



Elizabeth Park, Trenton, MI

Photo credit: James Marvin Phelps

<https://www.flickr.com/photos/mandj98/4271757821>

***Fostering the science and art of soil and water conservation
in Michigan and the Great Lakes Region.***

Happy Winter Michigan chapter members! This is the quarterly newsletter from your local chapter of the Soil and Water Conservation Society. In it you will learn about the latest goings-on within the chapter, the latest in soil and water conservation research, and a fellow chapter member. As always, if you are willing to share your own pictures that capture the beauty of water and soil in Michigan, or have an article about related events that you would like to share, please email me so that we can feature them in a future newsletter. Please contact me at oneilg@msu.edu with your contributions.

Glenn O'Neil (oneilg@msu.edu)

Chapter News and Upcoming Events

The chapter's Professional Development Committee is planning its **Annual Ag and Natural Resources (ANR) Seminar** for Friday, March 8, 2024, from 9AM – 4PM, at the AgroLiquid Conference Center in St. Johns, Michigan. The seminar's title is "Sustainable Intensification of the Rural Landscape: Protecting Soil Health, Water Quality, and Farm Profitability." The workshop will include speakers from diverse sectors of the conservation community, including scientists from Saginaw Valley State University, the Nature Conservancy, Ohio State University, and Michigan State University; a conservation specialist from Van Buren County, the director of natural resources for the Pokagon Band of Potawatomi, and Michigan farmers from three different operations (usually have just one). Blaine Baker, John Burk and Lee and Marilyn Thelen will all talk about their experiences implementing soil conservation/soil health technology into their operations.

The seminar registration link, and more details about the presentations and speakers is available on the chapter website:

<https://www.miglswcs.org/events-and-archives/>



**David Karpovich,
Ph.D.**
*Director
Saginaw Bay
Environmental
Science Institute -
SVSU*

**Doug Pearsall,
Ph.D.**
*Senior
Conservation
Scientist
The Nature
Conservancy*



Robyn Wilson
*Professor
Ohio State
University*

Randy Schaeztl
*Professor
Michigan State
University*



Colleen Forestieri
*Senior Conservation Specialist
Van Buren County
Conservation District*

Blaine Baker (left), with Kim Baker
*Bakerlads Farm
Lenawee County*



Michigan Envirothon

Michigan Envirothon has five registered teams ready to participate in the southwest Michigan regional to be held March 19th at the Kalamazoo Nature Center. Several more teams are being formed and we have three teams that will probably be participating at the southeast Michigan regional at Kresge Eastern Michigan University nature area located outside of Lapeer. There are several conservation districts working to recruit teams in the central part of the state and around the Grand Traverse Bay area. We are hoping to pass many of these teams on to the state competition at MSU on May 8-10. Qualifying tests will be given at the regionals to determine which teams will advance to states.

The last competition held in Michigan was cut short in 2020 when covid broke and we are excited to see such enthusiasm to get the competition re-established here in our state. We are still looking for volunteers to help as resource professionals at regional events and the state competition. Teams have until March 15th to register with the Michigan Association of Conservation Districts for the 2024 competition. Contact your local conservation district or the Michigan Envirothon Committee to get a registration form. If you would like to be a team advisor, teams just need to consist of 3 to 8 high school age students and can be formed from science or outdoor clubs, FFA programs or 4-H clubs, or from any high school class or homeschool group willing to study the subject areas of Agriculture, Forestry, Wildlife, Aquatic Ecology, Soils, and Energy. SWCS members make great resource professionals, so if you are looking for a way to participate in Michigan this spring, contact Steve Schaub at steve.schaub@macd.org.

Crockery Creek Watershed Pollinator Habitat Improvement Project

Chapter member Sarah Bowman, a Watershed and Conservation Specialist for the Ottawa Conservation District, recently led a joint project between the district and NRCS to convert fallow farmland in the Crockery Creek Watershed into a supportive habitat for native plant species and biodiversity. You can read more about that project at the district's website:

https://ottawacd.org/crockery_pollinator_habitat/



Sarah Bowman (center) at the transformed habitat.

Member profile: *Zach Curtis*

Our member profile for this newsletter is Zach Curtis of Hydrosimulatics in Lansing, MI. Zach has been an active member of the Executive Council in recent years, and currently serves as the Region 2 Director.



Zach Curtis and Stella at Ludington State Park

1. Where do you work and what do you do there?

I work at Hydrosimulatics (Lansing, MI), a small business spin-off from MSU that specializes in environmental modeling (especially related to water/hydrological systems). We develop and maintain an online platform technology - called MAGNET4Water- that was originally invented at MSU for groundwater science and engineering, but is now applicable to watershed systems, river networks, and urban water systems (urban catchments, storm-sewer networks, and pressurized pipe networks)

My time is split between professional environmental consulting (especially related to groundwater resource management); strategic planning (technology development and project management); and educational outreach/support to students and instructors that use MAGNET4Water in their classrooms.

2. *When and why did you join MI-SWCS?*

I joined back in 2018 after helping to facilitate a strategic planning meeting for MI-SWCS (I knew a member of that committee and had some facilitation training just prior to that, so it was a good fit). It was a great way to learn about the goals and inner workings of MI-SWCS, and it motivated me to join and get involved with the Executive Council.

3. *What do you see as a major challenge to conservation efforts in Michigan?*

I think the rapid pace of climate change is (and will be) the biggest challenge to our collective conservation community in Michigan. Changing patterns of temperatures and precipitation are already having impacts on growing seasons and dynamics of water systems around Michigan (ice cover in the Great Lakes is currently at an all-time low!). This means "doing business as usual" in some of the activities related to soil and water conservation will not work. Climate change also makes planning for the future more difficult. In a "stable climate", we can use past trends and statistics to project what might happen in the future under different management scenarios. Climate change means we can't use necessarily use past trends to project into the future, because the statistics/trends are changing (this is especially true in hydrology/water resources management). This underscores the importance of continuous collection of environmental data/information and applying modeling/simulation tools (many of which were not previously available) to experiment with a range of plausible (yet uncertain) futures.

4. *How have you participated in the MI SWCS chapter?*

I have served as the Region 2 Director and Scholarship Committee Chair for the past three years.

5. *How do you feel your membership to the MI SWCS is valuable?*

Personally, it is valuable in that it allows me to naturally learn about other conservation projects around Michigan (and nationwide, even) and the way different conservation professionals go about their work. That, in turn, makes me a better communicator of my own work and how it translates to building toward the "common good".

For the broader conservation community in Michigan, I think Mi SWCS is valuable because it connects professionals that may otherwise not cross paths, and highlights a lot of good work that can be extended in different areas or for different purposes.

6. *What advice do you have for aspiring or early career natural resource professionals?*

Take time to think about (and even document) how your day-to-day work fits into the "bigger picture" - whether it's the objective of your current project, the mission of your organization, or your career goals more broadly. It can be inspirational and help set you on a more effective path as you work through the details.

7. *Where were you born, and where did you grow up?*

I was born in Battle Creek, Michigan, but grew up in East Lansing, Michigan. I went to MSU for undergraduate and graduate degrees.

8. *What is your favorite place in Michigan to visit?*

My favorite place would have to be Isle Royale, but I only visited once. I can't wait to go back.

My favorite "routine spot "is probably the Kalamazoo area. There are good opportunities for outdoor recreational activities, and a lot of good spots for food and live music.

9. *What do you like to do in your free time?*

Of course, spending time with my family and dog, but I also enjoy camping and hiking, listening to music (especially live music) and watching sports, and reading books (especially about history or with historical context).

10. *Best place to eat in your area, and what to order there?*

Zoobies in the Old Town district of Lansing. All of their appetizers are delicious so try ordering a few!

11. **Bonus:** *What is your favorite dessert?*

Blueberry pie with ice cream.

Thank you, Zach!

JSWCS Highlight

SWCS members have access to the Journal of Soil and Water Conservation, where they can learn about the latest research around the globe in conservation science. In this section we highlight an article in the most recent journal issue.

In the Jan./Feb. 2024 issue, a team of researchers from Utah State University and South Dakota State University evaluated factors that contribute to farmer adoption of conservation tillage (CT) in South Dakota (doi:10.2489/jswc.2024.00124). They employed an approach called the theory of planned behavior in which a farmer's intention of conservation adoption, and the degree to which it is controlled by a range of socio-economic variables, is used to estimate the likelihood of them implementing CT. The researchers surveyed nearly 500 farmers from across South Dakota, gathering information about gross farm income, education level, age, farm size, and conservation tillage adoption rates. Results indicated that farmer attitudes and the extent to which they felt they could implement CT were the most significant predictors of adoption (age and income were not statistically significant predictors). They concluded that although respondents viewed conservation practices positively, farmers were "more likely to adopt CT when they perceive that they have the necessary knowledge and skills to successfully engage in CT practices." Perhaps most relevant to conservation professionals and organizations, the authors stated, "Positive attitudes and sufficient knowledge and skills among South Dakota farmers can be attributed to the role of various organizations in promoting conservation practices." This study underscores the vital role that organizations like MI-SWCS can play in facilitating conservation adoption. The extent to which MI-SWCS can be an honest and reliable resource for conservation information, and the frequency with which it provides farmers opportunities to learn about the conservation benefits, the greater the likelihood of them adopting practices like CT and its subsequent benefits for Michigan soil and water.

Conservation Tools Highlight

EPA's How's My Waterway tool (<https://mywaterway.epa.gov/>) allows users to easily identify and explore the status of surface water impairments throughout the country. Users can type in a location and view a map of rivers, streams, and lakes, and see which have been classified as healthy and which are impaired. The system provides users with an overview of impairment within their community, but also allows them to drill down on individual water bodies and explore timelines of what issues were observed what activities they support (swimming, fishing, fish consumption, drinking, etc.), what active restoration plans are currently underway, and what steps citizens can take to help protect these water resources.

The screenshot displays the EPA's How's My Waterway tool interface. On the left, a search bar contains "East Lansing, MI" and a "Go" button. Below the search bar is a map of the East Lansing area, showing various water bodies and their status. On the right, the "Aquatic Life" section is active, displaying a summary of waterbody conditions. The summary indicates that there are 3 waterbodies assessed for aquatic life: 1 Good, 2 Impaired, and 2 Condition Unknown. A legend below the summary shows the corresponding colors for each condition: green for Good, red for Impaired, and purple for Condition Unknown. The summary also mentions that there are 3 waterbodies assessed for aquatic life in the Herron Creek-Red Cedar River watershed. The interface includes navigation tabs for Swimming, Eating Fish, Aquatic Life, Drinking Water, and Water Monitoring. A disclaimer is visible below the summary, and a "Show Text" button is located in the top right corner of the Aquatic Life section.

Let's get started!

East Lansing, MI

Search by address, zip code, or place...

Aquatic Life

EPA, states, and tribes monitor and assess water quality to determine the impact of impairments on plants and animals living in the water.

Plants and animals depend on clean water. Impairments can affect the quality of water, which can have adverse effects on plants and animals living in the water. The condition of a waterbody is dynamic and can change at any time, and the information in How's My Waterway should only be used for general reference. If available, refer to local or state real-time water quality reports. [Show less](#)

DISCLAIMER

There are 3 waterbodies assessed for aquatic life

Count	Condition
1	Good
2	Impaired
2	Condition Unknown

Waterbody Conditions:

- Good
- Impaired
- Condition Unknown

There are 3 waterbodies assessed for aquatic life in the Herron Creek-Red Cedar River watershed.

Rivers/Streams in HUC 040500040504
State Waterbody ID: MI040500040504-01

An assessment of impairments impacting aquatic life near East Lansing, MI by EPA's How's My Waterway tool.

Pictures for the Newsletter

Have some interesting pictures to share with a Michigan Soil & Water theme? If you would like to share them with the Chapter, please send them to members of the Executive Council, or to me at oneilg@msu.edu.

Membership

If you are not currently a member of the Soil & Water Conservation Society, membership has many benefits. By joining the national Society, members are automatically affiliated with their state chapters. This is an opportunity to network with professionals in the conservation field and support the Society's critical mission. Information about how to join is available through the link: <https://www.swcs.org/get-involved/join/>

Links of Interest

[Michigan Soil and Water Conservation Society - YouTube](#)

[North Central Region | Soil and Water Conservation Society \(swcs.org\)](#)

[Great Lakes Echo - Environmental news across the basin](#)

[Michigan Farmers Union | United to Grow Family Agriculture](#)

[American Farm Bureau Federation - The Voice of Agriculture | Homepage \(fb.org\)](#)

[W.K. Kellogg Biological Station • Michigan State University \(msu.edu\)](#)

[Great Lakes Restoration Initiative | Great Lakes Restoration Initiative \(glri.us\)](#)

[Home | Hoosier Chapter of the Soil and Water Conservation Society \(hoosierchapterswcs.org\)](#)

[GLIN: Great Lakes Information Network - Great Lakes Commission \(glc.org\)](#)

[MSU Water Withdrawal Statistics](#)