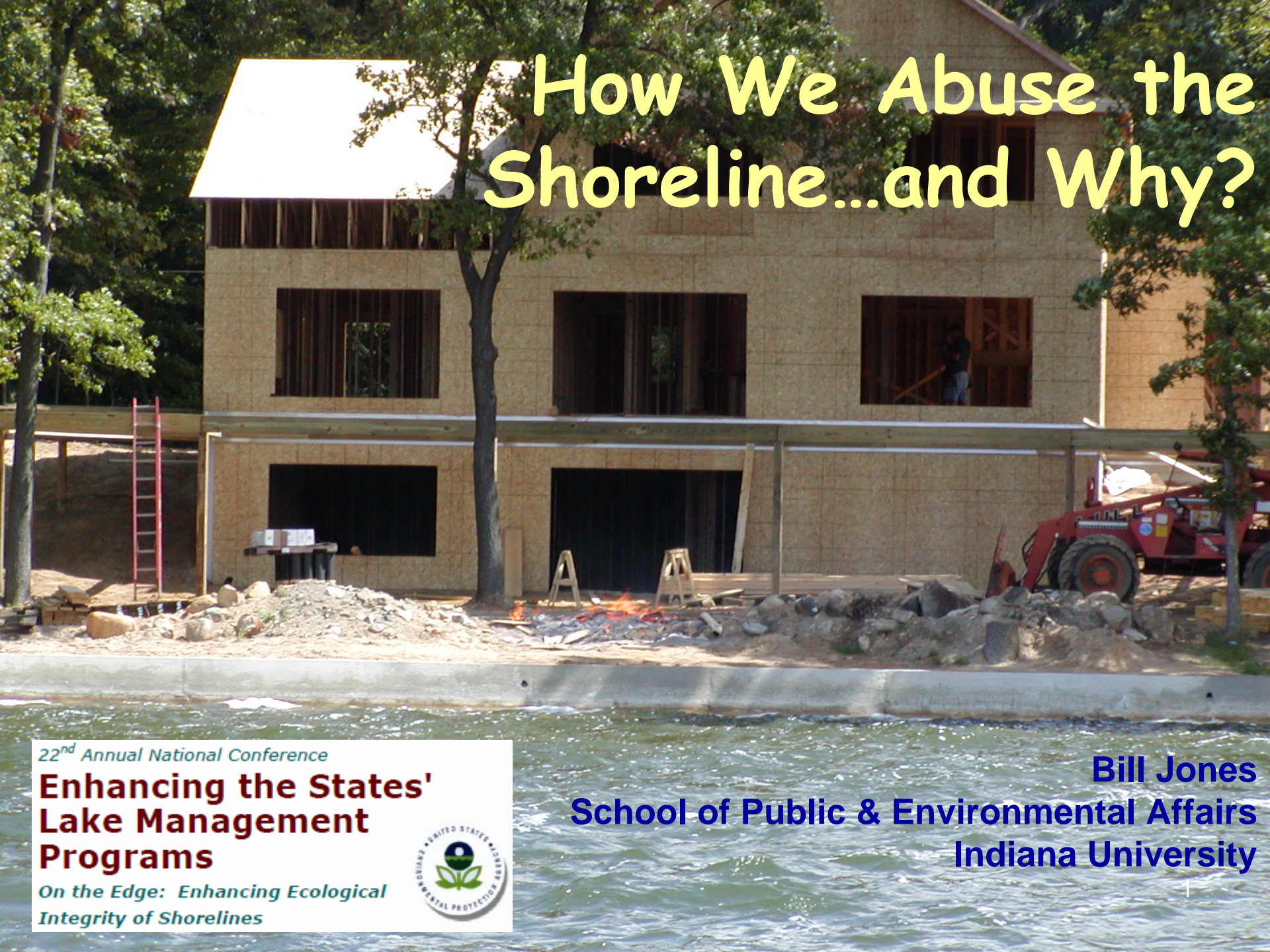


How We Abuse the Shoreline...and Why?



22nd Annual National Conference

Enhancing the States' Lake Management Programs

On the Edge: Enhancing Ecological Integrity of Shorelines



Bill Jones
School of Public & Environmental Affairs
Indiana University

We are drawn to the water



People have been enjoying and living on lakes for many years. This scene along Indiana's Lake Tippecanoe is from 1909.



Recreation at lakes increased greatly after WW II



- Increased affluence
- Shorter work week
- National highway system
- Widespread auto ownership

WALKERS LANDING TIPPECANOE LAKE IND.



Small, seasonal lakeshore cottages in the past had fairly benign impacts on lakes and shorelands ⁵

Large, 'city mansions' are appearing on many of Indiana's lakes



Geist Reservoir, Indianapolis

New construction on the lakeshore
must be more sensible than this



Meserve Lake, IN

TOLL FREE 1(888)495-LAND

SOLD

*Available Waterfront Property Is Vanishing...
Like A Sunset.*

Claim Your Piece Of Nature. Call John Christianson



Wisconsin Lakes Partnership



in Indiana and other states - Cottages are
being torn down...



...and replaced with dream houses

Is this good shoreline stewardship?



A \$10 million re-development project on
Lake Tippecanoe, Indiana

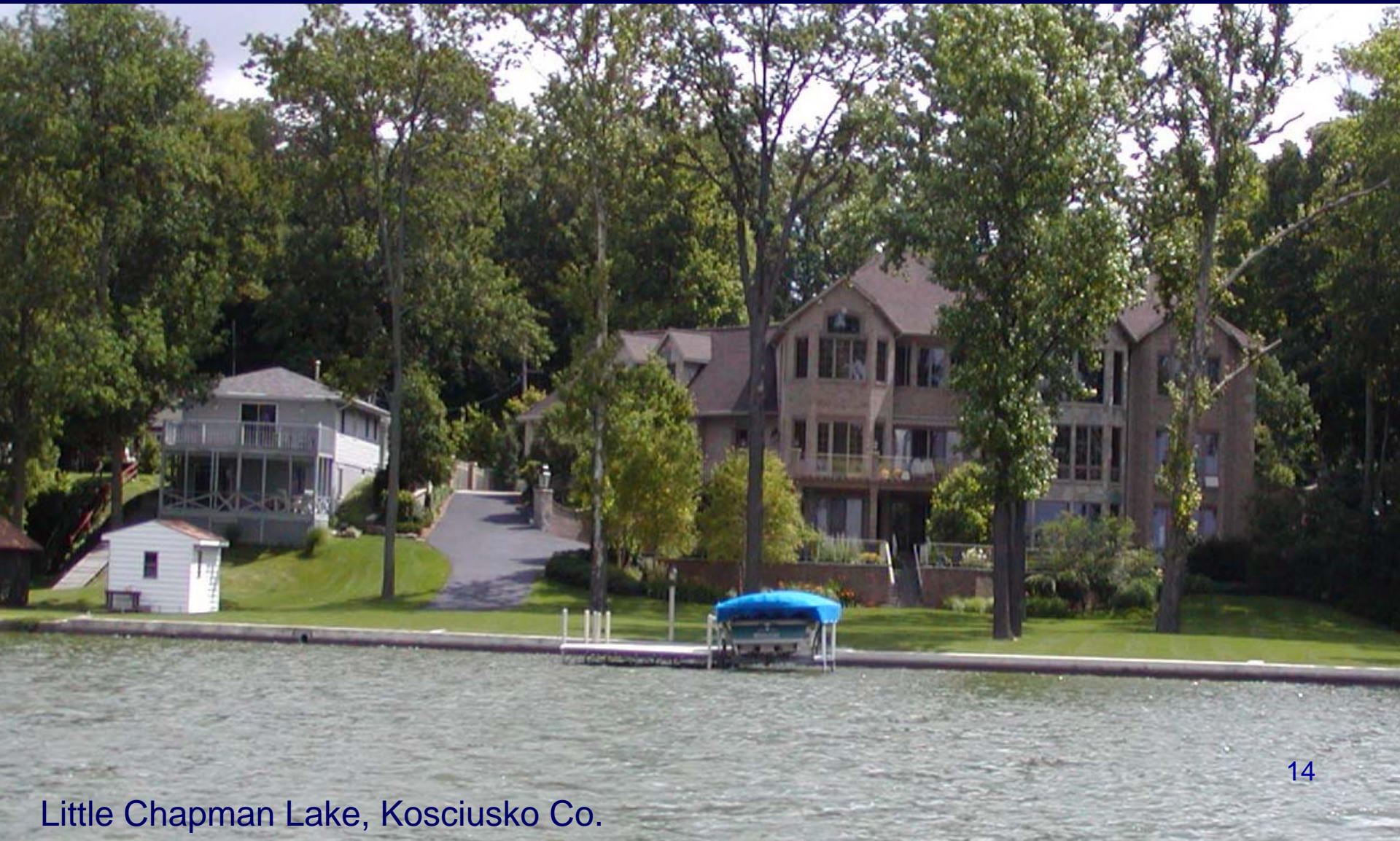
The slope at this re-developed property is too steep for the stone to stay in place



Re-developed property on Lake Maxinkuckee...100% impervious surfaces



A common element in “modern” lakeshore development is a sterile shoreline with little ecological value or sustainability





What 'ecological functions' are present on this shoreline?

By their actions, shoreland owners destroy
the very features that attracted them to
the lakeshore

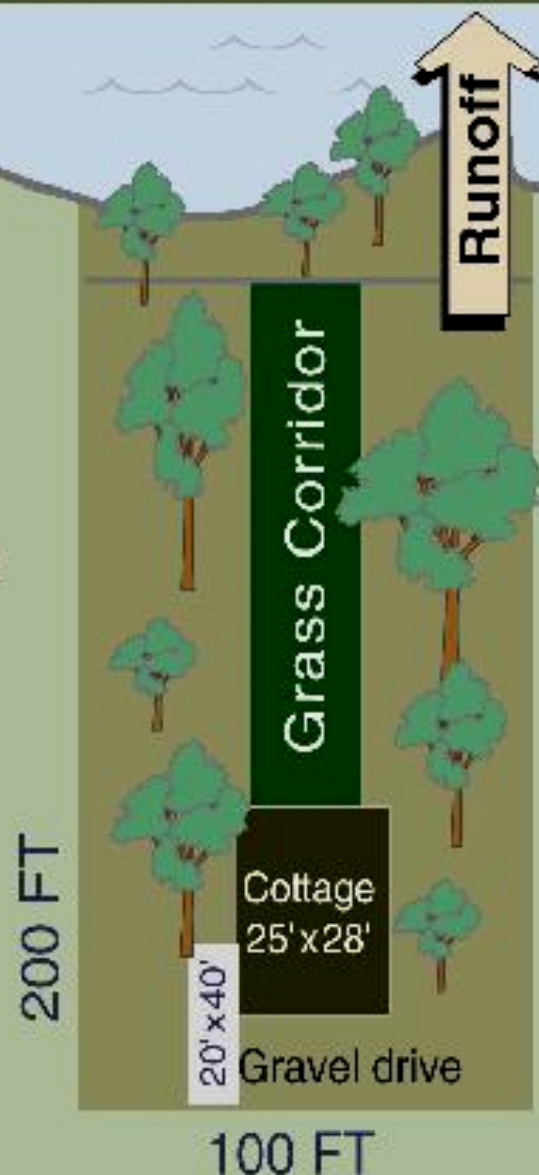




Habitat for people or habitat for Geese?

1940s development – Apr.-Oct. phosphorus/sediment runoff model

- maple-beech forest
- 6% slope to lake
- grass corridor 20'-wide
- cottage 700 ft² perimeter
- gravel drive 800 ft²
- 35'-wide buffer strip

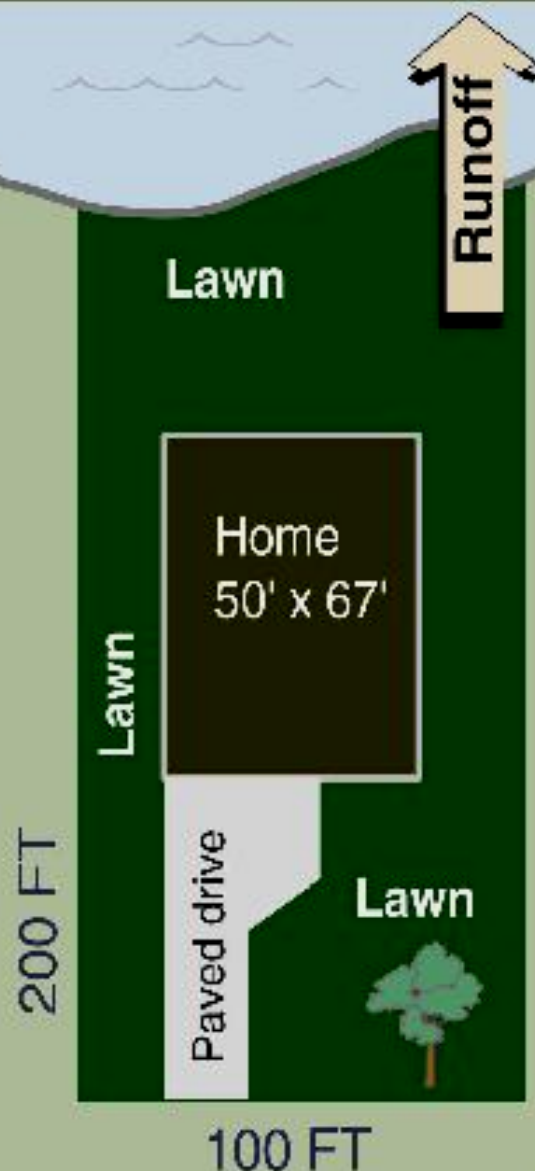


IMPACT ON LAKE (April - Oct.)

- 1,000 ft³ runoff to lake
- 0.03 lbs. phos. to lake
- 20 lbs. sediment to lake

1990s development – Apr.-Oct. phosphorus/sediment runoff model

- maintained lawn, soil graded
- 6% slope to lake
- home 3,350 ft² perimeter
- paved drive 770 ft²

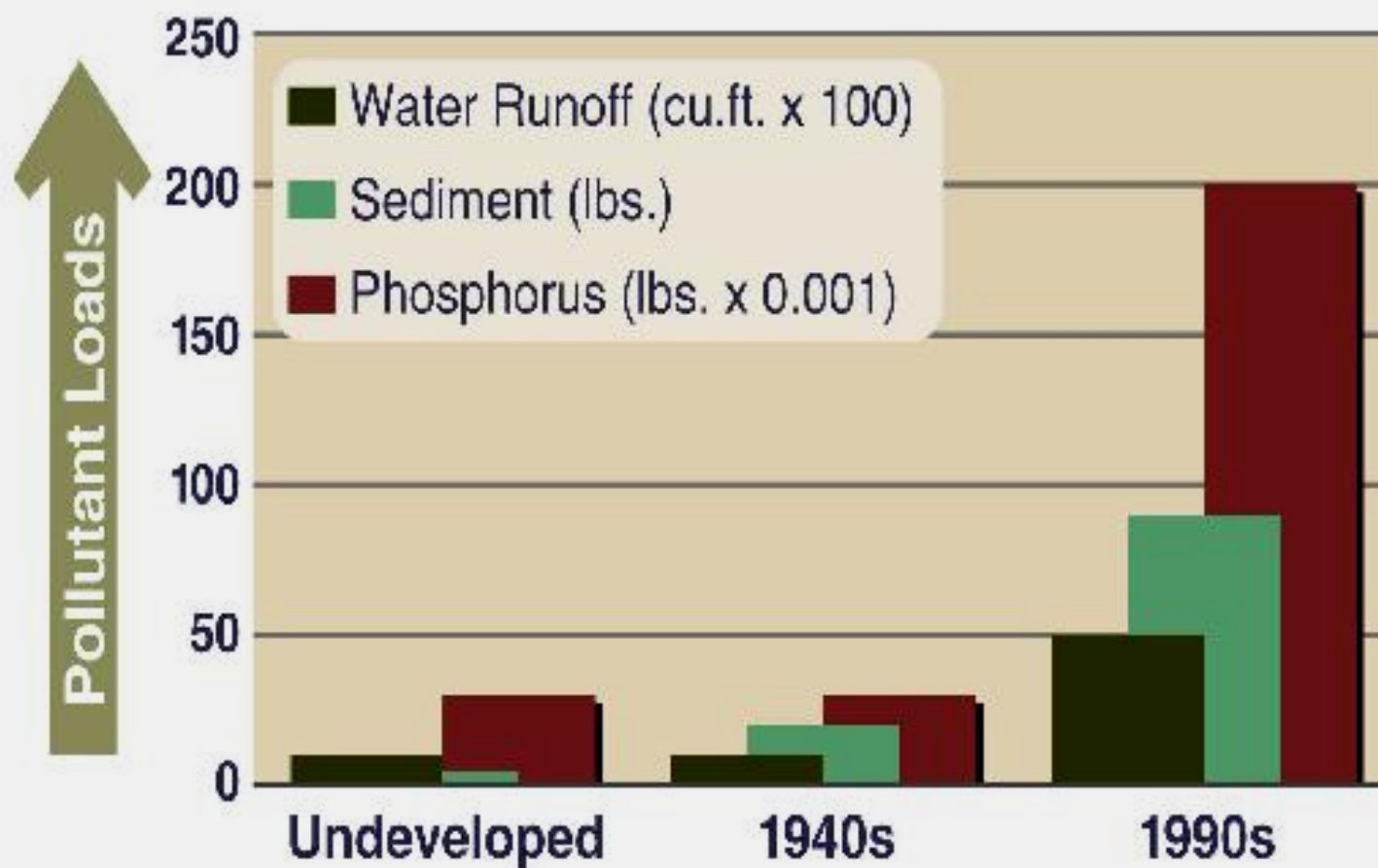


IMPACT ON LAKE (April - Oct.)

- 5,000 ft³ runoff to lake
- 0.20 lbs. phos. to lake
- 90 lbs. sediment to lake

Consequences

Impacts of Lake Development



Our shoreland reach extends out
into the water



How many boats does one family need?

What is wrong with this picture?



With higher densities of people
come higher densities of piers



Group pier for lakeside condos

Aquatic Toys



- Navigation hazards
- Shoreline impacts?



Un-permitted beach installation on Martin Lake, IN



Homeowners love bulkhead seawalls



Poured cement seawall

Sheet piling seawall



Wood seawall



??



Why do people love seawalls?



1. Like the neat, clean appearance
2. Bulkheads are the default option
3. To match up with neighbor's seawall
4. Snakes



Even when the shoreline is stable and vegetated...

Some shoreline owners will still install a bulkhead



And when aquatic plants somehow insist on growing, there's always the weedwacker



Shoreline Classification in Indiana

1. Significant wetland :

- a) >2,500 square feet of contiguous emergent vegetation or rooted vegetation with floating leaves; or
- b) adjacent wetland areas designated by a federal or state agency; or
- c) existence of animals or plants that are listed as extirpated, endangered, threatened, or rare

2. Natural shoreline : unaltered shoreline for >250 feet.

3. Area of special concern:

- a) >625 square feet of contiguous emergent vegetation or rooted vegetation with floating leaves;
- b) unaltered shoreline where bulkhead seawalls are >250 feet apart,
- c) bogs, fens, muck flats, sand flats, or marl beaches.

4. Developed area: none of the above

Current Permitting Problem

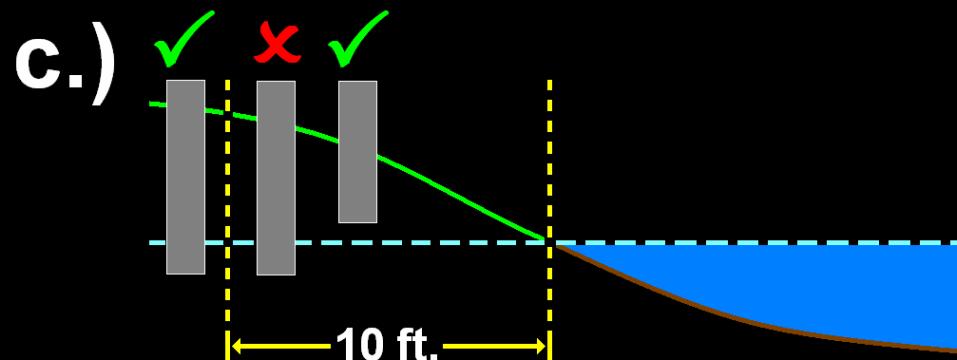
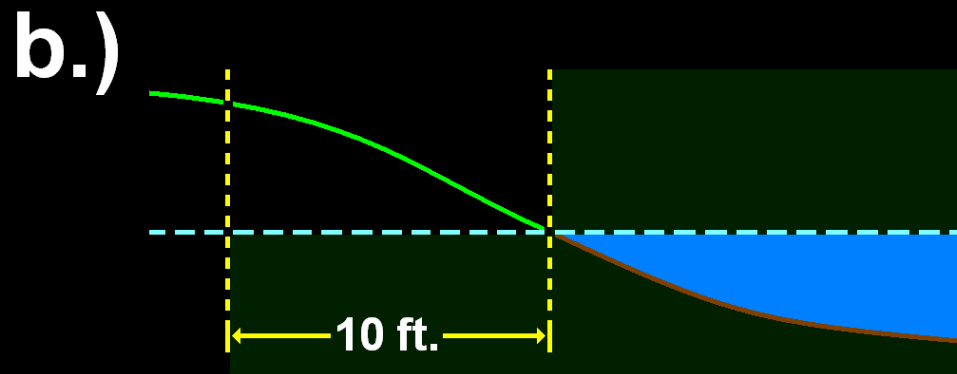
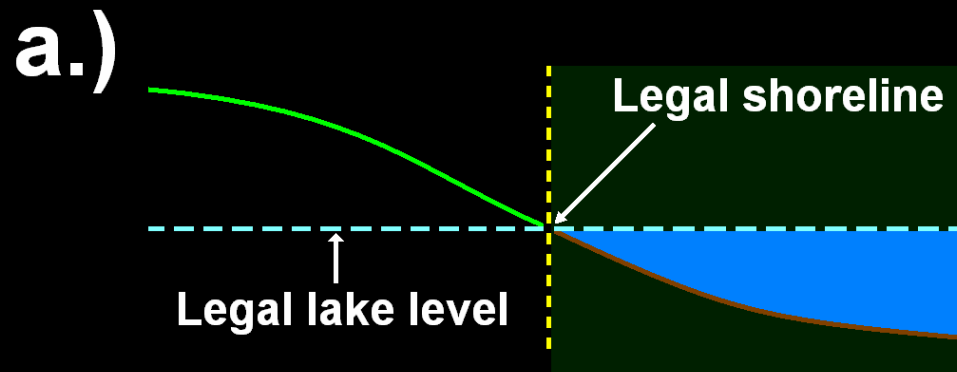
"Retaining walls" negate shoreline rules -
A loophole big enough to drive a truck through.



Another retaining wall - soon to be a seawall



Photo: Jeremy Price, IDNR



New rule
extends
IDNR
jurisdiction
10 feet
inland
beneath the
legal lake
shoreline

Aesthetics

What feature of this lakeshore catches your eye?



'We think of land as a civil liberty
instead of as a social resource' – Bob
Korth



Dense trees remain for riparian stability

Sight lines maintained by trimming lower branches only

Lakeshore homes don't
have to ruin lakeshore
aesthetics



Funneling aka Keyhole Dev.

- purchase and develop an 'off-lake' property
- purchase adjacent lake property to allow lake access
- extend riparian rights to entire parcel through one lake lot
- get huge group piers as a result

Even in a state with little zoning, there are those who think there is too much



Why the assault on shorelines?

- Ignorance about aquatic ecology
- "This is how we did it in town"
- Man over Nature Syndrome
- Selfishness - it is my property



Shoreland
landscaping with
purple loosestrife

Solutions?

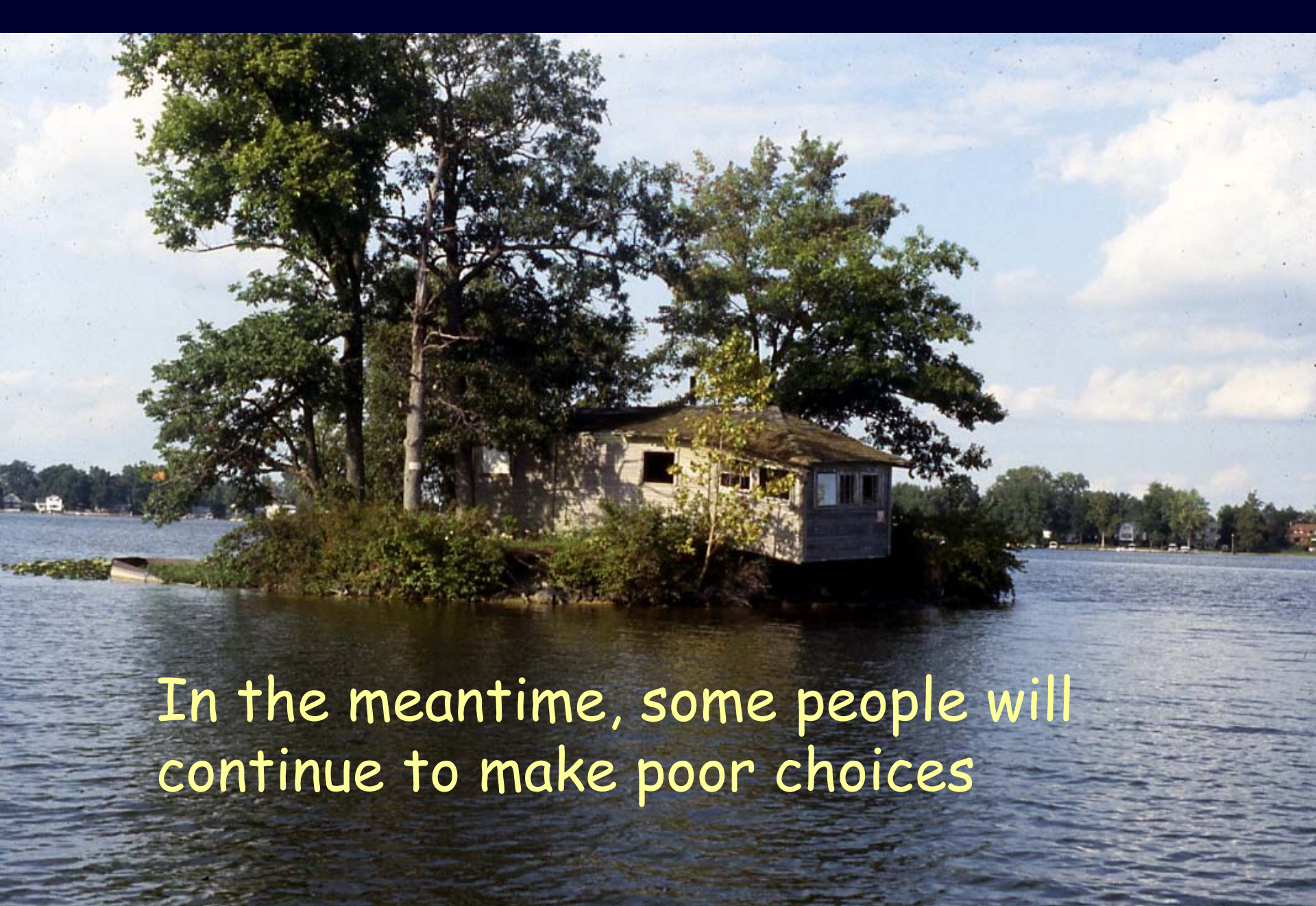
- Education
- Continue to set good examples
- Economics



Crystal Lake, WI



Saugany Lake, IN



In the meantime, some people will
continue to make poor choices