Eastern Lakes Times

Marathon County CPZ
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Wausau, WI 54403-5449

Do you have suggestions for articles or photos to share? Would you like to receive an electronic copy of this newsletter? Please contact:
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"The best time to plant a tree was 20 years ago.

The next best time is today."

A Review of Shoreland Zoning Continued

Below are the options that can be chosen for projects that require mitigation. Please note that for placement of an open sided and screened structure within 75' of the OHWM, the only option is to establish a vegetative buffer.

Activity that Requires Mitigation	Mitigation Practices (Pick Three of the Four)			
Lateral expansion of a principal structure between 35' & 75' of the OHWM.	Remove all non-conforming accessory structures located in the shore setback area.	Establish a vegetative buffer.	Evaluate and upgrade POWTS system.	Establish a stormwater practice.
Replacement or relocation of principal structure between 35' & 75' of the OHWM.	Remove all non-conforming accessory structures located in the shore setback area.	Establish a vegetative buffer.	Evaluate and upgrade POWTS system.	Establish a stormwater practice.
Impervious surface area greater than 15% and/or less than or equal to 30%.	Remove all non-conforming accessory structures located in the shore setback area.	Establish a vegetative buffer.	Evaluate and upgrade POWTS system.	Establish a stormwater practice.
Placement of an open sided and screened structure within 75' of OHWM.	N/A	Establish a vegetative buffer.	N/A	N/A

MARATHON COUNTY
Conservation, Planning, & Zoning Department

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Sara Park Shoreland Buffer Restoration, Tomahawk (and header photo)

Marathon County Lake Protection

Marathon County

Shoreland Buffers = Better Water Quality

By Lauren Nichols, Shoreland Protection Technician, Marathon County CPZ

Lakes are greatly affected by stormwater runoff. Countless studies have shown the correlation between an increase in impervious surfaces within a lake's watershed, and the amount of pollution within that lake. This is why the county regulates impervious surfaces and shoreland buffers—because these factors have a large impact on water quality.

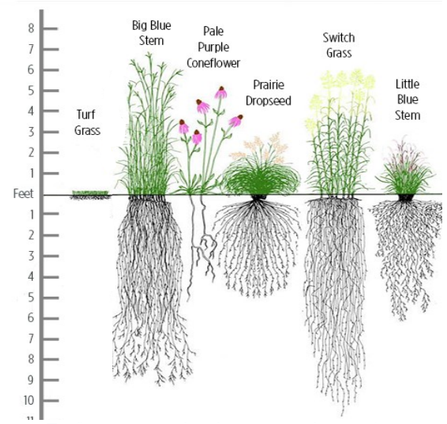
Shoreland buffers can mitigate some of this pollution. They are called "buffers" because they provide a physical barrier between human impacts and the water. When water travels down driveways, lawns, and other impervious surfaces, it picks up all kinds of pollution—lawn chemicals, lawn fertilizers, road salt, dog poop, car wash chemicals, grass clippings, eroded soil, you name it. Without a buffer, all of that pollution has a straight shot to the water. Nutrients can cause a boom in aquatic plant or algae growth, and sediment can make the water cloudy, stressing fish and covering spawning beds. Other chemicals can cause physiological affects or death in aquatic organisms. Once a lake is saturated with nutrients, it is very difficult and expensive to remove them.

Now picture a lake that has an intact buffer, like the photo in the banner above and to the left. In this scenario, stormwater runoff is physically slowed down and stopped by the plants, which gives the water time to soak into the ground. The soil will filter out nutrients, and any eroded sediment will settle out. By the time this water reaches the water table, it will be pretty darn clean.

While trees and shrubs are an important part of a healthy shoreland buffer, the main type of plants that will slow and stop the runoff are the groundcovers—the non-woody plants like wildflowers, grasses, and sedges, that provide more of a physical barrier to runoff. The width of the buffer is also important. According to Marathon County's standards, it must extend at least 35 feet from the water's edge. But, if a property has a lot of impervious surfaces, the buffer may need to be wider in order to take on all of the stormwater runoff.

Another key player in water infiltration lies in plant roots. Roots create a network of underground channels that provide pathways for stormwater to take. So, the deeper the root system, the better the water infiltration. This is why lawns can generate runoff. Their roots systems are very shallow (4-5"), which means that they don't allow for much water to soak into the ground. Native plants have much deeper root systems, with some growing 15 feet deep. Not only do these plants infiltrate more water, but they also provide a feasible solution to erosion control at the water's edge.

For more information, or to get a list of plants recommended for your shoreland, please contact me, Lauren Nichols, at lauren.nichols@co.marathon.wi.us or 715-261-6027.



Turf grass root depth compared to native plant root depth.

Aquatic Invasive Species 2019 Update

By Chris Hamerla, Regional Aquatic Invasive Species Coordinator, Golden Sands RC&D

2019 has proven to be another busy summer. Many lakes had concerns over high water levels, excessive runoff and increased plant growth. Thankfully, due to contributions from lake groups and participating counties, Golden Sands RC&D's Regional Aquatic Invasive Species (AIS) program was available to answer questions and assist groups with their concerns. Here is a summary of work done so far this summer in Marathon County:

Purple loosestrife is an invasive wetland plant. It was/is out in full force due to abundant rain this year. If you're driving about the countryside or along I-39 between Stevens Point and Wausau, you've undoubtedly noticed all the purple flowers in the ditches. Marathon Co. CPZ staff and volunteers raised an estimated 135,000 galerucella beetles this year to help control purple loosestrife. I'll be looking for more volunteers in early March of 2020. If you have purple loosestrife near you that you'd like to control or want to volunteer, please contact me!

Purple loosestrife

AIS Early Detection surveys were completed on Big Bass and Norrie Lakes. This consisted of doing meander surveys around the entire lake and spending ten minutes at each of five locations that would be likely areas for invasive species. Increased time was also spent monitoring the boat landings. No new AIS were recorded at either lake. Banded mystery snails are known to be in Big Bass and they were observed during the survey. In addition to the early detection survey, myself and LTE Madeline Abbatacola attended the Big Bass Lake District meeting in May and toured the lake with volunteers following the meeting. Lake issues, native plants, and invasive species were discussed.

A point intercept aquatic plant survey (PI survey) was completed on Wadley Lake to continue monitoring for Eurasian watermilfoil (EWM) that was treated in 2013. For the last several years, only a small number of EWM plants have been observed in shallow water and many have been manually removed by hand pulling. Unfortunately EWM was found growing at a much deeper location this summer. Due to the depth of the EWM, it isn't known how much is there. Golden Sands RC&D has scuba divers available to access and remove the milfoil. This work is not supported by the grant funded Regional AIS Program and would need to be a contracted service. If there is interest please contact myself or Golden Sands RC&D. I did spend one day this summer on Wadley Lake training a volunteer to pull EWM. We removed many of the shallow plants but not all.

Since the WI River has been drawn down on the north side of Wausau, we were able to monitor the exposed river bed for invasive species including zebra mussels and corbicula (an invasive clam). Neither were found and no other new AIS were discovered. In conjunction with the AIS monitoring, we also presented and trained volunteers about native mussels. Volunteers observed eleven different species of native mussels and relocated 110 live mussels to deeper water.

To date, LTE Madeline Abbatacola has contacted 163 people at boat landings in Marathon County as part of the Clean Boats Clean Waters program. During that time, she has inspected 100 watercraft for AIS. She has spent time on several eastern lakes, Lake Wausau and landings on the WI River around Mosinee.

Since 2008, I have had an AIS booth at the Wausau Youth Sporting Heritage Day held at the Wausau School Forest. The booth focuses on showing people how to prevent the spread of invasive species by cleaning a wide variety of sporting gear including boats, trailers, ATVs, footwear, duck decoys, and trapping equipment. This year, Madeline and I had tubs with live rusty crayfish for the kids to "play with" and learn about. The rusty crayfish is one of two invasive crayfish in WI and is very wide spread. The other, the red swamp crayfish, is only known in a couple of waters in the southeast part of the state.

One final event that is yet to come is the Waterfowl Hunter Outreach Event on September 28th, opening day of duck season. This event will be held at the Mead Wildlife area. Volunteers are needed to contact hunters at the HWY O and S landings and discuss AIS prevention methods related to waterfowl hunting. Many AIS can be moved around through contaminated equipment. Faucet snails are one AIS that can have deadly implications for waterfowl. The snails can carry up to three harmful trematodes (parasites) that when eaten by ducks, the trematodes burrow into the intestinal tract of the duck causing hemorrhaging and potentially death. To learn more or how to volunteer on September 28th please contact me.

Before I sign off, I'd like to let you know that Golden Sands RC&D will be applying for another grant this fall to continue the Regional AIS Program in Marathon and surrounding counties. Letters of support stating financial contributions are needed to secure this grant. By the time some of you get this newsletter you'll likely have received an email from me detailing this request. I'll also explain this more in the fall Eastern Lakes newsletter. Letters of support stating financial contributions are needed by November 22, 2019.

If you have questions about your lake or are interested in participating in an event please email me at chris.hamerla@goldensandsrcd.org or call (715) 242-6215 ext. 704

Have a great summer!
- Chris Hamerla

Shoreland Zoning FAQs

When do I need a Shoreland Zoning Permit?

When building any structure within Shoreland Jurisdiction (300ft from rivers & streams, 1000ft from lakes, ponds, & flowages.

When do I need a Shoreland Alteration Permit?

When grading, filling, or excavation is to occur within 300' of the OHWM, which creates a ground disturbance that could result in erosion or runoff.

When filling and grading in shoreland areas, DNR identified Best Management Practices shall be implemented to prevent adverse effects to the waterways.

How close to the Ordinary High Water Mark (OHWM) can I build a structure?

There is a 75' setback from the OHWM where no structure can be constructed, except for the following:

(please note that all of these options require mitigation)

1. Open sided or screened structures, including patios, gazebos, decks, 5'-walkway, etc., yet, not to exceed 200sq/ft

2. Boathouses must be between 3-20 feet from the OHWM (in viewing corridor). Yet, may not be constructed on slopes greater than 20%.

3. Expansion of non-conforming structures limit 200sq/ft.

* 1 Walkway and 1 *Boathouse* are the only structures allowed within 35' of the OHWM.

What is mitigation?

Mitigation can be defined as the use of balancing actions that are designed, implemented, and function, to restore natural processes and values that are otherwise lost through development and human activities.

Please see page 4 for when mitigation is required and what your options are.

Impervious surfaces are all the surfaces that impede the ability of rainwater to be absorbed into the soil, including compacted gravel (and all driveways). If properties within Shoreland Jurisdiction have an impervious surface of higher than 15%, mitigation is required.

What is a shoreland vegetative buffer?

A shoreland buffer is the area of native vegetation that extends 35 feet inland from the OHWM. Within the shoreland buffer, Marathon County's standards require a native plant density of 1 tree, 2 shrubs, and 70 groundcovers per every 100 square feet. Groundcovers are non-woody plants such as wildflowers, grasses, sedges, and ferns.

What is a viewing and access corridor?

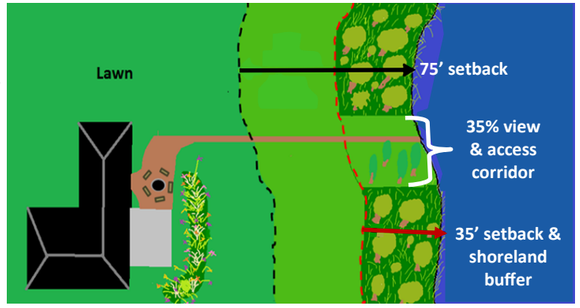
Shoreland owners are allowed to allocate 35% of their shoreline frontage to a viewing and access corridor, or 35 feet, whichever is largest. This is the only area of the shoreland in which you are allowed to remove vegetation. All access points to the water, including a pathway and dock must be located within this area.

When can I remove vegetation in the shoreland buffer?

Within the viewing and access corridor, vegetation is allowed to be removed. Outside of the viewing and access corridor and within the 35 foot setback, vegetation may only be removed if it is dead/dying, diseased, non-native, or an immediate concern to human life. This applies to trees, shrubs, and groundcovers. If any vegetation is removed, it must be immediately replaced.

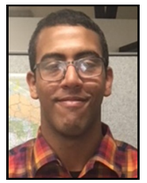
Shoreland Property Reminders:

- All proposed structures must be at least 75 feet away from the OHWM.
- No more than 35% of the total length of the shoreline's vegetation can be altered extending 35 feet from the water's edge (OHWM).
- If a walk-out basement is proposed, ensure slopes from all directions are no greater than 3:1 (Horizontal : Vertical)
- Total impervious surface percentage will be calculated prior to issuing any permits in shoreland areas. Mitigation, re-vegetation, removal of non-conforming structures, and/or rain gardens may be required if between 15%-30% impervious surfaces.



Questions?

Contact Marathon County CPZ's Zoning Technician,



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