunteers samples two sites under the direction of a trained team leader. Samples of each organism are collected and field identifications are verified in the lab.

Understanding Benthic Scores

Stream Quality Index (**SQI**) is determined by weighting each type and number of organisms found by their sensitivity ratings. SQI a measure of the degree of organic pollution that is calculated by rating and scoring organisms based on their sensitivity (sensitive, somewhat sensitive and tolerant) and frequency in the sample (rare or common). A higher proportion of sensitive organisms such as mayflies and caddisflies results in a higher **SQI**. A greater number of different organisms also results in a high **SQI**. Higher scores reflect better quality sites. The **SQI** has four different levels: **>48=EXCELLENT, 34-48=GOOD, 19-33=FAIR, <19=POOR**.

Number of taxa represents the number of different families of organisms. Like SQI, a higher number of taxa indicate a healthier site.

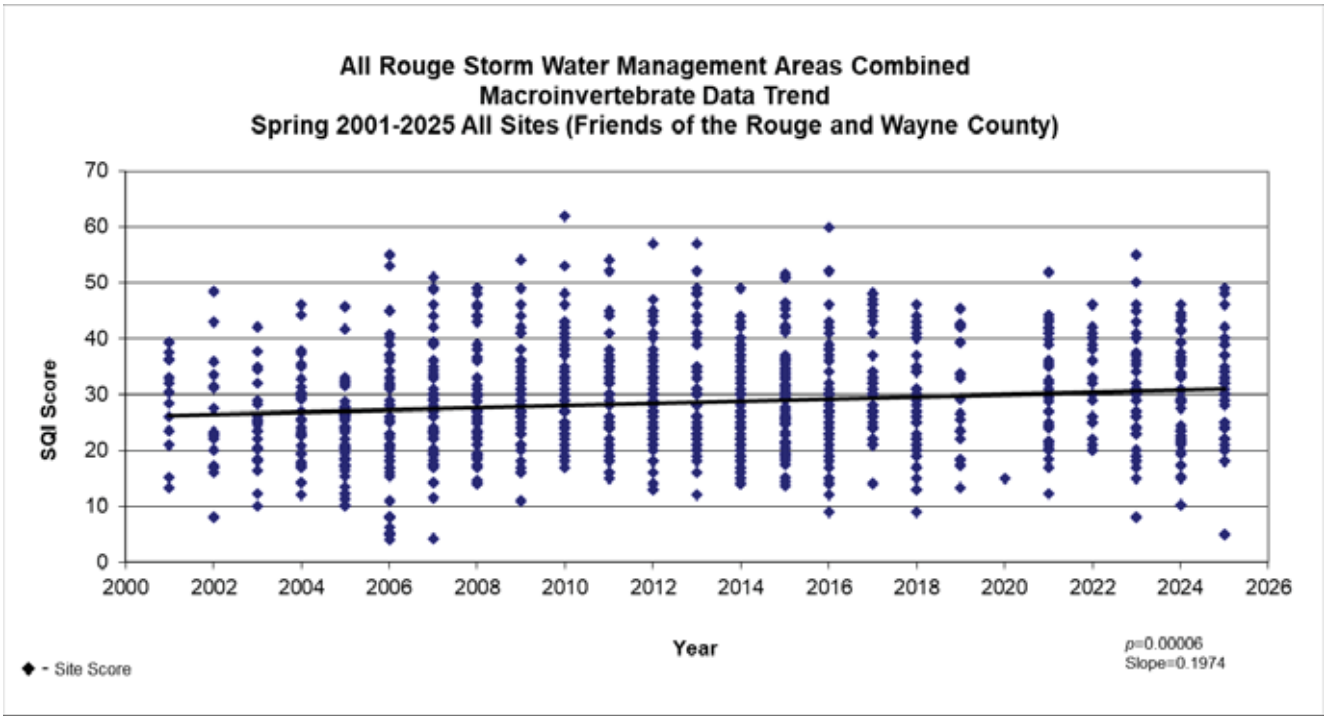
Number of insect taxa – insects are more sensitive than the non-insect taxa.

EPT refers to the number of mayfly, caddisfly and stonefly families found; these three orders contain some of the most sensitive organisms.

WQR – Water Quality Rating is a measure of the degree of organic pollution similar to SQI. Organisms are rated based on the Hilsenhoff Index of Biotic Integrity and scores are weighted by the number of individuals found. Unlike SQI, a LOWER score is indicative of less pollution. There are seven categories rather than four. 0.0-3.50=**Excellent**, 3.51-4.50=**Very Good**, 4.51-5.50=**Good**, 5.51-6.50=**Fair**, 6.51-7.50=**Fairly Poor**, 7.51-8-50=**Poor**, 8.51-10.0=**Very Poor**. WQR is calculated based on family level identification.

Overall Summary:

Stream Quality Index (SQI) averaged 30 or FAIR and the Water Quality Index (WQR) averaged 5.97 FAIR (maps pg. 11-12, Table 6, and graph below). Taxa averaged 13 Families per site, EPT 2, and Chloride 209 ppm (chronic level).
To compare trends over time, we analyzed the trends in SQIs for sites with three or more years of data. When all of the sites were compared, there was a small but significant upward trend in SQIs (see graph below).



SQI Summary:

When looking at SQI trends over time across subwatersheds, Main 1-2 had a significant positive trend. Treated separately or together with the Middle 1 subwatershed, Middle 3 also had a significant positive trend (Table 1, graphs pg. 21-23). No other subwatersheds showed significant trends.

Table 1-FOTR and Wayne County Spring Bug Hunt Summary 2001-2025 SQI					
Branch	**slope**	**p-value**	**True trend**	**Subwatershed average score**	**Stream Quality Index**
Main 1-2	0.1858	0.0301	yes, positive	27	Fair
Main3-4*	-0.1351	0.7504	no trend	25	Fair
Upper	-0.0377	0.6826	no trend	24	Fair
Johnson Creek	-0.0179	0.8730	no trend	38	Good
Middle 1	0.2213	0.0639	no trend	30	Fair
Middle 3	0.4111	0.0283	yes, positive	20	Fair
Lower 1	0.0642	0.5350	no trend	30	Fair
Lower 2	-0.1435	0.3490	no trend	26	Fair
Middle 1 and Middle 3 combined	0.3419	0.0014	yes, positive	27	Fair

***no sites sampled in this subarea spring 2025**

In addition to the trend analysis by subwatershed, a site-by-site analysis of all the sites was done (Table 2). The majority of sites had no trend. Six sites had significant positive trends, and three sites had significant negative trends.

Table 2-Friends of the Rouge and Wayne County Spring Bug Hunt Data Trend 2001-2025 by site SQI					
Site	**slope**	***p*-value**	**Statistically significant trend**	**Site average score**	**Stream Quality Index**
Main5	0.6884	0.0105	yes, positive	28	Fair
Main6	0.6926	0.0246	yes, positive	25	Fair
Bell2	-0.6712	0.0488	yes, negative	25	Fair
MR-23	-1.1124	0.0427	yes, negative	29	Fair
MR-27	-2.1868	0.0464	yes, negative	42	Good
John5	0.6688	0.0167	yes, positive	30	Fair
Nton	0.5919	0.0009	yes, positive	22	Fair
Wall2	0.3535	0.0231	yes, positive	22	Fair
Fel2	0.4883	0.0123	yes, positive	29	Fair

WQR Summary:

In 2021, MiCorps, the organization that oversees monitoring protocols for monitoring groups like ours in Michigan, developed a new scoring system for the bugs to replace the SQI. The new system, called Water Quality Rating (WQR), should better reflect the pollution tolerance of the bugs found at the site. Since there is no way to convert SQI to WQR, FOTR continues to track SQI. The Lower 2 subwatershed has a significantly negative trend (Table 3), however one site demonstrated a positive trend: John8 (Table 4). This site had a GOOD WQR score.

Table 3-FOTR and Wayne County Spring Bug Hunt Trend Summary 2023-2025 WQR

Branch	slope	p-value	True trend	Average score	Water Quality Rating (WQR)
Main 1/2	-0.1425	0.6383	no trend	6.29	Fair
Upper	-0.1388	0.7814	no trend	6.41	Fair
Johnson Creek	0.2325	0.0767	no trend	5.81	Fair
Middle 1	0.2488	0.3064	no trend	5.97	Fair
Lower 1	0.0933	0.7401	no trend	5.92	Fair
Lower 2	-0.3225	0.0261	yes, negative	5.84	Fair
All subwatersheds	-0.0474	0.6839	no trend	6.06	Fair

***No sites sampled in Main 3/4 in 2025. Middle 3 sites did not have enough data for trends**

Table 4-Friends of the Rouge and Wayne County Spring Bug Hunt Data Trend 2003-2025 by site WQR					
Site	**slope**	***p*-value**	**Statistically significant trend**	**Site average score**	**Water Quality rating (WQR)**
Evan2	0.0700	0.9031	no trend	6.47	Fair
Main1	0.1900	0.0770	no trend	6.82	Fairly Poor
Nott	-0.4750	0.3275	no trend	6.69	Fairly Poor
Sprag	-0.3550	0.5885	no trend	5.16	Good
Bell1	0.0050	0.9268	no trend	5.92	Fair
Bell2	-0.2400	0.9048	no trend	8.16	Poor
Bell3	-0.4750	0.3505	no trend	6.20	Fair
Up2	0.1550	0.5963	no trend	5.39	Good
MR-22	0.2250	0.6785	no trend	5.83	Fair
MR-23	0.3300	0.4878	no trend	5.88	Fair
John1	0.5900	0.0989	no trend	6.46	Fair
John2	0.1100	0.7450	no trend	5.73	Fair
John3	0.0400	0.4543	no trend	5.94	Fair
John8	0.1000	0.0000	yes, positive	5.40	Good
Ing1	0.1800	0.1012	no trend	6.10	Fair
Bish2	-0.3100	0.3760	no trend	5.24	Good
Nton	-0.4700	0.6460	no trend	6.09	Fair
Ton1	-0.3950	0.4339	no trend	6.42	Fair
Fowl1	0.6500	0.6259	no trend	5.87	Fair
Fowl2	-0.1450	0.5288	no trend	6.11	Fair
Fel2	-0.2250	0.1210	no trend	5.78	Fair
LR-1	-0.2900	0.2940	no trend	5.74	Fair
LR-3	-0.3550	0.2049	no trend	5.94	Fair

Friends of the Rouge

SALT WATCH™
IZAAK WALTON LEAGUE OF AMERICA

Since 2020, we have been testing sites for road salt (chloride) through the Izaak Walton League's Salt Watch program during the Stonefly Search and Bug Hunts. Salt we apply to our roads and sidewalks for snow and ice removal washes into our streams and is toxic to aquatic life when it reaches high levels. Recognizing this, (EGLE) set water quality values aiming to protect surface water from chloride, based on parts per million (ppm) concentrations.

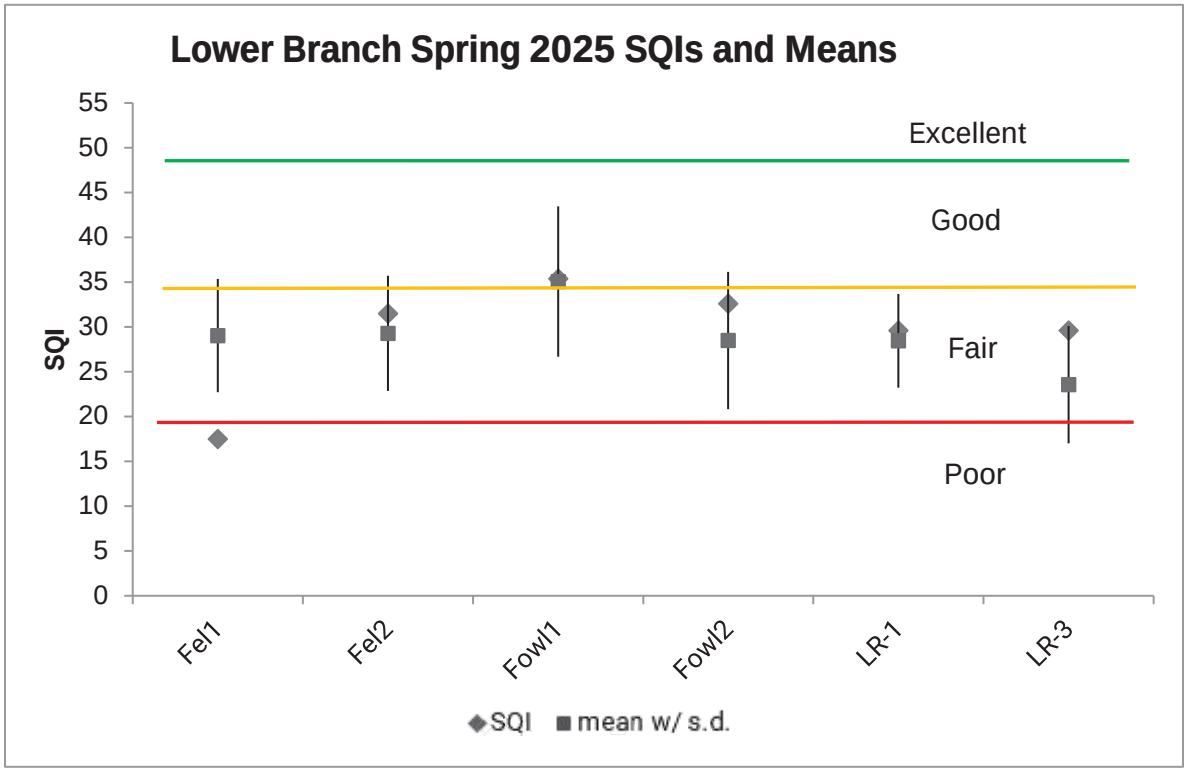
These are:
150 ppm and above - causes long term effects to aquatic life (chronic)
320 ppm and above - causes acute effects to aquatic life (toxic)

This spring, twelve sites had toxic levels of chloride, and thirteen had chronic levels of chloride (table 5, map pg. 13).

Table 5: Spring 2025 Sites With Elevated Chloride Levels

BRANCH	Stream Name	FIELDID	Site Description	Cl ppm	Cl Rating
Lower	Lower Rouge	LR-3	Goudy Park	200	chronic
Main	Evans Creek	Evan2	LTU	612	toxic
Main	Main Rouge	Main1	Firefighters Park	166	chronic
Main	Main Rouge	Main3	Quarton at Lakeside	197	chronic
Main	Main Rouge	Main4	Booth Park	248	chronic
Main	Main Rouge	Main4.5	Birmingham	248	chronic
Main	Main Rouge	Main5	Douglas Evans	213	chronic
Main	Main Rouge	Main6	Southfield Civic Center	231	chronic
Main	Nottingham Creek	Nott	Country Day Middle School	231	chronic
Main	Sprague Creek	Sprag	Lloyd Stage Nature Center	231	chronic
Middle	Bishop Creek	Bish2	Bishop Scarborough	>612	toxic
Middle	Ingersoll Creek	Ing1	Brookfarm Park	404	toxic
Middle	Middle Rouge	MR-1	Northville Rec	242	chronic
Middle	Middle Rouge	MR-2	Reservoir Rd	242	chronic
Middle	Middle Rouge	MR-4	Levan Knoll	280	chronic
Middle	Middle Rouge	MR-18	Springbrook Rec	346	toxic
Middle	Tonquish Creek	Nton	S Evergreen St	267	chronic
Middle	Tonquish Creek	Ton2	Ann Arbor Rd	330	toxic
Middle	Walled Lake Drainage	Wall1	Rotary Park	432	toxic
Middle	Walled Lake Drainage	Wall2	10 Mile	353	toxic
Upper	Bell Branch	Bell1	Bicentennial Park	378	toxic
Upper	Bell Branch	Bell2	Schoolcraft College	353	toxic
Upper	Bell Branch	Bell3	Livonia 6 Mile	330	toxic
Upper	Seeley Creek	See3	Kennedy Court	378	toxic
Upper	Upper Rouge	Up2	Shiawasee Park	320	toxic

Lower Branch



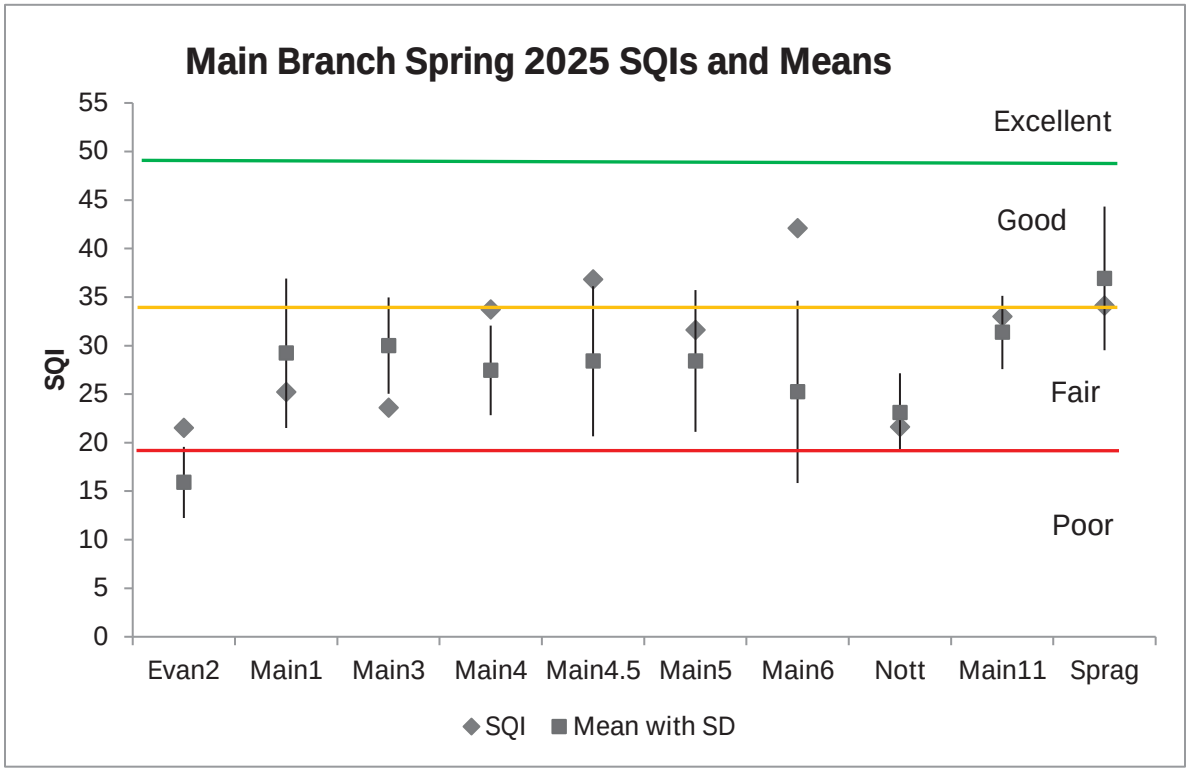
Six sites were sampled on the Lower Branch (Table 6, pg. 17-18), including two tributaries: Fellows and Fowler Creeks. SQIs averaged FAIR (29). One sites had a GOOD SQI, four sites had FAIR SQIs, and one site had a POOR SQI. Site scores calculated using the WQR system averaged fair (6.23). According to the WQR scoring, five sites were FAIR, and one was POOR. Sites had an average of 13 taxa, and 2 EPT taxa.

Chloride levels ranged from a low of 30 ppm at Fowl1 to a high of 200 ppm at LR-3; one site had chronic level (LR-3) with no sites at the toxic level (Table 5, map pg. 13).

SQI scores were compared with past data (graph above). Five were within a standard deviation of the average for the site, and one was below (Fel1).

Long term trend analysis showed no significant trends for the Lower 1 and for all of the Lower when the subwatersheds are combined (Table 1, graphs pg. 20). Fel2 had a significant positive trend (Table 2).

Main Branch

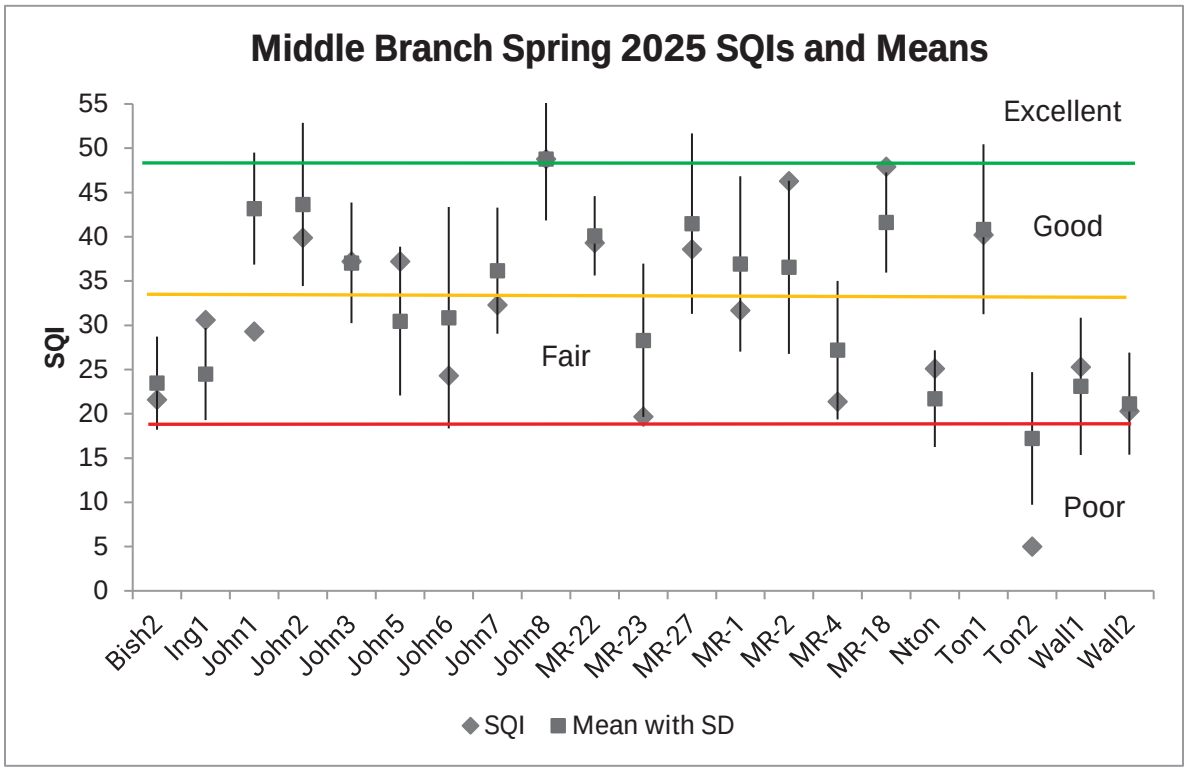


Ten sites on the Main Branch were sampled, including the following tributaries: Evans, Nottingham, Quarton, and Sprague Creek. SQIs averaged FAIR (30). Four sites rated GOOD, and six FAIR. WQRs averaged FAIR (6.03). One site rated GOOD, eight rated FAIR, and one rated FAIRLY POOR. Taxa averaged 13 and 2 EPT. Chloride levels averaged 248 ppm, and most sites were at the chronic effects level (>150 ppm), with one site at the toxic level (Evan2) (Table 5).

SQI scores were compared with past data (graph above). Five were within a standard deviation of the average for the site, four were above, and one was below.

Long term trend analysis shows a significant positive trend for the Main 1-2 subwatersheds (Table 1, graphs pg. 21). Main5 and Main6 had significant positive trends (Table 2).

Middle Branch

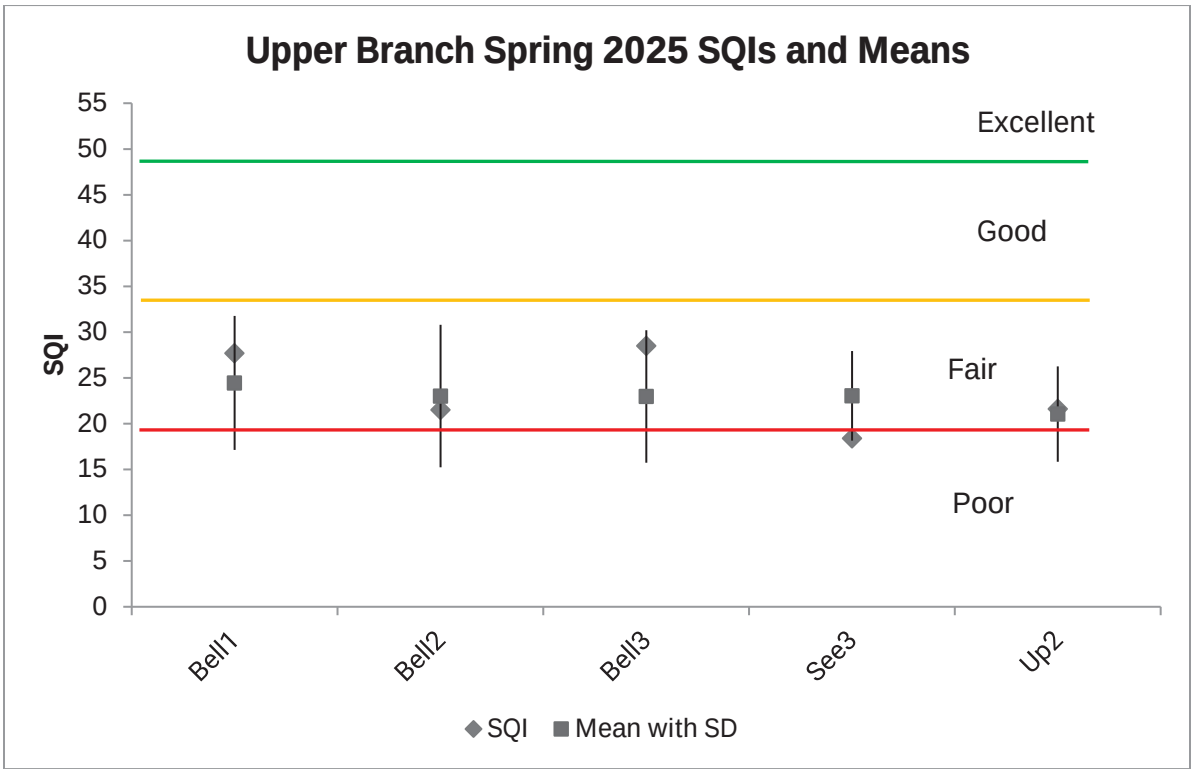


Twenty-one sites were sampled on the Middle Branch and six of its tributaries. Ten sites were sampled on Johnson Creek, one on Bishop Creek, three on Tonquish Creek, one on Ingersoll Creek, and two Walled Lake Drainage sites. The final four sites were in the Middle Rouge. SQI scores averaged FAIR (32). One site SQI was EXCELLENT, eight were GOOD, eleven FAIR and one POOR. WQRs averaged fair (5.93). Five sites had GOOD WQRs, fourteen were FAIR, and two were FAIRLY POOR. Taxa averaged 13, and EPT averaged 2.

In comparing averages and past data (graph above), the majority of sites (17) were within a standard deviation of the average for the sites. Two sites were above (Ing1 and MR-18) and two sites were below (John1 and Ton2). Chloride levels averaged 187 ppm (chronic) and four sites were at the toxic level (Table 5).

In long term trend analysis, the Middle 3 subwatershed had a positive trend, and when the Middle 1 and Middle 3 subwatersheds were combined, there was also a significant positive trend (Table 1, graphs pg. 22-23). John5, Nton, and Wall2 all had a positive trends when considered by site, whereas MR-23, and MR-27 all had negative trends (Table 2).

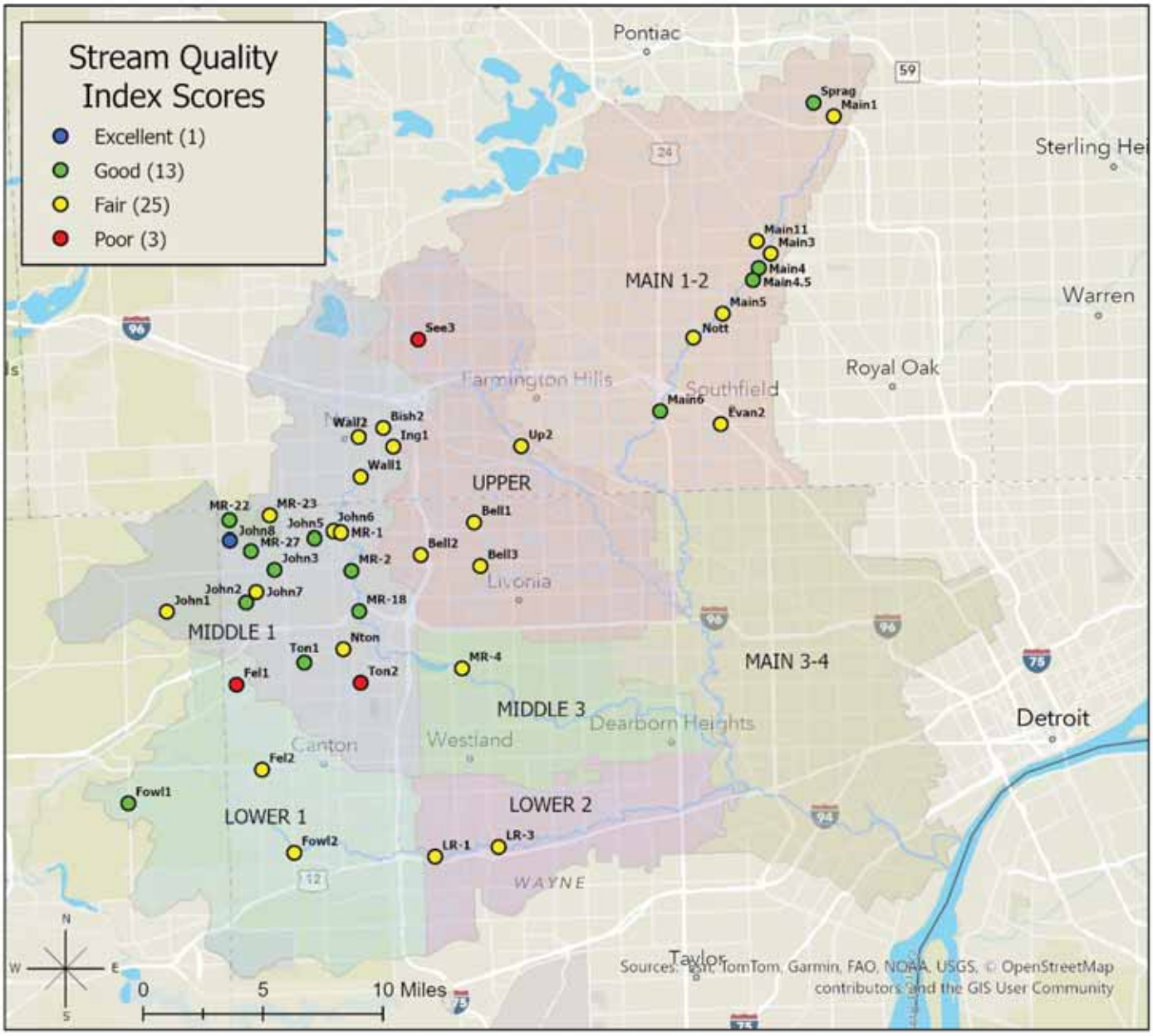
Upper Branch



Five Upper branch sites were sampled including three sites on the Bell Creek tributary, one on Seeley Creek, and one on the Upper Rouge at Shiawassee Park. SQIs averaged FAIR (24). Four sites were FAIR, and one was POOR. WQR averaged fair (5.9). One site had a GOOD WQR, three FAIR, and one FAIRLY POOR. Taxa averaged 11, and EPT averaged 1.

In comparing averages and past data (graph above), all sites were within the standard deviation of the average for a given site. Chloride levels averaged 352 ppm (chronic) and all five sites were at the chronic level (Table 5).

Long term trend analysis shows no trend for the Upper Branch subwatershed (Table 1, graph pg. 24), however when looking at individual sites, Bell2 had a significant negative trend (Table 2).


Stream Quality Index Scores
Excellent (1)
Good (13)
Fair (25)
Poor (3)
Pontiac
Sterling Heights
Warren
Royal Oak
Farmington Hills
Southfield
Livonia
Dearborn Heights
Detroit
Canton
Westland
Taylor
WAYNE
MAIN 1-2
MAIN 3-4
UPPER
MIDDLE 1
MIDDLE 3
LOWER 1
LOWER 2
Sprag
Main1
Main11
Main3
Main4
Main4.5
Main5
Nott
Main6
Evan2
See3
Wall2
Bish2
Ing1
Wall1
Up2
MR-22
MR-23
John8
John5
John6
MR-1
MR-27
John3
MR-2
Bell1
Bell2
Bell3
John2
John7
John1
MR-18
Nton
Ton1
Ton2
MR-4
Fel1
Fel2
Fowl1
Fowl2
LR-1
LR-3
N
W
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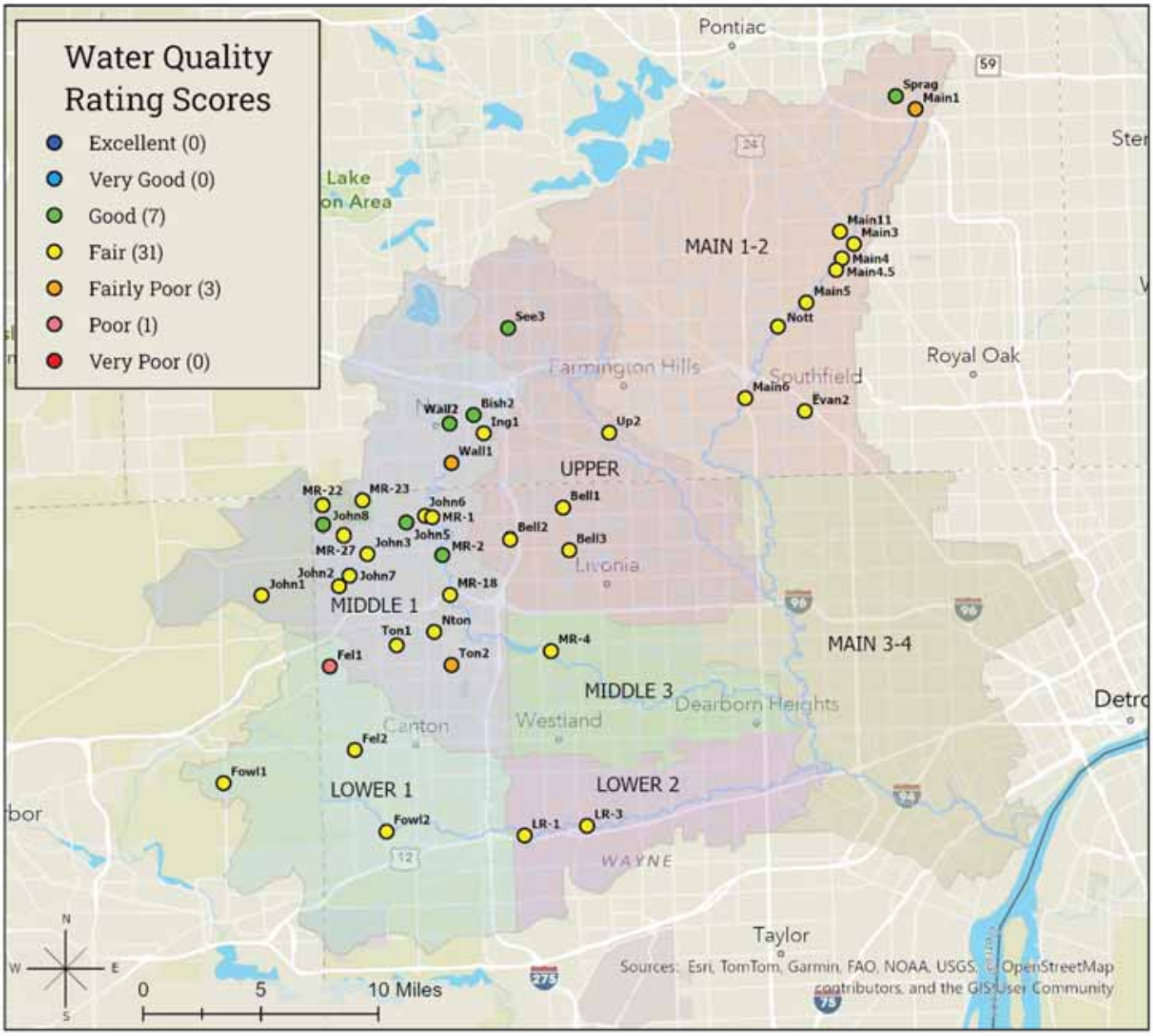
S
0
5
10 Miles
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community


Water Quality Rating Scores
Excellent (0)
Very Good (0)
Good (7)
Fair (31)
Fairly Poor (3)
Poor (1)
Very Poor (0)
Pontiac
Lake
on Area
Sprag
Main1
Main11
Main3
Main4
Main4.5
Main5
Nott
MAIN 1-2
See3
Farmington Hills
Southfield
Royal Oak
Main6
Evan2
Wall2
Bish2
Ing1
Up2
Wall1
UPPER
MR-22
MR-23
John6
John8
MR-1
John5
John3
MR-27
MR-2
Bell1
Bell2
Bell3
Livonia
John2
John7
John1
MR-18
MIDDLE 1
Ton1
Nton
Fel1
Ton2
MR-4
MAIN 3-4
MIDDLE 3
Dearborn Heights
Canton
Westland
Fel2
Fowl1
LOWER 1
LOWER 2
Fowl2
LR-1
LR-3
WAYNE
Taylor
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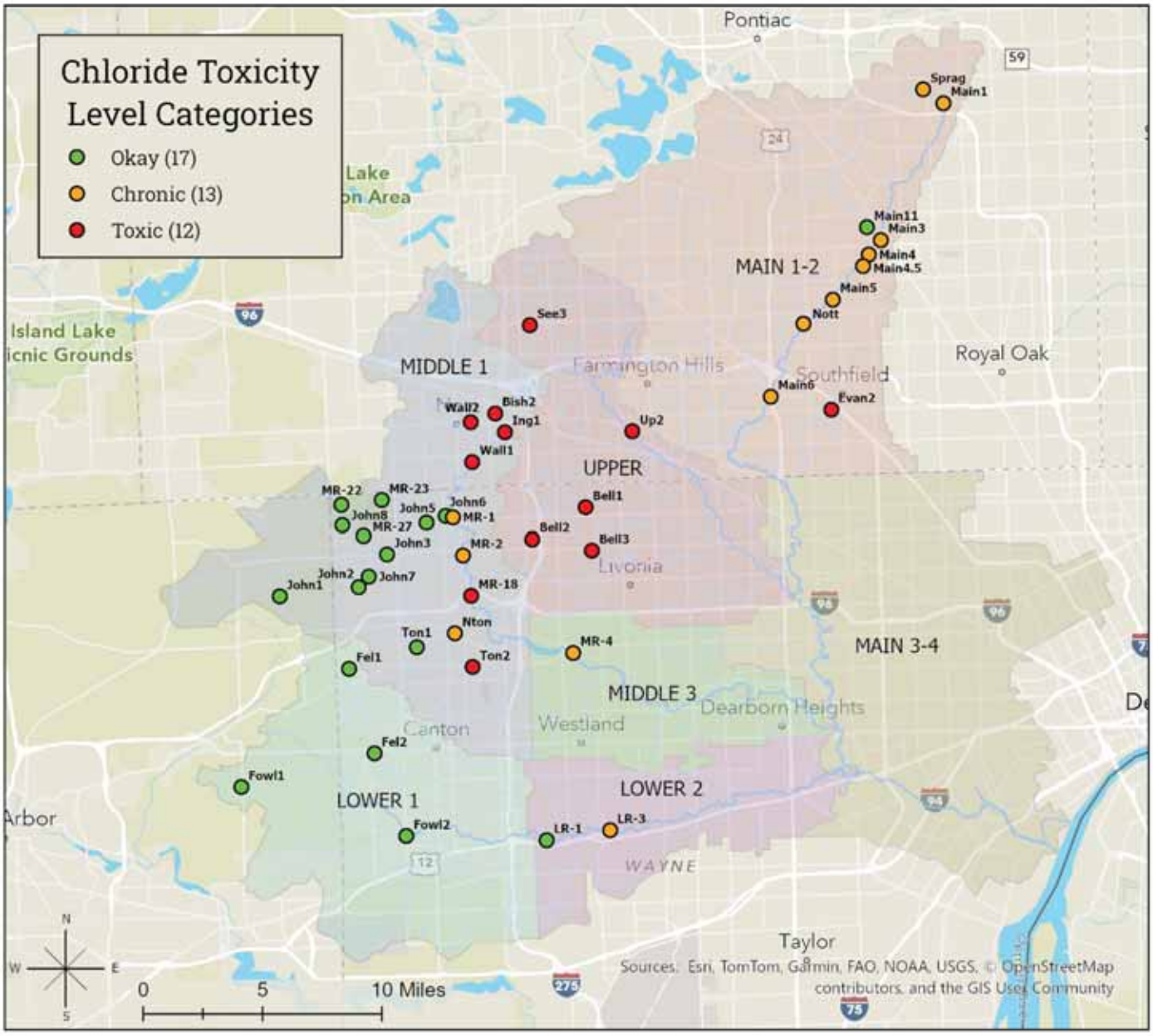
5
10 Miles
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community


Chloride Toxicity Level Categories
Okay (17)
Chronic (13)
Toxic (12)
Pontiac
Lake
on Area
Island Lake
icnic Grounds
Sprag
Main1
Main11
Main3
Main4
Main4.5
MAIN 1-2
Main5
Nott
See3
MIDDLE 1
Farmington Hills
Southfield
Royal Oak
Main6
Evan2
Wall2
Bish2
Ing1
Up2
Wall1
UPPER
MR-22
MR-23
John6
John5
John8
MR-1
MR-27
John3
MR-2
Bell1
Bell2
Bell3
Livonia
John2
John7
John1
MR-18
Nton
Ton1
MR-4
Ton2
Fel1
MAIN 3-4
MIDDLE 3
Dearborn Heights
Canton
Westland
Fel2
Fowl1
LOWER 1
LOWER 2
Arbor
Fowl2
LR-1
LR-3
WAYNE
Taylor
N
W
E
S
0
5
10 Miles
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Thank you to all the **volunteers** and **Team Leaders, Wayne County Department of Public Services for providing bug hunt team leaders, sampling additional sites, and other technical support**, **Sue Thompson** for sampling additional sites, identifying difficult specimens, and helping create the report. Thank you to **Deirdre Devlin**, and **Lawrence Tech** staff and students for sampling sites.

Funding for the event was provided by the communities of Beverly Hills, Birmingham, Farmington, Livonia, Northville Township, Novi, Plymouth, Plymouth Township, Southfield, Troy, Washtenaw County Water Resources, Michigan Department of Environment, Great Lakes, and Energy and the United States Environmental Protection Agency's Great Lakes Restoration Initiative, the Alliance of Rouge Communities, and the Michigan Clean Water Corps.

Please mark your calendars for the 2025 Fall Bug Hunt Oct. 12, 2024 10 am-4 pm

Volunteers meet at 10am at the Plymouth Arts and Recreation Building Jack Wilcox Theater. There will be an indoor welcome from 10am-11am where volunteers will have a chance to meet their team, enjoy refreshments (coffee, juice, bagels, and donuts), and watch a short presentation before heading out to two sites throughout the watershed. Ending times for each team will vary, but most teams should be able to finish by 3pm.

Holding it this way means people can meet all of the rest of the volunteers and it makes it easier for us to make adjustments so that each team has enough volunteers. For those who would rather meet in the field, that can still be arranged.

Please mark your calendars for the Fall Team Leader Training Sept. 27th, 2025 9 am-1 pm

(must have participated in a previous event)

We are always in need of people willing to train and act as Team Leaders for Bug Hunts and Stonefly Searches. If you have attended an event before and would like to train to become a team leader, please join us for the fall training.

Table 6: 2025 Spring Bug Hunt Sampling Sites										
Lower Branch										
Stream Name	FIELDID	Site Description	WQR	WQR Rating	SQI	SQI Rating	Taxa	EPT	Chloride (ppm)	Chloride Rating
Fellows Creek	Fel1	Top of Hill Ct	8.28	Poor	18	Poor	10	1	82	OK
Fellows Creek	Fel2	Vintage Valley	5.58	Fair	32	Fair	12	2	82	OK
Fowler Creek	Fowl1	Prospect	6	Fair	35	Good	16	3	30	OK
Fowler Creek	Fowl2	Fowler Beck	6.35	Fair	33	Fair	14	2	49	OK
Lower Rouge	LR-1	Commerce Ct	5.53	Fair	30	Fair	12	2	145	OK
Lower Rouge	LR-3	Goudy Park	5.66	Fair	30	Fair	11	2	200	Chronic
Average			**6.23**	**Fair**	**29**	**Fair**	**13**	**2**	**98**	**OK**
Main Branch										
Stream Name	FIELDID	Site Description	WQR	WQR Rating	SQI	SQI Rating	Taxa	EPT	Chloride	Chloride Rating
Evans Creek	Evan2	LTU	6.28	Fair	22	Fair	8	1	612	Toxic
Main Rouge	Main1	Firefighters Park	7	Fairly Poor	25	Fair	9	2	166	Chronic
Main Rouge	Main3	Quarton at Lakeside	6.42	Fair	24	Fair	9	1	197	Chronic
Main Rouge	Main4	Booth Park	5.58	Fair	34	Good	14	2	248	Chronic
Main Rouge	Main4.5	Birmingham	6.38	Fair	37	Good	16	2	248	Chronic
Main Rouge	Main5	Douglas Evans	5.99	Fair	32	Fair	13	2	213	Chronic
Main Rouge	Main6	Southfield Civic Center	6.06	Fair	42	Good	18	3	231	Chronic
Nottingham Creek	Nott	Country Day Middle School	6.06	Fair	22	Fair	11	1	231	Chronic
Quarton Branch	Main11	Fairway Park	6.02	Fair	33	Fair	13	3	102	Ok
Sprague Creek	Sprag	Lloyd Stage Nature Center	4.53	Good	34	Good	14	3	231	Chronic
Average			**6.03**	**Fair**	**30**	**Fair**	**13**	**2**	**248**	**Chronic**

Table 6 continued: 2025 Spring Bug Hunt Sampling Sites

Middle Branch

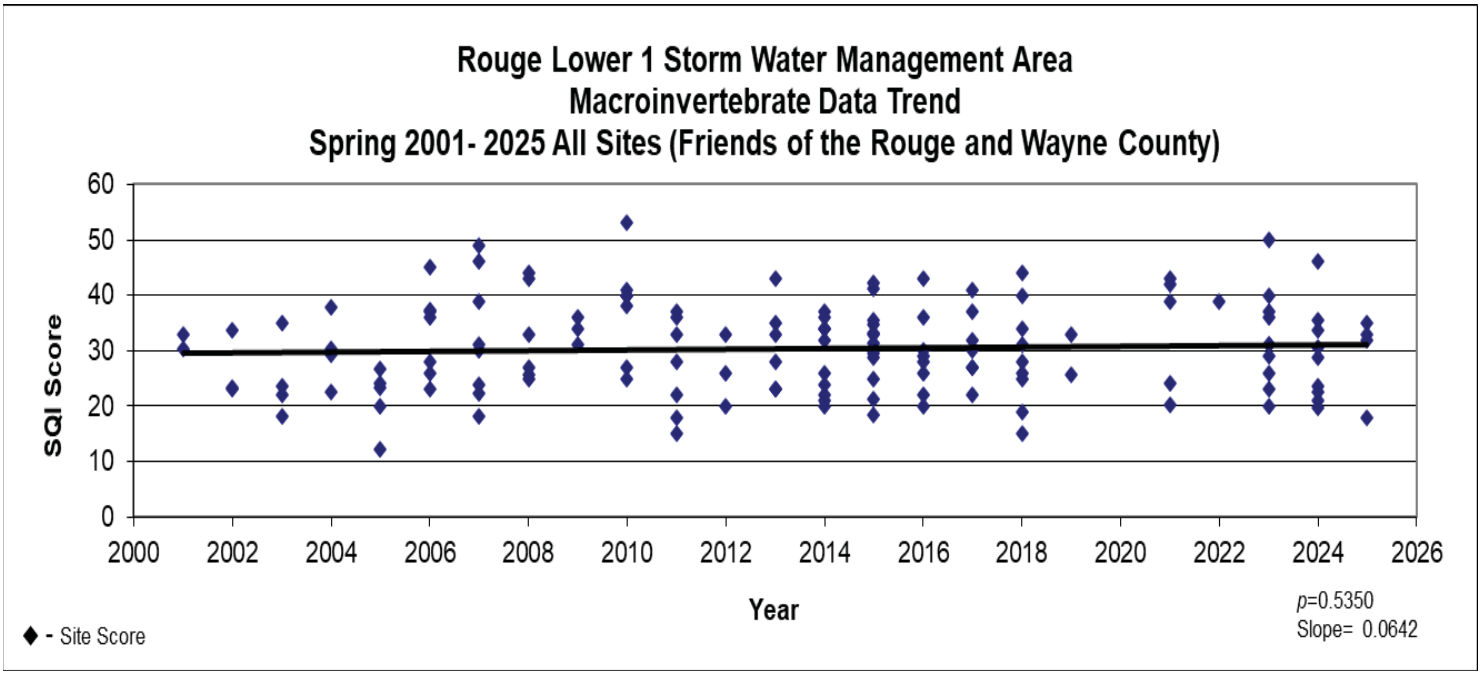
Stream Name	FIELDID	Site Description	WQR	WQR Rating	SQI	SQI Rating	Taxa	EPT	Chloride	Chloride Rating
Bishop Creek	Bish2	Bishop Scarborough	5.05	Good	22	Fair	10	1	>612	Toxic
Ingersoll Creek	Ing1	Brookfarm Park	5.91	Fair	31	Fair	13	1	404	Toxic
Johnson Creek	John1	5M Salem	6	Fair	29	Fair	14	4	49	Ok
Johnson Creek	John2	5M NV	5.69	Fair	40	Good	18	4	56	Ok
Johnson Creek	John3	6M NV	6	Fair	37	Good	15	4	56	Ok
Johnson Creek	John5	Fish Hatchery Park	5.47	Good	37	Good	14	3	73	Ok
Johnson Creek	John6	7 Mile & Hines	5.77	Fair	24	Fair	10	2	82	Ok
Johnson Creek	John7	Arcadia Ridge subdivision	6.1	Fair	32	Fair	11	3	56	Ok
Johnson Creek	John8	Maybury Angell	5.5	Good	49	Excellent	20	3	101	Ok
Johnson Creek	MR-22	Maybury south	5.82	Fair	39	Good	20	1	81	Ok
Johnson Creek	MR-23	Maybury north	6.03	Fair	20	Fair	10	0	81	Ok
Johnson Creek	MR-27	Ridge	5.71	Fair	39	Good	15	3	81	Ok
Middle Rouge	MR-1	Northville Rec	5.68	Fair	32	Fair	12	1	242	Chronic
Middle Rouge	MR-2	Reservoir Rd	5.48	Good	46	Good	18	5	242	Chronic
Middle Rouge	MR-4	Levan Knoll	6.42	Fair	21	Fair	11	2	280	Chronic
Middle Rouge	MR-18	Springbrook Rec	6.17	Fair	48	Good	20	3	346	Toxic
Tonquish Creek	Nton	S Evergreen St	6.06	Fair	25	Fair	9	1	267	Chronic
Tonquish Creek	Ton1	Plymouth Twp Park	6.21	Fair	40	Good	19	2	131	Ok
Tonquish Creek	Ton2	Ann Arbor Rd	7.15	Fairly Poor	5	Poor	3	0	330	Toxic
Walled Lake Drainage	Wall1	Rotary Park	7	Fairly Poor	25	Fair	10	2	432	Toxic
Walled Lake Drainage	Wall2	10 Mile	5.41	Good	20	Fair	8	1	353	Toxic
Average			**5.93**	**Fair**	**32**	**FAIR**	**13**	**2**	**187**	**Chronic**

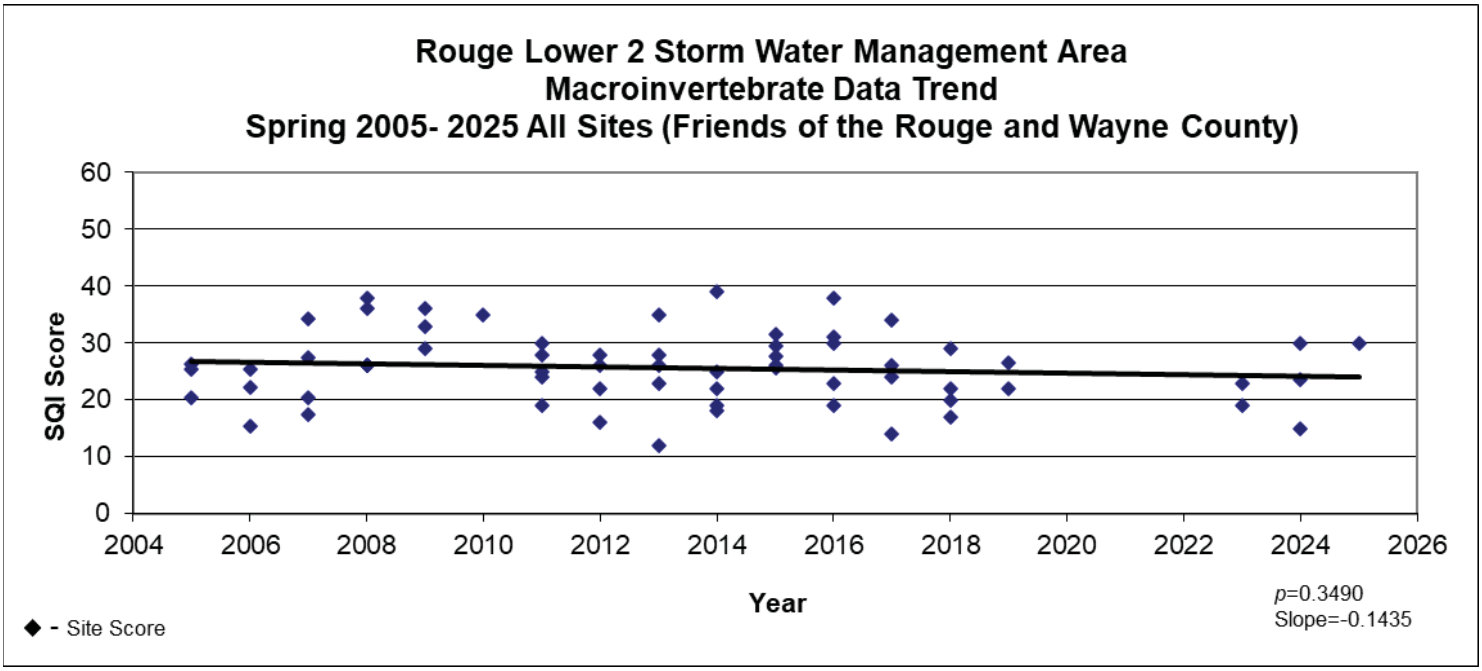
Upper Branch

Stream Name	FIELDID	Site Description	WQR	WQR Rating	SQI	SQI Rating	Taxa	EPT	Chloride	Chloride Rating
Bell Branch	Bell1	Bicentennial Park	5.9	Fair	28	Fair	14	0	378	Toxic
Bell Branch	Bell2	Schoolcraft College	7	Fairly Poor	22	Fair	10	1	353	Toxic
Bell Branch	Bell3	Livonia 6 Mile	5.89	Fair	29	Fair	12	0	330	Toxic
Seeley Creek	See3	Kennedy Court	5.04	Good	18	Poor	10	1	378	Toxic
Upper Rouge	Up2	Shiawasee Park	5.67	Fair	22	Fair	10	1	320	Toxic
Average			**5.90**	**Fair**	**24**	**FAIR**	**11**	**1**	**352**	**Toxic**

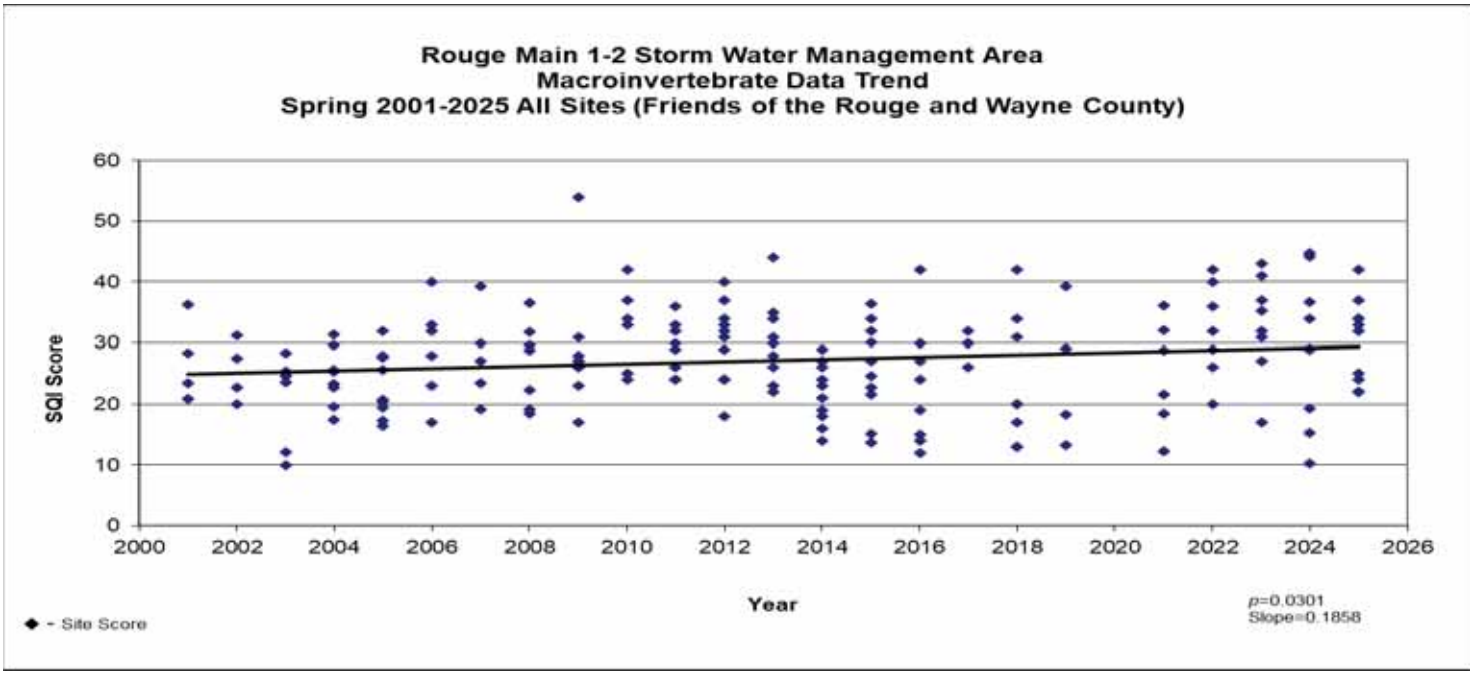
Trend Graphs

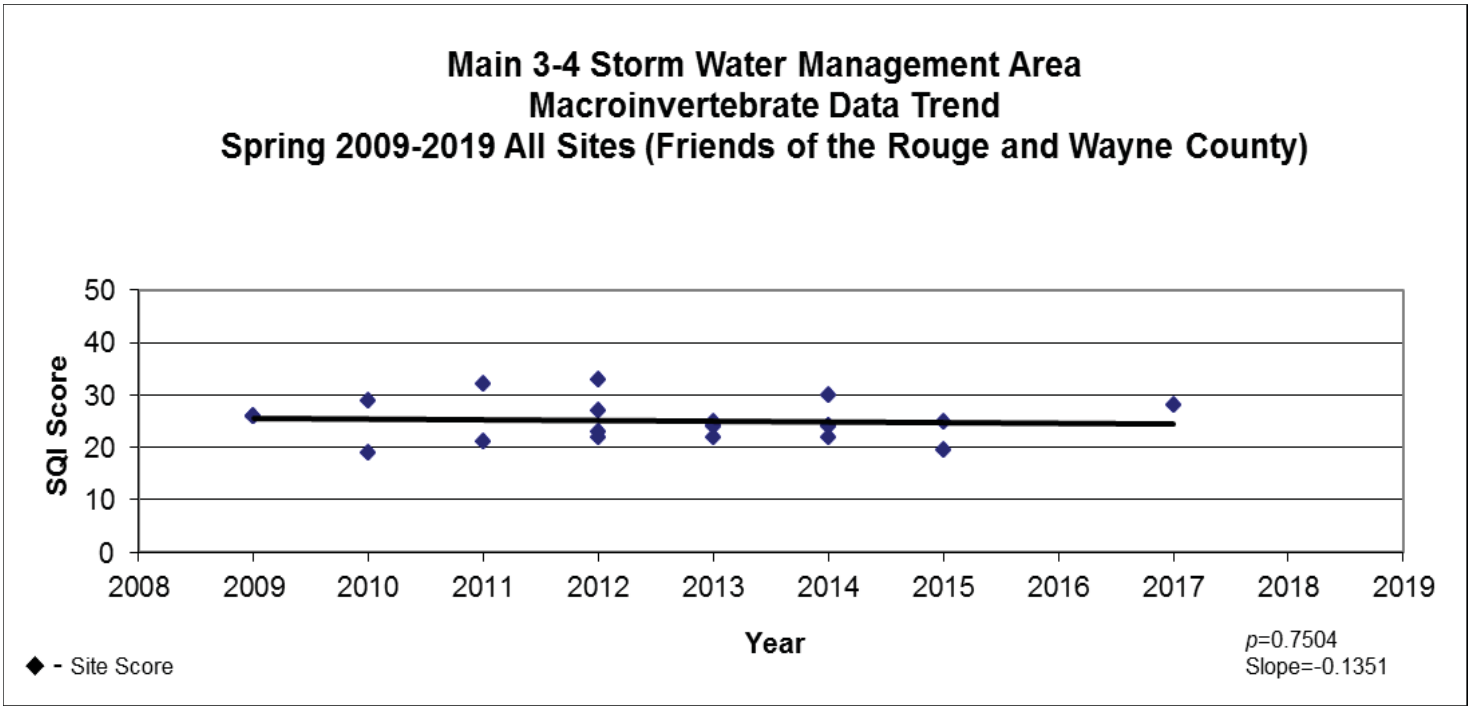
Lower Branch





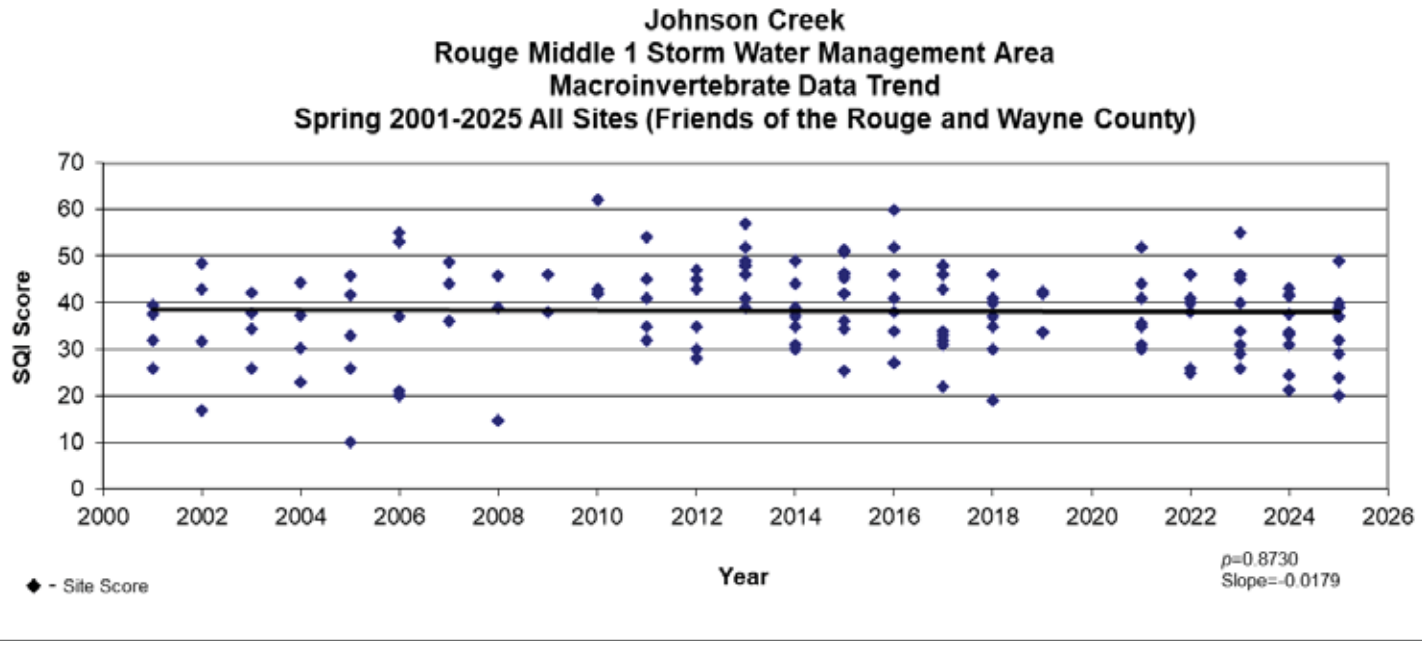
Main Branch

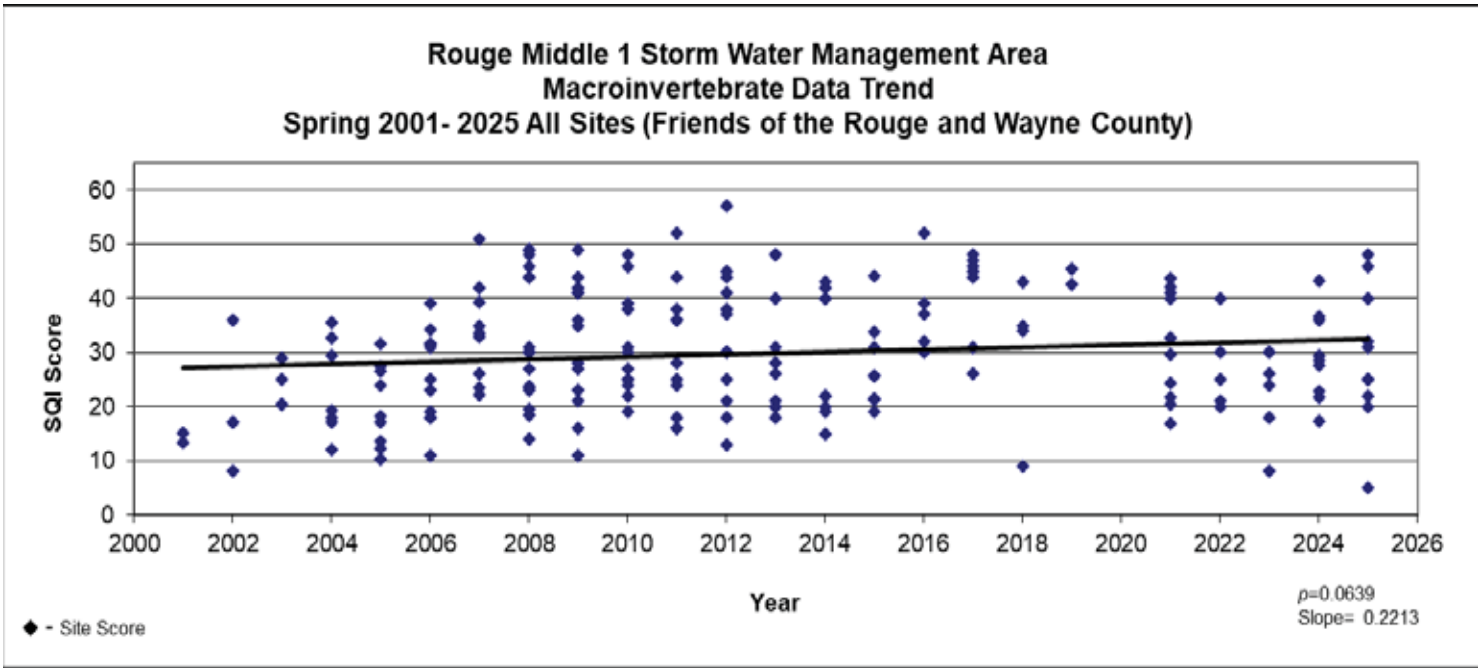


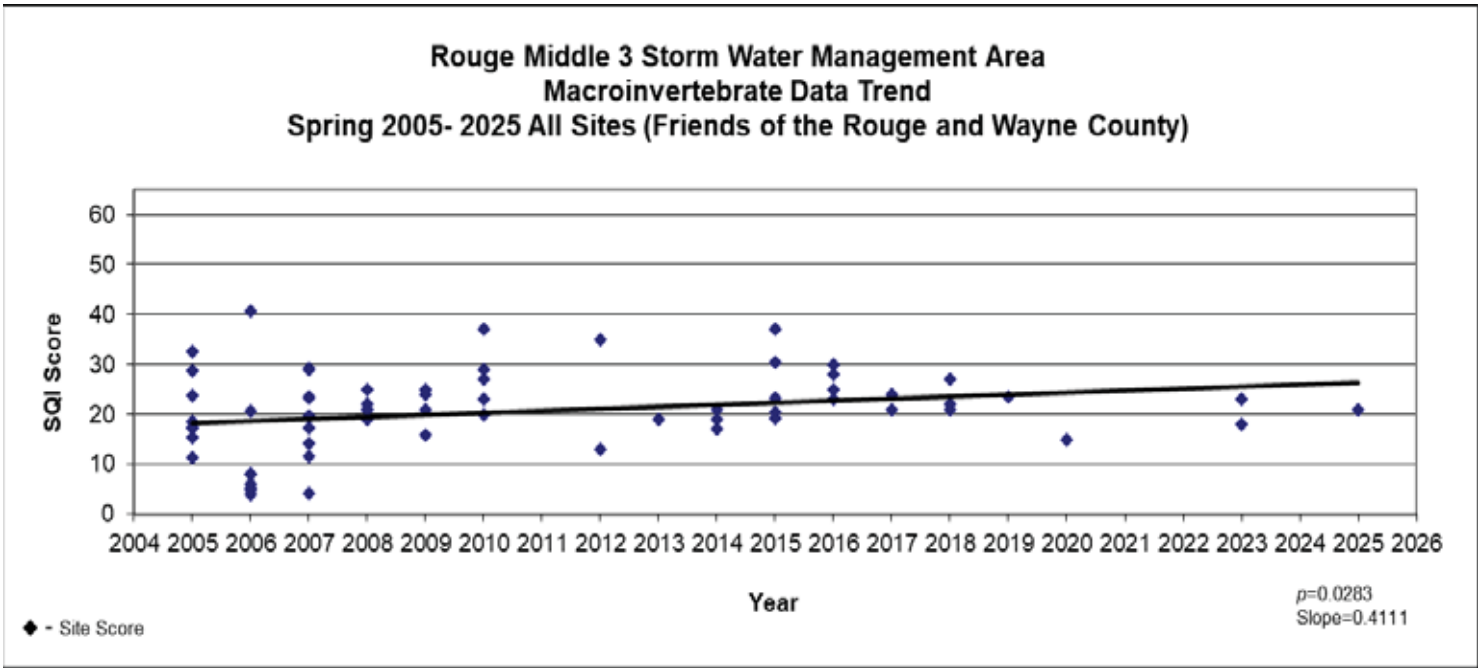


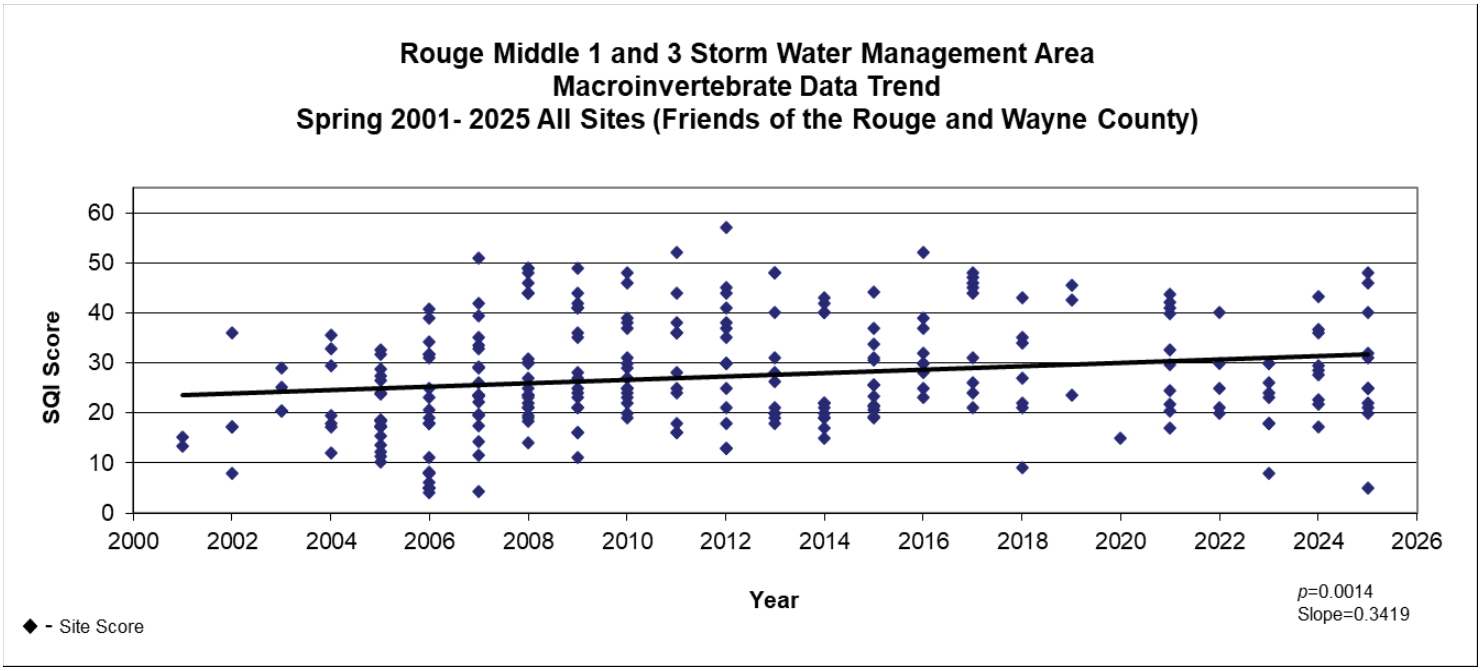
***no sites sampled in Main 3/4 in Spring 2018-2025**

Middle Branch



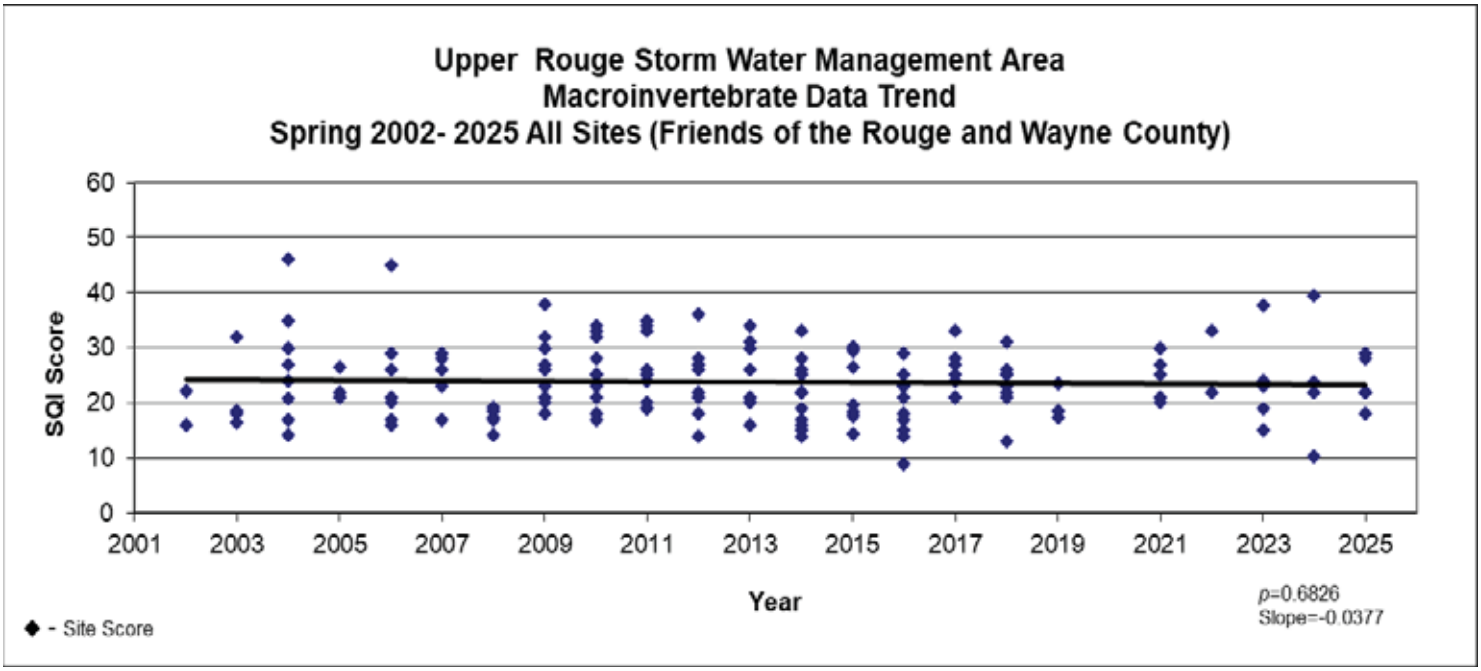






***Middle 1 and 3 graph does not include Johnson Creek**

Upper Branch



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Rouge River Benthic Monitoring Program
Fall 2025 Report

This report contains benthic macroinvertebrate sampling results from 46 Rouge tributary and river sites. The Fall Bug Hunt on October 11, 2025 had 15 teams that sampled 29 sites, and it was a beautiful fall day. Groups that participated included Lawrence Tech University's Environmental Alliance student group; Wayne State University; the University of Michigan-Ann Arbor, and the Paul H. Young Chapter of Trout Unlimited. Additional sites were sampled during the Team Leader Training, and by Wayne County. Funding for the monitoring was provided by the communities of Beverly Hills, Farmington, Livonia, Northville Township, Novi, Plymouth, Plymouth Township, Southfield, Troy, Birmingham, Washtenaw County Water Resources, Michigan Department of Environment, Great Lakes, and Energy (EGLE), the United States Environmental Protection Agency Great Lakes Restoration Initiative, and the Michigan Clean Water Corps.

FRIENDS OF THE ROUGE BENTHIC MONITORING PROGRAM

FOTR's benthic monitoring program was started in 2001 to involve a large number of volunteers in monitoring the health of the watershed by sampling the creeks of the Rouge River. The types and number of benthic macroinvertebrates found can be used to assess water quality. Each team of volunteers samples two sites under the direction of a trained team leader. Samples of each organism are collected and field identifications are verified in the lab.

Understanding Benthic Scores

Stream Quality Index (**SQI**) is determined by weighting each type and number of organisms found by their sensitivity ratings. SQI a measure of the degree of organic pollution that is calculated by rating and scoring organisms based on their sensitivity (sensitive, somewhat sensitive and tolerant) and frequency in the sample (rare or common). A higher proportion of sensitive organisms such as mayflies and caddisflies results in a higher **SQI**. A greater number of different organisms also results in a high **SQI**. Higher scores reflect better quality sites. The **SQI** has four different levels: **>48=EXCELLENT, 34-48=GOOD, 19-33=FAIR, <19=POOR**.

Number of taxa represents the number of different families of organisms. Like SQI, a higher number of taxa indicate a healthier site.

Number of insect taxa – insects are more sensitive than the non-insect taxa.

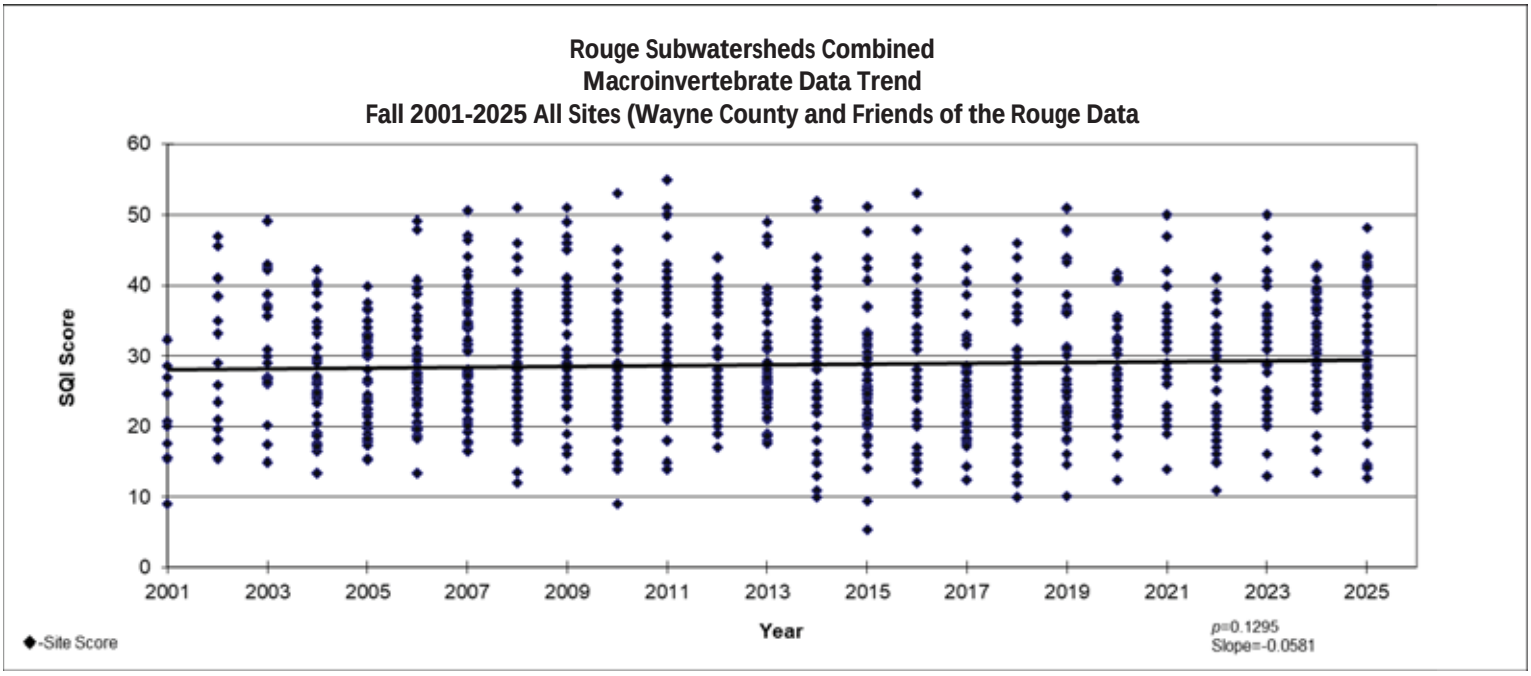
EPT refers to the number of mayfly, caddisfly and stonefly families found (Ephemeroptera, Plecoptera, and Tricoptera); these three orders contain some of the most sensitive organisms.

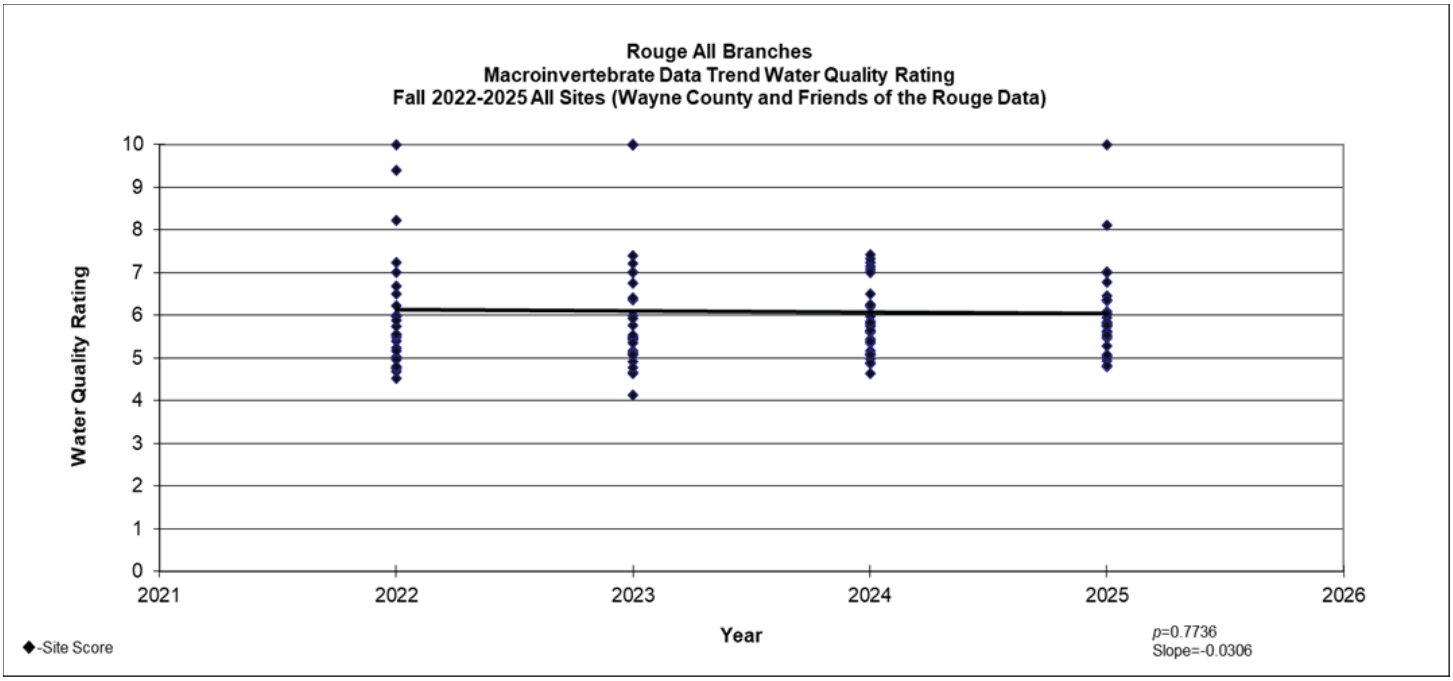
Water Quality Rating (WQR) is a measure of the degree of organic pollution similar to SQI. Organisms are rated based on the Hilsenhoff Index of Biotic Integrity and scores are weighted by the number of individuals found. Unlike SQI, a LOWER score is indicative of less pollution. There are seven categories rather than four. 0.0-3.50=**Excellent**, 3.51-4.50=**Very Good**, 4.51-5.50=**Good**, 5.51-6.50=**Fair**, 6.51-7.50=**Fairly Poor**, 7.51-8-50=**Poor**, 8.51-10.0=**Very Poor**. WQR is calculated based on family level identification.

Overall Summary:

Stream Quality Index (SQI) averaged 29 or FAIR and the Water Quality Index (WQR) averaged 5.94 or FAIR (maps pg. 15-16, Table 8, and graphs below). Taxa averaged 14 Families per site, EPT 2, and Chloride 217 ppm (chronic toxicity level).

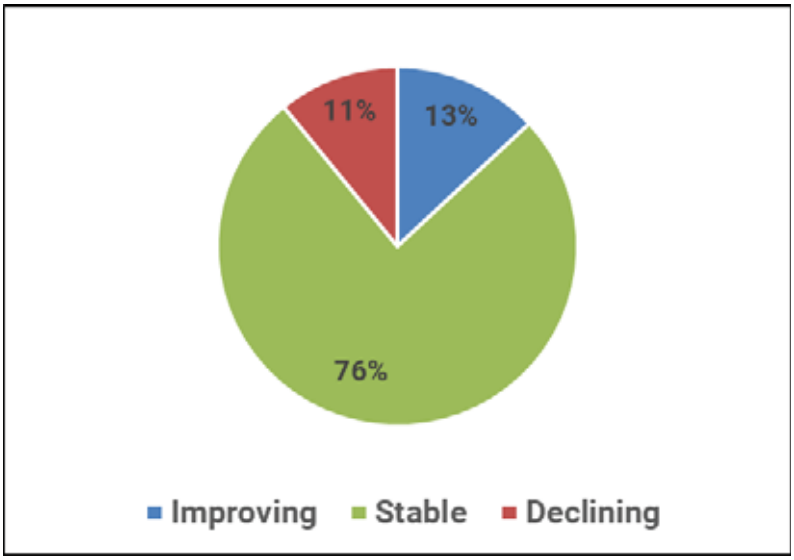
To compare trends over time, we analyzed the trends in SQIs and WQRs. When all of the sites were compared, there was not a significant trend in SQIs or WQRs (see graph below).





Data Trends

In comparison to past years, 78% of sites were stable, 11% of the sites improving and 11% declining.



SQI Summary by Subwatershed:

To compare change over time, we analyzed the trends by subwatershed, with Johnson Creek analyzed separately as it is a coldwater tributary (Table 1 and graphs p. 19-29). The Middle 3 subwatershed had significant positive trends. The Lower 1 subwatershed had significant negative trends. These trends are similar to last year.

Table 1: Fall Bug Hunt Trend Summary All Sites 2001-2025

Subwatershed	slope	*p*-value	True Trend	Subwatershed SQI average score	SQI Rating
Main 1-2	-0.1733	0.0710	no trend	29	Fair
Upper	-0.0794	0.3326	no trend	25	Fair
Johnson Creek	0.1137	0.1590	no trend	35	Good
Middle 1	-0.1487	0.1115	no trend	31	Fair
Middle 3	0.3474	0.0001	yes, positive	23	Fair
Lower 1	-0.2005	0.0369	yes, negative	28	Fair
Lower 2	-0.0860	0.5276	no trend	26	Fair
Main3-4	-0.0025	0.9926	no trend	28	Fair

The data was further analyzed for trends by tributaries and subareas. Table 2 contains a summary of this analysis; the graphs are on p. 19-29. When the upper and lower sections of the Main, Middle and Lower subwatersheds were combined, the trends were negative for the Main and Lower and positive for the Middle. This is the same trend as last year. When all the sites were combined, there was no significant trend.

Table 2: Fall Bug Hunt Trend Summary Branches/Tributaries 2001-2025					
Branch	**Slope**	***p*-value**	**True Trend**	**Branch Average SQI Score**	**SQI Rating**
Rouge All Subwatersheds combined	0.0581	0.1295	no trend	29	Fair
Main (Main 1/2 and Main 3/4)	-0.1834	0.0412	**yes, negative**	29	Fair
Bell Creek only	-0.0109	0.9333	no trend	23	Fair
Upper only	-0.0759	0.6495	no trend	27	Fair
Middle (Middle 1 and Middle 3)	0.0977	0.2273	no trend	29	Fair
Tonquish Creek only	-0.0377	0.8194	no trend	31	Fair
Middle without Tonquish Creek	0.1224	0.1938	no trend	29	Fair
Johnson Creek and Middle (Middle 1 and Middle 3)	0.1741	0.0093	**yes, positive**	31	Fair
Sump Creek (Johnson Creek tributary)	-0.1285	0.7292	no trend	36	Good
Lower 1 and Lower 2	-0.1751	0.0269	**yes, negative**	27	Fair

Individual sites were examined for long term trends (Table 3). Of the sites sampled this fall, seven had a significant trend: five negative and two positive.

Table 3: Friends of the Rouge and Wayne County Fall Bug Hunt Data Trend 2001-2025 by site					
Site	**slope**	***p*-value**	**Statistically significant trend**	**Site average score**	**SQI Rating**
Main6	-0.3962	0.0093	**yes, negative**	32	Fair
MN-7	1.0659	0.0111	**yes, positive**	25	Fair
Bell2	-0.4638	0.0423	**yes, negative**	24	Fair
MR-5	0.5479	0.0329	**yes, positive**	22	Fair
MR-14	-0.5907	0.0282	**yes, negative**	28	Fair
Ing1	-0.6853	0.0384	**yes, negative**	27	Fair
LR-3	-0.4655	0.0294	**yes, negative**	27	Fair

WQR Summary:

In 2021, MiCorps, the organization that oversees monitoring protocols for monitoring groups like ours in Michigan, developed a new scoring system for the bugs to replace the SQI. The new system, called Water Quality Rating (WQR), should better reflect the pollution tolerance of the bugs found at the site. Since there is no way to convert SQI to WQR, FOTR continues to track SQI.

Since the adoption of the WQR ratings in 2021, there are a small amount of sites that have three or more years of WQR data to evaluate trends, as compared to the SQI dataset originating in 2001. For the sites that do have more than three years of data, we found that the Middle 3 subwatershed has a significantly negative trend (Table 4), and one site demonstrated a negative trend: MR-4 (Table 6).

Table 4: Fall Bug Hunt Trend Summary All Sites 2022-2025 WQR

Subwatershed	slope	*p* -value	True Trend	Subwatershed WQR average score	Water Quality Rating	Number of sites with enough data for trend analysis
Main 1-2	-0.2389	0.3830	no trend	6.28	Fair	10
Upper	0.0106	0.9696	no trend	6.16	Fair	5
Johnson Creek	0.0029	0.9897	no trend	5.59	Fair	6
Middle 1	0.2544	0.1238	no trend	5.84	Fair	6
Middle 3	-0.2770	0.0168	yes, negative	6.29	Fair	1
Lower 1	-0.3889	0.1885	no trend	6.72	Fairly Poor	4
Lower 2	-0.1283	0.7888	no trend	5.65	Fair	2
Main 3-4	NA	NA	NA	NA	NA	0
		NA-not enough data to determine trend				

Table 5: Fall Bug Hunt Trend Summary Branches/Tributaries 2022-2025 WQR					
Branch	**Slope**	***p*-value**	**True Trend**	**Branch Average WQR Score**	**Water Quality Rating**
Rouge All Subwatersheds combined	-0.0306	0.7736	no trend	6.07	Fair
Main (Main 1/2 and Main 3/4)	NA	NA	NA	NA	NA
Bell Creek only	-0.1140	0.7387	no trend	6.8	Fairly Poor
Upper only	NA	NA	NA	NA	NA
Middle (Middle 1 and Middle 3)	0.1778	0.2211	no trend	5.92	Fair
Tonquish Creek only	0.3196	0.1248	no trend	5.97	Fair
Johnson Creek and Middle (Middle 1 and Middle 3)	0.1019	0.4273	no trend	5.76	Fair
Sump Creek (Johnson Creek tributary)	0.1037	0.5486	no trend	5.25	Good
Middle without Tonquish Creek	0.1258	0.6764	no trend	5.21	Good
Lower 1 and Lower 2	-0.2050	0.4215	no trend	6.38	Fairly Poor
	NA- not enough data to determine trend				

Table 6: Friends of the Rouge and Wayne County Fall Bug Hunt Data Trend 2022-2025 by site WQR					
Site	**slope**	***p*-value**	**Statistically significant trend**	**Site average score**	**Water Quality Rating**
MR-4	-0.2770	0.0168	Yes, negative	6.29	Fair

Friends of the ROUGE

SALT WATCH™
IZAAK WALTON LEAGUE OF AMERICA

Since 2020, we have been testing sites for road salt (chloride) through the Izaak Walton League's Salt Watch program during the Stonefly Search and Bug Hunts. Salt we apply to our roads and sidewalks for snow and ice removal washes into our streams and is toxic to aquatic life when it reaches high levels. Recognizing this, the State of Michigan Department of Environment, Great Lakes and Energy (EGLE) set water quality values aiming to protect surface water from chloride, based on parts per million (ppm) concentrations.

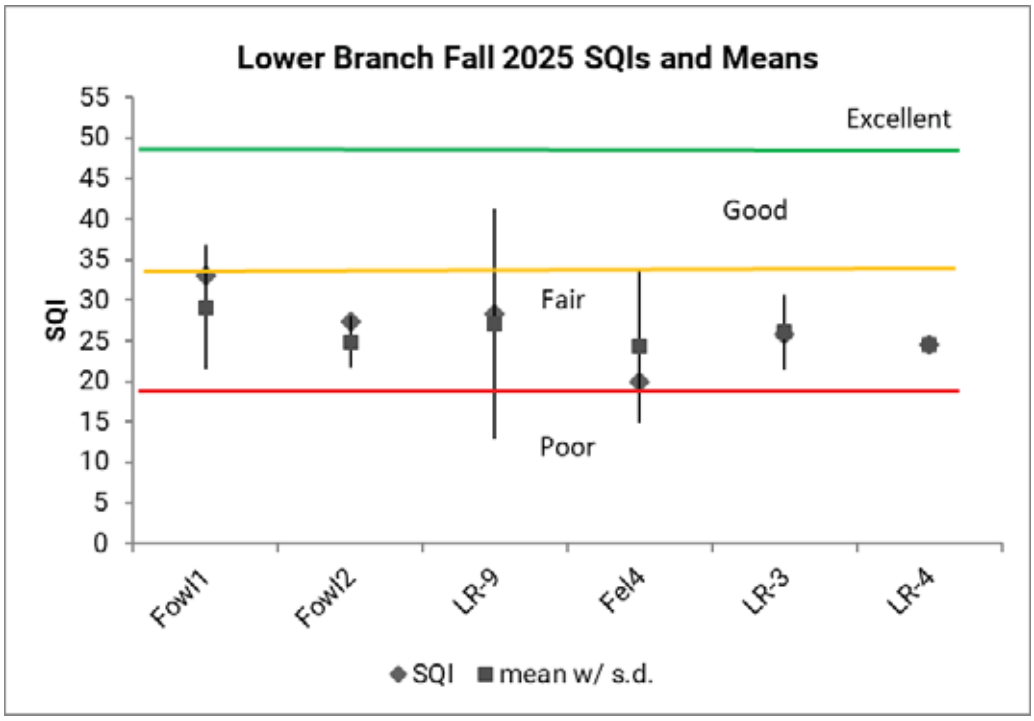
These values are:
150 ppm and above - causes long term effects to aquatic life (chronic)
320 ppm and above - causes acute effects to aquatic life (toxic)

This fall, seven sites had toxic levels of chloride, and twenty-five sites had chronic levels (table 7, map p. 17). This is particularly concerning as one would expect road salt applied last winter to be washed out of the system by October. EGLE has already listed Bishop Creek as "impaired" due to high salt levels, and more areas may be listed in the future due to elevated chloride levels throughout the watershed.

Table 7: 2025 FBH Sites With Elevated Chloride Levels

BRANCH	Stream Name	FIELDID	Site Description	Cl ppm	Cl Rating
Lower	Fellows Creek	Fel4	Flodin Pk	152	chronic
Main	Sprague Creek	Sprag	Main Lloyd Stage	213	chronic
Main	Main Rouge	Main1	FF Park	186	chronic
Main	Main Rouge	Main3	Booth Pk	197	chronic
Main	Main Rouge	Main11	Quatron at Lakeside	267	chronic
Main	Main Rouge	Main4	Linden Pk	222	chronic
Main	Main Rouge	Main4.5	Fairway Pk	231	chronic
Main	Main Rouge	Main5	Douglas Evans	213	chronic
Main	Nottingham Creek	Nott	Country Day	287	chronic
Main	Main Rouge	Main6	Sfld Civic Ctr	166	chronic
Main	Evans Creek	Evan2	LTU	612	toxic
Main	Main Rouge	Main10	HF Estate Dam	317	chronic
Main	Main Rouge	MN-2	Eliza Howell	239	chronic
Main	Main Rouge	MN-7	Rouge Park	296	chronic
Middle	Johnson Creek	MR-22	Maybury south	173	chronic
Middle	Johnson Creek	John8	Maybury Angell	221	chronic
Middle	Walled Lk Drainage	Wall3	WL 12M	213	chronic
Middle	Walled Lk Drainage	Wall2	WL 10M	231	chronic
Middle	Middle Rouge	MR-1	Northville Rec W	205	chronic
Middle	Bishop Creek	Bish2	Bishop Scarborough	612	toxic
Middle	Ingersoll Creek	Ing1	Brookfarm Park	197	chronic
Middle	Middle Rouge	MR-20	Waterford Bend	189	chronic
Middle	Middle Rouge	MR-2a	Reservoir Rd W	189	chronic
Middle	Tonquish Creek	Ton2	Ann Arbor Rd	353	toxic
Middle	Middle Rouge	MR-24	Lion's Pk	339	toxic
Middle	Tonquish Creek	Nton	S Evergreen St	353	toxic
Middle	Middle Rouge	MR-4	Levan Knoll	221	chronic
Middle	Middle Rouge	MR-5	Valley View	257	chronic
Upper	Seeley Creek	See3	Kennedy Ct	197	chronic
Upper	Bell Branch	Bell1	Bicentennial Park	404	toxic
Upper	Bell Branch	Bell3	Livonia 6 Mile	353	toxic
Upper	Bell Branch	Bell2	Schoolcraft College	213	chronic

Lower Branch

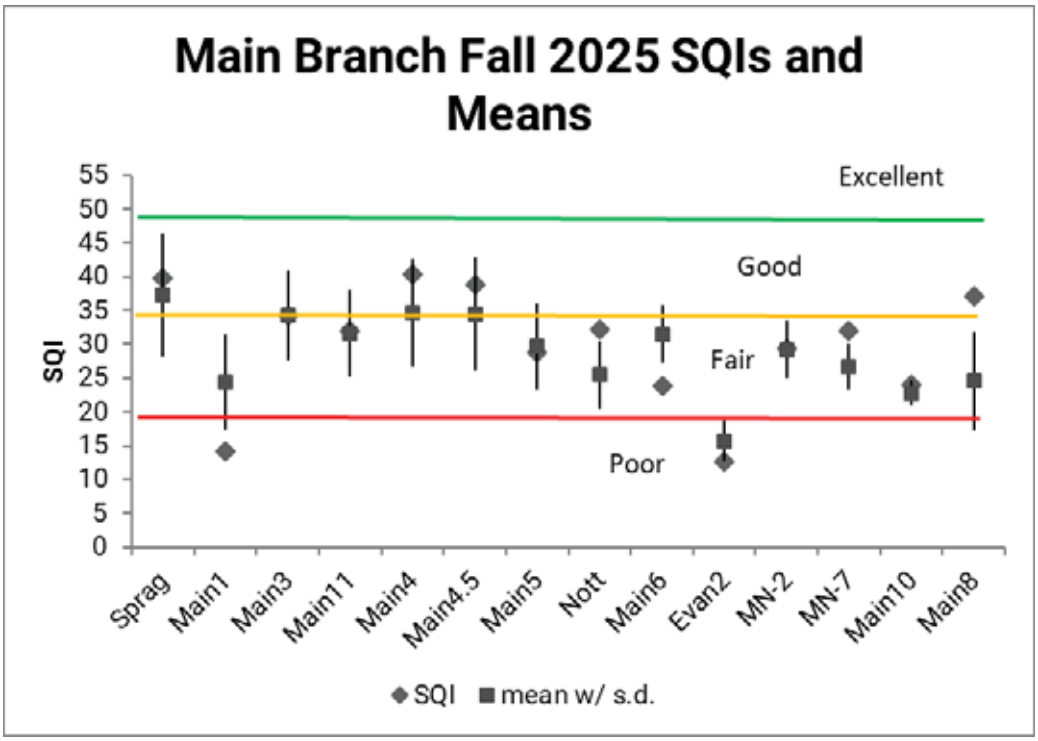


Six sites were sampled on the Lower Branch (Table 8, p. 18), including two tributaries: Fellows Creek and Fowler. SQIs averaged FAIR (27). All six sites had FAIR SQI scores. In the new WQR system, sites averaged fair (5.99). Sites had an average of 12 taxa found, 7 insect taxa and 1 EPT.
Chloride levels ranged from a low of 42 ppm at Fowl2 to a high of 152 ppm at Fel4; one site had chronic levels (Fel4) with no sites at the toxic level (Table 8, p. 18).

SQI scores were compared with past data (chart above). All sites were within a standard deviation of the average for the site.

Long term trend analysis showed a significant negative trend for the Lower 1 and for all of the Lower when the subwatersheds are combined (Table 1 and 2, graphs p. 28-29). LR-3 had a significant negative trend (Table 3).

Main Branch



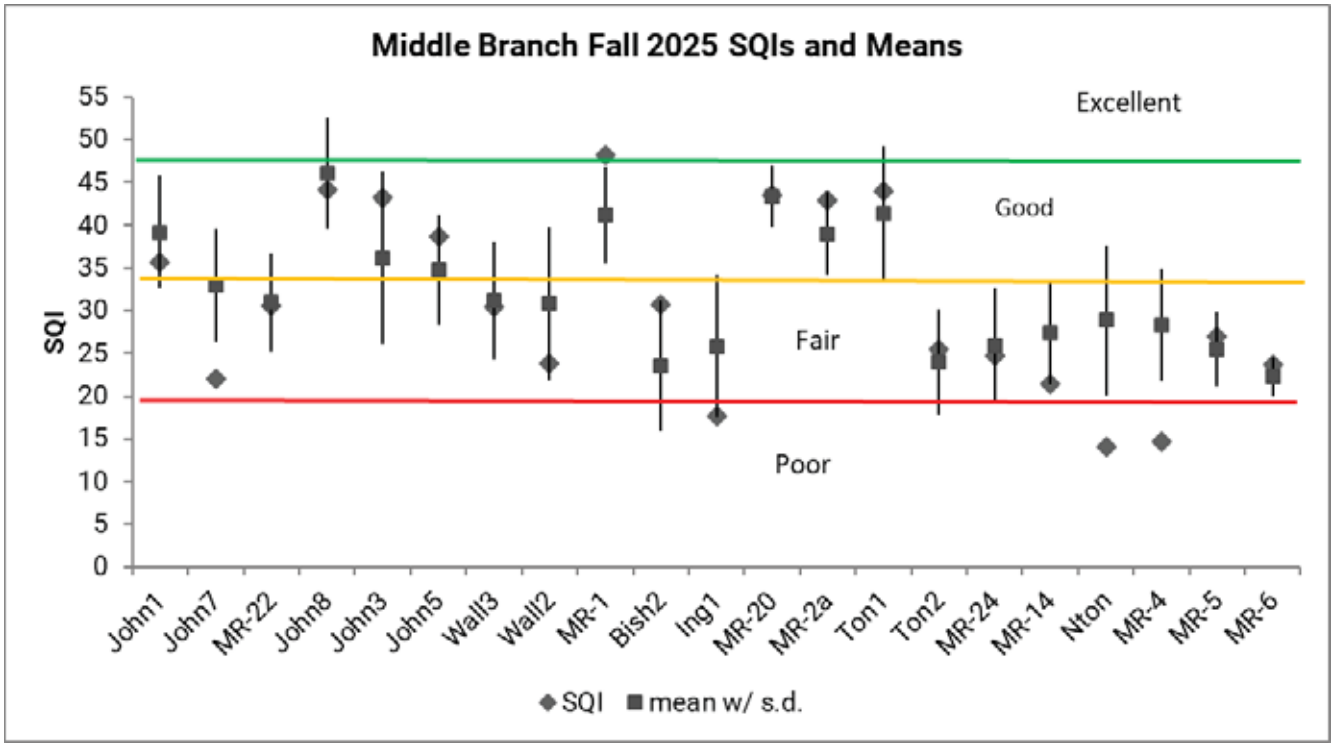
Thirteen sites on the Main Branch were sampled, including the following tributaries: Evans, Nottingham, and Sprague Creek. SQIs averaged FAIR (29). Four rated GOOD, seven rated FAIR, and two rated POOR. WQRs averaged fair (6.12). Taxa found averaged 15, 8 Insect taxa, and 2 EPT. Chloride levels averaged 265 ppm, with twelve sites at the chronic effects level (>150 ppm), with one site at the toxic level (Evan1) (Table 8, p. 18).

SQI scores were compared with past data (chart above). Nine were within a standard deviation of the average for the site, two were above, and two were below. Long term trend analysis shows a significant negative trend for all of the Main when the subwatersheds are combined (Table 2, graphs p. 19-20). Main6 had a significant negative trend, while MN-7 had a significant positive trend when considered separately (Table 3).

Due to low water levels, we were able to sample four downstream Main sites that we have not visited in many years. This included MN-2 (Eliza Howell Park), MN-7 (Rouge Park), Main10 (the Henry Ford Estate) and Main8 (Fordson Island). MN-7, Main10, and Main8 had higher SQI scores compared to historical scores. In addition, a live freshwater mussel was found at Main8 as well as three species of dragonflies, two of which are very sensitive.

Upstream, we found a live fat mucket mussel at Sprag but a very low score at Main1. The Main1 site at Firefighters Park is undergoing a habitat improvement project that has disturbed the site but also had sediment coming into it from an upstream source. FOTR reported the sediment and it is hoped that over time this site will improve as it was once home to the largest freshwater mussel population in the watershed.

Middle Branch

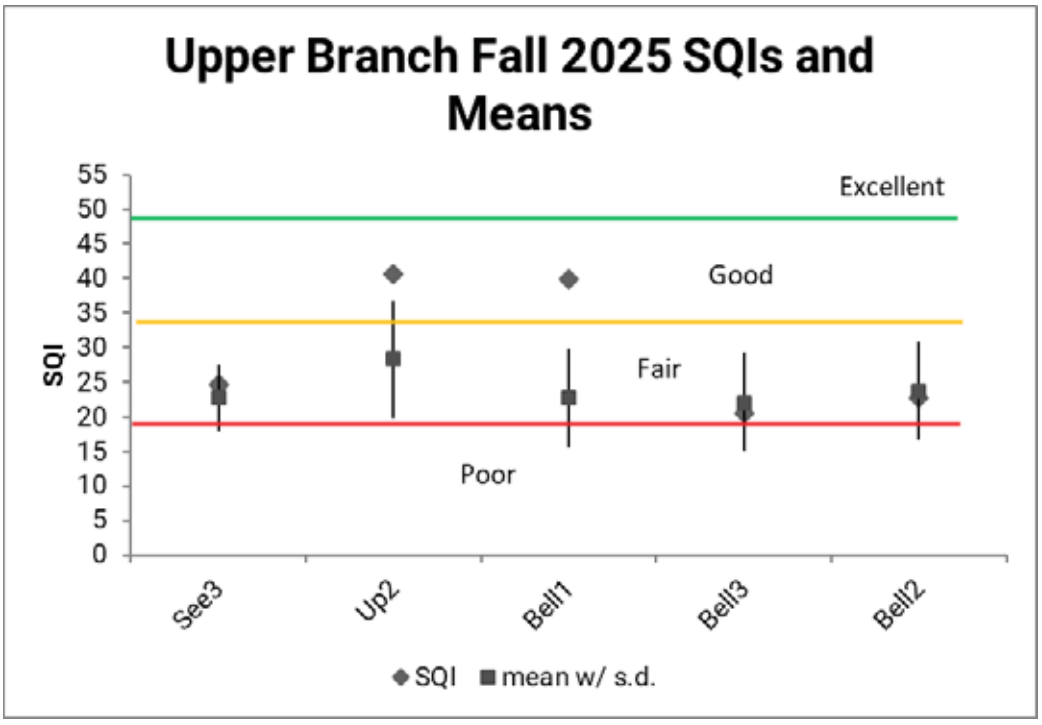


Twenty-one sites were sampled on the Middle Branch; Johnson Creek had six sites, Tonquish Creek had four sites, the Walled Lake Drainage had two sites, Bishop Creek had one site, Ingersoll Creek had one site, and the final seven sites were in the Middle Rouge. SQI scores averaged FAIR (31), with one EXCELLENT (MR-1), seven GOOD, ten FAIR, and three POOR. WQRs averaged fair (5.79). Number of taxa averaged 14, 8 insect taxa and 2 EPT.

In comparing averages and past data (chart above), the majority of sites (17) were within a standard deviation of the average for the sites. One site was above (MR-1) and three sites were below (John7, Nton, and MR-4). Chloride levels averaged 212 ppm, with ten sites at the chronic level, and four sites at the toxic level: Bish2, Ton2, MR-24, and Nton (Table 8, p. 18).

In long term trend analysis, the Middle 3 had a positive trend (Table 1). When the Johnson Creek, Middle subwatersheds were combined, there was a significant positive trend (Table 2, graphs p. 23-27). MR-5 had a positive trend, whereas MR-14 and Ing1 had significant negative trends when considered by site (Table 3).

Upper Branch



Five Upper branch sites were sampled including Seeley Creek, the Bell Branch, and the Upper Rouge at Shiawasee Park. SQIs averaged FAIR (30). Two sites were GOOD, and three sites were FAIR. WQR averaged fair (6.04). Number of taxa averaged 15, 10 insect taxa and 1 EPT.

In comparing averages and past data (chart above), two sites were above a standard deviation of the average, and three were within the standard deviation of the average for a given site. Chloride levels averaged 245 ppm, with two sites at the chronic level, and two sites at the toxic level: Bell1 and Bell3 (Table 8, p. 18).

Long term trend analysis shows no significant trend in scores for the Upper Branch (Table 1 and 2, graphs p. 21-22). Bell2 had a significant negative trend when considered separately (Table 3).

THANK YOU!!!!!

Thank you to all the **volunteers** and **Team Leaders, Sue Thompson** for sampling additional sites, helping with identification, analyzing trends and reviewing the report. Funding for the event was provided by the communities of Beverly Hills, Farmington, Livonia, Northville Township, Novi, Plymouth, Plymouth Township, Southfield, Troy, Birmingham, Washtenaw County Water Resources, Michigan Department of Environment, Great Lakes, and Energy and the United States Environmental Protection Agency's Great Lakes Restoration Initiative, the Alliance of Rouge Communities, and the Michigan Clean Water Corps.

Join us for the 2026 Winter Stonefly Search

Friends of the ROUGE

Stonefly Search

Surveying Since 1998

Become a Rouge Community Scientist!

Do you ever wonder about what lives in the river besides fish and turtles? Come to our Bug Hunt and see for yourself the amazing variety of aquatic insects, crayfish, snails and clams that make up the bottom of the river food chain. Volunteers visit sites throughout the headwaters of the Rouge watershed and search for aquatic invertebrates. The presence or absence of these streambed creatures gives us valuable data on the quality of the river water and overall habitat.

Winter Stonefly Search

January 24th, 2026

10am-3pm(ish)

Meet at the Jack Wilcox Theater -
Plymouth Arts & Recreation Complex,
650 Church St. Plymouth

No prior experience needed, but registration is required. Children eight and older are welcome when accompanied by a participating adult. Groups of six or less can sign up together.

Register Now

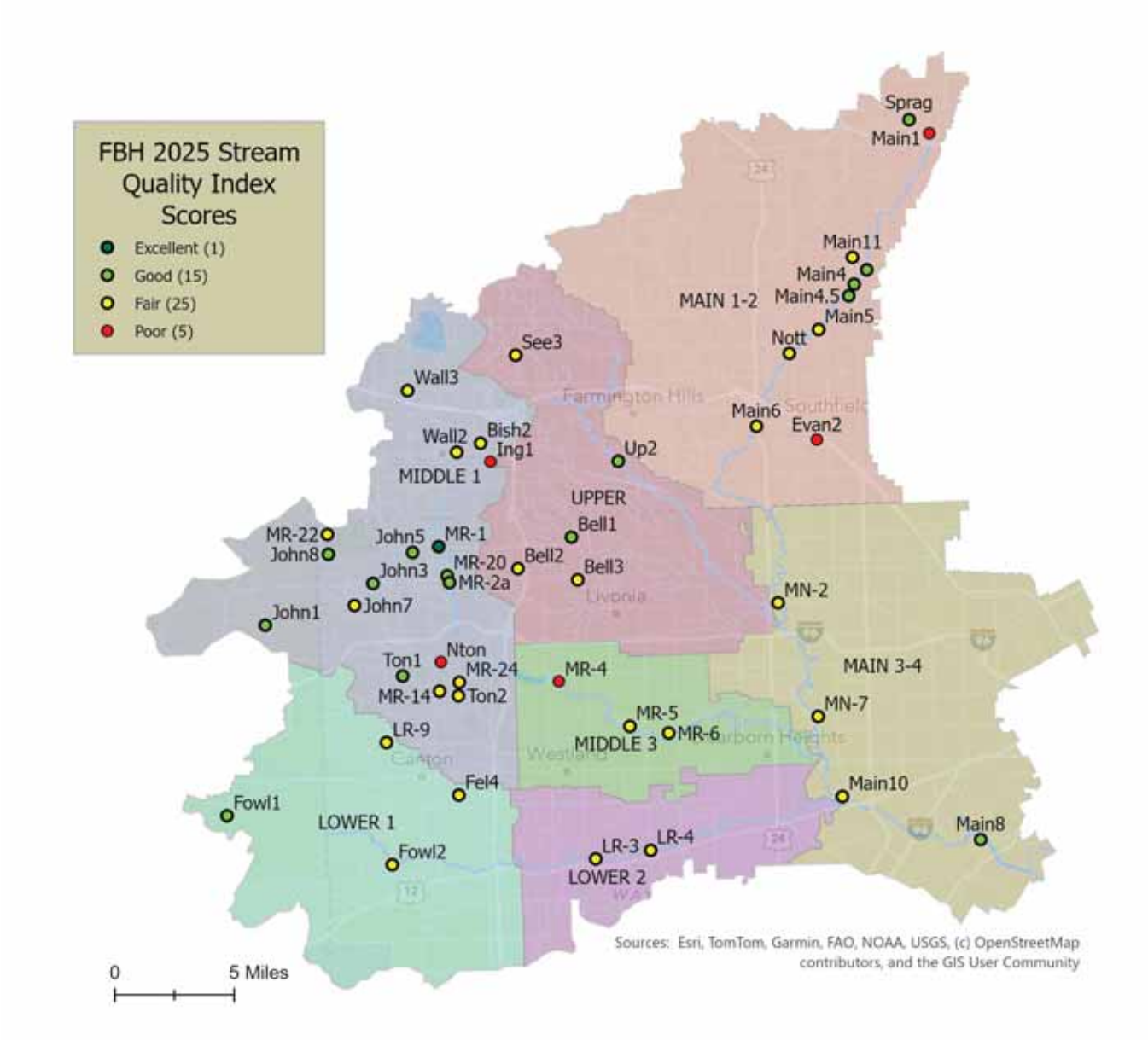
Made possible by:

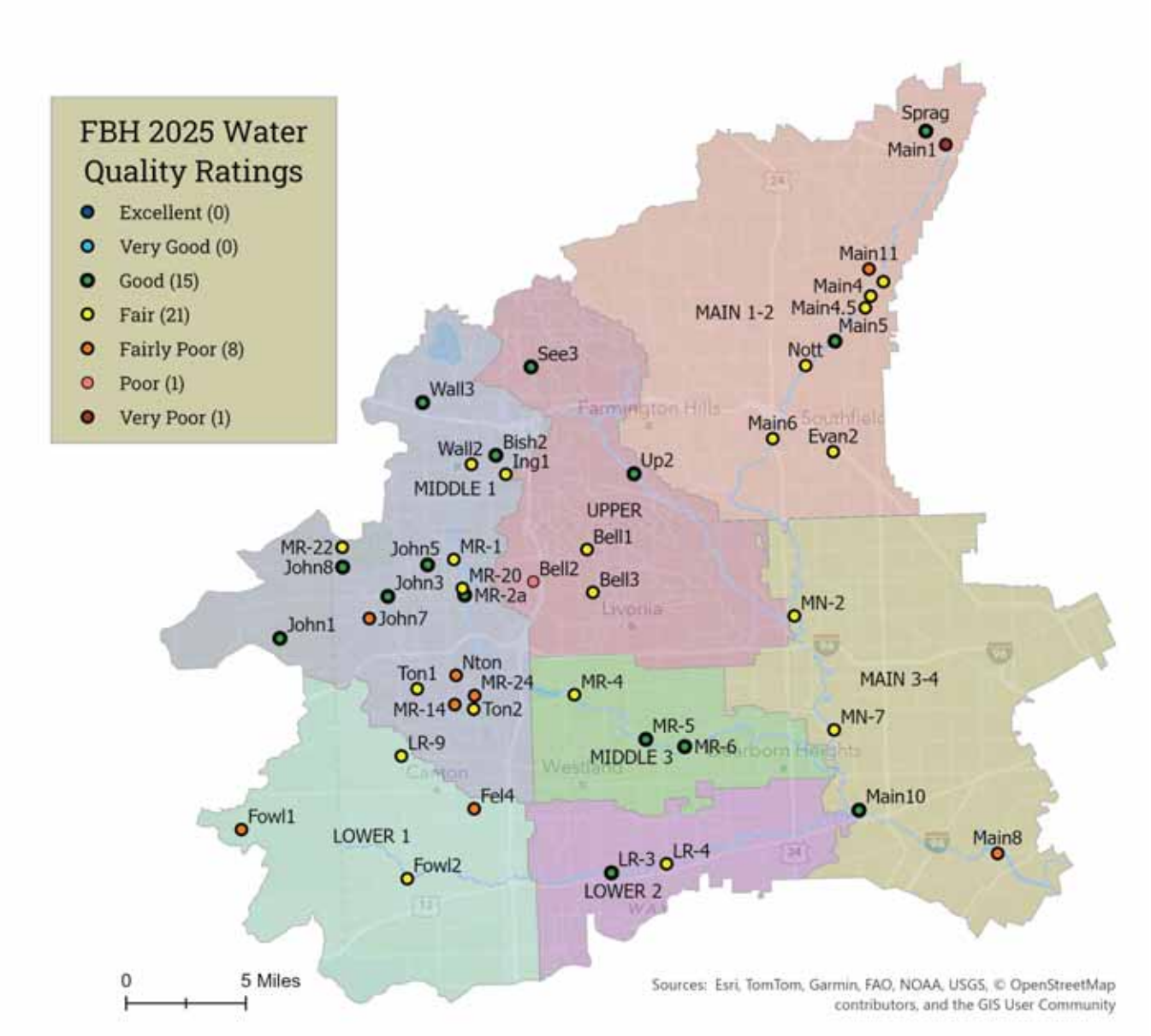
Mercedes-Benz Financial Services

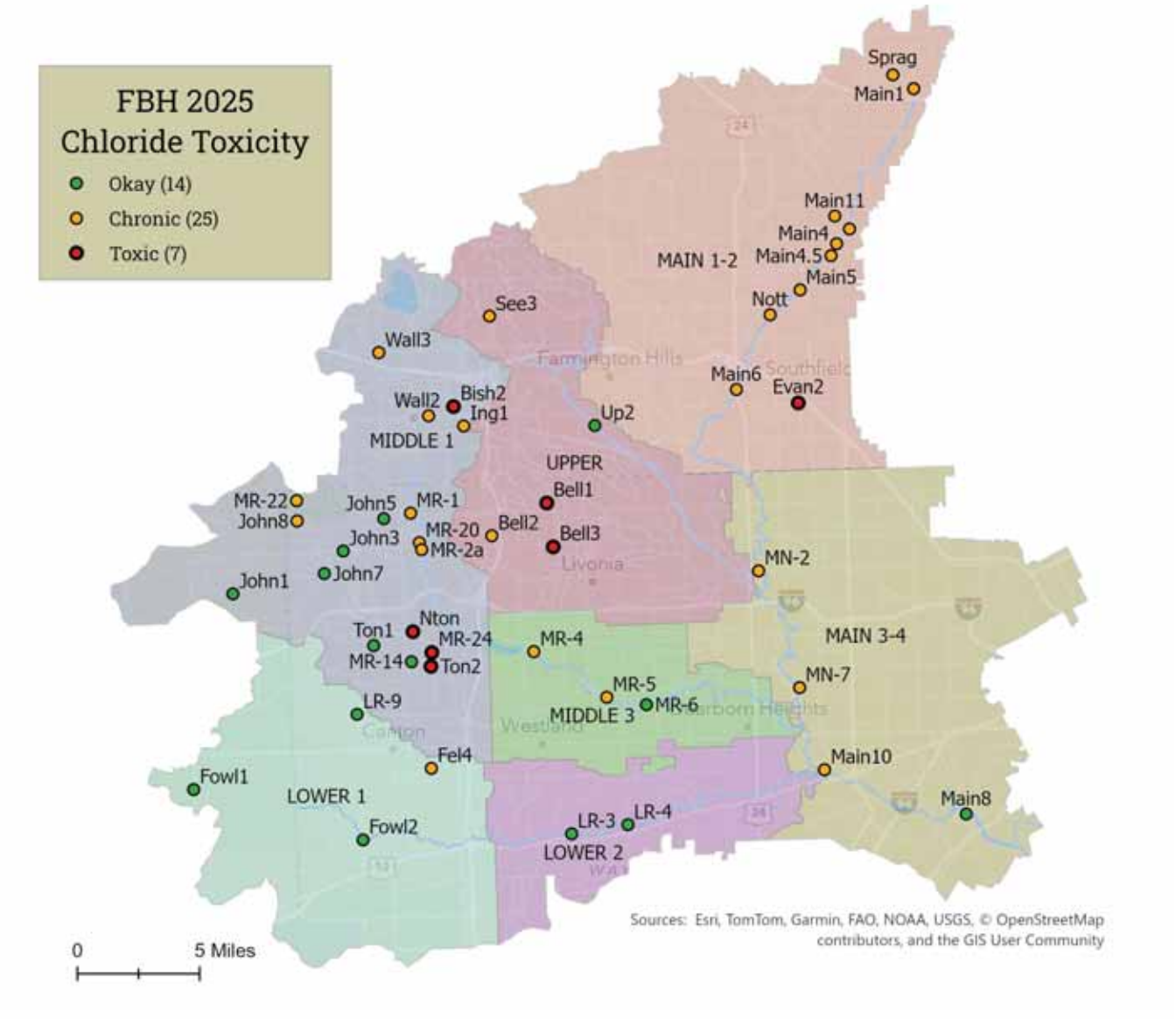
Alliance of Rouge Communities
OURS TO PROTECT

TheRouge.org/Bug-Hunts

Questions? Email Monitoring Manager, Lauren at leaton@therouge.org


FBH 2025 Stream Quality Index Scores
Excellent (1)
Good (15)
Fair (25)
Poor (5)
Sprag
Main1
Main11
Main4
Main4.5
MAIN 1-2
Main5
Nott
See3
Wall3
Farmington Hills
Main6
Southfield
Evan2
Wall2
Bish2
Ing1
Up2
MIDDLE 1
UPPER
Bell1
MR-22
John5
MR-1
John8
Bell2
Bell3
John3
MR-20
MR-2a
Livonia
MN-2
John7
John1
Nton
Ton1
MR-24
MR-4
MAIN 3-4
MR-14
Ton2
MR-5
MN-7
LR-9
MIDDLE 3
MR-6
Dearborn Heights
Canton
Westland
Fel4
Main10
Fowl1
LOWER 1
Main8
LR-3
LR-4
Fowl2
LOWER 2
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, (c) OpenStreetMap contributors, and the GIS User Community
0
5 Miles


FBH 2025 Water Quality Ratings
Excellent (0)
Very Good (0)
Good (15)
Fair (21)
Fairly Poor (8)
Poor (1)
Very Poor (1)
Sprag
Main1
Main11
Main4
Main4.5
Main5
MAIN 1-2
Nott
See3
Wall3
Main6
Evan2
Wall2
Bish2
Ing1
Up2
MIDDLE 1
UPPER
Bell1
MR-22
John5
MR-1
John8
Bell2
MR-20
Bell3
John3
MR-2a
MN-2
John1
John7
Ton1
Nton
MR-24
MR-4
MAIN 3-4
MR-14
Ton2
MN-7
MR-5
LR-9
MR-6
MIDDLE 3
Fel4
Main10
Fowl1
LOWER 1
Main8
LR-3
LR-4
Fowl2
LOWER 2
0
5 Miles
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community


FBH 2025
Chloride Toxicity
Okay (14)
Chronic (25)
Toxic (7)
Sprag
Main1
Main11
Main4
Main4.5
MAIN 1-2
Main5
Nott
See3
Wall3
Farmington Hills
Main6
Southfield
Evan2
Wall2
Bish2
Ing1
Up2
MIDDLE 1
UPPER
Bell1
MR-22
John8
John5
MR-1
Bell2
Bell3
John3
MR-20
MR-2a
Livonia
MN-2
John1
John7
Nton
Ton1
MR-24
MR-4
MAIN 3-4
MR-14
Ton2
MN-7
MR-5
LR-9
MR-6
MIDDLE 3
Dearborn Heights
Canton
Westland
Fel4
Main10
Fowl1
LOWER 1
Main8
LR-3
LR-4
Fowl2
LOWER 2
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
0
5 Miles

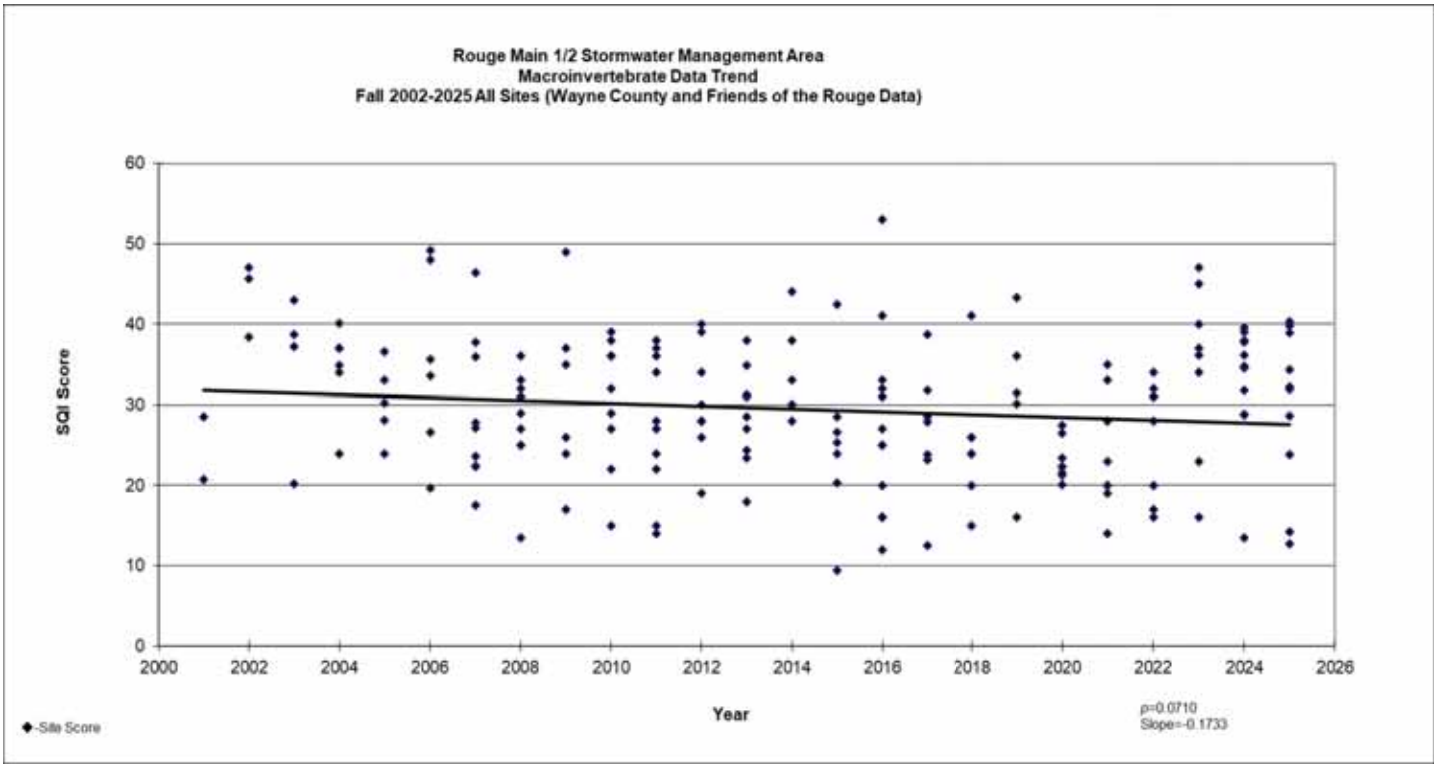
Friends of the Rouge

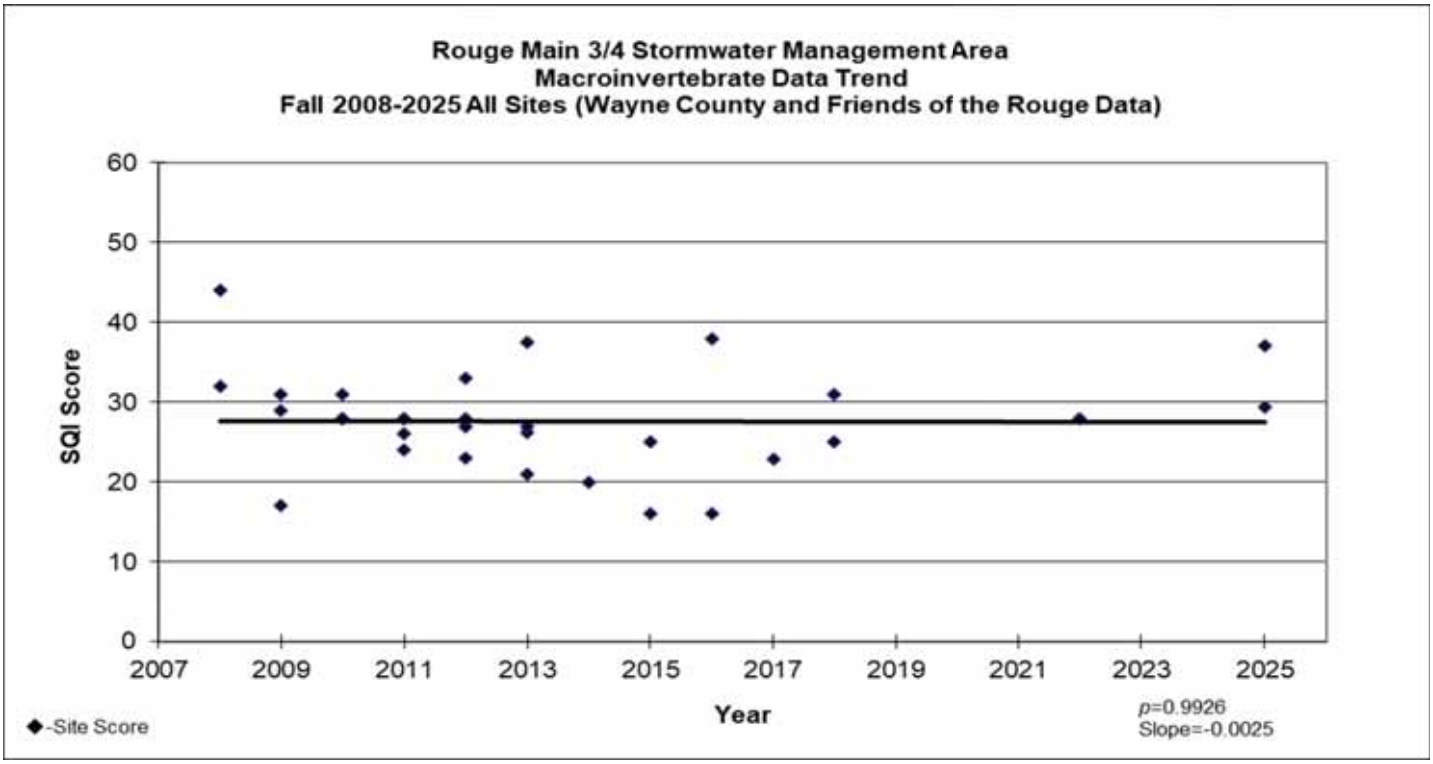
Table 8: Fall 2025 Data

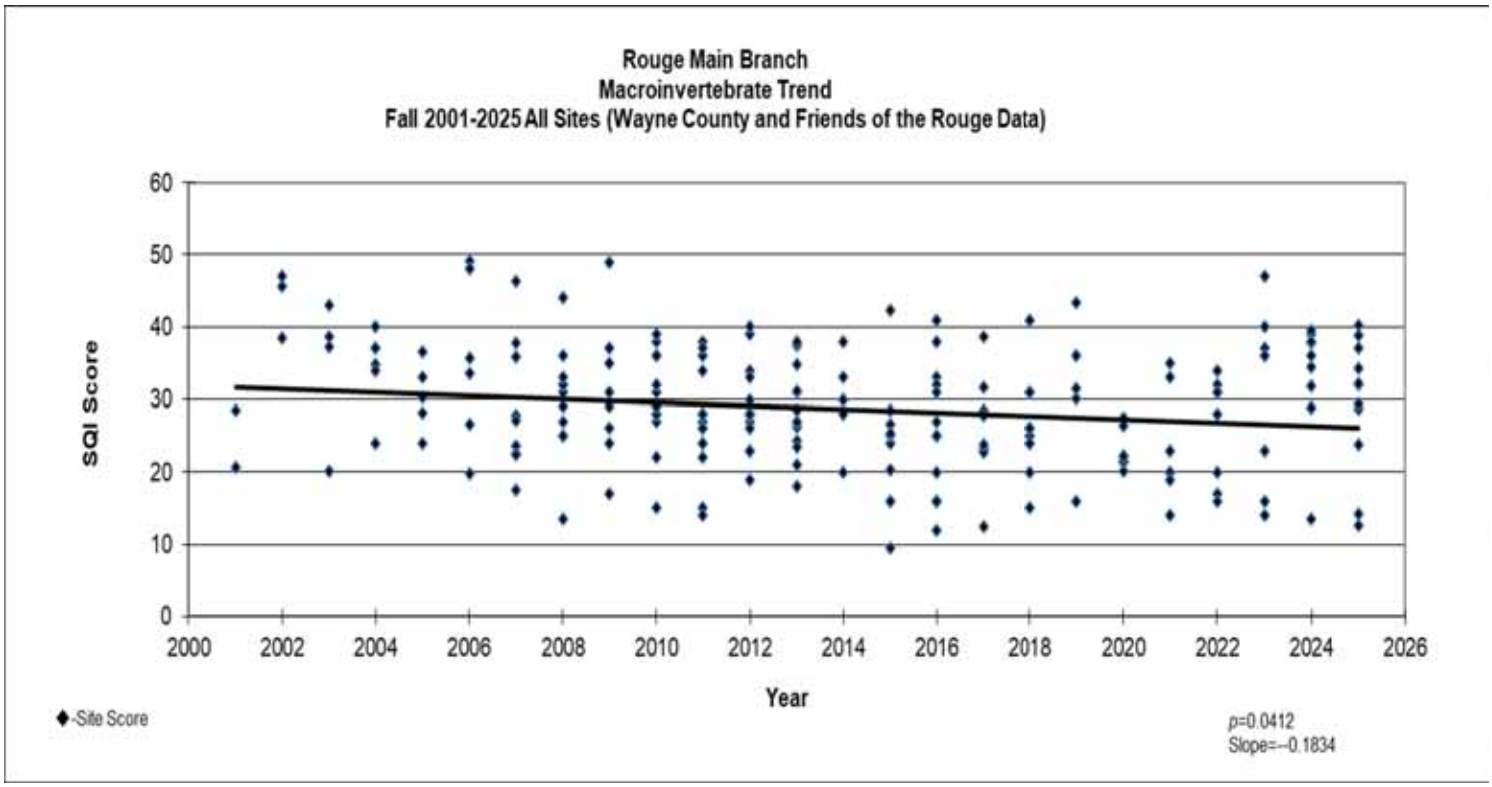
BRANCH	Stream Name	FIELDID	Site Description	SQI	SQI Rating	Taxa	Insect Taxa	EPT	WQR	WQR Score	Cl ppm	Cl Rating
Lower	Fowler Creek	Fowl1	Prospect	33.1	Fair	14	9	2	7	Fairly Poor	82	ok
Lower	Fowler Creek	Fowl2	Fowler Beck	27.3	Fair	13	6	1	6.09	Fair	42	ok
Lower	Fellows Creek	LR-9	Fellows Beck Warren	28.4	Fair	14	8	0	5.76	Fair	102	ok
Lower	Fellows Creek	Fel4	Flodin Pk	19.9	Fair	12	5	0	6.57	Fairly Poor	152	chronic
Lower	Lower Rouge	LR-3	Goudy Park	25.8	Fair	10	6	2	4.83	Good	145	ok
Lower	Lower Rouge	LR-4	Merriman Rd	24.5	Fair	11	7	2	5.66	Fair	145	ok
Main	Sprague Creek	Sprag	Main Lloyd Stage	39.8	Good	13	8	3	5.04	Good	213	chronic
Main	Main Rouge	Main1	FF Park	14.2	Poor	7	4	0	10	Very Poor	186	chronic
Main	Main Rouge	Main3	Booth Pk	34.3	Good	17	10	3	5.74	Fair	197	chronic
Main	Main Rouge	Main11	Quatron at Lakeside	31.9	Fair	16	8	1	6.77	Fairly Poor	267	chronic
Main	Main Rouge	Main4	Linden Pk	40.3	Good	23	13	3	5.62	Fair	222	chronic
Main	Main Rouge	Main4.5	Fairway Pk	38.9	Good	21	14	4	6.33	Fair	231	chronic
Main	Main Rouge	Main5	Douglas Evans	28.7	Fair	19	7	1	5.27	Good	213	chronic
Main	Nottingham Creek	Nott	Country Day	32.2	Fair	14	7	0	6.44	Fair	287	chronic
Main	Main Rouge	Main6	Sfld Civic Ctr	23.8	Fair	12	8	1	5.95	Fair	166	chronic
Main	Evans Creek	Evan2	LTU	12.7	Poor	8	6	0	5.61	Fair	612	toxic
Main	Main Rouge	Main10	HF Estate Dam	24	Fair	10	6	2	4.85	Good	317	chronic
Main	Main Rouge	MN-2	Eliza Howell	29.4	Fair	18	10	2	6.15	Fair	239	chronic
Main	Main Rouge	MN-7	Rouge Park	32	Fair	15	7	2	5.85	Fair	296	chronic
MN	Main Rouge	Main8	Fordson Island	37.1	Good	19	8	1	6.83	Fairly Poor	42	ok
Middle	Johnson Creek	John1	5M Salem	35.7	Good	18	13	2	5.46	Good	82	ok
Middle	Johnson Creek	John7	5M NV	22.1	Fair	11	9	3	7	Fairly Poor	82	ok
Middle	Johnson Creek	MR-22	Maybury south	30.6	Fair	13	7	1	5.83	Fair	173	chronic
Middle	Johnson Creek	John8	Maybury Angell	44.2	Good	21	13	2	5.07	Good	221	chronic
Middle	Johnson Creek	John3	6M NV	43.3	Good	16	11	4	4.79	Good	82	ok
Middle	Johnson Creek	John5	Fish Hatchery Pk	38.7	Good	16	11	3	5.25	Good	82	ok
Middle	Walled Lk Drainage	Wall3	WL 12M	30.4	Fair	12	7	1	5.5	Good	213	chronic
Middle	Walled Lk Drainage	Wall2	WL 10M	23.8	Fair	10	6	1	5.54	Fair	231	chronic
Middle	Middle Rouge	MR-1	Northville Rec W	48.2	Excellent	18	10	3	5.55	Fair	205	chronic
Middle	Bishop Creek	Bish2	Bishop Scarborough	30.7	Fair	14	8	1	5.49	Good	612	toxic
Middle	Ingersoll Creek	Ing1	Brookfarm Park	17.6	Poor	13	6	0	6.12	Fair	197	chronic
Middle	Middle Rouge	MR-20	Waterford Bend	43.6	Good	23	14	5	5.97	Fair	189	chronic
Middle	Middle Rouge	MR-2a	Reservoir Rd W	42.9	Good	17	10	3	4.92	Good	189	chronic
Middle	Tonquish Creek	Ton1	Plym Twp Pk	44	Good	21	12	2	5.75	Fair	114	ok
Middle	Tonquish Creek	Ton2	Ann Arbor Rd	25.5	Fair	11	7	3	6.06	Fair	353	toxic
Middle	Middle Rouge	MR-24	Lion's Pk	24.7	Fair	12	6	2	7	Fairly Poor	339	toxic
Middle	Tonquish Creek	MR-14	Smith Elem	21.5	Fair	11	6	1	7	Fairly Poor	107	ok
Middle	Tonquish Creek	Nton	S Evergreen St	14.1	Poor	7	4	1	7	Fairly Poor	353	toxic
Middle	Middle Rouge	MR-4	Levan Knoll	14.6	Poor	9	3	1	5.87	Fair	221	chronic
Middle	Middle Rouge	MR-5	Valley View	27	Fair	12	8	2	5.22	Good	257	chronic
Middle	Middle Rouge	MR-6	Sherwood	23.7	Fair	10	6	2	5.24	Good	146	ok
Upper	Seeley Creek	See3	Kennedy Ct	24.7	Fair	13	9	1	4.93	Good	197	chronic
Upper	Upper Rouge	Up2	Shiawasee Park	40.7	Good	17	11	2	5.01	Good	56	ok
Upper	Bell Branch	Bell1	Bicentennial Park	39.8	Good	19	12	2	6.35	Fair	404	toxic
Upper	Bell Branch	Bell3	Livonia 6 Mile	22.8	Fair	13	5	1	5.8	Fair	353	toxic
Upper	Bell Branch	Bell2	Schoolcraft College	20.5	Fair	15	11	1	8.11	Poor	213	chronic

Data Trend Tables

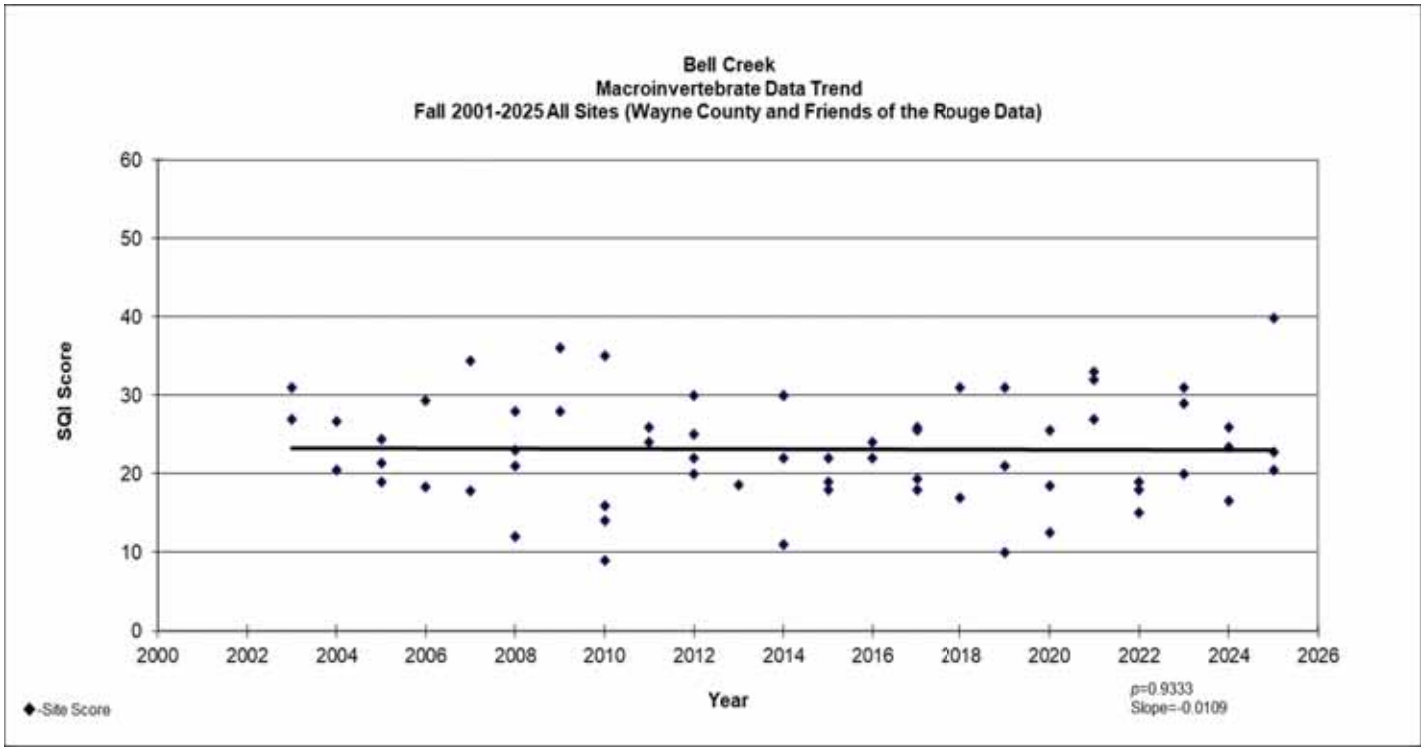
Main

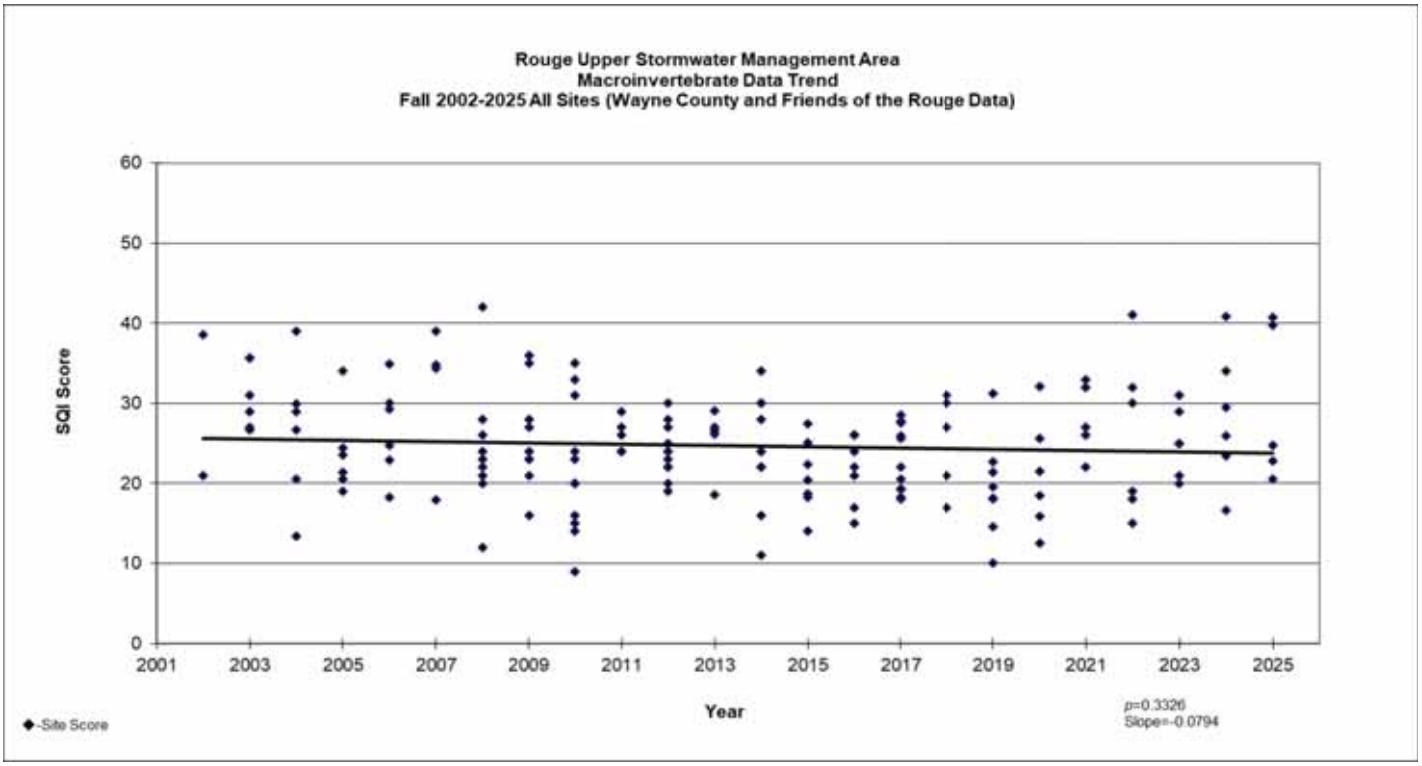




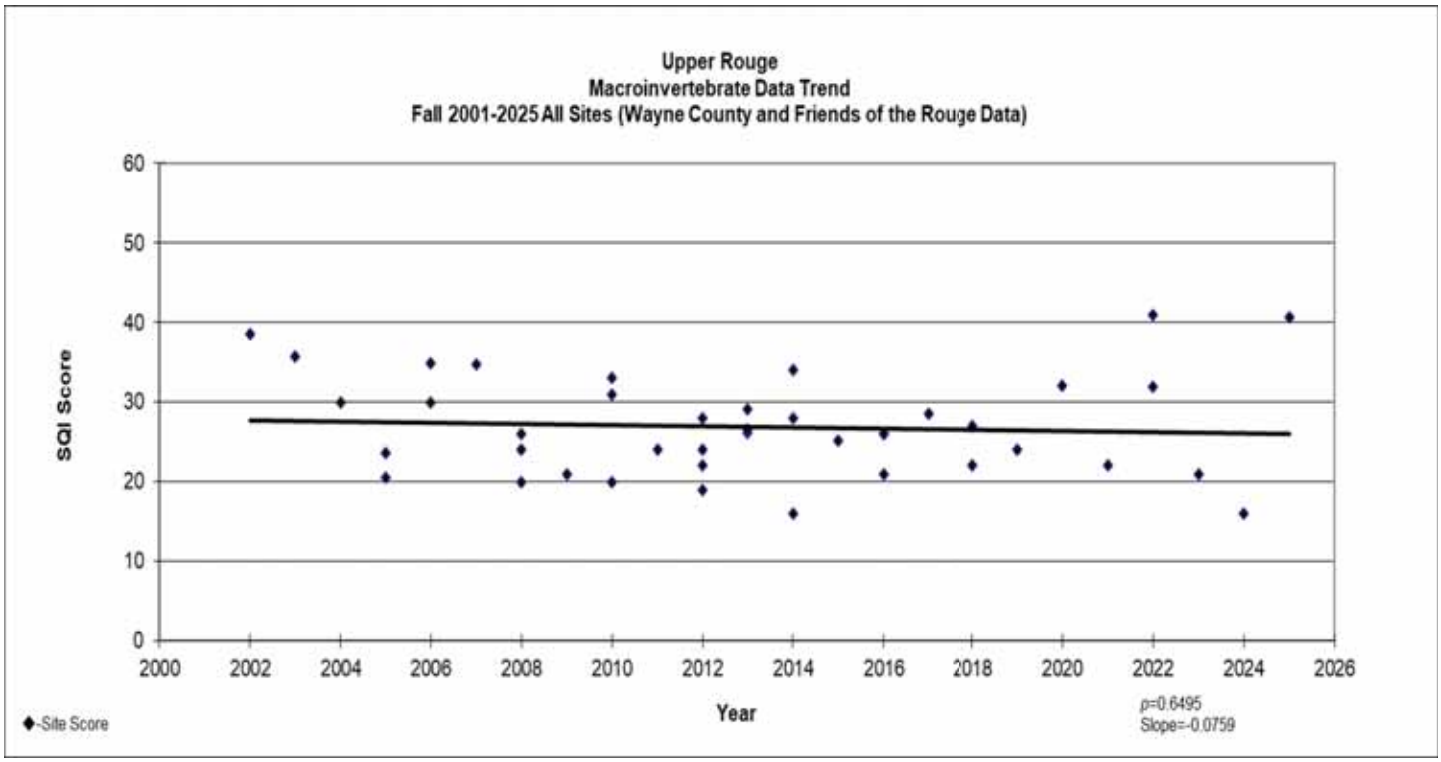

Rouge Main Branch
Macroinvertebrate Trend
Fall 2001-2025 All Sites (Wayne County and Friends of the Rouge Data)
SQI Score
60
50
40
30
20
10
0
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020
2022
2024
2026
Year
♦-Site Score
p=0.0412
Slope=-0.1834

Upper

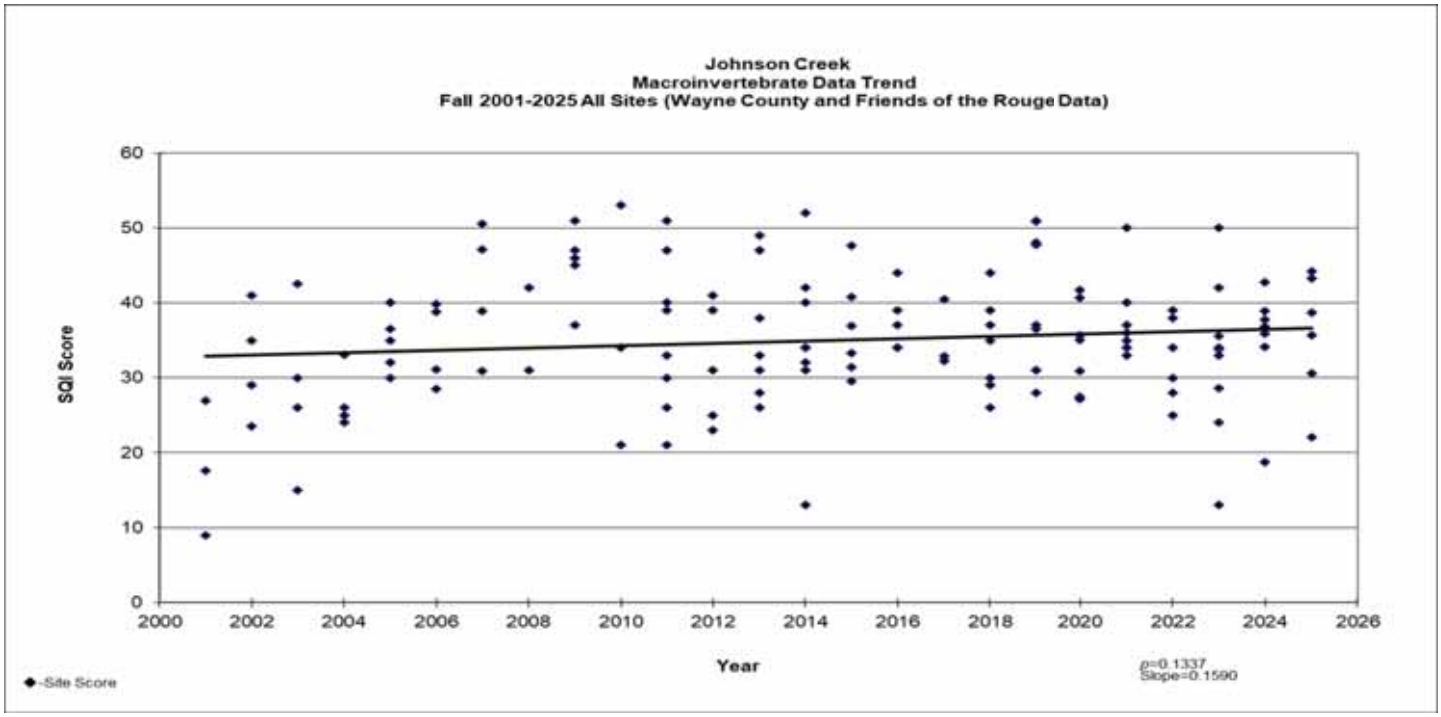

Bell Creek
Macroinvertebrate Data Trend
Fall 2001-2025 All Sites (Wayne County and Friends of the Rouge Data)
SQI Score
Year
◆-Site Score
p=0.9333
Slope=-0.0109

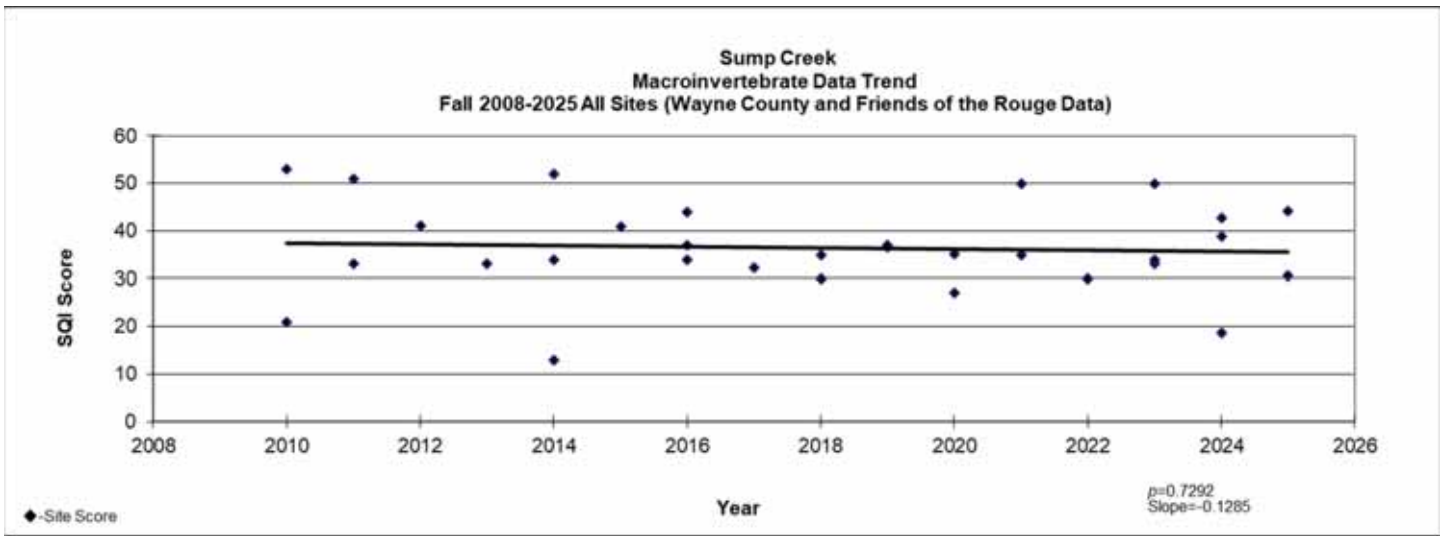

Rouge Upper Stormwater Management Area
Macroinvertebrate Data Trend
Fall 2002-2025 All Sites (Wayne County and Friends of the Rouge Data)
SQI Score
Year
◆-Site Score
p=0.3326
Slope=-0.0794

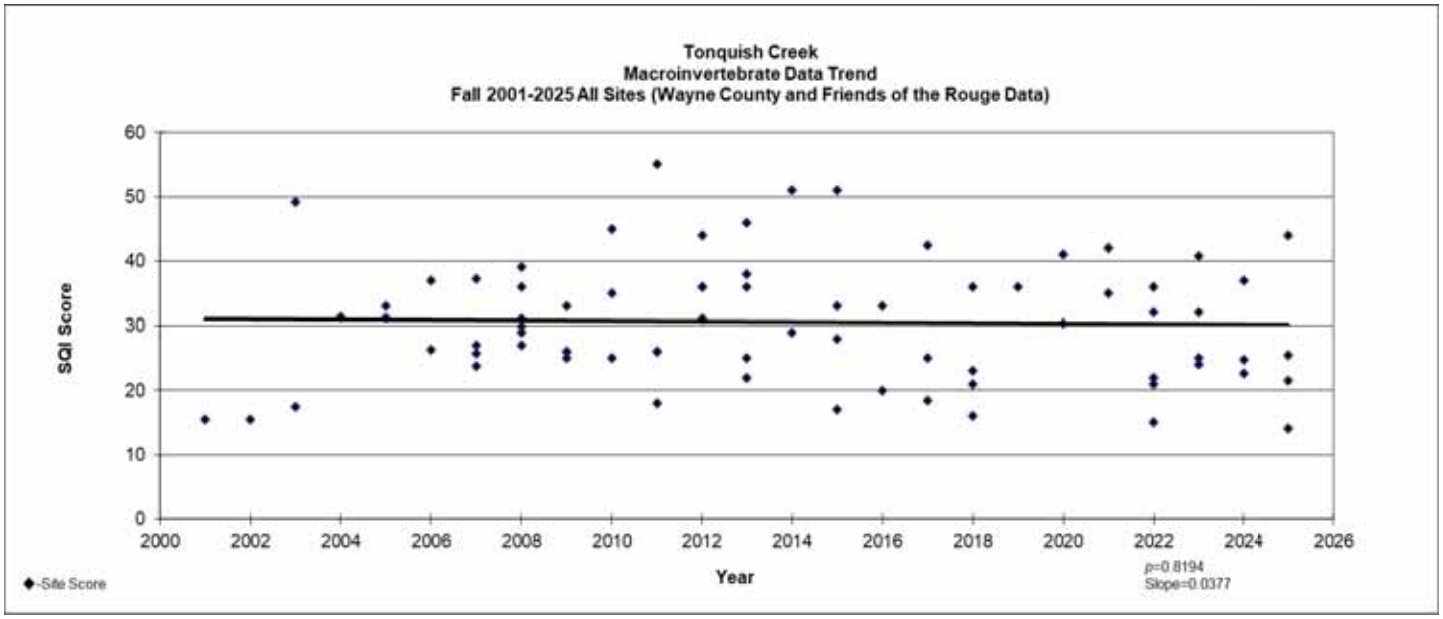
Upper with no tributaries

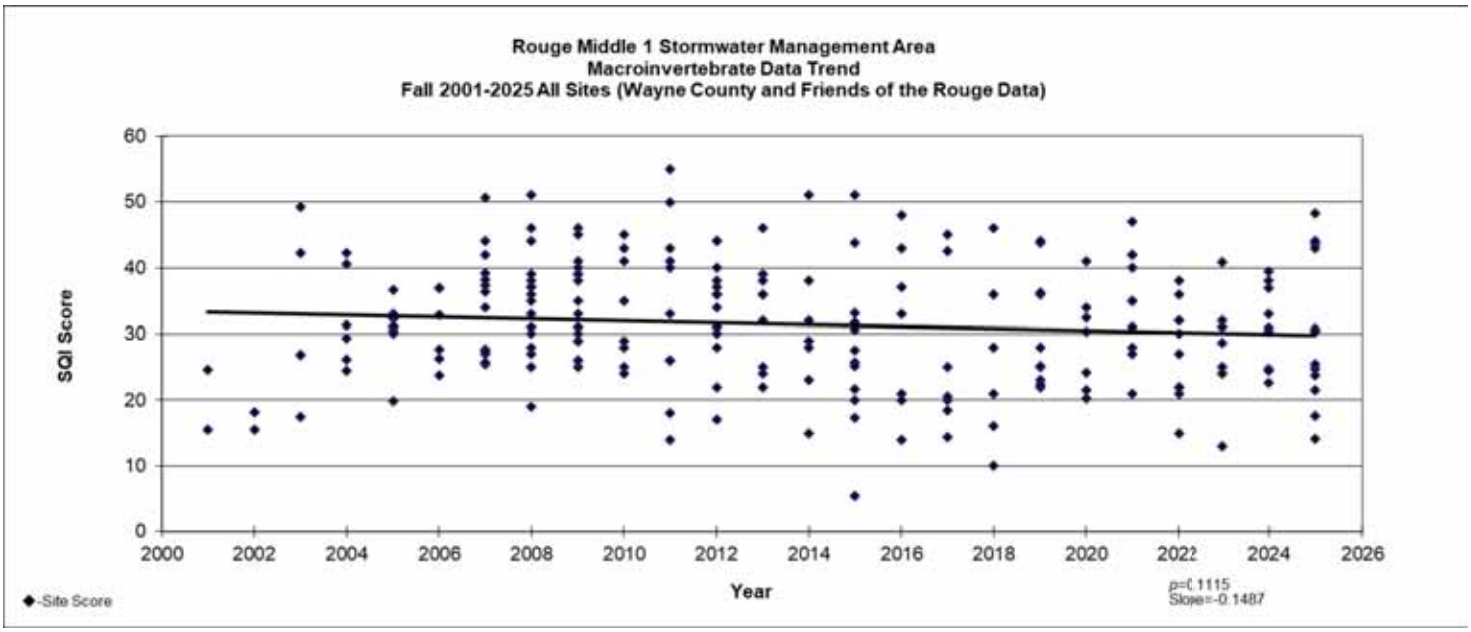


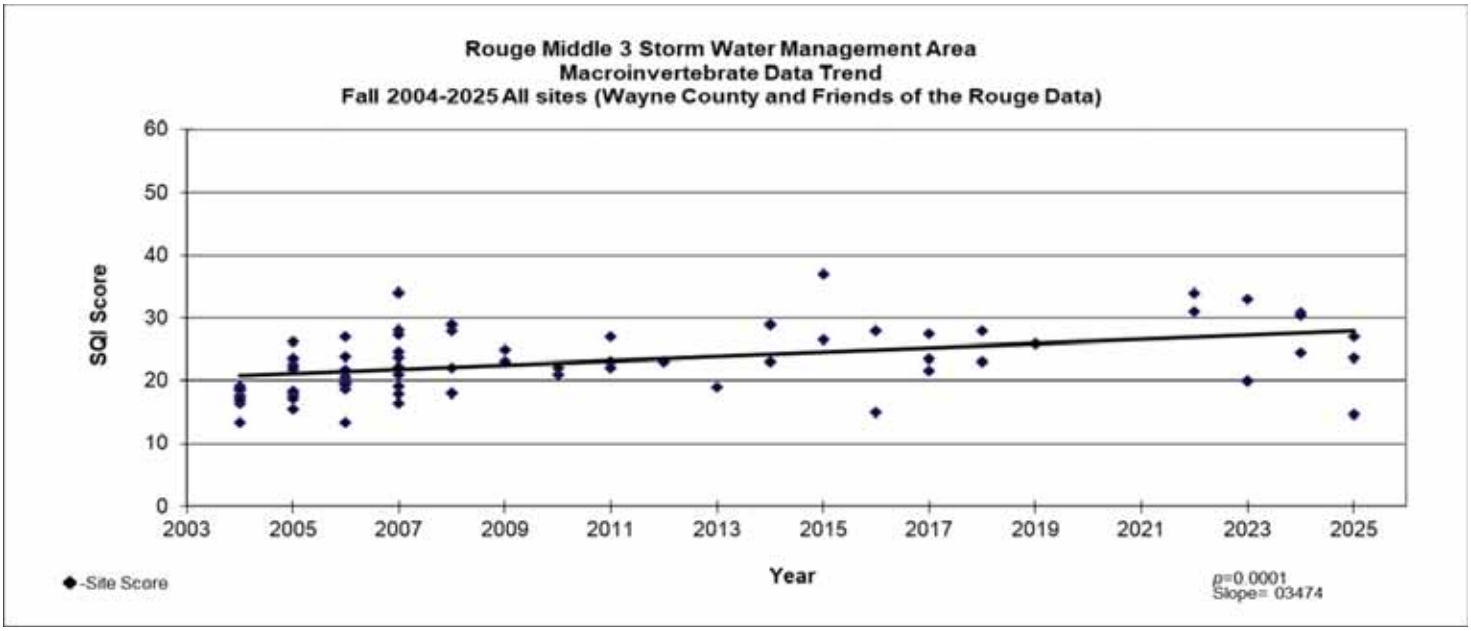
Middle

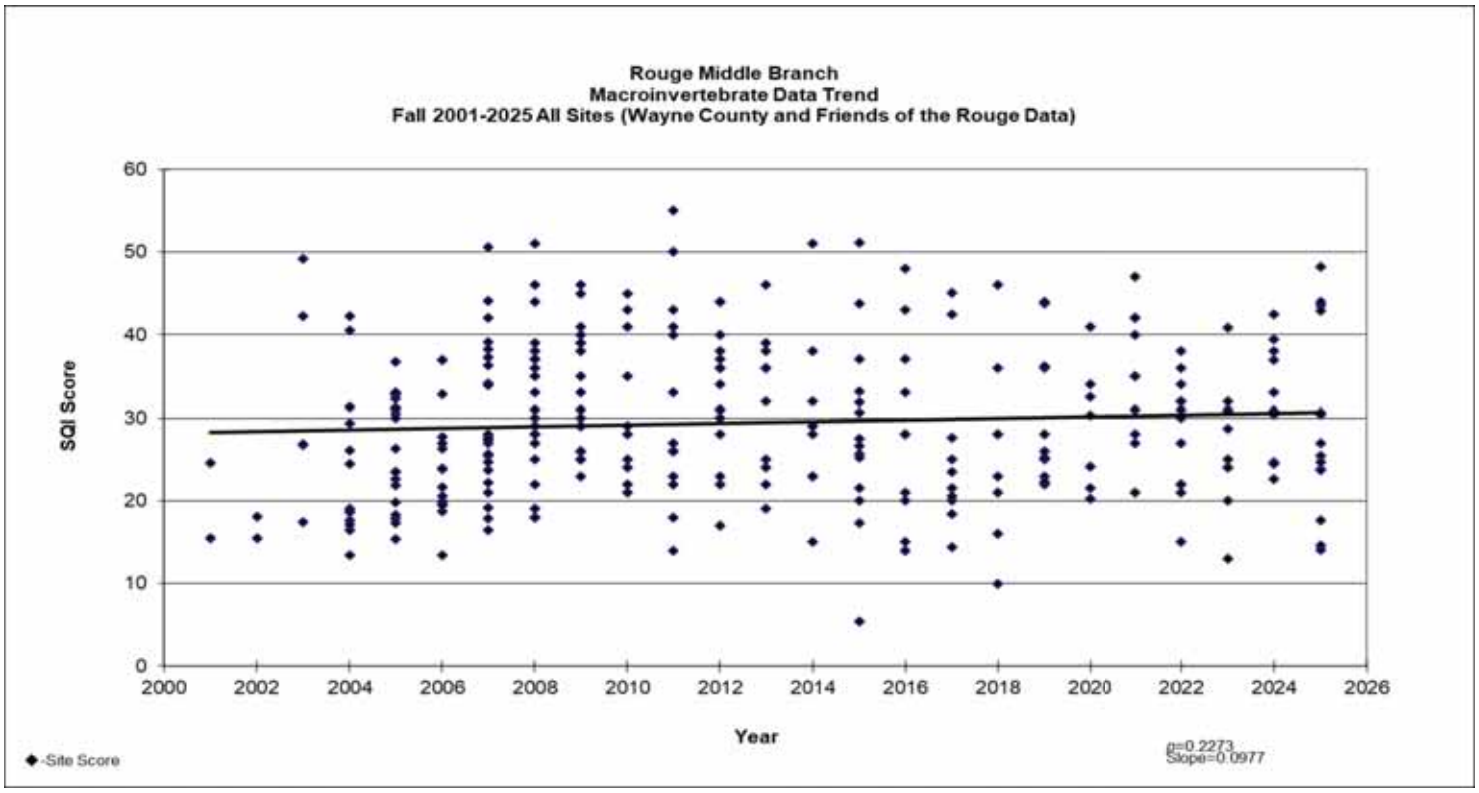

Johnson Creek
Macroinvertebrate Data Trend
Fall 2001-2025 All Sites (Wayne County and Friends of the Rouge Data)
SQI Score
Year
60
50
40
30
20
10
0
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020
2022
2024
2026
Site Score
p=0.1337
Slope=0.1590

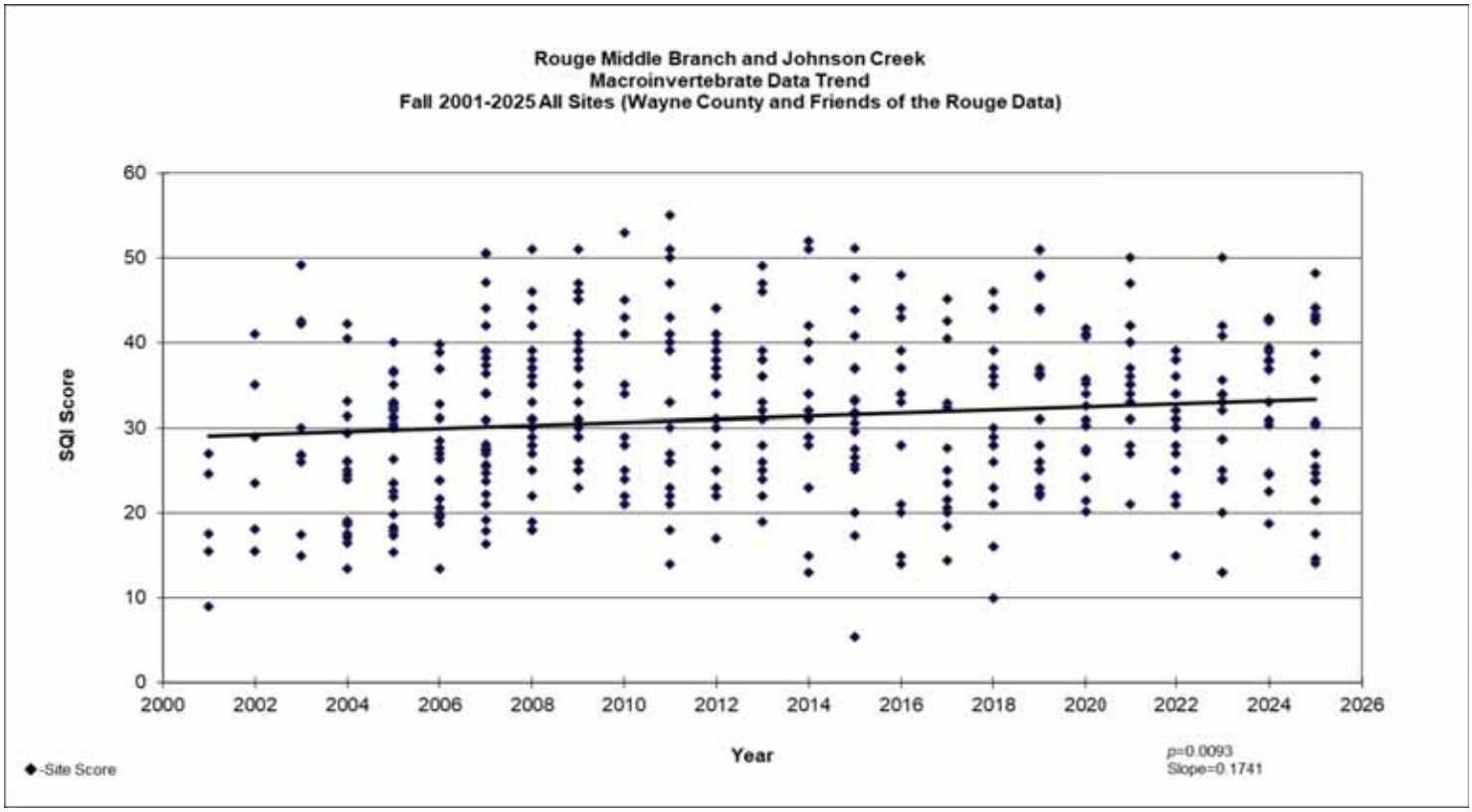

Sump Creek
Macroinvertebrate Data Trend
Fall 2008-2025 All Sites (Wayne County and Friends of the Rouge Data)
SQI Score
Year
◆-Site Score
p=0.7292
Slope=-0.1285

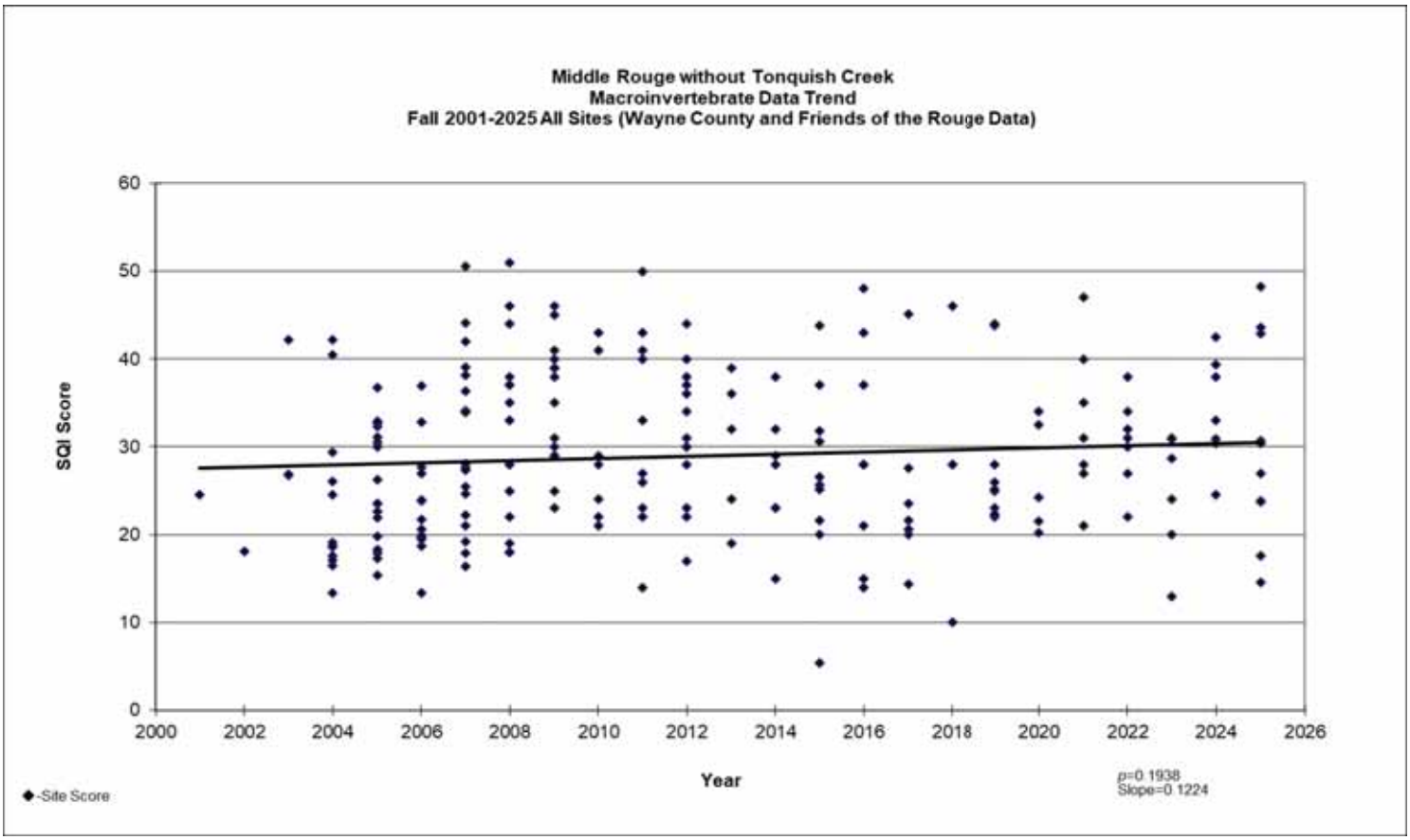

Tonquish Creek
Macroinvertebrate Data Trend
Fall 2001-2025 All Sites (Wayne County and Friends of the Rouge Data)
SQI Score
Year
◆-Site Score
p=0.8194
Slope=0.0377


Rouge Middle 1 Stormwater Management Area
Macroinvertebrate Data Trend
Fall 2001-2025 All Sites (Wayne County and Friends of the Rouge Data)
SQI Score
Year
-Site Score
p=0.1115
Slope=-0.1487

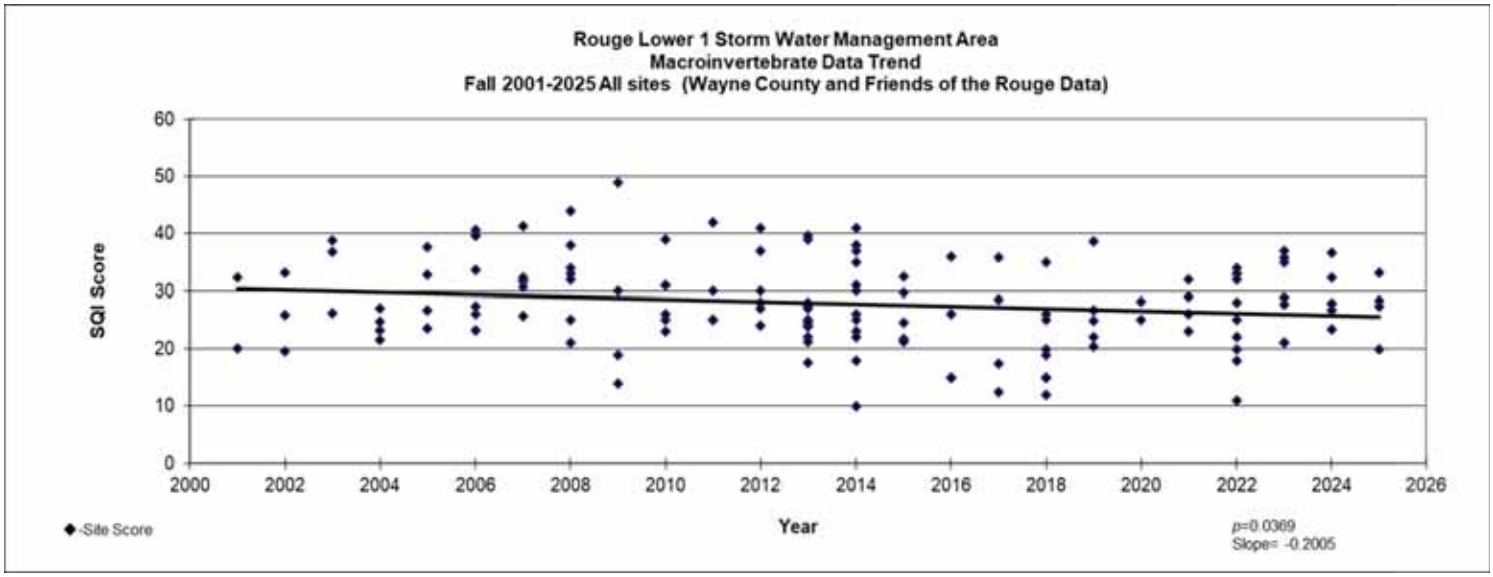

Rouge Middle 3 Storm Water Management Area
Macroinvertebrate Data Trend
Fall 2004-2025 All sites (Wayne County and Friends of the Rouge Data)
SQI Score
Year
-Site Score
p=0.0001
Slope= 03474

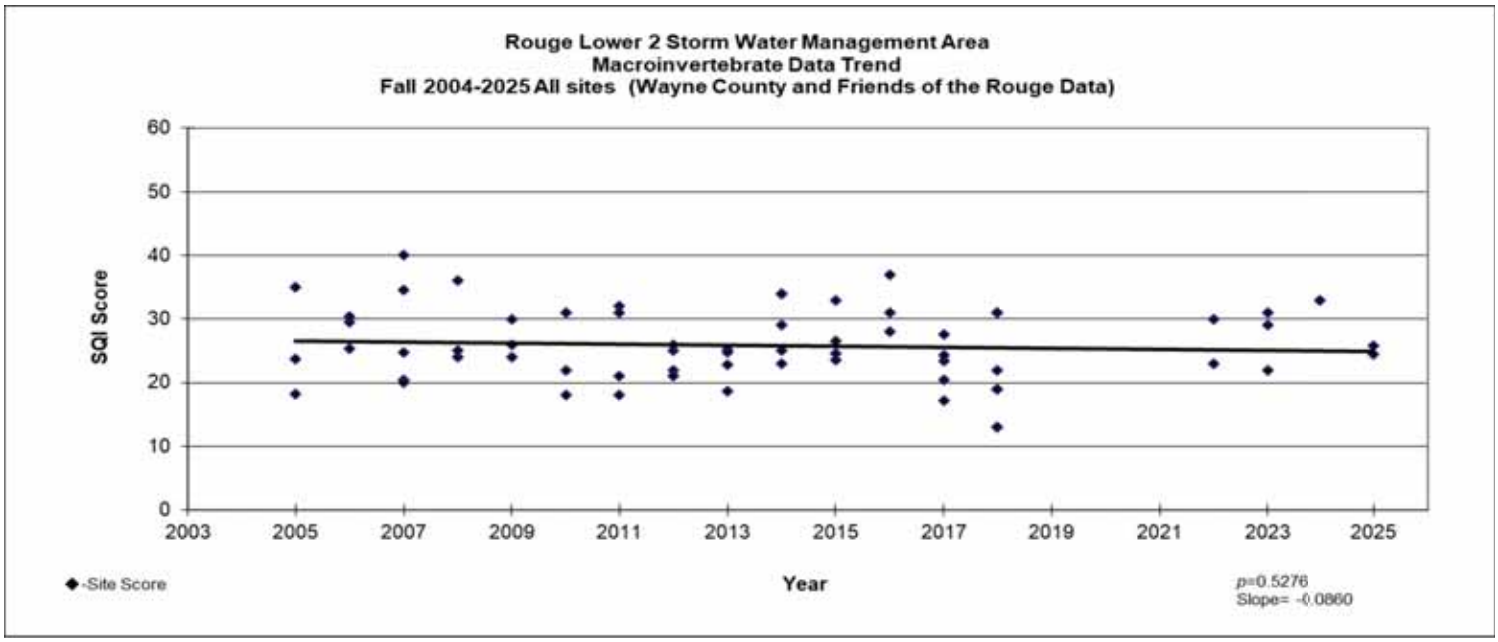

Rouge Middle Branch
Macroinvertebrate Data Trend
Fall 2001-2025 All Sites (Wayne County and Friends of the Rouge Data)
SQI Score
Year
-Site Score
p=0.2273
Slope=0.0977

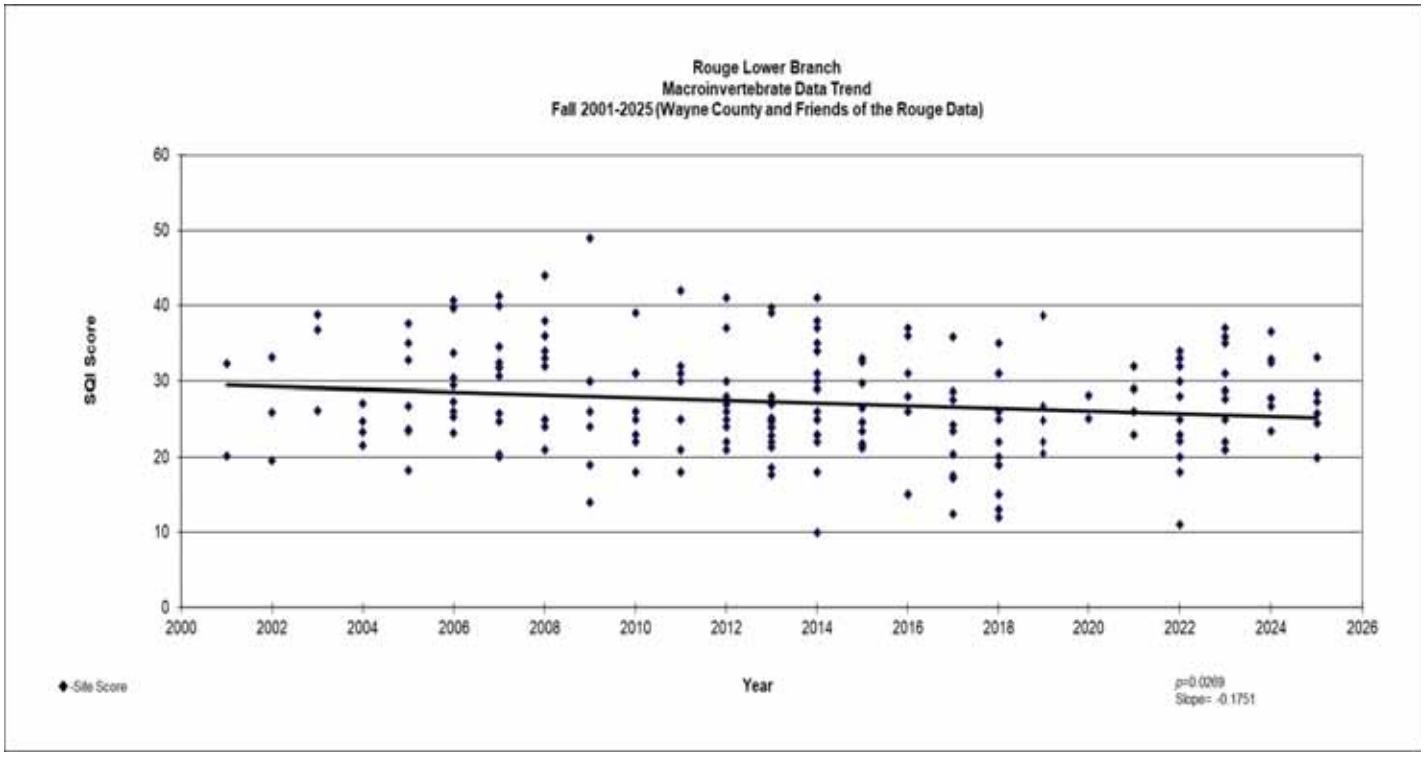

Rouge Middle Branch and Johnson Creek
Macroinvertebrate Data Trend
Fall 2001-2025 All Sites (Wayne County and Friends of the Rouge Data)
SQI Score
Year
-Site Score
p=0.0093
Slope=0.1741


Middle Rouge without Tonquish Creek
Macroinvertebrate Data Trend
Fall 2001-2025 All Sites (Wayne County and Friends of the Rouge Data)
SQI Score
60
50
40
30
20
10
0
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020
2022
2024
2026
Year
p=0 1938
Slope=0 1224
-Site Score

Lower


Rouge Lower 1 Storm Water Management Area
Macroinvertebrate Data Trend
Fall 2001-2025 All sites (Wayne County and Friends of the Rouge Data)
SQI Score
Year
-Site Score
p=0.0369
Slope= -0.2005


Rouge Lower 2 Storm Water Management Area
Macroinvertebrate Data Trend
Fall 2004-2025 All sites (Wayne County and Friends of the Rouge Data)
SQI Score
Year
-Site Score
p=0.5276
Slope= -0.0860


Rouge Lower Branch
Macroinvertebrate Data Trend
Fall 2001-2025 (Wayne County and Friends of the Rouge Data)
SQI Score
60
50
40
30
20
10
0
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020
2022
2024
2026
Year
Site Score
p=0.0269
Slope= -0.1751