



Washtenaw County Conservation District

AUGUST 2019

Conservation Ag Field Day

August 13th from 8am to 3pm
at Green Things Farm

The Conservation Ag Field Day will be hosted on Tuesday, August 13th at Green Things Farm (3825 Nixon Rd, Ann Arbor, 48105) from 8AM-3PM. The Field Day will cover an overview of various practices ranging from reduced tillage in diversified vegetable production, rotational grazing, woodlot management, silvopasture, invasive species management and the Michigan Agriculture Environmental Assurance Program (MAEAP) verification process. The Field Day is a perfect opportunity to learn about diversified conservation management on agricultural land and connect with others who are focusing on similar efforts.

Green Things is the only farm in Washtenaw County that currently has four MAEAP verifications in farmstead, cropping, wildlife and habitat, and livestock systems. Presenters for the day will include several Washtenaw County farmers: Nate and Jill Lada of Green Things Farm, Eric Kampe of Ann Arbor Seed Company and Malaika Whitney of Whitney Farmstead. Featured speakers will also include Julie Crick, Natural Resources Educator with MSUE; Kable Thurlow, Beef & Grazing Educator with MSUE; Daniel Ufnar, Resource Soil Scientist with the Natural Resource Conservation Service (NRCS); David Borneman of David Borneman, LLC; Carl Burhop of Burhop Forestry Consulting and Nick Manchinski, MAEAP Technician with the WCCD.

A free farm-to-table lunch will be provided featuring farm vegetables and other local items. Please contact Megan DeLeeuw to reserve your space at 734.761.6721 ex. 5, megan.deleeuw@macd.org. The field day is sponsored in part by Harvest Energy Solutions, Nifty Hoops and the Michigan Organic Food and Farming Alliance.



Our Staff and Board Directors

Matt Koenn, Chair

Jill Dohner, Vice-Chair

Howard Sias, Treasurer

Julianne Chard, Secretary

Don Rentschler, Director

Megan DeLeeuw, District
Manager

Nick Machinski, MAEAP
Technician

Hannah Bradshaw -
Outreach and Education
Intern

CONTACT US:

Washtenaw CD

7203 Jackson Rd

Ann Arbor, MI

48108

734-205-1219 (O)

734-718-5506 (C)

[megan.deleeuw@
macd.org](mailto:megan.deleeuw@macd.org)

Seeking Nominations for our 2019 Conservation Awards!

Please consider nominating someone who you think is deserving of one of the following: **2019 Small or Beginning Farmer of the Year** (celebrating the efforts of small farmers with ten acres or less and/or beginning farmers in their first ten years of farming that prioritize conservation practices), **2019 Tree Conservationist of the Year** (recognizing excellent tree planting efforts over many years), or **2019 Conservation Farmer of the Year** (recognizing farmers that have prioritized conservation practices).

Nominations are due by August 30th.

Conservation District Director Elections

If you are concerned about climate change, erosion, water quality, forestry or other conservation issues, then consider running for a Conservation District Director position. One Director position will be elected at the Washtenaw County Conservation District annual meeting, January 16, 2020 to serve a four-year term.

What do Conservation District Directors do? Conservation District Directors are locally elected public officials, responsible for the operation and management of the Conservation District. Directors develop policy, plans and programs which are carried out by district staff and other resource personnel, to assist local landowners with the management of their natural resources. Directors meet monthly; meet with elected officials to discuss District programs and funding needs; and represent the District at meetings of other organizations. Directors are not paid, but receive compensation for expenses related to attending meetings and other activities of the District.

Who can be a Director? Any resident of Washtenaw County who can vote in general elections is eligible to be a District Director. Interest in, and awareness of local conservation issues is important, and a desire to serve. Director candidates must file a nominating petition, signed by at least five Washtenaw County residents, at least 60 days prior to the District annual meeting. Petitions are available from the Conservation District office and must be returned by November 14, 2019.

For additional information about the position of Conservation District Director or to obtain a nominating petition, contact the District Manager Megan DeLeeuw at: (734) 205-1219 or e-mail: megan.deleeuw@macd.org.

Conservation Stewards Program Fall 2019

Passionate about conservation in your community? Want to get more hands-on involvement? The Conservation Stewards Program is a volunteer leader training program designed for those interested in science-based ecosystem management principles and sharing this knowledge with others to help restore and conserve ecosystems throughout Michigan communities. It is led through MSUE and includes over 45 hours of instruction, classroom and field based, as well as online learning modules and a capstone project. Washtenaw County Courses will be offered this fall on Wednesday evenings starting in September with two Saturday field days in October. The program will end on November 13th. Registration is \$250 per person, and scholarships are available. More information and online registration can be found here: https://www.canr.msu.edu/conservation_stewards_program/.

MAEAP June Update By Nicholas Machinski

The Michigan Agriculture Environmental Assurance Program (MAEAP) is an innovative, proactive, and voluntary program that helps farms of all sizes and all commodities voluntarily prevent or minimize agricultural pollution risks. It helps farmers evaluate their entire operation and truly make sustainable management decisions balancing society's needs, the environment, and economics.

Funding for Farmers

For those farmers in the River Raisin Watershed, there is \$150,000 available for conservation practices. Michigan State University's Institute of Water Research has established a program for growers in the River Raisin Watershed interested in installing new conservation practices on their ground. Practices include: no-till, cover crops, filter strips, having a nutrient management plan, applying all phosphorus at planting time and more. There are even bonus incentives for attending upcoming field events (such as our Conservation Ag Field Day on August 13th), beginning MAEAP, or beginning a soil testing program.

Applications will be accepted on a weekly basis with the goal of notifying qualified candidates within a week after applying. The program will end when funding runs out or by September 27th. If you have questions or want to apply please call Nick Machinski at 734-761-8789 ext. 1218 to set up an appointment.

Horning Farms Discusses the Challenges of Dairy Farming on Michigan Radio

Recently, Katelyn Packard of Horning Farms was interviewed for a piece on Michigan Radio's Stateside. Horning Farms has been around for 140 years and is MAEAP verified (working on re-verification) in their cropping and livestock systems. The interview was part of a larger conversation about dairy farms adapting to changing times as well as the agricultural community as a whole. The interview and the rest of the conversation can be found by following this link: <https://www.michiganradio.org/post/it-s-getting-harder-small-dairy-farmers-make-it-michigan>.



It is impossible for me to discuss everything that is happening to Michigan dairy farmers in this article as the list is long. The need to scale-up has pushed many dairies out of the business. Even for larger dairies that have scaled-up recently, like Horning Farms, face falling milk prices, trade disputes, dairy alternatives, and more are constant threats to the industry.

In the interview, Katelyn discusses how Horning Farms has thought about diversifying itself; exploring options during these tough times in the dairy industry. Selling beef or cheese products on the farm are options (Note: the farm does sell freezer beef; details are below). Another option being tossed about is creating a space to house visitors and maybe rent space as part of an Air B&B.

140 years is a long time and there is a lot of history at Horning Farms. Any farm or business that has been around for that long is a treasure to the county and are becoming increasingly rare. To keep such places around for decades to come, it is important for the local communities to show their support for their local farms.

Residents in the Pleasant Lake and Manchester area can go to Horning Farms to purchase bulk freezer beef directly from the farm. To purchase you can contact Horning Farms in the following ways:

Email horningfarms@gmail.com, Phone: 734-368-3147, Facebook: @horningfarms.

Algal Blooms and Lake Erie

A series looking at the system of factors leading to algal blooms in the Western Lake Erie Basin (WLEB)

By Nicholas Machinski



In the first two parts of this series we discussed the rural and urban environments surrounding Lake Erie and how they play a part in contributing to the algal blooms. Well, its not just the inputs from the surrounding landscape that contributes to the problem. Lake Erie doesn't do itself any favors.

When you ask someone in Michigan where they are going on vacation, more often than not, you'll get response along the lines of, "We're going to our cottage up North." My response is a bit different. I instead go South...to Ohio. That's right, Ohio. My family has had a cottage on one of the Bass Islands for years and I've been there hundreds of times throughout my life. It is one of my favorite places to go and please note that this is probably the only time you'll catch me saying anything positive about Ohio.

Having been to Lake Erie so many times, I've picked up some information up over the years that I just know and don't have to reference. However, if you question some of the figures I'm about to mention, please feel free to look them up yourself. I think you'll find that I'm pretty accurate.

The glaciers that formed the Great Lakes didn't bestow Lake Erie with the depth that many of the other lakes have. The Bass Islands sit the Western Lake Erie Basin (WLEB) the shallowest part of Lake Erie. The average depth of this basin is only about 23ft. Think about that. If you're 6ft tall, you're already a quarter of the way to the bottom of the lake. If you've got the lung capacity, you could probably dive down to the bottom and make it back to the surface without much of a problem. Since the basin (and the lake itself) is so shallow, the water can easily get over 70 degrees Fahrenheit during the summer months. Basically, Lake Erie becomes an extremely large swimming pool.



Figure 1: Lake Erie's Western Basin as of 8/1/19

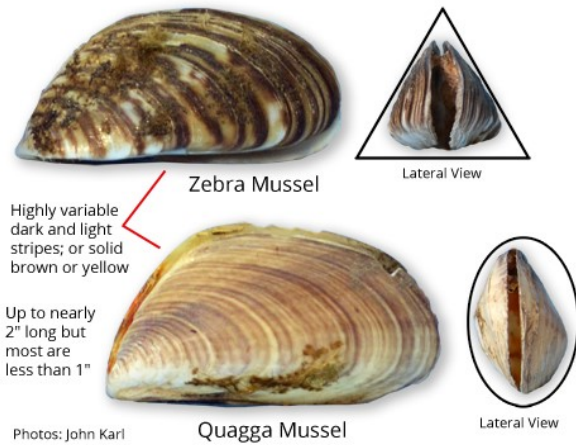
Now the warm water feels great, but it comes at a price. This warm water is the perfect habitat for algae. Once, the calendar says July, Lake Erie is quickly heating up and by the end of the month we start to see the algal bloom (Figure 1).

We also need to talk about another feature that is not only a feature of Lake Erie, but much of the Great Lakes; invasive species, namely: Zebra and Quagga mussels. These mussels arrived in the Great Lakes, decades ago through ballast water discharge. Ships from eastern Europe would travel over the ocean, up the St. Lawrence River and into the Great Lakes where they would empty their ballast water as well as any aquatic stowaways, like Zebra and Quagga mussels.

The shallow depths of the WLEB have caused this area of Lake Erie to be quite turbid. However, over the years, it has become relatively clear. Credit for the reduction in turbidity can be given to these invasive mussels.

Continued on page 5...

Continued from page 4...



Zebra and Quagga mussels can attach to any hard surface: rocks, wood, boats, even other mussels. In fact, populations of native mussels have plummeted because these invasive mussels latch onto the natives and become so heavy that the native mussel can't even open up and so it starves. From a swimming standpoint, one has to be careful where they walk, Zebra and Quagga shells are sharp and I can attest to their ability to slice open a foot. Eventually, the population exploded, and entire beaches were no longer rock, but the shells of these invasives.

Mussels are filter feeders and when you have millions and millions of these Zebra and Quagga mussels in a shallow it can actually lower the turbidity of the water, making it clearer. In fact, it is estimated that the populations in Lake Michigan can cycle through the entire lake in just 9-12 days!¹ I've been to Lake Superior, the clear water is beautiful, however when talking about algae blooms, clear water is bad news. The increase in clarity, increases the amount of light penetration into the lake. This warms the water more quickly and thus allows the algae to flourish.

So, the last two factors (lake depth and invasive mussels) are local. This third factor is global, but I'll discuss what it means on a local level: Climate Change. How this global phenomenon will impact specific areas is uncertain, but scientific models have been made to try to predict what warmer temperatures mean at a regional level. Models predict that climate change will mean warmer and wetter winters and springs.² Sound familiar? It should; this spring was an extremely wet season. This extra rain increases the chances of fertilizer washing away and into Lake Erie feeding the algal bloom.

Climate change also decreases the amount of ice cover on Lake Erie. We learned in Part 2: City Life that less ice cover on the Huron, means more erosion and thus phosphorus. The situation is similar here. With less ice cover there is an increased likelihood of erosion occurring along the Lake Erie shore. Less ice on the lake also means that Lake Erie can heat up faster and an algal bloom can occur even sooner.

Now, there is little that can be done about the depth of Lake Erie. We can't dig out the entire WLEB to make it deeper. The area being so shallow, is a large factor that favors the formation of algal blooms. It is possible that there will always be an algal bloom in the WLEB, even if the invasive mussels were extirpated and climate change mitigated. It is all about how severe of a bloom occurs.

Just over 5 years ago, Toledo Ohio began to trend on social media. Nowadays, if a city is trending on social media, the news typically isn't good. Growing up just north of the Michigan-Ohio line, I had (and still have) a lot of friends living in the city. Clicking through the news though it wasn't a shooting or terrorist attack, it was that the drinking water to the city and surrounding areas had been shut off due to some contamination.³ For two days, water was unsafe to drink for millions of people, including my friends, parents and grandparents. An entire city, thirsty.

Now there were many factors that went right for the toxin, microcystin, to enter the drinking water system for the city: the bloom, the temperature, the wind, etc. Yet, it happened. And it happened at Pelee Island in Canada. There 300 inhabitants literally surrounded by fresh water could not drink any of it!⁴

1- https://www.mlive.com/environment/2012/08/zebra_mussels_are_transforming.html

2- <http://elpc.org/wp-content/uploads/2019/03/Great-Lakes-Climate-Change-Report.pdf>

3- <https://www.wtol.com/article/news/toledo-water-crisis-a-timeline-of-whats-happened-so-far/512-71a2414b-a34d-4b4a-9632-58e1c212d098>

4- <https://www.michiganradio.org/post/residents-pelee-island-lake-erie-warned-not-drink-or-bathe-their-water>

Continued on page 6...

The toxic part of algal blooms are caused by cyanobacteria that create the microcystin toxin. This is not something that can be boiled out of the water so one can drink as it thrives in warm temperatures. The toxin can cause vomiting, skin irritation, kill dogs and even move in the air.⁵ Size doesn't matter in the case of toxicity. Big or small, microcystin can occur if the conditions are right.

This isn't to say that size doesn't matter though. This year, there is a prediction that the bloom may have a severity of a 9 on a scale of 10. This scale refers to the size of the bloom, not whether it is toxic or not. Algae take in carbon dioxide but when they die and decompose, oxygen is used. This intake of oxygen in the decomposition process causes dead zones. Essentially, marine life suffocates and dies.

Residents and lake goers don't need to wait until late summer to feel the impact of the algal blooms either. The shutdown of Toledo's water happened on August 2nd, 2014. And this year a no-swim advisory was issued for Maumee Bay State Park on July 25th.⁶ At the time of that advisory, we still had nearly eight weeks of summer left.

That is enough doom and gloom for now though. Next time I'll try to lighten things up a bit and discuss some solutions that we can all take to help reduce our own impact on Lake Erie. If you haven't already please read the draft of the [Lake Erie: 2019-2023 Lakewide Action and Management Plan](#). It will be a key component of my discussion next time and the deadline to comment on this draft is at the end of this month.

5- <https://pubs.acs.org/doi/10.1021/acs.est.7b03609>

6; <https://www.wtol.com/article/news/local/maumee-bay-state-park-under-no-swim-advisory/512-977446ab-c83b-4b3f-9958-99f9082646bb>

UPCOMING EVENTS

Conservation Ag Field Day

When: Tuesday August 13th from 8am-3pm

Where: Green Things Farm, 3825 Nixon Rd, Ann Arbor, MI 48105

See page one of newsletter for more details!

Farm Drainage Field Day

When: September 12 & 13

Where: 8815 Samaria Road, Riga, MI 49276

This event is hosted by the Michigan Land Improvement Contractors Association and Michigan State University Extension. The field days will run from 9am to 4pm both days and lunch will be provided. Topics covered will include drainage system installation, conventional drainage, controlled drainage, drainage water recycling, cover crops, and soil health. There will be a pond installation for drainage water recycling at the event! Please register for the event at <https://events.anr.msu.edu/field19>. More information about speakers and CCA credits can also be found at the link.

Fall Tree & Native Plant Sale - October 11th

Orders can be placed on our website or in the office. Pick-up is at the Washtenaw Farm Council Grounds from 2-6pm on Friday, October 11th.