



Shoreland Zoning

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

Wisconsin Lakes Convention

April 7, 2017

Co-presented by:

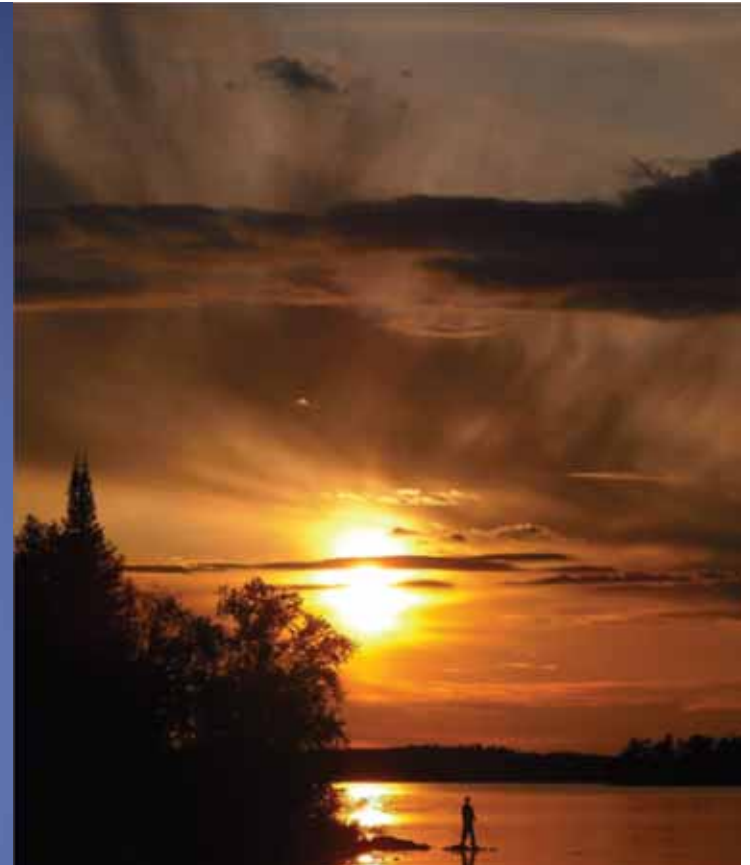
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In Wisconsin, we are fortunate to have over 15,000 lakes and over 80,000 miles of streams

For many people in Wisconsin, our waters are part of who we are

Healthy fish, abundant wildlife and clear water all depend on how waterfront properties are developed



~230 years ago

- Like many other states, Wisconsin's surface water laws are based on the Public Trust Doctrine
- The Trust is based on ideas found in the Northwest Ordinance of 1787



Public Trust Doctrine & Shoreland zoning history

- The **Wisconsin Constitution**, adopted in 1848, 170 years ago, copied the Northwest Ordinance language verbatim to say **navigable waters are “common highways and forever free”**
- This led to **“The waters of WI belong to the people of WI”** and the State holds them in trust for all residents
- **Public rights** in all navigable waters include boating, fishing, swimming & hunting
- These rights have been challenged & defended in WI courts

s. 281.31 Wisconsin Statutes

See short videos **Champions of the Public Trust** dnr.wi.gov/topic/waterways/about_us/doctrine.htm



118 years ago

- 1899- WI Supreme Court said

"The legislature has no more authority to emancipate itself from the obligation resting upon it...to preserve for the benefit of all people forever the enjoyment of the navigable waters within its boundaries, than it has to donate the school fund or the state capitol to a private purpose."

Priewe v. WI Land & Improvement Co.

50 years ago

- 1966 – Wisconsin Legislature passed Water Resources Act, which included shoreland zoning to protect our lakes and rivers

44 years ago

- 1972- WI Supreme Court said

“Is the ownership of a parcel of land so absolute that man can change its nature to suit any of his purposes?...An owner of land has no absolute and unlimited right to change the essential natural character of his land so as to use it for a purpose for which it was unsuited in its natural state and which injures the rights of others...”

Just v. Marinette County

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 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



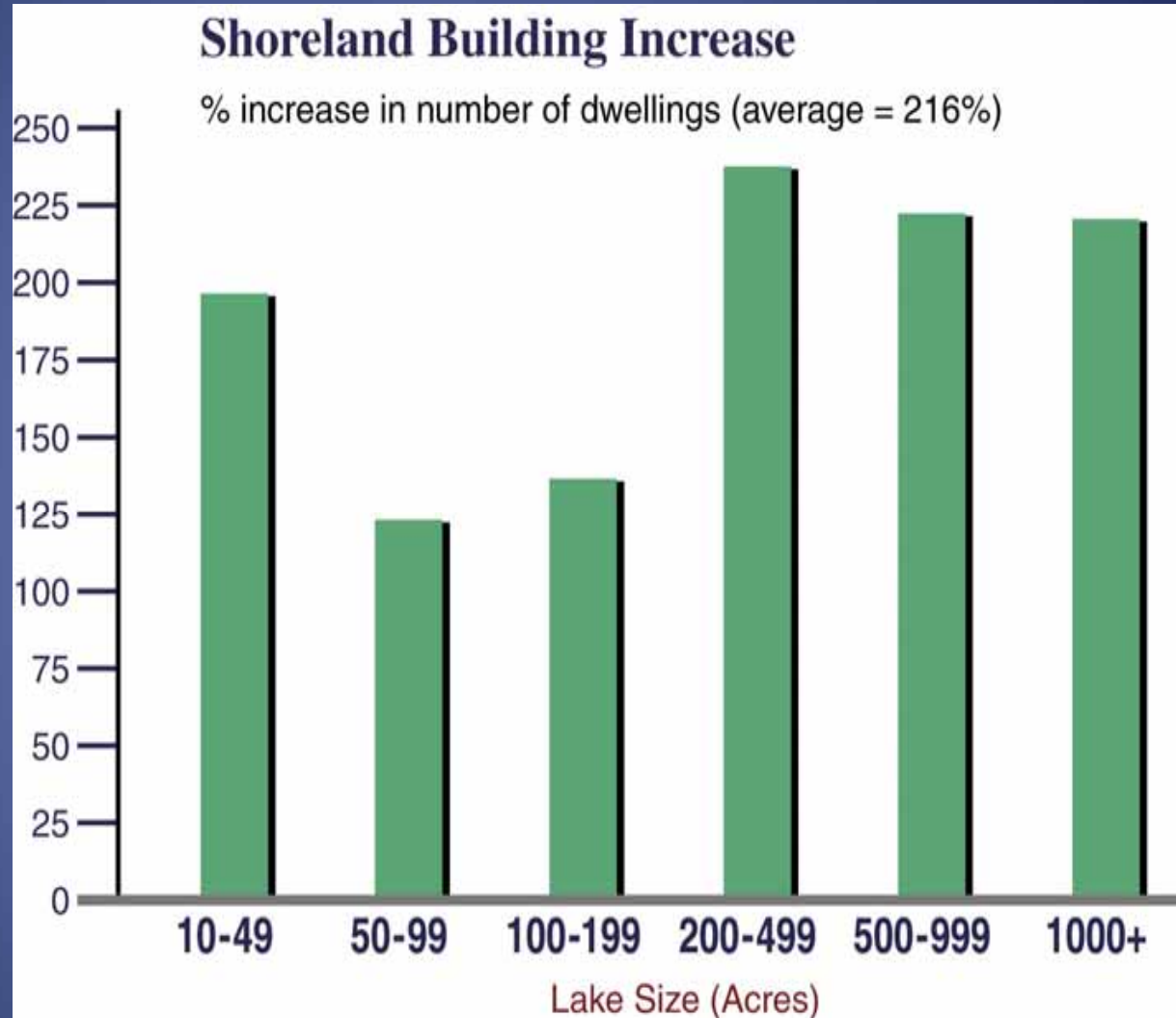
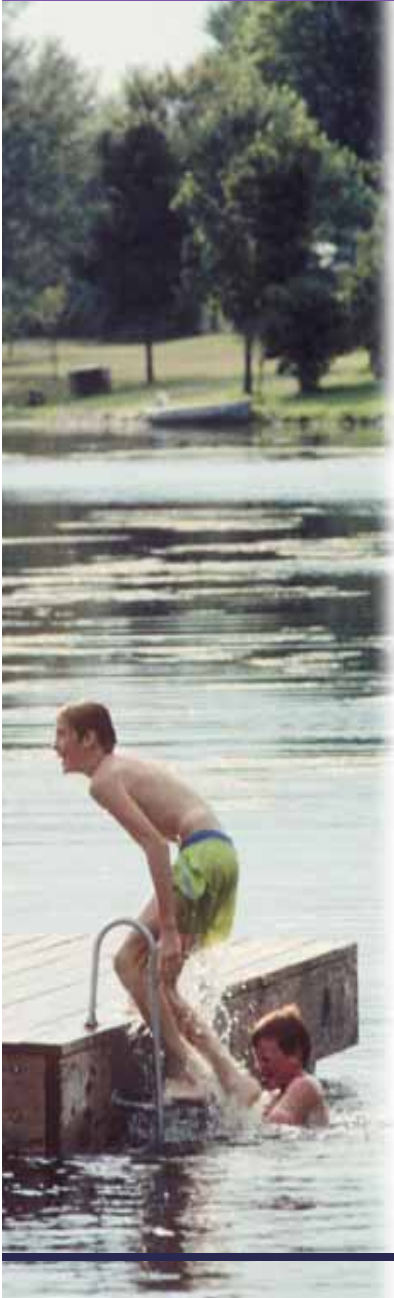
What shoreland practices make water less clear?

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

Shoreland Zoning History

- 1968 – State set minimum standards
- Counties could be more protective or restrictive than state minimum standards to effectively manage the lakes and rivers in their counties.
- Many counties had the minimums until...

Shoreland building increase, 1965-1995

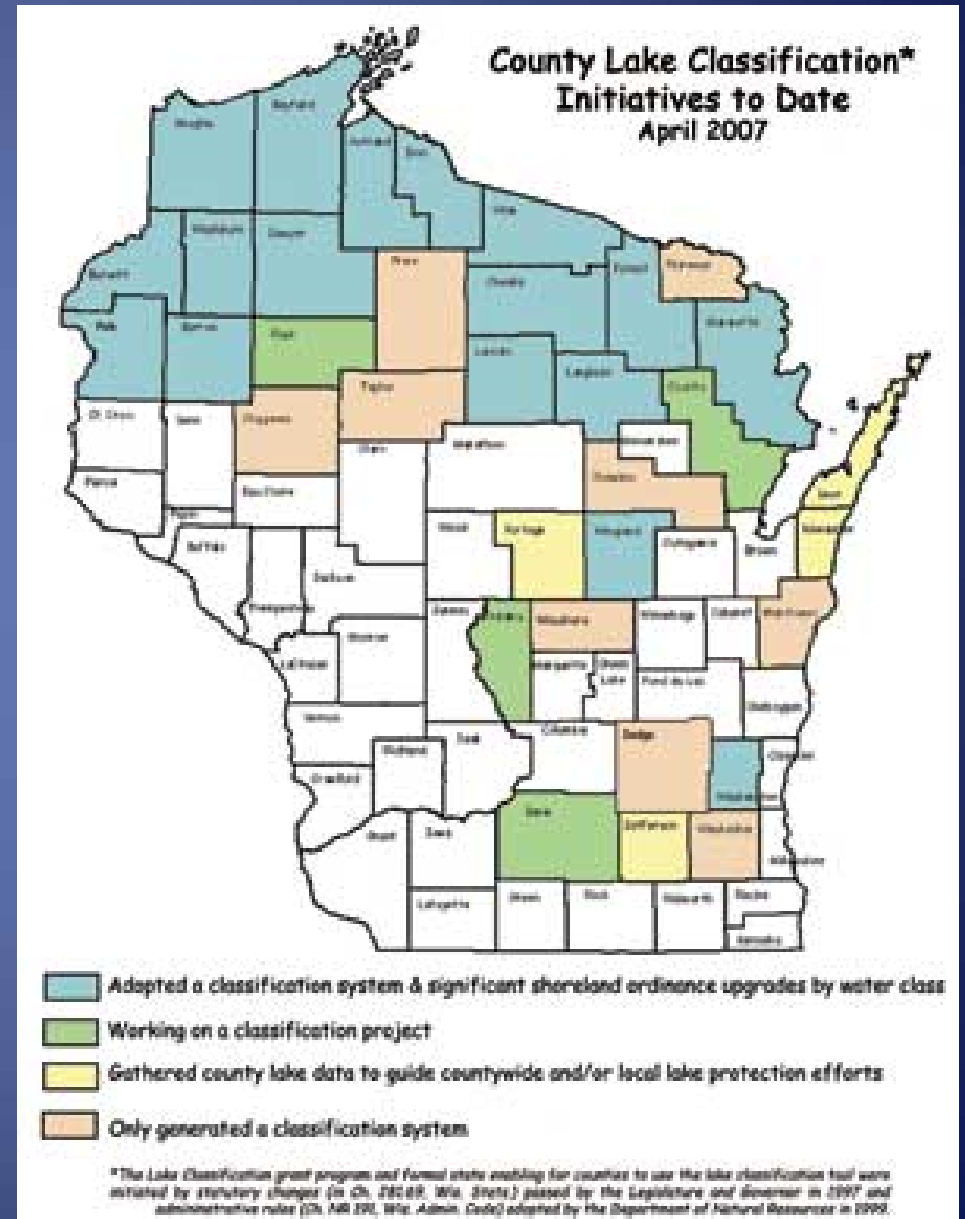


Source: Wisconsin Dept. of Natural Resources



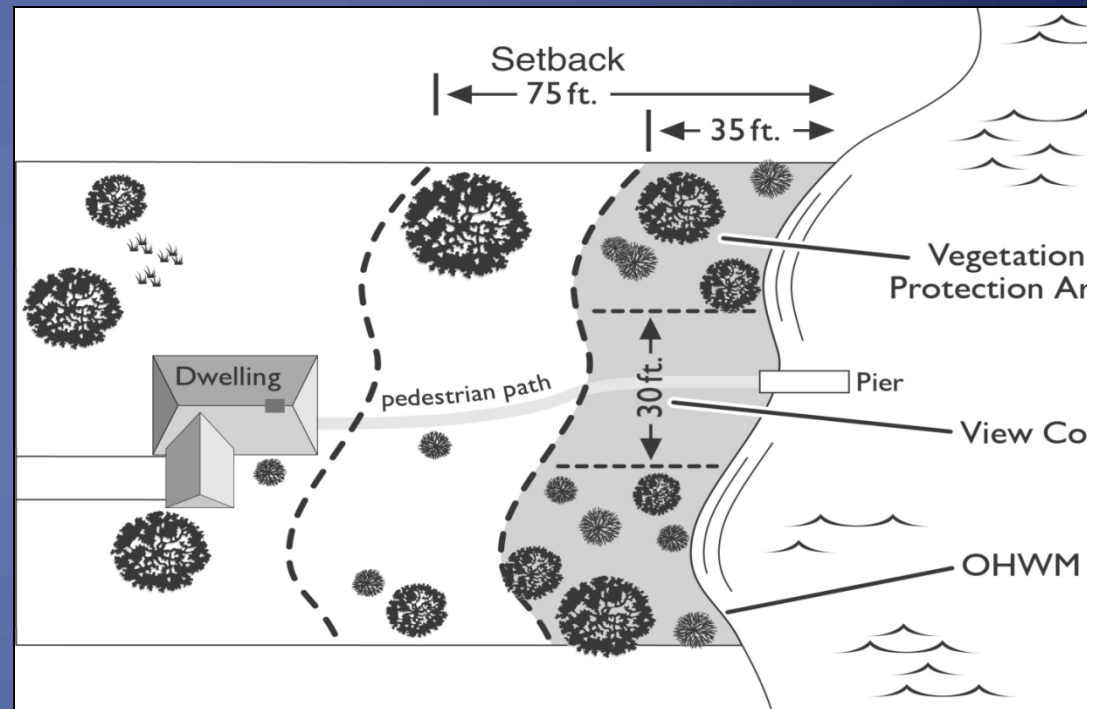
Counties led...

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



Higher standards adopted by counties...

- Larger lot areas: 41
- Larger lot widths: 43
- Larger setbacks: 25
- Larger buffer sizes: 17
- Imp. surface stds: 17



Only 17 counties had no standards higher than state minimums

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 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
- 2015: Act 55: Changes to one-size-fits-all SL zoning stds

2015: Act 55

- Counties can no longer have shoreland zoning standards that are any more restrictive (higher) than the state standards for any of their lakes and streams
- Made changes to other shoreland zoning standards.
- Effective - July 14th, 2015
- See 3 short videos about 2015-16 changes on YouTube. Search for “shoreland zoning”

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

Act 55

Counties may regulate “matters” that are not regulated by a shoreland zoning standard in NR 115. *59.692(1d)(b)*

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
- Density requirements – ex. # of structures with living quarters permitted on a lot
- Land uses: residential, commercial, etc.
- Land suitability & buildable areas

Interaction with other 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 had until October 1, 2016 to have a compliant, certified ordinance.**

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

Higher standards by
some counties

300 foot lots

22 homes



Effects of lot sizes

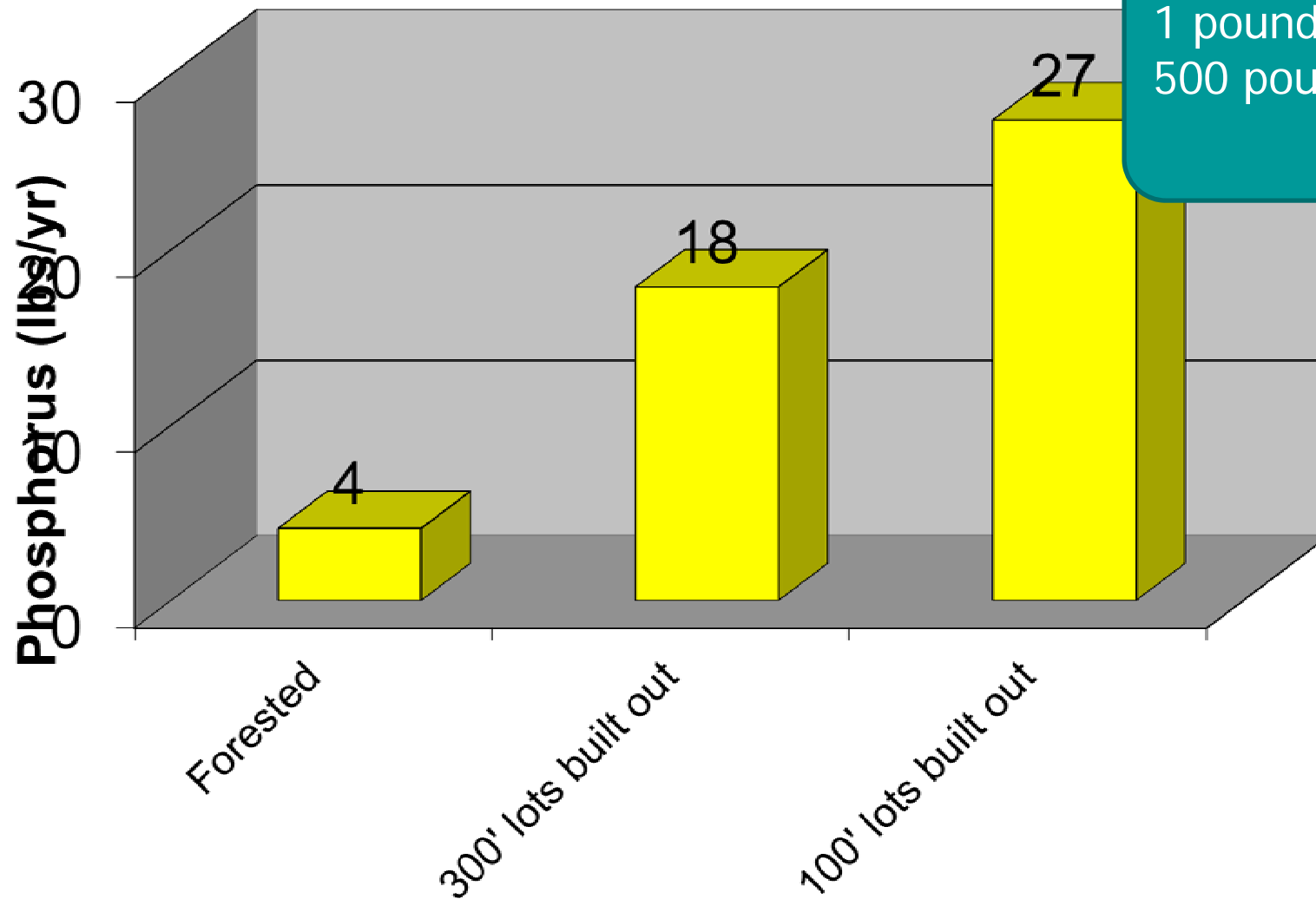
Current statewide
shoreland standards

Unsewered
100 foot lots
66 homes

Sewered
65 foot lots
105 homes



More development = More Phosphorus



1 pound of P =
500 pounds of algae





43 counties adopted larger shoreland minimum lot sizes prior to 2015 for some or all of their lakes or streams

Shoreland zoning lot size standards after Act 55 are **one-size-fits-all** statewide

- 20,000 square feet and 100' wide – unsewered
- 10,000 square feet and 65' wide – sewerred

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 & Setbacks



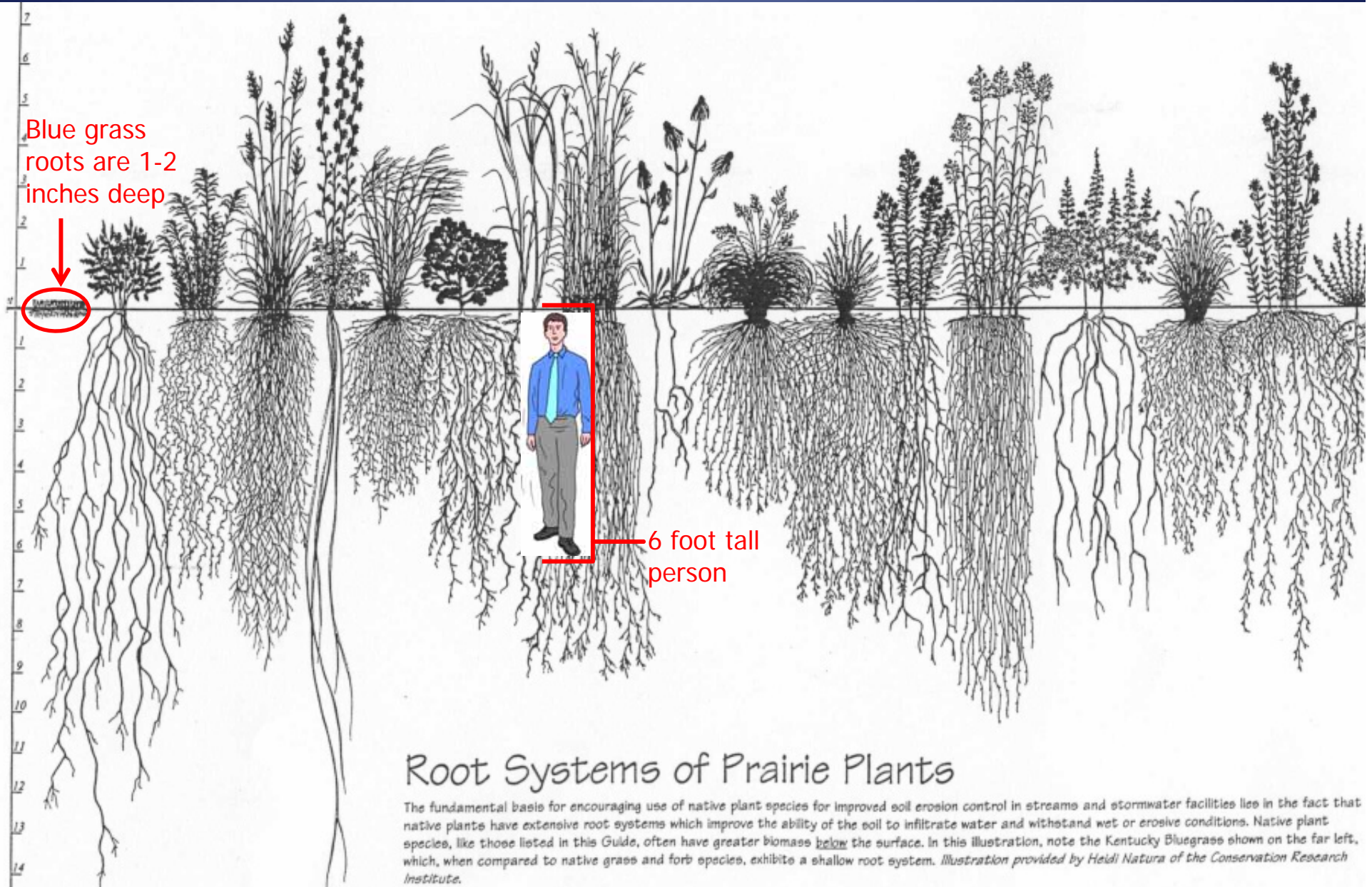
- Areas of undisturbed soils and vegetation
- Provide natural shoreland functions: protects water quality, provides habitat for wildlife and fish

What happens when a shoreline buffer is cut?



- Shoreline bank is destabilized and eroded
- Soil washed into the lake contains phosphorus which increases algae growth
- Eroded soil covers spawning beds, smothering fish eggs
- Less shade leads to warmer water temperatures
- Habitat needed by birds, frogs and other wildlife is lost

Shoreline buffers

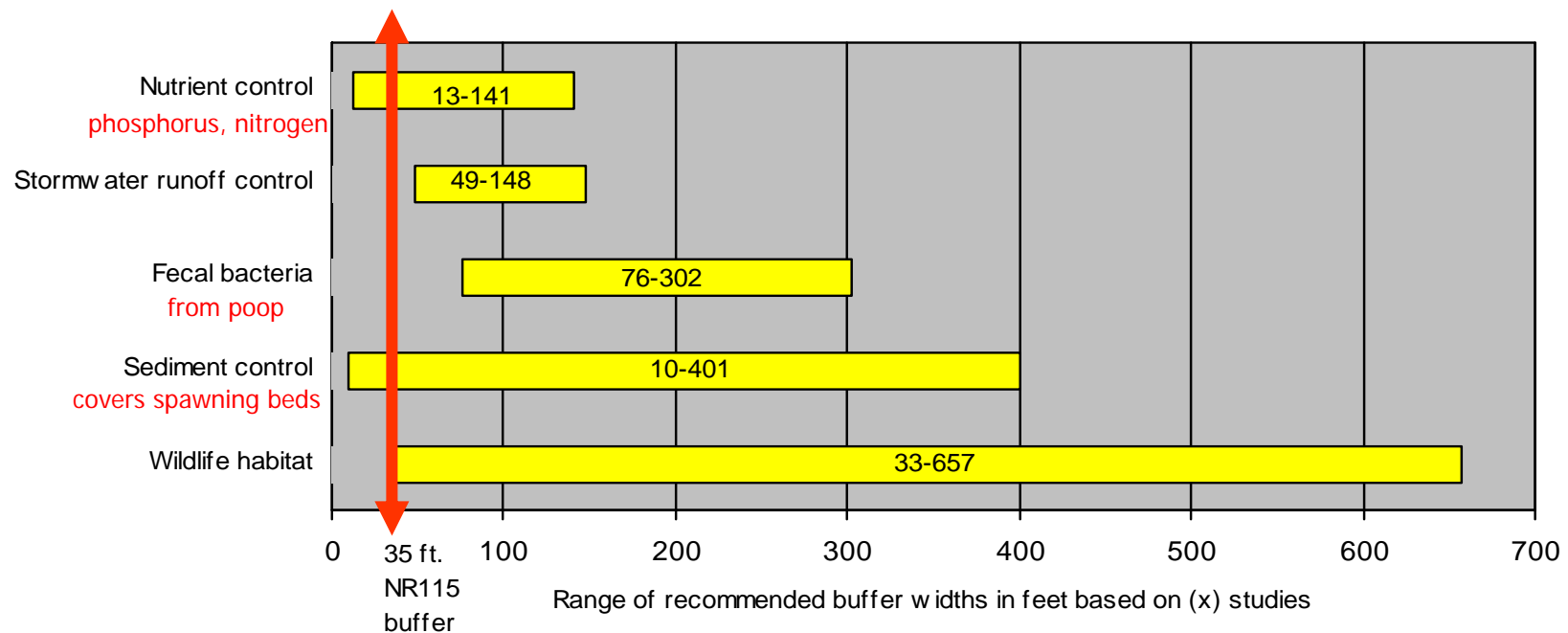


Root Systems of Prairie Plants

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 can buffers do if they're big enough?

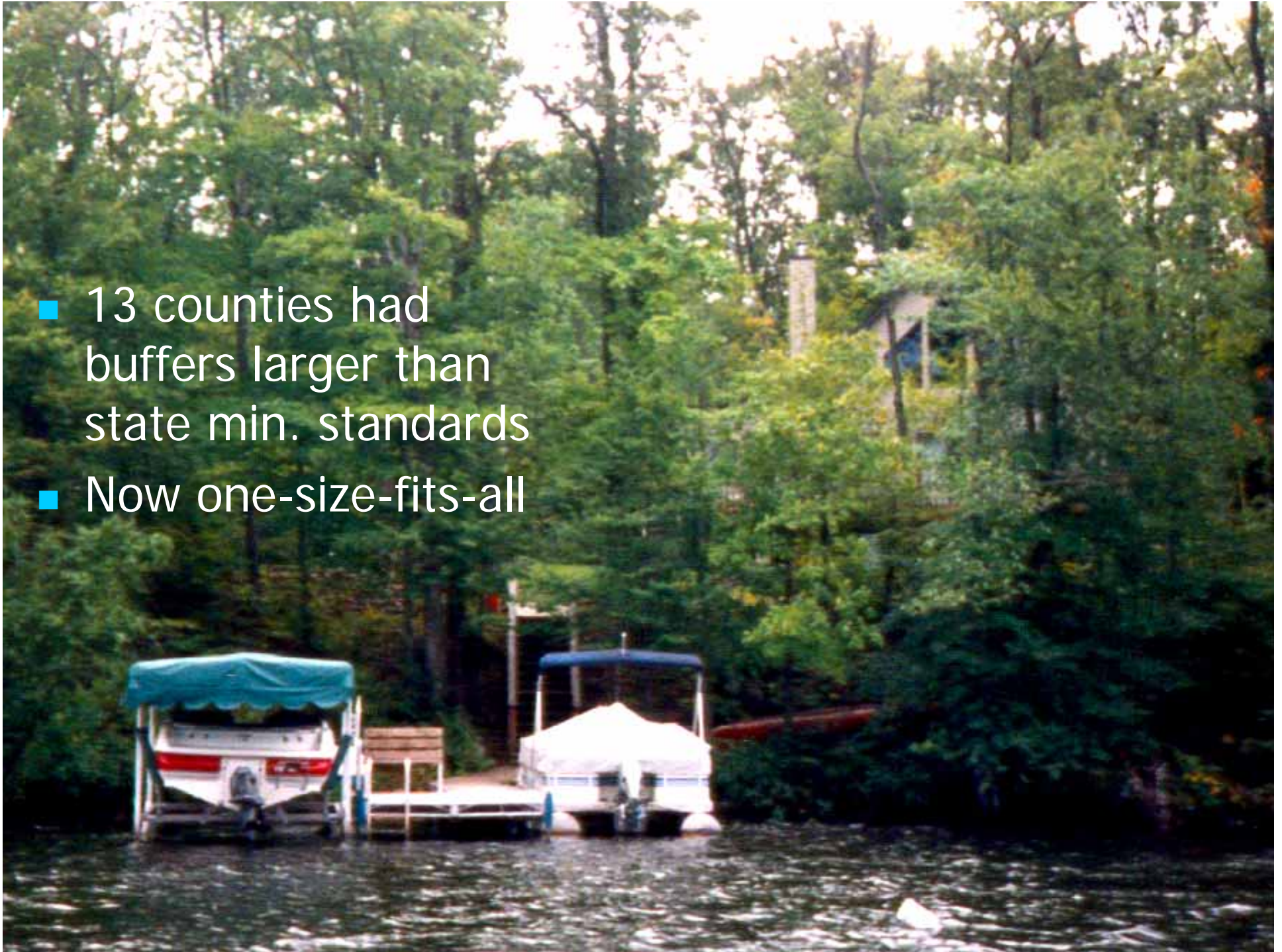
Recommended Shoreline Buffer Widths A Research Summary



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

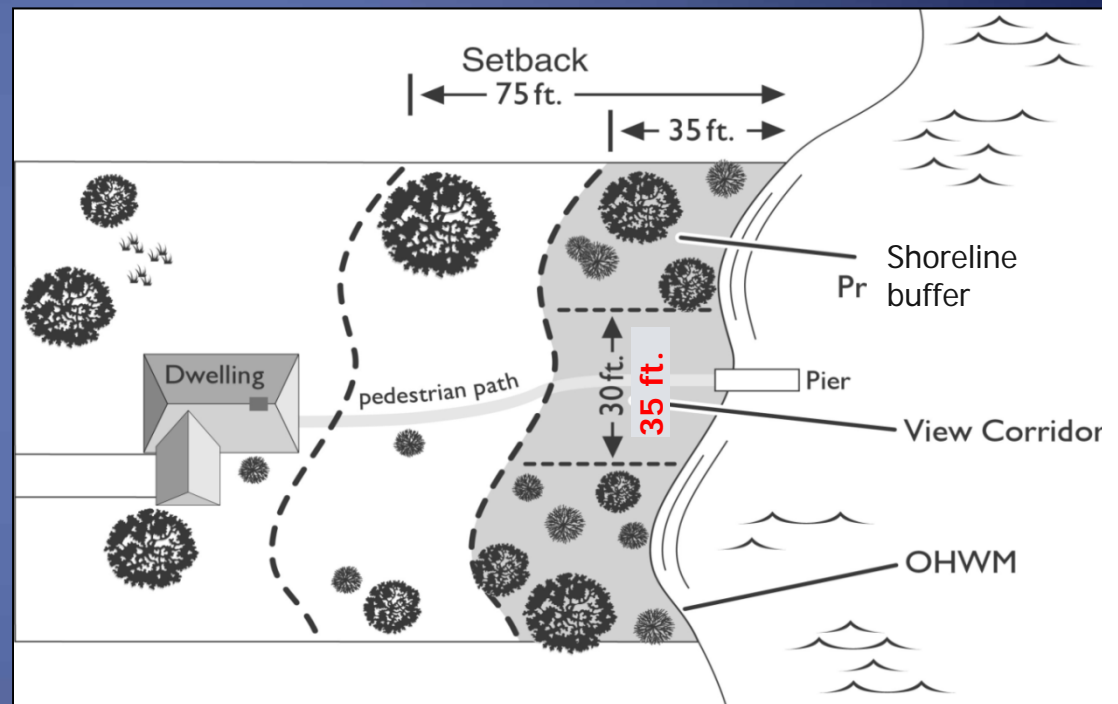
A 35 foot deep shoreline buffer does not keep bacteria from poop out of the water. In many situations, it doesn't keep P and sediment out of the water, and isn't enough for wildlife.

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

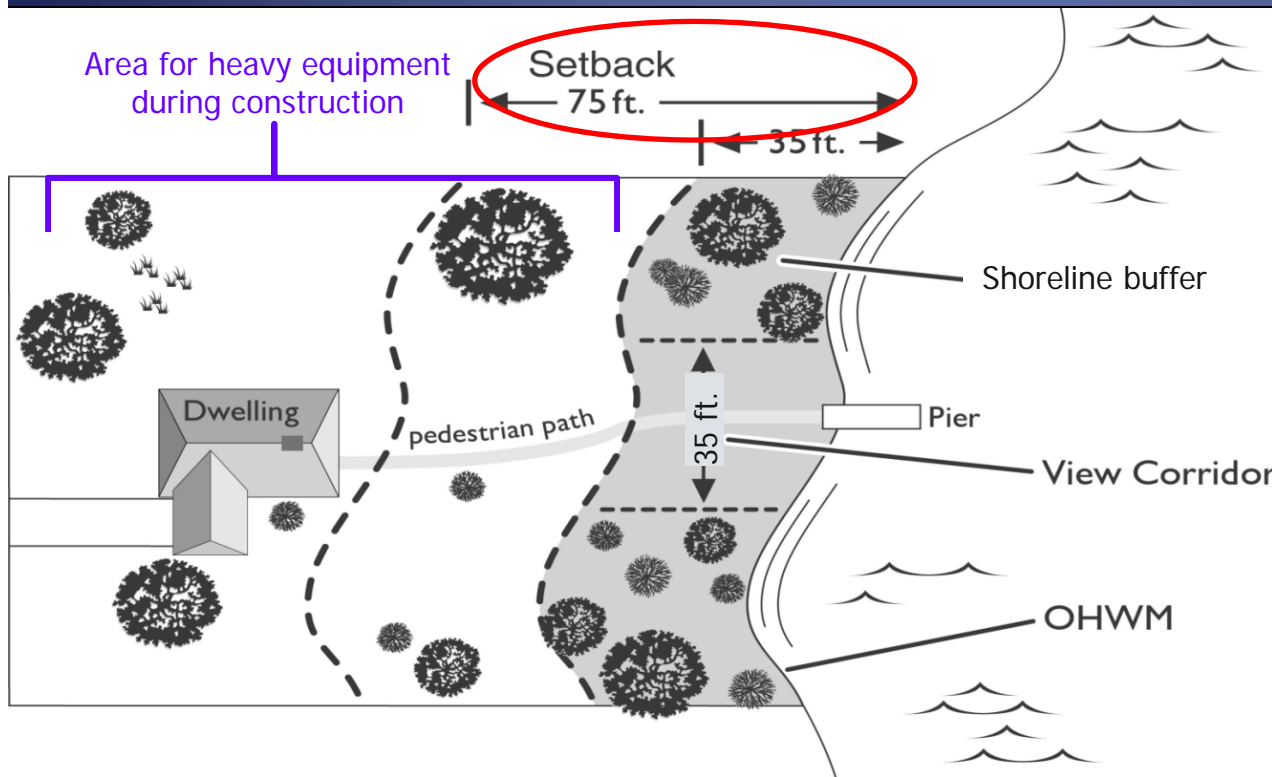


2015-16 buffer changes

- Counties may not require buffers larger than 35'
- Viewing corridor in buffer increased to 35' in every 100'
- Viewing corridor is allowed to run contiguously for the entire maximum width



Why shoreline setbacks?



- To provide space for the shoreline buffer
- To keep the shoreline buffer intact during and after home construction
- To keep homes & other buildings on stable ground

Prior to 2015

- 25 counties had larger setbacks for some or all of their lakes or streams



Now:

- All counties have a 75 foot setback without averaging
- Counties must use setback averaging to reduce setbacks less than 75 feet if 2 adjacent principal structures exist at less than 75' for new principal structures only.
- Additional averaging options.



**Impervious
surfaces**



More Impervious Surface = Less Fish

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

Less than 8%

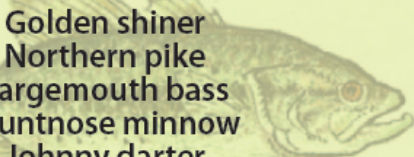

8 - 12%

Greater than 12%

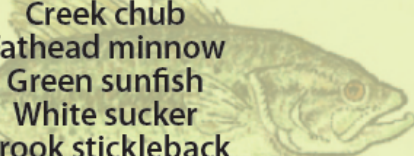

More Impervious Surfaces in Watershed 



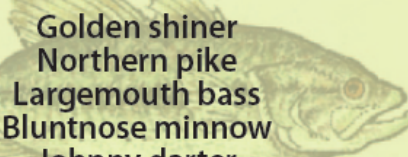

Iowa darter
Black crappie
Channel catfish
Yellow perch
Rock bass
Horneyhead chub
Sand shiner
Southern redbelly dace



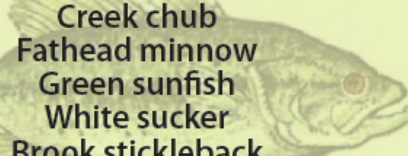

Golden shiner
Northern pike
Largemouth bass
Bluntnose minnow
Johnny darter
Common shiner



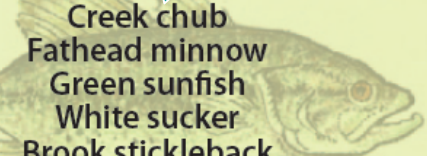

Creek chub
Fathead minnow
Green sunfish
White sucker
Brook stickleback



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 

More Impervious Surface = Less Fish

More impervious surface causes



- 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

