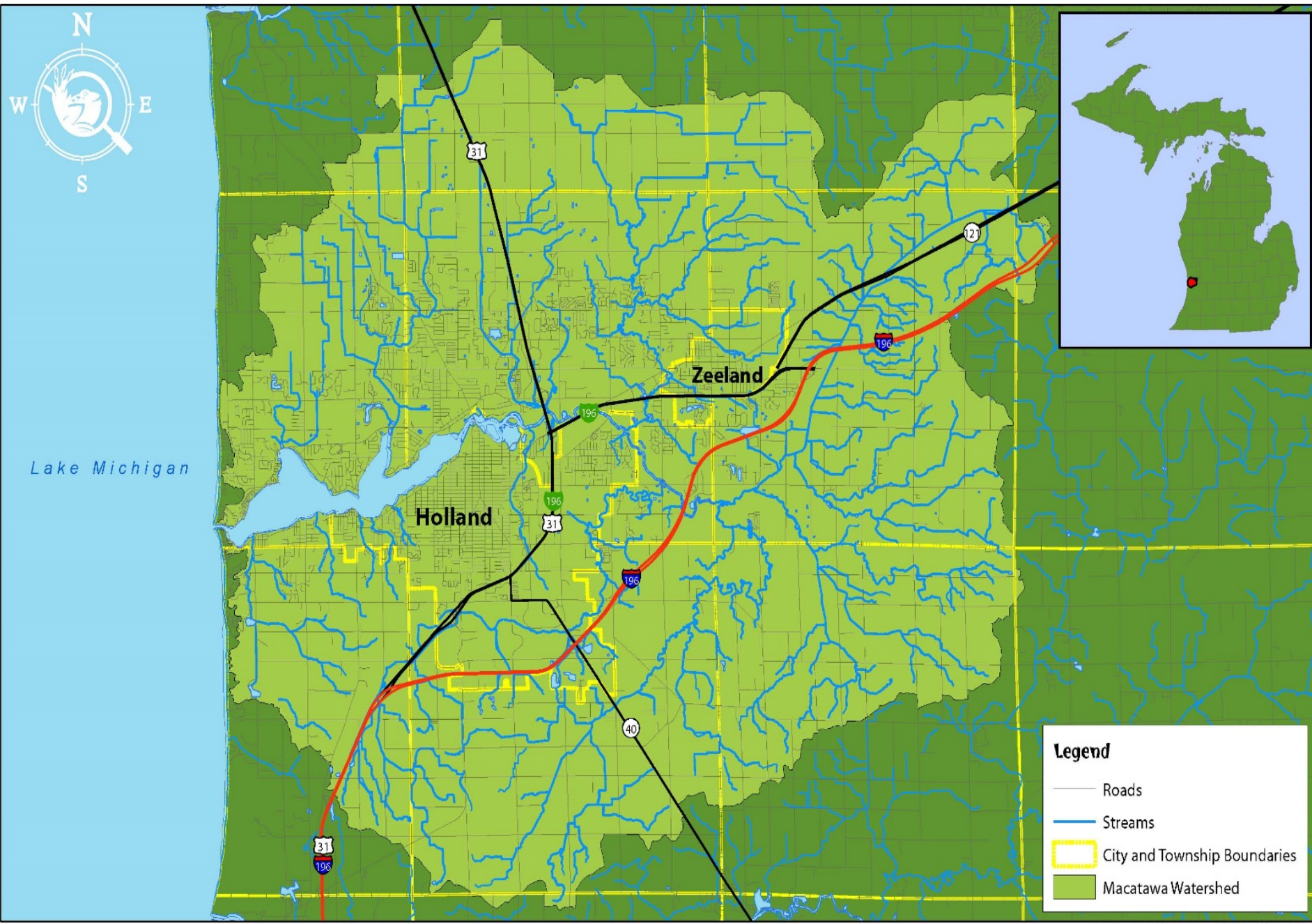




# PROJECT **clarity**

Restoring the Macatawa Watershed Update



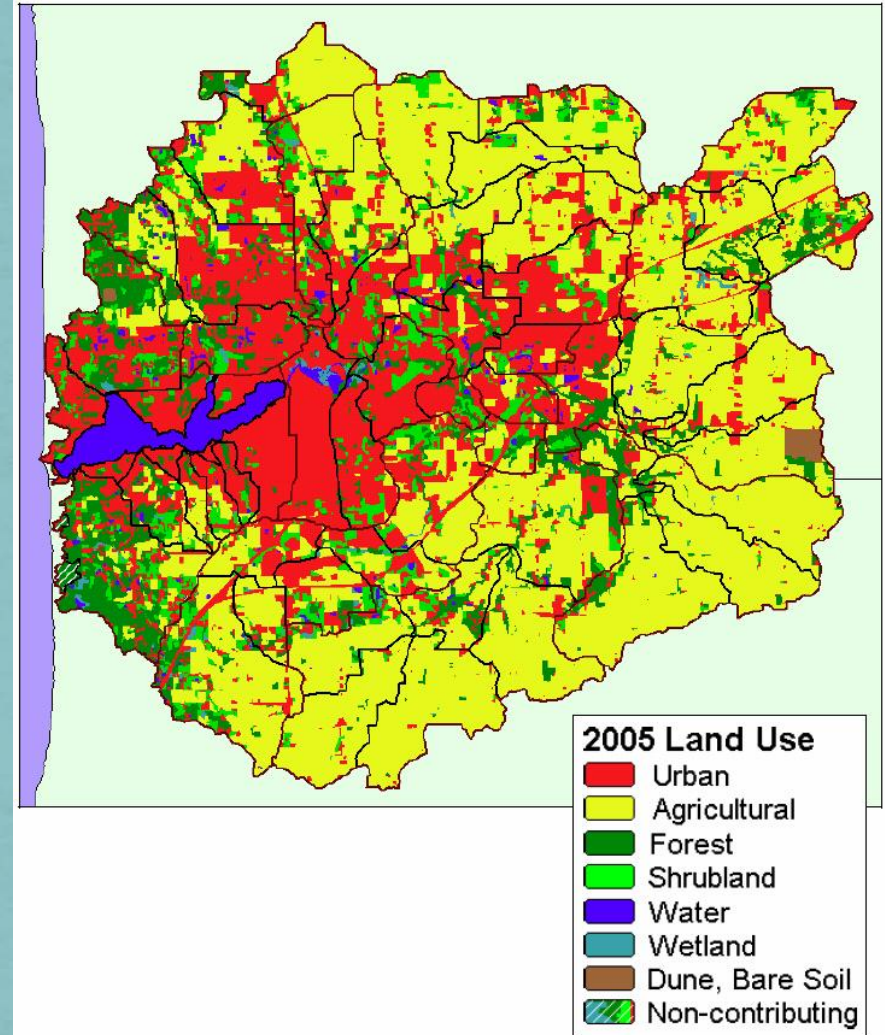
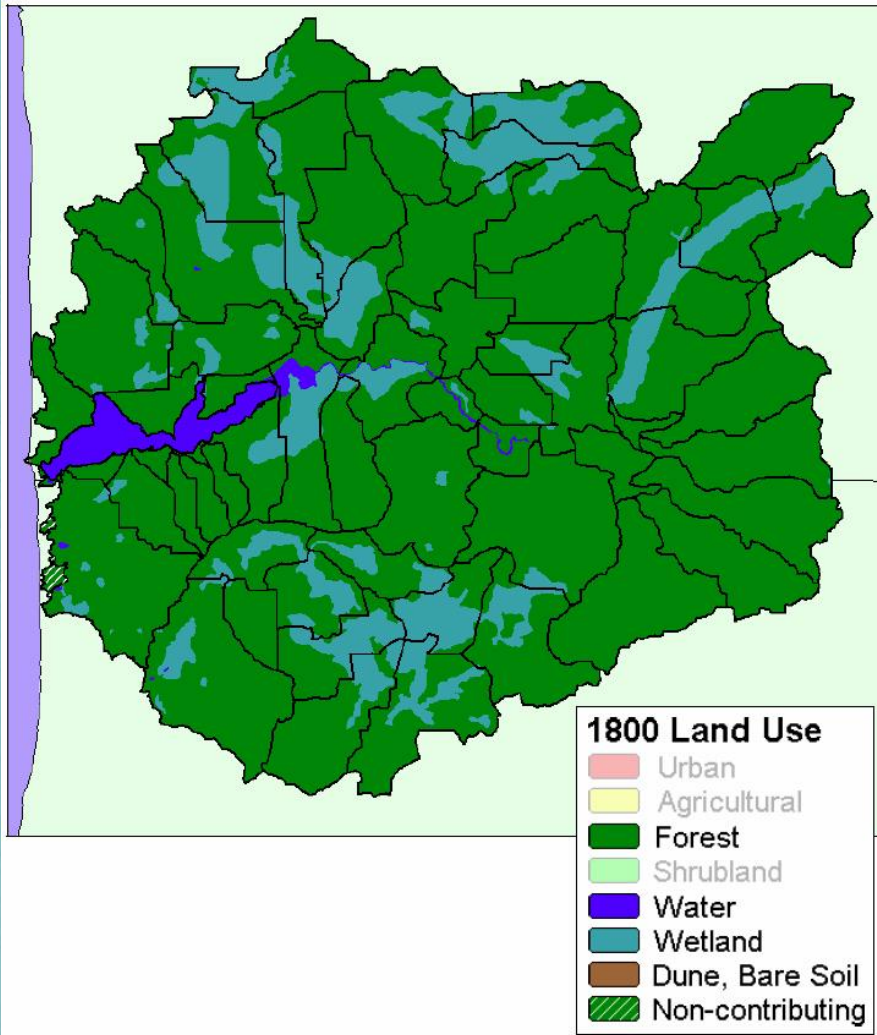
# The Macatawa Watershed

Data Source: Michigan Geographic Data Library, MDEQ





# Land Use













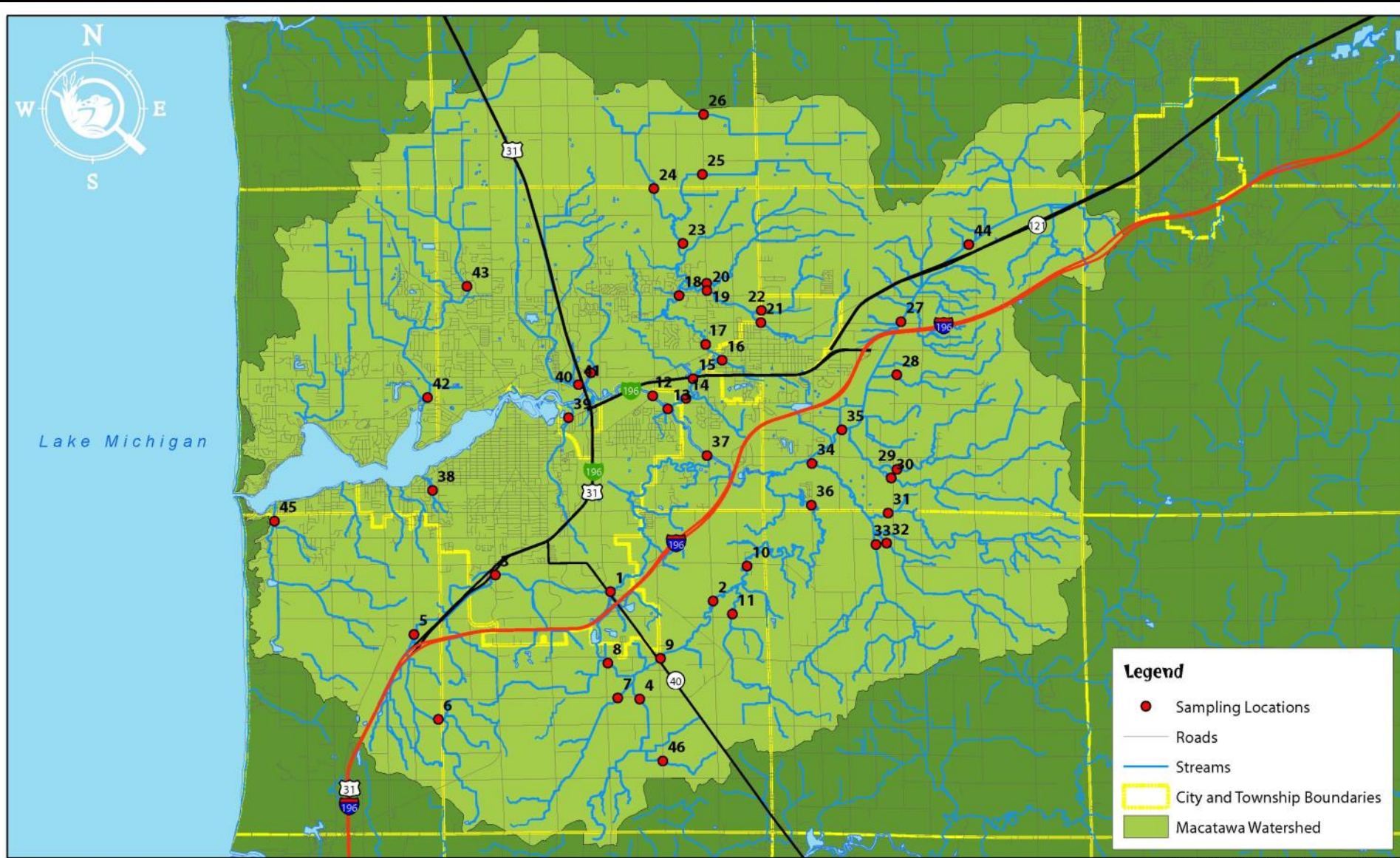








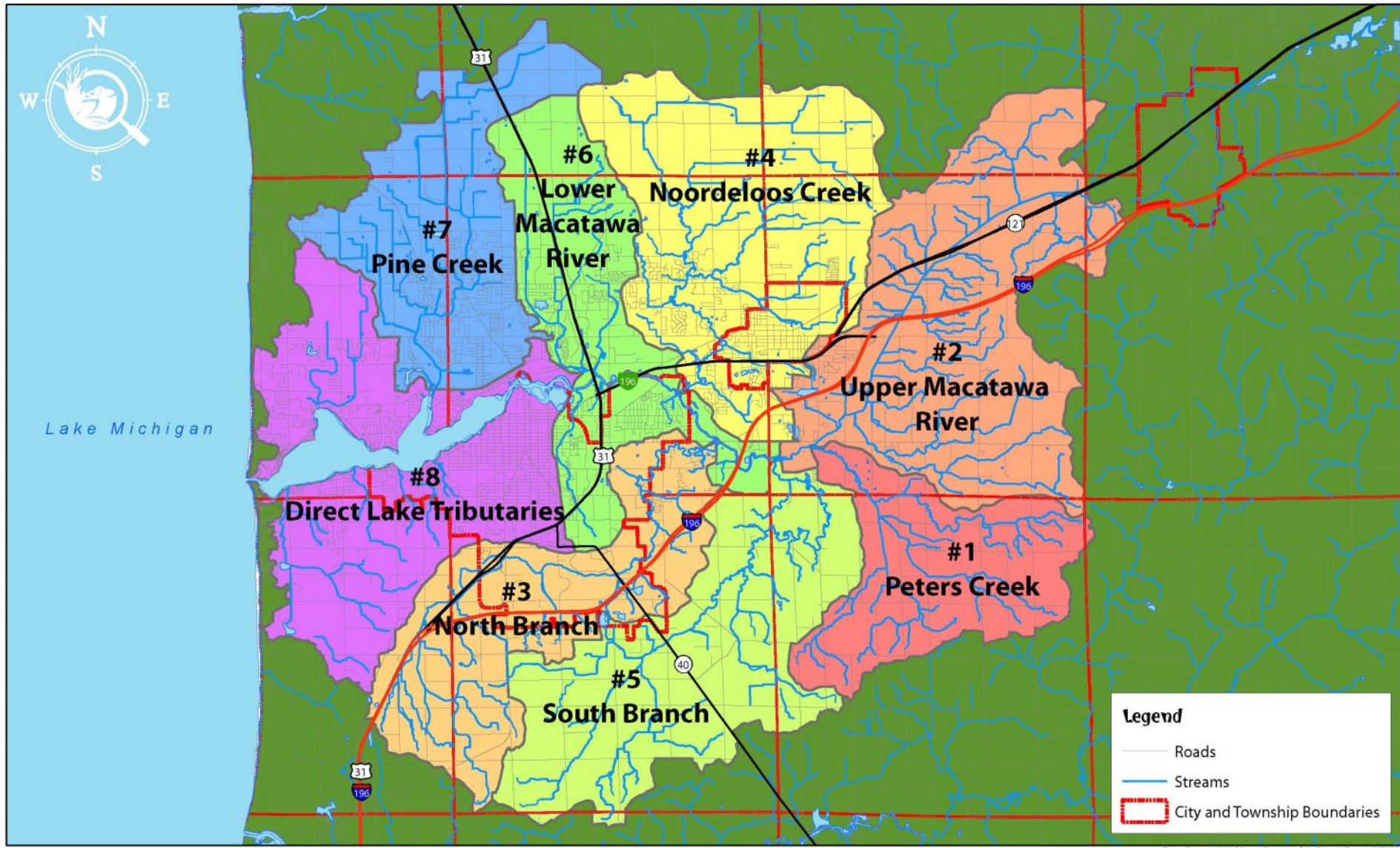
# Monitoring



Data Source: Michigan Geographic Data Library, MDEQ



# Priority Areas

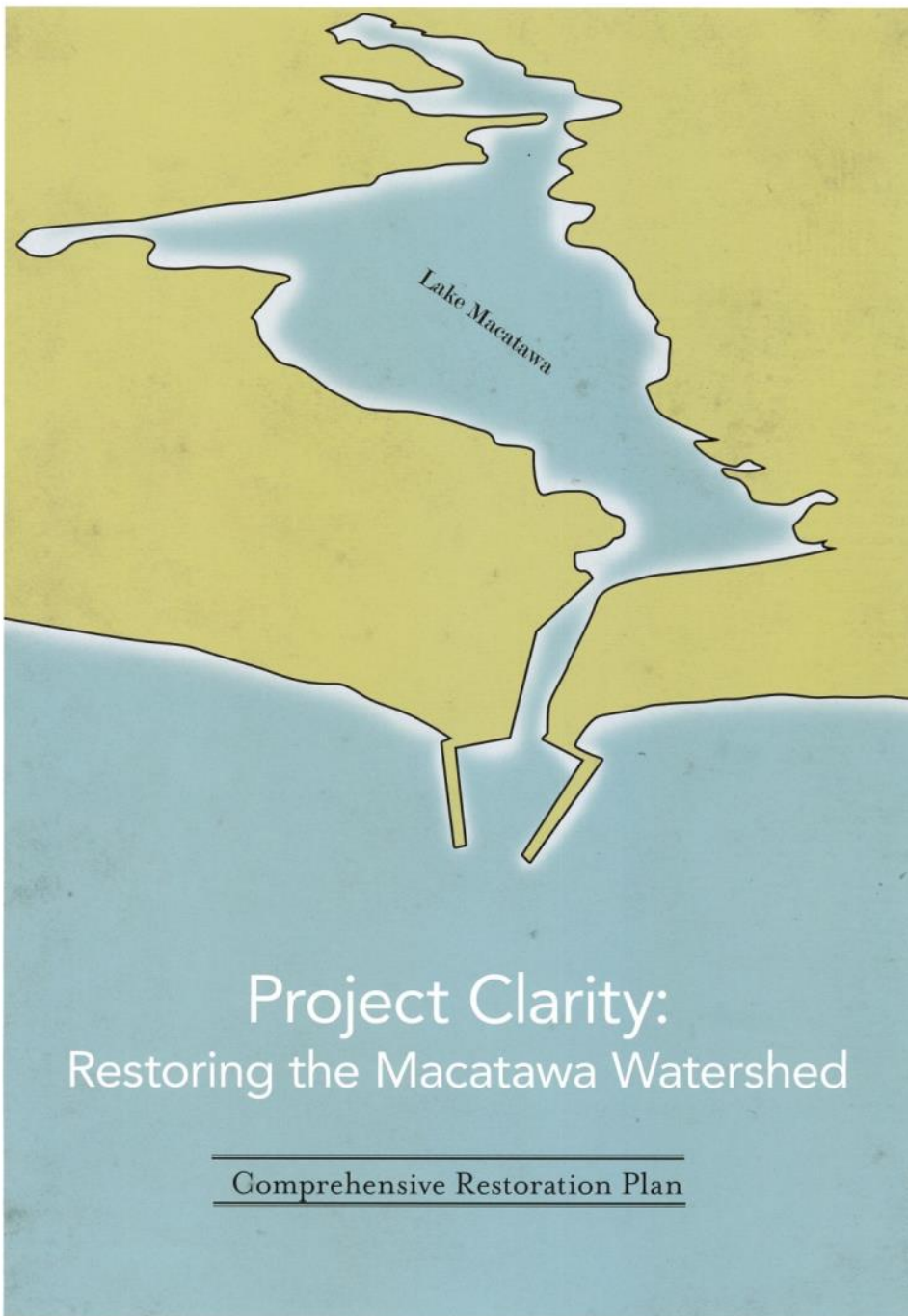


Data Source: Michigan Geographic Data Library, MDEQ



**Priority Subbasins in the Macatawa Watershed**





# Comprehensive Restoration Plan

Project Clarity:  
Restoring the Macatawa Watershed

Comprehensive Restoration Plan

# Phase Two: Goals

- No “silver bullet” fix
- Multi-faceted approach required
- Meet DEQ TMDL
- 70% Reduction Phosphorus (Sediment)
- Focused in 5 areas



# Five Focus Areas

- Land acquisition
- Wetland restoration
- Best Management Practice implementation
- Education
- Maintenance and monitoring





**Before**

**Paw Paw Bridge, Zeeland**





**After**







**Before**





# Before

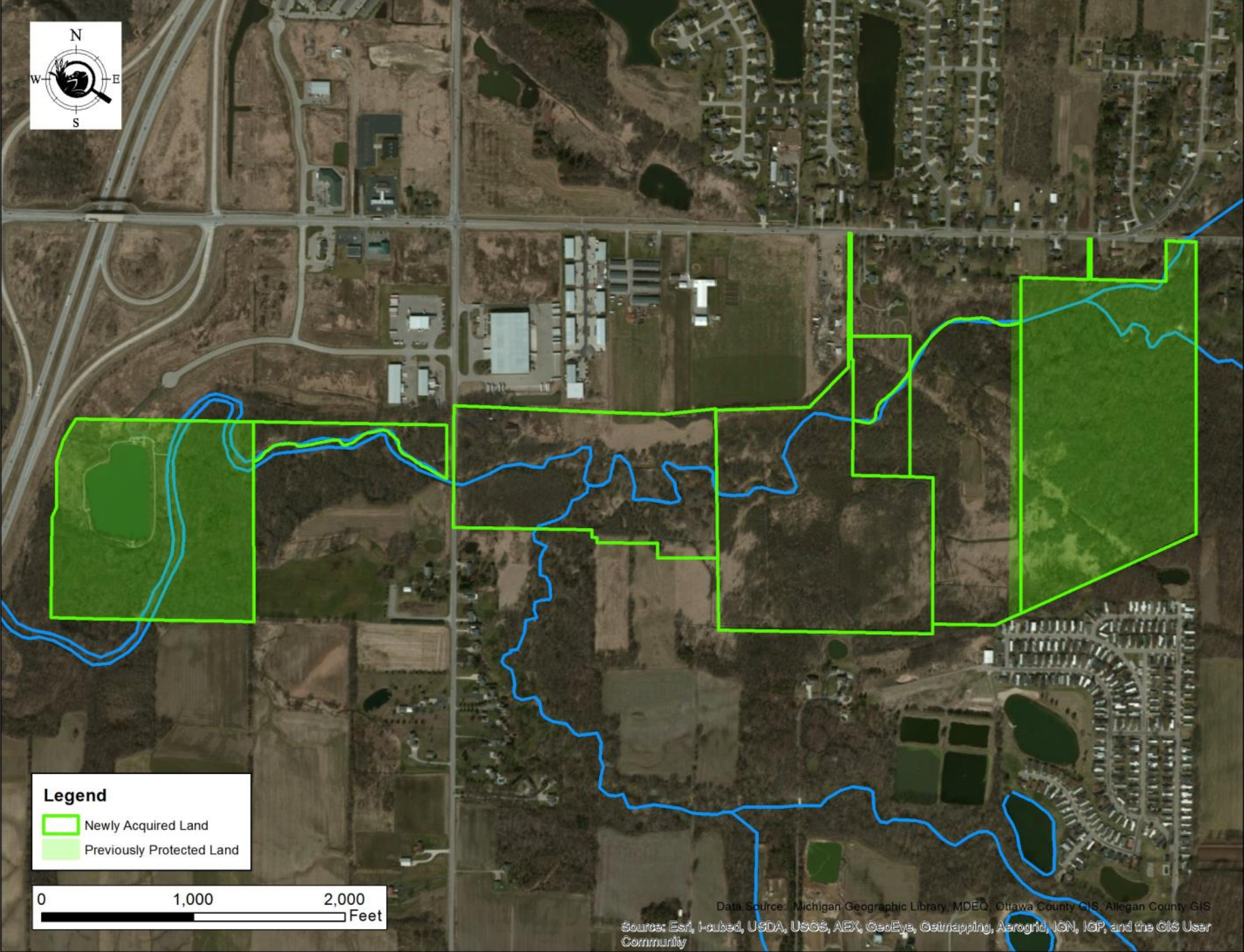






# After

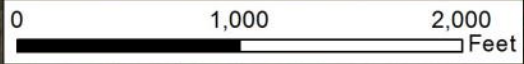






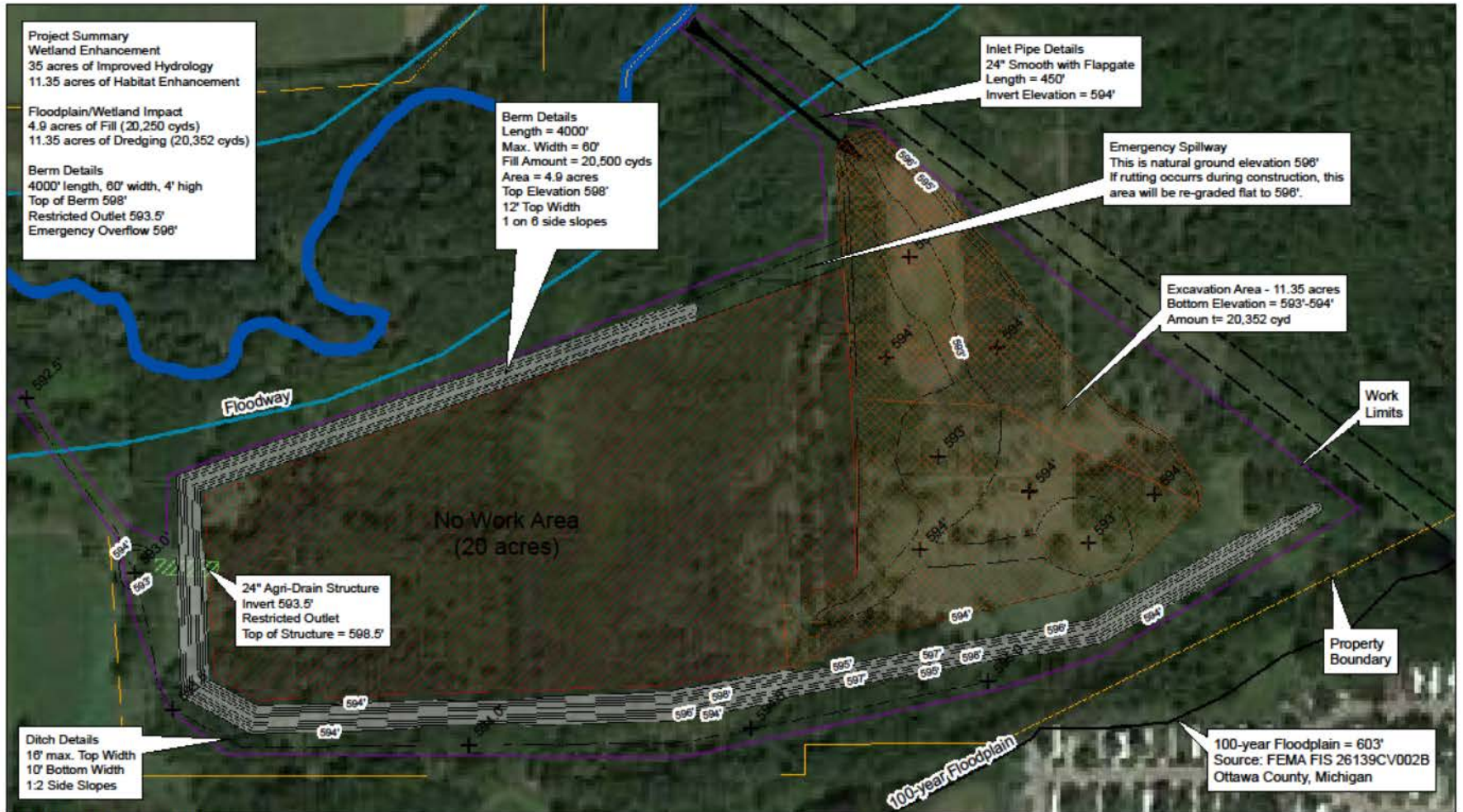
**Legend**

-  Newly Acquired Land
-  Previously Protected Land



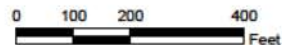
Data Source: Michigan Geographic Library, MDEQ, Ottawa County GIS, Allegan County GIS  
Source: Esri, i-cubed, USDA, USGS, AEX, GeoEye, Geomapping, AeroGRID, IGN, IGP, and the GIS User Community





**Plan Sheet 1 - Grading Plan**

NE 1283-2 Project Clarity, Middle Macatawa (South) Restoration  
 Section 31 of Zeeland Township (T05N, R14W)  
 Ottawa County, MI  
 Aerial Source/Date: N/A  
 Map Date: February 10, 2014



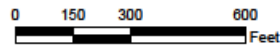
9436 Mackay Road, BigBrook, MI 48115  
 810.225.0559 ext 6761 | 810.225.0553 ext 622



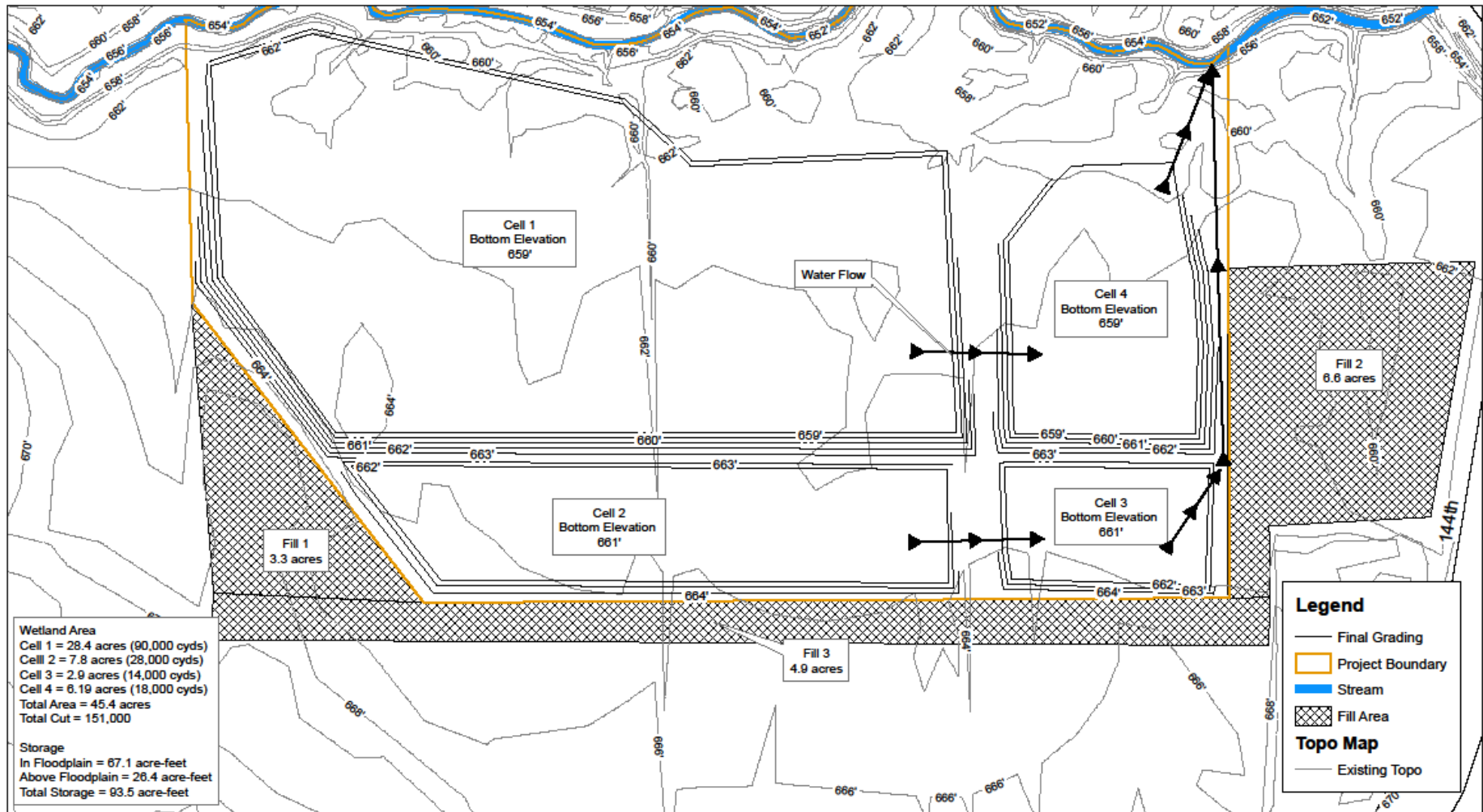




**Proposed Property Boundary and Access Easement**  
 NE 1283-1 Project Clarity, Haworth Restoration  
 Section 9, Town 04N, Range 15W  
 City of Holland, Allegan County, Mi  
 Aerial Date/Source: 2012 MiGDL  
 Map Date: February 18, 2014

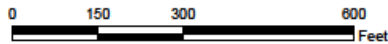






**Haworth Restoration, Concept 2**

NE 1283-1 Project Clarity, Haworth Property  
 Section 9, Town 04N, Range 15W  
 City of Holland, Allegan County, MI  
 Aerial Date/Source: 2012 MiGDL  
 Map Date: January 6, 2013

















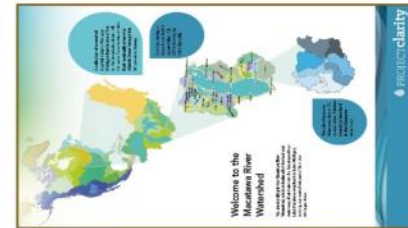








# Watershed Information & Education



**PROJECTclarity**

Aperture Science  
Umbrella Corporation

KOLLEN PARK





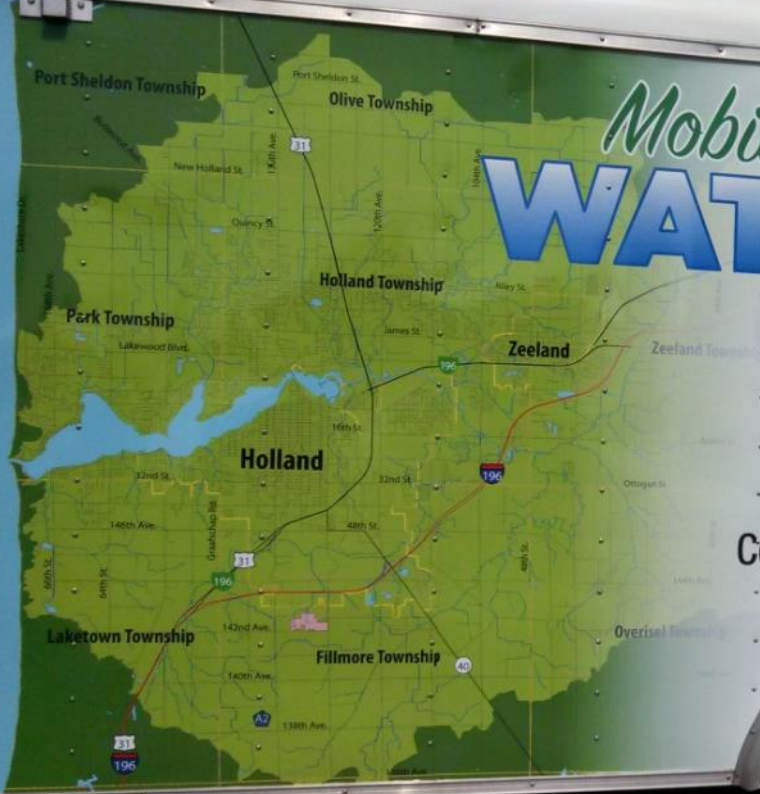
616-393-9453  
www.outdoordiscovery.org

# Mobile WATERSHED Classroom

Education  
Conservation  
Preservation



Connecting people, land and nature.





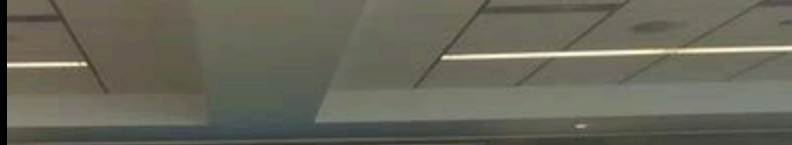
OUTDOOR DISCOVERY CENTER  
**CLARITY**  
AUG 16, 17 7:30 PM FREE











# OAISD Summer IChallengeUth Program













# Project Clarity Investment = Value Added Responses

- MDOT
- Drain Offices
- Ordinances
- School Curriculum



# Where We're At...

- **Fundraising**

- Over \$8 million committed (~65% of goal)
- Community Foundation of the Holland/Zeeland Area
- Michigan West Coast Chamber of Commerce

- **Acres of Land Secured**

- Over 350 acres

- **Wetland & Stream Restoration Projects**

- Five projects in process for 2014
- 230 acre feet of water storage (approx. 170 football fields 1' deep)
- Nearly 1,000' of stream bank stabilization



# Where We're At...

- **Best Management Practices**

- Nearly 1 mile of two stage ditch development planned
- 2015 seven land owners switching to BMP's
- City & Township Storm Water Ordinance

- **Education**

- Water Festival
- River Encounters
- School Programs
- Clarity DVD

- **Maintenance Fund**

- \$108,000





PROJECT **clarity**

[www.MacatawaClarity.org](http://www.MacatawaClarity.org)