



Macatawa Watershed Project

Lake Macatawa A Resource Worth Protecting

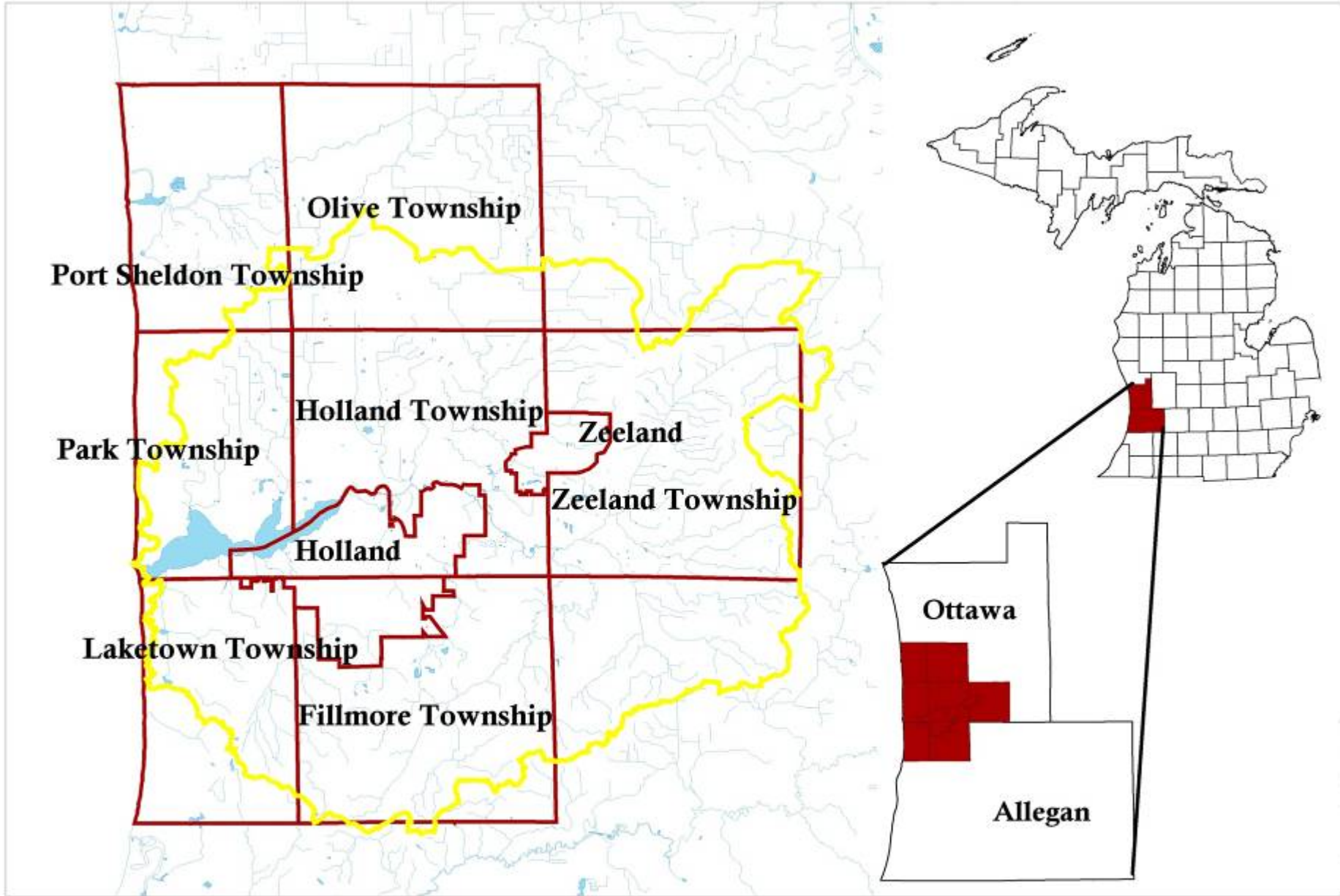
Mary Fales, Watershed Coordinator
Macatawa Watershed Project
Ottawa County Water Quality Forum
November 14, 2008

The MACC and Lake Macatawa



MACC Mission:

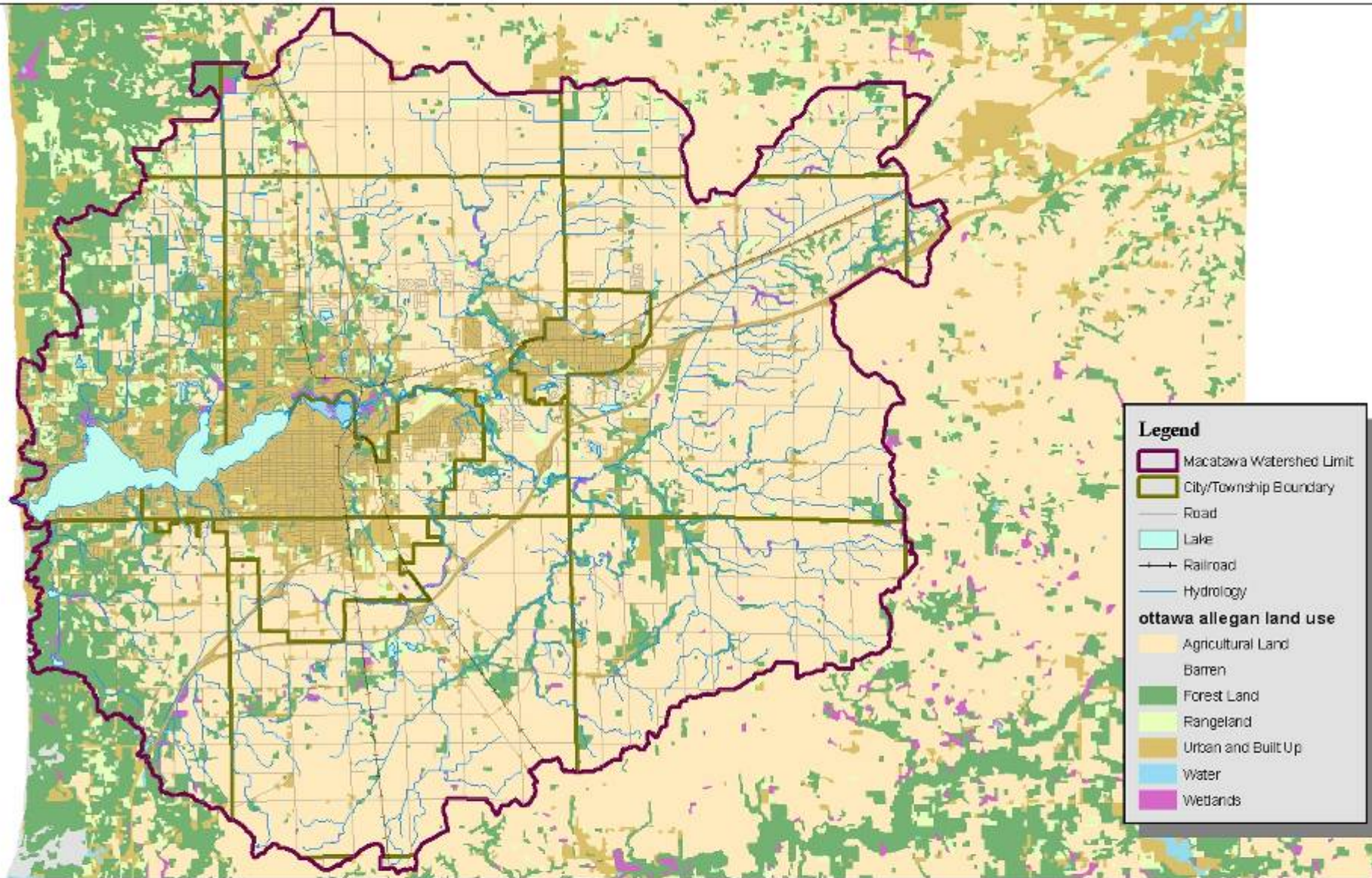
“To encourage cooperation among neighboring units of government on area wide issues”



Macatawa Watershed Location and Boundaries



Macatawa Area Coordinating Council
A Cooperative Effort Among Units of Government



Legend

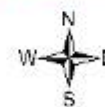
- Macatawa Watershed Limit
- City/Township Boundary
- Road
- Lake
- Railroad
- Hydrology

ottawa allegan land use

- Agricultural Land
- Barren
- Forest Land
- Rangeland
- Urban and Built Up
- Water
- Wetlands

Macatawa Watershed Land Use

Created for: Macatawa Area Coordinating Council, Macatawa Watershed Project
 Created by: ECH, MACC, November 7, 2008



Lake Macatawa Watershed
Holland, Michigan

History of the Watershed Project

- 1970s-1995: Degraded water quality, low DO, high nutrients, algal blooms: hypereutropic
- 1996 : put on 303 d list for nonattainment
 - DEQ rcvd EPA Grant
 - Main problem: Phosphorus
 - Develop Total Maximum Daily Load (TMDL)
- Goal Set – 70% Phosphorus Reduction
 - Annual load was 126,100 lbs – 138,500 lbs P
 - 90% coming from non point sources
 - Goal was set at capping P inputs at 55,000 lbs/yr

How did we get to this point ?

- Why is the Project at the MACC?
 - Watershed is a regional issue!
 - Developed Implementation Plan
- Who is responsible for the condition of Lake Macatawa?
- Watershed Stakeholders

Where do we go from here?

- TMDL Goal – 10 years
 - We haven't yet reached our goal . .
- Focused on Implementation and Community Awareness
- New Grant to Revise our Watershed Management Plan
- To be continued

What is being done?

Water Quality Monitoring



What is being done?


- Storm Water Regulations
- 6 permittees
 - Cities of Holland and Zeeland
 - Drain Offices
 - Road Commissions
- Storm Water monitoring
- Allegan and Ottawa Co Phosphorus Ban



What is being done? Research

Hope College & GVSU

- Internal Phosphorus Re-suspension
- Toxic Sediment Study
- Student Research



Macatawa Watershed Project

Want to learn more about the research that Hope College Students are doing in the Macatawa Watershed?

Please join us!
Tuesday, December 2, 10:00 am
Riley Street Fire Station

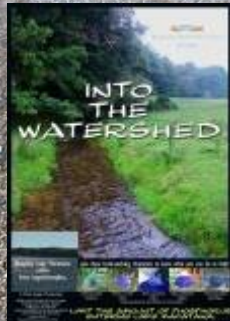
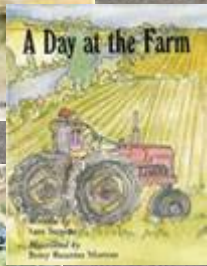
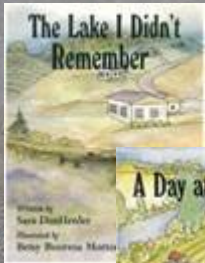
Students from Dr. Graham Peaslee's Advanced Environmental Seminar will be presenting their semester long research projects on the following topics:

- Quantitative Analysis of the Relationship Between Riparian Buffer Widths and Suspended Stream Sediments
- Shuttle Bus vs. Shuttle Van: A Cost-benefit Analysis of Hope College Transportation
- Correlating Present Erosion Risk with Streambank Vegetation and Soil Composition in the Macatawa Watershed
- Fueling the Debate: Exploring the Feasibility of Algae as a Biofuel in Holland

Please call 616-395-2688 or email njfales@the-macc.org for more information

What is being done?

- Education, Education, Education!



What is being done?

- Best Management Practices – Demonstration Sites
 - Hope College, City of Holland
 - Smallenburg Park



Keeping It
On the Land

Great Lakes Basin
Program for
Soil Erosion and
Sediment Control
www.glc.org/basin

What is being done?

- Great Lakes Basin Program – Grant Funded
 - Noordeloos Creek Treatment Wetland





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Storm Drain Outfall Reroute and Bioswale Installation

Partnered with Ottawa
Co Road Commission

Watershed Stakeholder of the Year!

City of Zeeland



- Tiered Bioswale and Raingarden