PROJECT clarity

December 2019 Dashboard

A community initiative to permanently clean and restore the waters of Lake Macatawa and the Macatawa Watershed

2019 has been a year of extremes. Following a long, wet, and cool spring, summer brought extended periods of dry weather, finally to be broken by several large fall rain events. This led to challenging conditions for many area farms, delaying planting for many. For the second year in a row, significant acreage in the Macatawa and surrounding watersheds were not planted due to field conditions, with many others planting late. There were several area farmers who were able to plant on time, however, thanks to conservation minded measures they've implemented in recent years. Conservation tillage and cover crops have helped several area growers made unpredictable years more manageable.

Lake Macatawa has reached unprecedented heights, impacting the waterfront and those who use it. While we will await the results of the annual monitoring report to see how the lake fared, it did create wet conditions for our annual Macatawa Water Festival. Held in July, activities were located in the shadow of De Zwaan, as well as on the river itself, including kayaking, canoeing, fishing, crafts, and games. A beautiful day greeted nearly 3,000 guests and the couple dozen volunteer organizations.

Once banks were cut, logs and brush were installed

Log structures called cross veins are used to slow and direct water flow

Erosion mats help control erosion while plants grow

(left) Initial brush clearing and earthwork

Bringing in mats of grass and shrubs to plant on top of stabilizing banks

The areas around Peters Creek in Zeeland Township have long been prone to erosive forces within the stream channel. While rivers naturally move around within their floodplains, many streams in our area move too quickly and erode the nearby streambanks. After implementing thousands of acres worth of best management practices upstream to help manage flows and sediment loading, we restored a section of Peters Creek on our Poppen Woods property, located along the Macatawa Greenway.

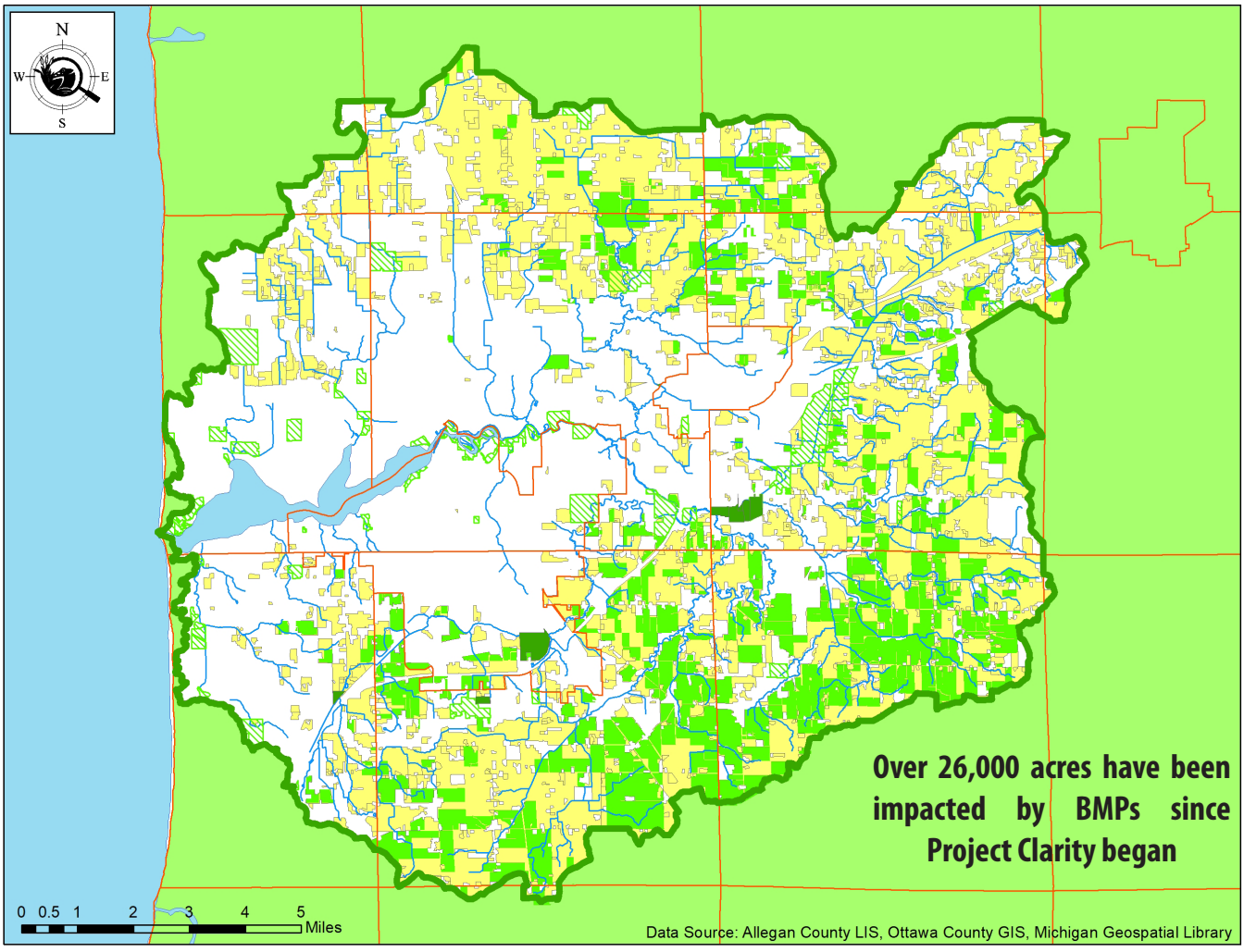
Crews from North State Environmental (North Carolina), Green Watershed Restoration (Colorado), Niswander Environmental (Michigan), and 28 Specialties (Michigan), completed the earthmoving and initial seeding in just under a weeks' time. Using natural channel design and materials from the site, the team reshaped the channel and added log structures designed to reduce erosion and move sediment naturally through the stream. Rather than using rock to protect streams, which is often considered the cheap, effective way to protect eroding banks, the project utilized sunken logs called toe wood. This helped reduce costs of bringing in rock as well as allowed for the use of logs that were cleared to create room to work. The site later received native seed and live stakes of native shrubs to help protect the banks long term. All together, this site will prevent eleven dump trucks worth of sediment from entering the stream on a yearly basis.

This project was constructed with funds from Project Clarity and EGLE (formerly DEQ). There were enough cost savings in the project that we will be able to use leftover grant funds for additional projects elsewhere along Peters Creek. State engineers who reviewed the site see it as a model for the region. As improvements continue to take place around the watershed, we hope stream projects using these types of design techniques will become more commonplace, reducing the need for continued maintenance. It may not be the traditional way of repairing streams, but we hope projects like this will become the norm.

Project Outcomes To Date

The following are recorded totals associated with water quality projects throughout our watershed since Project Clarity was initiated in 2013.

- A total of 139 projects since 2013
- Models estimate over 39,000 pounds of phosphorus removed annually
- 7 major restoration projects created 92 acres of new wetland on 290 acres of protected land
- 41 mitigation credits created, supporting long-term stewardship
- 201 acre-feet of water storage created
- Nearly 3 miles of streams and waterways have been restored and 7,500 feet of two-stage ditch created
- Over 200 acres of land treated for invasive plants
- 77 acres of native plantings
- 128 agriculture BMP projects
- 65 farms have committed to best management practices on over 26,000 acres
- 31% of BMP project costs have been contributed by producers



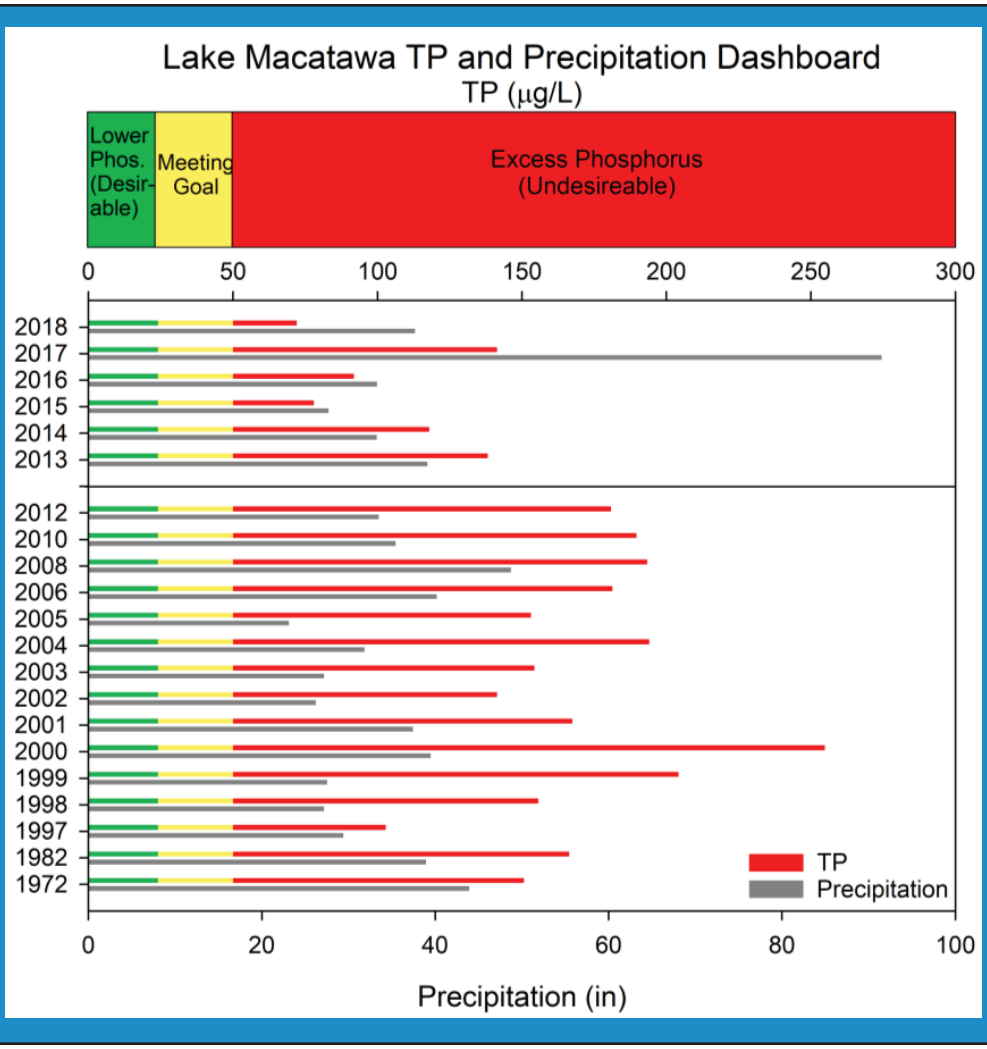
Land enrolled in BMP projects (green) out of agricultural land across the watershed (yellow)

Recent grant awards will help fund additional cover crop and grassed waterway acreage within the watershed

Project Clarity funds have matched numerous state and federal grants, including a recent award to the MACC by the Great Lakes Commission. They plan on installing three grassed waterways and cover crops in the watershed, bringing in $190,000 to help local projects. Since Project Clarity began, over $2 million has been awarded to the ODC Network and MACC by state and federal agencies to address water quality.

In our continuing effort to find new ways to reduce phosphorus — particularly dissolved phosphorus, the most available to algae — we have installed additional slag filters in the southern reaches of the watershed. These filters process water flowing through tile drains, binding phosphorus and filtering dirt before the water reaches nearby streams. This project has been funded by a pair of grants from the Department of Agriculture and Rural Development.

Installation of a large slag filter complex on a field in Fillmore Township



Precipitation and Total Phosphorus (P) in Lake Macatawa

This chart compares precipitation and phosphorus levels in the Macatawa Watershed over the last 46 years.

P levels in 2018 were the lowest measured levels since monitoring began in the 1970's. While levels will continue to fluctuate, the long-term trend is encouraging.

For the full report, visit outdoordiscovery.org