

# Education and Outreach

Dickinson County Clean Water Alliance

Shoreline Protection and Restoration

# The price of lakeshore property



# The price of lakeshore property



# Lakes get bigger but not deeper



# Why are shorelines important

- Runoff can be 5 to 10 times higher than natural shorelines
- Up to 9 times more phosphorus is carried into the lake than from natural shorelines
- Sediment inputs to the lake increase 18 times more than natural shorelines
- Water flowing over lawns also picks up more soil, toxic chemicals/pesticides, pet waste, and other pollutants than natural shorelines

*Margin of Error? Human Influence on Wisconsin Shores, A Production of the Wisconsin Lakes Partnership © 1999 University of Wisconsin*

# The Challenge

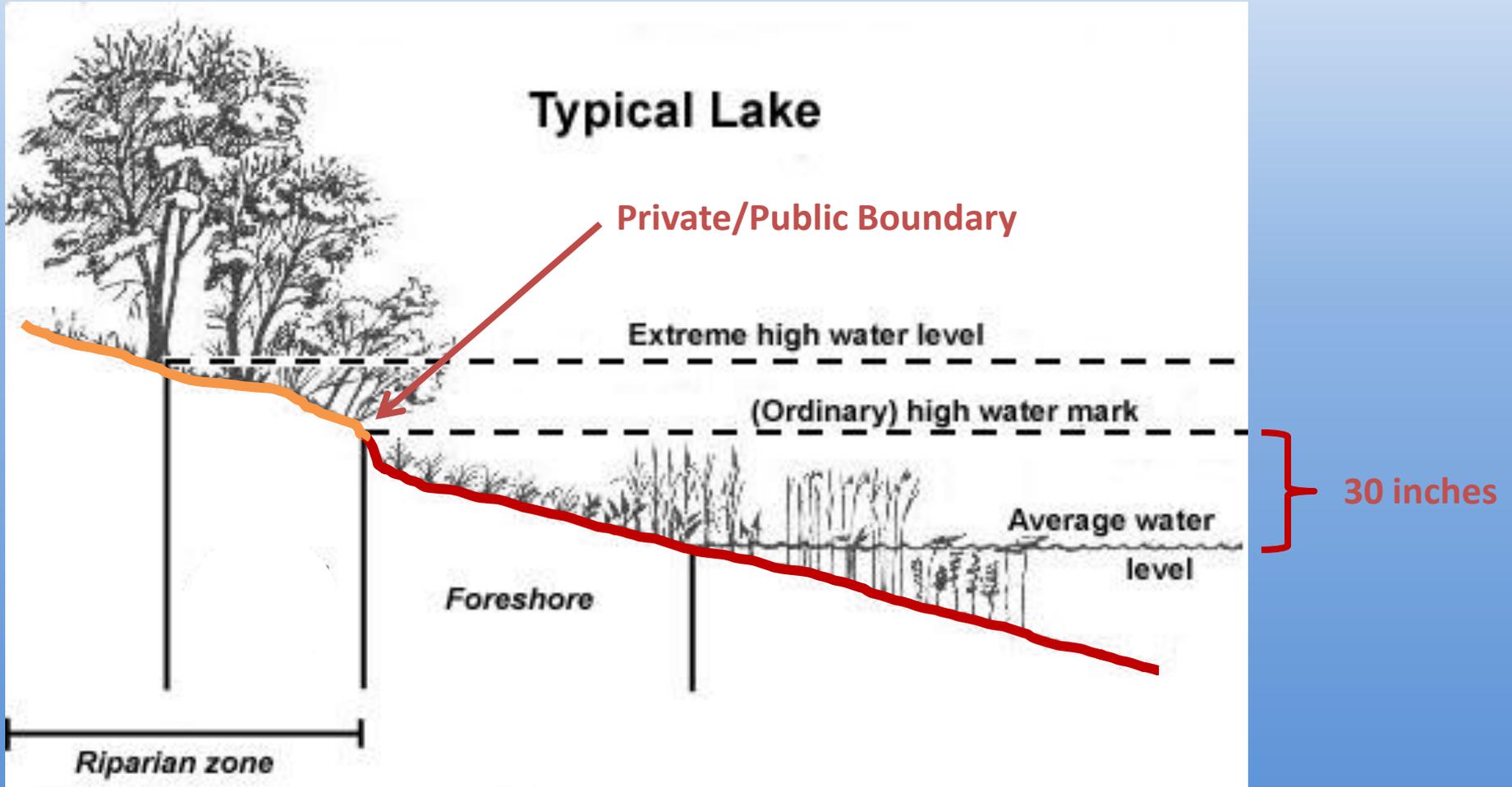
## Iowa Great Lakes

- 3,090 landowners
- 16 landscaping companies
- Nearly all of the shoreline is developed

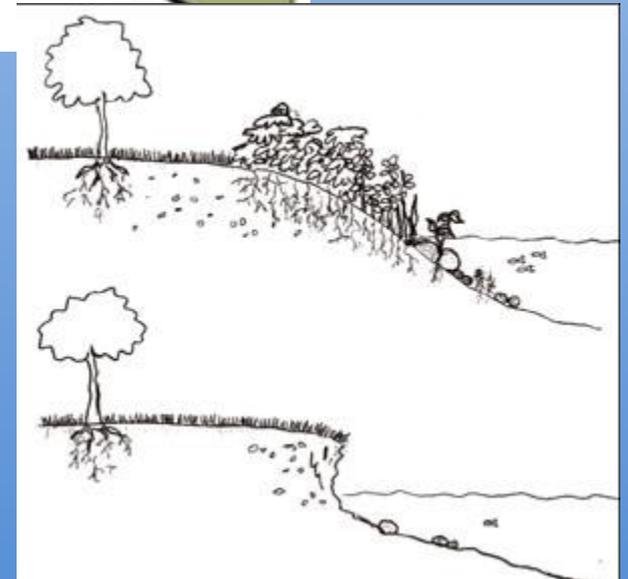
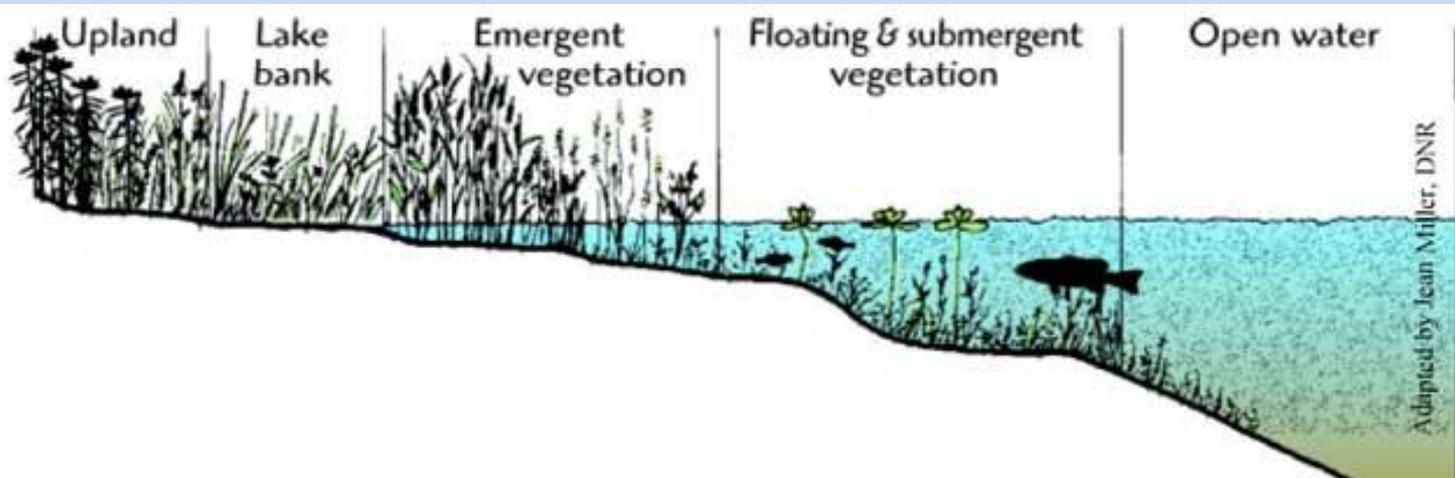
## Chapter 13 Iowa Administrative Code

- 40-50 permits issued yearly in Dickinson County
- Numerous landowner consultations
- Encroachment investigations
- Investigations of construction without a permit
- Contested cases

# The OHWL



# The shoreline continuum



# Fish and Wildlife Impacts

## *Habitat Selection on Bergen Lake*



Reed, J. R. and D.L Pereira. Relationships between shoreline development and nest site selection by black crappie and largemouth bass. *North American Journal of Fisheries Management* (2009). Volume: 29, Issue: Table 1, Pages: 943-948

# Beauty is in the Eye of the Beholder



# Rip Rap



# Lots of Rip Rap



# Terracing



# The Beach



# The Woods



# Under the canopy



# The Wall



# The Great Wall



# Another Point of View



# Another Point of View



# Another Point of View



# Another Point of View



# The Ugly



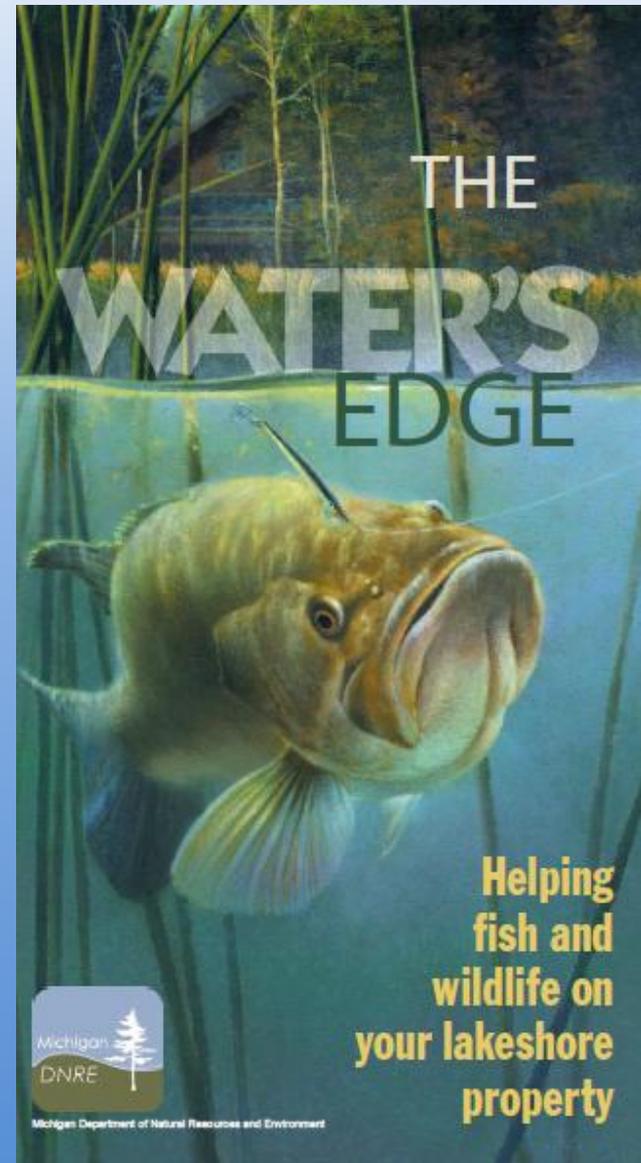
# Changing the Paradigm

- LID Seminars were a huge success
  - Treating rainwater on your property
  - Engineers, landscapers, local leaders, landowners
  - Local ordinance passed
  - Buy in and a change in how we think
- Can we model other efforts in the same way?

# Iowa's Natural Lake Shorelines

- Guide to lakeshore development and restoration
- Seminars on lakeshore development
  - Laws
  - Biology
  - Mechanics
  - Success stories
- Engineering and design standards
- Pilot projects
- Cost share for implementation

# We're not reinventing the wheel



“As we understand more about the structure and function of shoreland, we also become aware of the importance of our role in keeping these systems healthy.”  
Minnesota Restore Your Shore Program