

What It Takes to Make a Difference: An NGO Perspective

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Today we work with a wide suite of partners to protect the land and water upon which all life depends.



Water, People and Agriculture

- Lake Erie and its watershed are significant sources of food, water, and other economic production.
- One of largest freshwater fisheries in the world.
- A drinking water source for 11 million people in the U.S.
- About 2/3rds of the Western Lake Erie Basin is in soy and corn agriculture (\$1.2 billion in agricultural products annually), including about 25% of Ohio's total agricultural products.

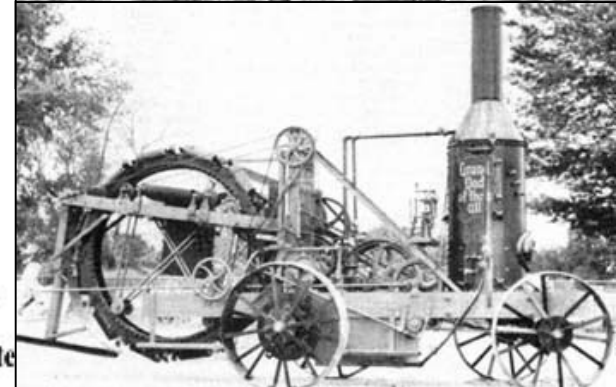
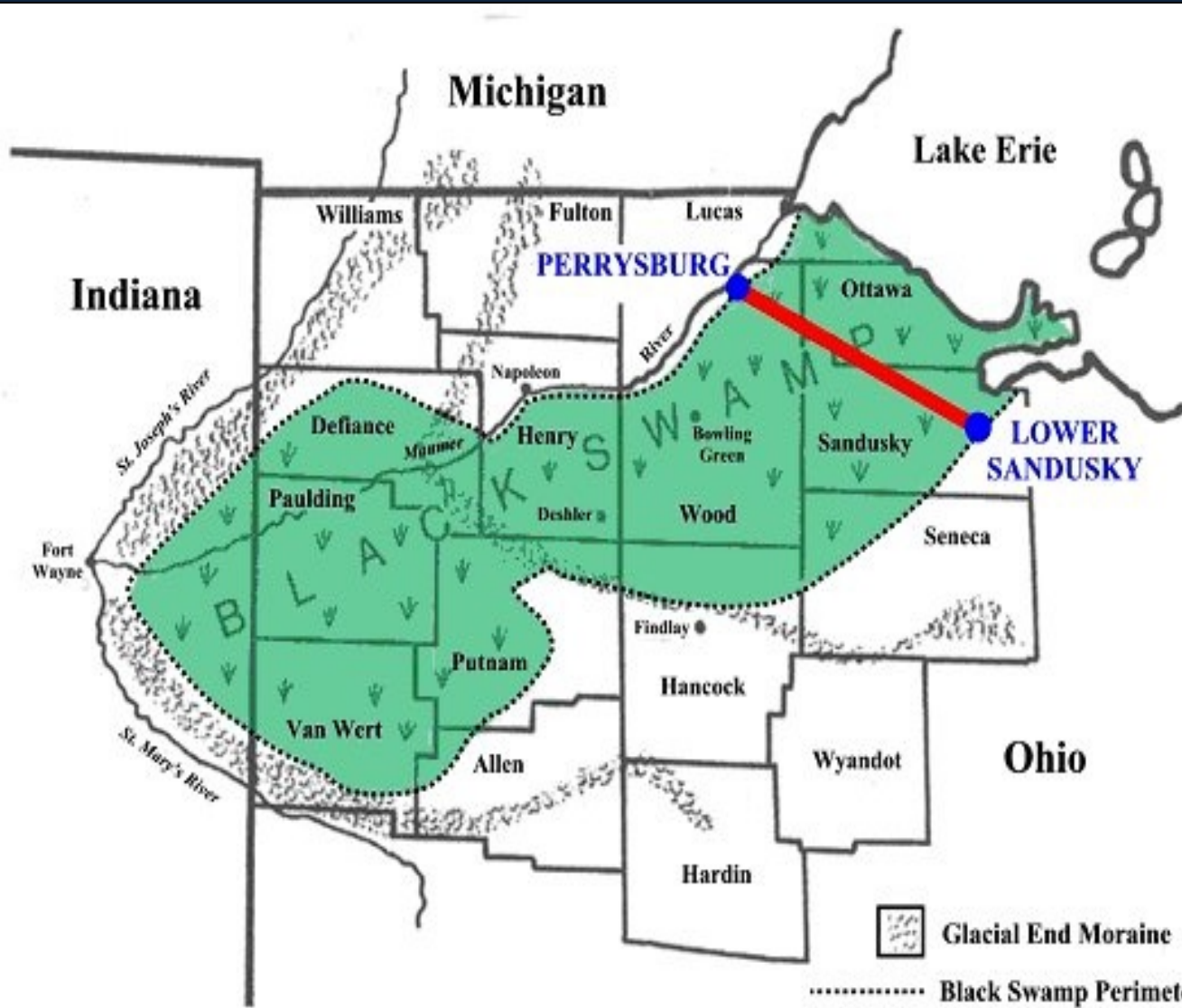


Lake Erie

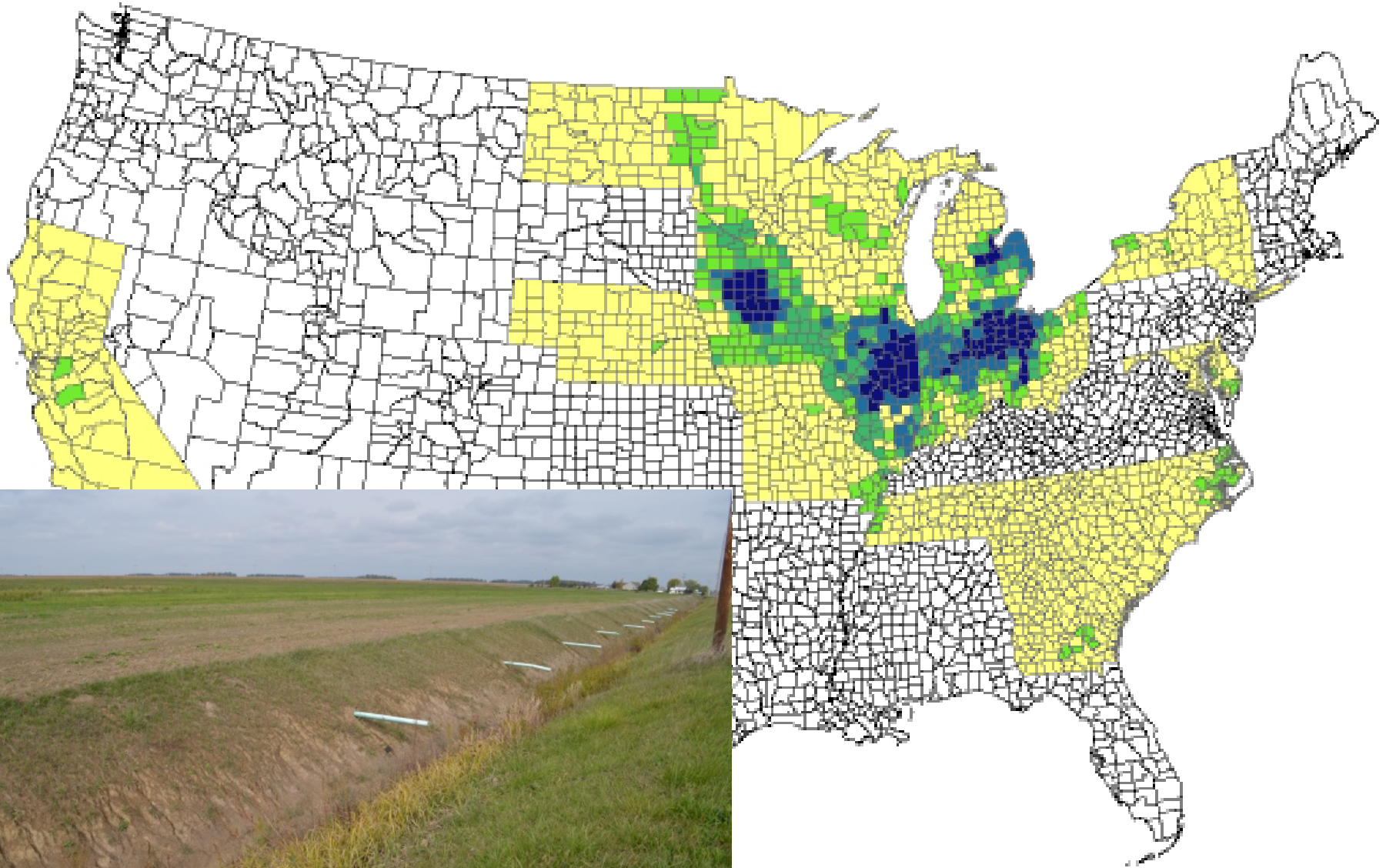


Satellite image of 2011 algal bloom in the Western Lake Erie Basin
@MERIS/NASA; processed by NOAA/NOS/NCCOS

A history of land drainage and channel modification...



Estimated Subsurface Tile-Drained Land Using GIS: 18 Leading Drainage States



WRI 2007

How do we fix the Problem?

- **Voluntary Action by individual farmers**
- **Industry Led Initiatives**
- **Regulation**



Science tells us where to look for Solutions!



Nutrient Sources

- 4R Nutrient Stewardship Certification Program
- Soil Health Partnership

Nutrient Delivery Pathways

- Water and Drainage Management
- Wetland & Floodplain Restoration

Building Knowledge and Capacity

- Demonstration Farms
- Sharing Science

Nutrient Sources:

Soil Health
Partnership
and
4R Nutrient
Stewardship



4R Nutrient Stewardship Advisory Committee

4
NUTRIENT
STEWARDSHIP
CERTIFIED



Corn Marketing Program of Michigan
Michigan Corn Growers Association



How We Work with Partners

Foundation in Science

Outreach and Education

Align Policy and Funding

Keys to Success

- ✓ Everyone Brings Something to the Table
- ✓ Everyone is Expected to Participate
- ✓ Everyone is a Decision Maker
- ✓ Everyone Comes Together Around a Common Goal

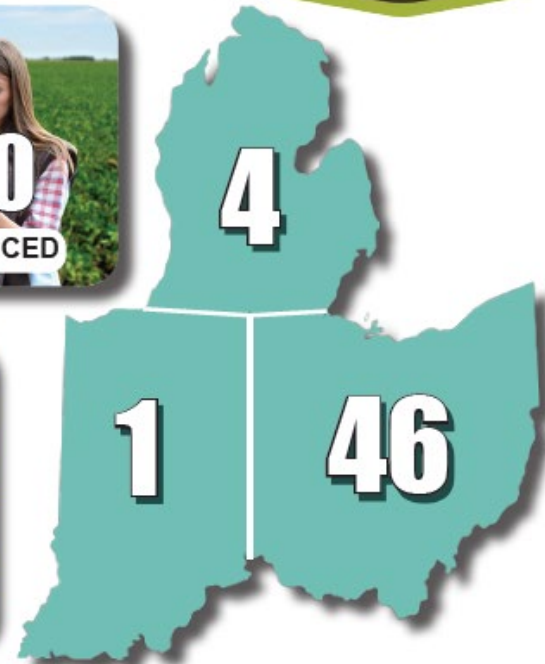
4R Program

Goal: Manage the nutrients on 80% of farmed acres in WLEB.

- Using the Right Source of Nutrients at the Right Rate and Right Time in the Right Place
- March 2014 – Began in WLEB in Ohio, Michigan and Indiana
- Expanded to:
 - All of Ohio
 - Ontario, Canada
 - New York
 - Florida
 - Considered in 8 other U.S. states

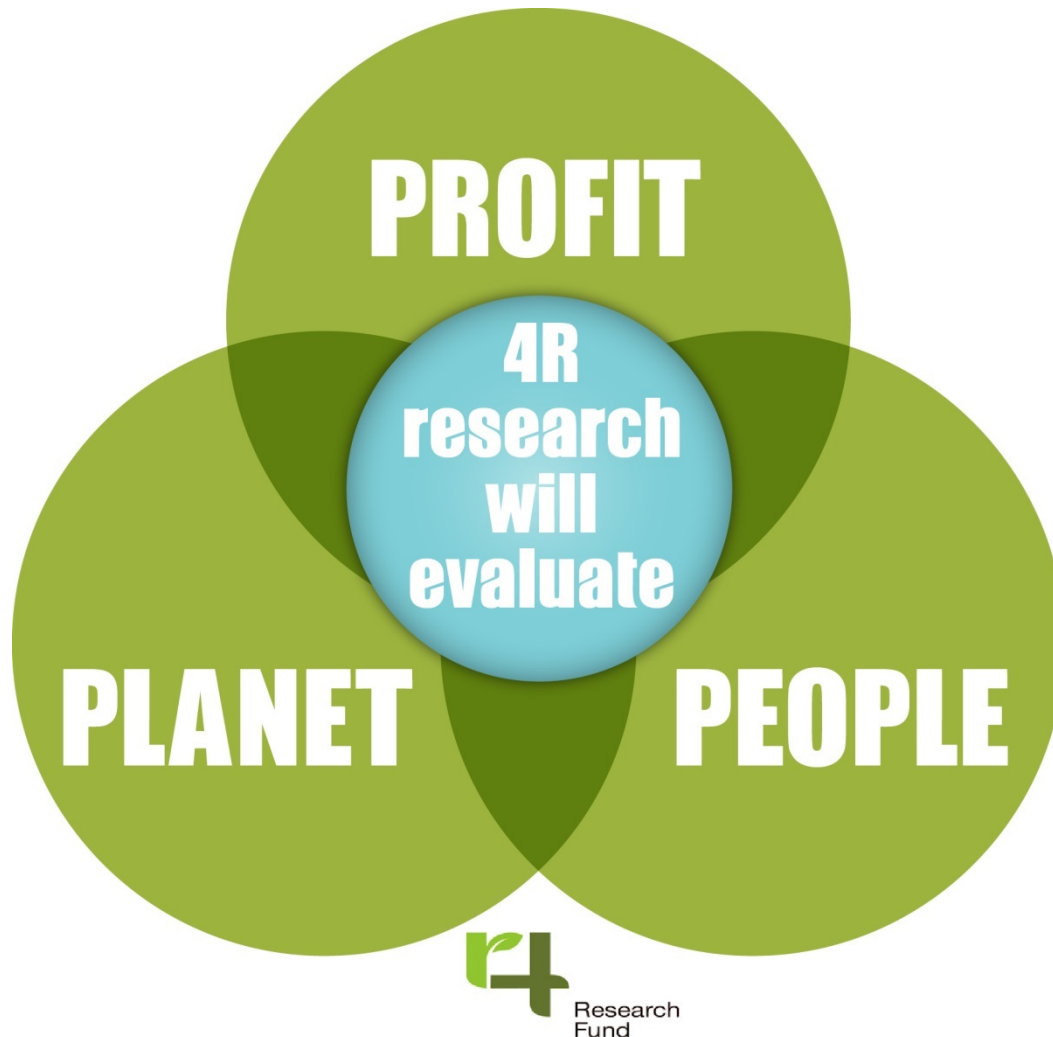
4R NUTRIENT STEWARDSHIP CERTIFICATION PROGRAM

Voluntary program in Western Lake Erie Basin (WLEB) and entire state of Ohio for agricultural retailers & nutrient service providers implementing the 4Rs



<http://4rcertified.org>

4R Research Fund: 5-year Evaluation \$1.25 Million



How do we continue to work together?

- Public private partnerships
- Technology
 - Product development
 - Application technology
- Engage Supply Chain
- Test New & Innovative Practices
 - Monitor
 - Measure
 - Expand across North America and the globe!

Supply Chain

TNC traditionally worked mostly at this level

Producer



Processors,
Food and
Beverage
Companies



Retailers

Opportunities:
Farm Bill, company practices,
supply chain engagement



Moving Forward

- Manage nutrients AND water
- Engage old & new partners
 - Crop retailers
 - Drainage Engineers/Managers
 - Supply Chain
- Align Policy, Science and Funding
 - Farm Bill is insufficient
 - Explore new opportunities
 - ✓ Pay for performance/County ditch assessments
- Continue to convene partners & share science
 - Research to farmers
 - Farmers and industry to lake



Thank you!

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