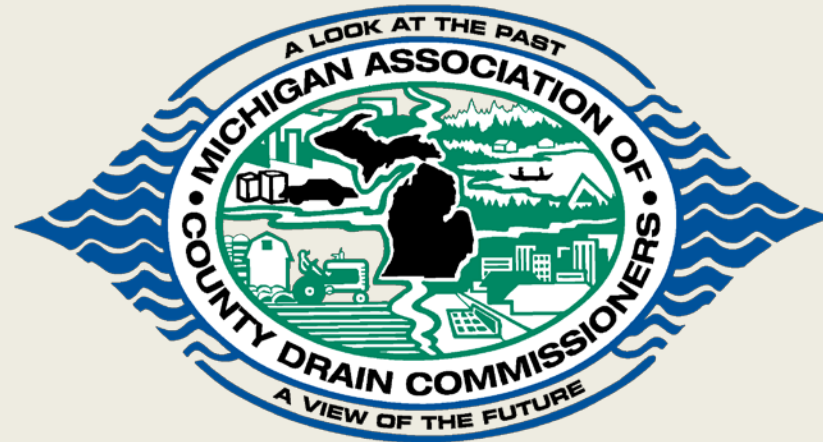


MICHIGAN ASSOCIATION OF COUNTY DRAIN COMMISSIONERS



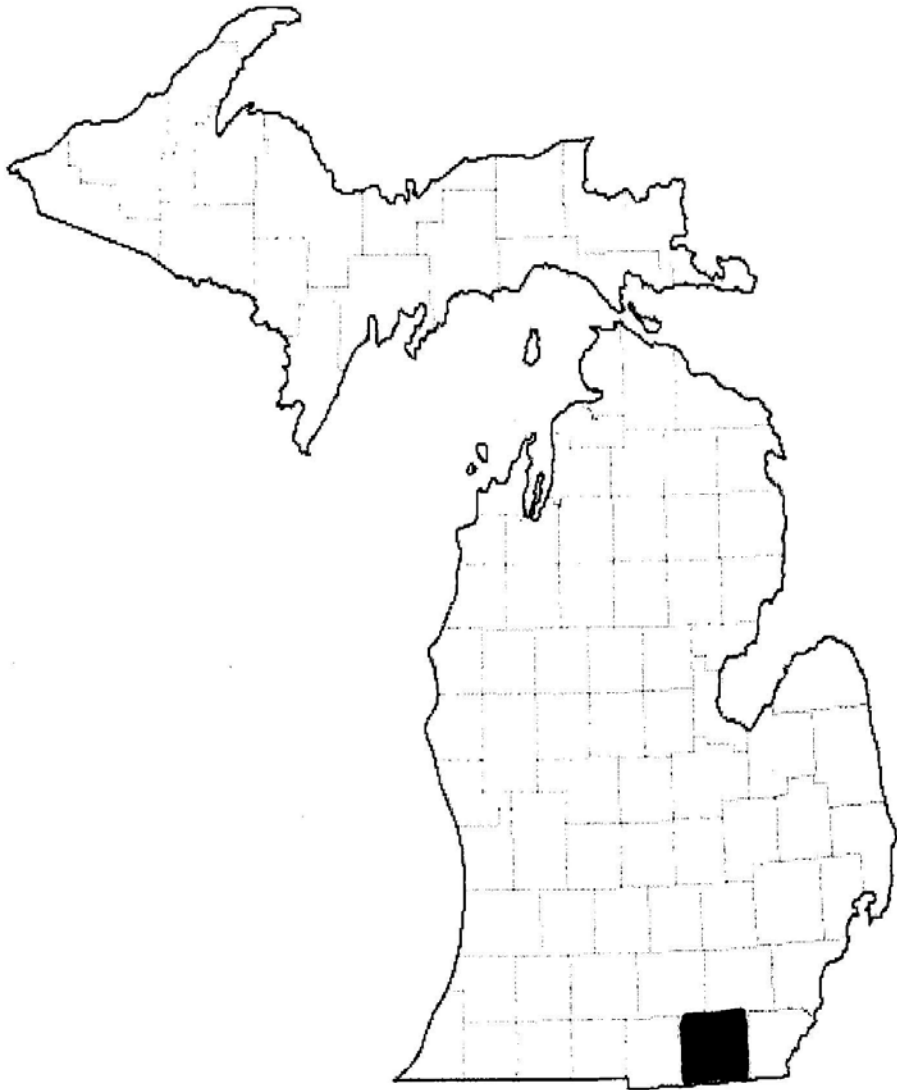
Water Quality & Farming, bringing it together

Jim Isley, Palmyra Township Supervisor/Farmer
Ed Scheffler, Drain Supt./Deputy Lenawee Co. Drain Commission

July 18, 2018
macdc.us

Lenawee County Demographics/Facts

- Population: 99,505 (2000 U.S. Census)
- Area: 487,040 acres
- Land Use
 - Approximately 70% agricultural (row crop/pasture)
 - Approximately 9% residential
 - Approximately 2 % commercial/industrial
 - Remaining 19% forest/riparian/wetland
- Natural Features
 - Eastern side of county tends to be flat lake plains , intensively farmed
 - Western side of county tends to be rolling hills with forested areas, smaller farm fields, residential
 - 35 lakes predominantly concentrated in the Northwestern portion of the county



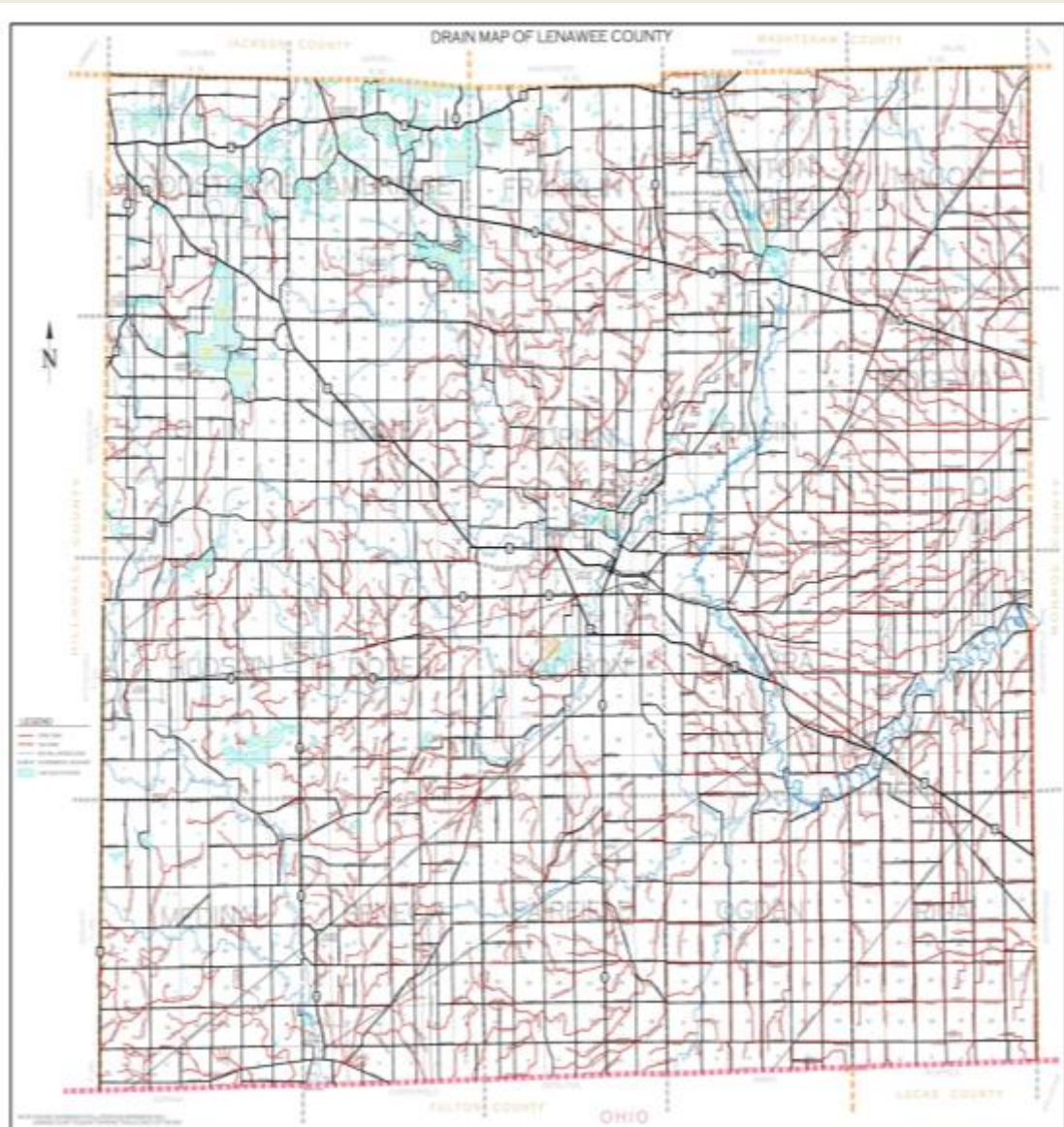


Lenawee County Agriculture

- Number of farms: 1,618
- Acres in Agricultural Production: 344,347 acres
- Market Value of Products sold:\$204,571,000
 - Crop Sales: \$144,060,000 (70%)
 - Livestock sales: \$60,511,000 (30%)
- State Ranking:
 - #14 County in Michigan for total value of agricultural products sold
 - #2 County in Michigan for acres of Soybeans planted
 - #5 County in Michigan for acres of corn planted for grain

**Source 2012 Census of Agriculture*





Agricultural Drainage in Lenawee County

Much of the most productive farmland in Lenawee County would not be in production without extensive surface and sub-surface drainage.

The Eastern half of the County is located in what was once a large swamp and part of Lake Erie, without man-made drainage much of the county would not be farmable.

- March 18, 1847 Act 104 of the Legislature was approved to provide for the draining of swamps, marshes and other low lands.
- Lenawee County Drain Commission was established
 - 709 Drainage Districts
 - 1500 miles of Drains, predominantly Ag. Drains

In addition, the majority of the most productive ground has been extensively pattern tiled by landowners.





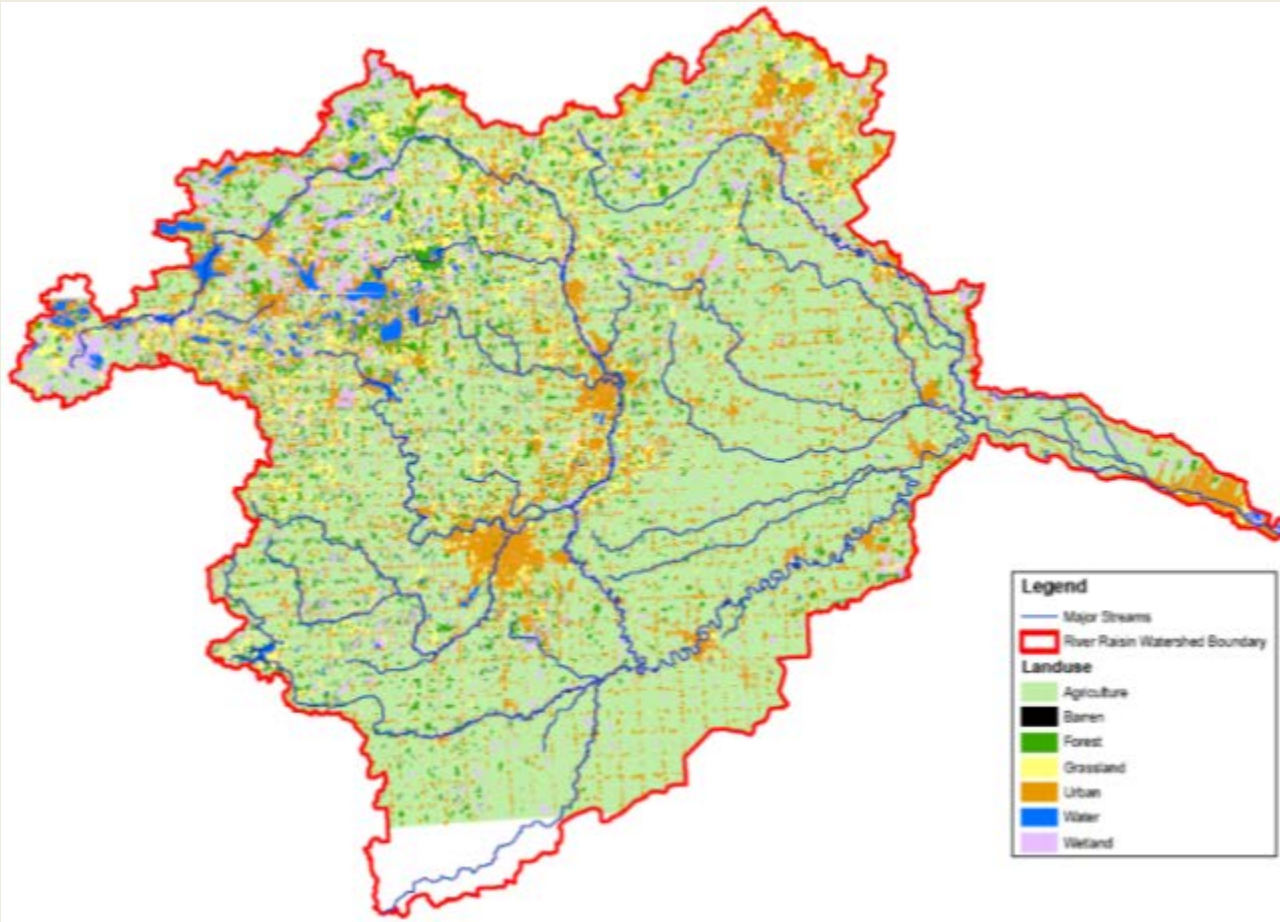
Western Lake Erie Basin Impairment Status

- MDEQ declared the Western Lake Erie Basin as impaired for phosphorus pollution in November of 2016.
- A Domestic Action Plan was developed by MDEQ to achieve a healthier Lake Erie. Main objective is to reduce nutrient loading and therefore harmful algal blooms which create cyanobacteria. The plan describes how Michigan will measure, track and report progress towards meeting its objectives.
- Target of 40% reduction in phosphorus loading by 2025.
- Total Maximum Daily Load – MDEQ or EPA may require if current plan does not reduce phosphorus levels.



Farmers Role in a Solution

- Majority of Lenawee County is in the River Raisin Watershed which outlets into the Western Basin of Lake Erie.
- Voluntary efforts underway to reduce nonpoint source nutrient loading
- Michigan Agriculture Environmental Assurance Program (MAEAP)
- Implementation of Conservation Best Management Practices
- Current voluntary efforts are showing reduction in phosphorus levels, some studies suggest that there has already been a reduction of over 20 percent



How Drain Commissioners Can Help



- Work together with Farmers
 - Understand their operations, develop relationships
 - Try to work with their schedules/planting/crop rotations, etc.
 - Communicate your intentions, explain your operations
 - Work together with them on BMPs, educate them on what's available and why, opportunities for funding
 - Acknowledge what they have implemented and work with them to maintain and/or improve practices.
- Work together with other Agencies to Promote Water Quality
 - County Conservation District
 - Watershed Councils
 - Farm Bureau
 - Natural Resource Conservation Service
 - The Nature Conservancy
 - Commercial Ag. Spraying and Fertilizing companies
 - Farm Co-Ops, grain elevators
- Demonstrations/Partnerships
 - Partner in Grant/funding opportunities
 - Install Demonstration/Permanent BMPs
 - Share GIS data and other resources





Farmer-Led Watershed Conservation

Western Lake Erie Basin (WLEB)

River Raisin Watershed

Farmer-Led Conservation Working Group





Jim Isley
Palmyra, Michigan



The River Raisin Watershed:

- River Raisin is 150 miles long
- 1,072 Square Miles
- Home to 178,000 people in 2010
- Lenawee, Monroe, Washtenaw, Jackson & Hillsdale plus a portion of Fulton Co., Ohio
- 429 lakes & ponds
- 3,000 miles of man-made drainage systems
- 22 mainstream dams & 38 tributary dams
- The “crookedest” river in the world
- River Raisin watershed land uses in 2010:
 - Agriculture – 65%
 - Urbanized Areas – 11%
 - Wetlands – 8%
 - Forest – 7%
 - Grassland – 7%



The River Raisin Watershed Council:

- Established in 1974
- Membership includes 50 of the 63 municipalities in the watershed
- 31 individual memberships
- 10 corporate memberships



Farmer-Led Working Group

“Farmers Helping Farmers to Protect Water Quality”

- Consists of local producers from within the watershed
- Goal – Engage other local producers and lead constructive conversations about agriculture's role in water quality and conservation
- To communicate the benefits of conservation practices to the larger community
- To assist in educating landowners & producers about BMP's (best management practices)
- To increase the number of MAEAP (Michigan Agriculture Environmental Assurance Program) verified

ShopTalk meetings



Soil Testing



No-till



Strip-Till



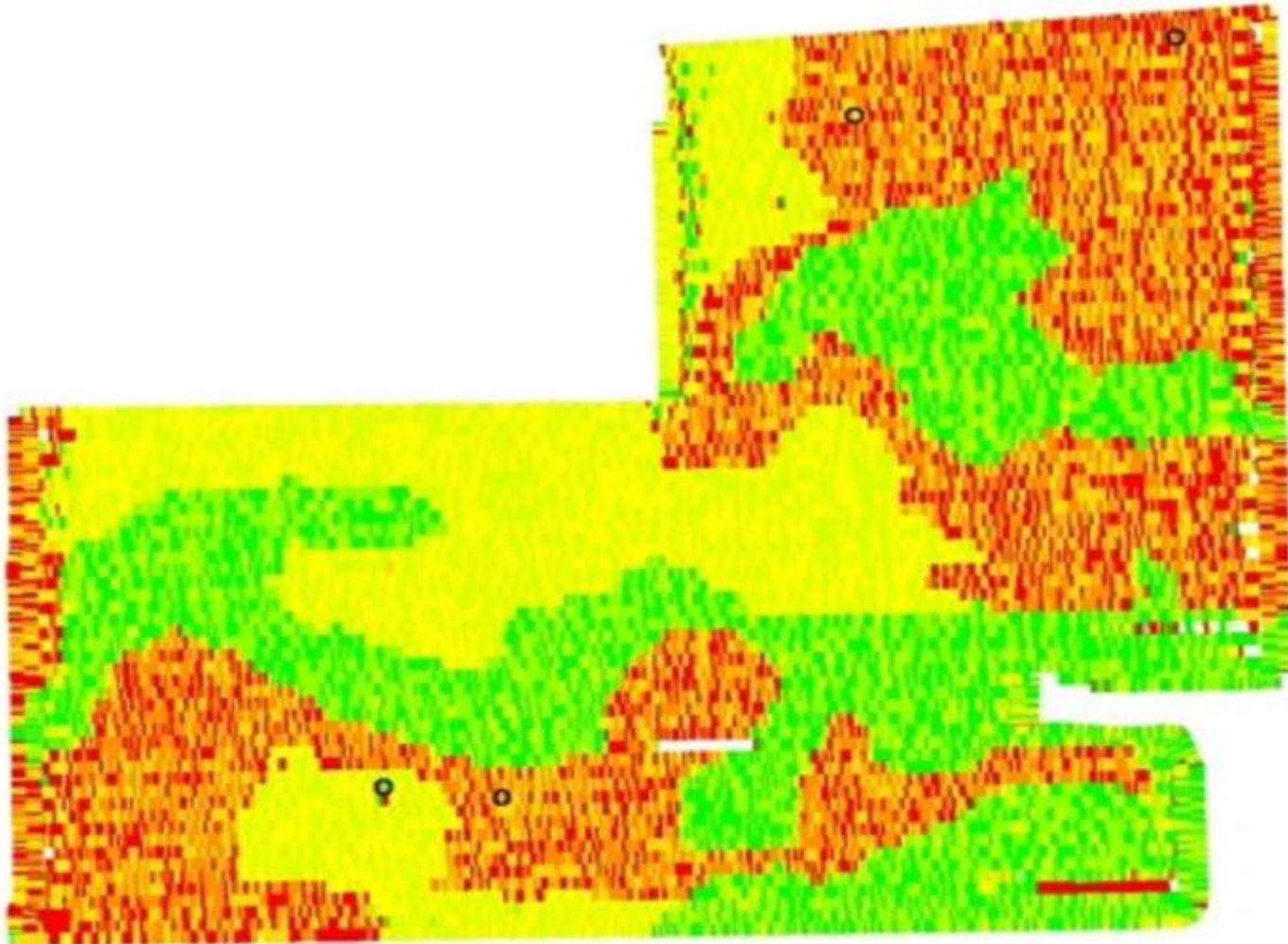
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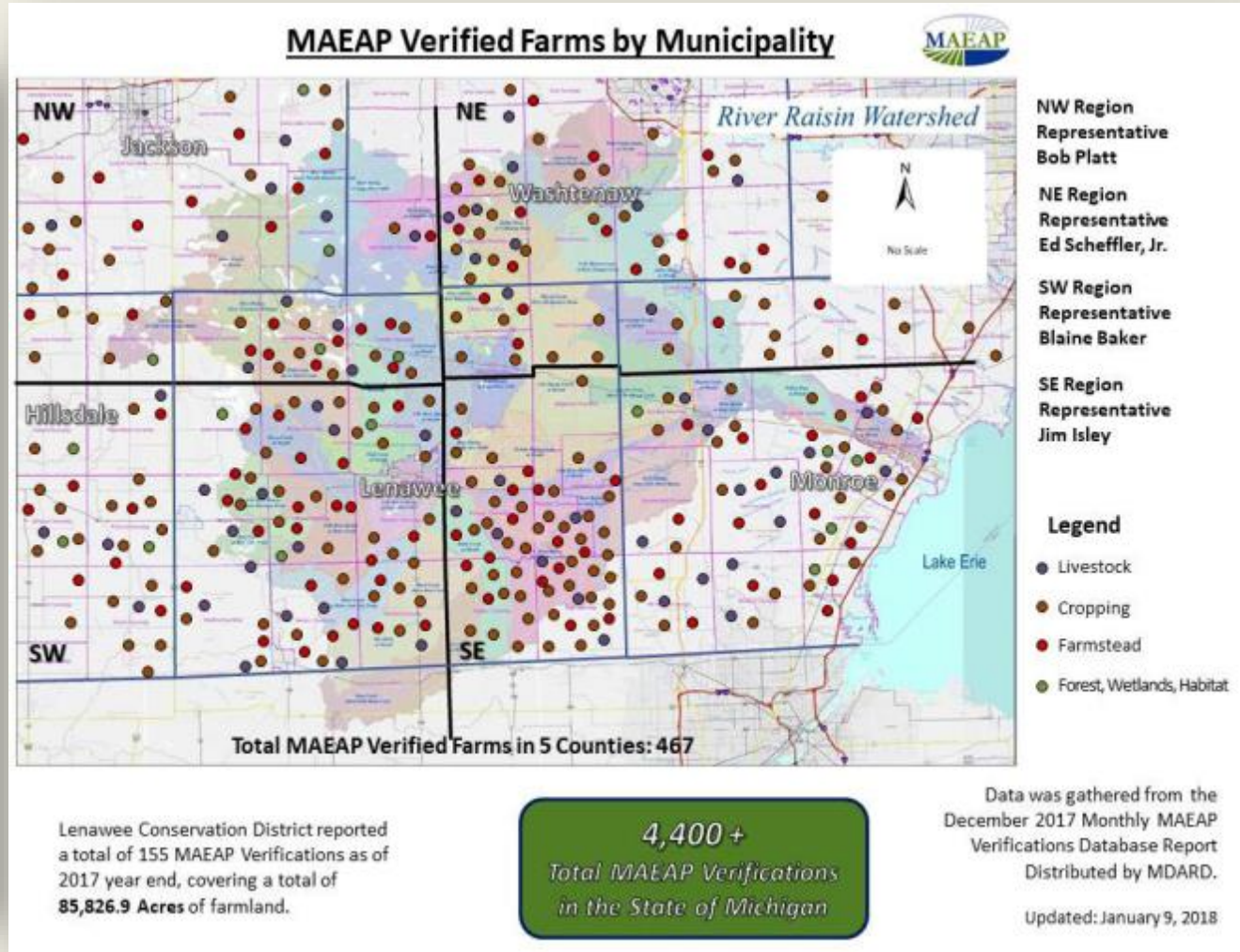
Drainage control & water monitoring



VRT – Variable Rate Technology



MAEAP



Lenawee Conservation District reported a total of 155 MAEAP Verifications as of 2017 year end, covering a total of **85,826.9 Acres** of farmland.

Challenges

- “Age” challenge – “we’ve never done it that way before”
- Negative conservation “attitude” – “Conservation and profitability don’t go together”
- Depressed commodity prices

Opportunities

- Work with the “younger” generation of producers
- Be an example of “conservation” – take the financial risk
- Encourage other producers to “take the next conservation step”

More information is available from:

- River Raisin Watershed Council
- 320 Springbrook Ave.
Adrian, MI 49221
rrwc@lenawee.mi.us
- (517)-264-4754
- www.riverraisin.org
- www.waterqualityfarming.org
- Like us on Facebook!



River Raisin
WATERSHED COUNCIL
Partner • Protect • Preserve