



Shoreland Zoning

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

Wisconsin Lakes Convention

March 30, 2016

Co-presented by:

Kay Lutze
Shoreland Zoning Policy
Coordinator

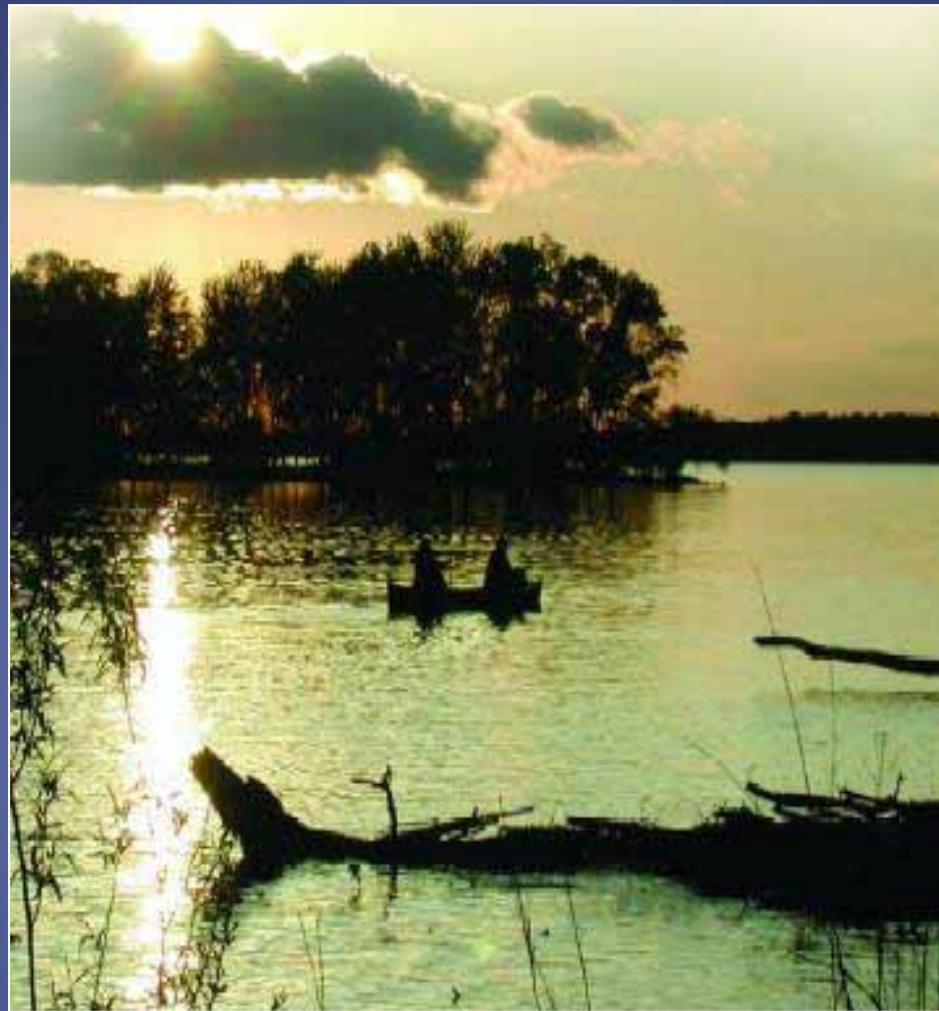
Lynn Markham
Center for Land Use Education,
UWEX

Introductions

- Please tell us who you are and where you're from. Were you at last year's SL zoning session?
- Why are lakes and rivers important to you?
- Why do you want to learn more about shoreland zoning?
- What do you want to see in the future with regard to SL zoning and dev't around our lakes and rivers in WI?

Outline

1. Brief history of shoreland zoning & the public trust doctrine
2. Shoreland standards: Science and changes from Act 55 – State budget passed in July 2015
3. Spring 2016 changes by WI Legislature
4. Timeline for county SL ordinance changes - October 2016
5. Thoughts and feelings about changes. Questions.



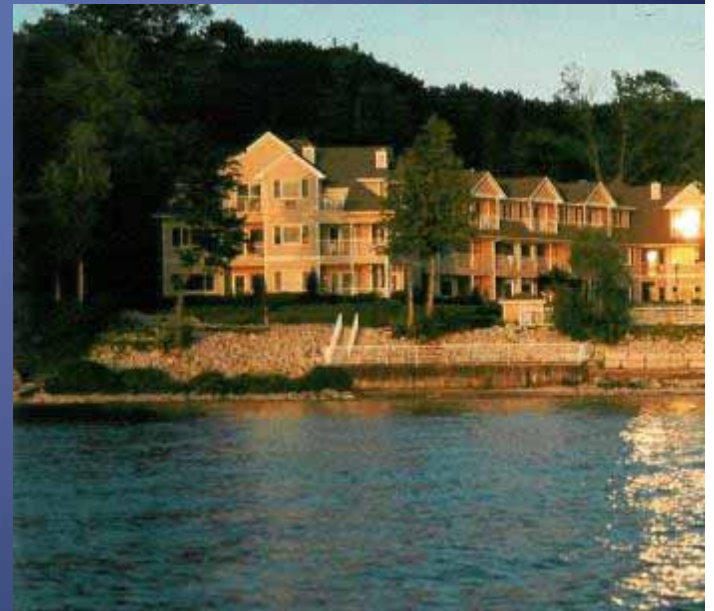
Natural shorelands contain a lush mixture of native grasses, flowers, shrubs and trees that help to filter polluted runoff and provide important habitat for animals in the water and on the land. A mature native buffer represents many years of nature at work.

Healthy shorelands provide some of the most effective protection for the lakes and streams of Wisconsin.

Shoreland zoning history

- The **Wisconsin Constitution**, adopted in 1848, says 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



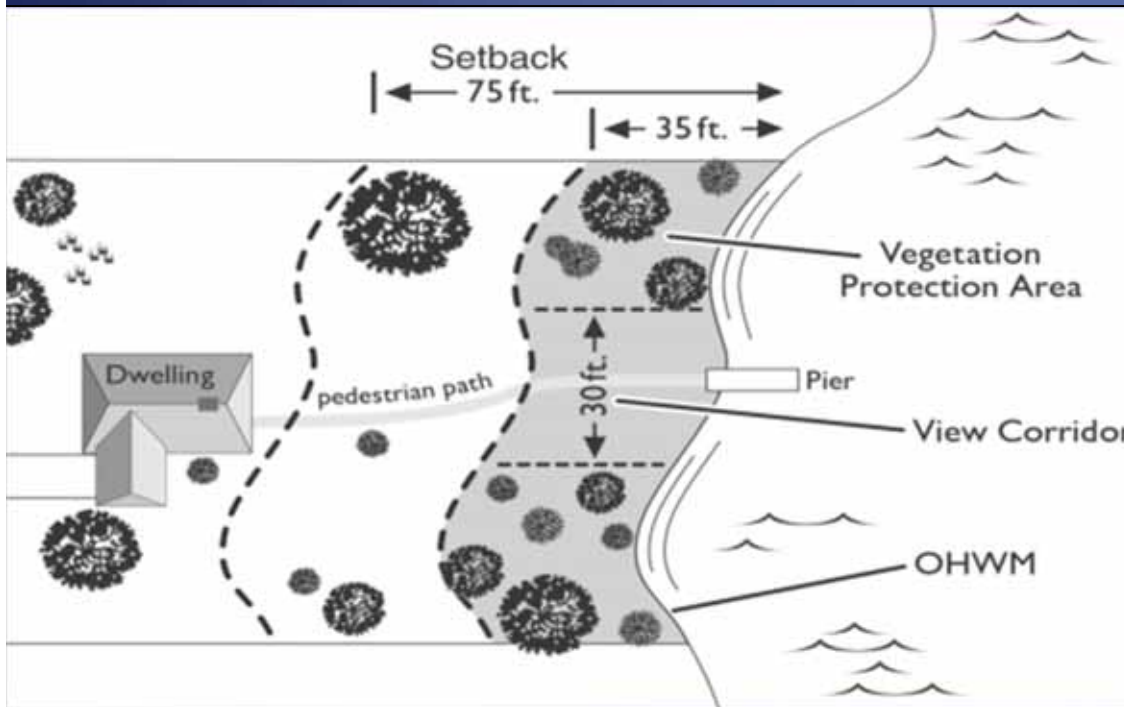
Purposes of shoreland zoning include...

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



s. 281.31 Wis. Stats.

WI min. shoreland standards (NR 115)

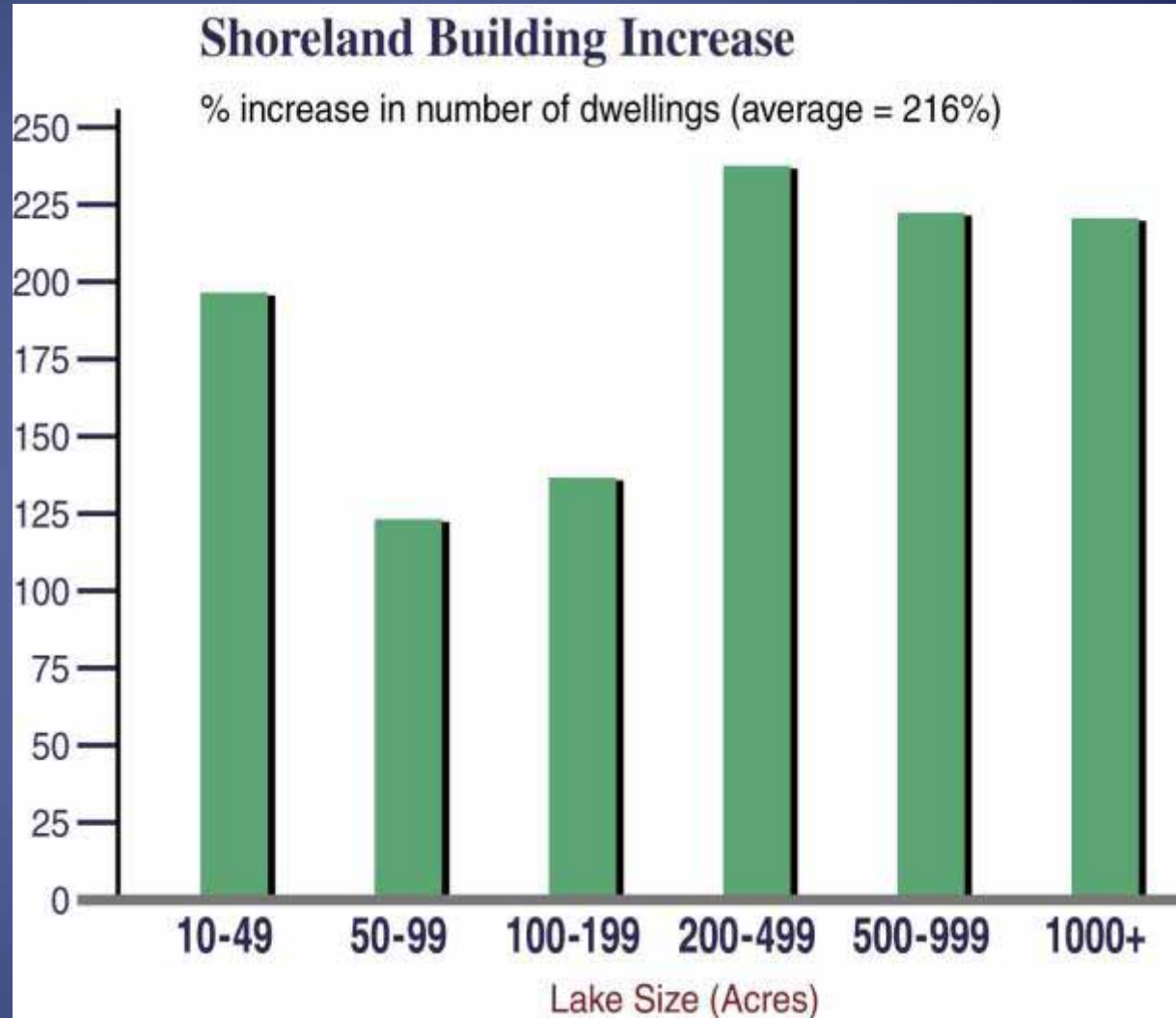
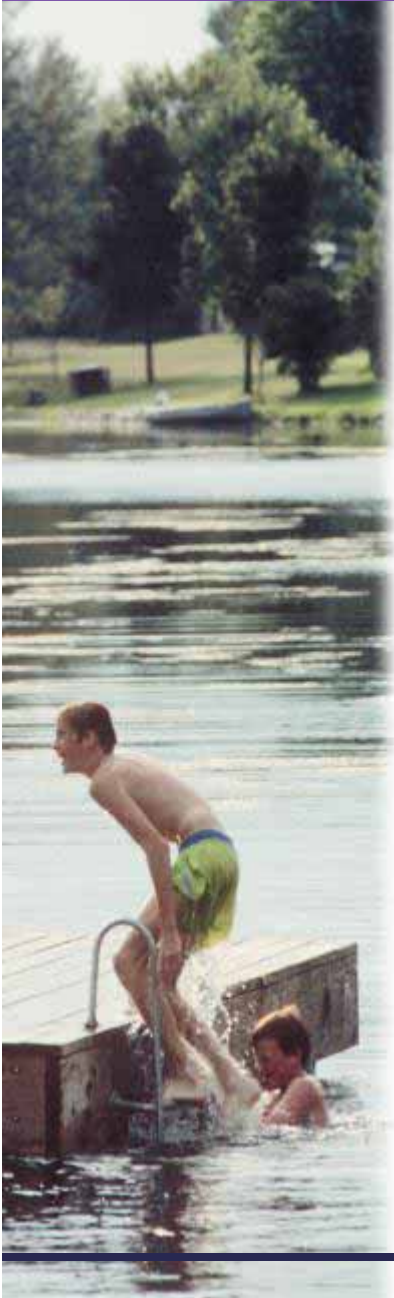


- Adopted in 1968
- Lot size
- Vegetative standards
- Shoreline setback
- Filling/grading
- Nonconforming structures

Shoreland Zoning History

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

Shoreland building increase, 1965-1995

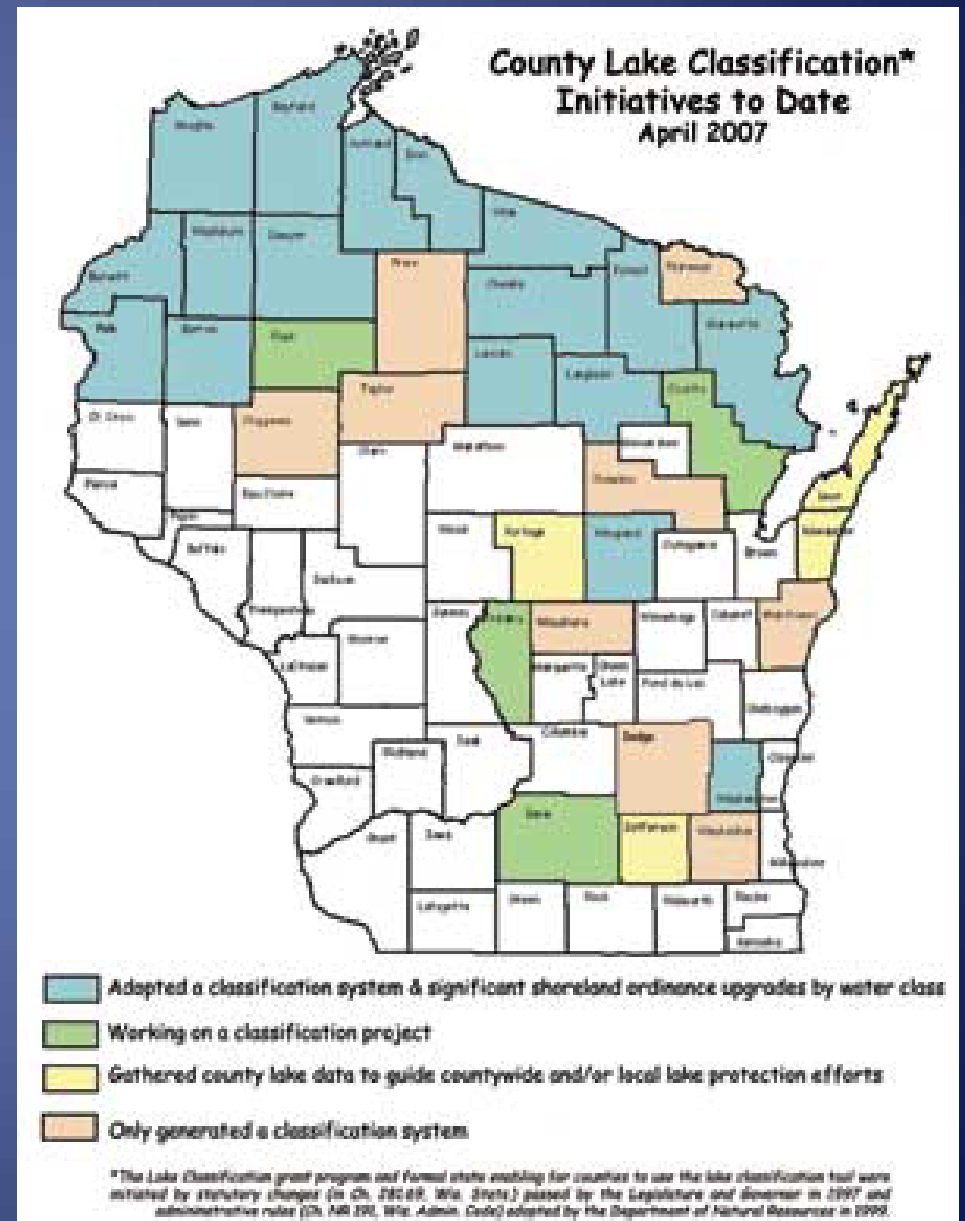


Source: Wisconsin Dept. of Natural Resources



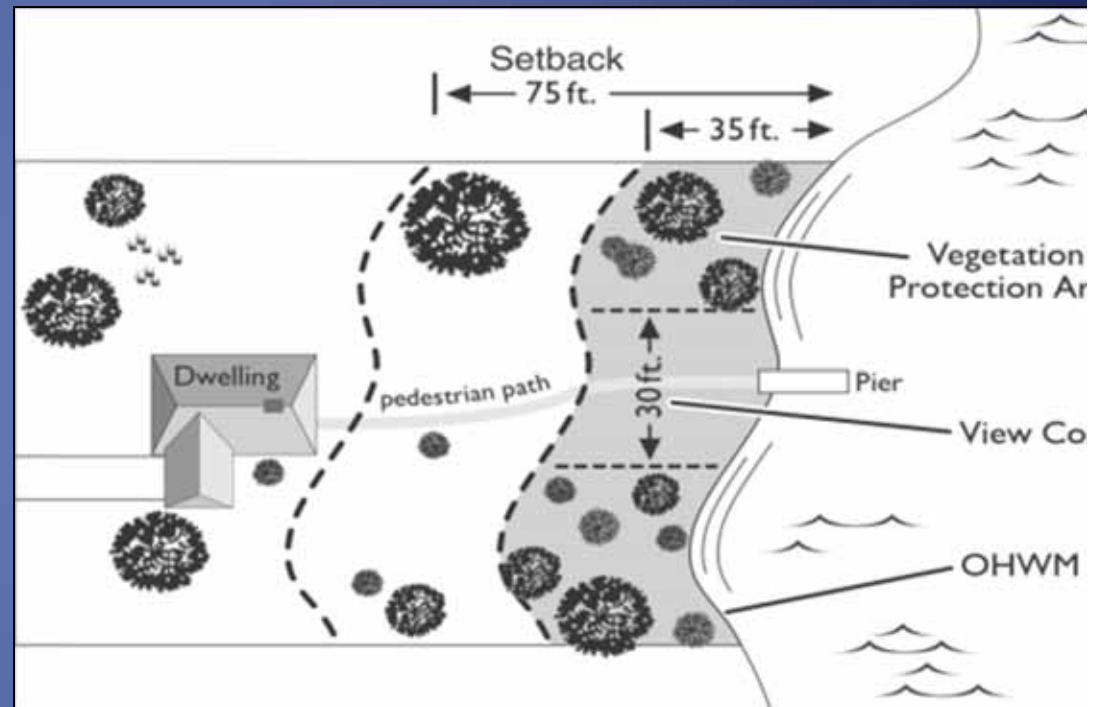
Counties led...

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

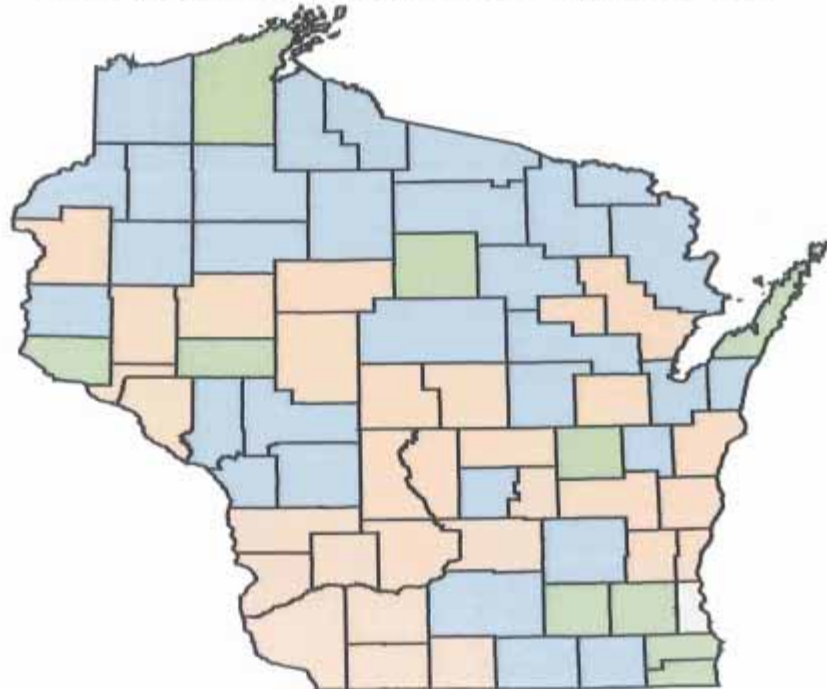






Higher standards adopted by counties...

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



Shoreland Lot Area Standards



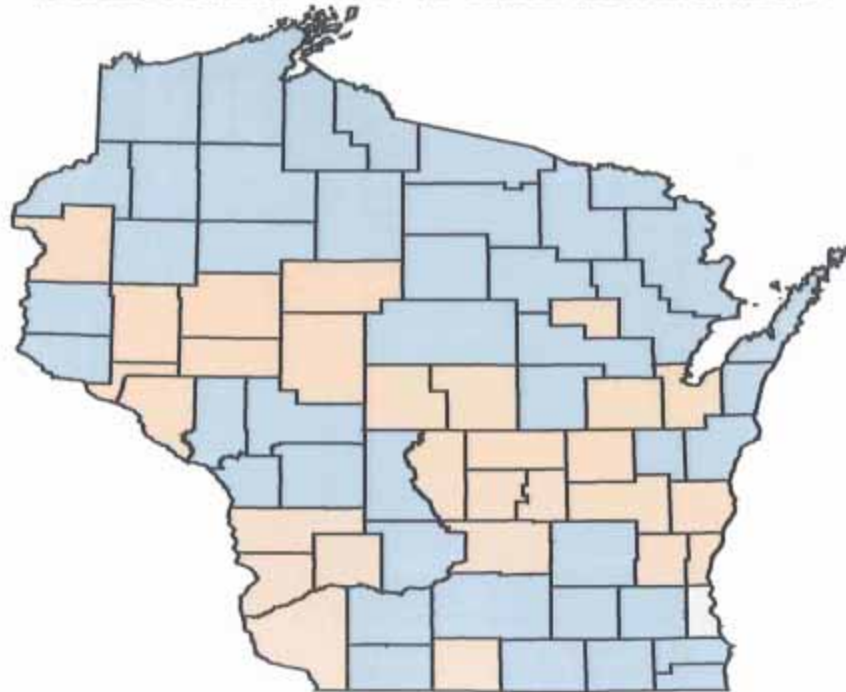
-  County is not regulated under NR 115.
-  County meets minimum lot area requirements from NR 115.
-  County exceeds minimum lot area requirements from NR 115 on all or some lakes, rivers, and streams.
-  County uses underlying zoning districts to determine minimum lot areas, which meet or exceed NR 115 requirements.




For more information, contact Carren Wagner,
WI DNR, Shoreland Zoning Specialist, 608-267-7694.

May 22, 2000
Bureau of Watershed Management, WDNR



Shoreland Lot Width Standards



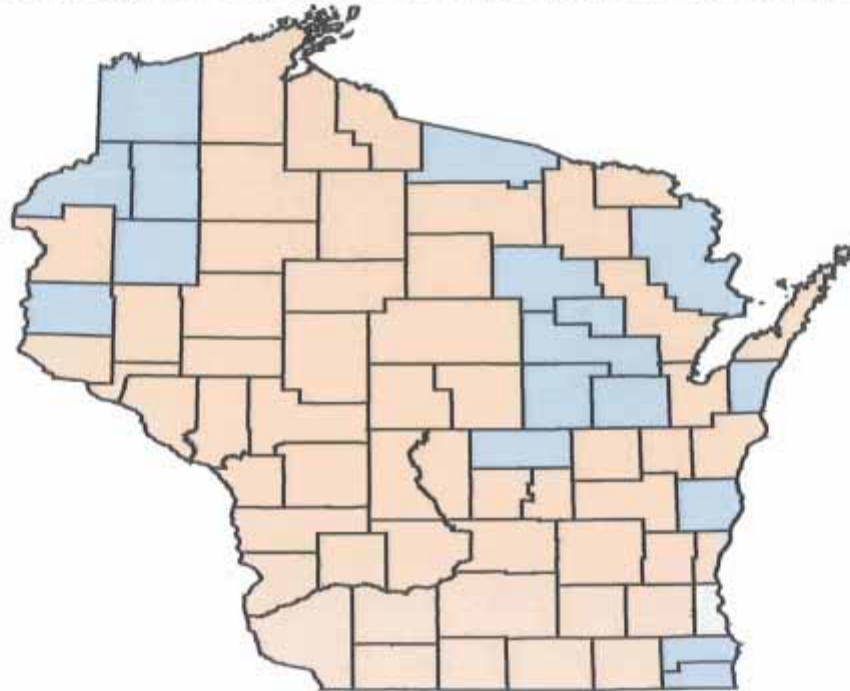
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


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Shoreland Buffer Dimension Standards

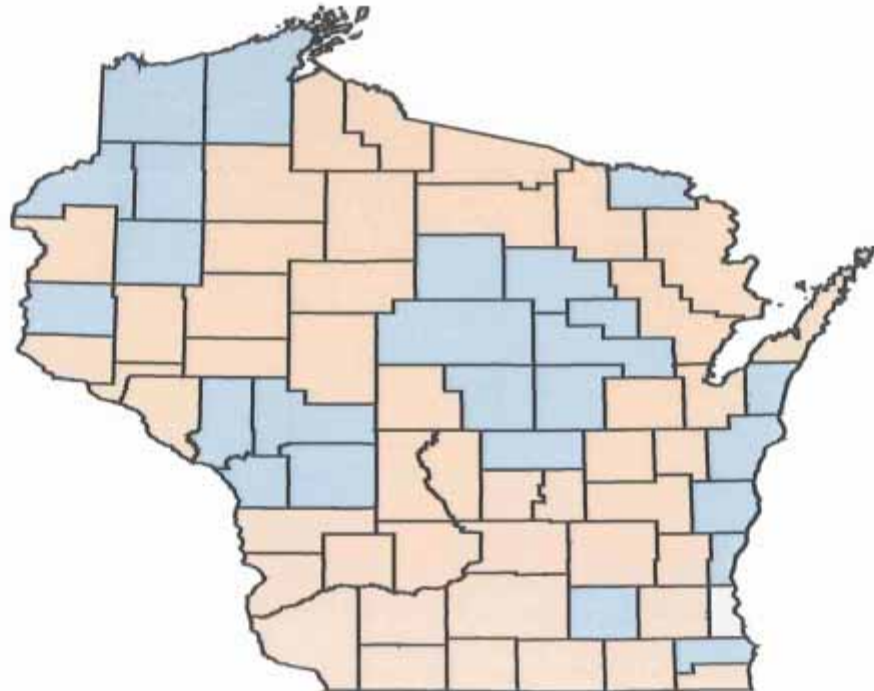





-  County is not regulated under NR 115.
-  County requires a 35 foot buffer parallelling the OHWM for lakes, rivers, and streams.
-  County requires buffers greater than 35 feet for all or some lakes, rivers, and streams.

For more information, contact Carmen Wagner,
WI DNR, Shoreland Zoning Specialist, 608-267-7694.


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Bureau of Watershed Management

Shoreland Setback Standards

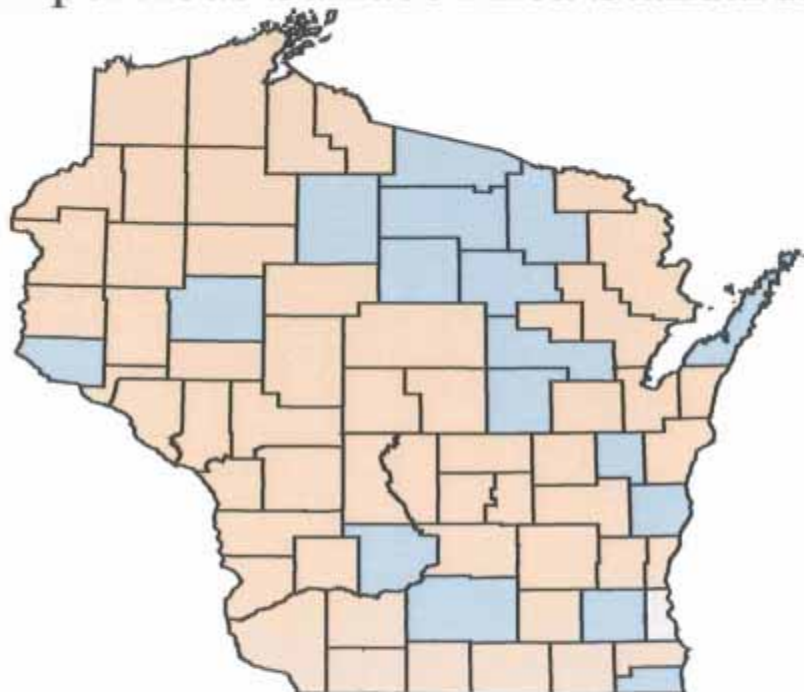





-  County is not regulated under NR 115.
-  County meets the minimum shoreland setback requirement in NR 115.
-  County exceeds the minimum shoreland setback requirement in NR 115 on all or some lakes, rivers, and streams.

For more information, contact Carmen Wagner,
WI DNR, Shoreland Zoning Specialist, 608-266-0061


May 22, 2000
Bureau of Watershed Management

Impervious Surface Area Standards



-  County is not regulated under NR 115.
-  County does not place limitations on impervious surface area for shoreland lots.
-  County limits impervious surface area for shoreland lots.

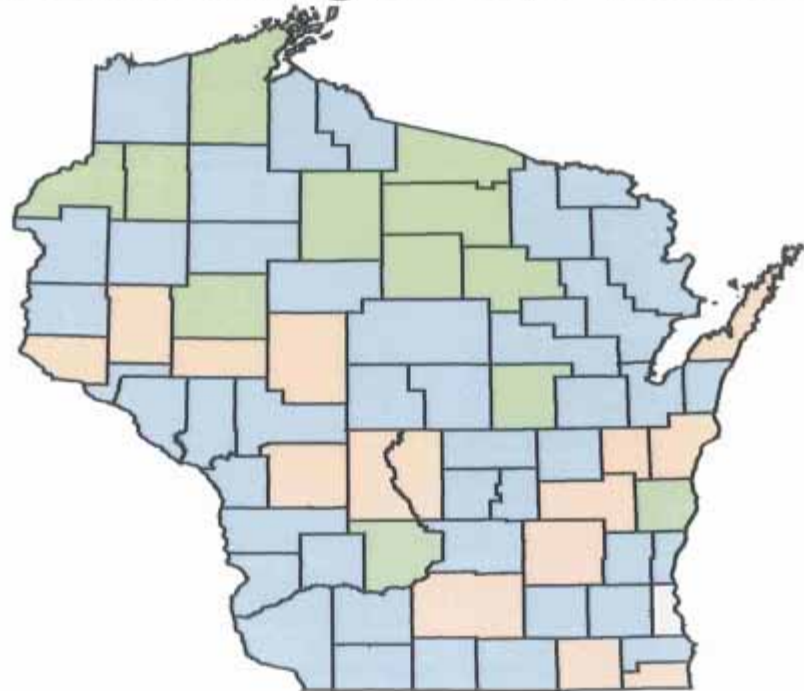
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





May 22, 2000

Bureau of Watershed Management

Nonconforming Structure Standards



-  County is not regulated under NR 115.
-  County uses a variation of the 50% rule to regulate additions and alterations to nonconforming structures.
-  County requires alterations or additions to nonconforming structures to comply with shoreland ordinance or to not increase nonconformity.
-  County regulates nonconforming structures based on distance of structure to OHWM and/or total area of structure.

For more information, contact Carmen Wagner,
WI DNR, Shoreland Zoning Specialist, 608-267-7604



May 22, 2000

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NR 115 Revisions

Process to upgrade state shoreland standards from 2002-2010 resulted in agreement to changes from lake, river, realtor and builder groups

Goal of proposed revisions: balance public rights to fishing and hunting, water quality and natural scenic beauty on lakes and streams with private property rights

Changes again in 2013 was based on input from county zoning staff and legislators

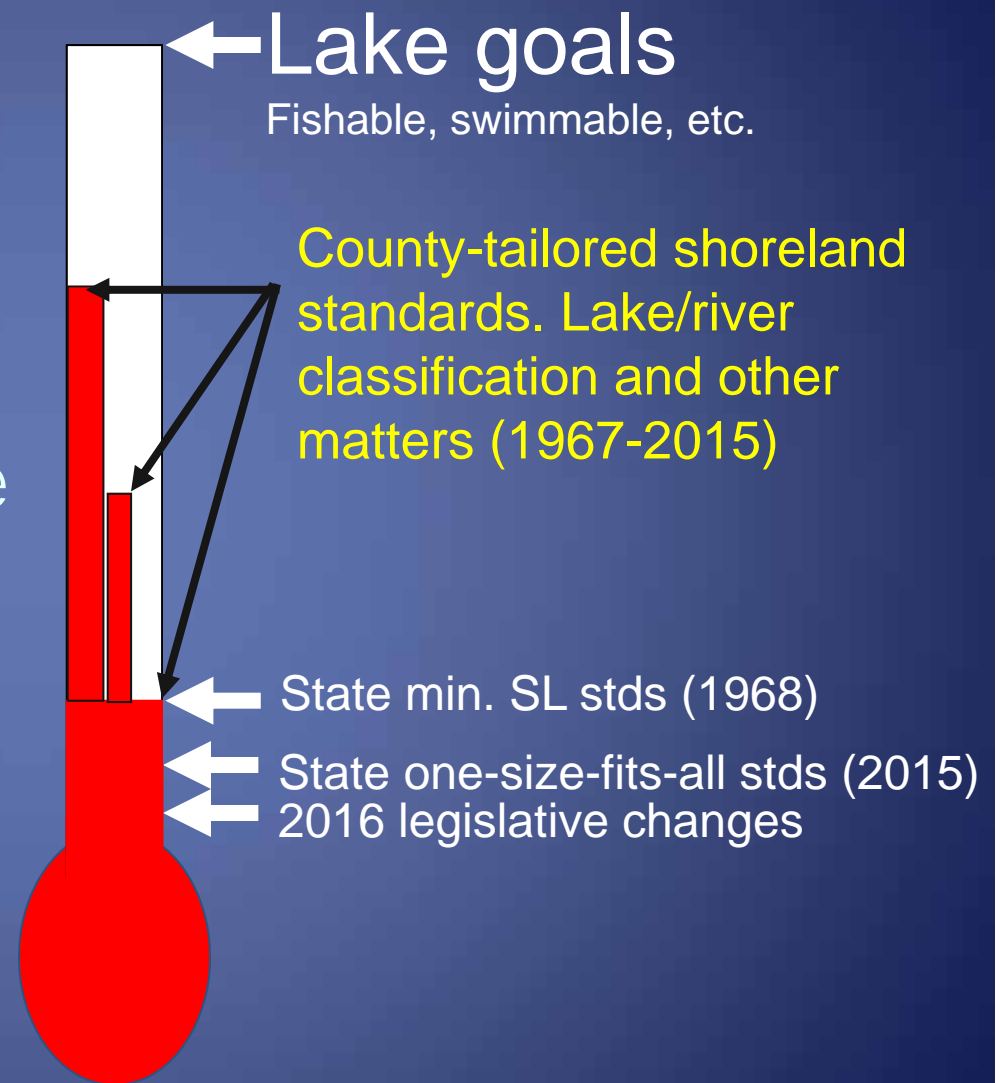
Compromise in setting statewide minimum standards

Act 55

- Changes the authority counties have in the development of a shoreland ordinance that is more restrictive than NR 115 standards
- Made changes to other shoreland zoning standards.
- Effective - July 14th, 2015

Regulations provide lake protection

Other tools are needed to achieve optimum performance



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



Effects of lot sizes

100 foot lots

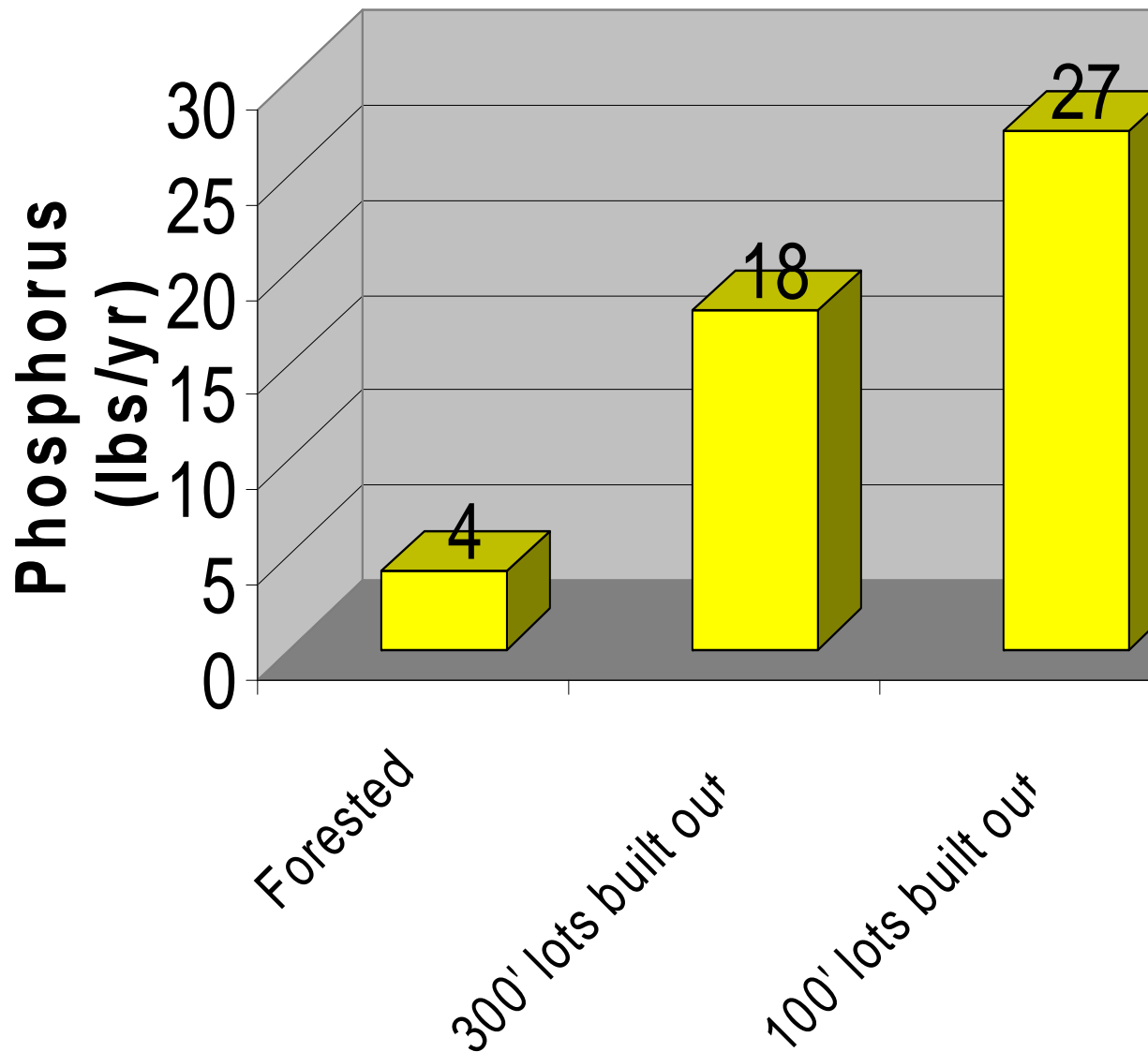
Current allowed density

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 and streams. Now min. lot sizes in SL zoning are the same statewide.

Smaller lot sizes result in

- Increased runoff
- More wastewater discharge
- Loss of wildlife habitat
- More nutrients & pollutants delivered to the lake

Minimum Lot sizes

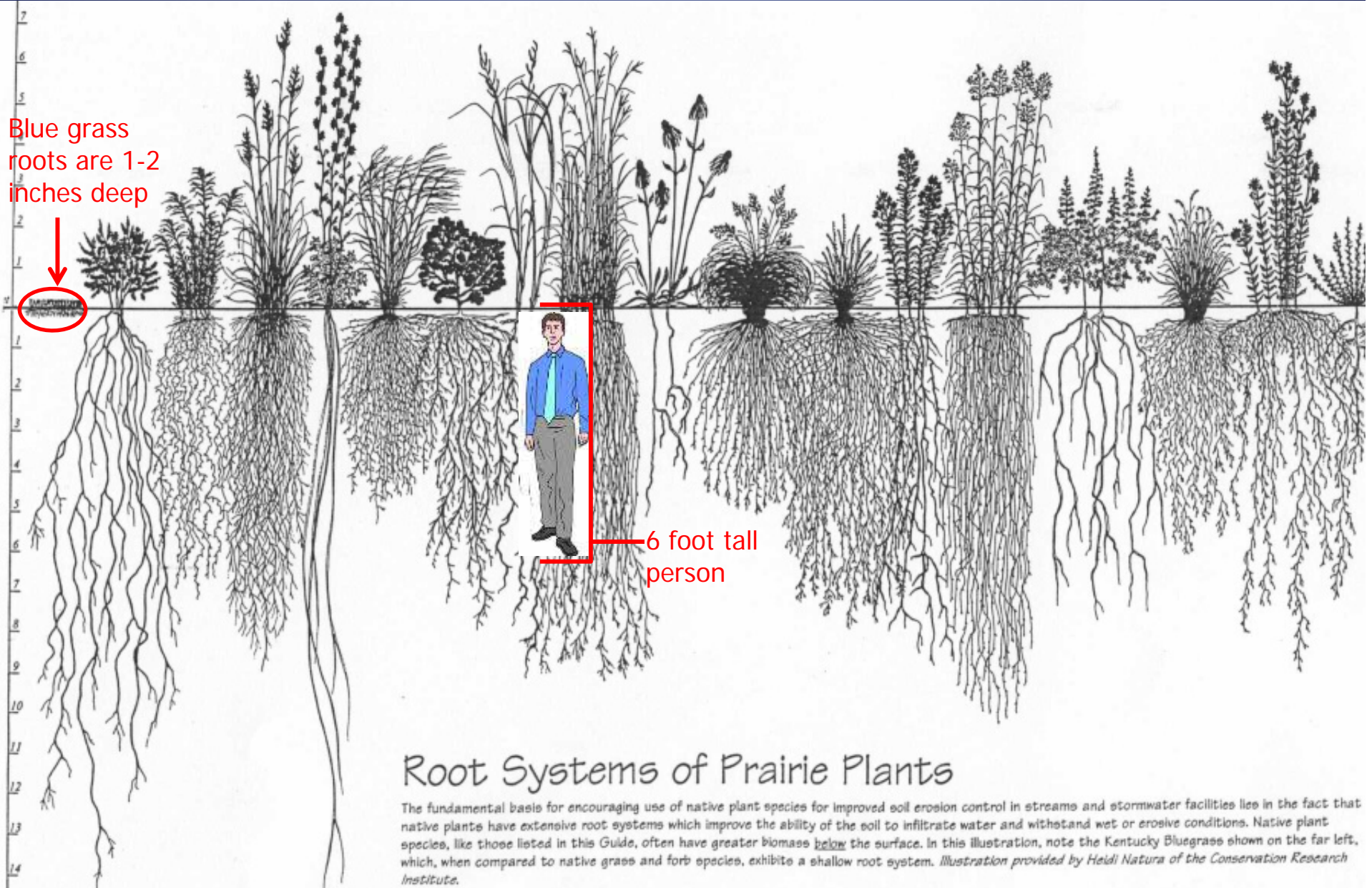
- Shoreland zoning ordinance may not require lot sizes larger than the minimum lot size identified in NR 115.05(1)(a)
 - 20,000 square feet and 100' wide - unsewered
 - 10,000 square feet and 65' wide – sewer
 - Measurement of average lot width can continue to be defined by the counties.
 - Original model measured it at water's edge and at building line

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



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

Buffers affect birds

- Shoreline buffers provide habitat for
 - Eagles, loons, great blue herons, wood ducks and more



- Lawns provide habitat for
 - Canada geese

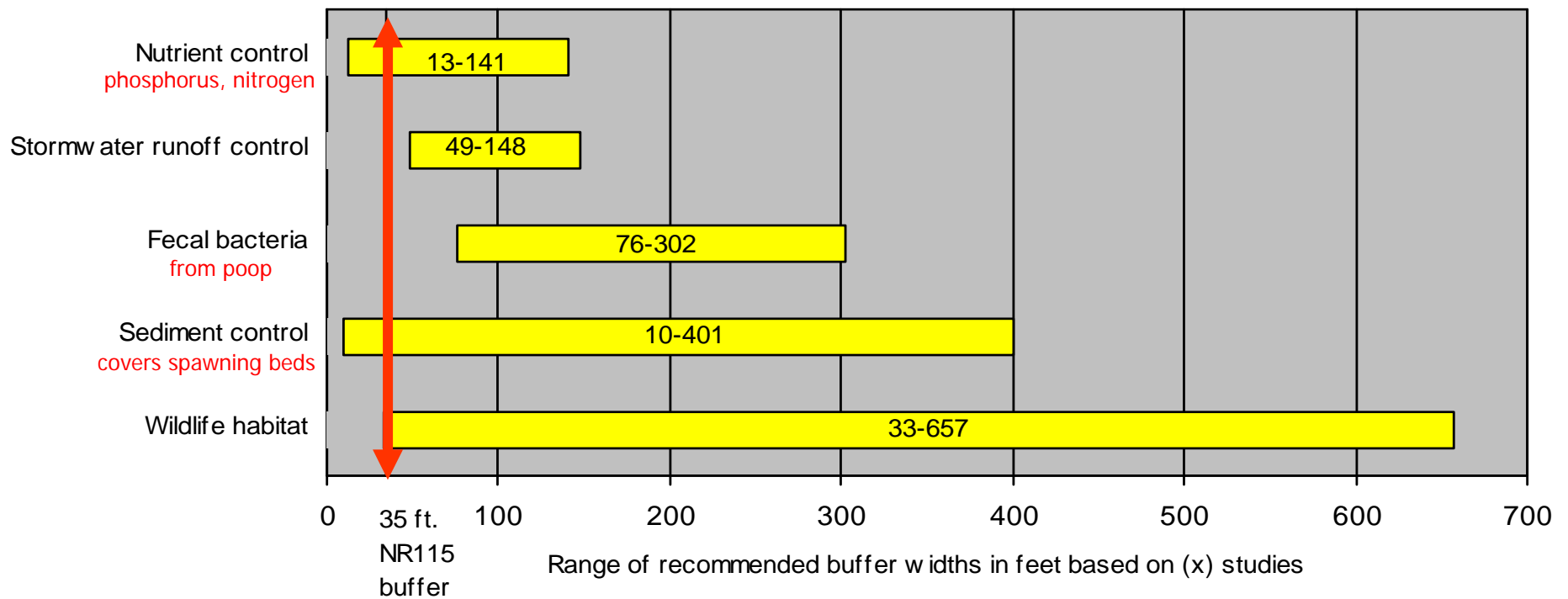


Geese avoid buffers because **the buffers** can conceal predators such as coyotes, foxes and raccoons

Goose video at [youtube.com/watch?v=9Oef1C_kPNI](https://www.youtube.com/watch?v=9Oef1C_kPNI)

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.

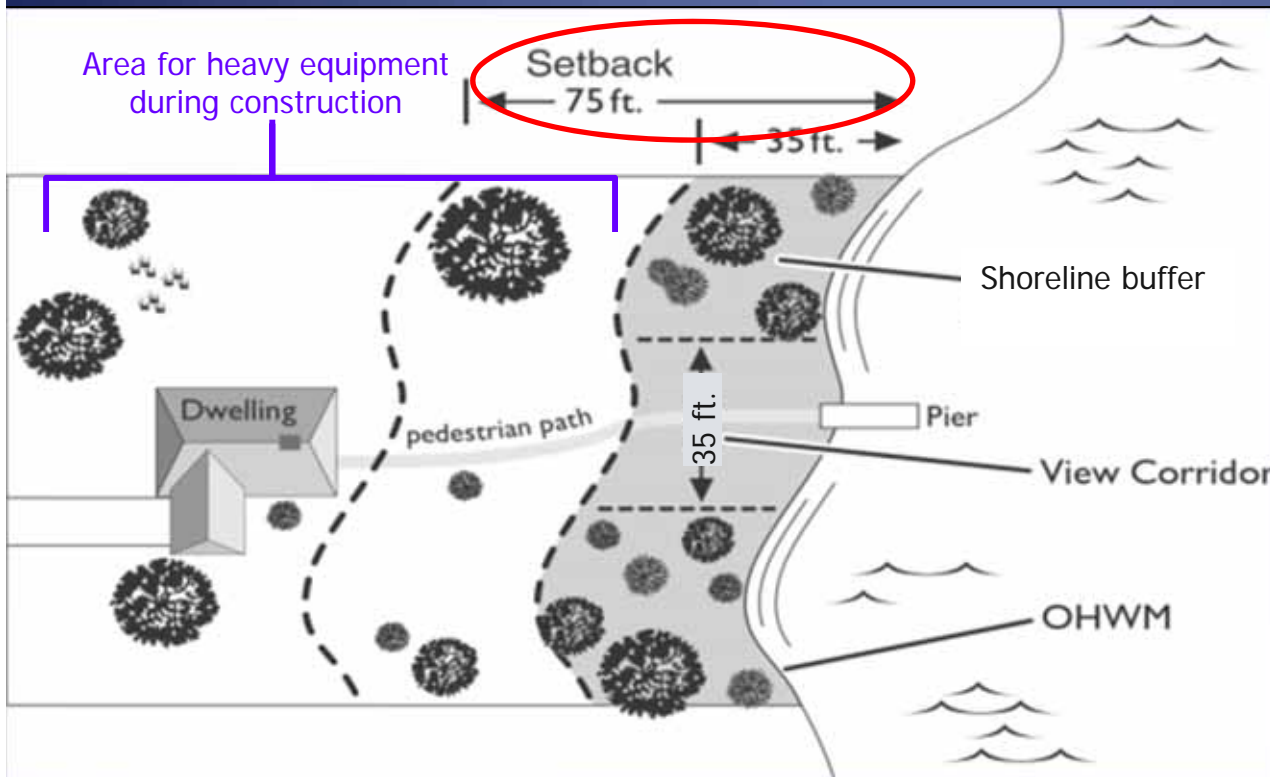


- 13 counties had buffers larger than state min. standards
- Now one-size-fits-all

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
- All structures are required to meet the setback from the OHWM unless they are identified and qualify as an exempt structure.

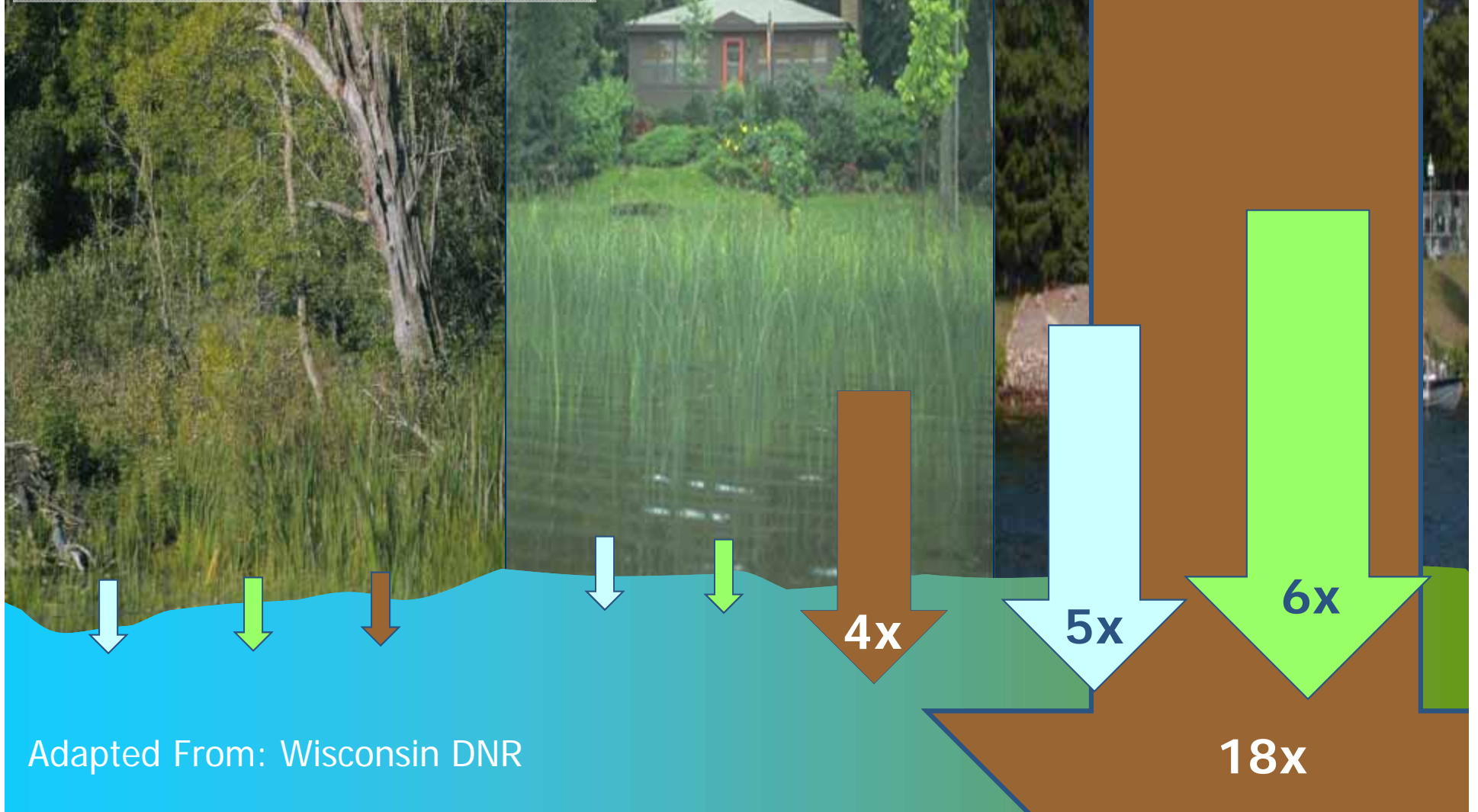


Effects of impervious surfaces

(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



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%

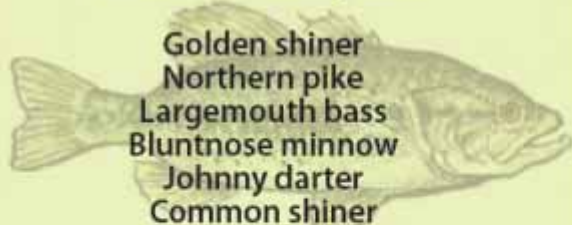
8 - 12%

Greater than 12%

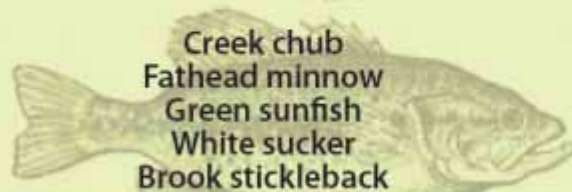
More Impervious Surfaces in Watershed 



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

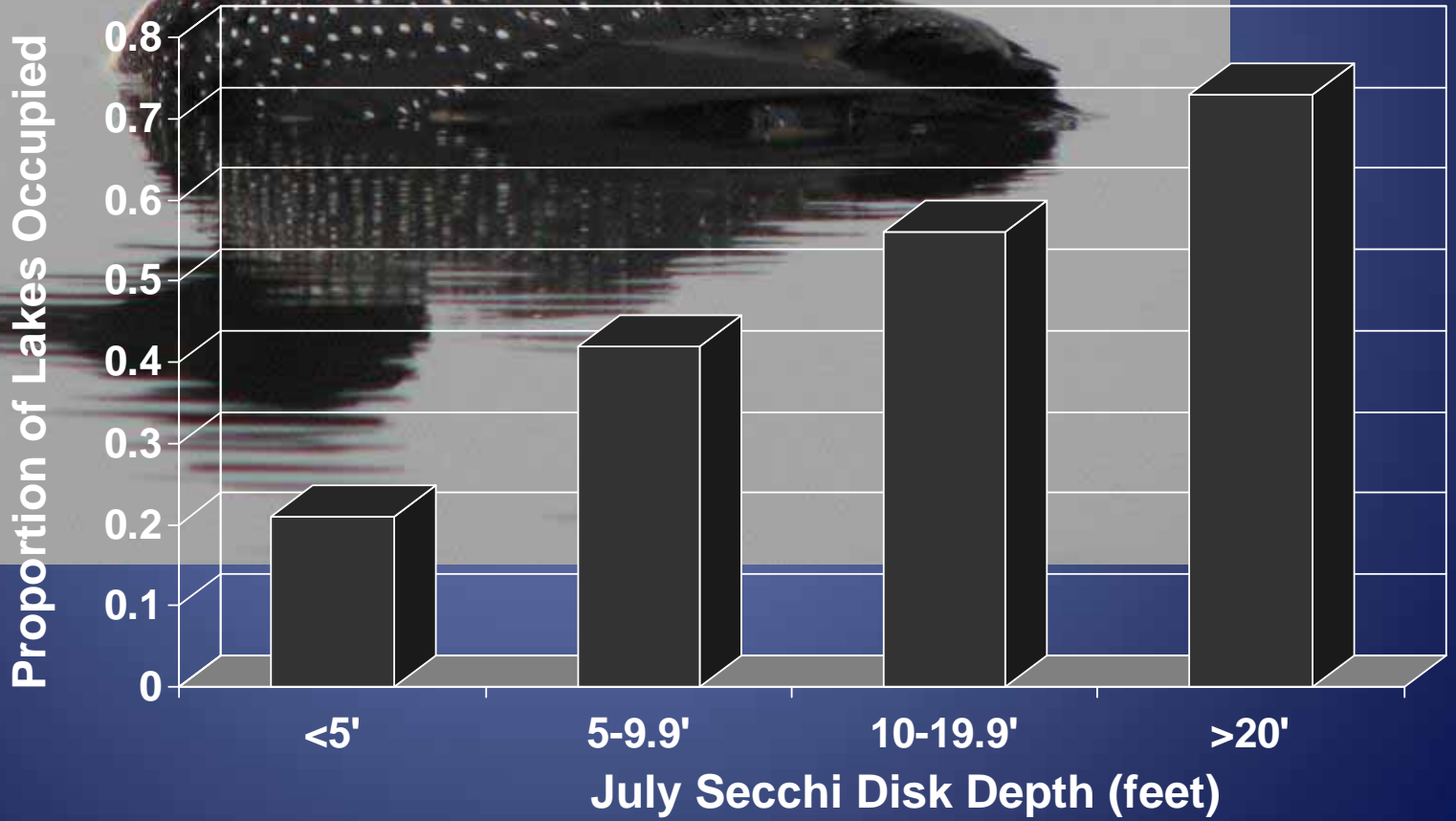
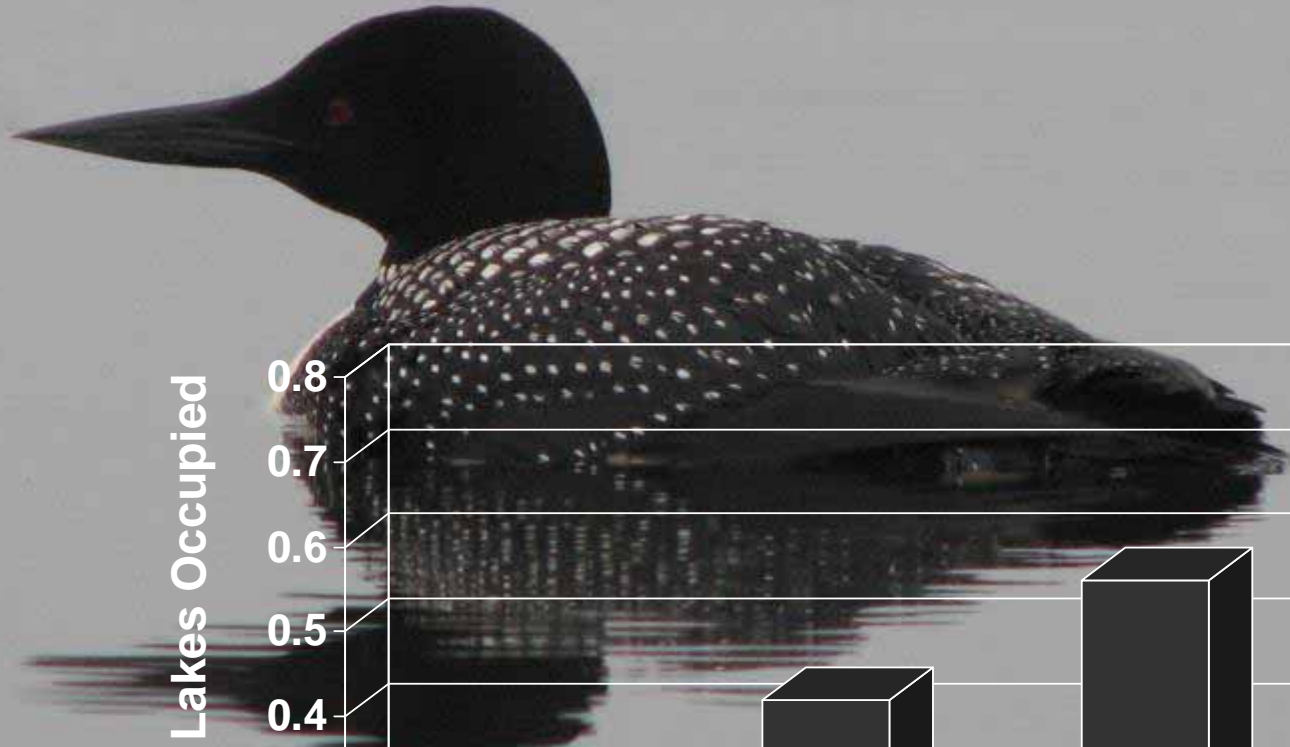


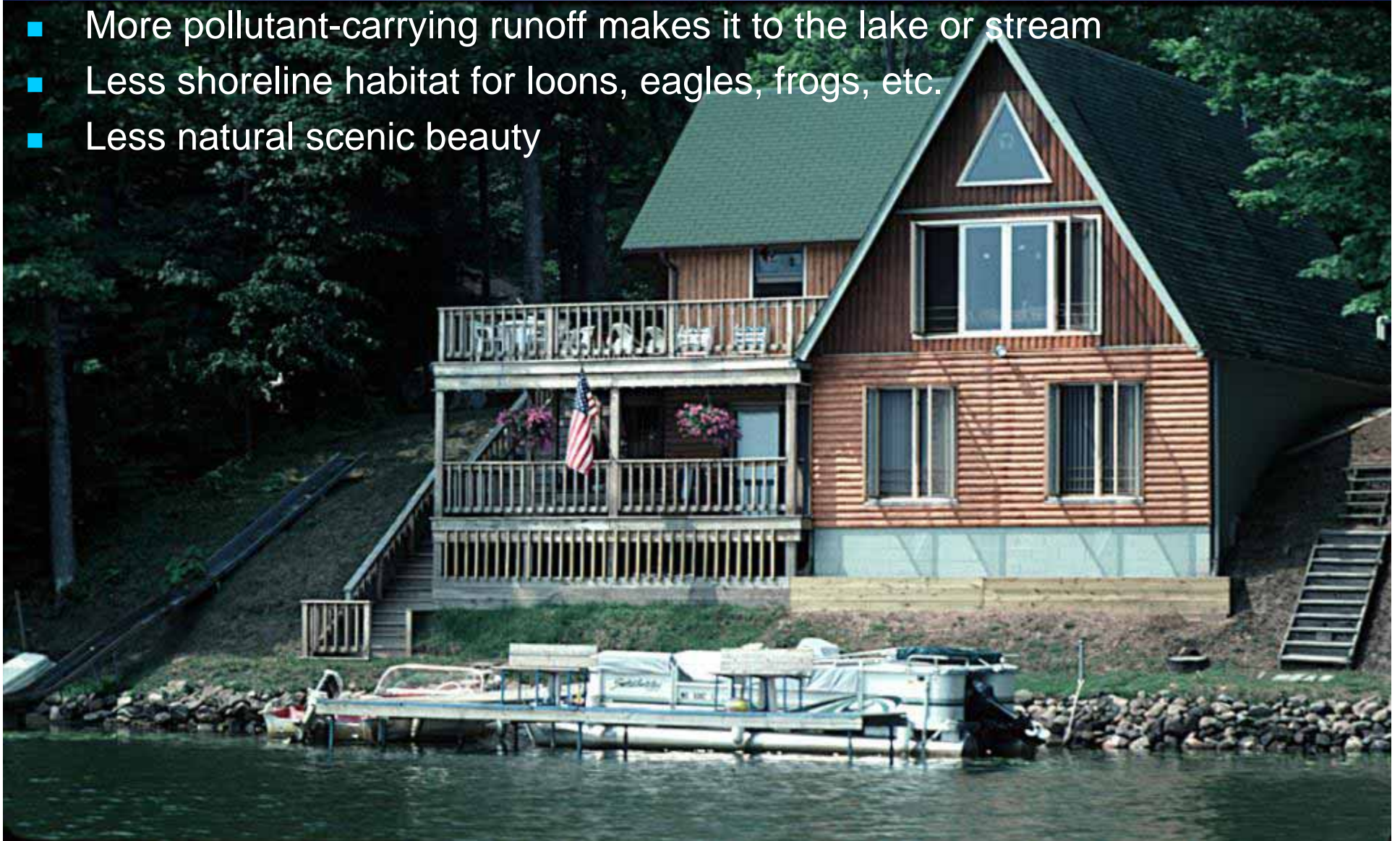
Photo credit
Doug Killian

Changes to NR 115 Standard -Impervious Surfaces

- Counties are required to adopt provisions within their impervious surface standards that 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.
 - Property owner needs to demonstrate that the runoff is being treated or is internally drained.

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

Act 55 also resulted in:

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

Regulating Other Matters

Act 55 continues to allow counties to regulate “matters” that are not regulated by a shoreland zoning standard in NR 115. Other matters need 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

Quiz: Other Matters

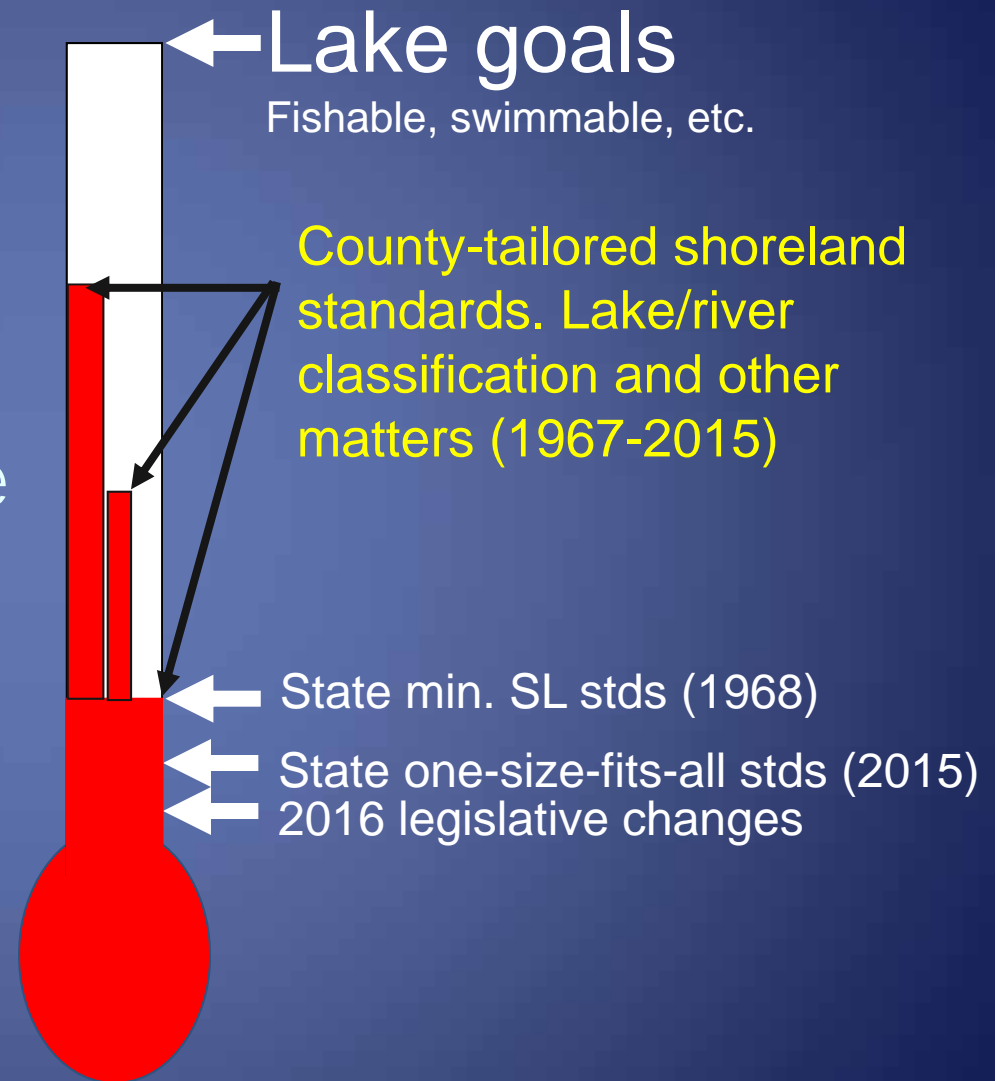
- Q: Can a county through its shoreland ordinance regulate the number of principal structures?



- A: Yes, a county can regulate density as an “other matter” since it furthers the purpose of controlling building sites and the placement of structures.

Regulations provide lake protection

Other tools are needed to achieve optimum performance



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.

County Working Sessions

- Held 7 full day working sessions with the counties to review legislative changes and existing shoreland standards.
- Counties have until October 1, 2016 to have a compliant, certified ordinance.

Recent Legislative Changes

- Act 167 (AB 603)
- AB 582

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
 - Allows one-sided averaging as an option
 - Allows 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



They all depend on healthy shorelines

Questions? Comments?

Kay Lutze

Shoreland Policy Coordinator

Kay.Lutze@wisconsin.gov

Lynn Markham

Shoreland and Land Use Specialist

lmarkham@uwsp.edu