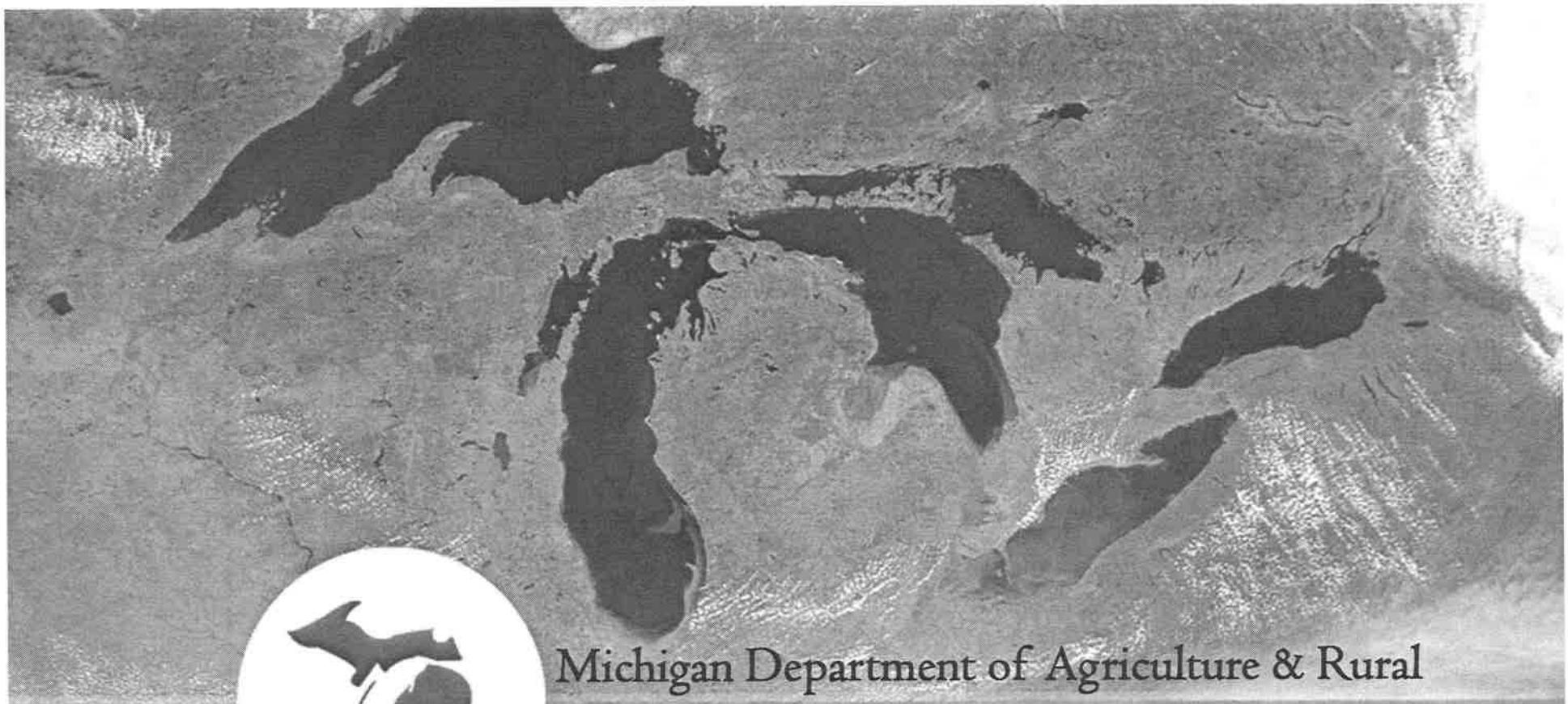
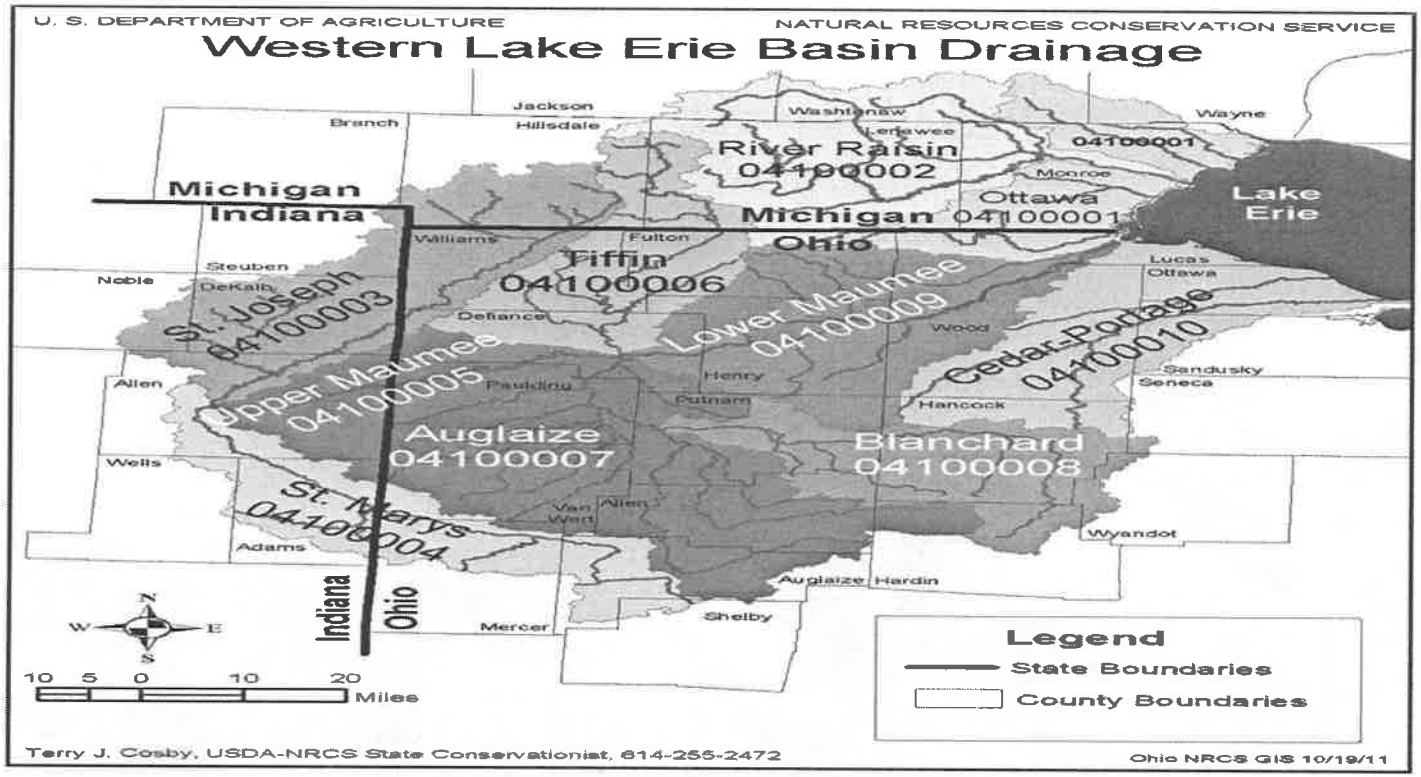


Michigan Department of Agriculture & Rural Development

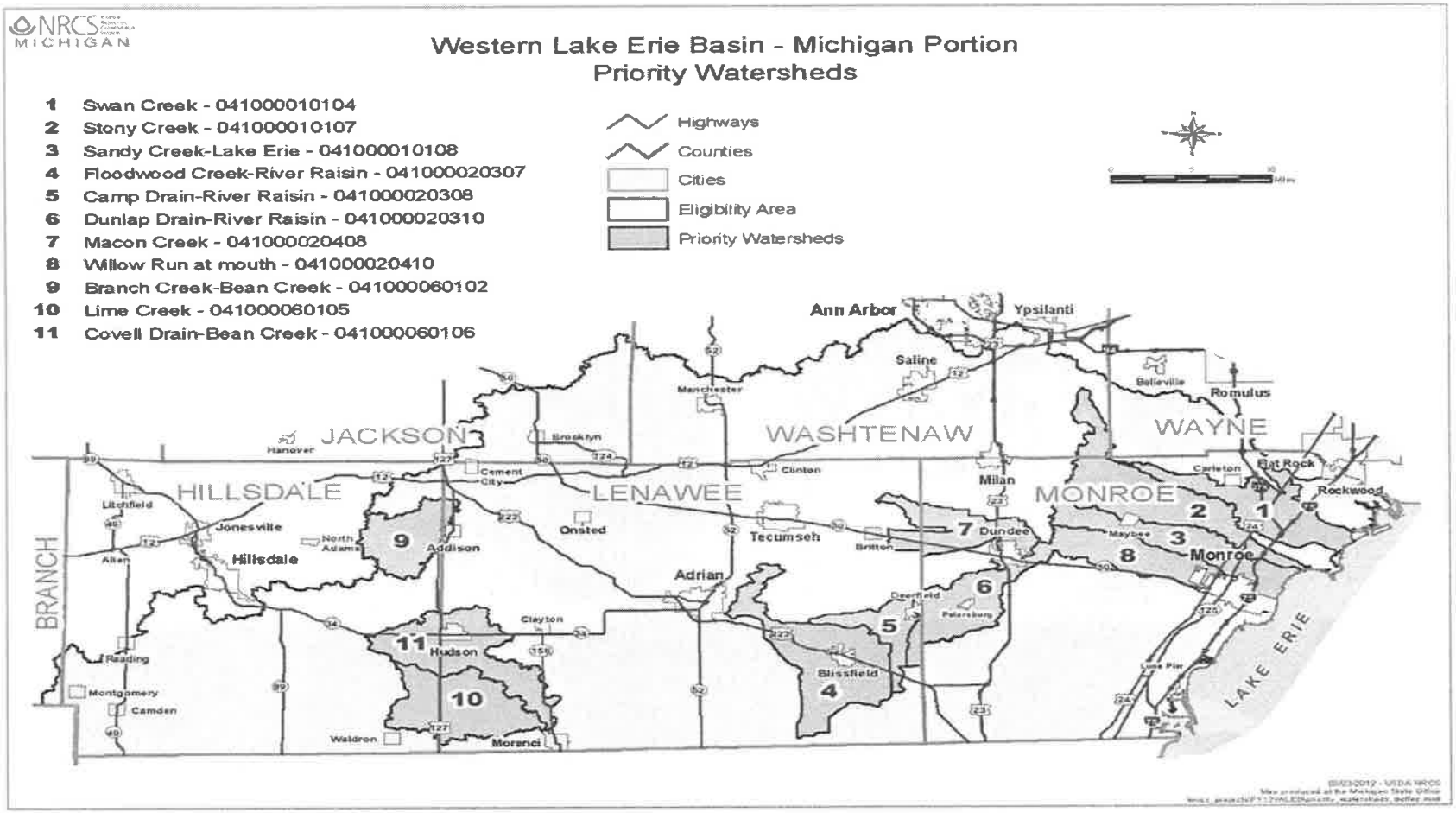
Western Lake Erie Basin

Building on the past to improve the future

Michigan Focus on Western Lake Erie Basin (WLEB)



Michigan Focus on Western Lake Erie Basin (WLEB)



Michigan Department of Agriculture & Rural Development

Michigan Focus on Western Lake Erie Basin (WLEB)

PARTNERSHIP

The efforts to improve water quality in the Western Lake Erie Basin have been a collaboration from the very beginning- both in idea & funding. Federal and state funds, as well as fees paid by agribusiness, have been used to create and maintain programs aimed toward environmentally conscious agriculture.

Partners and Supporters:

- MDARD
- DEQ
- US-EPA
- 4Rs/Precision Ag
- Farm Bill/NRCS
- Conservation and Environmental Community

PREPARATION

Conservation Reserve Enhancement Program (CREP)

Since 1999, almost 23,000 acres have been enrolled into CREP with an approximate 65-75% reduction in phosphorus delivery and sedimentation realized.

River Raisin GLRI/319

The Lenawee Conservation District has installed 181 tile line control structures, which allow the farms to manage their tile line flows on 5,275 acres of cropland.

GLRI Technical Assistance

With technical assistance, WLEB farmers reduced sediment and nutrients entering Lake Erie tributaries by implementing practices to keep more than 39,000 tons of sediment, 65,000 pounds of phosphorus and 145,000 pounds of nitrogen on the land.

MAEAP

POLICY

Michigan Agriculture Environmental Assurance Program

This program was codified into law in 2011 incentivizing farms to participate in environmentally conscious practices. From FY 2011 to FY 2013, 136 "A-Systs" have been completed- encompassing nearly 25,000 acres in the Western Lake Erie Basin.

Currently 325 "A-Systs" planned and underway with the potential to reduce phosphorus by more than 100,000 lbs.

PLANNING

Going forward, all partners have committed to continuing efforts to improve water quality.

- 9 tech staff dedicated to the region (state, NRCS, GLRI, conservation districts)
- **Resource Conservation Partnership Program,** Michigan is part of a multi-state proposal that has been invited to submit a full proposal to USDA.
- **4Rs/Precision Ag,** Michigan agribusiness continues to grow and expand this important stewardship program.
- MAEAP collaborators continue their work to reach 5,000 verifications by Sept. 2016.

Non-Agriculture Actions

- Phosphorus detergent ban implemented in 1977
- Adopted a phosphorus numeric standard of 1 mg/l and a narrative standard for NPDES permits in 1973
- Michigan is one of only 14 states to ban phosphorus in lawn fertilizer
- Fourteen concentrated animal feeding operations in the basin have a NPDES permit with Comprehensive Nutrient Management Plan requirements

Nutrient Management Plans

- First Great Lakes State to adopt nutrient management based on phosphorus through Right to Farm in late 1980s
- Effected all USDA, Natural Resources Conservation Service (NRCS) cost-share requirements
- Effected complaint response evaluations

Conservation Reserve Enhancement Program (CREP) - 1999-2014

- Nearly 23,000 acres in WLEB
- Permanent grasses & legumes, permanent native grasses, field windbreaks, filter strips & riparian buffers, wetland restoration, sediment retention control structures
- Farm Bill cost share supports installation of practices
- Reduces phosphorus delivery between 65-75%

Conservation Reserve Enhancement Program (CREP) - 1999-2014

Conservation Infrastructure

- Locally led Conservation Districts
  - Provide education and practice implementation assistance
- USDA, NRCS
  - Provide cost share for farmers to implement practices that reduce phosphorous loading
  - Farmers usually pay 50% of practice implementation cost
- Certified Crop Advisors

Michigan Agricultural Environmental Assurance Program (MAEAP)

- Initiated by farmers, involving state & federal government, along with universities
- Launched in 2002; 2011 codified and ramped up
- Education, risk assessments, practice implementation, verification
- Goal of 5,000 verifications statewide by 9/30/2016
- Currently 2,309 verifications statewide

MAEAP

MAEAP in WLEB

- FY 11 – 13
  - 136 risk assessments
  - 91 verifications
  - Over 100 nutrient management plans
  - Reduced phosphorus loadings by nearly 65,500 pounds
- FY 14 estimates
  - More than 230 risk assessments
  - 62 verifications to date

4R Nutrient Stewardship

- Right source, right rate, right time, right place
- Agribusinesses and certified crop consultants (CCAs) are working toward using the 4R model with customers
- About half the acres in southeast Michigan are serviced by CCAs.
- Technological advances driven by GPS & cloud computing
  - grid sampling
  - variable rate application

River Raisin Tile Line Control

- To date, Lenawee Conservation District has installed 181 tile line control structures managing 5,275 cropland acres
- Reduce nutrient runoff
- Another 300 structures in the queue
- Funded by DEQ – Great Lakes Restoration Initiative (GLRI) & Clean Water Act, Section 319

Much accomplished and much to do

- More phosphorus staying on farm fields
  - Producer assisted practices resulted in 1.5 million pounds of phosphorus reduction
  - Technological advances reduce phosphorus loading
- Accelerate efforts
  - Expand technical assistance
  - Harness technological advances

Questions?

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