Oconto County Lakes Project

DRAFT 031025

FINNEGAN LAKE MANAGEMENT PLAN

2025

VISION

Finnegan Lake will remain a secluded natural setting with beautiful clear water, great swimming and fishing, where people gather to enjoy nature and each other.

Finnegan Lake Management Plan

The authors would like to acknowledge the commitment and enthusiasm of Oconto County Lakes & Waterways Association, Oconto County Land and Water Conservation Department, UW Extension – Oconto County, Wisconsin Department of Natural Resources, UW-Stevens Point Water and Environmental Analysis Laboratory, Finnegan Lake Walley Club, landowners in the Finnegan Lake watershed, and participants in the Oconto County Lakes Project.

This plan was prepared by the Center for Watershed Science and Education at University of Wisconsin – Stevens Point.

Along with the Oconto County Lakes Project participants, the following individuals and organizations contributed to the content of this plan.

Finnegan Lake Planning Participants

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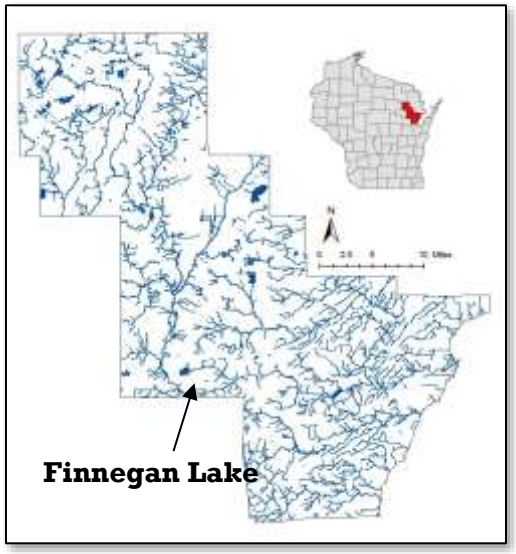
Resource	Acronym or Truncated Name
Citizen Lake Monitoring Network	CLMN
Clean Boats Clean Waters	CBCW
Lumberjack Resource Conservation & Development Council	LRCD
Oconto County Land & Water Conservation Dept.	OC LCD
Oconto County Board of Supervisors	OC Board
Oconto County Lakes and Waterways Association	OCLAWA
Town of Gillett	TOG
University of Wisconsin - Extension	UWEX
UWSP Water & Environmental Analysis Laboratory	WEAL
UWSP Center for Watershed Science and Education	CWSE
USDA Natural Resources Conservation Service	NRCS
Wisconsin Department of Natural Resources	WDNR
Wisconsin Department of Transportation	WDOT

Background

ABOUT FINNEGAN LAKE

Finnegan Lake is located in the Town of Gillett, in northeast Wisconsin. This 25-acre seepage lake has a maximum depth of 38 feet with clear water. Its bottom sediments are primarily muck and sand. Visitors have access to the lake from one public boat landing on the northeast side of the lake, which is owned and maintained by the Town. Water enters and leaves Finnegan Lake primarily through groundwater.



What Is A Lake Management Plan?

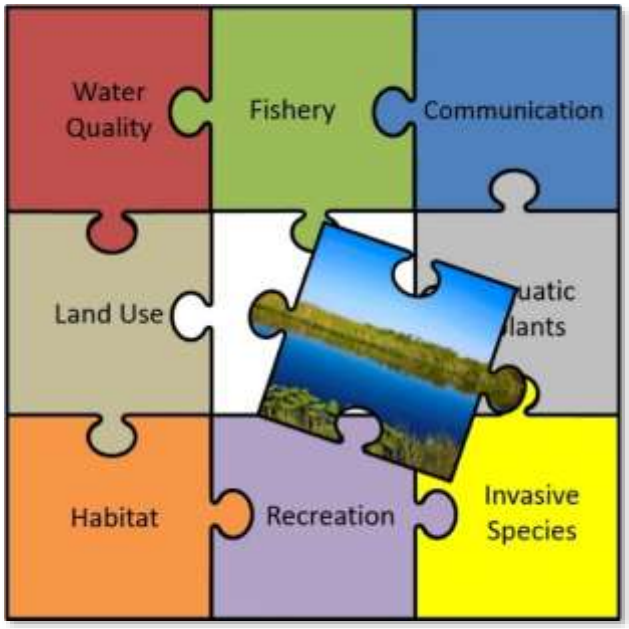
LAKE MANAGEMENT PLANS (LMP)

What is an LMP?

A management plan is a living document that changes over time to meet the current needs, challenges and desires of the lake and its community. Although each lake is different, the WDNR requires that each comprehensive lake management plan addresses a specific list of topics affecting the character of the lake, whether each topic has been identified as a priority, or as simply something to consider. In this way, every LMP considers the many aspects associated with lakes.

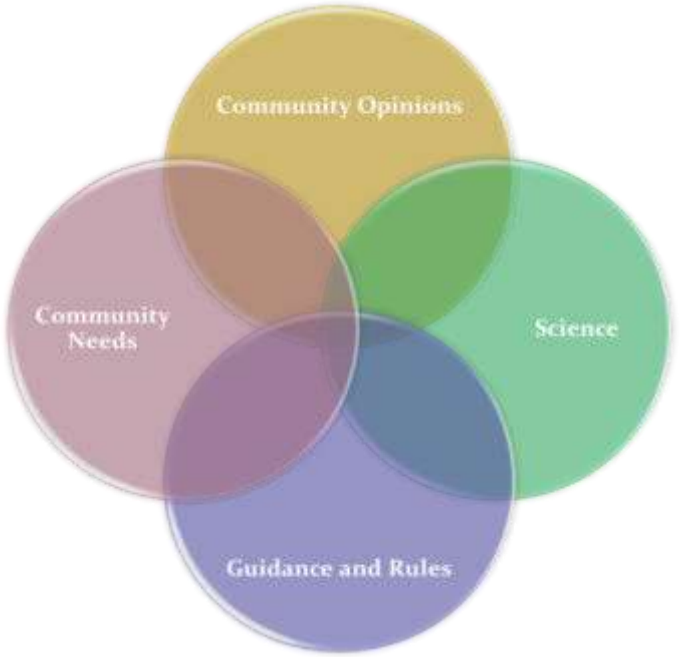
What is the purpose of this LMP?

This plan was created to ensure that Finnegan Lake is healthy now and for future generations. It was designed to learn about Finnegan Lake and identify features important to the Finnegan Lake community, in order to provide a framework for the protection and improvement of the lake.



Implementing the content of this LMP will enable citizens and others to work together to achieve the vision for Finnegan Lake now and in the years to come. It is a dynamic document that identifies goals and action items for the purpose of maintaining, protecting and/or creating desired conditions in the lake and identifies steps to correct past problems, improve on current conditions, and provide guidance for future boards, lake users, and technical experts.

Because many entities are involved in lake and land management, it can be challenging to navigate the roles, partnerships and resources that are available. The planning process and content of this plan have been designed to identify where some key assistance exists. The actions identified in this LMP can serve as a gateway for obtaining grant funding and other resources to help implement activities outlined in the plan.



How Was This Plan Created?

ABOUT THIS PLAN

One of the first steps in creating this plan was to gather and compile data about the lake and its ecosystem to understand past and current conditions. This was done in 2022-2023 alongside 5 other lakes as part of the Oconto County Lakes Project. The project was initiated by citizens in the Oconto County Lakes and Waterways Association who encouraged Oconto County to prioritize lake interests. This effort led to funding from the WDNR Lake Protection Grant Program. There was insufficient data available for many of the lakes to evaluate current water quality, aquatic plant communities, invasive species, and shorelands. The data that were available had been collected at differing frequencies or periods of time, making it difficult to compare lake conditions. Professionals and students from UW-Stevens Point, Oconto County Land Conservation Department, UW Extension, Oconto County citizens and WDNR staff collected the data for use in the development of lake management plans. Sources of information used in the planning process are listed at the end of this document.

Reports from the Finnegan Lake Study and the materials associated with the planning process and reports can be found on the Oconto County website: **www.co.oconto.wi.us** and navigating to Departments>Land Conservation>County Waterways>County-wide Lake Study.

THE PLANNING PROCESS

Who created the strategic plan?

This plan is the result of a stakeholder-driven effort which involved many partners combining insight, knowledge, and expertise throughout the process. Area residents, lake users, and representatives of local municipalities gathered at public meetings held on March 22, 2022 and on March 5, 2025 via an online platform to learn from one another and make decisions about the fishery, water quality, habitat, and land management in the Finnegan Lake watershed. Technical assistance during the planning process was provided by staff from OCLCD, UWEX, WDNR, and the CWSE.

How were various opinions incorporated?

Participation in the planning process was open to everyone and was encouraged by letters mailed to Finnegan Lake waterfront property owners and by press releases in local newspapers. In addition, those individuals and organizations who provided their information were provided with emails about upcoming meetings, which could be forwarded to additional contact lists. To involve and collect input from as many people as possible, including those who might not be able to attend the public meetings, an online survey was conducted. Property owners and interested lake users were notified about the survey and how to access it via direct mailings to waterfront property owners and associated lake organizations and press releases in local newspapers. The surveys could be filled out anonymously online, or paper copies were available upon request. Survey questions and responses were shared at the planning sessions and can be found in the Appendix.

How Is This Management Plan Used?

Who will use this plan?

- **Individuals:** Individuals can use this plan to learn about the lake they love and their connection to it. People living near the lake can have the greatest influence on the lake by understanding and choosing lake-friendly options to manage their land and the lake.
- **A future lake organization:** This plan provides an association with guidance for the whole lake and lists options that can easily be prioritized. Resources and funding opportunities for lake management activities are made more available by placement of goals into the lake management plan, and the association can identify partners to help achieve their goals for the lake.
- **Neighboring lake groups, sporting and conservation clubs:** Groups with similar goals for lake stewardship can combine their efforts and provide each other with support, improve competitiveness for funding opportunities, and make efforts more fun.
- **The Town of Gillett:** Municipalities can utilize the visions, objectives, and goals documented in this lake management plan when considering town-level planning or decisions within the watershed that may affect the lake.
- **Oconto County:** County professionals will better know how to identify needs, provide support, base decisions, and allocate resources to assist in lake-related efforts documented in this plan. This plan can also inform county board supervisors in decisions related to Oconto County lakes, streams, wetlands, and groundwater.
- **Wisconsin Department of Natural Resources (WDNR):** Professionals working with lakes in Oconto County can use this plan as guidance for management activities and decisions related to the management of the resource, including the fishery, and invasive species. LMPs help them to identify and prioritize needs, and where to apply resources. A well thought out lake management plan increases an application's competitiveness for funding from the State.

Who can help implement this plan?

Lead persons and resources are identified under each action in this plan. These individuals and organizations are able to provide information, suggestions, or services to achieve goals. The following table lists organization names and their common acronyms used in this plan. This list should not be considered all-inclusive – assistance may also be provided by other entities, consultants, and organizations.

Management Plan Structure

GOALS FOR FINNEGAN LAKE

The foundation of any effective strategic plan is clear identification of goals and the steps needed to achieve the goals. The selected goals should achieve the overall vision for Finnegan Lake. This plan also identifies available resources within each objective.

The topics comprise the chapters in this plan and have been grouped as follows:

In-Lake Habitat and a Healthy Lake

Fish Community—fish species, abundance, size, important habitat and other needs

Aquatic Plant Community—habitat, food, health, native species, and invasive species

Critical Habitat—areas of special importance to the wildlife, fish, water quality, and aesthetics of the lake

Landscapes and the Lake

Water Quality—water chemistry, clarity, contaminants, lake levels

Shorelands—habitat, erosion, contaminant filtering, water quality, vegetation, access

Watershed—land use, management practices, conservation programs

People and the Lake

Recreation—access, sharing the lake, informing lake users, rules

Communication and Organization—maintaining connections for partnerships, implementation, community involvement

Updates & Revisions—plan for maintaining a living document

Finnegan Lake Management Plan Goals

Goals for Finnegan Lake

The following goals and actions were derived from the values and concerns of citizens interested in Finnegan Lake and members of the planning committee, as well as the known science about Finnegan Lake, its ecosystem and the landscape within its watershed. Implementing and regularly updating the goals and actions in this plan will ensure that the vision is supported and that changes are incorporated into the plan.

LIST OF GOALS

Goal 1	**Finnegan Lake will have a healthy and well-balanced fishery.**
Goal 2	**Finnegan Lake will continue to have a healthy and diverse aquatic plant community that provides good habitat and water quality while minimizing impacts to recreation and remaining free of invasive species.**
Goal 3	**Sensitive areas in Finnegan Lake, which provide essential habitat and/or water quality benefits, will be protected.**
Goal 4	**Property owners in the Finnegan Lake watershed will know about and utilize methods and resources for healthy land management.**
Goal 5	**Shorelands around Finnegan Lake will be healthy and protective of water quality and habitat.**
Goal 6	**Maintain or improve water quality in Finnegan Lake.**
Goal 7	**Lake users will be informed about and care for the health of Finnegan Lake.**
Goal 8	**Bring representation to Finnegan Lake and recruit participation in lake stewardship.**
Goal 9	**Review plan annually and update as needed.**

Fish Community

IN-LAKE HABITAT AND A HEALTHY LAKE

The health of one part of the lake system affects the health of the rest of the plant and animal community, the experiences of the people seeking pleasure at the lake, and the quality and quantity of water in the lake. Habitat is the structure for a healthy fishery and wildlife community. It can provide shelter for some animals and food for others. Many animals that live in and near the lake are only successful if their habitat needs are met.

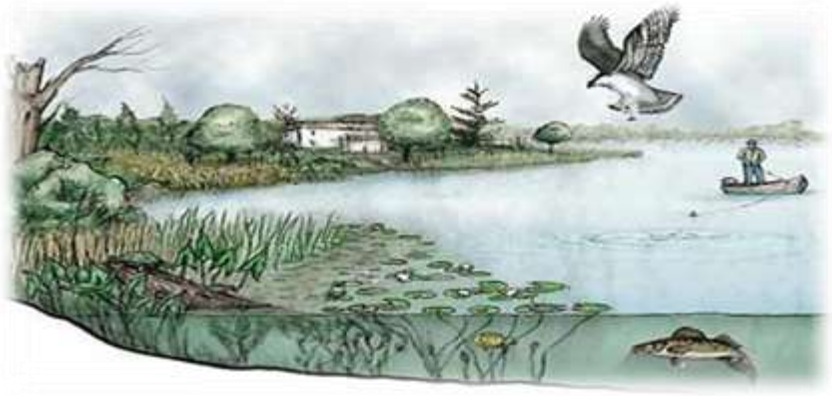
What is lake-habitat?

Healthy lake-habitat in Finnegan Lake includes native aquatic plants and shoreland vegetation, as well as tree branches/limbs above and below the water.

Habitat exists within the lake, along the shoreland, and even extends into its watershed for some wildlife species. Native vegetation (including wetlands) along the shoreline and connected to the lake provides shelter and food for waterfowl, small mammals, turtles, frogs, and fish. Native plants in and near the lake can also improve water quality and balance water quantity. Aquatic plants infuse oxygen into the water, which is essential for the fish community. Some lake visitors such as birds, frogs, and turtles use limbs from trees that are sticking out of the water for perches or to warm themselves in the sun. The types and abundance of plants and animals that comprise the lake community also vary based on the water quality, and the health and characteristics of the shoreland and watershed.

The Fish Community

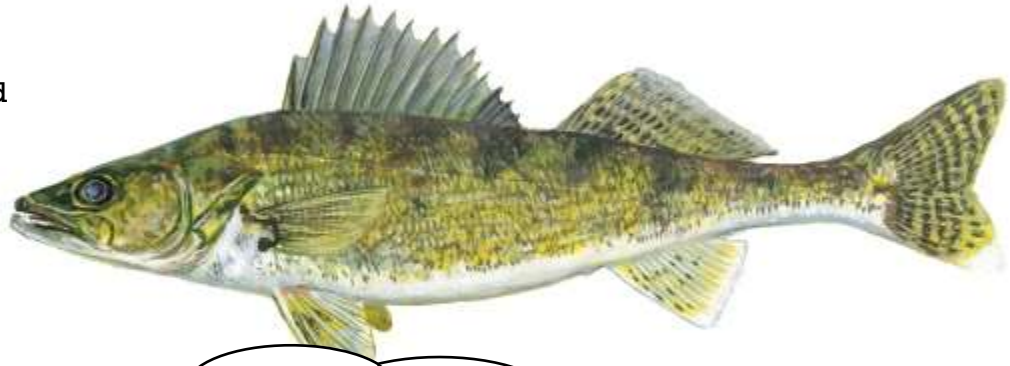
A balanced fish community has a mix of predator and prey species, each with different food, habitat, nesting substrate, and water quality needs to flourish.



What can affect the fishery?

Activities in and around a lake that can affect a fishery include:

- disturbances to the native aquatic plant community or substrate,
- excessive additions of nutrients or harmful chemicals,
- removal of woody habitat,
- shoreline alterations,
- shoreland erosion can cause sediment to settle onto the substrate, causing the degradation of spawning habitat.



Habitat provides shelter and food for fish and wildlife.

Fish Community

Can the fishery be improved?

Managing a lake for a balanced fishery can result in fewer expenses to lake stewards and the public. While some efforts may be required to provide a more suitable environment to meet the needs of the fish, they usually do not have to be repeated on a frequent basis. Ideally, a lake contains the habitat, water quality, and food necessary to support the fish communities present within the lake and provide fishing opportunities for people without a lot of supplemental effort and associated expenses to maintain these conditions.

- Protecting existing habitat such as emergent, aquatic, and shoreland vegetation, and allowing trees that naturally fall into the lake to remain in the lake, are free of cost.
- Restoring habitat in and around a lake can have an up-front cost, but the effects will often continue for decades.
- Costs in time, travel, and other expenses are associated with routine efforts such as fish stocking and aeration.

Finnegan Lake Fish Management History

- Regular stocking for past 20 years
- Winter fish kills in 2019 and 2022
- Aerator installed in Spring 2024

Finnegan Lake Fish Stocking History

Year	Species	Age Class	# stocked	Length (in)
2024	Black Crappie	Adult	610	5
	Bluegill	Adult	200	5
	Walleye	Lg. Fingerling	200	7.5
	Yellow Perch	Adult	600	6
2023	Black Crappie	Yearling	210	5
	Bluegill	Yearling	400	4
	Yellow Perch	Yearling	900	5
2022	Bluegill	Lg. Fingerling	6092	1
	Largemouth Bass	Lg. Fingerling	625	2.7
2021	Bluegill	Lg. Fingerling	2499	.75
	Largemouth Bass	Lg. Fingerling	935	2.8
2020	Black Crappie	Lg. Fingerling	500	4
	Largemouth Bass	Lg. Fingerling	625	2.3
	Yellow Perch	Yearling	500	6
2019	Black Crappie	Adult	1000	5
	Bluegill	Adult	2000	5
	Fathead Minnow	Adult		2
	Largemouth Bass	Lg. Fingerling	623	2.7
	Walleye	Lg. Fingerling	450	6
	Yellow Perch	Adult	500	6
	Yellow Perch	Yearling	300	4
2011	Largemouth Bass	Lg. Fingerling	799	3
	Northern Pike	Sm. Fingerling	1500	4.1
2010	Largemouth Bass	Lg. Fingerling	450	3.3
	Northern Pike	Sm. Fingerling	2000	3.6
	Northern Pike	Sm. Fingerling	552	2.73
2009	Black Crappie	Yearling	1000	5
	Bluegill	Lg. Fingerling	1499	4
	Fathead Minnow	Sm. Fingerling	9850	1
	Walleye	Lg. Fingerling	400	7.5
	Yellow Perch	Adult	499	8.5
	Yellow Perch	Lg. Fingerling	1000	4

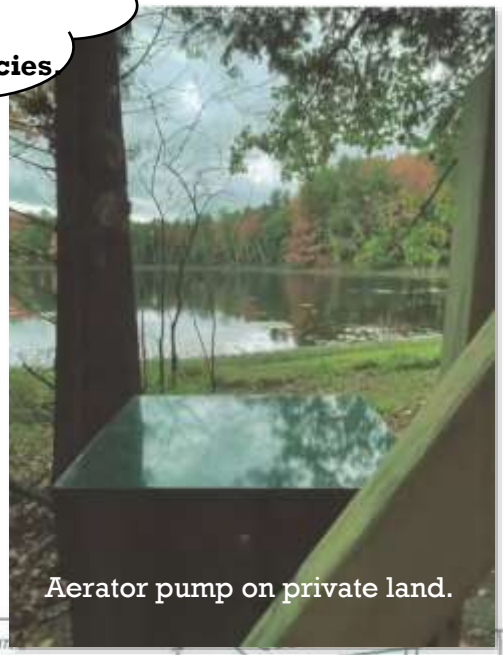
Fish Community

Fish cribs are good cover for small fish, but near shore habitat is essential for reproduction of most species.

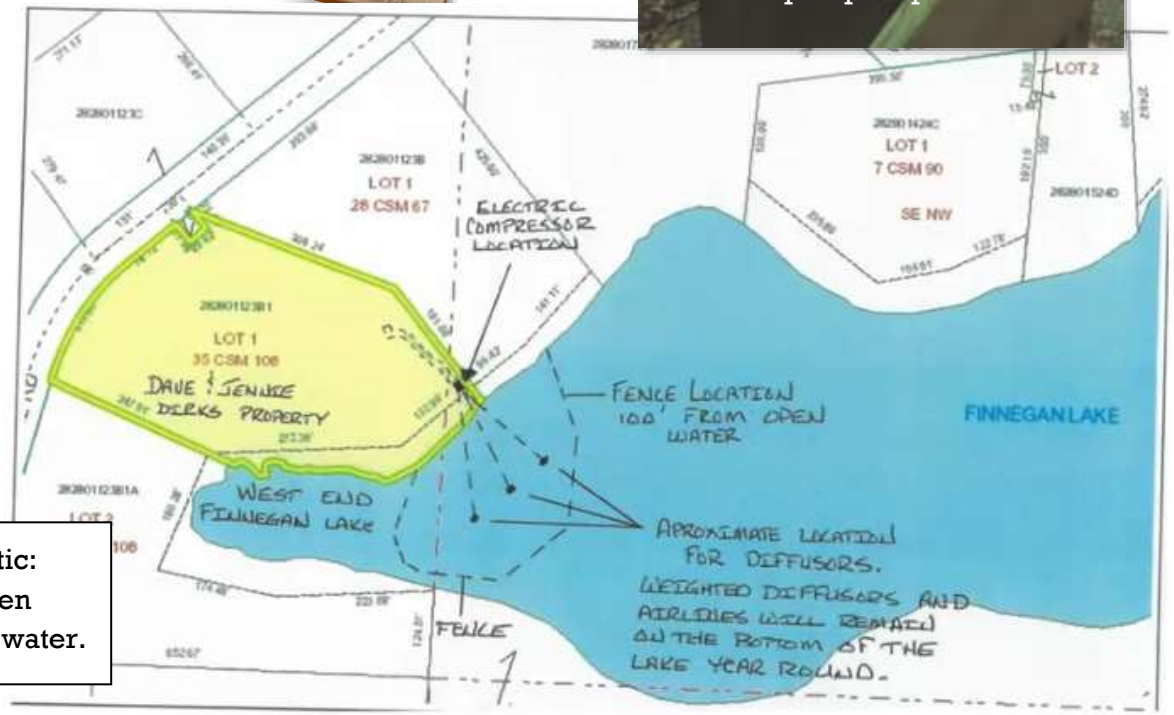
Finnegan Lake 2022 Fish Survey Results

- Boomshocker survey in June 2022. Most recent previous survey was April 2003 (fyke nets).
- Only 6 gamefish/panfish caught.

	Finnegan Lake - June 2022		
Common Name Of Fish	Number	Average Length (inches)	Length Range (Inches)
Brown Bullheads	100's		Did not net
Yellow Perch	1	4.9	
Northern Pike	1	13.4	
Pumpkinseed	2	3.0	2.7 – 3.3
Bluegill	2	2.7	2.5 – 2.9
Total	**6 gamefish & panfish**		


Aerator pump on private land.


Aerator installation, 2024



Aerator schematic:
3 diffusers to open about ½ acre of water.

Fish Community

Goal 1. Finnegan Lake will have a healthy and well-balanced fishery.

Objective 1.1 Enhance fish and wildlife habitat in around the lake. At least 5 fish stick clusters will be installed in the next 5 years.

Actions	Lead person/group	Resources	Timeline
Identify landowners/locations for fish stick installations. Trees would preferably be sourced from adjacent properties.		WDNR-Tammie Paoli	Ongoing
Educate and encourage landowners to leave logs, tree branches and limbs in place in the water, whenever possible.		WDNR-Tammie Paoli UWEX-Pat Goggin	Ongoing
Protect and restore disturbed shoreland areas. Avoid shoreland alterations to improve fish habitat.		Shoreland property owners	Ongoing
Maintain and operate the aerator in accordance with WDNR recommendations.	Walleye club	WDNR-Tammie Paoli	Ongoing

Aquatic Plant Community

Native plants provide essential food and habitat for fish and wildlife.

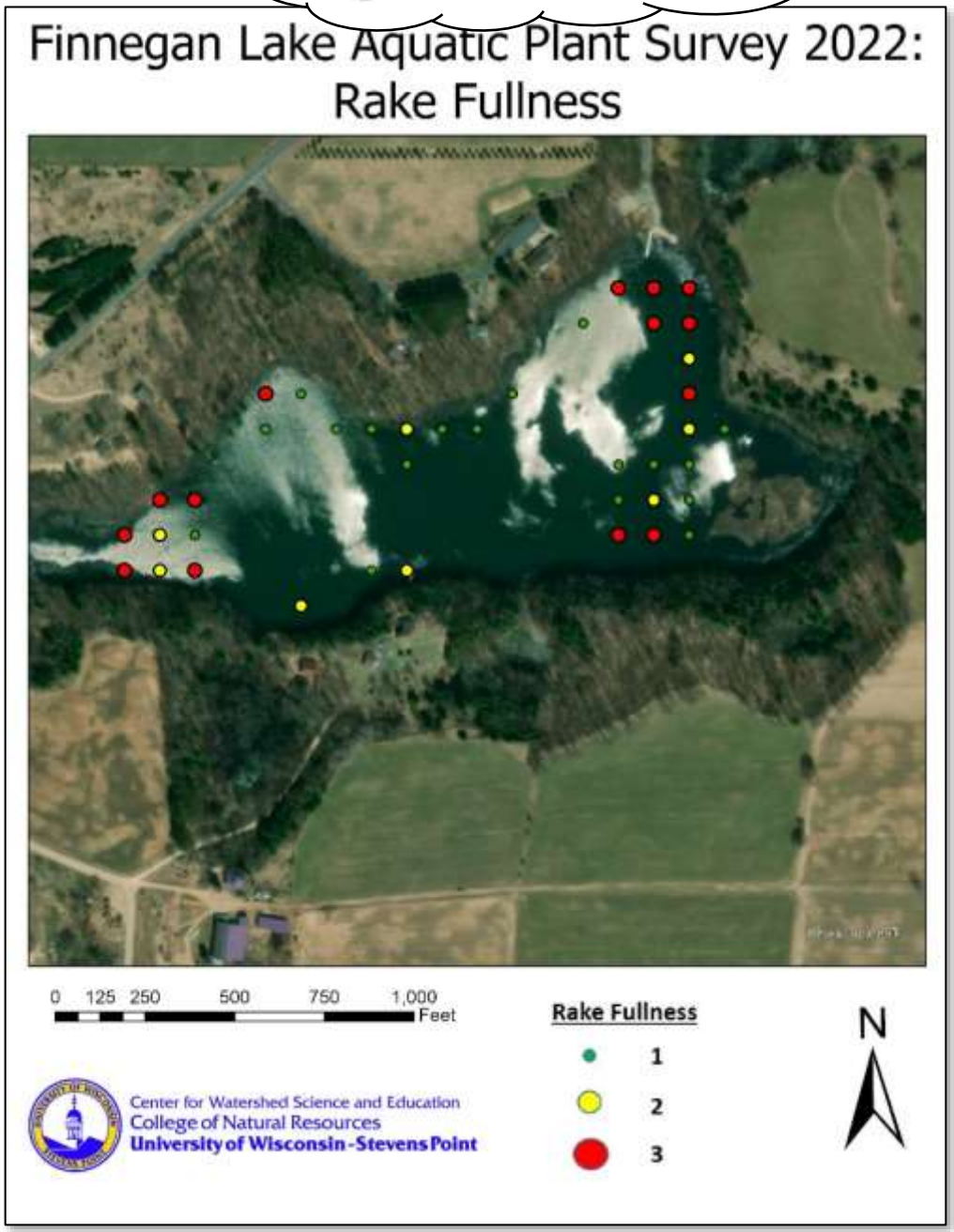
Aquatic Plants

Aquatic plants provide the forested landscape within Finnegan Lake. They provide food and habitat for spawning, breeding, and survival for a wide range of inhabitants and lake visitors including fish, waterfowl, turtles, amphibians, as well as invertebrates and other animals. They improve water quality by releasing oxygen into the water and utilizing nutrients that would otherwise be used by algae. A healthy lake typically has a variety of aquatic plant species, which makes the aquatic plant community more resilient and can help to prevent the establishment of non-native aquatic species. Additionally, they stabilize the bottom sediment and help filter out the suspended sediment from the water column.

Aquatic plants near shore and in shallows provide food, shelter, and nesting material for shoreland mammals, shorebirds and waterfowl. It is not unusual for otters, beavers, muskrats, weasels, and deer to be seen along a shoreline in their search for food, water or nesting material. Aquatic plants also serve as indicator species for environmental stressors that could be occurring in a lake or river, such as a runoff event.

Finnegan Lake 2022 WDNR (Brenda Nordin) Aquatic Plant Survey Highlights

- ✓ 45% of the sites visited had vegetative growth.
- ✓ The greatest depth aquatic plants were found was 13 feet.
- ✓ 15 species of aquatic plants were identified. This is below the North Central Hardwood average of 16.2.
- ✓ The three most dominate species were coontail (77%), common waterweed (30%), and chara (17%).
- ✓ The Floristic Quality Index (FQI) was 19.6. The northcentral hardwood average is 23.3.
- ✓ Eurasian watermilfoil was observed at 3 locations.



Aquatic Plant Community

Coontail lacks roots and can form dense mats just below the surface. It is usually in calm, nutrient-rich water and provides habitat for young fish and other aquatic animals. Waterfowl will eat the seeds and foliage

Common waterweed is a common and widespread plant in Wisconsin lakes. It is important forage and cover for aquatic animals and an important food source for waterfowl.

Chara is a type of macro algae that grows attached to muddy lake bottoms and has a musky odor. Muskgrass, as it is known, filters the lake water and is helpful in preventing the establishment of invasive species.

Aquatic Invasive Species (AIS)

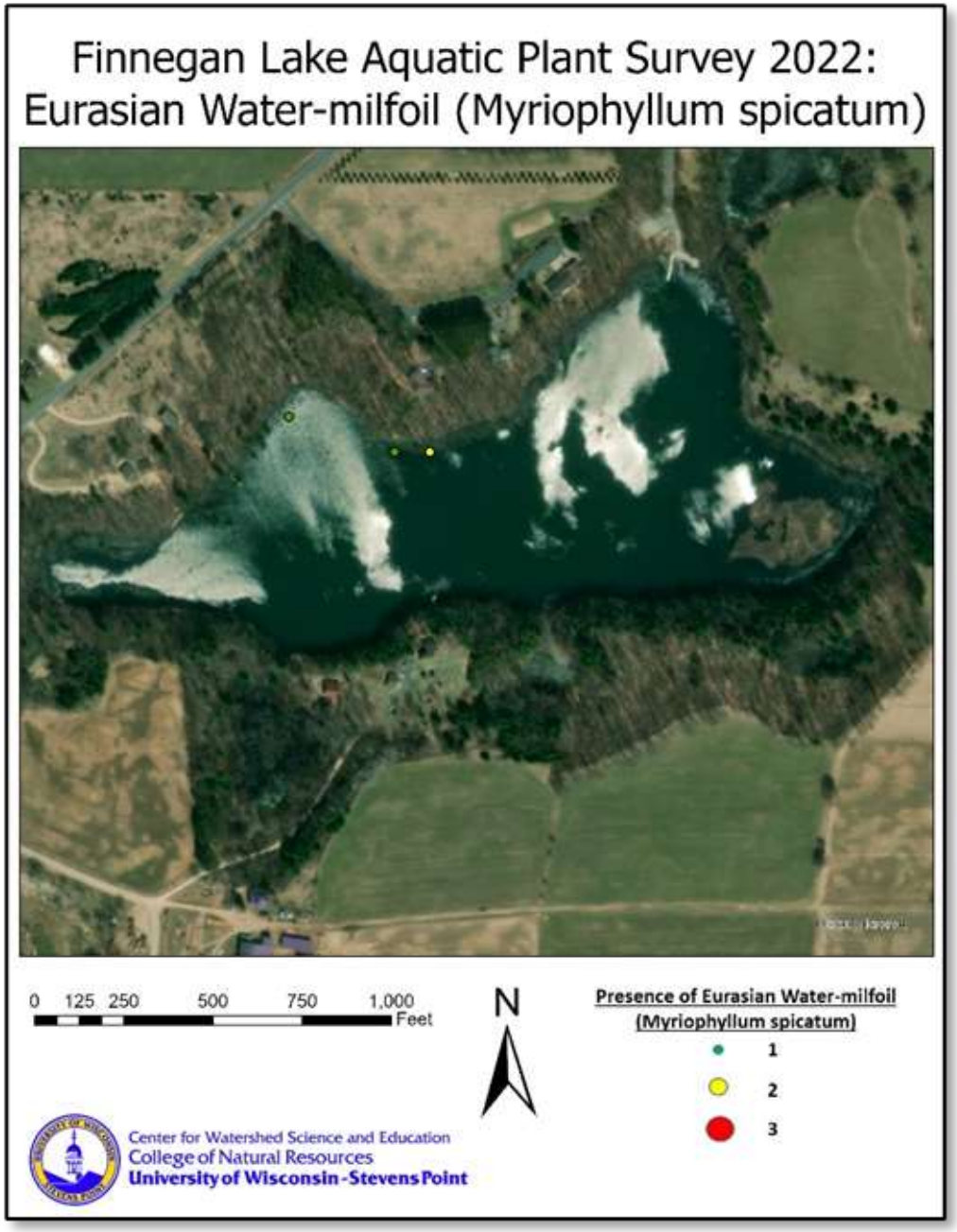
Aquatic invasive species are non-native aquatic plants and animals that are most often unintentionally introduced into lakes by lake users. This commonly occurs on trailers, boats, equipment, and from the release of bait. In some lakes, aquatic invasive plant species can exist as a part of the plant community, while in other lakes populations explode, creating dense beds that can damage boat motors, make areas non-navigable, inhibit activities like swimming and fishing, and disrupt the lakes' ecosystems.

The invasive species Eurasian watermilfoil was first documented in Finnegan Lake in 2003 and was observed at 3 locations during the 2022 survey. Chinese mystery snail (2015), Banded mystery snail (2015) and phragmites (2015) have been previously documented.

Banded mystery snails are born as fully formed snails that seem to appear from nowhere. Native to southeast US, they have the potential to serve as hosts for parasites and outcompete native snails for food and habitat.

Chinese mystery snails have the potential to be a vector for the transmission of parasites and disease and have also been known to clog the screens of water intake pipes.

Aquatic Plant Community



Phragmites, or common reed grass, creates tall, dense stands that crowd out native plants, degrades wildlife habitat and reduces access. It spreads through underground growth and takes aggressive treatment to control.

Eurasian watermilfoil is one of the most common invasive aquatic plants in Wisconsin. It can from dense mats that choke out native plants and inhibit navigation. New plants can grow from stem fragments that root on contact with the substrate.

Aquatic Plant Management in Finnegan Lake

Management strategies in Finnegan Lake were designed to achieve a balance between healthy aquatic habitat, good water quality, and eradication of invasive species.

Management Options for Invasive Species or Nuisance Native Aquatic Plants

Management options that offer the most practical and effective approaches for managing invasive species or nuisance native plants, while minimizing impacts to Finnegan Lake as a whole, have been identified. Depending upon conditions, the following options may be used alone or in combination with others.

Hand-pulling. No permit required.

Hand-pulling is the preferred method for removing invasive species. Additionally, lakefront property owners are allowed to manually remove native aquatic plants from an area up to 30 feet wide without a permit for swimming and boat access (this does not include the excavation or removal of any bottom sediments). Any denuded lakebed is prime real estate for invasive species, however, and close monitoring is necessary to ensure no populations are established.

Aquatic Plant Management Plan Review

A good aquatic plant management plan strategy should reduce the amount of management activity needed as time goes on. In Finnegan Lake, a series of successful strategies (integrated plant management) should lead to a balance between healthy aquatic habitat, water quality, and recreation with minimal annual management.

Be part of the solution!

- ✓ Learn to identify invasive species and routinely look for them when on the lake.
- ✓ Do not remove native aquatic vegetation beyond what is necessary to access the lake. Any denuded areas should be monitored closely for invasive species.

Goal 2. Finnegan Lake will continue to have a healthy and diverse aquatic plant community that provides good habitat and water quality while minimizing impacts to recreation and remaining free of invasive species.

Objective 2.1 Minimize disturbance to native aquatic plants.

Actions	Lead person/group	Resources	Timeline
Inform property owners of the importance of native aquatic vegetation to impede the establishment of additional AIS, provide food and habitat for wildlife, and protect the shoreline via distribution of educational materials or newsletter.		WDNR-Brenda Nordin	Ongoing
Encourage landowners to limit plant removal to invasive species or skimming off those that have become unrooted and free-floating. If plants severely impede recreation, consider hand-pulling small areas around private docks (within WDNR guidelines). Cleared lakebed is ideal habitat for AIS to become established, so be vigilant about watching for AIS in these areas.		WDNR-Brenda Nordin	Ongoing
Regularly monitor aquatic plant community to detect and changes in lake conditions and ensure a stable population. A point-intercept survey is recommended.		WDNR-Brenda Nordin Consultants	Every 10 years is no active plant management taking place

Reduce nutrient and sediment loading to lake (to limit abundance of plants and algae) by improving shoreland buffers (see **Shoreland** section) and implementing BMPs in the watershed (see **Watershed** section).		WDNR-Brenda Nordin OCLCD	Ongoing

Objective 2.2 Protect against establishment of new AIS and control/eradicate existing EWM.

Actions	**Lead person/group**	**Resources**	**Timeline**
Host training to identify and look for invasive species, particularly EWM.		WDNR-Brenda Nordin LRCD	Ongoing
Identify Clean Boats Clean Waters volunteers to staff boat launch on busy days. This can be paid for with a CBCW grant.		CBCW	Summers

Critical Habitat

Every waterbody has areas that are most important to the overall health of the lake.

Critical Habitat

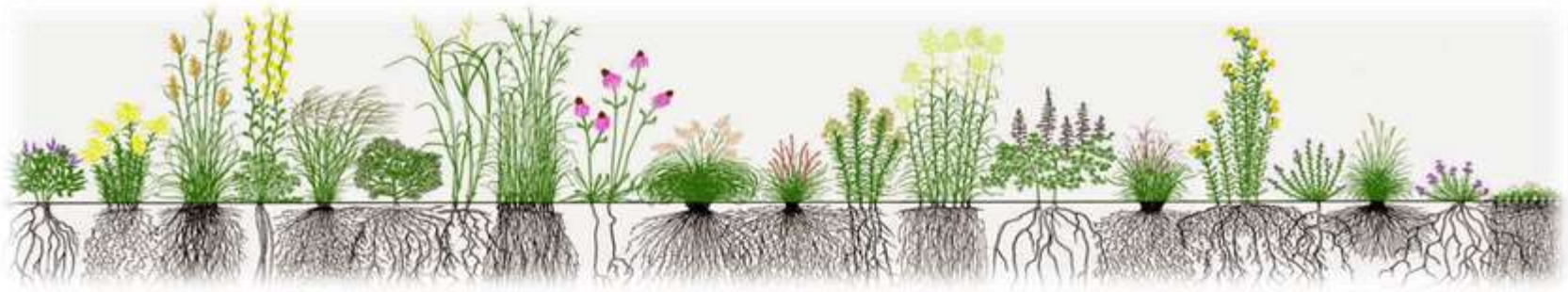
Special areas harbor habitat that is essential to the health of a lake and its inhabitants. In Wisconsin, critical habitat areas are identified by biologists and other lake professionals from the WDNR in order to protect features that are important to the overall health and integrity of the lake, including aquatic plants and animals. While every lake contains important natural features, not all lakes have official critical habitat designations. Designating areas of the lake as critical habitat enables these areas to be located on maps and information about their importance to be shared. Having a critical habitat designation on a lake can help lake groups and landowners plan waterfront projects that will minimize impact to important habitat, ultimately helping to ensure the long-term health of the lake.

Although Finnegan Lake does not have an official critical habitat area designation, there are areas within Finnegan Lake that are important for fish and wildlife. Natural, minimally-impacted areas with woody habitat such as logs, branches, and stumps; areas with emergent and other forms of aquatic vegetation; areas with overhanging vegetation; and wetlands are elements of good quality habitat. Identifying other important areas around the lake that are important habitat and informing lake users of their value can help raise awareness for the protection of these areas.

Goal 3. Sensitive areas in Finnegan Lake, which provide essential habitat and/or water quality benefits, will be protected.

Objective 3.1 Identify and inform others of quality habitat areas in and around Finnegan Lake.

Actions	Lead person/group	Resources	Timeline
Request a Critical Habitat Designation from WDNR.		WDNR-Brenda Nordin	2023
If critical habitat is identified, communicate to property owners, visitors, and Town Board as to why these areas are important. Look for opportunities to protect these areas.			TBD



Watershed

LANDSCAPES AND THE LAKE

Finnegan Lake Watershed

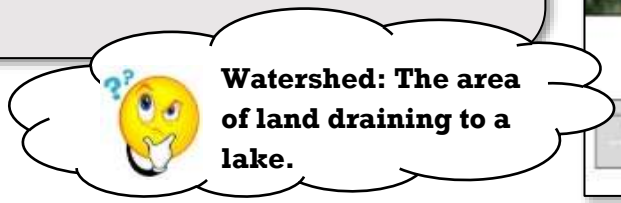
A Lake is a Reflection of its Watershed…

Understanding where Finnegan Lake's water originates is important to understanding lake health. During snowmelt or rainstorms, water moves across the surface of the landscape (runoff) towards lower elevations such as lakes, streams, and wetlands. This area is called the watershed. Groundwater also feeds Finnegan Lake; its land area may be slightly different than the surface watershed.

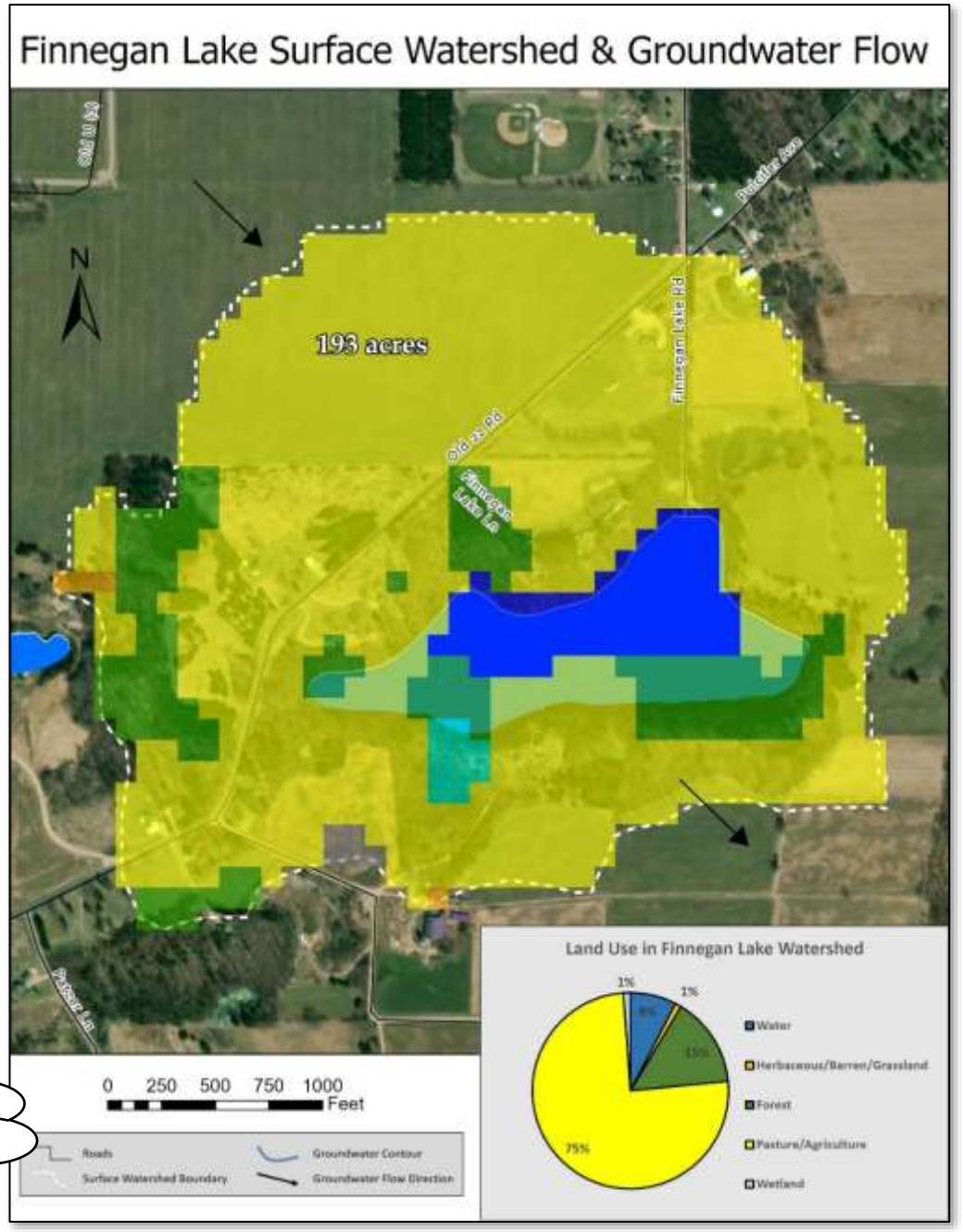
Less runoff is desirable because it allows more water to recharge the groundwater, which feeds the lake year-round - even during dry periods or when the lake is covered with ice. The capacity of the landscape to shed or hold water and contribute or filter particles determines the amount of erosion that may occur, the amount of groundwater feeding a lake, and the lake's water quality and quantity. Landscapes with greater capacities to hold water during rain events and snowmelt slow the delivery of the water to the lake.

Finnegan Lake's Watershed

The Finnegan Lake watershed is 193 acres. Primary land use is agriculture. The lake's shoreland is surrounded primarily by forest and wetland. In general, the land closest to the lake has the greatest immediate impact on water quality.



Watershed: The area of land draining to a lake.



Watershed

Why does land matter?

Land use and land management practices within the watershed can affect both its water quantity and quality. While forests, grasslands, and wetlands allow a fair amount of precipitation to soak into the ground, resulting in more groundwater and good water quality, other types of land uses may result in increased runoff and less groundwater recharge, and may also be sources of pollutants that can impact the lake and its inhabitants.

Soil and Erosion

Areas of land with exposed soil can produce soil erosion. Soil entering the lake can make the water cloudy and cover fish spawning beds. Soil also contains nutrients that increase the growth of algae and aquatic plants.

Development

Development on the land may result in changes to natural drainage patterns, alterations to vegetation on the landscape, and may be a source of pollutants. Impervious (hard) surfaces such as roads, rooftops, and compacted soil prevent rainfall from soaking into the ground, which may result in more runoff that carries pollutants to the lake. Wastewater, animal waste, and fertilizers used on lawns, gardens and crops can contribute nutrients that enhance the growth of algae and aquatic plants in our lakes.

What can be done?

Land management practices can be put into place that mimic some of the natural processes, and reduction or elimination of nutrients added to the landscape will help prevent the nutrients from reaching the water. In general, the land nearest the lake has the greatest impact on the lake water quality and habitat and is often the easiest to manage (own property, no politics, etc.).

Be Part of the Solution!

Practices designed to reduce runoff include:

- protecting/restoring wetlands,
- installing rain gardens, swales, rain barrels, and other practices that increase infiltration
- routing drainage from pavement and roofs away from the lake
- meandering lake access paths to minimize direct flow to the lake.

Practices used to help reduce nutrients from moving across the landscape towards the lake include:

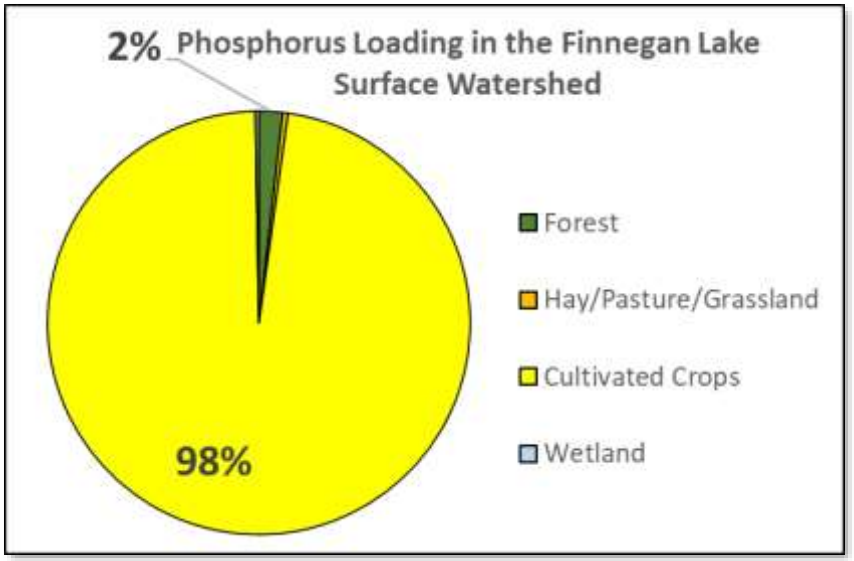
- eliminating/reducing the use of fertilizers,
- increasing the distance between the lake and a septic drainfield,
- protecting/restoring wetlands and native vegetation in the shoreland,
- controlling erosion,
- manure management and cropping practices.

Most of these activities are eligible for cost share and grant assistance!

Watershed

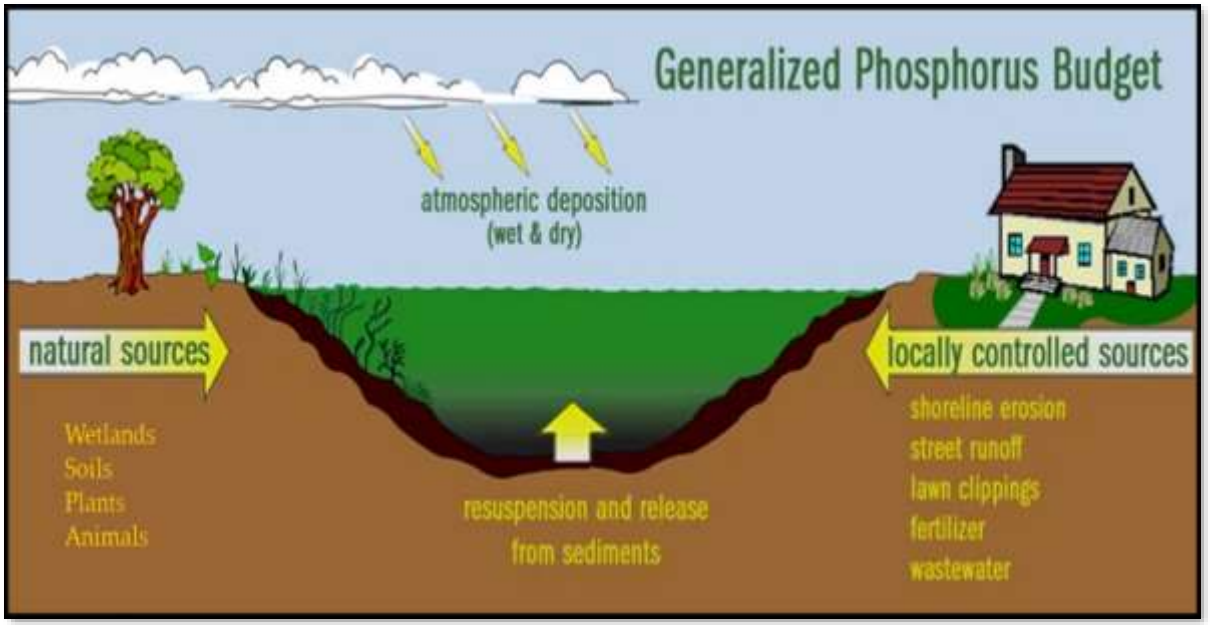
Phosphorus Modeling

Estimates of phosphorus from the landscape can help to understand the phosphorus sources to Finnegan Lake. Land use in the surface watershed was evaluated and used to populate the Wisconsin Lakes Modeling Suite (WILMS) model. In general, each type of land use contributes different amounts of phosphorus in runoff and groundwater. The types of land management practices that are used and their distances from the lake also affect the contributions to the lake from a parcel of land. The phosphorus contributions by land use category, called phosphorus export coefficients, have been obtained from studies throughout Wisconsin (Panuska and Lillie, 1995). In the Bear Paw Lake watershed, the vast majority of these sources are not anthropogenic.



Phosphorus Loading in Finnegan Lake Watershed

Based on modeling results, agriculture had the greatest percentage of phosphorus contributions from the watershed. Efforts to reduce nutrient inputs to the lake must be focused on land uses that we have some control over such as production and developed areas.



Goal 4. Property owners in the Finnegan Lake watershed will know about and utilize methods and resources for healthy land management.

Objective 4.1 Support healthy land management activities in the Finnegan Lake watershed.

Actions	Lead person/group	Resources	Timeline
Encourage the County to support and follow-up with water quality based best management practices (BMPs) within the watershed.		NRCS County Board Supervisors	Ongoing
Support landowners interested in the protection of their land via a land conservation program (i.e., Conservation Easement, Purchase of Development Rights, or sale of land for protection.		WDNR Lake Protection Grants Knowles-Nelson Stewardship Fund NWLT	As needed
Protect wetlands to maintain the water budget of Finnegan Lake. Any altered wetlands should be mitigated withing the lake's watershed.		Town of Gillett Developers	As needed


Cover crops


Drainage swales

Shorelands

90% of lake life spends all or part of their life in the near shore zone.

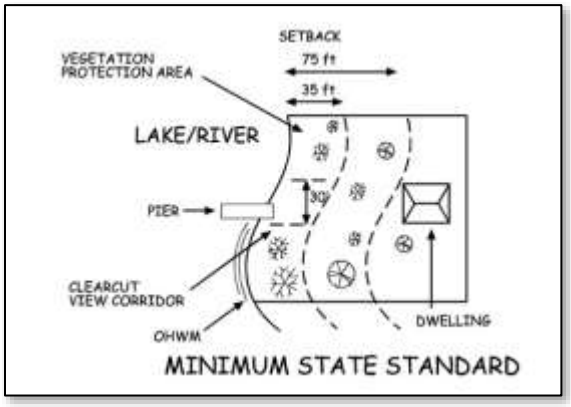
Shorelands

Shoreland vegetation is critical to a healthy lake ecosystem. It provides habitat for many aquatic and terrestrial animals including birds, frogs, turtles, and small and large mammals. It also helps to improve the quality of the runoff that is flowing across the landscape towards the lake.

Healthy shoreland vegetation includes a mix of unmowed grasses/flowers, shrubs, trees, and wetlands which extends at least 35 feet landward from the water's edge.

Shoreland ordinances have been in place since 1964 to improve water quality and habitat, and to protect our lakes. To protect our lakes, county and state (NR 115) shoreland ordinances state that vegetation should extend at least 35 feet inland from the water's edge, with the exception of an optional 30-foot wide view corridor for each shoreland lot. Although some properties were grandfathered in when the ordinance was initiated in 1966, following this guidance will benefit the health of the lake and its inhabitants.

Disturbed shoreland is measured as any shoreline without a shrub or herbaceous layer at the water's edge, regardless of buffer thickness. This may be a result of mowed lawn, artificial beach, etc.



Be Part of the Solution!

Follow Healthy Shoreland Practices

- Mow Less: The simplest, most affordable way to improve your shoreland is to reduce mowing near shore. Native vegetation will re-establish itself over time.
- Leave natural shoreland vegetation in place.
- Restore native shoreland vegetation where it is lacking.
- Plant attractive native species of grasses/flowers, shrubs and trees that will add interest and beauty to your property.
- Don't use fertilizers or herbicides, they may run into the lake. Test your soil to determine if fertilizer is warranted.
- Add or leave woody habitat near the shore. Turtles, birds, and fish love it!
- Never transplant water garden plants or aquarium plants into lakes, streams, or wetlands.
- Visit **www.healthylakeswi.com** for additional resources.

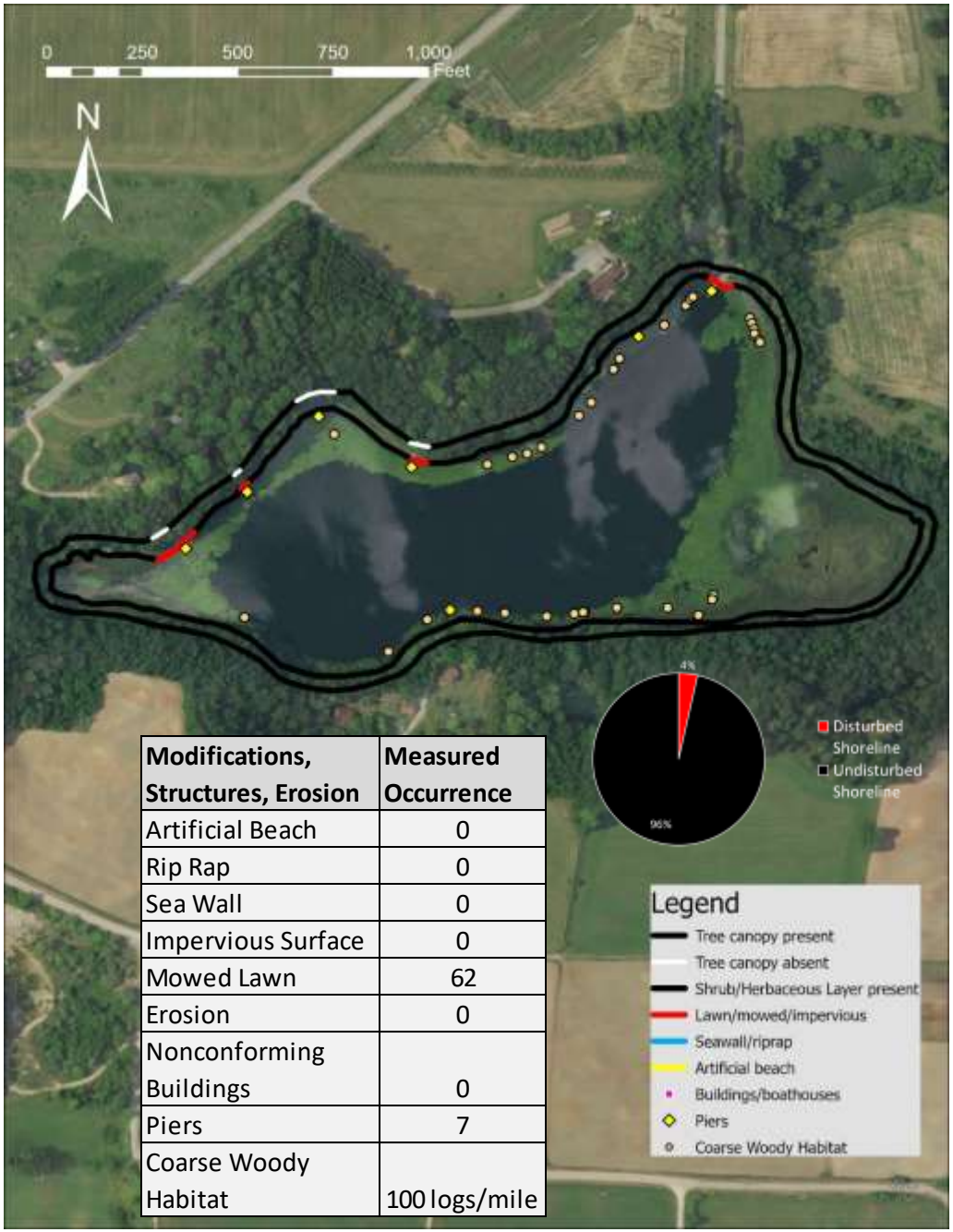
State Shoreland Zoning Ordinance

NR 115 Wisc. Adm. Code for Unincorporated Municipalities

No vegetation within 35 feet of the lake's edge shall be removed except for:

- Up to 30% of shoreline may be removed of shrubs and trees for a view corridor
- A mowed or constructed pedestrian path up to 5 feet wide to access lake

Shorelands



Modifications, Structures, Erosion	Measured Occurrence
Artificial Beach	0
Rip Rap	0
Sea Wall	0
Impervious Surface	0
Mowed Lawn	62
Erosion	0
Nonconforming Buildings	0
Piers	7
Coarse Woody Habitat	100 logs/mile

Finnegan Lake's Shorelands

To better understand the health of Finnegan Lake, shorelands were evaluated by WDNR (Brenda Nordin) in 2022. The survey inventoried shoreland vegetation, erosion, riprap, barren ground, seawalls, structures, and docks. Of the 0.3 miles of shoreline, 4% is considered disturbed. A total of 7 piers were counted during the survey (1/250 ft).

- With 9 lakefront lots, 270 feet (15%) of disturbed shoreland is permitted under NR115. Based on the 2022 shoreland inventory, 62 feet (4%) of Finnegan Lake's shoreland was disturbed. Coarse woody habitat was measured at 100 logs/mile (250 logs/mile recommended.)
- Finnegan Lake had above average shoreland health compared to other lakes in the study. Most stretches are in good shape, but a few have challenges that should be addressed.

Coarse Woody Habitat (CWH)

Woody debris (i.e., branches, limbs, trees) that falls into the lake forms critical habitat for tiny aquatic organisms that feed bluegills, turtles, crayfish and other critters. Water insects such as mayflies graze on the algae that grow on decomposing wood. Dragonfly nymphs hunt for prey among the stems and branches. Largemouth and smallmouth bass often find food, shelter, or nesting habitat among these fallen trees.

Above water, a fallen tree is like a dock for wildlife. Ducks and turtles sun themselves on the trunk, muskrats use the tree as a feeding platform, predators such as mink and otter hunt for prey in the vicinity of fallen wood, and dead trees that remain along the shoreline are used as perches by belted kingfishers, ospreys and songbirds.

Undeveloped lakes typically contain hundreds of 'logs per mile' while they may completely disappear on developed lakes. Unless it is a hazard to navigation or swimming, consider leaving woody debris in the water.

Shorelands

Finnegan Lake 2022 Shoreland Survey Results			
Total lakefront footage	**# Riparian lots**	**Total allowable (NR115) disturbed shoreland**	**Measured disturbed shoreland**
1,750	9	270 feet (15%)	62 feet (4%)

Goal 5. Shorelands around Finnegan Lake will be healthy and protective of water quality and habitat.

Objective 5.1 Shoreland property owners will be knowledgeable about and make good decisions regarding shoreland management.

Actions	**Lead person/group**	**Resources**	**Timeline**
Encourage and support shoreland owners interested in shoreland restoration. Contact OCLCD for available resources.		UWEX Lakes OCLCD WDNR Healthy Lakes Grants	Ongoing
Work with landowners of large undeveloped shoreline to develop protections for these areas such as conservation easement, land purchase, etc.		UWEX Lakes OCLCD WDNR Healthy Lakes Grants	Ongoing
Identify will property owners and locations for fish stick installations (see **Fish Community** section).		WDNR-Tammie Paoli	Ongoing
Work with US Forest Service to install a water diversion structure at the boat ramp to keep runoff from flowing directly into lake.		Town of Gillett USFS WDNR	2023

Water Quality

Water Quality

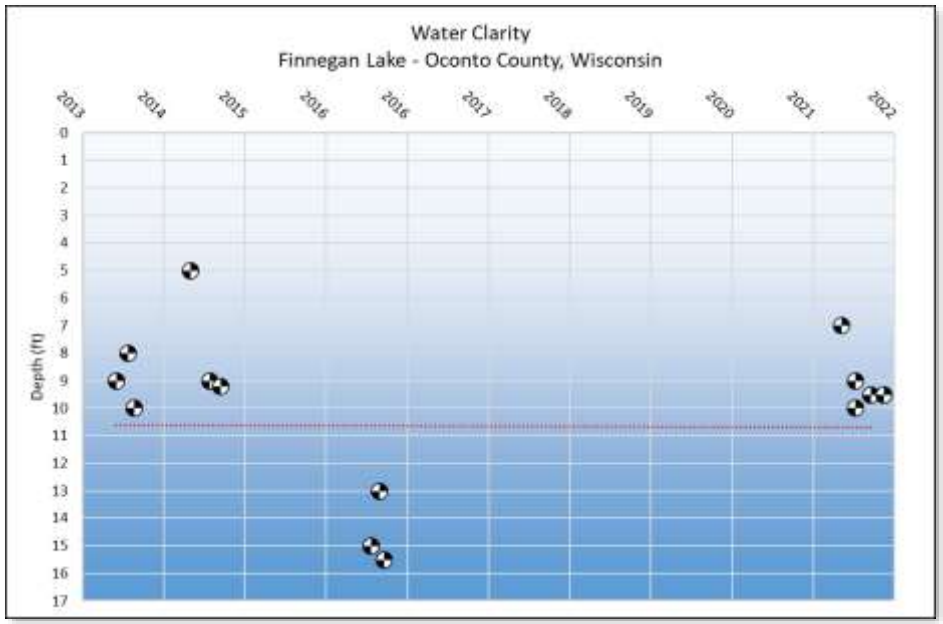
A variety of water chemistry measurements were used to characterize the water quality in Finnegan Lake. Water quality was assessed during the 2022-2023 lake study and involved a number of measures including temperature, dissolved oxygen, water chemistry, and nutrients (phosphorus and nitrogen). Nutrients are important measures of water quality in lakes because they contribute to algae and aquatic plant growth. Each of these interrelated measures plays a part in the lake's overall water quality. In addition, water quality data collected in past years was also reviewed to determine trends in Bear Paw Lake's water quality.

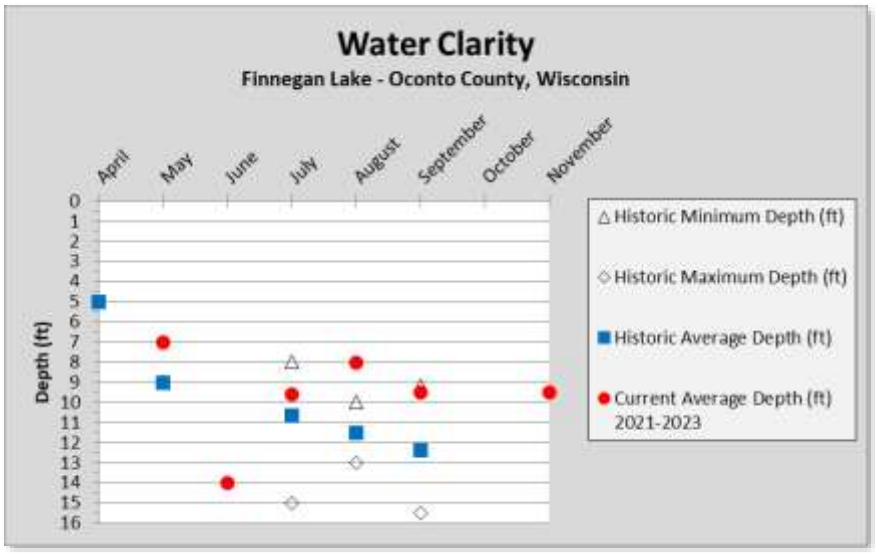
Finnegan Lake's Water Quality Summary

- ✓ **Water clarity** ranged from 7-14 feet (considered good). Limited data suggests that this trend is stable.
- ✓ **Dissolved oxygen** was sufficient most of the year but may become anoxic in late winter.
- ✓ Concentrations of **contaminants** were 'low' during the study. Atrazine was not detected.
- ✓ **Phosphorus** concentrations were periodically above the standard of 30 ug/L during the study. Limited data suggests a decreasing trend.
- ✓ **Inorganic nitrogen** remained below concentrations that spur algal blooms.

Water Clarity

Water clarity is a measure of how deep light can penetrate (Secchi depth). Clarity is affected by water color, turbidity, and algae and helps determine where rooted aquatic plants grow.

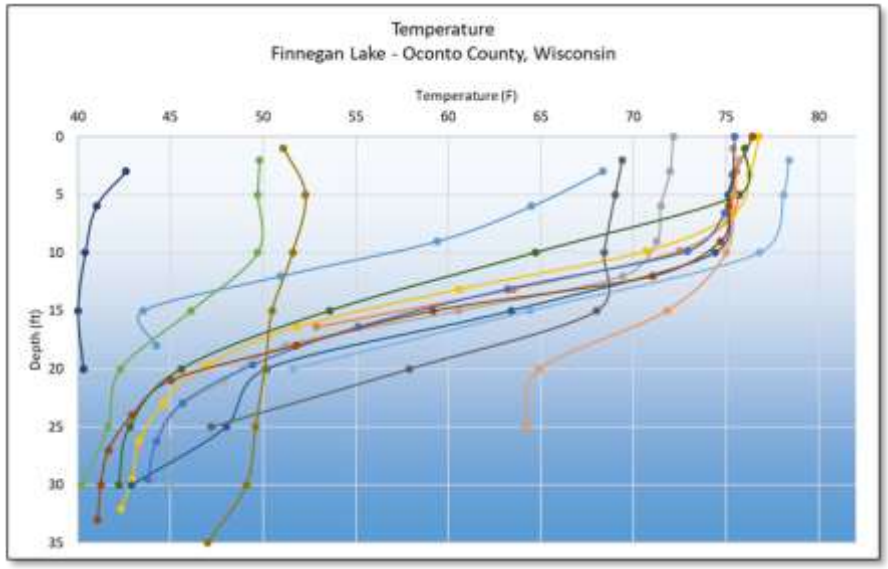




Water Quality

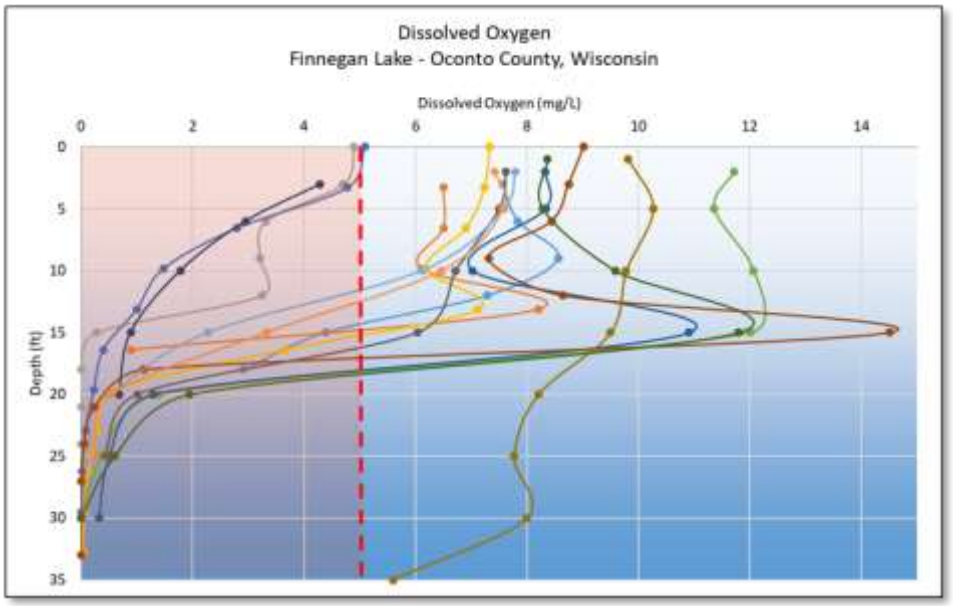
Temperature and Dissolved Oxygen

Temperature profiles for Finnegan Lake illustrate a typical 'deep' stratified lake with a clear thermocline visible between 10 and 20 feet.



Dissolved oxygen is an important measure in Finnegan Lake because a majority of organisms in the water depend on oxygen to survive. Oxygen is dissolved into the water from contact with air, which is increased by wind and wave action. Algae and aquatic plants also produce oxygen when sunlight enters the water, but the decomposition of dead plants and algae reduces oxygen in the lake.

Dissolved oxygen concentrations generally decline with depth as access to sources such as the atmosphere and growing plants is decreased. In Finnegan Lake, oxygen levels remain similar with depth until the thermocline at about 10 feet where concentrations drop off quickly. Late winter profiles indicate deficiencies in oxygen until very near the surface. Bumps in dissolved oxygen around the thermocline are indicative of algae blooms at depth.



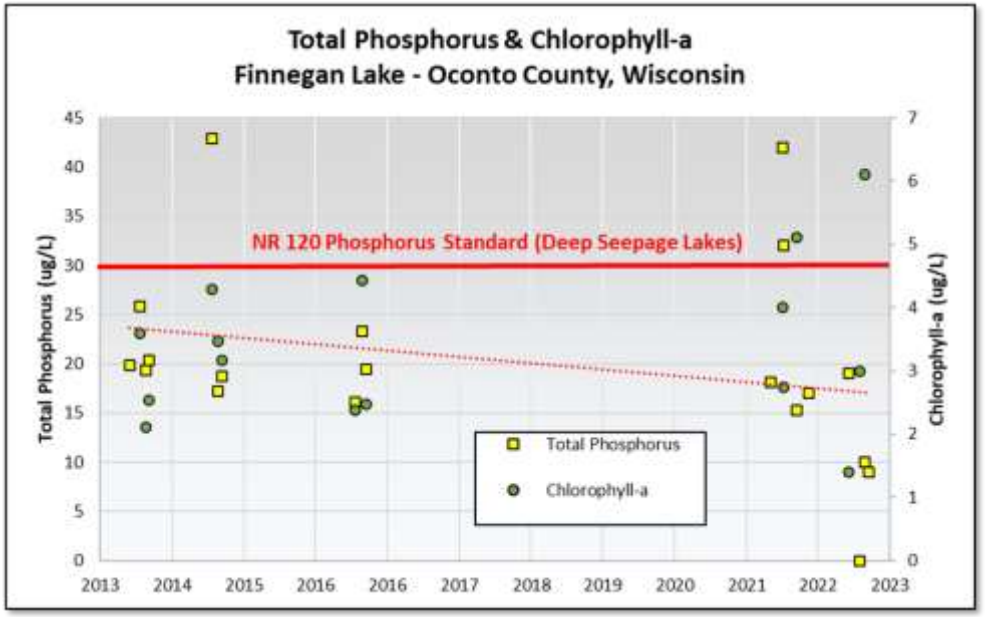
Contaminants

Chloride, sodium and potassium concentrations are commonly used as indicators of how a lake is being impacted by human activity. The presence of these compounds where they do not naturally occur indicates sources of water contaminants. Although these elements are not detrimental to the aquatic ecosystem, they indicate that sources of contaminants such as road salt, fertilizer, animal waste and/or septic system effluent may be entering the lake from either surface runoff or via groundwater. Measurements of these compounds was low suggesting little impact from human activities.

Water Quality

Nutrients

Phosphorus is an element that is essential in trace amounts to most living organisms, including aquatic plants and algae. Naturally-occurring sources of phosphorus include soils and wetlands, and groundwater. Common sources from human activities include soil erosion, animal waste, fertilizers, and septic systems. Although a variety of compounds are important to biological growth, phosphorus receives so much attention because it is commonly the "limiting nutrient" in many Wisconsin lakes. Due to its relatively short supply compared to other substances necessary for growth, relatively small increases in phosphorus result in significant increases in aquatic plants and algae. NR 120, Wisconsin Administrative Code lists phosphorus limits for different lake types. Deep seepage lakes such as Finnegan have a standard of 30 ug/L they must stay below to remain healthy. Finnegan Lake's dataset goes back about 20 years and suggests a decreasing trend.



Be part of the solution!

Managing nitrogen, phosphorus and soil erosion throughout the Finnegan Lake watershed is one of the keys to protecting the lake itself. Near shore activities that may increase the input of phosphorus to the lake include applying fertilizer, removing native vegetation (trees, bushes and grasses), mowing vegetation, and increasing the amount of exposed soil. Nitrogen inputs to a lake can be controlled by using lake-friendly land management decisions, such as the restoration of shoreland vegetation, elimination/reduction of fertilizers, proper management of animal waste and septic systems, and the use of water quality-based management practices.

Goal 6. Maintain or improve water quality in Finnegan Lake.

Objective 6.1 Maintain summer median total phosphorus concentrations below 30 ug/L and fall inorganic nitrogen concentrations below 0.3 mg/L.

Actions	Lead person/group	Resources	Timeline
Inform others about the impact of nutrients and land management on water quality through distribution of brochures, newsletter or host a guest speaker.		OCLWA WDNR UWEX Lakes	Ongoing
Refrain from the use of fertilizer. Encourage soil testing to determine if amendments are necessary.		OCUWEX	Ongoing
Encourage the restoration of disturbed shoreline to capture runoff and pollutants.		UWEX Lakes	Ongoing

Objective 6.2 Continue to develop an ongoing, robust water quality dataset for Finnegan Lake to monitor trends or changes over time.

Actions	Lead person/group	Resources	Timeline
Support volunteers collecting water quality data. Continue participation in the Citizen Lake Monitoring Network.		CLMN WDNR-Brenda Nordin	3+ times annually in summer
Submit all collected data to WDNR for archival and use by scientists and resource managers.		WDNR	Ongoing

Wisconsin has more than 500,000 registered boats-one for every 10 residents.

PEOPLE AND THE LAKE

The people who interact with the lake are a key component of the lake and its management. In essence a lake management plan is a venue by which people decide how they would like people to positively impact the lake. The plan summarizes the decisions of the people to take proactive steps to improve their lake and their community. Individual decisions by lake residents and visitors can have positive impacts on the lake and on those who enjoy this common resource. Collaborative efforts may have bigger positive impacts; therefore, communication and cooperation between the community and suite of lake users are essential to maximize the effects of plan implementation.

Boating hours, regulations, and fishing limits are examples of principles that are put into place to minimize conflicts between lake users and balance human activities with environmental considerations for the lake.

Recreation

According to survey responses, the lake is enjoyed for its scenery, boating and fishing. There is one public access located on the northeast side of the lake which is owned and maintained by the Town of Gillett. No Wake is allowed at any time.

Goal 7. Lake users will be informed about and care for the health of Finnegan Lake.

Objective 7.1 Nurture a healthy respect for the lake's ecosystem.

Actions	Lead person/group	Resources	Timeline
Work with other lake groups and towns in support of a recreational officer and municipal court for enforcement of regulations including No Wake and safe boat operation.		Town of Mountain OCLWA OC UWEX	Ongoing
Ensure signage at boat landing is up to date and clear. Consider updating board to kiosk with basic information on lake stewardship and expectations.		USFS UWEX Lakes	Ongoing

Communication and Organization

Working together on common values will help to achieve the goals outlined in this plan. This will involve communication between individuals, the Town of Gillett, Oconto County, resource managers, and elected officials. In addition, staying informed about lake- and groundwater-related topics will be essential to achieving the goals laid out in this plan. See the Oconto County Lake Information Directory in the Appendices for contact information.

Many of the goals outlined in this plan focus on distributing information to lake and watershed residents and lake users in order to help them make informed decisions that will result in a healthy Finnegan Lake ecosystem that is enjoyed by many people. Working together on common values will help to achieve the goals that are outlined in this plan.

Implementation of LMP When You Do Not Have a Lake Organization

The following is to help provide guidance for lake property owners seeking to grow cooperation and unified actions toward achieving the goals presented in their Lake Management Plan.

Clear and concise communication will lead to coordinated lake management efforts that are based on well-informed decisions. Though not required, it is beneficial to seek help in this situation, especially when lake property owners are unfamiliar with those living around the lake.

Moving forward as a unified voice: Conversations amongst property owners can help promote the goals of the plan.

1. *Invite fellow residents to a meeting* or two at least annually to discuss your Lake Management Plan, prioritize one or two goals, and to develop a strategy going forward including who will call whom about what and when.
    a. Identify your lake's property owners and host a gathering, at your property, a local park, or community center.
        i. Contact the County Land & Water Conservation or the UW-Extension to gain public records of your neighbors' addresses, to reach out and establish a dialog.
        ii. See if your neighbors are willing to share their contact information to make dissemination of information quicker i.e., email, phone, social media.
2. *Identify information to be readily available, most current, reviewed regularly on your lake*.
    a. Information can be stored on the Oconto County Land & Water Conservation website hosting your lake's information. Contact OCL&WC annually for updated information and anything you need posted concerning the lake.
    b. Your published/printed papers should find a home base for them to be readily available for review by members/neighbors, and safe keeping. This could be the role of a neighbor or local government/Town Board dedicating space for a file cabinet being accessible during office hours.

Annually discuss each goal within the plan for relevance to keep in the plan and/or to pursue in the next 12 months.

Develop Community Partnerships:

1. *Identify partners within the community* who can help with communication efforts, – i.e., Oconto's UW-Extension staff

and Oconto County Land & Water Conservation Department staff, the Oconto County Lakes and Waterways Association leadership, local Town officials, local sports clubs, businesses, realtors, school clubs, and other organizations.

2. *Look to these partners to assist in the creation, sponsorship, and dissemination* of water information for lake users, property owners, and visitors by:
    a. Assist in identifying key stakeholders (people or groups) needing to be consulted in making decisions and assisting in the plan's implementation of steps.
    b. Helping to organize your lake.
    c. Providing resources (i.e., Town could provide space for document storage/record storage within the Clerk's office regarding one or more lakes for easy/central access by lake group members/leadership; Oconto County staff could host needed digital documents on their waterways related webpages; the Town Board could designate a sub-committee of the Board to focus and discuss all water related issues.)
    d. Helping to identify existing or potential barriers and their needed strategies to overcome them that which stands in the way of gaining broad stakeholder support.

If after reading the above and you are unsure of how to proceed, contact the UW-Extension office and/or the Land & Water Conservation office for guidance. We all are working to enhance and/or protect our county's waters and will work together to "Have the healthiest waters in Wisconsin".

Goal 8. Bring representation to Finnegan Lake and recruit participation in lake stewardship.

Objective 8.1 Maintain good communication with residents, clubs, municipalities, the County and WDNR.

Actions	Lead person/group	Resources	Timeline
Create a Facebook page, or similar, to provide a common source of communication/information.		OC UWEX	Ongoing
Maintain an email list of property owners, resource managers/agency staff, and those interested in Finnegan Lake.		OC UWEX	Ongoing
Host gatherings to learn about topics identified in this plan. Invite speakers or conduct demonstrations.		UWEX Lakes	Annually
Network with other lake groups by having Bear Paw Lake represented at OCLWA.		OCLWA	Ongoing
Consider participating in the Wisconsin Lakes Convention or nominating an individual for the Lake Leaders Institute.		UWEX Lakes	Annually

Updates and Revisions

Updates and Revisions

A management plan is a living document that changes over time to meet the current needs, challenges and desires of the lake and its community. The goals, objectives and actions listed in this plan should be reviewed annually and updated with any necessary changes. Partners listed in the plan should be contacted annually, and updated information complied. A list of changes/updates to the plan should be documented. To ensure that everyone is informed about changes, appropriate approval for changes should be acquired by all partners signing on to this plan.

Goal 9. Review plan annually and update as needed.

Objective 9.1 Communicate updates with lake community, Oconto County and WDNR.

Actions	Lead person/group	Resources	Timeline
Review plan annually and discuss accomplishments and identification of goals/objectives for coming year.			Annually
Formally update this plan every 5 years.		OC UWEX WDNR	2027

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APPENDICES

Appendix A

Appendix A. Oconto County Lake Information Directory

Algae - Blue-Green

Contact: Brenda Nordin
Wisconsin Department of Natural Resources
Phone: 920-360-3167
E-mail: brenda.nordin@wisconsin.gov
Website: http://dnr.wi.gov/lakes/bluegreenalgae

Contact: Wisconsin Department of Health Services
1 West Wilson Street, Madison, WI 53703
Phone: 608-267-3242
Website:
www.dhs.wisconsin.gov/eh/bluegreenalgae/contactus.htm

Aquatic Invasive Species/Clean Boats Clean Water

Contact: Brenda Nordin
Wisconsin Department of Natural Resources
Phone: 920-360-3167
E-mail: brenda.nordin@wisconsin.gov
Website: http://dnr.wi.gov/topic/Invasives/

Aquatic Plant Management

(Native and Invasive)

Contact: Brenda Nordin
Wisconsin Department of Natural Resources
Phone: 920-360-3167
E-mail: brenda.nordin@wisconsin.gov
Website: http://dnr.wi.gov/lakes/plants/

Aquatic Plant Identification

Contact: Dr. Emmet Judziewicz
UWSP Freckmann Herbarium
TNR 301, 800 Reserve St., Stevens Point, WI 54481
Phone: 715-346-4248
E-mail: ejudziew@uwsp.edu

Contact: Brenda Nordin
Wisconsin Department of Natural Resources
Phone: 920-360-3167
E-mail: brenda.nordin@wisconsin.gov

Aquatic Plant Surveys/Management

Contact: Brenda Nordin
Wisconsin Department of Natural Resources
Phone: 920-360-3167
E-mail: brenda.nordin@wisconsin.gov
Website: http://dnr.wi.gov/lakes/plants/

Best Management Practices (rain gardens, shoreland buffers, agricultural practices, runoff controls)

Contact: Ken Dolata
Oconto County Land & Water Conservation Department
410 ½ East Main Street, Lena, WI 54139
Phone: 920-834-7152
E-mail: ken.dolata@co.oconto.wi.us
Website: http://www.co.oconto.wi.us/departments/

Boat Landings, Signage, Permissions (County)

Contact: Monty Brink
Oconto County Forestry/Park/Recreation
301 Washington Street, Oconto, WI 54153
Phone: 920-834-6995
E-mail: monty.brink@co.oconto.wi.us
Website: http://www.co.oconto.wi.us/departments/

Boat Landings (State)

Contact: Tammie Paoli
Wisconsin Department of Natural Resources
101 N. Ogden Road, Peshtigo, WI 54157
Phone: 715-582-5052
E-mail: Tammie.Paoli@wisconsin.gov
Website: http://dnr.wi.gov/org/land/facilities/boataccess/

Appendix A

Boat Landings (Town)

Contact the clerk for the specific town/village in which the boat landing is located.

Conservation Easements

Contact: Gathering Waters Conservancy
211 S. Paterson St., Suite 270, Madison, WI 53703
Phone: 608-251-9131
E-mail: info@gatheringwaters.org
Website: http://gatheringwaters.org/

Contact: Brenda Nordin
Wisconsin Department of Natural Resources
Phone: 920-360-3167
E-mail: brenda.nordin@wisconsin.gov

Contact: Northeast Wisconsin Land Trust
14 Tri-Park Way, Suite 1, Appleton, WI 54914
Phone: 920-738-7265
E-mail: newlt@newlt.org
Website: www.newlt.org

Contact: NRCS Lena Service Center
410 ½ East Main Street, Lena, WI 54139
Phone: 920-829-5406

Critical Habitat and Sensitive Areas

Contact: Brenda Nordin
Wisconsin Department of Natural Resources
Phone: 920-360-3167
E-mail: brenda.nordin@wisconsin.gov
Website: http://dnr.wi.gov/lakes/criticalhabitat/

Dams

Contact: Meg Galloway
Wisconsin Department of Natural Resources
PO Box 7921, Madison, WI 53707
Phone: 608-266-7014
E-mail: meg.galloway@wisconsin.gov
Website: http://dnr.wi.gov/org/water/wm/dsfm/dams/

Fertilizers/Soil Testing

Contact: Dale Mohr
Oconto County UW- Extension
301 Washington Street, Oconto, WI 54153
Phone: 920-835-6845
E-mail: dale.mohr@wisc.edu
Website: http://oconto.uwex.edu

Fisheries Biologist (management, habitat)

Contact: Tammie Paoli
Wisconsin Department of Natural Resources
101 N. Ogden Road, Peshtigo, WI 54157
Phone: 715-582-5052
E-mail: Tammie.Paoli@wisconsin.gov
Website: http://dnr.wi.gov/fish/

Frog Monitoring—Citizen Based

Contact: Andrew Badje
Wisconsin Department of Natural Resources
Phone: 608-785-9472
E-mail: Andrew.badje@wisconsin.gov
Website: WFTS@wisconsin.gov

Grants

Contact: Brenda Nordin
Wisconsin Department of Natural Resources
Phone: 920-360-3167
E-mail: brenda.nordin@wisconsin.gov
Website: http://dnr.wi.gov/Aid/Grants.html

Appendix A

Contact: Ken Dolata
Oconto County Land & Water Conservation Department
410 ½ East Main Street, Lena, WI 54139
Phone: 920-834-7152
E-mail: ken.dolata@co.oconto.wi.us
Website: http://www.co.oconto.wi.us/departments/

Groundwater Quality

Contact: Kevin Masarik
UWSP Center for Watershed Science & Education
TNR 224, 800 Reserve St., Stevens Point, WI 54481
Phone: 715-346-4276
E-mail: kmasarik@uwsp.edu
Website: http://www.uwsp.edu/cnr/watersheds/

Groundwater Levels/Quantity

Contact: Ken Dolata
Oconto County Land & Water Conservation Department
410 ½ East Main Street, Lena, WI 54139
Phone: 920-834-7152
E-mail: ken.dolata@co.oconto.wi.us
Website: http://www.co.oconto.wi.us/departments/

Contact: George Kraft
UWSP Center for Watershed Science & Education
TNR 224, 800 Reserve St., Stevens Point, WI 54481
Phone: 715-346-2984
E-mail: george.kraft@uwsp.edu

Informational Packets

Contact: UW Extension - Lakes
TNR 224, 800 Reserve St. Stevens Point, WI 54481
Phone: 715-346-2116
E-mail: uwexlakes@uwsp.edu

Lake Groups – Friends, Associations, Districts

Contact: Dale Mohr
Oconto County UW- Extension
301 Washington Street, Oconto, WI 54153
Phone: 920-835-6845
E-mail: dale.mohr@wisc.edu
Website: http://oconto.uwex.edu

Contact: Patrick Goggin
UWEX Lakes
TNR 203, 800 Reserve St., Stevens Point, WI 54481
Phone: 715-365-8943
E-mail: pgoggin@uwsp.edu
Website: http://www.uwsp.edu/cnr/uwexlakes/organizations/

Contact: Eric Olson
UWEX Lakes
TNR 206, 800 Reserve St., Stevens Point, WI 54481
Phone: 715-346-2192
E-mail: eolson@uwsp.edu
Website: http://www.uwsp.edu/cnr/uwexlakes/organizations/

Contact: Susan Tesarik
Wisconsin Lakes
4513 Vernon Blvd., Suite 101, Madison, WI 53705
Phone: 1-800-542-5253
E-mail: lakeinfo@wisconsinlakes.org
Website: http://wisconsinlakes.org/

Lake Levels

See: Groundwater

Lake-Related Law Enforcement (no-wake, transporting invasives, etc.)

Contact: Ben Mott
State Conservation Warden
Wisconsin Department of Natural Resources
427 E. Tower Drive, Suite 100, Wautoma, WI 54982
Phone: 920-896-3383
Website: http://www.wigamewarden.com/

Appendix A

Land Use Plans and Zoning Ordinances

Contact: Patrick Virtues
Oconto County Planning/Zoning/Solid Waste
301 Washington Street, Oconto, WI 54153
Phone: 920-834-6827
E-mail: Patrick.virtues@co.oconto.wi.us
Website: http://www.co.waushara.wi.us/zoning.htm

Contact: UWSP Center for Land Use Education
TNR 208, 800 Reserve St., Stevens Point, WI 54481
Phone: 715-346-3783
E-mail: Center.for.Land.Use.Education@uwsp.edu
Website: http://www.uwsp.edu/cnr/landcenter/

Nutrient Management Plans

Contact: Ken Dolata
Oconto County Land & Water Conservation Department
410 ½ East Main Street, Lena, WI 54139
Phone: 920-834-7152
E-mail: ken.dolata@co.oconto.wi.us
Website: http://www.co.oconto.wi.us/departments/

Contact: NRCS Lena Service Center
410 ½ East Main Street, Lena, WI 54139
Phone: 920-829-5406

Parks (County)

Contact: Monty Brink
Oconto County Forestry/Park/Recreation
301 Washington Street, Oconto, WI 54153
Phone: 920-834-6995
E-mail: monty.brink@co.oconto.wi.us
Website: http://www.co.oconto.wi.us/departments/

Purchase of Development Rights

Contact: Northeast Wisconsin Land Trust
14 Tri-Park Way, Suite 1, Appleton, WI 54914
Phone: 920-738-7265
E-mail: newlt@newlt.org
Website: www.newlt.org

Purchase of Land

Contact: Brenda Nordin
Wisconsin Department of Natural Resources
Phone: 920-360-3167
E-mail: brenda.nordin@wisconsin.gov
Website: http://dnr.wi.gov/topic/stewardship/

Rain Gardens and Stormwater Runoff

Contact: Ken Dolata
Oconto County Land & Water Conservation Department
410 ½ East Main Street, Lena, WI 54139
Phone: 920-834-7152
E-mail: ken.dolata@co.oconto.wi.us
Website: http://www.co.oconto.wi.us/departments/

Septic Systems/Onsite Waste

Contact: Patrick Virtues
Oconto County Planning/Zoning/Solid Waste
301 Washington Street, Oconto, WI 54153
Phone: 920-834-6827
E-mail: Patrick.virtues@co.oconto.wi.us
Website: http://www.co.waushara.wi.us/zoning.htm

Shoreland Management

Contact: Ken Dolata
Oconto County Land & Water Conservation Department
410 ½ East Main Street, Lena, WI 54139
Phone: 920-834-7152
E-mail: ken.dolata@co.oconto.wi.us
Website: http://www.co.oconto.wi.us/departments/

Shoreland Vegetation

http://dnr.wi.gov/topic/ShorelandZoning/

Shoreland Zoning Ordinances

See: Land Use Plans and Zoning Ordinances

Appendix A

Soil Fertility Testing
Contact: Dale Mohr
Oconto County UW- Extension
301 Washington Street, Oconto, WI 54153
Phone: 920-835-6845
E-mail: dale.mohr@wisc.edu
Website: http://oconto.uwex.edu

Water Quality Monitoring
Contact: Brenda Nordin
Wisconsin Department of Natural Resources
Phone: 920-360-3167
E-mail: brenda.nordin@wisconsin.gov

Water Quality Problems
Contact: Brenda Nordin
Wisconsin Department of Natural Resources
Phone: 920-360-3167
E-mail: brenda.nordin@wisconsin.gov

Wetlands
Contact: Jason Fleener
Wisconsin Department of Natural Resources
GEF2 DNR Central Office, Madison, WI 53707
Phone: 608-266-7408
E-mail: Jason.fleener@wisconsin.gov
Website: http://dnr.wi.gov/wetlands/

Contact: Wisconsin Wetlands Association
214 N. Hamilton Street, #201, Madison, WI 53703
Phone: 608-250-9971
Email: info@wisconsinwetlands.org

Wetland Inventory
Contact: Dr. Emmet Judziewicz
UWSP Freckmann Herbarium
TNR 301, 800 Reserve St., Stevens Point, WI 54481
Phone: 715-346-4248
E-mail: ejudziew@uwsp.edu

Woody Habitat
Contact: Tammie Paoli
Wisconsin Department of Natural Resources
101 N. Ogden Road, Peshtigo, WI 54157
Phone: 715-582-5052
E-mail: Tammie.Paoli@wisconsin.gov
Website: http://dnr.wi.gov/fish/

Appendix B. Rapid Response Plan

REPORTING A SUSPECTED INVASIVE SPECIES

1. Collect specimens or take photos.

Regardless of the method used, provide as much information as possible. Try to include flowers, seeds or fruit, buds, full leaves, stems, roots and other distinctive features. In photos, place a coin, pencil or ruler for scale. Deliver or send specimen ASAP.

Collect, press and dry a complete sample. This method is best because a plant expert can then examine the specimen.

-OR-

Collect a fresh sample. Enclose in a plastic bag with a moist paper towel and refrigerate.

-OR-

Take detailed photos (digital or film).

2. Note the location where the specimen was found.

If possible, give the exact geographic location using a GPS (global positioning system) unit, topographic map, or the Wisconsin Gazetteer map book. If using a map, include a photocopy with a dot showing the plant's location.

Provide one or more of the following:

- Latitude & Longitude
- UTM (Universal Transverse Mercator) coordinates
- County, Township, Range, Section, Part-section
- Precise written site description, noting nearest city & road names, landmarks, local topography

3. Gather information to aid in positive species identification.

- Collection date and county
- Your name, address, phone, email
- Exact location (lat/long or UTM, Township/Range)
- Plant name
- Land ownership (if known/applicable)
- Population description (estimated # plants, area covered)
- Habitat type where found (forest, field, prairie, wetland, open water)

4. **Mail or bring specimens and information to any of the following locations (digital photos may be emailed):**

Wisconsin Dept. Natural Resources
2984 Shawano Avenue,
Green Bay, WI 54313
Phone: (920) 662-5100

UW-Stevens Point Herbarium
301 Trainer Natural Resources Building
800 Reserve Street
Stevens Point, WI 54481
Phone: 715-346-4248
E-Mail: ejudziew@uwsp.edu

Wisconsin Invasive Plants Reporting & Prevention Project
Herbarium-UW-Madison
430 Lincoln Drive
Madison, WI 53706
Phone: (608) 267-7612
E-Mail: invasiveplants@mailplus.wisc.edu

Appendix C

Appendix C. Lake User Survey Results