



Wisconsin Lakes Convention March 31, 2016

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Shoreland Zoning

Protecting lakes through a partnership between citizens, lake associations, county zoning staff, county boards, DNR, UW-Extension and more

Shoreland zoning history

- 230 years ago the **Wisconsin Constitution**, adopted in 1848, said navigable waters are “common highways and forever free”
- This led to “**The waters of WI belong to the people of WI**” which is the basis of the Public Trust Doctrine
- State of WI has obligation to protect the **public’s rights** in all navigable waters including boating, fishing, swimming & hunting
- Shoreland zoning, adopted in 1966, is to protect our **lakes and rivers**

s. 281.31 Wisconsin Statutes



Purposes of shoreland zoning include...

- Prevent and control water pollution
- Protect spawning grounds, fish and aquatic life
- Reserve shore cover and natural beauty

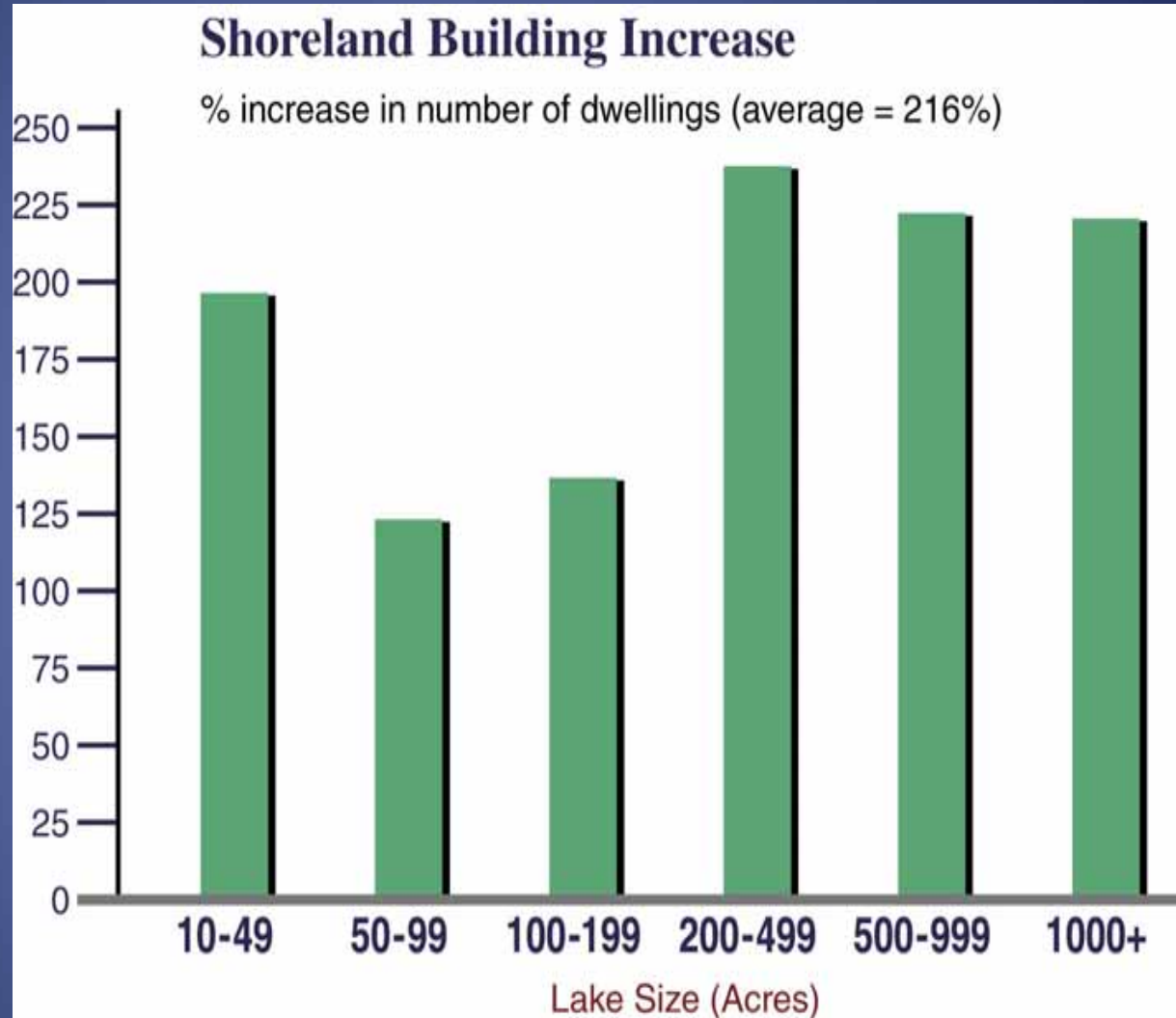
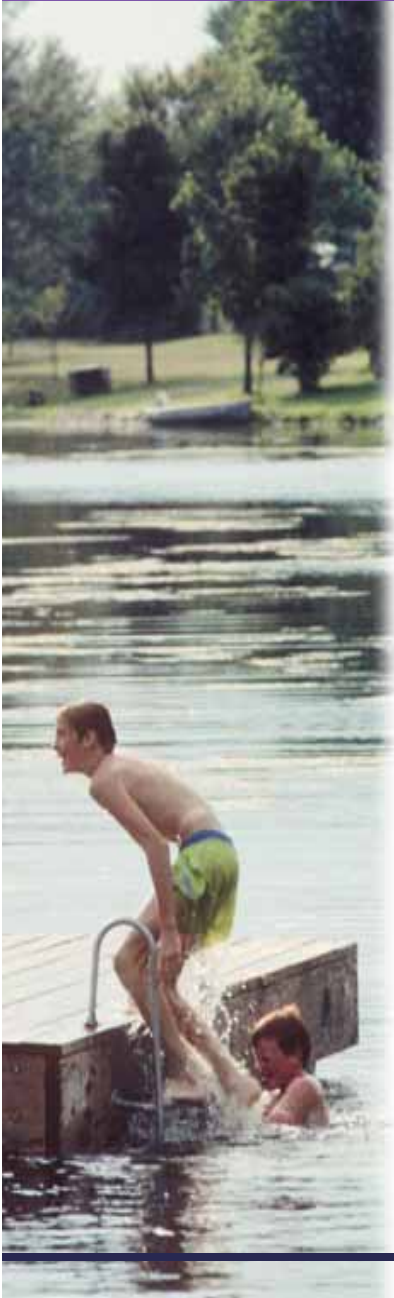


s. 281.31 Wis. Stats.

Shoreland Zoning History

- 1968 – set minimum standards
- Counties could be more protective or restrictive with the standards to effectively manage the resources relevant to their geographical location and development pressures.
- Many counties had the minimums until...

Shoreland building increase, 1965-1995

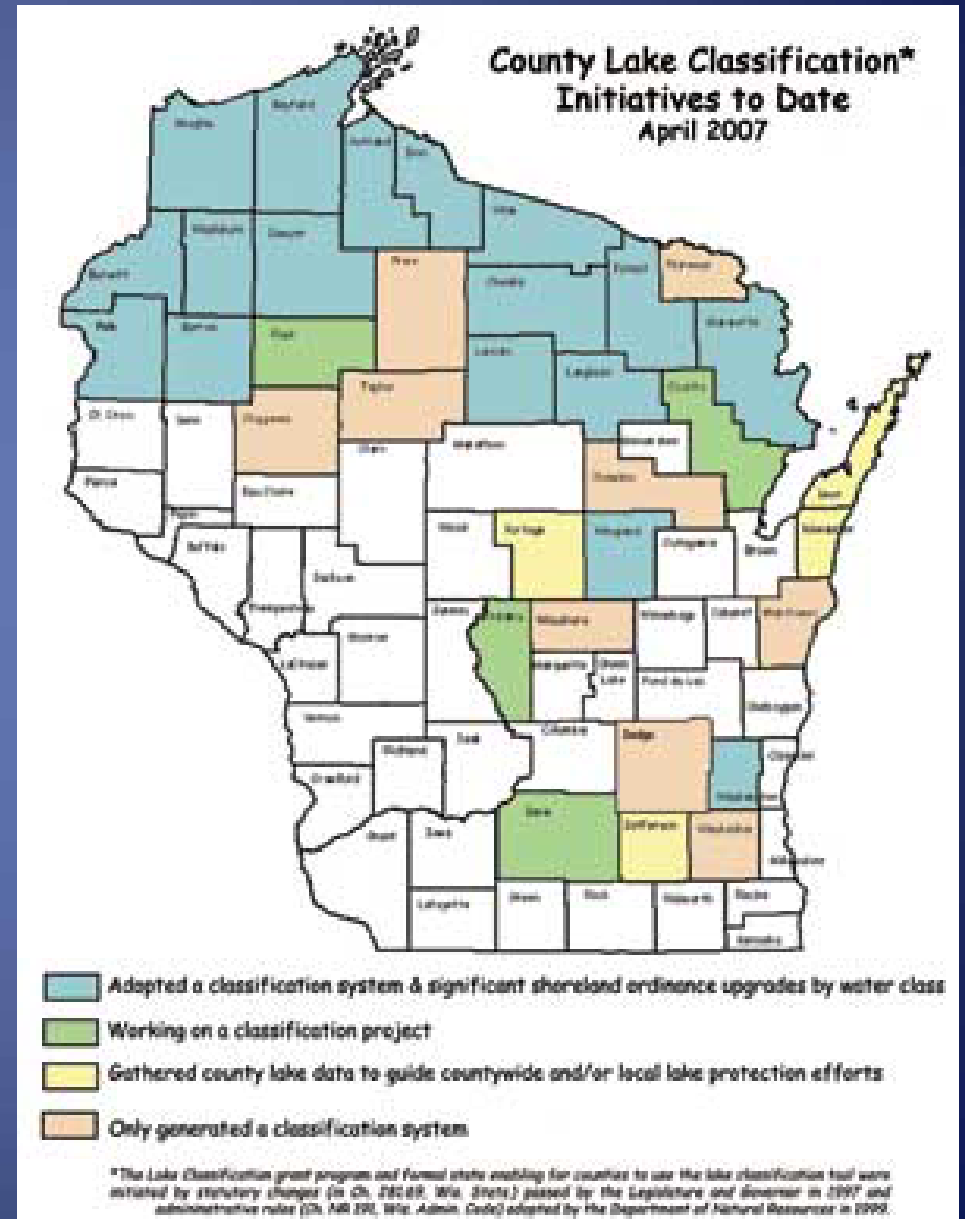


Source: Wisconsin Dept. of Natural Resources



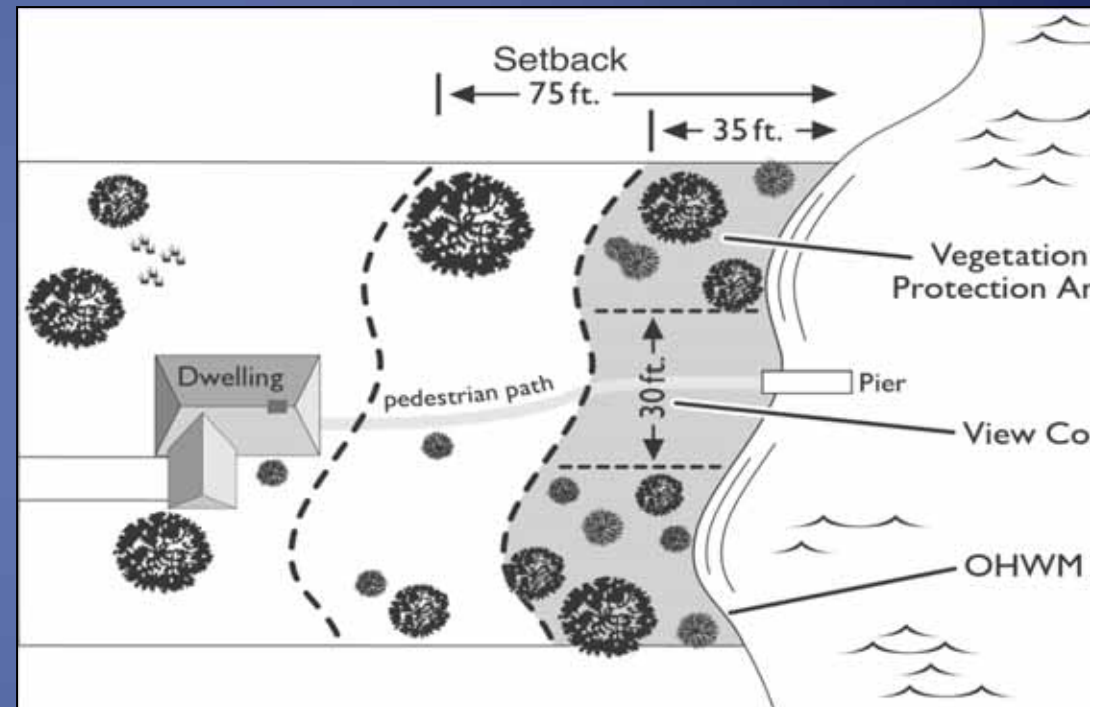
Counties led...

- Many counties recognized inadequacies in 1968 state SL zoning law
- Starting in 1990s, counties adopted higher standards



Higher standards adopted by counties...

- Larger lot sizes:
- 43
- Larger shoreland setbacks:
- 25
- Larger shoreland buffer sizes:
- 13
- Impervious surface standards:
- 17
- NC structures regs



Shoreland zoning standards protect property values

Less clear water = Lower waterfront property values

- A study of over 1200 waterfront properties in Minnesota found when water clarity went down by 3 feet, waterfront property values around these lakes went down by tens of thousands to millions of dollars



What shoreland practices make water less clear?

- Rooftops and pavement close to the water cause runoff that carries pollutants to waterway
- Soil erosion
- No shoreline buffer to filter runoff

In the last 15 years...

- 2002-2010: After 8 years of public input, 19 public hearings around the state, and over 14,000 public comments, statewide minimum shoreland zoning standards changed. Changed nonconforming structure standards and added impervious surface standards.
- 2012: State legislature said in Act 170 that **counties could not be more restrictive** than state standards regarding the regulation of NCS and substandard lots.
- 2013: NR 115 was changed **requiring counties to allow** lateral expansion of nonconforming structures and greater levels of impervious surfaces based on input from county zoning staff and a few state legislators.

Act 55

- Counties can no longer have shoreland zoning standards that are any more protective or restrictive than the state standards for any of their lakes and streams.
- Made changes to other shoreland zoning standards.
- Effective - July 14th, 2015

NR 115 Shoreland Zoning Standards

- 1. Minimum Lot Sizes
- 2. Vegetation
- 3. Building Setbacks
- 4. Filling, grading, lagooning, dredging, ditching and excavating.
- 5. Impervious Surfaces
- 6. Height
- 7. Nonconforming Structures and Uses

Why minimum lot sizes?

- Limit intensity of development to something that won't degrade the lake or river
- Each shoreland lot typically has
 - Tree removal
 - Filling and grading
 - Driveways, parking areas and buildings
- Allow adequate room on the lot for septic systems, wells, and the structure to meet required spacings
 - Wells 50' away from sanitary systems
 - Sanitary systems 50' back from OHWM

75 foot wide lots



Larger lots



Effects of lot sizes

300 foot lots

Result: 22 homes



Round Lake

80 acres

1.3 miles of developable shoreline

Effects of lot sizes

100 foot lots

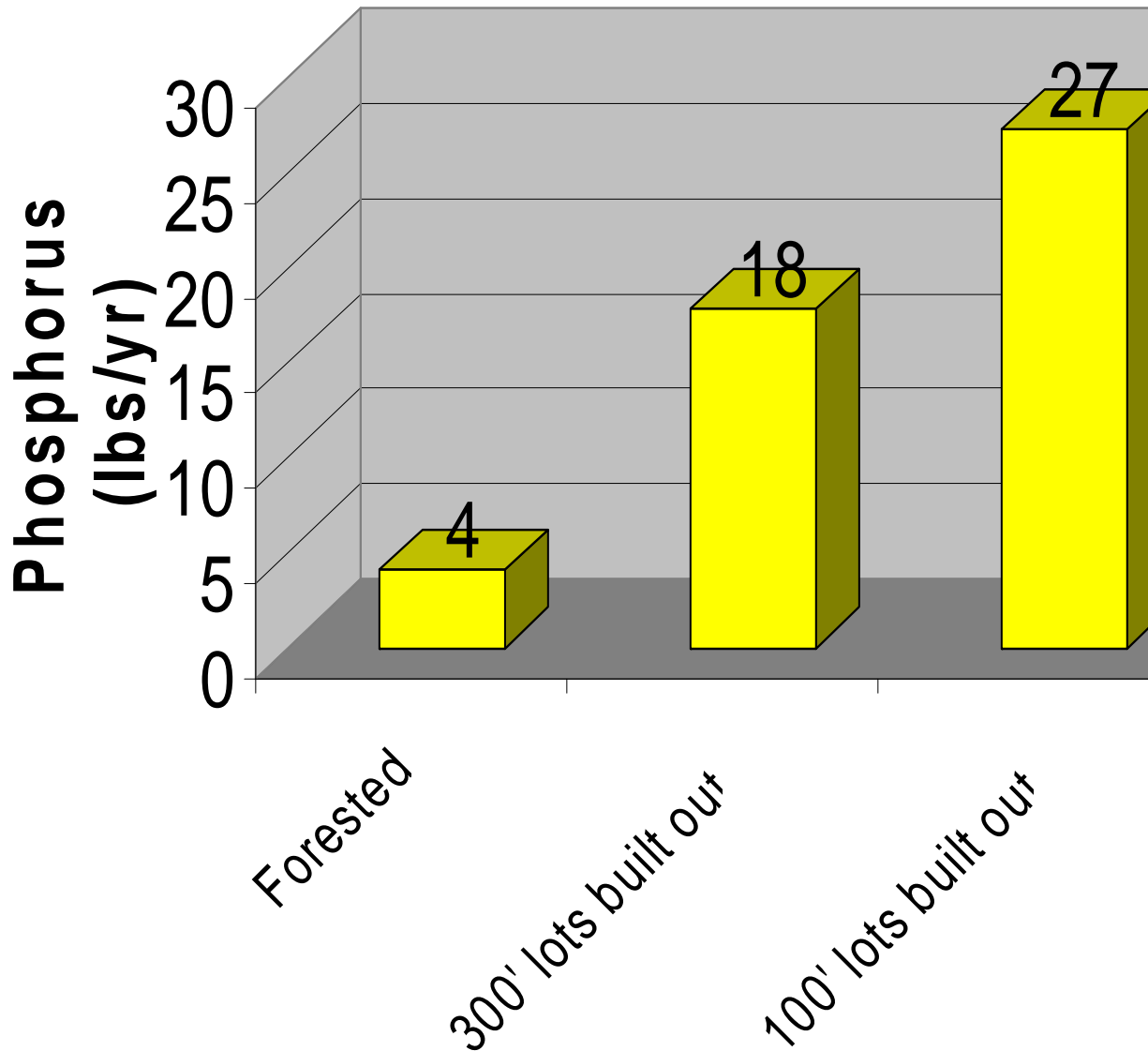
Current allowed density

Result: 66 homes

105 homes on 65' lots



More development = More Phosphorus



1 pound of P =
500 pounds of algae

So building homes
on 100 foot lots
around an 80 acre
lot adds 23 extra
pounds of P, which
can cause over
11,000 pounds of
additional algae



43 counties voluntarily adopted larger lot sizes for some or all of their lakes & streams.

Minimum lot sizes after Act 55 are one-size-fits-all statewide.

Minimum Lot sizes

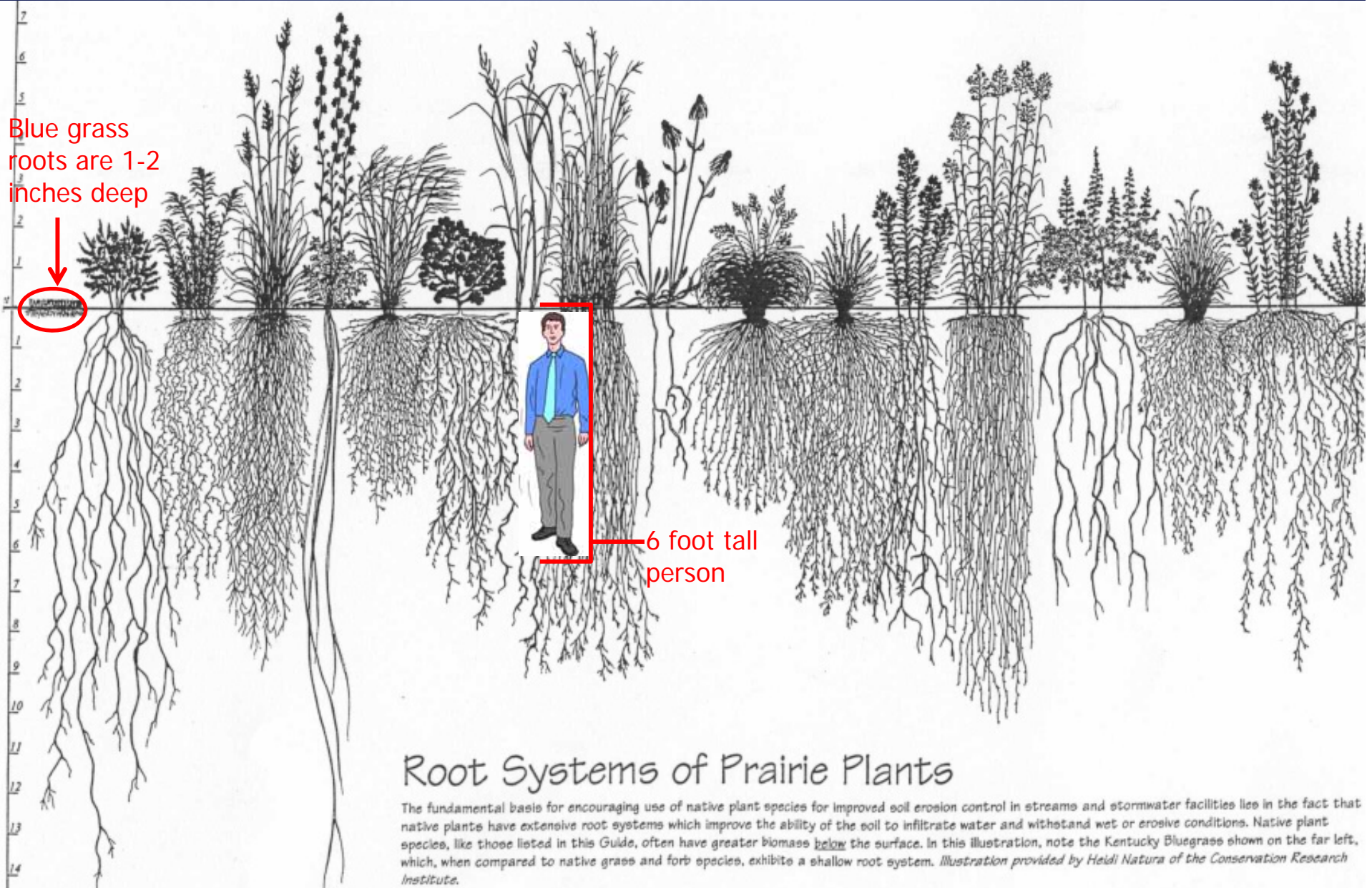
- Shoreland zoning ordinance may not require lot sizes larger than the minimum lot size identified in NR 115.05(1)(a)
 - 20,000 square feet and 100' wide - unsewered
 - 10,000 square feet and 65' wide – sewer

Quiz: Minimum Lot Size

- Q: Does Act 55 prevent counties from applying general zoning or subdivision “minimum lot size” requirements that are more restrictive (larger) than state shoreland zoning standards?

- A: No. A county may require a larger lot size under another statutory authority (general zoning, farmland preservation, subdivision, etc.) as long as the district and its more restrictive provisions does not only apply because the land in the district is within the shoreland.

Shoreline buffers



Root Systems of Prairie Plants

The fundamental basis for encouraging use of native plant species for improved soil erosion control in streams and stormwater facilities lies in the fact that native plants have extensive root systems which improve the ability of the soil to infiltrate water and withstand wet or erosive conditions. Native plant species, like those listed in this Guide, often have greater biomass below the surface. In this illustration, note the Kentucky Bluegrass shown on the far left, which, when compared to native grass and forb species, exhibits a shallow root system. *Illustration provided by Heidi Natura of the Conservation Research Institute.*

What happens when a shoreline is clear cut?

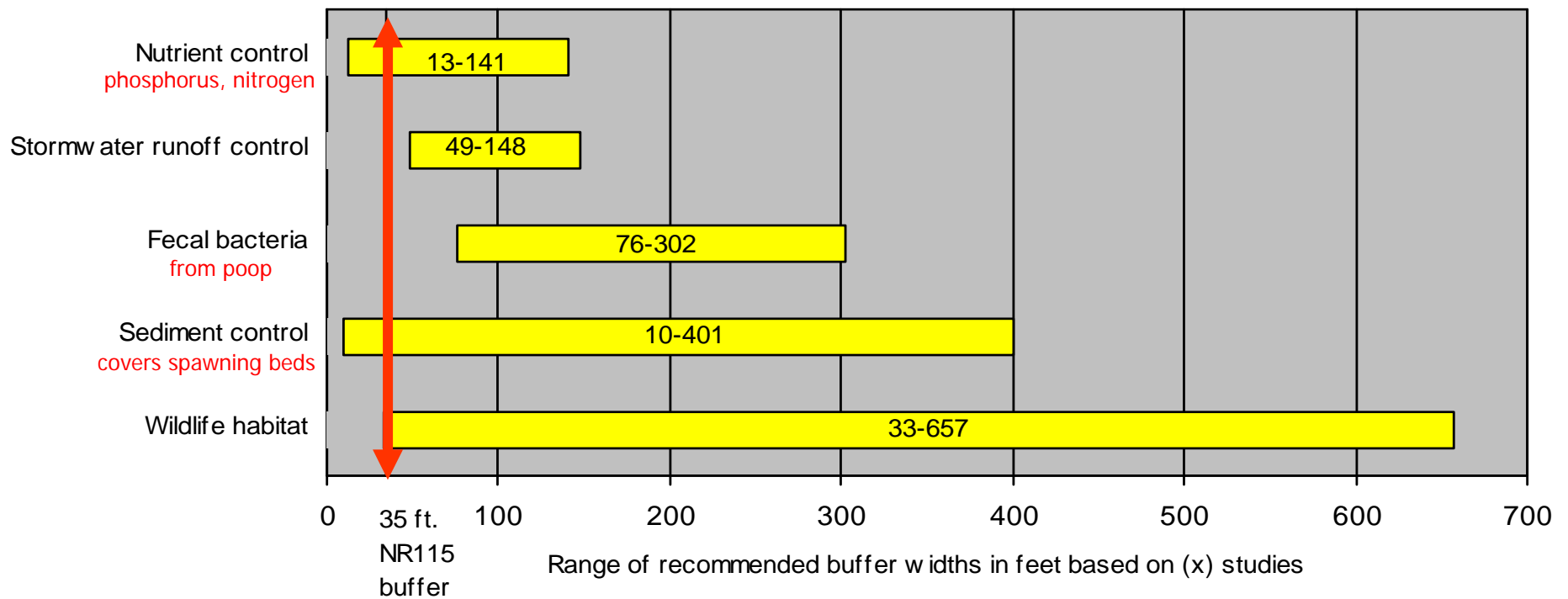


Developed site in Vermont

- Shoreline bank is destabilized, resulting in loss of land
- Soil erosion covers spawning beds, reduces fish habitat, and feeds algae growth
- Loss of shade leads to warmer water temperatures, especially in streams
- Loss of habitat for birds, frogs and other wildlife
- Loss of natural scenic beauty

What can buffers do if they're big enough?

Recommended Shoreline Buffer Widths A Research Summary



Review of 52 U.S. studies by Aquatic Resource Consultants, Seattle WA

A 35 foot deep shoreline buffer does not keep bacteria from poop out of the water. In many situations, it doesn't keep P and sediment out of the water, and isn't enough for wildlife.

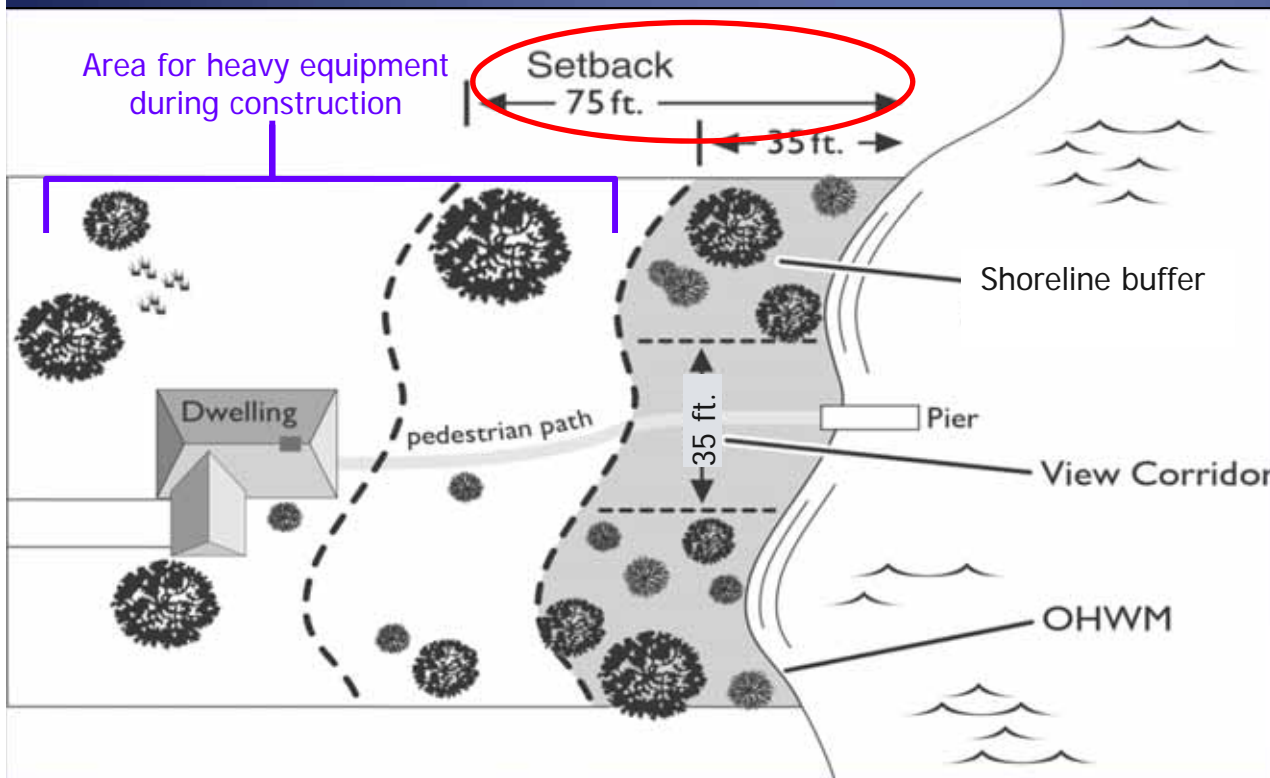


- 13 counties had buffers larger than state min. standards
- Now one-size-fits-all

Changes to NR 115 standard - Vegetation

- Vegetative Buffer – size allowed has been modified: A vegetative buffer that provides that a 35' viewing corridor for every 100' is allowed and the viewing corridor is allowed to run contiguously for the entire maximum width.
- A county shoreland ordinance may not require a person to establish a vegetative buffer on previously developed land and from expanding an existing buffer.
 - Establishment of veg. buffer can remain an OPTION for mitigation purposes.
 - Open sided structure (gazebo) exemption requirement to establish the vegetative buffer remains in effect.

Why shoreline setbacks?



25 counties voluntarily chose larger shoreline setbacks for some or all of their lakes and rivers

- To keep the home/structure on stable ground
- To keep the shoreline buffer intact during and after home construction
- To reduce pollutant-carrying runoff entering lake or stream
- To maintain habitat for birds and other wildlife, and natural scenic beauty

Building Setbacks

- Required setback is 75'
- Act 55 did not allow counties to keep larger setbacks
- Counties must allow setback averaging

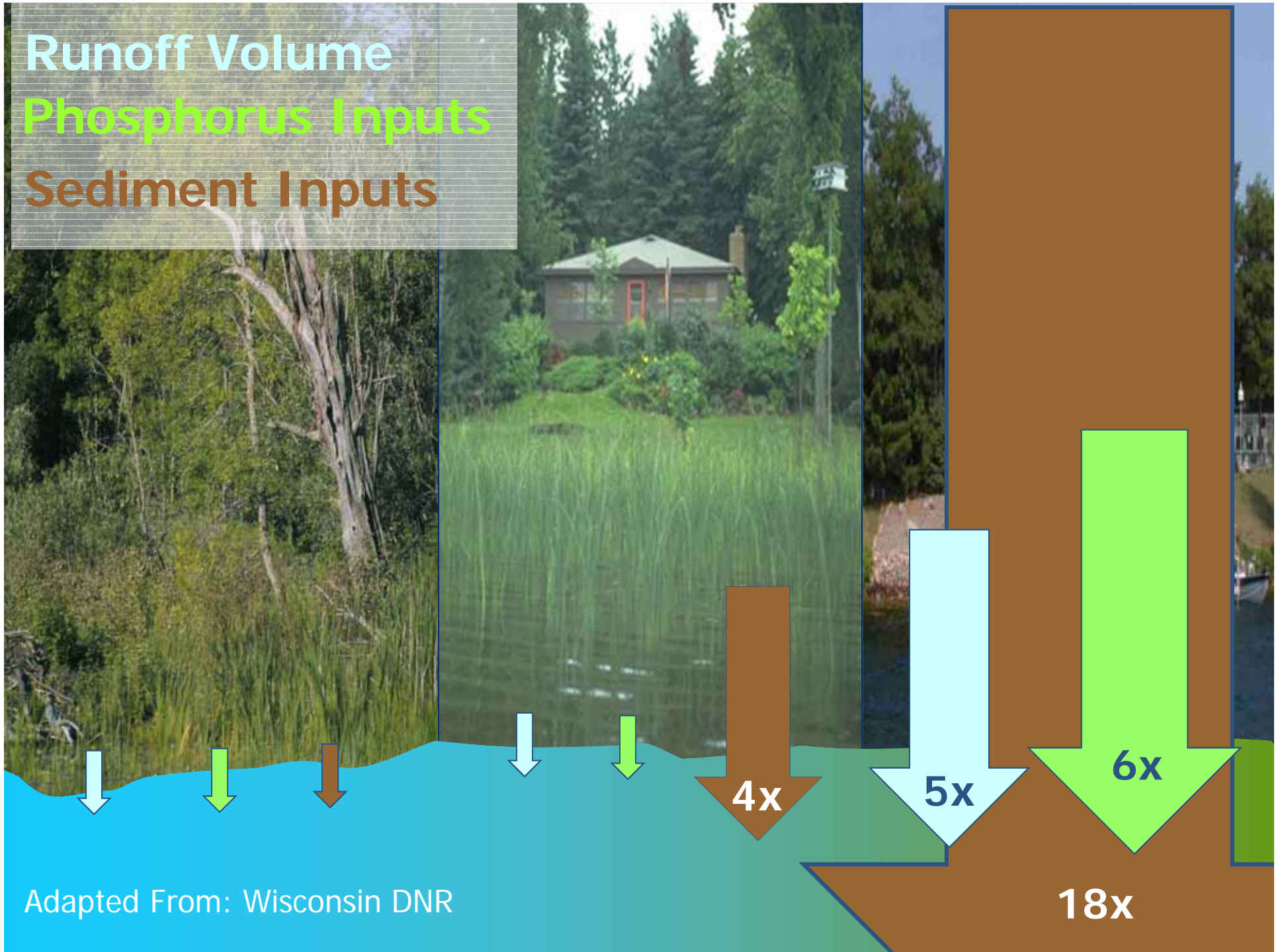


Effects of impervious surfaces

(based on the last 20 years of research)

- IS prevent water from soaking into the ground, which is the cool groundwater that enters lakes and streams during dry periods

Runoff Volume
Phosphorus Inputs
Sediment Inputs



Adapted From: Wisconsin DNR

Impervious surfaces are hard surfaces like roofs, driveways, parking areas and patios

More Impervious Surface = Less Fish

Fish found in streams when impervious surface in the watershed was:

Less than 8%

8 - 12%

Greater than 12%

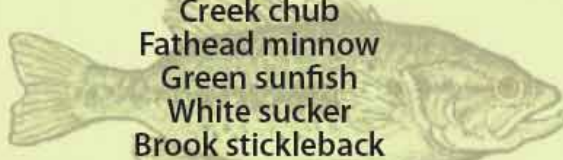
More Impervious Surfaces in Watershed 




Iowa darter
Black crappie
Channel catfish
Yellow perch
Rock bass
Horneyhead chub
Sand shiner
Southern redbelly dace



Golden shiner
Northern pike
Largemouth bass
Bluntnose minnow
Johnny darter
Common shiner



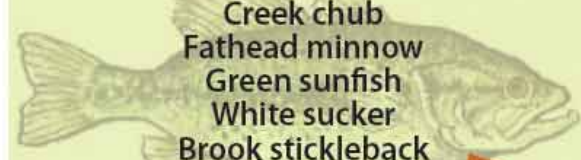
Creek chub
Fathead minnow
Green sunfish
White sucker
Brook stickleback



Golden shiner
Northern pike
Largemouth bass
Bluntnose minnow
Johnny darter
Common shiner



Creek chub
Fathead minnow
Green sunfish
White sucker
Brook stickleback



Creek chub
Fathead minnow
Green sunfish
White sucker
Brook stickleback

2008 study
of 164 WI
lakes found
the same
trend

Fewer species of fish 

See **Impervious Surfaces: How They Impact Fish, Wildlife and Waterfront Property Values** – handout and video at uwsp.edu/cnr-ap/clue/Pages/publications-resources/water.aspx

More Impervious Surface = Less Fish

More impervious surface



- Larger and more frequent floods
- Less groundwater leads to lower stream flows & warmer water temperatures during dry periods

More Impervious Surface = Less Fish

- **More runoff** from hot pavement and shingles makes the water hotter
- **More nutrients** from soil and fertilizers result in less oxygen in the water, which fish need to survive



Trout are gone above 11% impervious
Northern pike are gone above 12% impervious

More Impervious Surface = Less Fish

- **More sediments** and algae growth make it difficult for some predator species that hunt by sight to find their food
- **More sediments** cover spawning beds of fish such as walleye and smallmouth bass, depriving eggs of oxygen



17 counties voluntarily adopted impervious surface standards

Wisconsin Loons More Likely Found on Lakes with Clearer Water

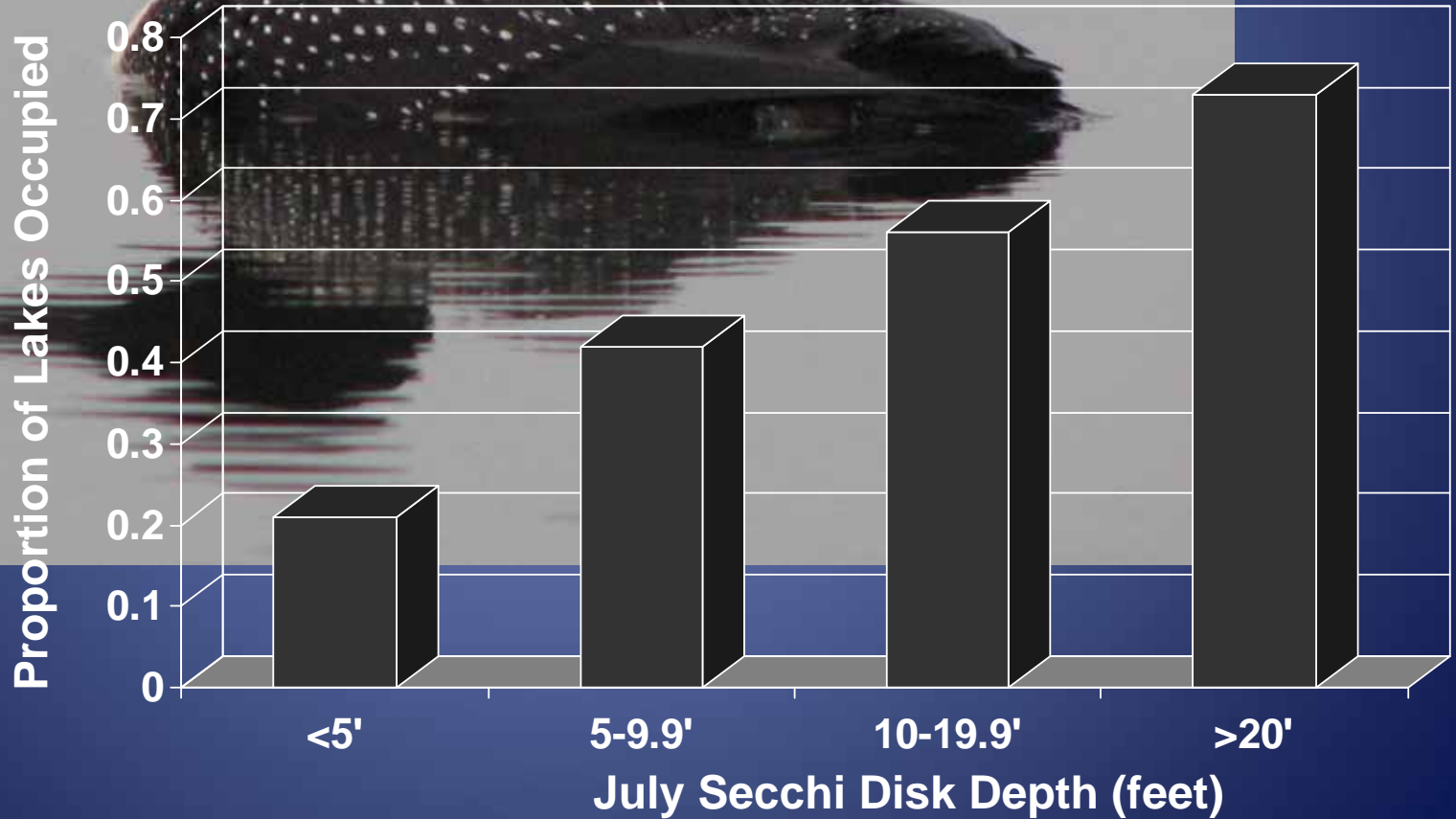
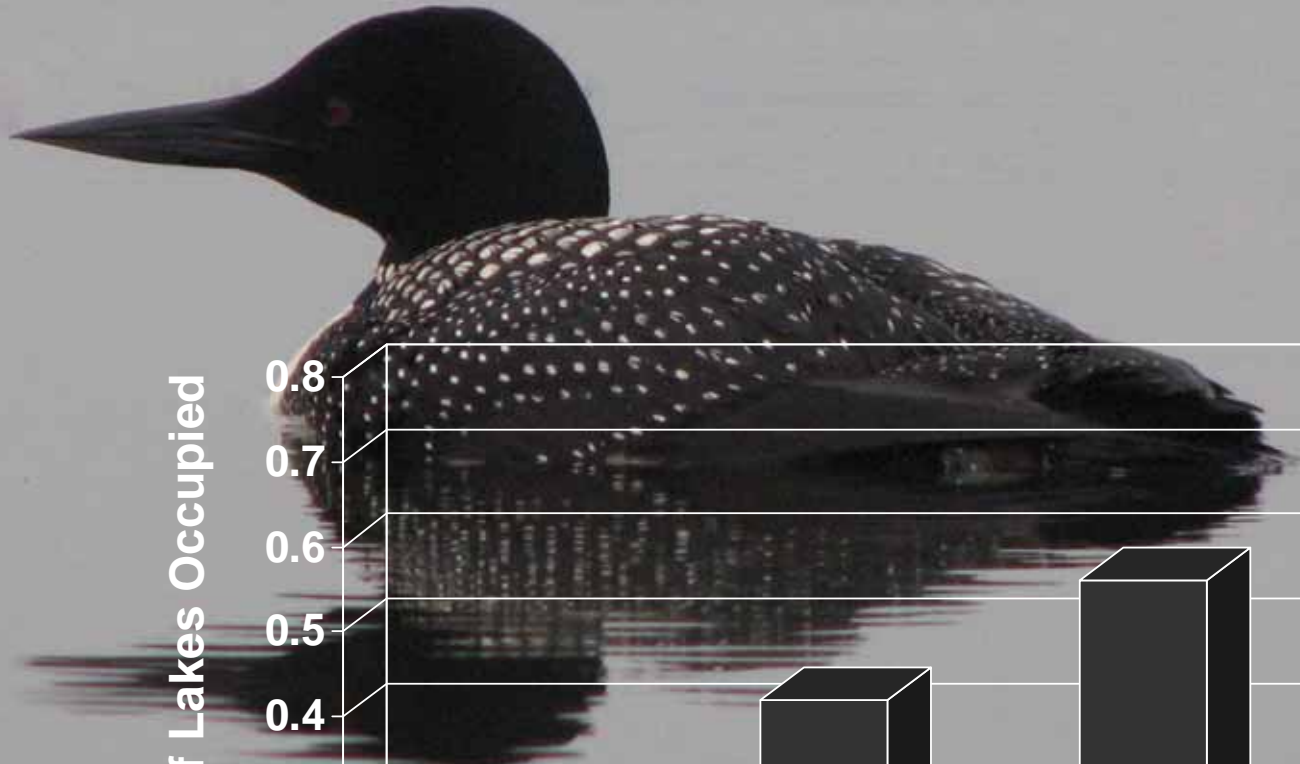


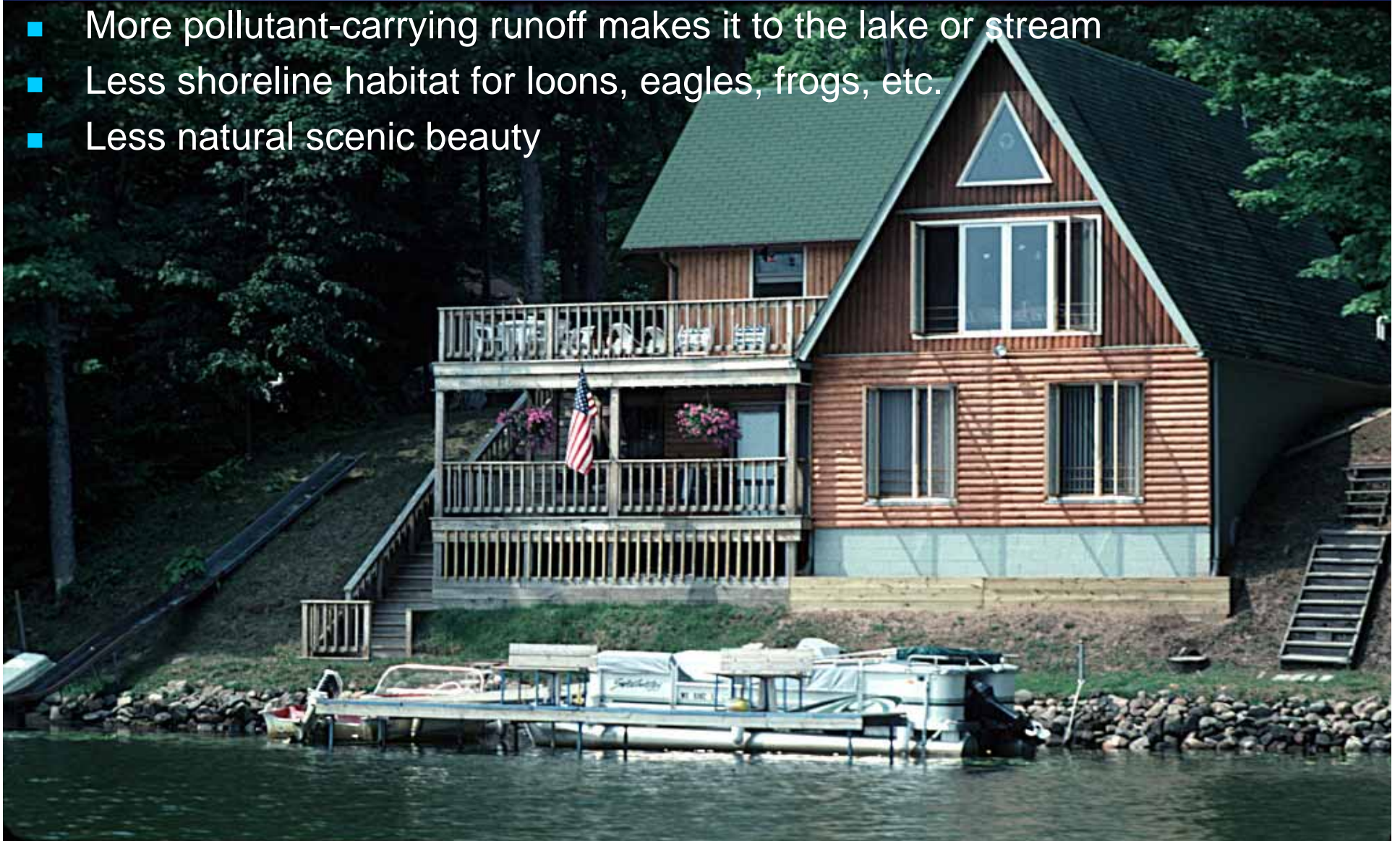
Photo credit
Doug Killian

Changes to NR 115 Standard -Impervious Surfaces

- For residential areas:
 - 15% impervious without mitigation
 - 30% with mitigation
 - Higher percentages on commercial lots and highly developed shorelines (40-60%+)
- Counties are required to allow an impervious surface to be considered pervious if the runoff from the impervious surface is treated by a device or system or is discharged to an internally drained pervious area on or off-site.
- That impervious surface is not counted towards % allowed.

The closer a structure is to the shoreline ...the greater impact it has on the waterway

- More pollutant-carrying runoff makes it to the lake or stream
- Less shoreline habitat for loons, eagles, frogs, etc.
- Less natural scenic beauty



Changes to NR 115 standard - Nonconforming Structures

- What is a nonconforming structure for shoreland zoning purposes?
 - A structure that was lawfully placed when constructed but does not comply with the required setback from the **ordinary high water mark**.
 - Structures that are exempt (boathouses) from the OHWM, were granted a variance, or have been illegally constructed are not considered nonconforming structures.

Nonconforming Structures - activities now allowed

- **Shoreland ordinance** cannot regulate the maintenance, repair, replacement, restoration, rebuilding, or remodeling of a nonconforming structure if the activity does not expand the footprint. No approval, fee or mitigation required.
- Shoreland ordinance cannot regulate the vertical expansion of a nonconforming structure if the expansion does not go beyond 35' in height. No approval, fee or mitigation required.

Nonconforming Principal Structure: activities that still require a permit

- Expansion beyond the setback
- Relocation of NC structure
- Lateral expansion of 200 square feet if:
 - Principal structure is 35' from OHWM
 - Mitigation required
 - All other ordinance provisions are met

Regulating Other Matters

59.692(1d)(b) allows counties to regulate “matters” that are not regulated by a shoreland zoning standard in NR 115.

Other matters must address the purposes of s. 281.31 – to further the maintenance of safe and healthful conditions; prevent and control water pollution; protect spawning grounds, fish and aquatic life; control building sites, placement of structure and land uses and reserve shore cover and natural beauty.

Examples of other matters

- Escarpment regulations and setbacks
- Wetland setbacks and other regulations not covered in the wetland section
- Density requirements – ex. how many structures permitted on a lot
- Land uses
- Land suitability

Interaction with other enabling statutes

- Act 55 affected 59.692 shoreland zoning
- Act 55 **did not impact** a county's ability to enact ordinances under other statutes such as 59.69 (general zoning), 87.30 (floodplain zoning), 236 (land division), etc.....
- Floodplain, sanitary, building -UDC, general zoning are all layers that still apply.
- **Counties have until October 1, 2016 to have a compliant, certified ordinance.**

Act 167 (3/1/2016)

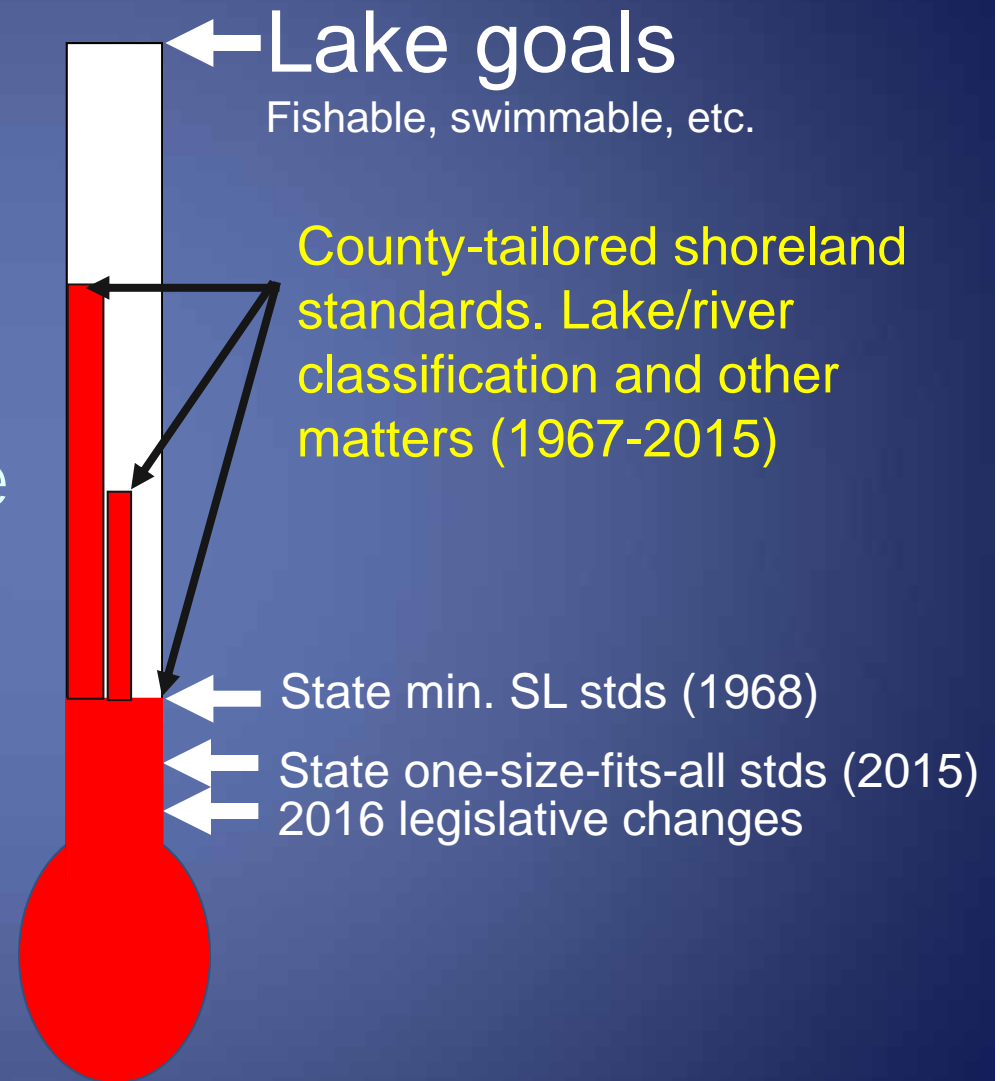
- Exempt structures (boathouses, walkways, etc) same allowances as NC structures within footprint and 3-dimensional building envelope
- Clarified setback averaging
 - Counties may allow one-sided averaging as an option
 - Counties may allow increased setback averaging as option
- Expands the area for a HD shoreline
- Clarifies that public roads/sidewalks are not to be counted as impervious

AB 582

- Provides that a surveyor in certain circumstances can set the OHWM for shoreland regulatory purposes.
- Roof of a flat boathouse may be used as a deck (no side walls or screens).
- Structures authorized by variance same allowances as NC structures within footprint.
- Utilities exempt if authorized by DNR.
- Device/system that retains runoff exempt from OHWM setback

Regulations provide lake protection

Other tools are needed to achieve optimum performance



Different approaches to shoreland zoning

- State-local shared control
- State min stds + local tailoring by counties
- More ability to protect lakes, fisheries, habitat & investments

- State control
- One-size-fits-all statewide
- More jobs? Construction?





They all depend on healthy shorelines

Questions? Comments?

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Summary of Act 55 - no longer allowed by law

- A shoreland zoning ordinance (county, village or city) may not:
 - regulate a matter more restrictively than the matter is regulated by a shoreland zoning standard.
 - require establishment of a vegetative buffer on previously developed land or expansion an existing vegetative buffer.

A shoreland zoning ordinance may not:

- Regulate outdoor lighting for residential use.
- Regulate the maintenance, repair, replacement, restoration, rebuilding or remodeling of a nonconforming structure if the activity does not expand the footprint. No approval, fee or mitigation required.
- Require the inspection or upgrade of the structure before the sale/transfer of the structure may be made.

A shoreland zoning ordinance may not:

- Regulate the vertical expansion of a nonconforming structure unless the expansion is greater than 35' above grade level. No approval, fee or mitigation required.
- Establish standards for impervious surfaces unless the standards provide that a surface is considered pervious if the runoff from the surface is treated by a device or system, or is discharged to an internally drained pervious area that retains the runoff on or off the parcel to allow infiltration into the soil.

A shoreland zoning ordinance may not:

- Regulate the construction of a structure on a substandard lot in a manner that is more restrictive than the shoreland zoning standards.
- A county may not impose on a conditional use permit a requirement that is preempted by federal or state law.

An ordinance provision that is inconsistent with the previous mentioned items may not be applied and enforced.

No longer allowed by law cont.

- The DNR may not issue an opinion on whether or not a variance should be granted or denied without the request of a county BOA.
- The DNR may not appeal a BOA decision.

Act 55 - added definitions

- “Shoreland setback area” means an area that is within a certain distance of the ordinary high-water mark in which the construction or placement of structures has been limited or prohibited under an ordinance enacted under this section.
- “Structure” means a principal structure or any accessory structure including a garage, shed, boathouse, sidewalk, stairway, walkway, patio, deck, retaining wall, porch or fire pit.
-