



Shoreland zoning to
protect property values,
fish, lakes & streams



Poll

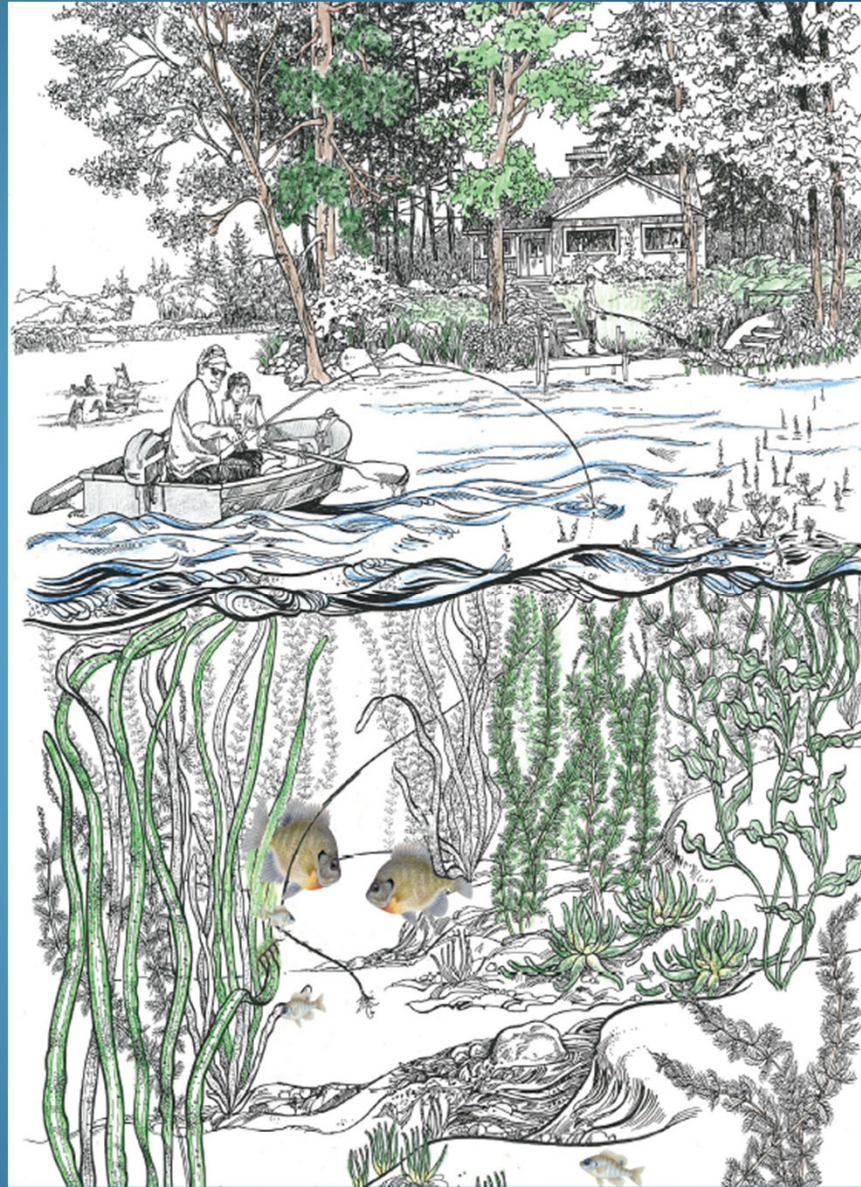
How many people are watching from your site?

- 1
- 2
- 3
- 4
- 5
- More than 5



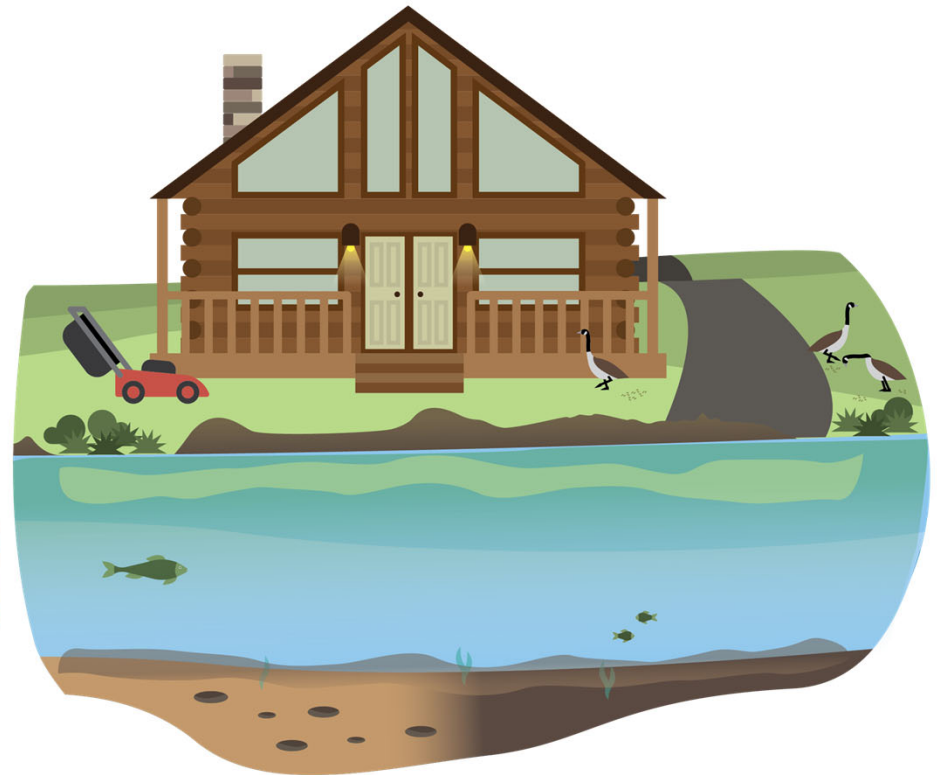
The land-water connection

What we do on the land affects the fish and water quality in lakes and rivers



What differences do you see?
Why do they matter?

Please type
your answers in
the chat box



A bit of history

- The **Wisconsin Constitution** says navigable waters are “common highways and forever free”
- This led to “**The waters of WI belong to the people of WI**” - the Public Trust Doctrine
- Shoreland zoning is a key part of how we protect the public’s rights in navigable waters



From 1965 forward

- In 1965, the Legislature passed the Wisconsin Water Resources Act, including shoreland zoning
- In 1968 the state set minimum standards, and counties could adopt higher standards



W h o p f o r h w z h k u n k o v k h o j h # i n f w



K h o k | z o l u k h g v p o h # k o k | o h #####

c o p # i j k # s u r s h w # y o h v

Purposes of shoreland zoning include...

- Prevent and control water pollution
- Protect spawning grounds, fish and aquatic life
- Control building sites, placement of structure and land uses
- Reserve shore cover and natural beauty

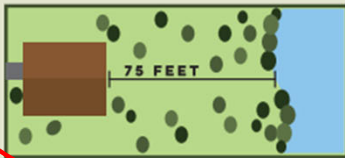
s. 281.31 Wis. Stats.



THE VALUE OF SHORELAND ZONING

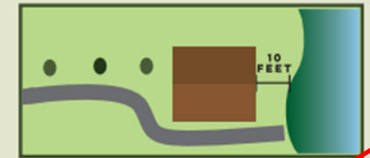
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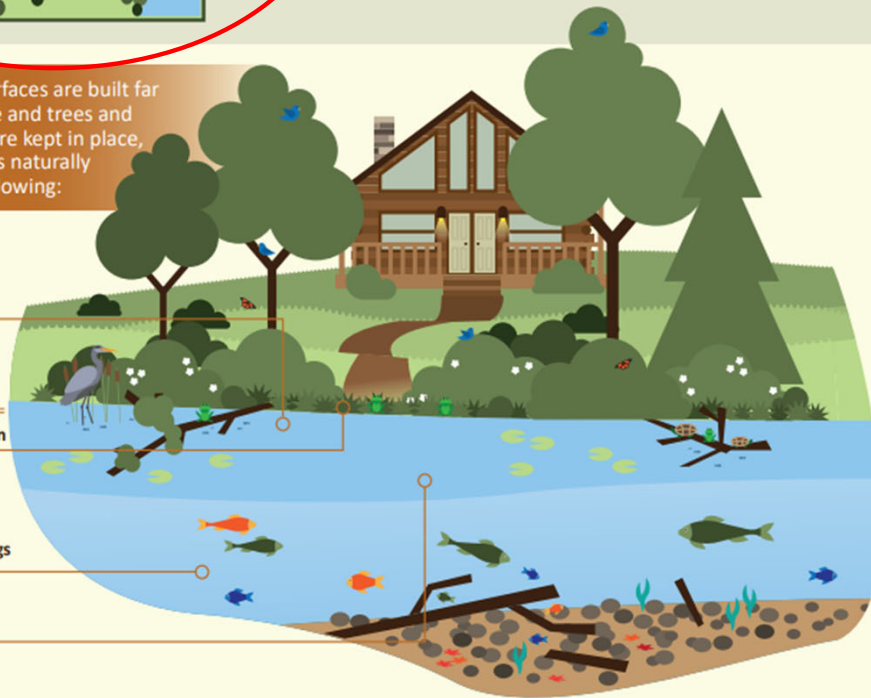
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High waterfront
property values

More trees and
native plants =
Stable shorelines =
Less water pollution

More trees and
native plants =
More fish and frogs

Less algae growth



When hard surfaces are built close to the shore and native plants are removed, the shoreline erodes into the lake or river causing:

Cloudy water =
Reduced waterfront
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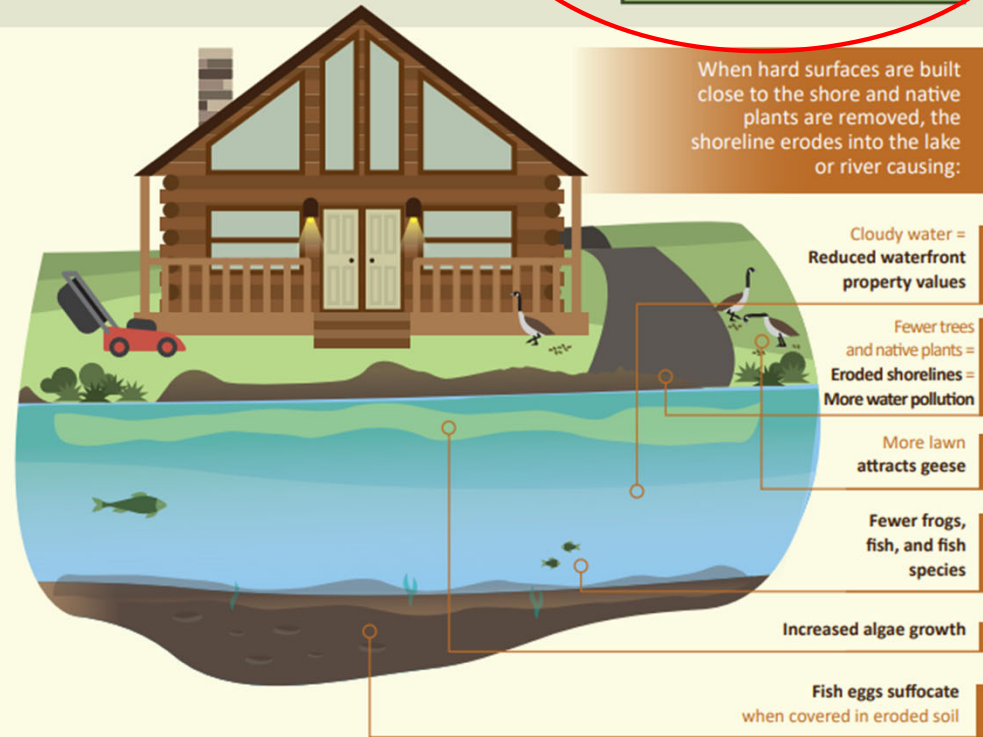
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Eroded shorelines =
More water pollution

More lawn
attracts geese

Fewer frogs,
fish, and fish
species

Increased algae growth

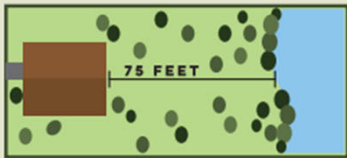
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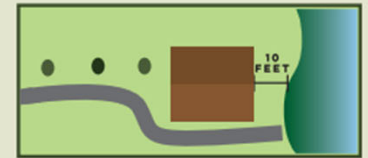
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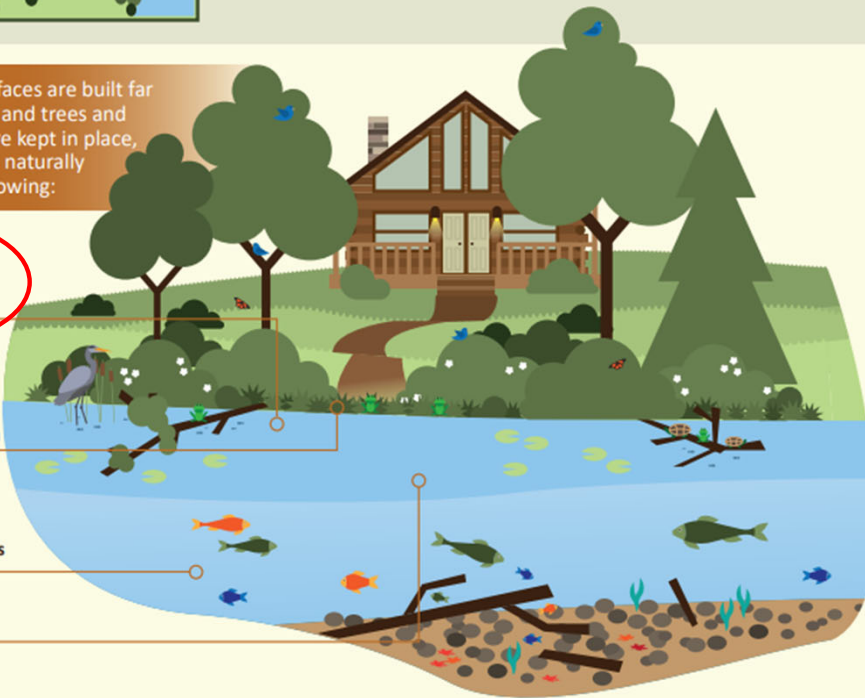
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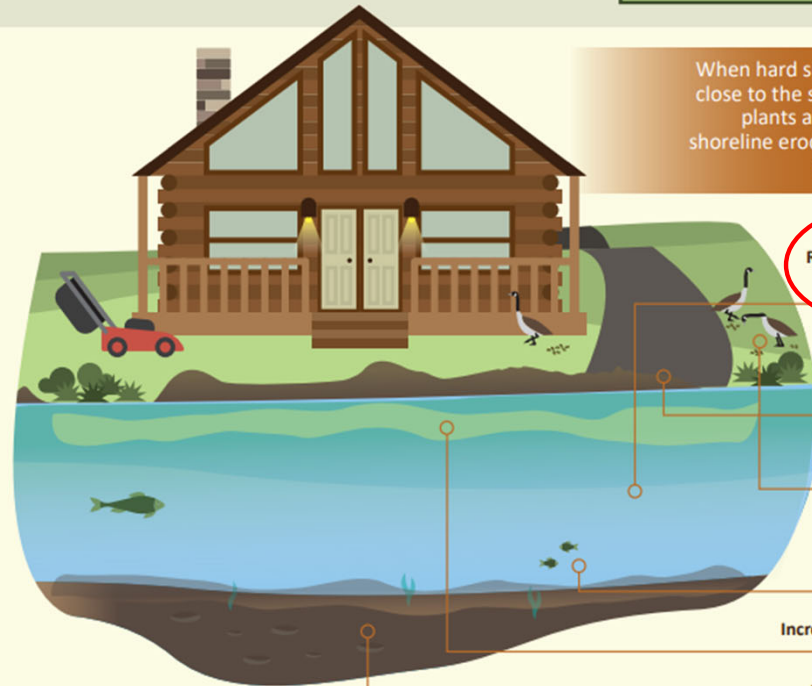
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Clear water =
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Cloudy water =
Reduced waterfront
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Clear water depends on

- Hard surfaces
- Deep-rooted plants at shoreline



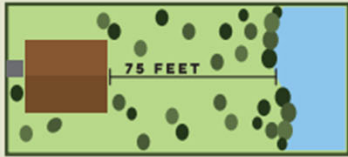
Protecting Your
Waterfront
Investment

10 Shoreland Stewardship Practices

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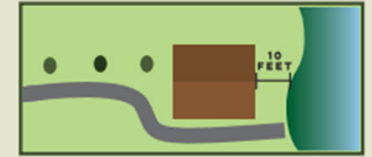
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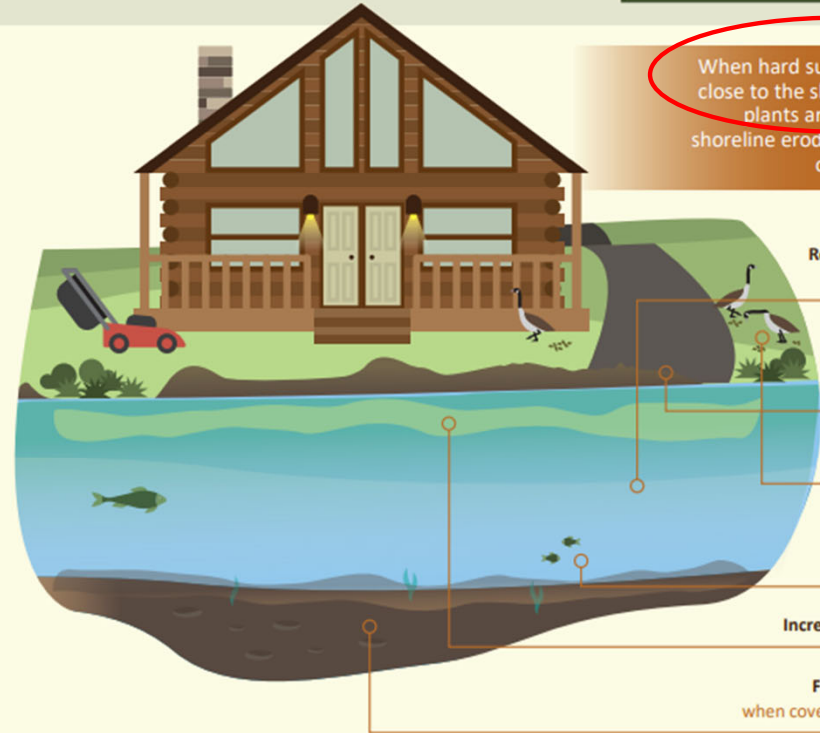
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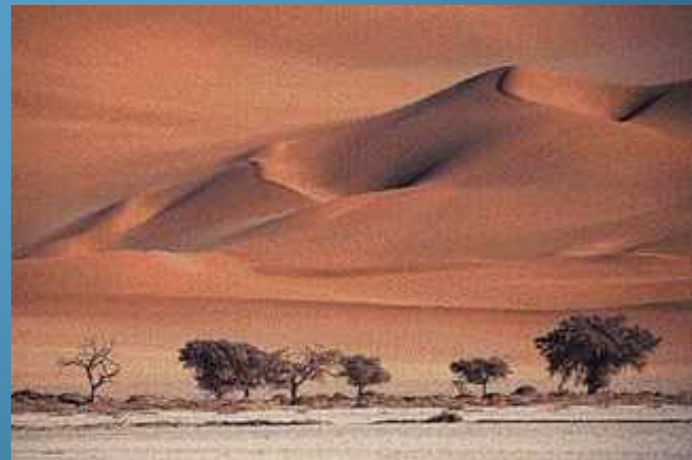


Impervious
surfaces



Impervious surfaces can be thought of as deserts

No plants = no food, no shelter



General Categories of Fish Habitat in Lakes

Physical Structure

Properties

- aquatic vegetation
- woody habitat
- substrate



Water Quality

Properties

- clarity
- sedimentation
- phytoplankton
- periphyton
- hypolimnetic oxygen



Principal Disturbance Drivers

Shoreline
disturbance from
development



Watershed
disturbance from
urbanization and
agriculture



Fish are indicators.

Healthy lakes and rivers have many fish species.

Less healthy lakes and rivers have few or no fish species.

Pick a fish



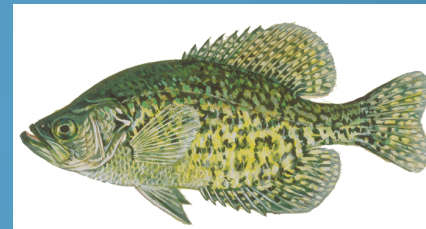
Adult Male Iowa Darter



Northern pike



Johnny darter



Black crappie

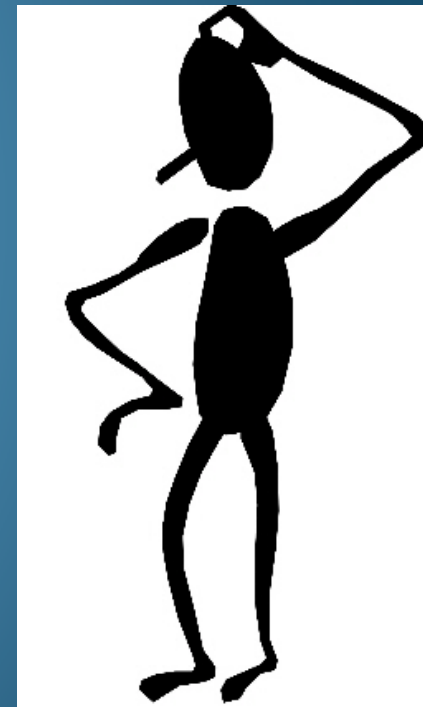


Brook stickleback



Largemouth bass

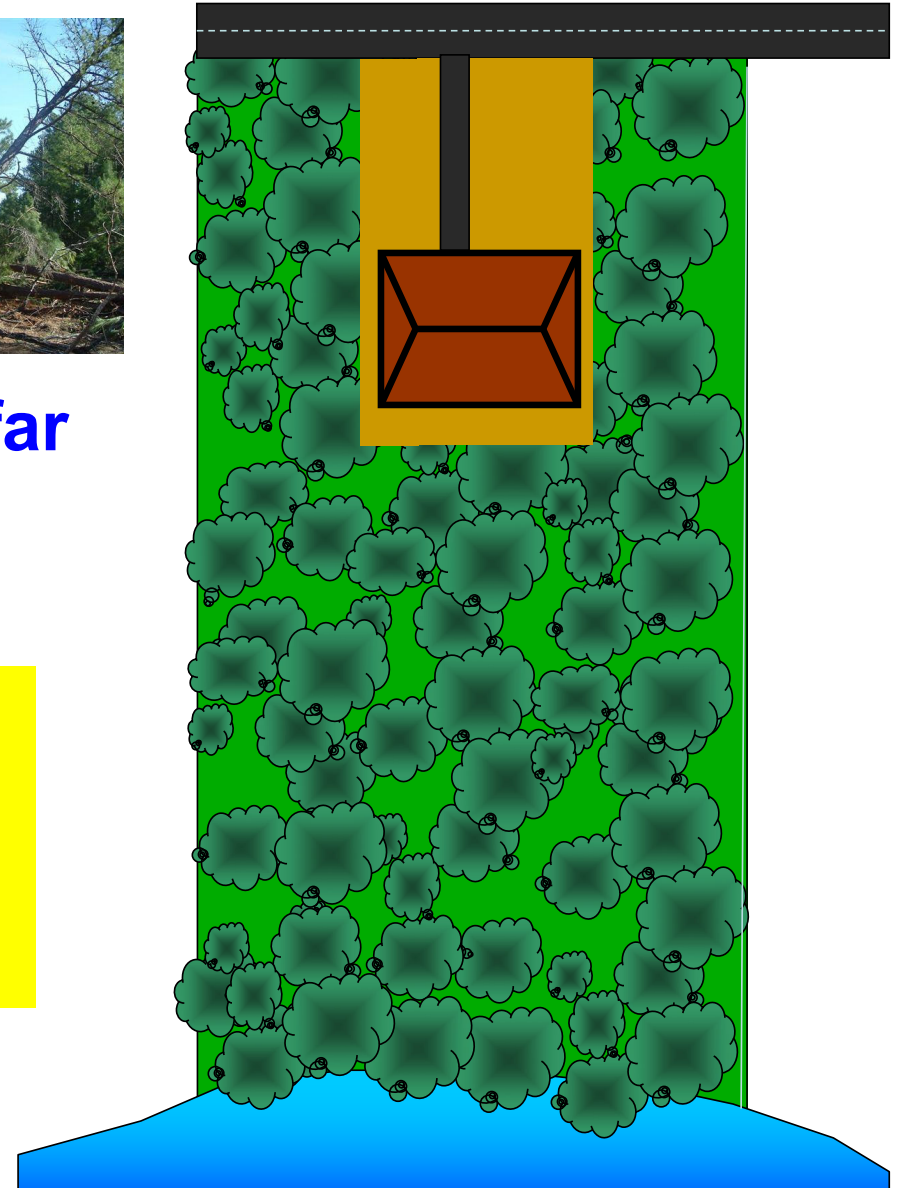
How does our footprint on the land impact fish?





A small footprint far from the lake (7% impervious)

- All fish survived this small footprint
- We can have homes on the shoreline AND lots of fish if we build carefully

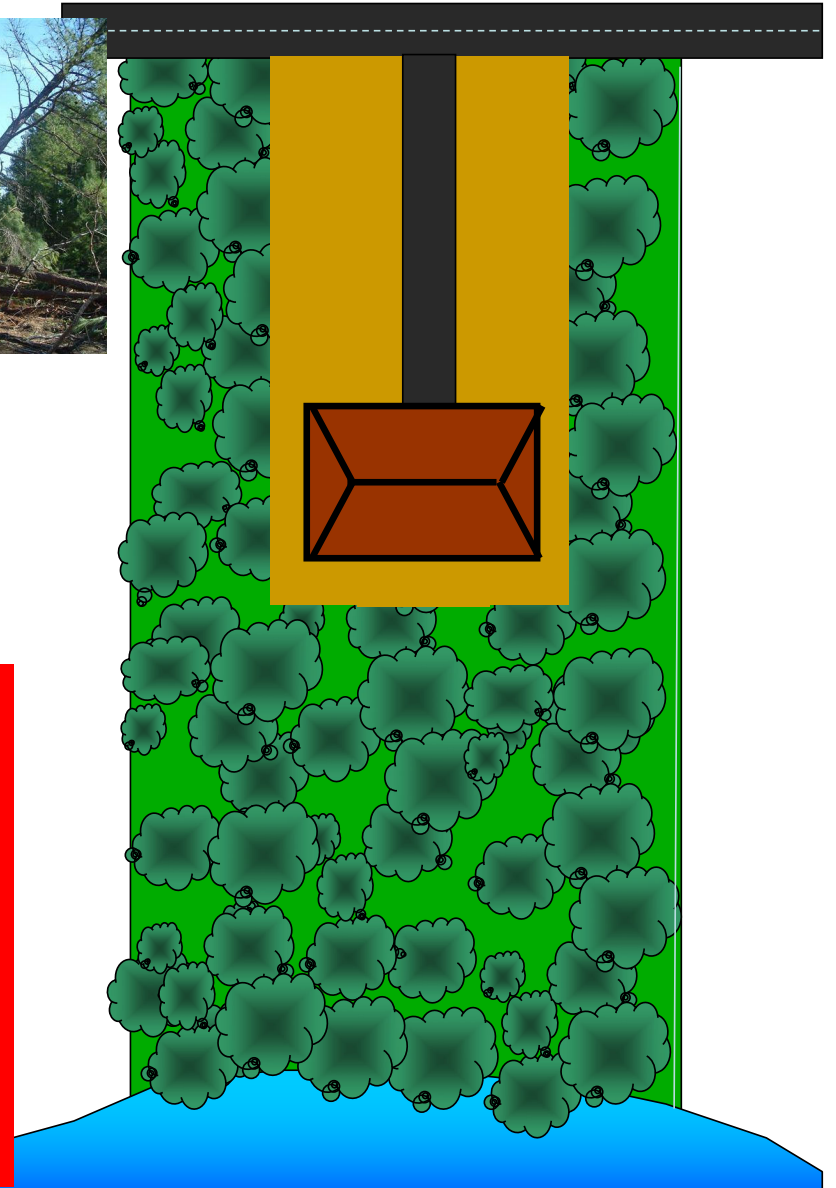




Medium footprint closer to the lake (10% impervious)

Gone

Iowa darter
Black crappie
Channel catfish
Yellow perch
Rock Bass
Hornyhead chub
Sand shiner
Southern redbelly dace
Brook trout

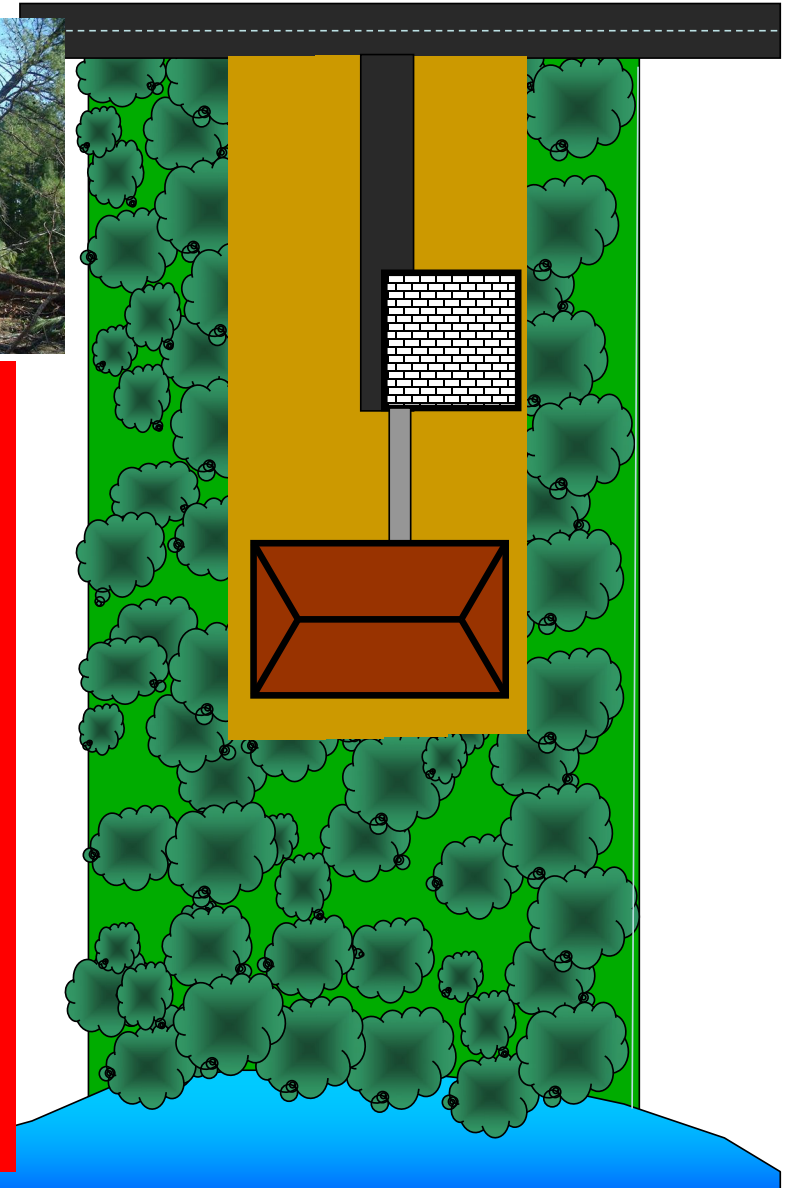




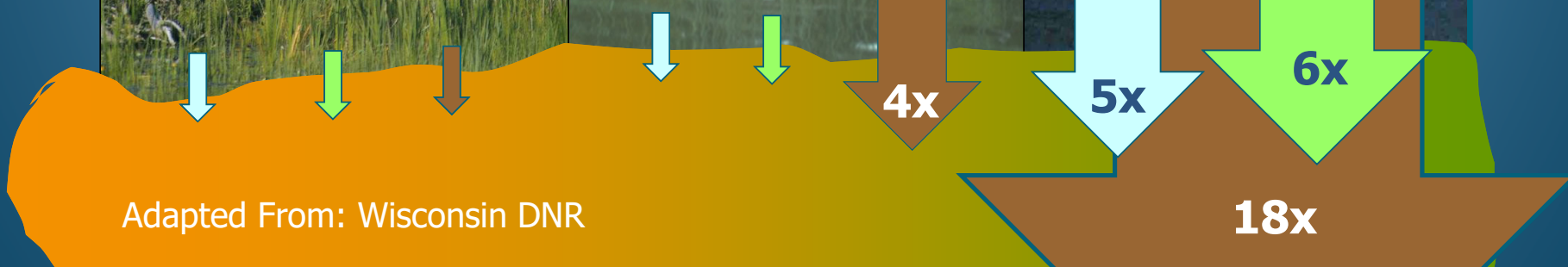
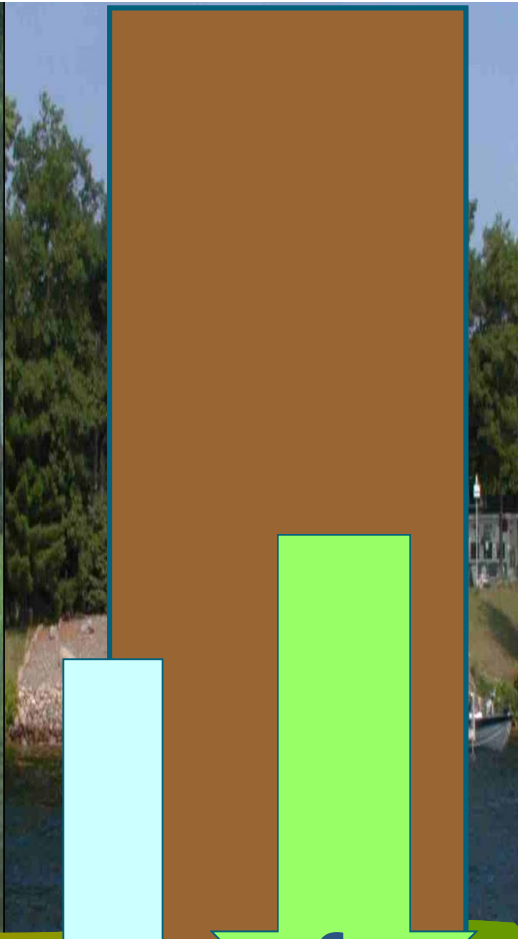
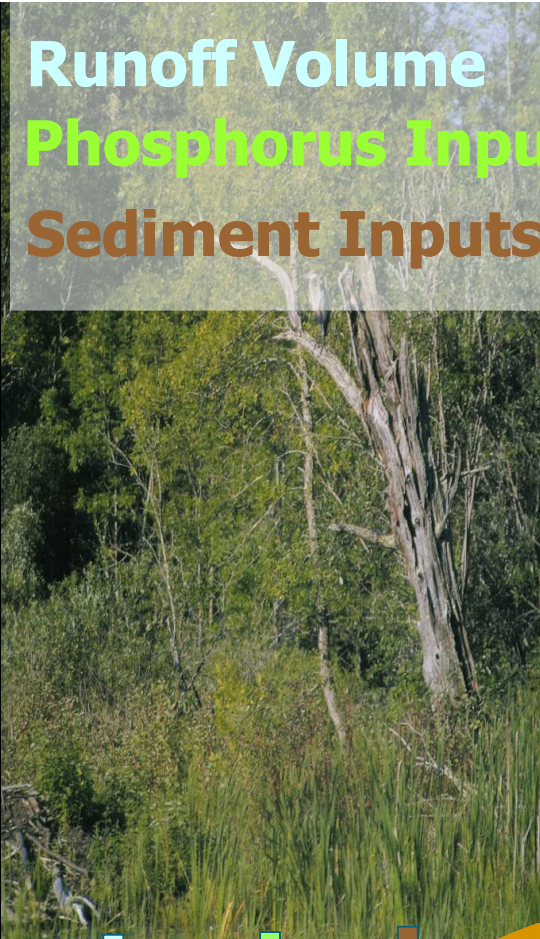
B

Fish eliminated

Golden shiner
Northern pike
Largemouth bass
Bluntnose minnow
Johnny darter
Common shiner
Iowa darter
Black crappie
Channel catfish
Yellow perch
Rock Bass
Hornyhead chub
Sand shiner
Southern redbelly dace
Brook trout



Runoff Volume
Phosphorus Inputs
Sediment Inputs



Adapted From: Wisconsin DNR

More Impervious Surface = Less Fish


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

Less than 8%

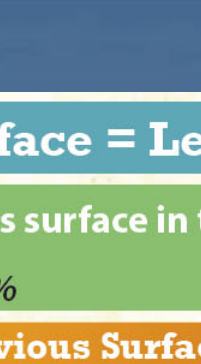
8 - 12%

Greater than 12%

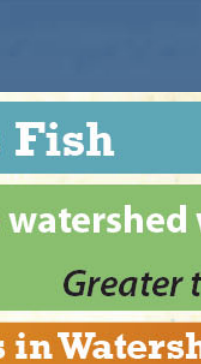
More Impervious Surfaces in Watershed 



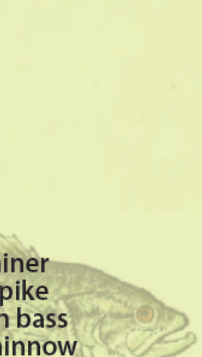
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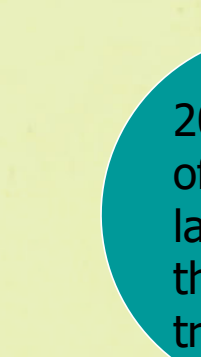
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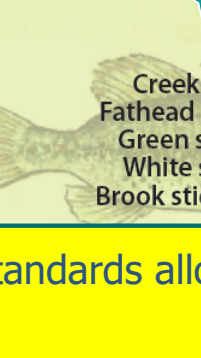
Creek chub
Fathead minnow
Green sunfish
White sucker
Brook stickleback



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Creek chub
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White sucker
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2008 study
of 164 WI
lakes found
the same
trend

Current one-size-fits-all shoreland zoning standards allow:

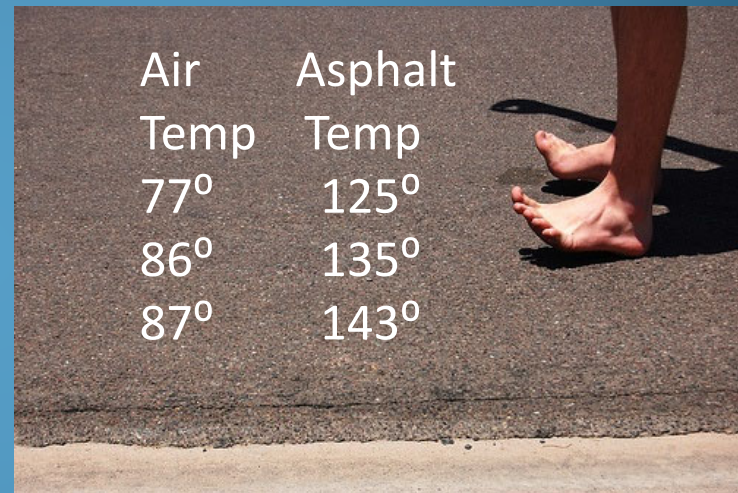
- 15% impervious on all home lots
- 40% on all commercial & industrial lots

More Impervious Surface = Less Fish

More impervious surface causes



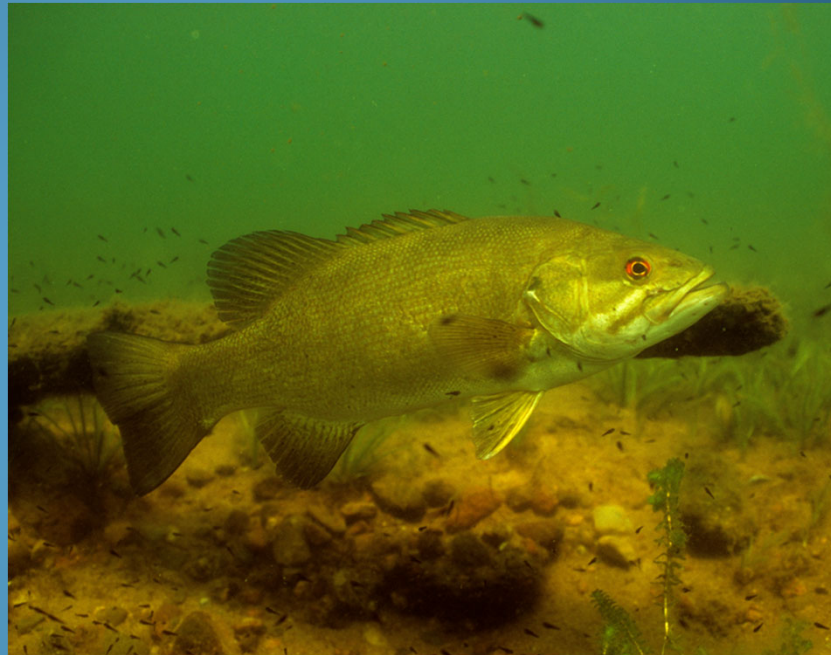
- Larger and more frequent floods



- Less groundwater leads to lower stream flows & warmer water

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 Impervious Surface = Less Fish

- **More sediments** cover spawning beds of walleye, cutting off their oxygen to their eggs



Smaller lot sizes often result in higher % impervious

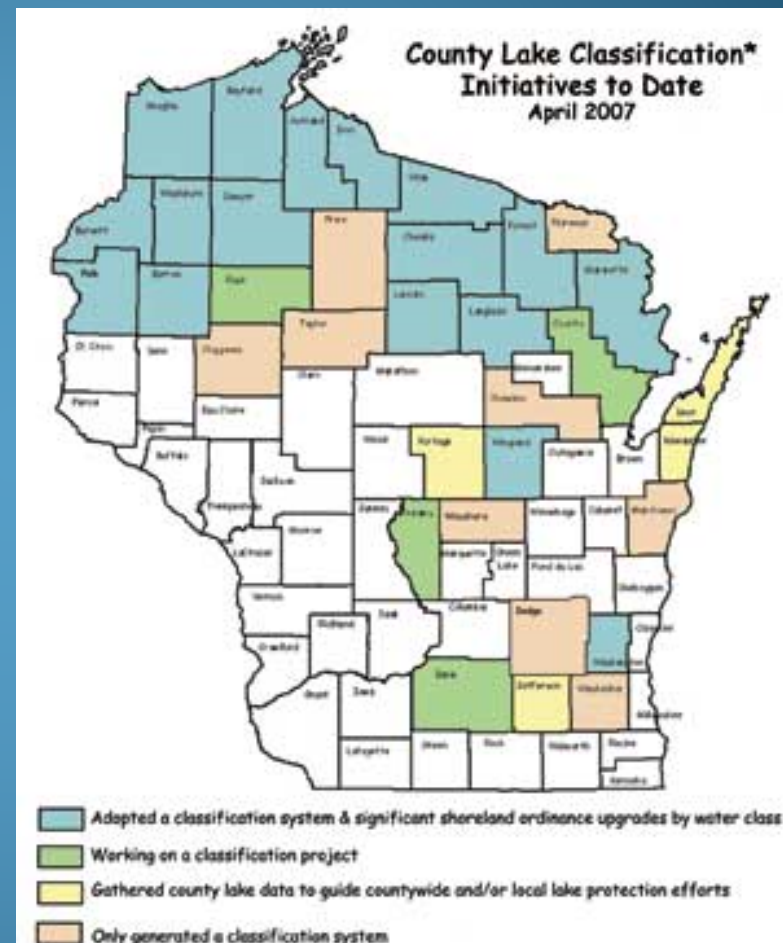


Shoreland zoning standards:

- New lots in unsewered areas need to be 100 feet wide
- New lots in sewerred areas need to be 65 feet wide

43 counties had larger lot sizes to protect their lakes and streams. Since 2015, larger lot sizes not allowed through shoreland zoning. Larger lot sizes are allowed through land division ordinances.

- From 1968-2015 the state set minimum shoreland standards, and counties could voluntarily adopt higher standards for the lakes and streams most affected by development
- 54 counties adopted higher standards for some of their lakes & streams
- In 2015, the WI Legislature set **one-size-fits-all shoreland standards** statewide. Counties can not currently have higher shoreland standards

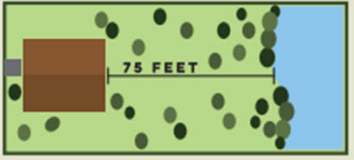


*The Lake Classification grant program and formal state enabling for counties to use the lake classification tool were initiated by statutory changes (in Ch. 28C.69, Wis. Stats.) passed by the Legislature and Governor in 1997 and administrative rules (Ch. NR 200, Wis. Admin. Code) adopted by the Department of Natural Resources in 1999.

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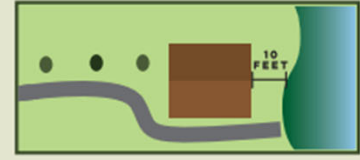
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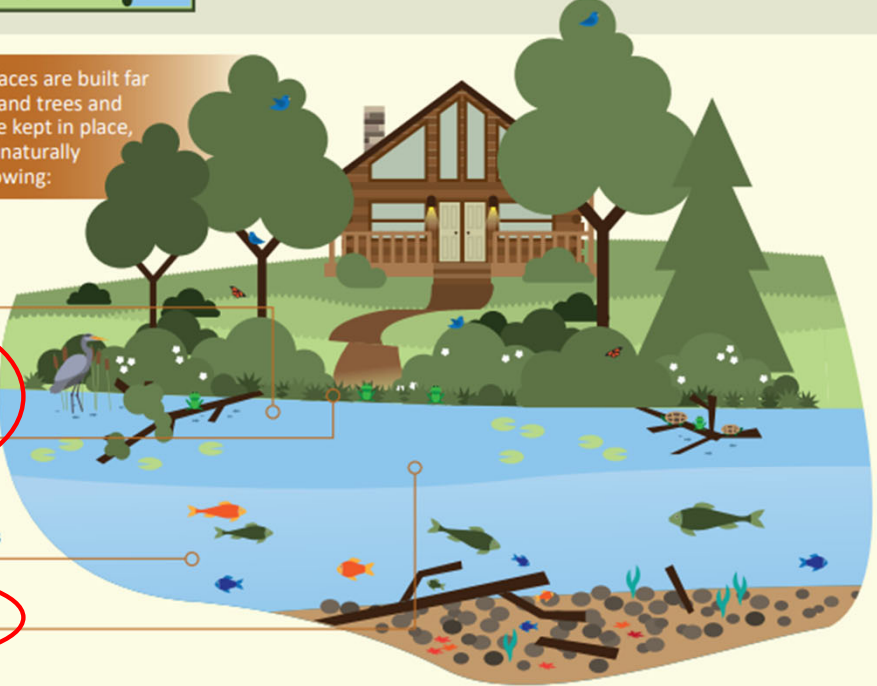
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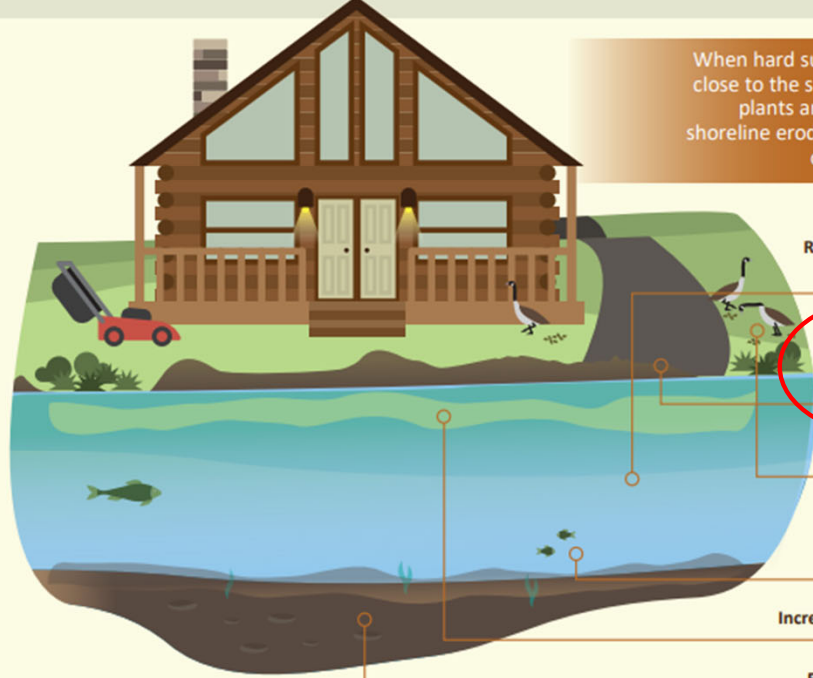
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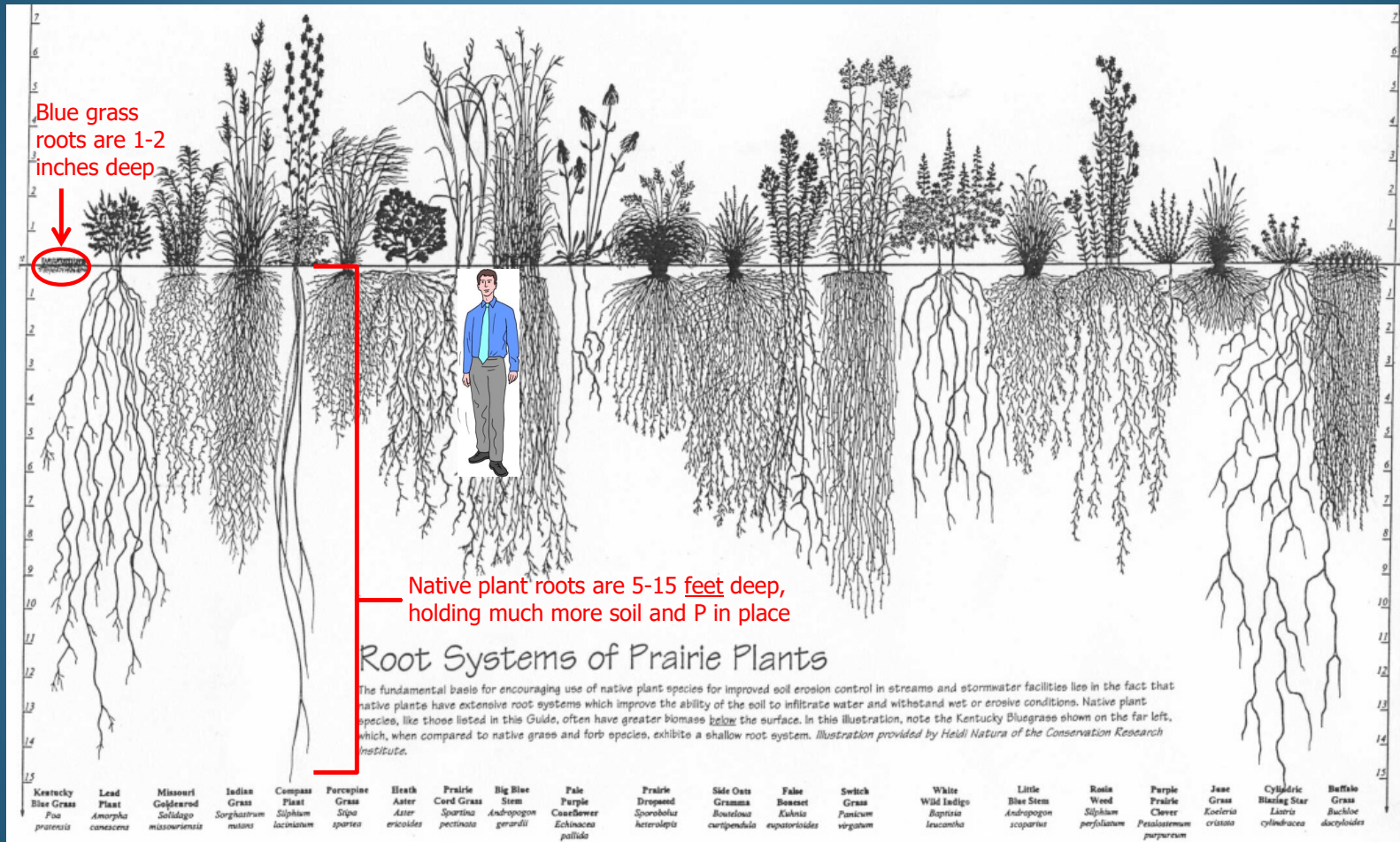
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Increased algae growth

Fish eggs suffocate when covered in eroded soil



Trees and native plants have deep roots



Blue grass cannot hold as much soil in place as native plants because blue grass has much shorter roots. Blue grass can lead to loss of shoreline, erosion, and sediment covering fish spawning beds.

When trees and native plants (buffer) are removed



Added water from hard surfaces and POWTS also destabilize shorelines

Minimize erosion and fertilizer use



Most lawn and garden soils contain adequate and often excessive levels of phosphorus

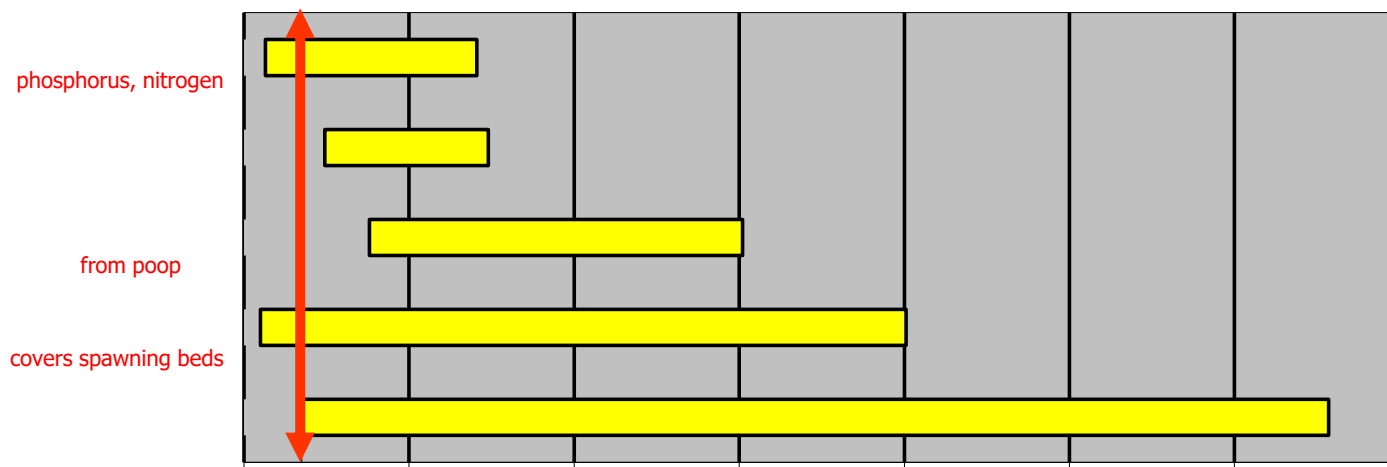
Eroding shorelines fertilize the lake

One pound of phosphorus can result in 500 pounds of algae growth!

It's the law. You cannot apply fertilizer containing phosphorus to lawns unless you qualify for an exemption



What can buffers do if they're big enough?



The 35-foot buffer required in shoreland zoning 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 it isn't enough for wildlife.



Center for Land Use Education
College of Natural Resources
University of Wisconsin-Stevens Point

Design by
Melissa Nieuwenhuis

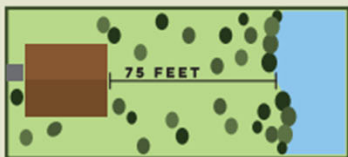


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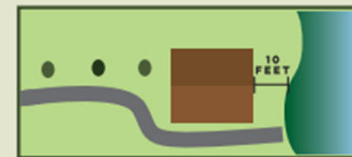
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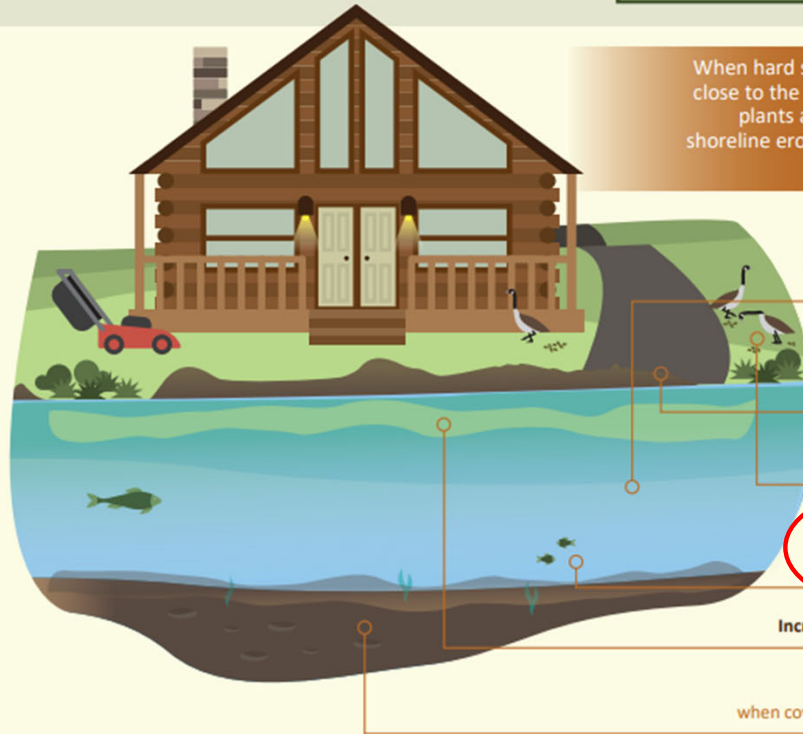
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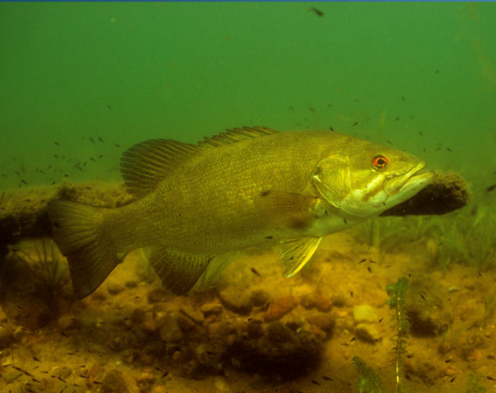
No buffer

Fewer fish

- Harder to hunt by sight
- Erosion covers spawning beds, smothering eggs

Fewer frogs

- No shelter



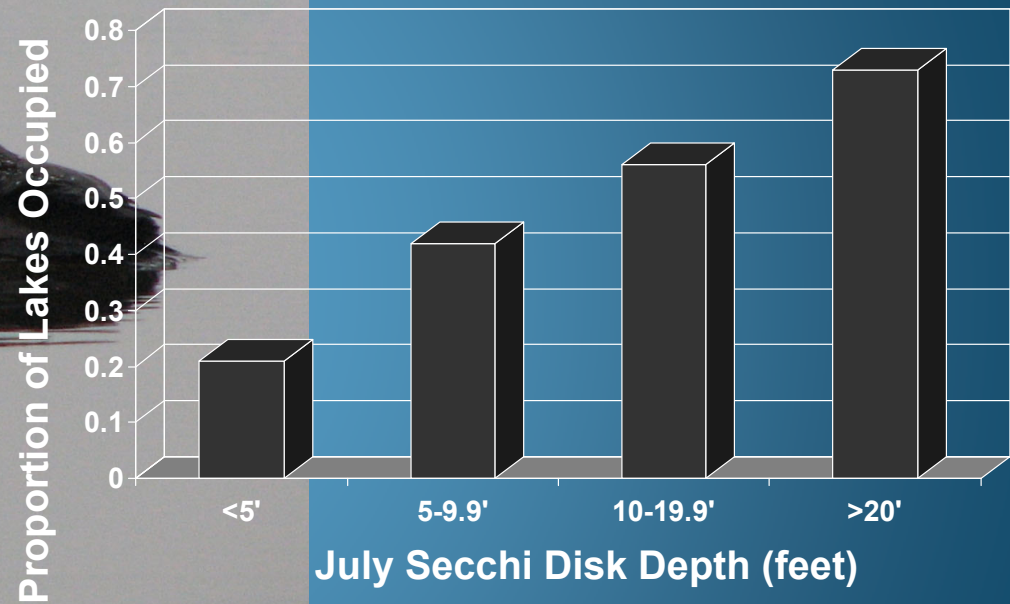
healthylakeswi.com



Wisconsin Loons More Likely on Lakes with Clearer Water



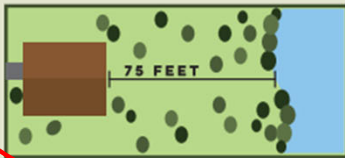
Photo credit
Doug Killian



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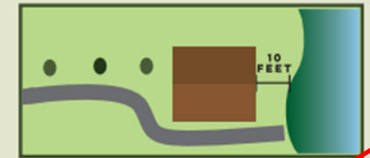
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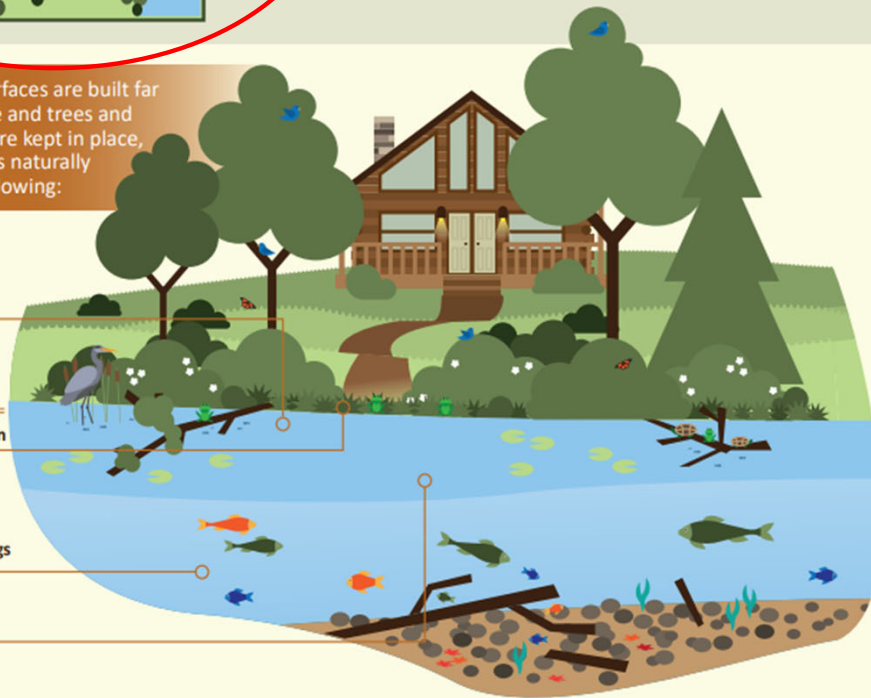
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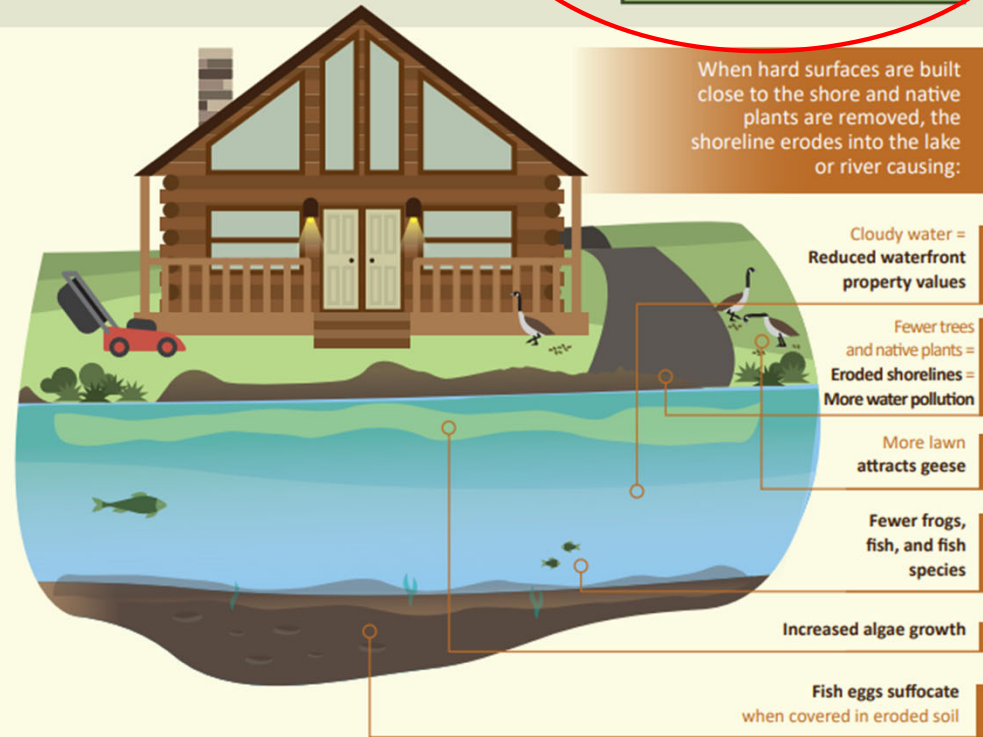
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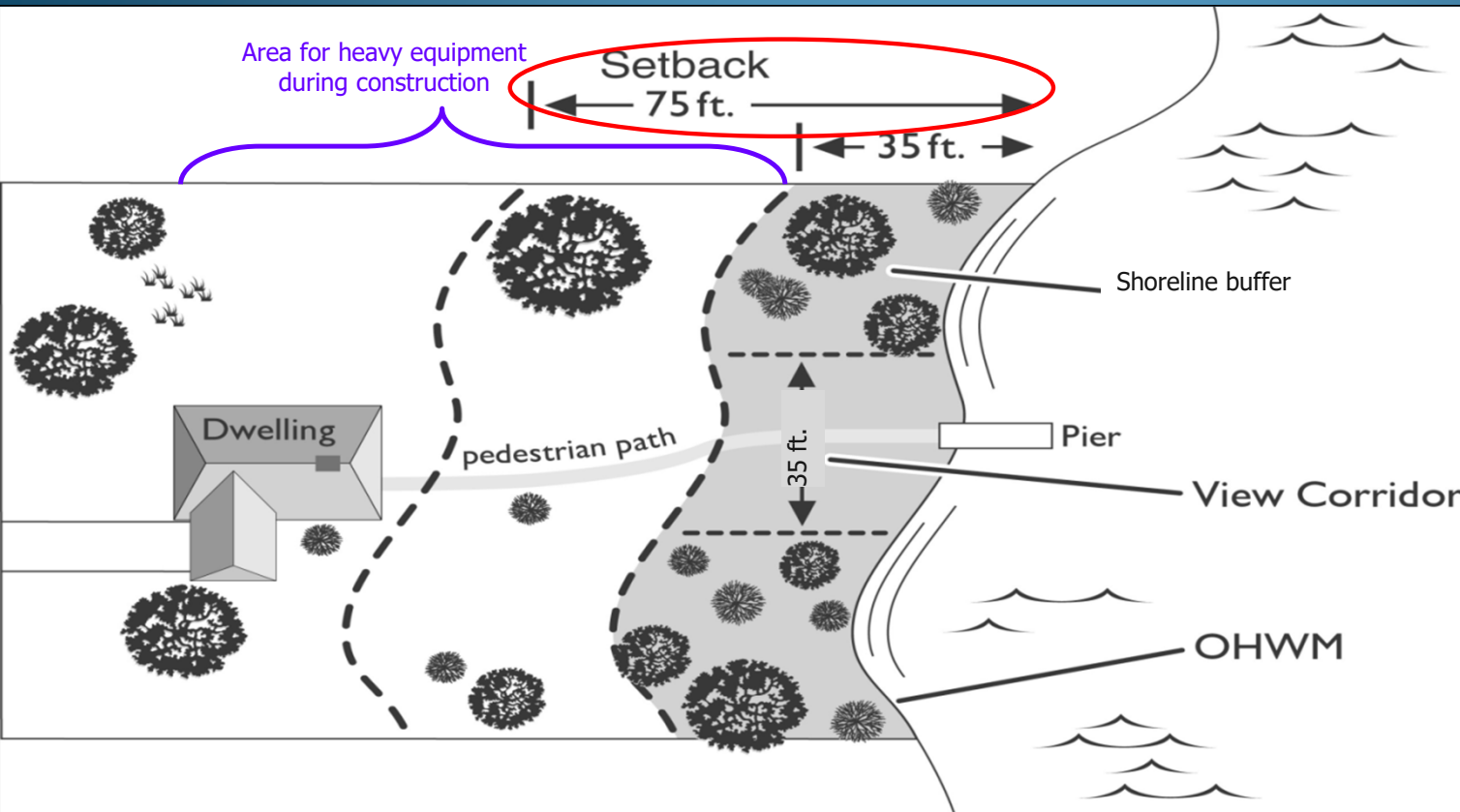
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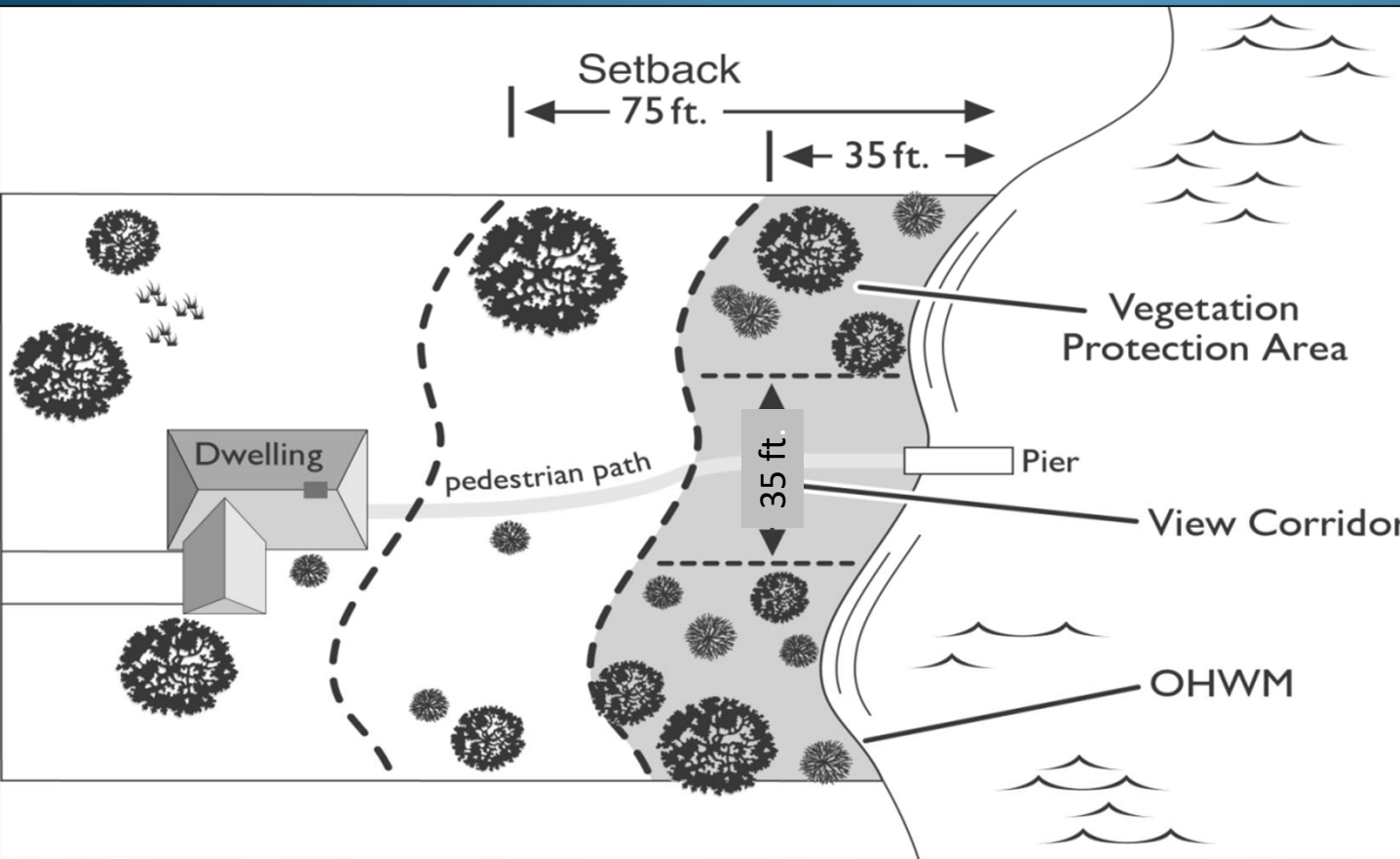


Why shoreline setbacks?

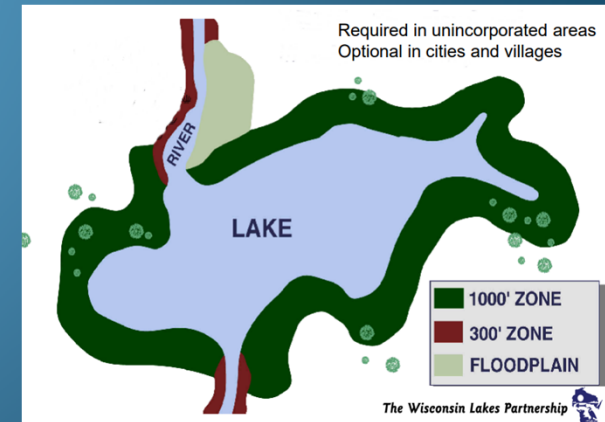


- To **keep the shoreline buffer intact** during and after home construction
- To reduce pollutant-carrying runoff entering lake or stream
- To keep the home/structure on stable ground
- To maintain habitat for frogs, birds and other wildlife

Shoreland zoning standards



1. Minimum lot sizes
2. Shoreline buffers
3. Building setbacks
4. Impervious surface limits
5. Height
6. NC structures
7. Filling, grading, dredging limits





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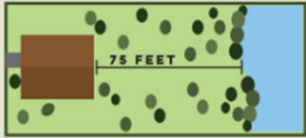
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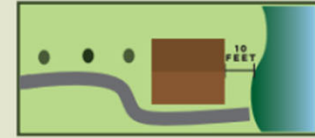
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Reduced waterfront
property values

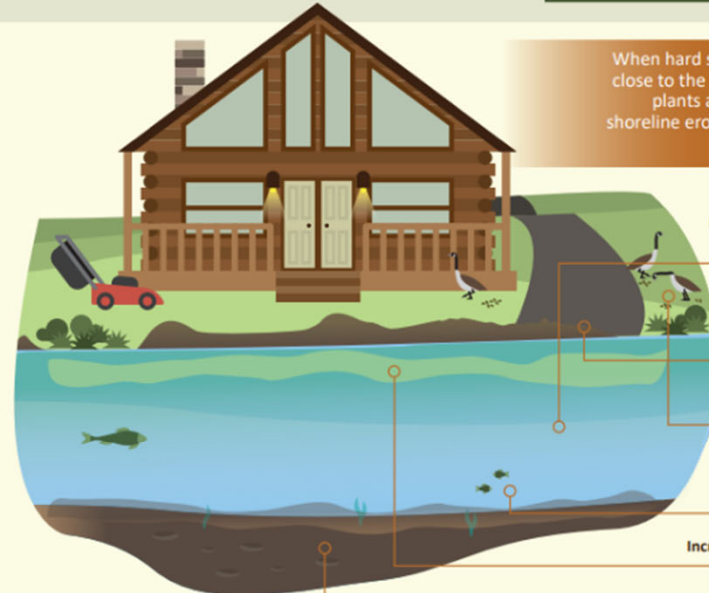
Fewer trees
and native plants =
Eroded shorelines =
More water pollution

More lawn
attracts geese

Fewer frogs,
fish, and fish
species

Increased algae growth

Fish eggs suffocate
when covered in eroded soil



CONCLUSIONS

Shoreland zoning standards make it possible to carefully develop a waterfront property, stabilize shorelines, protect the lake or river, and keep waterfront property values high.

For more information, check with your local zoning office.

WHAT DO SHORELAND ZONING STANDARDS ACCOMPLISH?

Stable
shorelines

Clearer water =
Higher property values

More food and shelter
for fish and frogs

More fish and
fish species

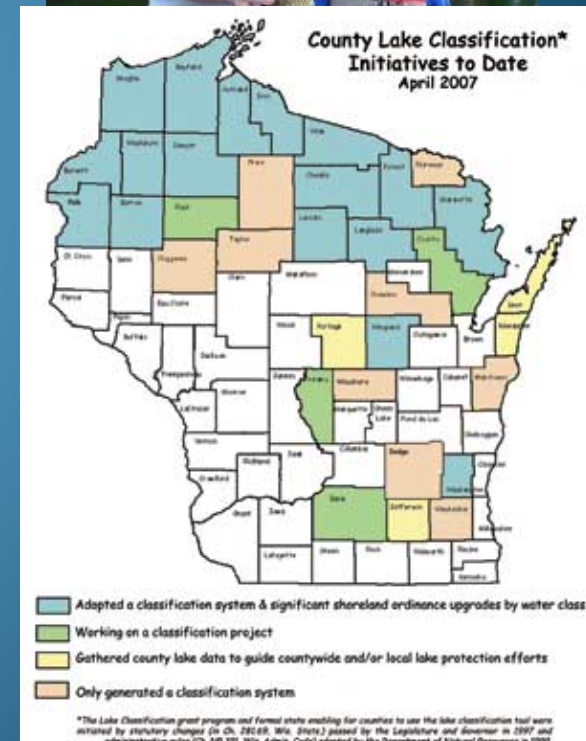
CONCLUSIONS

Waterfront property developed without shoreland zoning standards can cause eroded shorelines, a degraded lake or river, and reduced waterfront property values.

Complete the Shoreland Evaluation Tool to assess your waterfront property at survey.healthylakeswi.com.

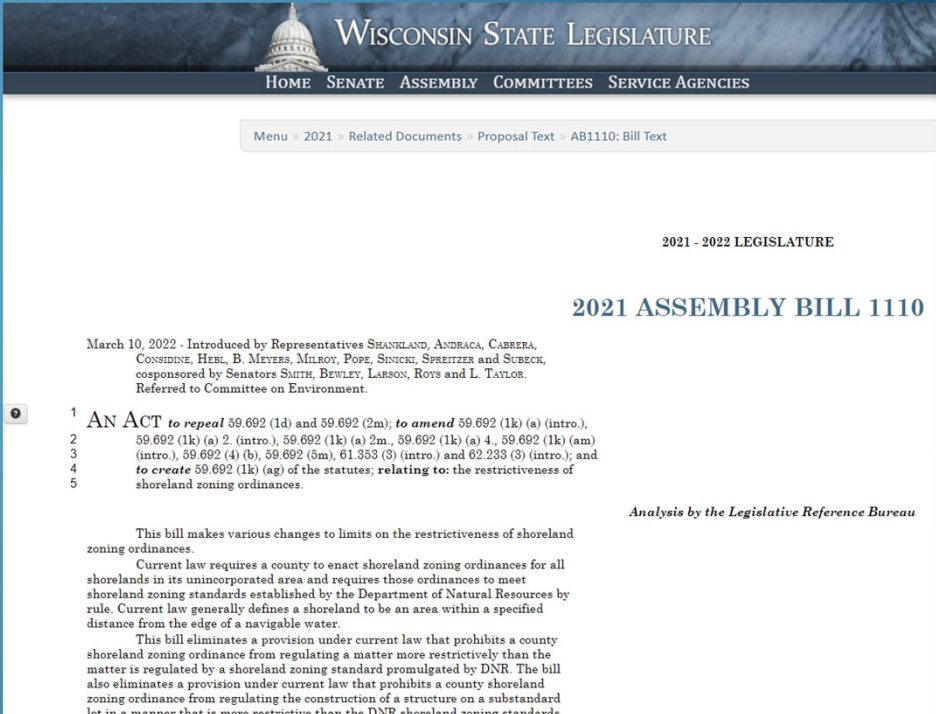
Review

- The quality of a lake or river depends on what's happening on the land around it
- Shoreland zoning **can** be an effective tool to protect our lakes, streams and fisheries through lot sizes, setbacks, buffers and more
- From 1968-2015 the state set minimum shoreland standards, and counties could voluntarily adopt higher standards for the lakes and streams most affected by development. 54 counties did adopt higher standards for some of their local lakes
- In 2015, the WI Legislature set **one-size-fits-all shoreland standards** statewide. Counties can not currently have higher shoreland standards, but **communities can have larger lot sizes through land division ordinances.**



New bill: AB1110/SB1090

- Returns local control of shoreland zoning by eliminating a 2015 provision. This bill would allow counties to again voluntarily have higher shoreland standards
- Introduced in March 2022 by Rep. Shankland
- Co-authored by 10 representatives and 5 senators
- <https://docs.legis.wisconsin.gov/2021/proposals/reg/asm/bill/ab1110>



WISCONSIN STATE LEGISLATURE

HOME SENATE ASSEMBLY COMMITTEES SERVICE AGENCIES

Menu » 2021 » Related Documents » Proposal Text » AB1110: Bill Text

2021 - 2022 LEGISLATURE

2021 ASSEMBLY BILL 1110

March 10, 2022 - Introduced by Representatives SHANKLAND, ANDRAGA, CABRERA, CONSIDINE, HEEL, B. MEYER, MILROY, POPE, SINICKI, SPREITZER and SUBECK, cosponsored by Senators SMITH, BEWLEY, LARSON, ROYS and L. TAYLOR. Referred to Committee on Environment.

AN ACT to repeal 59.692 (1d) and 59.692 (2m); to amend 59.692 (1k) (a) (intro.), 59.692 (1k) (a) 2. (intro.), 59.692 (1k) (a) 2m., 59.692 (1k) (a) 4., 59.692 (1k) (am) (intro.), 59.692 (4) (b), 59.692 (5m), 61.353 (3) (intro.) and 62.233 (3) (intro.); and to create 59.692 (1k) (ag) of the statutes; relating to: the restrictiveness of shoreland zoning ordinances.

Analysis by the Legislative Reference Bureau

This bill makes various changes to limits on the restrictiveness of shoreland zoning ordinances.

Current law requires a county to enact shoreland zoning ordinances for all shorelands in its unincorporated area and requires those ordinances to meet shoreland zoning standards established by the Department of Natural Resources by rule. Current law generally defines a shoreland to be an area within a specified distance from the edge of a navigable water.

This bill eliminates a provision under current law that prohibits a county shoreland zoning ordinance from regulating a matter more restrictively than the matter is regulated by a shoreland zoning standard promulgated by DNR. The bill also eliminates a provision under current law that prohibits a county shoreland zoning ordinance from regulating the construction of a structure on a substandard lot in a manner that is more restrictive than the DNR shoreland zoning standards.

Webinar Resources Page

Webinar Materials

PowerPoint slides for the webinar will be available in PDF format a day before the event.



The Value of Shoreland Zoning is available for free in two sizes:
 - Handout (11x17)
 - Poster (18.5x28)

These can be ordered at no cost at <https://bit.ly/shorelandgraphic>.

[Wisconsin Shoreland Zoning Timeline](#)

[Variance Decision Form - Shoreland Zoning](#)

[Shoreland Zoning Resources](#)



Additional shoreland/waterfront publications that can viewed

[Protecting your waterfront investment](#)

[Choosing the right waterfront property](#)

[Impervious Surfaces: How they impact fish, wildlife and water](#)

[The Water's edge: Helping fish and wildlife on your waterfront](#)

Shoreland Zoning Resources

Overview of Shoreland Zoning
 A video explaining basics, science, citizen efforts, and the legislative changes to shoreland zoning.
www.youtube.com/watch?v=evnu0Cm0Zg

Shoreland science handouts
<https://bit.ly/shorelandscience>

History of Shoreland Zoning
 Three short videos about the Wisconsin residents who helped develop the Public Trust Doctrine. This is the legal basis and the rationale behind shoreland zoning and goes back to the Wisconsin Constitution. <http://bit.ly/209q3p3>

Wisconsin shoreland zoning timeline.
www.wisconsin.gov/Documents/Water/Wisconsin20Shoreland20Zoning20Timeline202019.pdf

Role of the zoning board webinar recording
 This webinar covers decisions typically assigned to the zoning board of adjustment or appeals, including variances, administrative appeals, and conditional uses. It takes a closer look at the quasi-judicial role of the zoning board and how their decisions impact communities.
www.wisconsin.gov/Documents/Water/Wisconsin20Shoreland20Zoning20Webinar20Role20of20the20Zoning20Board20Appendix.pdf

CLUE offers zoning board training through webinars and workshops.

Zoning Board Handbook
 Zoning boards act like judges to decide on variances, administrative appeals, and in some counties, conditional uses. Their decisions impact shoreland zoning and other types of zoning. The Zoning Board Handbook is intended to assist zoning board members, local government officials, and citizens in understanding the role of the zoning board and the procedures and standards with which their decisions must comply.
www.wisconsin.gov/Documents/Zoning/Handbook/Zoning_Board_Handbook.pdf

Summary of shoreland zoning, including suggestions for zoning board members. Starts on page 159 of the Zoning Board Handbook.

Role of the Zoning Board
 August 20, 2016 at 10:00 am

Zoning Board Handbook
 August 20, 2016 at 10:00 am

Publications for waterfront property owners
www.wisconsin.gov/Documents/Water/Wisconsin20Shoreland20Zoning20Timeline202019.pdf

- The value of shoreland zoning
- Choosing the right waterfront property
- Protecting your waterfront investment: 10 shoreland stewardship practices
- Impervious surfaces: How they impact fish, wildlife and waterfront property values
- The water's edge: Helping fish and wildlife on your waterfront property

Videos you might play for the public

Our Lakeshore Connection (8 minutes)
<https://www.youtube.com/watch?v=6d4u8d1m5d>

Impacts of impervious surfaces on fish, wildlife and waterfront property values (12 minutes)
<https://www.youtube.com/watch?v=2P7yG281A84&feature=youtu.be>

Larry the All-American Bullfrog (one minute video about habitat for frogs)
<https://www.youtube.com/watch?v=fA8qV5M4>

Sebastian the Goose Encourages Natural Shorelines (two minutes)
<https://www.youtube.com/watch?v=4k61Gk4g>

Compiled by Lynn Markham, Center for Land Use Education 3/14/22

Do you plan to take any of these actions after attending this session? (select all that apply)



Consider ordering shoreland zoning handouts

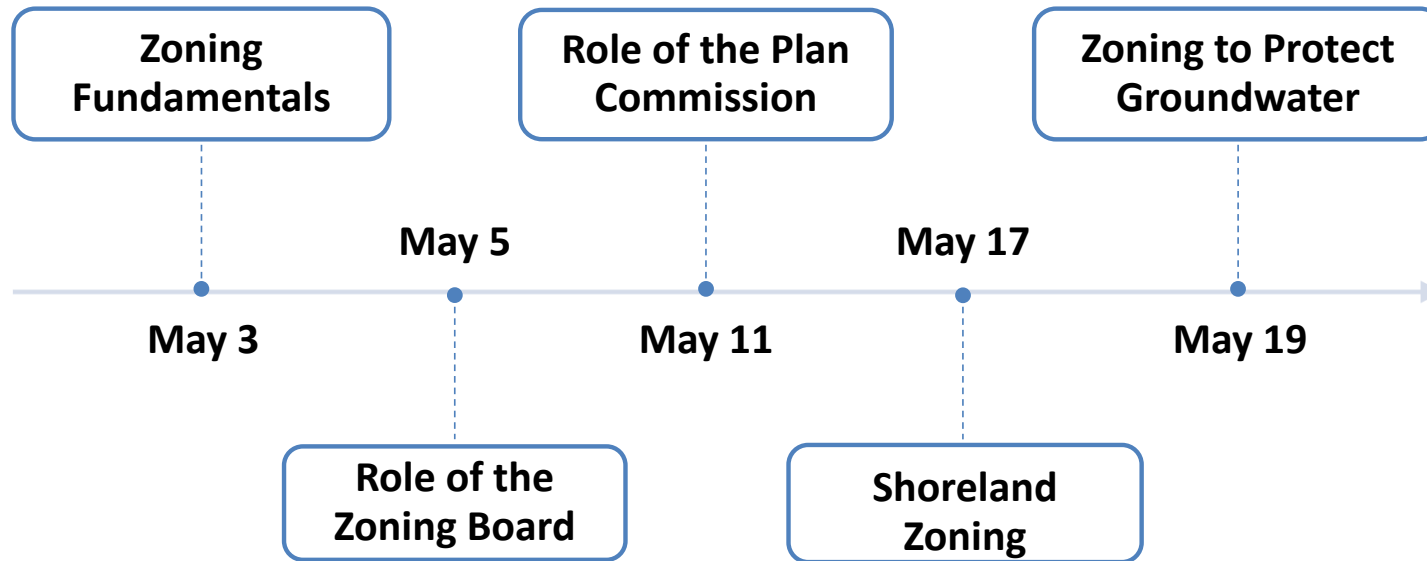


Focus on shoreland zoning purposes when making decisions



Share webinar resources with my community

Spring Zoning Webinar Series



Registration www.eventbrite.com/e/zoning-webinars-spring-2022-tickets-298685475297

Shoreland Zoning Program

Mike Wenholz - Shoreland Program Coordinator
Dale Rezabek - Shoreland Specialist





Thank you
Comments?
Questions?

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Center for Land Use Education
College of Natural Resources
University of Wisconsin - Stevens Point

Demographics

Understanding the demographics of our participant helps us improve Extension programs and services. Asking for the following also helps us meet our institutional requirements for compliance with Federal non-discrimination policies. Providing us with this information is **voluntary**.

If you have questions about this survey or why Extension collects this information, please contact Kim Waldman, Compliance Coordinator & Equity Strategist, UW-Madison Division of Extension, (608) 263-2776, kim.waldman@wisc.edu



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