

## 2015 Macatawa Watershed Stakeholder of the Year

The Macatawa Area Coordinating Council was pleased to present the 2015 Macatawa Watershed Stakeholder of the Year Award to the Project Clarity Agricultural Committee. The nine-member committee has worked together since October 2014 to develop and guide implementation of agricultural best management practices for Project Clarity. Committee members include three agribusiness representatives, one private farm consultant and five local farmers. The committee is supported by staff from the MACC and the Outdoor Discovery Center Macatawa Greenway. An initial task of the committee was to develop and approve a process for farmers to apply for Project Clarity funding to install best management practices. From October 2014 through September 2015, the committee approved funding for 10 farmers to install the following: 2 two-stage ditches, a drainage water management system, a series of water and sediment control basins, 2 equipment purchases that will support cover crop planting, 2 additional contracts for planting cover crops (1,476 total acres of cover crops), and 2 contracts for gypsum application (3,170 acres). Together, these practices will keep about 3,500 pounds of phosphorus out of Lake Macatawa each year. This is a significant step towards meeting the overall phosphorus goal for Lake Macatawa.



Committee members present to accept the award at the December 4 meeting included (from left to right) Allison Brink, Brink Consulting; Bob Dykhuis, Dykhuis Farms; Cal Schipper, Schipper Eggs; and John Christian, Green Valley Agriculture. Members not pictured include Bob Fenton, CHS; Cliff Meeuwssen, Zeeland Farm Services; Jeff Hoeve, Hoeve Farms; Ross Timmerman, Quarterline Farms; and Bryan Kleinheksel, Kleinheksel Farms.

# About the MACC

## **Steve Bulhuis**

Executive Director

## **Elisa Hoekwater**

Transportation Manager

## **Kelly Goward**

Watershed Project Manager

## **Aaron Spicer**

Agricultural Technician

## **Carolyn Ulstad**

Program Assistant

The Macatawa Area Coordinating Council (MACC) was formed in 1993. It is the Metropolitan Planning Organization for the Holland, Michigan, urbanized area and is required by federal legislation to provide coordinated transportation planning. The MACC's transportation program is funded by planning funds from the Federal Highway Administration, the Federal Transit Administration, the Michigan Department of Transportation, and local dues. Other programs of the MACC include the Macatawa Watershed Project that works to improve area water quality and the Clean Air Action Program that promotes voluntary actions on Clean Air Action! Days.



**Macatawa Area  
Coordinating Council**

*A Cooperative Effort Among Units of Government*

301 Douglas Ave

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[www.the-macc.org](http://www.the-macc.org)

## **Calendar of Events**

**January 8, 2016, 5:30-7:30pm—Showshoe Hike.**

Explore the Ottawa County Park's Riley Trails (16300 Riley St, Holland) with a naturalist from the Outdoor Discovery Center Macatawa Greenway on snowshoes. Wooden, Ojibwa-style snowshoes ideal for people aged 8 years and up will be available for loan. Participants are welcome to wear their own snowshoes. Flashlights are recommended. Be prepared to be outside the entire 2 hours hiking. At least 4 inches of snow base is required in order for the loaner snowshoes to be available to the group. Go to [parktownship.org](http://parktownship.org) to register

**February 11, 2016, 1:30-3:30pm—Macatawa**

**Watershed Advisory Committee Meeting.** Meetings are open and all are welcome to attend to learn more about current watershed activities.

**February 20, 2016, 3:00-4:00 pm—Wildlife Encounter:**

**River Otter** at the Hemlock Crossing Nature Education Center (8115 West Olive Rd, West Olive). River Otters are rarely seen, but are present in our local waterways. Dive into the history of this animal in Michigan and be intrigued by the unique life that this playful mammal lives. The Wildlife Encounters series aims to introduce people to the amazing natural history of the wildlife found in our own yards, parks and region. These 30-45 minute presentations are geared for older children and adults. An optional guided nature hike will follow after the program. Pre-registration is not required.

## **Correction to Fall newsletter**

Did you read the "Did you know..." section in our last newsletter? If so, we need to make a quick correction. Lake Macatawa has always been connected to Lake Michigan, but not in the same way that it is today. Lake Macatawa originally had a small river outlet that flowed north of the current channel and emptied into Lake Michigan via a waterfall. The current channel was constructed after Dutch settlement of the area.

## Student Research in the Macatawa Watershed

Students from Grand Valley State University's Annis Water Resources Institute are conducting water quality research in the Macatawa Watershed. Two students shared their projects at the Macatawa Watershed Annual Meeting on December 4. Delilah Clement, pictured at right, is looking at phosphorus in agricultural tile drains and how algae that live in Lake Macatawa use it. Initial results show high variability in the amount of phosphorus in different tile drains. It is also highly available for algae to use. Delilah's research will continue through February. She will also look into causes for the variability, including land use practices. A second student, Emily Kindervater, is just starting to design her research project. She will be looking at phosphorus retention in agricultural two-stage ditches. Two-stage ditches have a wider design and hold more water than traditional drainage ditches. Project Clarity, in partnership with the Allegan County Drain Commissioner, has already built several in the area. Emily's research will help measure how well they remove phosphorus and improve water quality. Copies of Delilah's and Emily's presentations are available on the MACC's website: [www.the-macc.org](http://www.the-macc.org)



## 2015 Watershed Accomplishments

2015 was a busy year for the Macatawa Watershed Project. MACC staff took part in 17 community events. We engaged both children and adults in learning about Lake Macatawa and improving water quality. There are many events that we take part in each year, such as PumpkinFest and National Night Out. This year, most events were new for the MACC, including Kinderplaats (pictured at right) and the Paw Paw Park Party. Our series of children's books continue to be a very popular handout with over 200 each distributed in 2015.



2015 was also a great year for volunteers. Hope College students were a huge help in staffing our booth during Kinderplaats. Some students even came to help out at our Spring River Cleanup. Employees from Herman Miller worked to improve and maintain the Paw Paw Footbridge Park streambank project. During their spring work day, some Zeeland Christian Middle School students joined to help pull weeds and plant native plants.

The MACC continues to work on agricultural conservation in the watershed, both through federal grants and Project Clarity. About 4,000 acres of agricultural land used conservation practices in 2015. This will reduce the amount of phosphorus reaching Lake Macatawa by about 2,200 pounds each year.

The full 2015 Macatawa Watershed Annual Report can be viewed at [www.the-macc.org](http://www.the-macc.org)

## Energy Conservation: Impact on the Bottom Line

*Helping Michigan farmers reduce their energy expenses is the focus of one-day workshops being held around the state.*

By M. Charles Gould, Michigan State University Extension

Farming operations use an extraordinary amount of energy. According to a 2013 USDA report entitled "Agriculture's Supply and Demand for Energy and Energy Products", energy requirements can be as much as 34 percent of a farm's total costs. Helping Michigan farmers reduce their energy expenses is the focus of a series of one-day workshops being held around the state. Farmers who attended past meetings have:

- Reduced overall farm energy expenses.
- Leveraged utility company rebates, Federal grants and low interest loans to implement energy conservation practices recommended by an audit.
- Applied for and received renewable energy project funding.

Michigan farmers have enjoyed great success in getting USDA grant dollars. The spike in approved renewable energy and energy efficiency projects began in 2009 when USDA Rural Development required Tier II energy audits to be completed by auditors certified by the MSU energy auditor training program. MSU studies have shown that, on average, agricultural operations realize a 40% reduction in energy expenses over a 3.8 year payback period when recommended energy conservation practices are implemented.

At the workshop, attendees will hear from energy specialists from MSU Extension on how to develop an energy use strategy. Utility and electric cooperative representatives will discuss rebate options and opportunities. A panel discussion will feature farmers talking about their experience in implementing energy conservation practices. Attendees will also receive practical instruction from USDA Natural Resources Conservation Services and Rural Development personnel on applying for grant dollars for energy conservation practices.

**Date:** Tuesday, January 19, 2016

**Time:** 10:00am-3:00 pm

**Location:** Olive Township Hall, 6480 136th Ave, Holland, MI 49424

*\*There are additional dates and locations. See website for details.*

There is a \$15 fee to attend and lunch is included. Registration information and an agenda can be found online at: [events.anr.msu.edu/2016\\_AgEnConsWorkshop/](http://events.anr.msu.edu/2016_AgEnConsWorkshop/) If you have questions about the workshop, contact Charles Gould, MSU Extension Educator, at 616/994-4547 or [gouldm@msu.edu](mailto:gouldm@msu.edu).

## Farming Advancements in the Macatawa Watershed

By Aaron Spicer, MACC Agricultural Technician

The MACCs Agricultural Program had a very successful year. Agricultural Technician Aaron Spicer was able to meet with many new producers and continued to work with existing partners. This year, farmers were able to significantly retain more soil sediment and phosphorus in their fields. One thing that has allowed producers to make huge leaps in their farming programs is the advancement of farming technology and practices.

New to the MACCs agricultural efforts this year was Idlenot Farms, owned by Dirk Pyle of Zeeland. Dirk committed to reducing sediment loss in a big way this year. Dirk pursued a new reduced tillage program with assistance from the MACC and Project Clarity. With this assistance, Dirk was one of the first in the state to trial new technology to include cover crops in his reduced tillage system. A Pennsylvania InterSeeder, pictured at right, drills cover crop seed into standing corn or soybeans, allowing a much earlier planting with a high rate of germination. It can also spread post-emergent herbicide and apply directed fertilizer simultaneously. This versatility saves time and fuel while effectively drilling a cover crop seed. Dirk also partnered with the MACC and MSU Extension in trials of his 6-row InterSeeder, hoping to promote better data for farmers interested in this new equipment and its success in establishing cover crops. This year he tried a variety of cover crops including white, red and crimson clover and oats planted in strips. The early results looked very favorable. The trial will expand in 2016 to further test effectiveness with various cover crops and amendments.



Bob Dykhuis of Dykhuis Farms, LLC made another technological advancement in the watershed. Bob recently acquired a Hagie Cover Crop Interseeder that allows rapid surface seeding of cover crops. The machine, equipped with an 80 cubic foot Gandy dry box to hold the cover crop seed, below canopy drop-down hoses and 60 foot boom arms, broadcasts cover crop seed in large swaths to rapidly cover large areas. This year's oat seeding was successful in terms of equipment capability, speed and germination rate. Dykhuis committed to seeding a minimum of 1,000 acres with his new Hagie for the next five years. This is a significant step forward in the goals for his farm and the Macatawa Watershed.



Hagie Cover Crop Interseeder hard at work planting cover crops into corn. Photo courtesy of the Outdoor Discovery Center Macatawa Greenway

Other farmers in the watershed have taken a more experimental approach in their attempts to improve soil quality and reduce sediment loss. One such experiment in the southern watershed manipulated seeding rates with a cover crop mix. The end results have yet to be determined but looked impressive before the first snowfall. The mix of sorghum sudangrass, crimson clover and tillage radishes was carefully selected for exact purposes and planted after wheat harvest. The sorghum sudangrass adds large amounts of biomass and green cover to help suppress weeds. The radishes, with their tubers and deep-growing tap roots, help aerate soil and bring nutrients from deeper in the soil to the surface where microbial activity releases them for future crops. All three species compliment the soil biodiversity, which will help reduce disease and pest pressure. The mixture is meant to have a two-stage effect. All three species emerge quickly, then the two fast-growing tall species create shade that holds the radishes in a slow growth mode. The taller species die off after the first frost and the radishes hold on for several weeks until multiple consecutive nights of frost. Overall, this mix is good for scavenging nutrients and protecting the soil surface from wind and rain erosion.

The MACC is excited to see these technological and planning advancements happen in our watershed. We will continue to promote good practices like these in the coming year and look forward to working with new producers to install even more best management practices.

# Project Clarity Restorations

By Dan Callam, Greenway Manager, Outdoor Discovery Center Macatawa Greenway



The constructed berm at the Middle Macatawa restoration may be incorporated into a future trail

As we reach the end of 2015, let us take a moment to pause and catch our collective breath and celebrate what has been a tremendous year for Project Clarity. Amongst those projects that have gone into the “completed” category are two significant restorations that began earlier this summer – the Middle Macatawa restoration and the Haworth restoration. These sites, at 40 and 42 acres of wetlands respectively, provide crucial additional storage capacity for floodwater along

two of the most polluted tributaries to Lake Macatawa. Construction and restoration activities wrapped up in October, with native plants establishing themselves from seed on the site over the next couple years.

These larger projects are not the only ones having an impact on our watershed. The Project Clarity Agricultural Committee, comprised of local farmers, agribusiness managers, and consultants, have been working to approve and implement projects designed to help improve water quality in rural settings.



Construction of a two-stage ditch in Overisel Township

These projects have included drainage management, two-stage ditches, cover crops, gypsum applications, and other assistance designed to both improve productivity and water quality. Over half a million dollars has been committed to the watershed since the Agricultural Committee began its work late last year, with almost half in matching contributions.

To date, Project Clarity has 25 projects that have been completed or are presently underway, with several

more slated for 2016. Our fundraising goal of \$12 million is well on its way to being reached. We will continue to work in the coming years with everyone in our community – cities, townships, businesses, farmers, schools – to ensure that the vision of a healthier Macatawa Watershed is achieved. There is a great deal of work that lies ahead, but we are hopeful it will continue well beyond 2015. For more information on projects and outcomes, visit [macatawaclarity.org](http://macatawaclarity.org)

# Water Pollution 101

Can you name and describe the two main types of water pollution? Do you know which one is a bigger problem in the Macatawa Watershed?

There are two major types of water pollution: point source and non-point source. **Point source pollution** comes from a distinct location, usually a pipe from a factory. You can easily “point” to the source of the pollution. You can also measure the type and amount of pollution coming from a pipe. **Non-point source pollution** comes from the land and is carried by rain water into our lakes and streams. Therefore, anything that leaks or is spilled onto lawns or paved surfaces



becomes water pollution when rain washes it away. Once in surface water, it is difficult to point to where the pollution came from because it comes from everywhere! This also makes it difficult to measure.

**Point source pollution** is relatively easy to manage, control and regulate. Factories that discharge pollution to surface water must have a permit from the State of Michigan. The permit sets limits on how much pollution a factory is allowed to discharge. Point source discharges of pollution are not allowed to exceed levels that will harm uses of surface water, such as recreation and wildlife habitat. Based on the limits set in the permit, the factory treats their waste water to remove pollution. Because the State carefully regulates point source pollution, the MACC does not have to focus our time and money on reducing point source pollution.

**Non-point source pollution**, in contrast, is very *difficult* to manage, control and regulate in the same way as point sources. Non-point sources come from a much larger area, 175 square miles in the case of the Macatawa Watershed. Every landowner within that area contributes non-point source pollution every time that it rains. Therefore, non-point source pollution must be managed and controlled by each individual landowner! Farmers can use practices to reduce how much water runs off their fields, thereby reducing how much sediment and fertilizer enters our waterways. Homeowners and business owners can use smart lawn care to ensure that fertilizer and grass clippings do not end up in storm drains. This then becomes an important goal of the Macatawa Watershed Project: to reduce non-point sources of pollution, especially phosphorus, into Lake Macatawa. We'll talk more about phosphorus next time!

## Nonpoint source pollutants found in urban areas:

1. Excess fertilizer and pesticides from lawns
2. Sediment (soil)
3. Grass clippings and leaves (become fertilizer when they decompose in water!)
4. Oil and gasoline from leaky cars in driveways or parking lots
5. Salt and sand from winter road and parking lot maintenance
6. Bacteria, viruses and nutrients from pet waste that isn't picked up and properly disposed

## Macatawa Area Coordinating Council

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## We have a new look!

We decided it was time to update the look and feel of our Watershed Newsletter. The newsletter has undergone many physical changes since first being published in 1998, but the content has remained consistent. We hope you enjoy this new look and will find the content to be as informative and engaging as it has always been!

## We would love to hear from you!

Do you have an idea for a future newsletter article? Is there a water quality topic that you would like to know more about? Contact us, share your ideas and we will do our best to incorporate them into future newsletters, website articles and Facebook posts.

## Contact Us

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