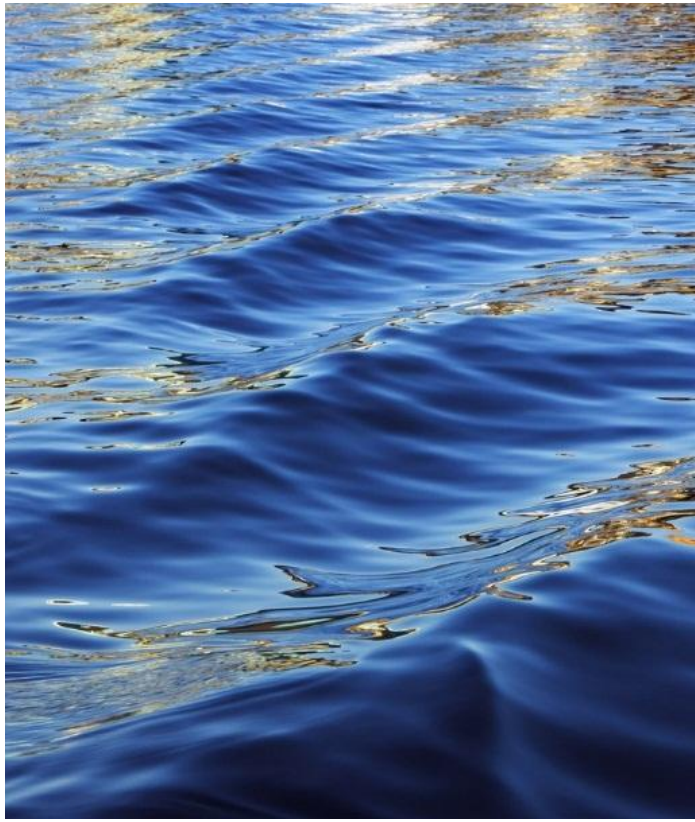
ALPOA
Committee Report –

Lake Health Subtopic



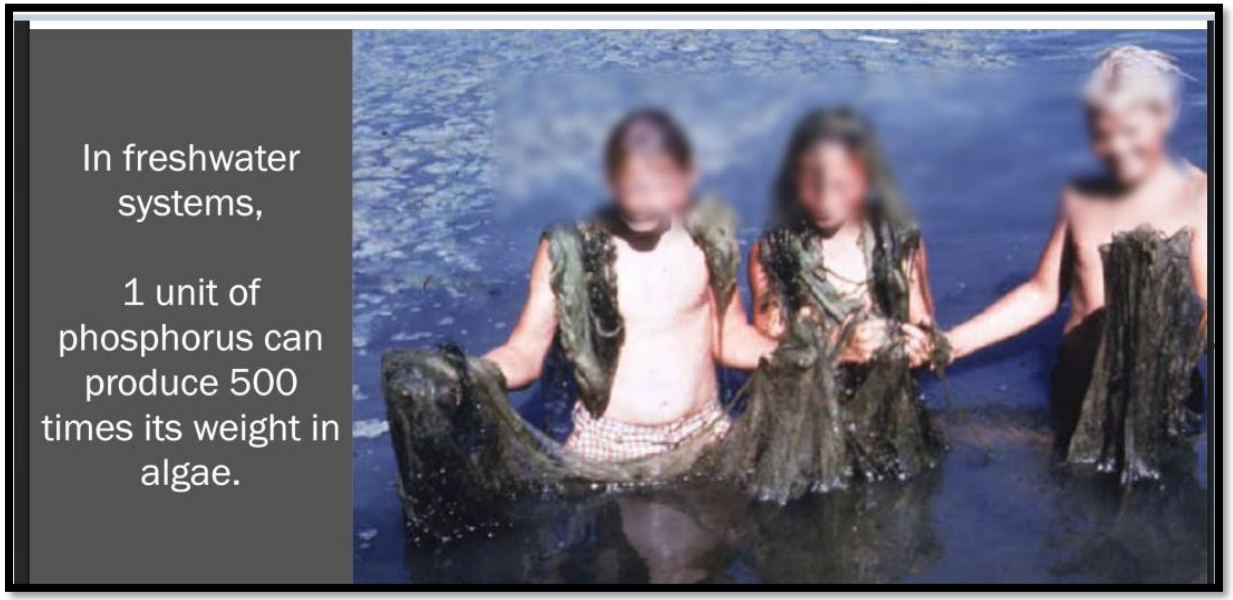
For more information contact Maureen Carey and Rick Oakley

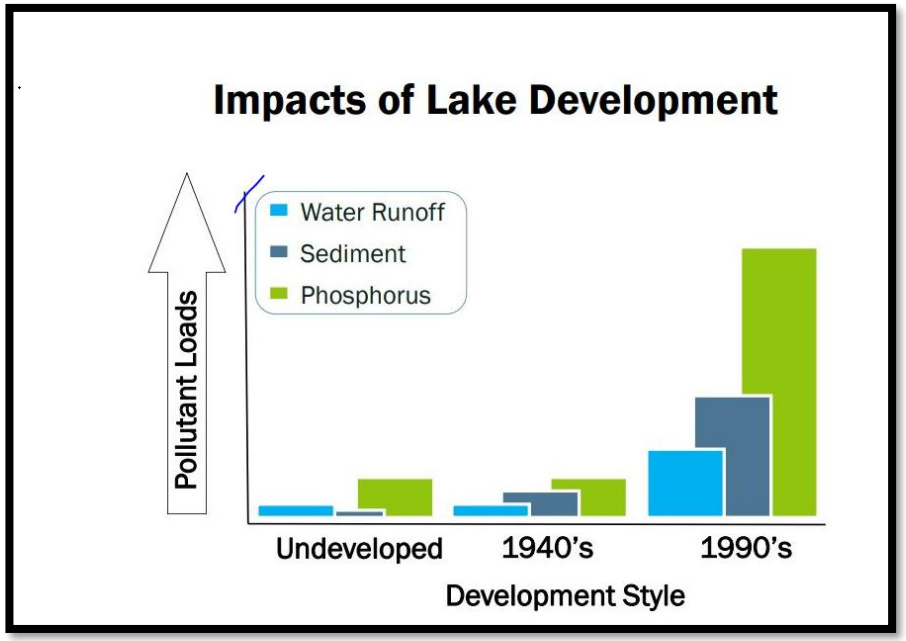
Shoreline Sub-topic

- In 1949 records indicate Au Sable Lake had three resorts and three liveries along its shoreline. The properties that flanked the shore were summer cottages and small farms. Much has changed in 76 years. Fortunately for those of us who love this lake, it remains much better preserved than the overcrowded lakes found in southern Michigan. With a little effort and vision, Au Sable Lake can continue to remain an all-sports lake, enjoyed by all of its residents and guests for generations to come.
- For Au Sable Lake to continue its fish and wildlife legacy from northern pike to loons and eagles, the health of the lake is crucial. There exist many factors that contribute to the wellness of Michigan's freshwater lakes. Most notably the watershed in which each lake resides is among the most significant. For our lake there is no industry causing pollution. However, the properties adjacent to the lake do impact the overall health of the lake.
  - Unmaintained septic systems
  - Fertilizers/pesticides for lawn maintenance
  - Pet waste
  - Erosion control (from wave energy or rain runoff)

Why Care About Phosphorous, and runoff?

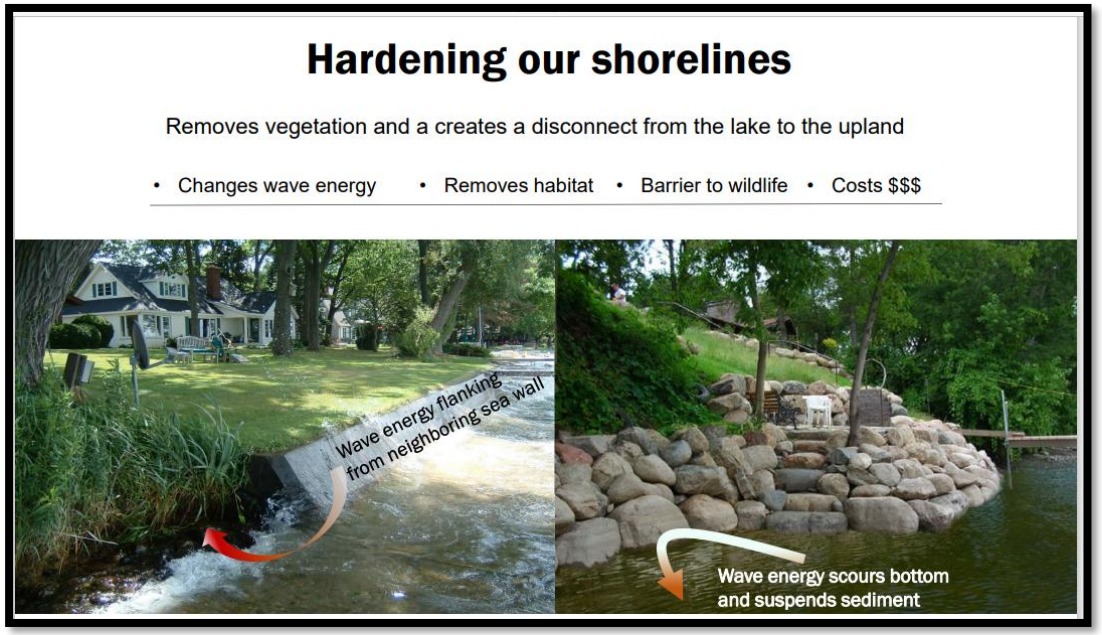
- The changing lake use and increasing ambient temperatures threaten the native balance of algae/zooplankton and larger animals in the food web of Michigan freshwater lakes
- Large inputs of phosphorus from fertilizers coupled with septic system inadequacies impact unwanted algal blooms, some toxic to humans and other mammals
- As modern amenities have been added to former seasonal homes the increase of phosphorous has become highly impactful. (Likely significantly higher in 2025, not shown).

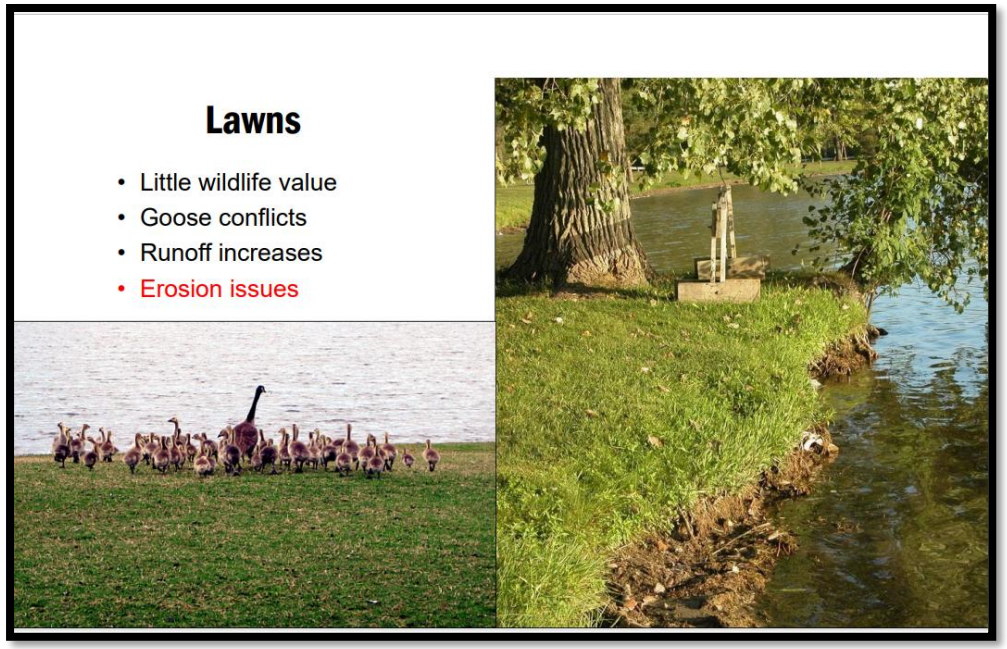




Why Care About Appropriate Erosion Control?

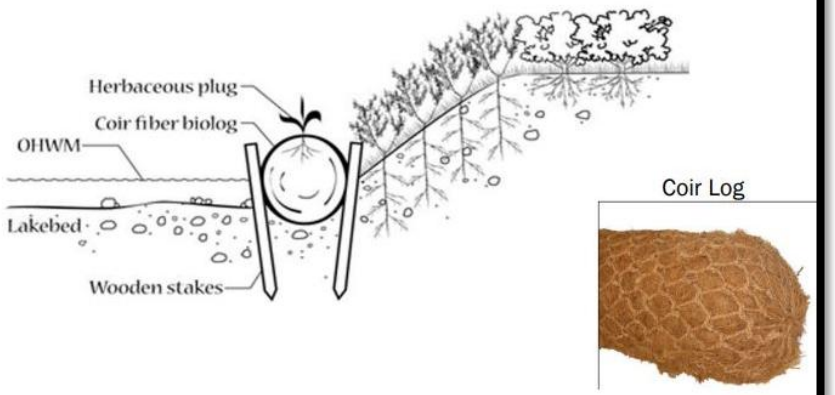
- The increased use of high speed watercraft has caused many residents to resort to seawalls to guard against shore loss. Seawalls cause a 'shore hardening' that adversely impacts the quality of the shoreline. The energy of a wave that hits a seawall is directed down, or to the seawall's edge. This greatly disturbs the lake bottom adjacent to the seawall.
- Lawns adjacent to shore lines do little to control erosion and invite geese and require fertilizer use (phosphorous source) for maintenance



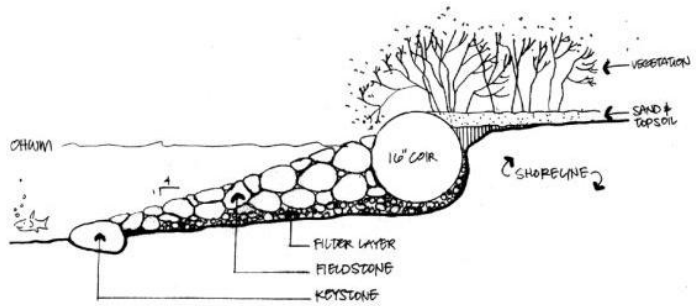


Erosion Repair and Control Options

Bioengineering Design
Coir log design – low energy



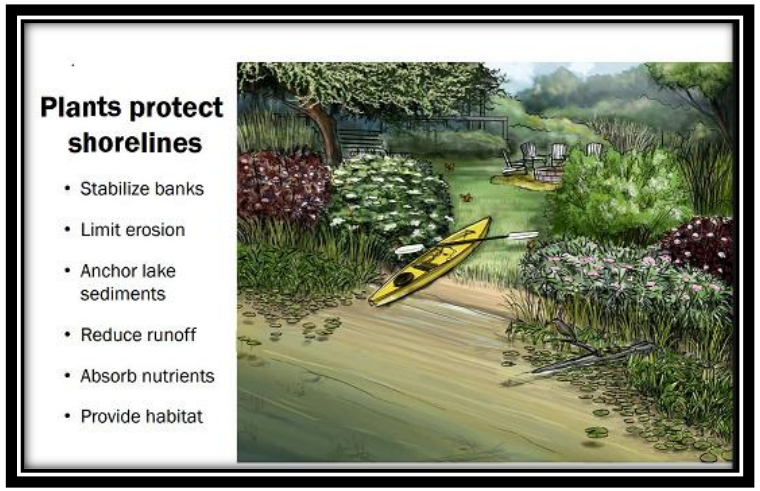
Bioengineered Design
Rock design – high energy



What if I already have a seawall or rock rip rap?

There are lots of options!

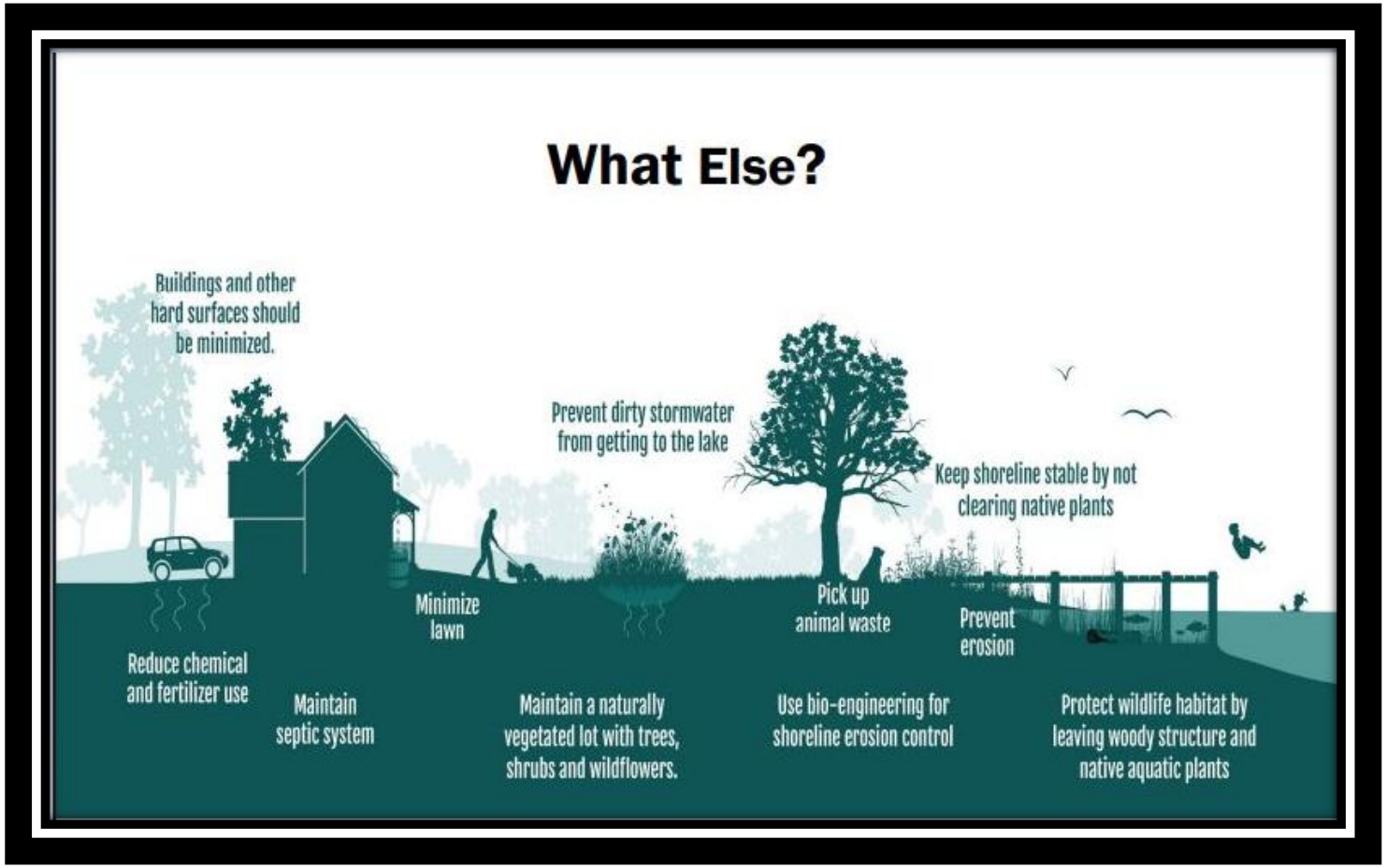
Best Shoreline Practices



Use Native Plants:

- Adapted to soil and climate in which they live
- Resist damage from freezing
- Have high ecological importance
- Require less maintenance
- Have extensive root systems
- Attract native animals and birds

For more detailed understanding please visit Michigan Natural Shoreline Partnership:
http://www.mishorelinepartnership.org/



Not everyone can do everything,

But everyone can do something

-Max Lucado