



SUCCESSFUL LAKE MANAGEMENT: PLEASANT LAKE, WASHTENAW COUNTY

Dr. Jo Latimore

25 March 2012

Dr. Jo Latimore

- MSU Department of Fisheries and Wildlife Outreach Specialist



- Cooperative Lakes Monitoring Program
- Clean Boats, Clean Waters program
- Lake and Stream Leaders Institute
- Michigan Inland Lakes Partnership
- Michigan Chapter of the North American Lake Management Society









Michigan's Inland Lakes

11,000 lakes
over 5 acres

Largest
Surface Area:
**Houghton
Lake** (20,044
acres)

Deepest:
Torch Lake
(285')

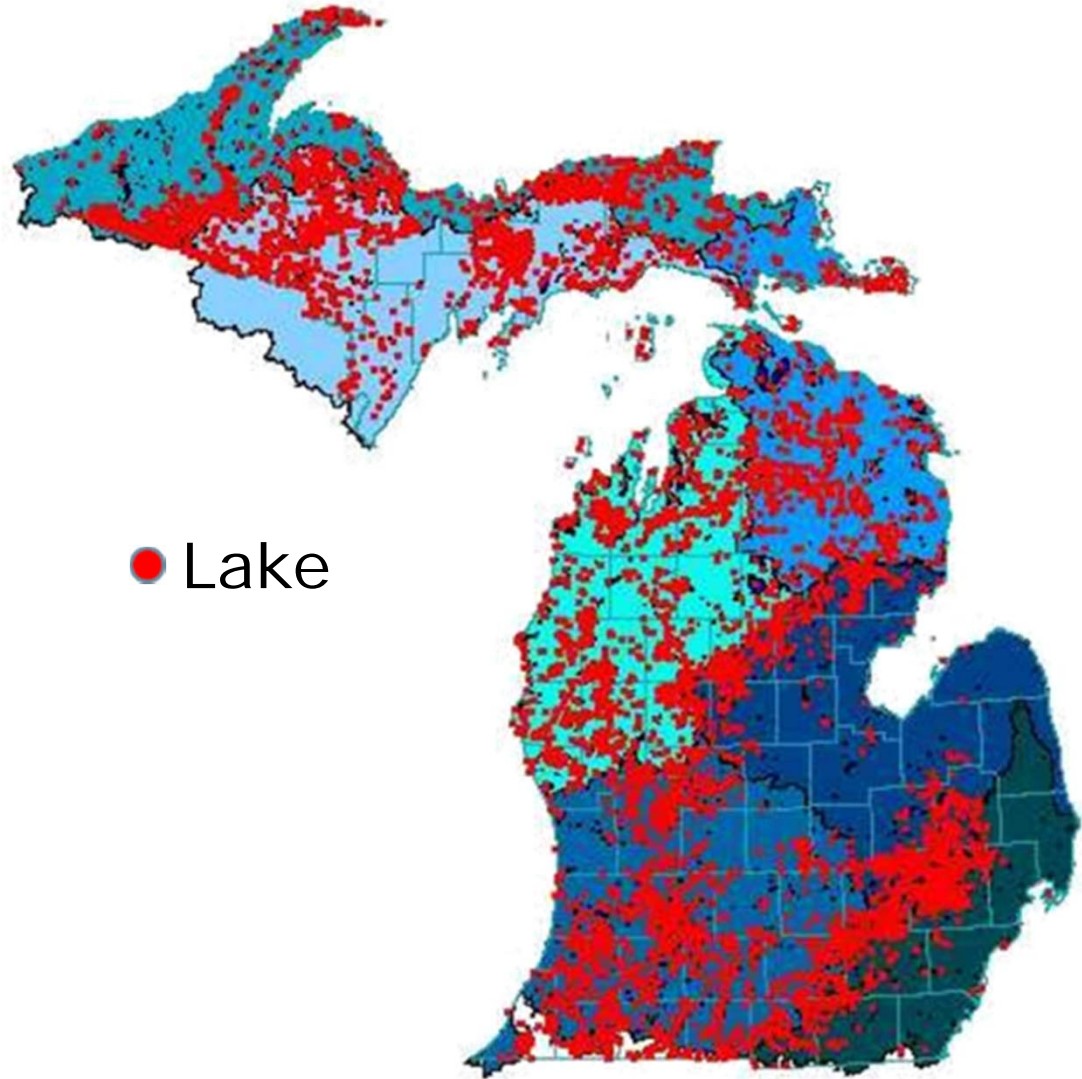


Lake Distribution

Distribution
varies across
the landscape

WHY?

● Lake



Southern Michigan Lakes

- Many shoreline homes
- High recreational use
 - ▣ Sometimes conflicting
- Urbanized watersheds



Management Issue: Weeds



- Excessive weed growth results from:
 - Excessive nutrients
 - Invasive species introduction
 - Excessive sediments

- Question to ponder: How many weeds are too many?

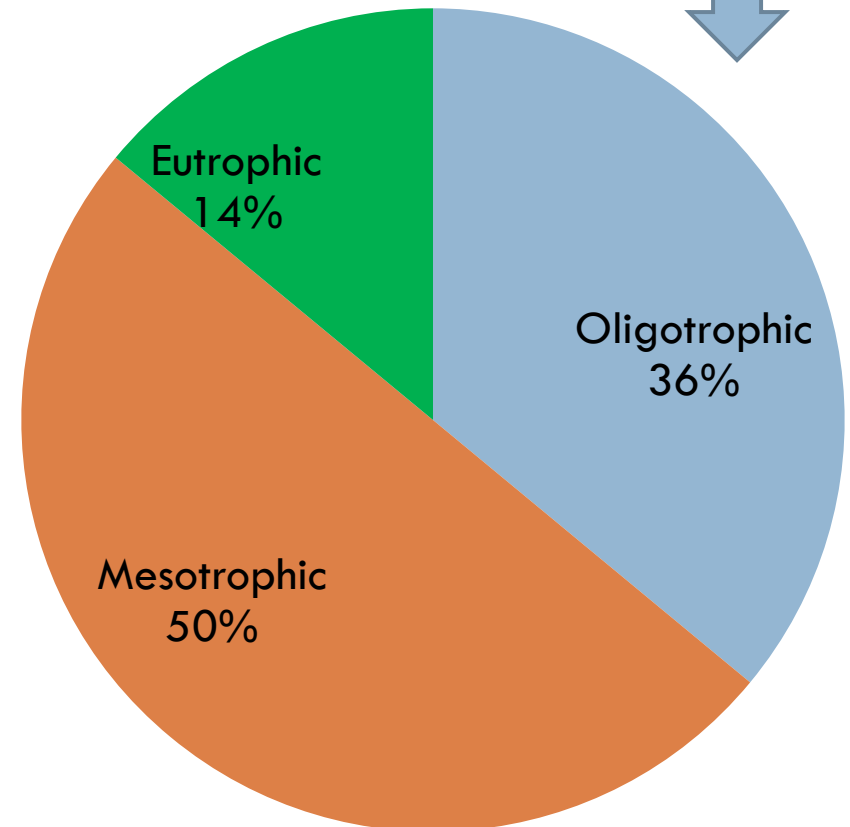
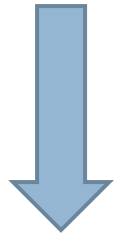
Trophic Status: Oligotrophic



Oligotrophic Lake

- Low nutrients
- Few plants
- Clear water

Michigan's
inland lakes

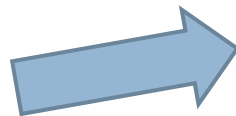


Trophic Status: Mesotrophic

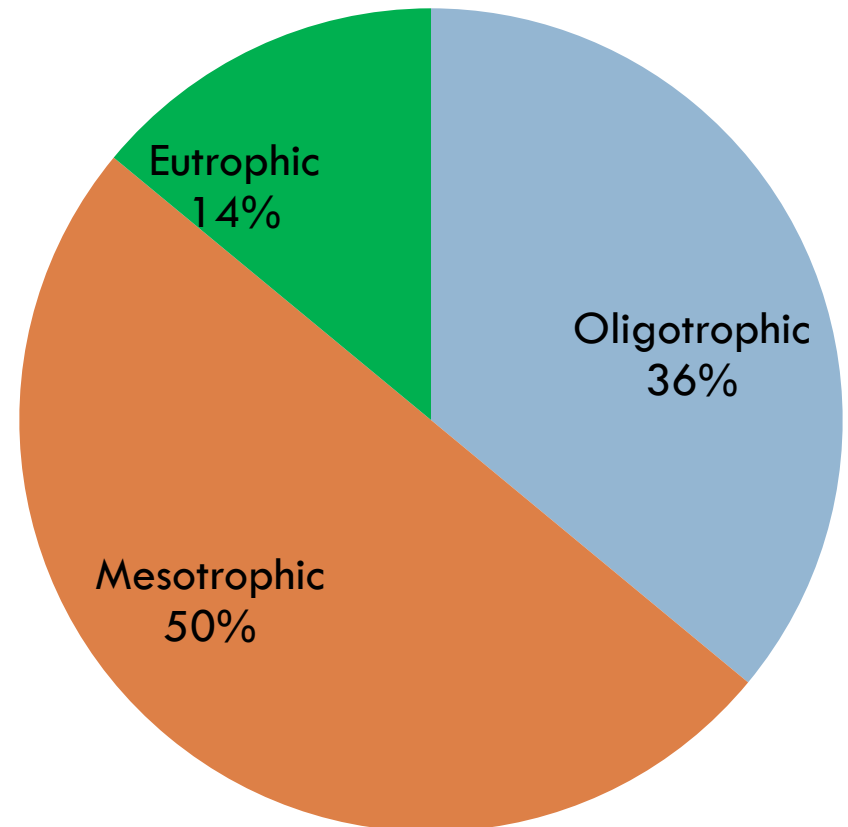


Mesotrophic Lake

- Moderate nutrients
- Plants in shallows
- Moderately clear water



Michigan's inland lakes



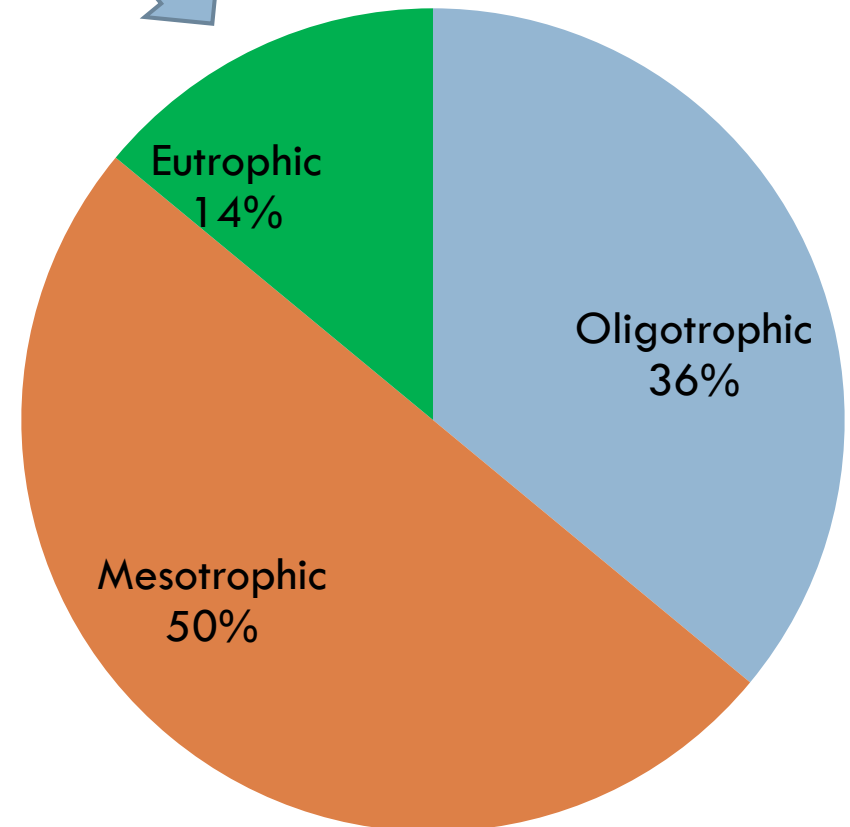
Trophic Status: Eutrophic



Eutrophic Lake

- High nutrients
- Plants & algae throughout
- Low water clarity

Michigan's
inland lakes



Pleasant Lake: Trophic Status



- Mesotrophic

- Moderate nutrients – not excessive

- CLMP Phosphorus results

- Plants in shallows

- Moderately clear water

- CLMP Secchi depth 8-10 feet

Invasive Species

- ❑ Eurasian Water Milfoil
- ❑ Curly-leaf Pondweed
- ❑ Starry Stonewort
- ❑ Hydrilla
- ❑ Others?



Do you know what you have in your lake?

Management Issue: Shoreline Habitat

- ❑ Loss of natural shoreline habitat
- ❑ Replaced with seawalls, rock
- ❑ Is this a concern for your lake?



Steps for Successful Lake Management



- ❑ Get everyone involved
- ❑ Gather information on your lake and watershed
- ❑ Identify problems
- ❑ Prioritize important issues
- ❑ Consider options
- ❑ Community decision
- ❑ Initiate work
- ❑ Review the plan and project – renew as necessary

Gathering information



- Gather historic data
- Collect new data
 - ▣ Cooperative Lakes Monitoring Program
 - Consider adding new parameters
 - ▣ Paid consultants
- Talk to other lake associations
- Learn!
 - ▣ MSU Extension “Introduction to Lakes” program
 - ▣ Michigan Natural Shoreline Partnership
 - ▣ Lake and Stream Leaders Institute

“Management Institutions”



- Lake Associations
- Township Public Improvement Projects
- Lake Boards

What a lake association can do...



- ❑ Organize the community
- ❑ Provide information
- ❑ Educate local citizens
- ❑ Promote projects
- ❑ Form committees to work with local government
- ❑ Be an advocate for the lake, the property owners, and users

Township Public Improvement Projects



- State law provides for public improvements by township boards to inland lakes under the Township Public Improvement Act
 - ▣ Township can set up a “Special Assessment District” to collect funds to pay for studies and projects to improve the quality of the lake and recreational use.

Lake Boards




- ❑ Established by county, township, or local municipality
- ❑ Functions as a governmental management unit
- ❑ Membership
 - ❑ County Commissioner
 - ❑ Drain Commissioner
 - ❑ Township/municipal representatives
 - ❑ DEQ representative
 - ❑ Citizen property owner

What can a Lake Board do?



- Projects to:
 - ▣ Eliminate pollution
 - ▣ Improve conditions for swimming, boating, recreation, fish, wildlife, agriculture, and other conservation uses
 - ▣ Eliminate unsafe public health conditions
 - ▣ Eliminate flood hazards



Start small, and build on successes —
but start!

**The best management institution
for your lake is a community
decision.**

Sources of Technical and Financial Support



- Local support
 - ▣ Watershed and conservation groups
 - ▣ Local community foundations
 - ▣ Local government public works authorities
- Institutional Support
 - ▣ MSU Extension, school studies
 - ▣ Consulting firms
- State Support
 - ▣ DNR and DEQ data and grants
- Federal Support (administered by DEQ)
 - ▣ CWA Section 319 watershed funds

Contact Information:

Dr. Jo Latimore
latimor1@msu.edu
517-432-1491

MICHIGAN STATE
UNIVERSITY

