2015

Norrie Lake Management Plan

Prepared by staff from the Center for Watershed Science and Education
University of Wisconsin-Stevens Point.

Center for Watershed Science and Education
College of Natural Resources
University of Wisconsin-Stevens Point

Norrie Lake Management Plan

The Norrie Lake Management Plan was prepared after obtaining input from residents and lake users at a series of four public planning sessions held at the Norrie Town Hall in Birnamwood, Wisconsin in August, September, October and November 2014. The inclusive community sessions were designed to learn about and identify key community opportunities, assets, concerns, and priorities. Representatives of state and local agencies, as well as nonprofit organizations, also attended the planning sessions to offer their assistance to the group in developing a strategic lake management plan (LMP).

The plan was adopted by the Town of Norrie on: July 13, 2015.

The plan was adopted by Marathon County on: August 18, 2015.

The plan was approved by the Wisconsin Department of Natural Resources on: _____.

A special thanks to all who helped to create the Norrie Lake Management Plan and provided guidance during the plan's development.

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We are grateful to many for providing insight, enthusiasm, and funding:

Marathon County Concerned Citizens and Property Owners
Marathon County Environmental Fund
Wisconsin Department of Natural Resources Lake Protection Grant

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Overarching Vision for Norrie Lake

Norrie Lake will remain a peaceful, minimally developed lake with a strong, sustainable fishery and excellent water quality. The traditions and experiences enjoyed on the lake for the past 100 years will continue for future generations.

Norrie Lake is located in the township of Norrie, east of Hatley and County Highway Y. One public boat launch is located on its southern side. Norrie Lake is a 100 acre seepage lake with groundwater and surface runoff contributing most of its water. The maximum depth in Norrie Lake is 21 feet; the lakebed has a moderate to steep slope. Its bottom sediments are mostly muck with sand found on the eastern and northeastern edges. The lake is enjoyed by local residents and visitors alike. It is known for quality fishing and has a public park with picnic area and a beach on the north side.

Based on discussions throughout the planning process, Norrie Lake planning session participants identified some key issues and goals that they would like to focus on in upcoming years:

- Maintaining a healthy and sustainable fishery
- Improving shoreland habitat

Introduction and Background

This lake management plan (LMP) and its planning process allow the community to guide the fate of its lake. The LMP is a dynamic document that identifies goals and action items for the purpose of maintaining, protecting and/or creating desired conditions in a lake for within given period of time. It can correct past problems, improve on current conditions, and provide guidance for future boards, lake users, and technical experts by identifying which issues have been addressed and how successful previous efforts were. Each plan is unique, dependent upon the conditions of the lake, its watershed, and the interests of the stakeholders involved. The actions identified in this LMP serve as a gateway for obtaining grant funding and other resources to help implement activities outlined in the plan. 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 of the key assistance exists.

Many individuals and organizations are involved in assuring that the Norrie Lake ecosystem is healthy. It is essential for key partners who are responsible for lake and land management work together to achieve this goal. The planning process and content of this plan have been designed to identify where some of the key assistance exists. Following is a list of key partners; this list is not all inclusive.

- **Individuals**: Individuals can use this plan to learn about the lake they love and their connection to it. People living near Norrie Lake can have the greatest influence on the lake by understanding and choosing lake-friendly options to manage their land and the lake.
- **Norrie Lake Sportsman Club:** This plan provides the Club with a well thought out plan for the whole lake and lists options that can easily be prioritized. Annual review of the plan will also help the Club to realize its accomplishments. Resources and funding opportunities for District management activities are made more available by placement of goals into the lake management plan, and the Club can identify partners to help achieve their goals for Norrie Lake.
- **Neighboring lake groups, sporting and conservation clubs**: Neighboring 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 Norrie**: The Town can utilize the visions, wishes, and goals documented in this lake management plan when considering town-level management planning or decisions within the watershed that may affect the lake.
- **Marathon 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 Eastern Marathon County lakes, streams, wetlands, and groundwater.
- **Wisconsin Department of Natural Resources**: Professionals working with lakes in Marathon 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. Lake management plans help the WDNR identify and prioritize needs within Wisconsin's lake community, and decide where to best apply resources and funding. A well thought out lake management plan increases an application's competitiveness for funding from the State – if multiple Marathon County lakes have similar goals in their lake management plans, they can join together when seeking grant support to increase competitiveness for statewide

resources. Information about WDNR grants is located on their website http://dnr.wi.gov/lakes/grants/. Grant contacts are also listed in Appendix A.

One of the first steps in creating the Norrie Lake Management Plan was to gather and compile data about the lake and its ecosystem to understand past and current lake conditions. The Eastern Marathon County Lakes Project was initiated by citizens who encouraged Marathon County to work in partnership with personnel from UW-Stevens Point to assess 11 lakes located in the eastern portion of the county. Finding for this effort was provided by the WDNR Lake Protection Grant program, the county's environmental fund, and monetary and in-kind contributions from citizens. One of the first steps of the project was the Eastern Marathon County Lakes Study (2010-12), which gathered and compiled data about the 11 lakes and their ecosystems in order to understand past and current lake conditions. Many of the lakes had insufficient data available to help evaluate current water quality concerns, aquatic plant communities, invasive species, or fisheries. Professionals and students from UW-Stevens Point conducted the study and interpreted the data for use in lake management planning. The results of this project (including this document) will assist citizens, municipalities, Marathon County, and State staff to efficiently manage their water resources and help make informed decisions and policies that affect their lakes.

In addition to the Eastern Marathon County Lakes Study, data collected by citizens, consultants, and professionals from the WDNR were incorporated into the planning process to provide a robust set of information from which informed decisions were made in this plan. Sources of information used in the planning process are listed at the end of this document for future reference.

Several reports from the Norrie Lake Study and the materials associated with the planning process and reports can be found on the Marathon County website: http://www.co.marathon.wi.us/Departments/ConservationPlanningZoning/ConservationServices/LakePrograms.aspx.

The purpose of this plan is to learn about Norrie Lake and identify features important to the Norrie Lake community in order to provide a framework for the protection and improvement of the lake. This framework, or lake management plan, will enable citizens and other supporters to achieve the vision for Norrie Lake now and in the years to come. The planning process included a series of four public planning sessions which were held at the Norrie Town Hall to assist area residents, members of the Norrie Lake Sportsman Club, lake users, and representatives of local municipalities with the development of the lake management plan. These meetings took place between August and November 2014.

The purpose of this plan is to learn about Norrie Lake, identify factors important to lake residents and users, and develop goals to protect and improve Norrie Lake for future generations.

Participation in the planning process was open to everyone and was encouraged by letters sent directly to Norrie Lake waterfront property owners and by press releases in local newspapers. In addition, members of the planning committee were provided with emails about upcoming meetings which could be forwarded to others.

Guest experts and professionals were invited to attend the planning sessions. They presented information and participated in discussions with participants to provide context, insight and recommendations for the lake management plan, including environmental and regulatory considerations. Information provided by the professionals was organized

with the survey results into discussion topics, which included: the fishery and recreation; the aquatic plant community; water quality and land use; shoreland health; and communication. After learning about the current conditions of each topic, participants identified goals, objectives, and actions for the lake management plan that were recorded by professionals from UW-Stevens Point. Planning session notes and presentations were posted to the Marathon County website.

The Norrie Lake Planning Committee consisted of property owners, recreational users, members of the Norrie Lake Sportsman Club, and Town board members. Technical assistance during the planning process was provided by the Marathon County Conservation, Planning, and Zoning Department (CPZ) and professionals from the Wisconsin Department of Natural Resources (WDNR), Golden Sands Resource Conservation & Development, Inc. (RC&D), and the University of Wisconsin-Stevens Point Center for Watershed Science and Education (CWSE).

Goals, Objectives and Actions

The following goals, objectives, and associated actions were derived from the values and concerns of citizens and members of the Norrie Lake Management Planning Committee, and the known science about Norrie Lake, its ecosystem and the landscape within its watershed. Implementing and regularly updating the goals and actions in the Norrie Lake Management Plan will ensure that the vision is supported and that changes or new challenges are incorporated into the plan. 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.**

Although each lake is different, to ensure a lake management plan considers the many aspects associated with a lake, the Wisconsin Department of Natural Resources requires that a comprehensive lake management plan address, at a minimum, a list of topics that affect the character of a lake, whether each topic has been identified as a priority or as simply something to preserve. These topics comprise the chapters in this plan. For the purposes of this plan, the chapters 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 and Quantity—water chemistry, clarity, contaminants, lake levels
Shorelands—habitat, erosion, contaminant filtering, water quality, vegetation, access
Watershed Land Use—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 and Revisions—continuing the process
Governance—protection of the lake, constitution, state, county, local municipalities

Lead persons and resources are given under each objective of this plan. These individuals and organizations are able to provide information, suggestions, or services to accomplish objectives and 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.

Acronym	Organization/Resource
CBCW	Clean Boats Clean Waters
CLMN	Citizen Lake Monitoring Network
CWSE	UWSP Center for Watershed Science and Education
CPZ	Marathon County Planning and Zoning (includes Land Conservation Department)
MC	Marathon County
NCCT	North Central Conservancy Trust
NRCS	USDA Natural Resources Conservation Service
RC&D	Golden Sands Resource Conservation and Development Council, Inc.
UWSP	University of Wisconsin-Stevens Point
UWEX	UW-Extension
WEAL	UWSP Water and Environmental Analysis Lab
WDNR	Wisconsin Department of Natural Resources
WDOT	Wisconsin Department of Transportation

Contact information for organizations and individuals who support lake management in Marathon County can be found in Appendix A.

In-Lake Habitat and a Healthy Lake

Many lake users value Norrie Lake for its fishing, wildlife, and good water quality. These attributes are all interrelated; 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.

Lake habitat occurs within the lake, along all of its shorelands, and even extends into its watershed for some species. Many animals that live in and near the lake are only successful if their needs – food, a healthy environment, and shelter – are met. Native vegetation including wetlands along the shoreline and adjacent to the lake provides habitat for safety, reproduction, and food, and can improve water quality and balance water quantity. 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. Aquatic plants infuse oxygen into the water and provide food and shelter for waterfowl, small mammals, and people. 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. Healthy habitat in Norrie Lake includes the aquatic plants, branches, and tree limbs above and below the water.

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 in order to flourish. Activities in and around a lake that can affect a fishery may involve disturbances to the native aquatic plant community or substrate, excessive additions of nutrients or harmful chemicals, removal of woody habitat, shoreline alterations, and/or an imbalance in the fishery. Shoreland erosion can cause sediment to settle onto the substrate, causing the deterioration of spawning habitat. Habitat can be improved by allowing shoreland vegetation to grow, minimizing the removal of aquatic plants, providing fallen trees or limbs in suitable areas, and protecting wetlands and other areas of critical habitat.

People are an important part of a sustainable fish community; their actions on the landscape and the numbers and sizes of fish taken out of the lake can influence the entire lake ecosystem. Putting appropriate fishing regulations in place and adhering to them can help to balance the fishery with healthy prey and predatory species, can be adjusted as the fish community changes, and can provide for excellent fishing.

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

Norrie Lake

A healthy fishery is one that seeks to be in balance with the lake's natural ability to support the fish community, and one in which populations do not decline over time because of fishing practices. The fish community should be adaptable to fishing without additional stocking or input. A balanced fish community has a mix of predator and prey species, each of which has different needs to flourish including sufficient food, habitat, appropriate spawning substrate, and water quality.

Norrie Lake supports a warm water fish community. In a survey conducted in 2012, eight fish species were sampled and identified out of the ten species that have been recorded in surveys dating back to 1970 (Meronek 2014). The 2012 survey also documented smallmouth bass for the first time. Northern pike and pirate perch were documented previously but not detected during the 2012 survey. Pirate perch is a unique species which is designated a species of special concern in Wisconsin. Bluegill and yellow perch were the most abundant species during the 2012 survey, with maximum lengths reaching 9.3 inches and 4.8 inches, respectively. Walleye reached a maximum length of 22.4 inches. Pumpkinseed and black bullhead were least commonly sampled. Crayfish were not encountered during the sampling period.

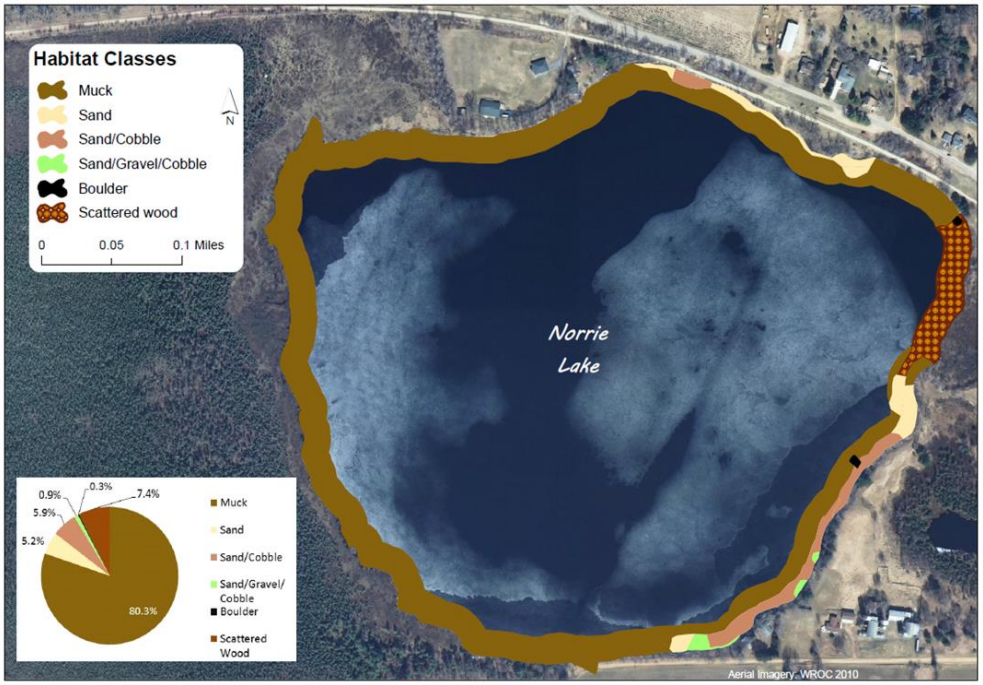
During the fishery planning session, WDNR Fisheries Biologist Tom Meronek stated that the Norrie Lake fishery currently supports stable populations of bluegill, black crappie and largemouth bass. It appears that stocking efforts have resulted in a walleye fishery with a good range of size classes. While young walleye were present in Norrie Lake, conclusions about natural reproduction are difficult without more intensive sampling efforts. The yellow perch fishery is not producing large fish but provides a forage base for the fishery as a whole. This conclusion was based on the results of the 2012 survey conducted by UWSP (see 2010-2012 Norrie Lake Study Report) and an electroshocking survey conducted by WDNR fishery biologists in 2003.The presence of young smallmouth bass, largemouth bass, and abundant sunfish sampled in 2012 indicated successful reproduction of these species was occurring in Norrie Lake.

Norrie Lake was selected for inclusion in the Wisconsin Walleye Initiative which is being carried out by WDNR fishery biologists. Through this program, Norrie Lake was stocked with 1400 walleye fingerling in 2014; stocking is scheduled to take place every other year for three to five years. WDNR fishery biologist Tom Meronek explained that the Norrie Lake Sportsmen's Club may continue to stock walleye in the Initiative's non-stocking years. During the planning meeting at the Norrie Town Hall on October 8, several citizens indicated a strong interest in opting out of the Wisconsin Walleye initiative and instead continuing stocking efforts by the Norrie Lake Sportsmen's Club. Since Norrie Lake had not been selected as a study site, Meronek thought it may be possible for Norrie Lake to be withdrawn from the Initiative.

As a part of the fishery study, in-lake habitat was examined from the shoreline out to a distance of 90 feet (see 2010-2012 Norrie Lake Study Report). Substrate in Norrie Lake consisted of a soft bottom, muck (80%), sand (5.2%), and mixtures of hard substrate. Coarse woody habitat (CWH), including downed trees and logs, are abundant in Norrie Lake. Norrie Lake has a unique habitat feature on the northeastern shoreline: scattered wood. A historic

logging operation deposited large amounts of scrap wood, and many logs and pieces still cover the bottom today. This is an excellent spawning habitat, protective cover, and foraging site for aquatic organisms.

Yellow perch and walleye utilize near-shore cobble in oxygen-rich environments for spawning activity; parents do not offer parental care. Sand can be important habitat for reproduction of non-game minnows. Bulrush was sparse in Norrie Lake. Northern pike, which do not offer parental care, utilize areas with emergent and floating-leaf vegetation in shallow or flooded areas for spawning. The absence of young northern pike in the 2012 sampling may be an indicator of poor reproduction, although more intense population sampling over several seasons would be required to determine the reproduction effort for individual fish species. Black crappie utilize bulrush habitat on gravel or sand substrates where they construct nests and guard young.



Guiding Vision for the Fish Community

Norrie Lake will continue to have a healthy, well-structured fishery that provides great angling.

Goal 1. Support conditions that provide a healthy fishery.

Objective 1.1. Enhance and improve fish habitat.

Actions	Lead person/group	Resources	Timeline
Enhance and extend near-shore gravel and cobble areas to increase existing spawning habitat.		WDNR Fisheries Biologist	
Educate residents about the importance of critical woody habitat for forage and protection zones for fish.	Interested citizen	UWEX Lakes (educational material)	
Maintain aquatic plants in the shallows; explore re-establishment of bulrush along the northwest shore as suggested in Objective 2.1 of this plan.		WDNR Fisheries Biologist	

Explore the possibility of installing a complex of fish cribs in deeper areas (~10 feet) to provide mid-lake structure.		WDNR Fisheries Biologist	

Objective 1.2. Continue to supplement the fishery as needed.

Actions	Lead person/group	Resources	Timeline
Explore advantages and disadvantages of continuing to participate in the Wisconsin Walleye Initiative.		WDNR Fisheries Biologist	
Continue stocking/fisheries management by Norrie Lake Sportsman Club with walleye and other species in cooperation with Tom Meronek and the WDNR		WDNR Fisheries Biologist	
Confer with WDNR fisheries biologist on results of future fish surveys.		WDNR Fisheries Biologist	

Aquatic Plants

Aquatic plants provide the forested landscape within Norrie 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 creates diversity that makes the aquatic plant community more resilient and can help to prevent the establishment of non-native aquatic species.

The diversity of an aquatic plant community is defined by the type and number of species present throughout the lake. Norrie Lake had the second highest number of species of the 11 lakes in the Eastern Marathon County Lakes Study. Twenty-six aquatic plant species were observed during the survey in Norrie Lake. Norrie Lake had more high quality plants than any of the lakes in the Eastern Marathon County Lakes Study – 13 species were considered high quality with a C-value of eight or greater. Out of these 13 species, three are designated as species of special concern in Wisconsin: Farwell's water milfoil, waterthread pondweed, and large purple bladderwort. Norrie Lake was one of only four lakes within the Eastern Marathon County Lakes Study hosting species of special concern. The greatest diversity was located in the northwestern corner of the lake.

Overall, the aquatic plant community in Norrie Lake can be characterized as having good species diversity, with a number of relatively uncommon species to central Wisconsin. The wetlands surrounding Norrie Lake provide excellent habitat and an incredible variety of plant species. These wetlands also contribute to the dark color of the water. This limits light penetration and inhibits aquatic plant growth in areas of the lake deeper than eight feet. The habitat, food source, and water quality benefits of the diverse plant community in and around Norrie Lake should be focal points in future lake management strategies.

No aquatic invasive plant species were observed in Norrie Lake during the aquatic plant survey in 2011. The amount of disturbed lakebed from raking or pulling plants should be minimized, since these open spaces are "open real estate" for aquatic invasive plants to establish. Early detection of aquatic invasive species (AIS) can help to prevent their establishment should they be introduced into the lake. Boats and trailers that have visited other lakes can be a primary vector for the transport of AIS. Programs are available to help volunteers learn to monitor for AIS and to educate lake users at the boat launch about how they can prevent the spread of AIS.

More detailed information can be found in the Norrie Lake Aquatic Plant Report or the Norrie Lake 2010-2012 Lake Study Report.

Guiding Vision for Aquatic Plants in Norrie Lake

Norrie Lake will maintain the diversity of high quality native aquatic plants that support a thriving fishery and excellent water quality.

Goal 2. Maintain the existing native plant community in Norrie Lake.

Objective 2.1. Preserve/protect the high quality plant community in Norrie Lake.

Actions	Lead person/group	Resources	Timeline
Inform visitors about the lake's unique and vibrant native aquatic plant community with a brochure available at the public access or signage that includes interesting facts and information about species of special concern in the lake.		UWEX Lakes (educational materials)	
Explore the re-establishment of bulrush along the northwestern shore.	Interested citizen	Scott Provost (WDNR)	
Refrain from removing native vegetation in and around the lake. Use manual techniques only if removal is required.	Shoreland property owners	UWEX Lakes (educational materials)	

Aquatic Invasive Species (AIS)

Aquatic invasives species are non-native aquatic plants and animals that are most often unintentionally introduced into a lake by lake users. This most 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.

During the aquatic plant survey of Norrie Lake, no invasive aquatic plant species were observed. This is a good indicator of overall aquatic health within the lake. The lack of aquatic invasive species also demonstrates diligence by users of the lake in cleaning watercraft before entering the lake to prevent non-native species transfer.

Management strategies for Norrie Lake should focus on preventative strategies for AIS invasion or spread by boats that travel between lakes.

Guiding Vision for Aquatic Invasive Species

Norrie Lake will not be adversely impacted by aquatic invasive species.

Goal 3. Prevent aquatic invasive species from entering Norrie Lake.

Objective 3.2. Educate and encourage visitors to Norrie Lake about controlling the transport of invasive species between water bodies.

Actions	Lead person/group	Resources	Timeline
Include information about the impact of aquatic invasive species in a welcome packet or newsletter and remind lake users to clean plants off trailers, drain motors and live wells, and wash boats before and after entering/leaving the lake.		UWEX Lakes (educational materials) CPZ	
Develop signage at the boat landing to inform users about aquatic invasive species concerns and the importance of cleaning plants off trailers, draining motors and live wells, and washing boats before and after entering/leaving the lake.		UWEX Lakes (educational materials) Town of Norrie	

Objective 3.2. Be proactive in preventing establishment of AIS in Norrie Lake.

Actions	Lead person/group	Resources	Timeline
Protect and leave in place as much native aquatic vegetation as possible.	Shoreland property owners		
Learn about identification and proper manual removal techniques for AIS.	Interested citizen	RC&D*	
Closely monitor for and take immediate action if AIS is observed in the lake.	Interested citizen	RC&D*	

Develop rapid response plan and publish in local papers like Community Shopper and Northerner (both in Wittenberg) and notify Town Chair/Clerk.			
Provide letter to RC&D* in support of their work to assist communities in AIS identification, monitoring and eradication.	Interested citizen	Town of Norrie	

* Note: Services offered by RC&D are dependent on available funds through grants or lake groups.

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 Wisconsin Department of Natural Resources 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 Norrie Lake does not have an official critical habitat area designation, there are areas within Norrie 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.

Guiding Vision for Norrie Lake's Critical Habitat

Sensitive areas on Norrie Lake will be enhanced and protected from degradation.

Goal 4. Preserve and redevelop high quality habitat for fish and wildlife.

Objective 4.1. Identify potentially critical habitat on Norrie Lake.

Actions	Lead person/group	Resources	Timeline
Request Critical Habitat Designation from WI-DNR	Interested citizen	WDNR Aquatic Biologist and Lake Managers	
Once identified, help others understand the value of these areas.	Interested citizen	UWEX Lakes (educational materials) WDNR Aquatic Biologist and Lake Managers	

Landscapes and the Lake

Land use and land management practices within a lake's 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. 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 on the land may result in changes to natural drainage patterns and 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. Land management practices can be put into place that better 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.

Shoreland vegetation is critical to a healthy lake's ecosystem. It helps improve the quality of the runoff that is flowing across the landscape towards the lake. It also provides habitat for many aquatic and terrestrial animals including birds, frogs, turtles, and many small and large mammals. Healthy shoreland vegetation includes a mix of tall grasses/flowers, shrubs, and trees which extend at least 35 feet landward from the water's edge. Shorelands include adjacent wetlands, which also serve the lake by allowing contaminants to settle out, providing shelter for fish and wildlife, and decreasing the hazard of shoreline erosion by providing a shoreland barrier from waves and wind.

The water quality in Norrie Lake is the result of many factors, including the underlying geology, the climate, and land management practices. Since we have little control over the climate and cannot change the geology, changes to land management practices are the primary actions that can have positive impacts on the lake's water quality. The water quality in Norrie Lake was assessed by measuring different characteristics including temperature, dissolved oxygen, water clarity, water chemistry, and algae. All of these factors were taken into consideration when management planning decisions were made.

Water Quality

Water quality was assessed during the 2010-2012 lake study, and past water quality data were acquired and reviewed to determine trends in Rice Lake's water quality. These data included a number of measures such as temperature, dissolved oxygen, water chemistry, and phosphorus. Each of these interrelated measures plays a part in the lake's overall water quality.

Dissolved oxygen is an important measure in aquatic ecosystems because a majority of organisms in the water depend upon oxygen to survive. Oxygen is dissolved into the water from contact with the air, which is increased by wind and wave action. When sunlight enters the water, algae and aquatic plants also produce oxygen; however, the decomposition of algae and plants by bacteria after they die reduces oxygen in the lake. During winter and summer when lakes stratify, the amount of dissolved oxygen is often lower towards the bottom of the lake. Dissolved oxygen concentrations below 5 mg/L can stress some species of cold water fish, and over time can reduce habitat for sensitive cold water species of fish and other critters.

Dissolved oxygen concentrations in Norrie Lake ranged from plentiful to limited, depending upon depth and time of year. Like temperature, dissolved oxygen was mixed from top to bottom during spring and fall. During the summer, dissolved oxygen concentrations became stratified as the surface water warmed, with reduction in dissolved oxygen near the bottom where decomposition occurs. In winter of both years during the ice-covered period, the upper six feet of water provided sufficient dissolved oxygen concentrations to support many fish species. However, in years with long periods of snow and ice cover, a greater percent of the lake's water will have lower dissolved oxygen concentrations, potentially creating stressful conditions for some species of cold water fish.

Over the study period, concentrations of chloride, sodium, potassium, and inorganic nitrogen were low, and atrazine, an herbicide commonly used on corn, was below the detection limit (<0.01 µg/L) in the samples that were analyzed from Norrie Lake.

Norrie Lake is a nutrient-rich lake. Its soft water makes it particularly susceptible and responsive to the addition of nutrients, especially phosphorus; therefore, care should be taken to minimize the addition of phosphorus to the lake from erosion, the addition of nutrients to the landscape within the watershed, and the re-suspension of lake sediments from boat wakes and/or disturbing the protective layer provided by aquatic plants.

During the study, total phosphorus concentrations in Norrie Lake ranged from a high of 38 µg/L in April 2012 to a low of 17 µg/L in August 2012. The summer median total phosphorus concentration was 30 µg/L and 29.5 µg/L in 2011 and 2012, respectively. This is above Wisconsin's phosphorus standard of 20 µg/L for deep seepage lakes. Additionally, the water clarity measured in Norrie Lake during the study was considered poor. Water clarity ranged from 2.3 to 5 feet into the water. When the study data was compared with limited past data (1979 to 2005) submitted for Norrie Lake, average water clarity was found to have declined for all months.

Analysis indicated an unsettled algal community in Norrie Lake over the two year study period, with no regular seasonal patterns. **This variable algal community in combination with high phosphorus and decreasing water clarity depths likely indicate a lake undergoing a change in trophic status from mesotrophic to eutrophic.**

Managing nitrogen, phosphorus and soil erosion throughout the Norrie 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 Norrie 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.

Guiding Vision for Water Quality in Norrie Lake

Norrie Lake will have excellent water quality attractive to fish, wildlife and lake users alike.

Goal 5. Maintain nutrient concentrations appropriate for deep seepage lakes with no detectable pollutants/contaminants.

Objective 5.1. Establish a decreasing trend in phosphorus concentrations and reduce the summer median concentration to <25 ug/L over the next 5 years.

Actions	Lead person/group	Resources	Timeline
Establish a water quality monitoring program to include regular water clarity measurements and analysis of phosphorus and chlorophyll-*a* to evaluate changes over time. Phosphorus samples need to be collected according to WisCALM guidance to compare to the State's phosphorus rule.	Interested citizen	CLMN Coordinator	
Monitor dates of ice on/ice off and submit the information to the state database.	Interested citizen	WDNR	
If indicated by changes in summer sampling results, consider adding overturn sample for additional water quality data.	Interested citizen	CLMN Coordinator	
Inform others in the watershed about the impacts of nutrients and land management on water quality through the distribution of a Town newsletter and neighborly discussions. Consider including information on a lake sign.	Interested citizen	UWEX Lakes (educational materials)	
Refrain from the use of fertilizers on shoreland properties (see Shorelands section). Consider distributing educational materials around the lake.	Shoreland property owners	UWEX Lakes (educational materials)	
Explore the establishment of a 'Lakes' subcommittee to the Town Board.	Interested citizen	Town of Norrie	

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. Vegetation 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 tall grasses/flowers, shrubs and trees extending at least 35 feet inland from the water's edge. Alone, each manmade disturbance may not pose a problem for a lake, but on developed lakes, the collective impact of these disturbances can be a problem for lake habitat and water quality. Norrie Lake's shoreland was assessed for the extent of vegetation and disturbances.

Norrie Lake has approximately 1.5 miles of shoreline. Although much of the shoreland vegetation is primarily in a natural state, the northern portion of the lake lacked an adequate buffer. The 2012 study indicated that 49% of the shoreline had a grasses/forbs buffer depth of greater than 35 feet, which is the minimum depth required by Wisconsin and Marathon County shoreland zoning ordinances. 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 viewing 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.

Strategies should be developed to ensure that healthy shorelands remain intact, and efforts should be made to improve shorelands that have disturbance. Efforts may include:

- Informing new and existing property owners about the importance of healthy shorelands and ways they can protect them.
- Informing interested property owners about options for

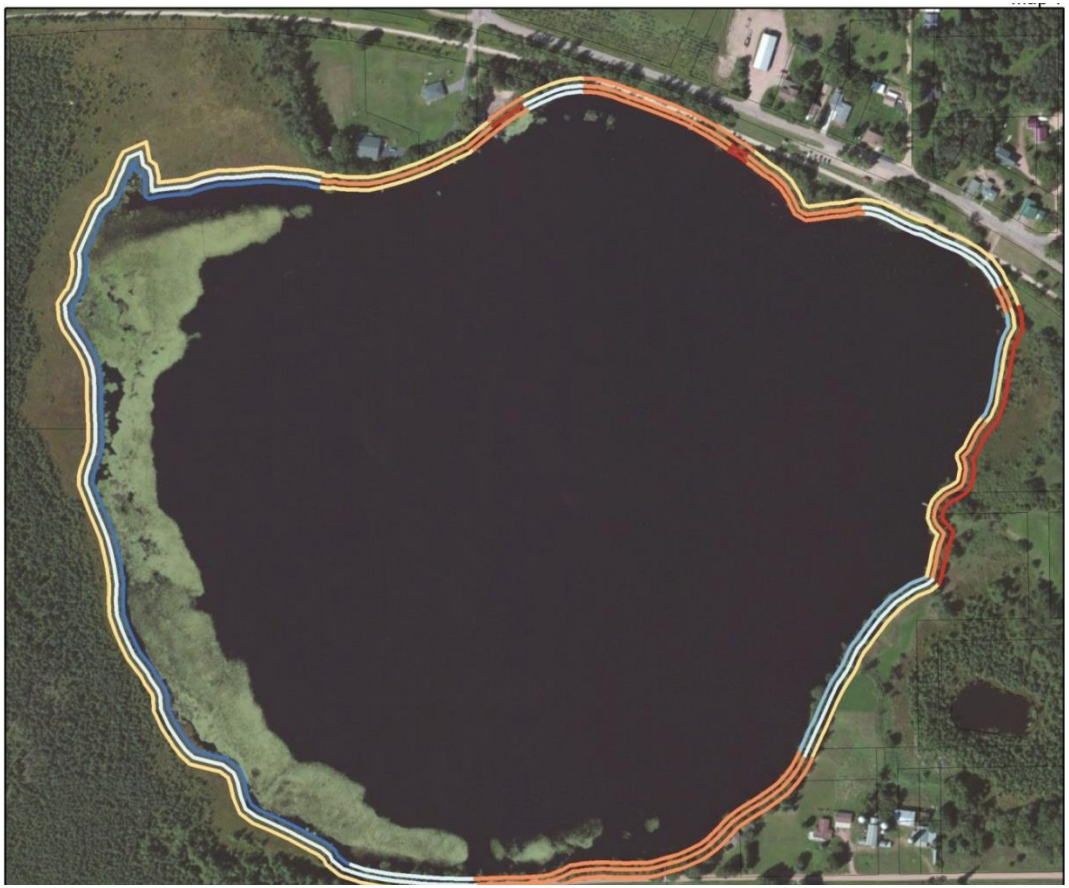


Figure 1 Map of different types of vegetative buffers extending inland from Norrie Lake.

protecting undisturbed shoreland, such as conservation easements. Conservation easements allow property owners to determine how their land will be managed and which parts of the property will be protected, typically resulting in lower taxes. Unless public funds are used for the purchase of the easement, there is no requirement to allow access to the public.

- Ensuring that prospective developers have the information needed to make good decisions, and that zoning is in place to achieve habitat, water quality, and aesthetic goals.

Guiding Vision for Norrie Lake's Shorelands

Norrie Lake will have healthy shorelines that provide continuous habitat from land to water to support a healthy lake ecosystem for aquatic and terrestrial wildlife and minimal runoff.

Goal 6. Maintain vegetated shorelines where they already exist, and encourage shoreland restoration where it does not.

Objective 6.1. Property owners and lake stewards will be knowledgeable about healthy shorelands and will be engaged in healthy shoreland maintenance and restoration.

Actions	Lead person/group	Resources	Timeline
Provide materials to new and existing property owners about the importance of healthy shorelands and ways they can protect them. Information can be distributed in welcome packets to residents and may also be shared through the Norrie Lake Sportsman Club.		CPZ Norrie Lake Sportsman Club	Ongoing
Encourage County Parks Department (which maintains the trail) to install a rain garden in the county park that may serve as a demonstration and educational site for local waterfront property owners and visitors while maintaining the park atmosphere. This could be developed as a community restoration project involving a local school or scout group.	Interested citizen	MC Parks Norrie Lake Sportsman Club	

Property owners can investigate options for protecting their shoreland through conservation easements or designation of special areas based on biological surveys.		NCCT	
Actively participate in the public process of revising the Marathon County Comprehensive Plan which will include revisions to the County's shoreland zoning ordinance.	Interested citizen	CPZ	

Objective 6.2. Reduce current problems in the shoreland where they exist.

Actions	Lead person/group	Resources	Timeline
Explore methods to control or eradicate buckthorn along Mountain Bay State Park Trail.	Interested citizen	RC&D*	
Explore ways to reduce the impacts of impervious surfaces such as Norrie Road, the parking lot and the Mountain Bay State Trail.	Interested citizen	CPZ	

***** Note: Services offered by RC&D are dependent on available funds through grants or lake groups.

Watershed Land Use

It is important to understand where Norrie Lake's water originates in order to understand the lake's health. During snowmelt or rainstorms, water moves across the surface of the landscape (runoff) towards lower elevations such as lakes, streams, and wetlands. The land area that contributes runoff to a lake is called the surface watershed. Groundwater also feeds Norrie Lake; its land area may be slightly different than the surface watershed.

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 ultimately, the lake's water quality and quantity. Essentially, landscapes with greater capacities to hold water during rain events and snowmelt slow the delivery of the water to the lake. 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. A variety of land management practices can be put in place to help reduce impacts to our lakes. Some practices are designed to reduce runoff. These include protecting/restoring wetlands, installing rain gardens, swales, rain barrels, and routing drainage from pavement and roofs away from the lake. Some practices are used to help reduce nutrients from moving across the landscape towards the lake. Examples include manure management practices, 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, and using erosion control practices.

The surface watershed for Norrie Lake is approximately 1,270 acres. Primary land use is forest and agriculture (Figure 2). The lake's

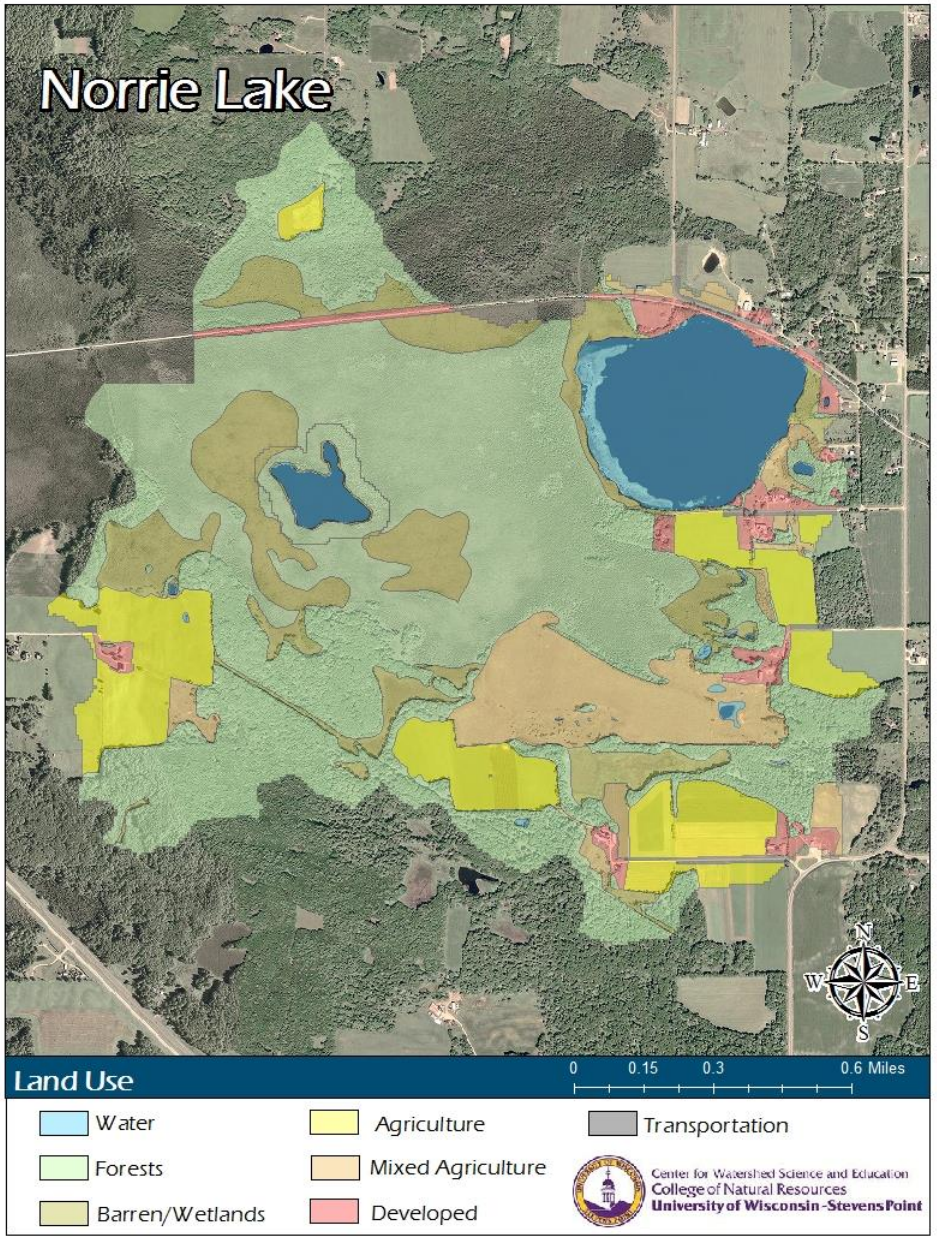
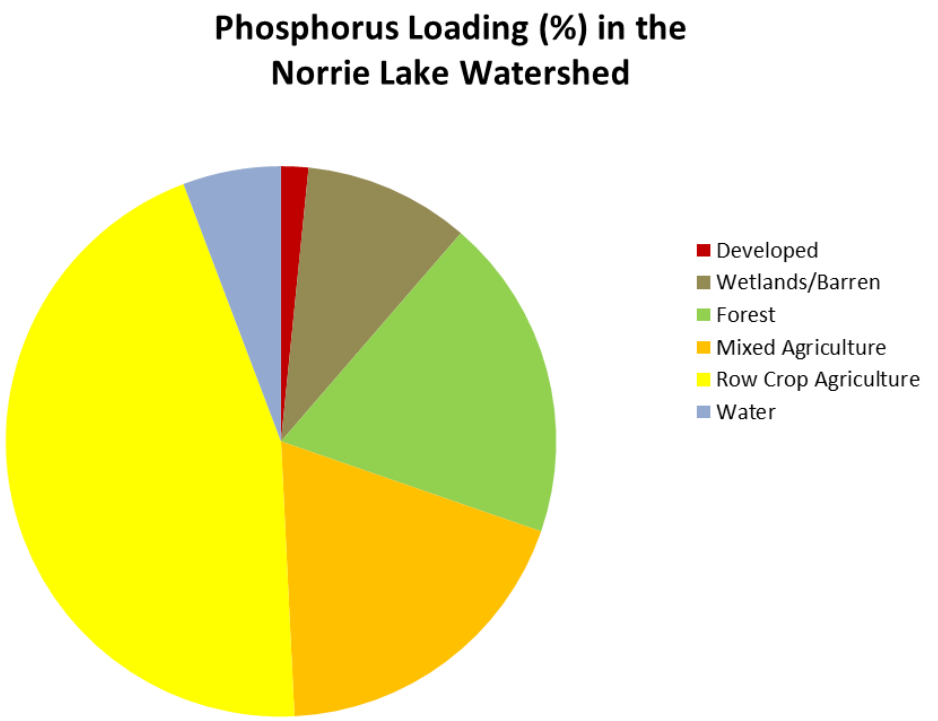


Figure 2. Surface watershed of Norrie Lake.

shoreland is surrounded primarily by residential development, forests, agriculture, and recreational land. In general, the land closest to the lake has the greatest immediate impact on water quality.

Estimates of phosphorus from the landscape can help to understand the phosphorus sources to Norrie Lake. Land use in the surface watershed was evaluated and used to populate the Wisconsin Lakes Modeling Suite (WILMS) model. The types of land management practices that are used and the distance from the lake also affect the contributions to the lake from a parcel of land. Forests comprised the greatest amount of land in the watershed, but modeling results indicated that agriculture contributed the most phosphorus from the watershed to Norrie Lake.



Guiding Vision for Norrie Lake's Watershed

Land management within the Norrie Lake's watershed will minimize adverse impact to the lake's water quality.

Goal 7. Land use practices within the watershed will not adversely impact the lake.

Objective 7.1. Protect important habitat around Norrie Lake and within its watershed by informing landowners of options and opportunities.

Actions	Lead person/group	Resources	Timeline
Support those interested in the purchase of development rights that permanently protect the landscape while retaining private ownership.		CPZ	

Support those interested in conservation easements to restrict development or uses of land that would impact critical habitat or natural features of the land.		NCCT	

Objective 7.2. Reduce runoff in the Norrie Lake watershed by working with landowners to design landscapes and management practices that enhance infiltration and filtering.

Actions	Lead person/group	Resources	Timeline
Encourage the County to work with landowners to install and maintain Best Management Practices (BMPs) for water quality.		CPZ	

People and the Lake

The people that 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 a positive impact on the lake and on those who enjoy this common resource. Collaborative efforts may have a bigger positive impact; therefore, communication and cooperation between a lake district, 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

Norrie Lake is enjoyed by residents and visitors who swim, boat, fish and appreciate its beauty. The lake has one public boat ramp on the south side. The Mountain-Bay State Trail runs adjacent to the north side of the lake and includes a public park area on the north shore with a small beach, picnic and parking area.

Guiding Vision for Recreation

Norrie Lake will remain a quiet place for fishing and other recreational activities.

Goal 8. Visitors to Norrie Lake will have safe access to the lake.

Objective 8.1.

Actions	Lead person/group	Resources	Timeline
Determine whether or not the power pole at the boat landing can be moved further away from the landing.		Utility company	

Communication and Organization

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 ecosystem in Norrie Lake enjoyed by many people. Working together on common values will help to achieve the goals that are outlined in this plan.

Guiding Vision for Communication

Norrie Lake will have a dedicated group of lake stewards who communicate with one another, lake users, watershed residents, municipalities and other lake stewards.

Goal 9. Communicate important lake information, decisions, and actions within the group and with those that live around the lake.

Objective 9.1. Communicate important lake information in a variety of venues.

Actions	Lead person/group	Resources	Timeline
Inform property owners within the watershed about the effects of fertilizers, impervious surfaces, and septic systems on the lake.		CPZ UWEX Lakes (educational materials)	
Inform property owners around the lake about the importance of shoreland vegetation and information about shoreland restoration.		CPZ UWEX Lakes (educational materials)	
Monitor issues that may lead to problems within the lake community, i.e. activities that may lead to erosion like residents clear cutting shorelines, dumping sand on shorelines or other shoreline disturbance; septic failures; non-compliance with setbacks; new construction, and/or new irrigation wells. Educate residents about how to mitigate adverse effects from such activities and report major problems to the County.	Interested citizen	Norrie Lake Sportsman Club	
Work with County to ensure the distribution of welcome packets to new residents. Consider a watershed welcome packet.		CPZ	
Explore the formation of a lakes subcommittee on the town board, and/or a county-wide lake group.	Interested citizen	Town of Norrie	

Encourage attendance at the Lakes Convention and Lake Leaders Institute, and announce educational events such as these.	Interested citizen	Norrie Lake Sportsman Club	
Identify a volunteer to produce and maintain a website and official Facebook page.	Interested citizen	Norrie Lake Sportsman Club	
Consider organizing periodic picnics, backyard walks, and other social activities to grow the community,	Interested citizen	Norrie Lake Sportsman Club	

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.

Guiding Vision for Updates and Revisions

Norrie Lake will maintain an accurate and comprehensive lake management plan that is reviewed regularly and documents all management activities and results.

Goal 10. Review plan annually and update as needed.

Objective 10.1. Communicate updates with community members and members of the sportsmen's club, Towns, county, and state.

Actions	Lead person/group	Resources	Timeline
Notify the Town, the County, and WDNR of any potential changes in the management plan.		Norrie Lake Sportsman Club	

Governance

This section will identify plans, ordinances, and regulations that affect the lake and responsible authorities including the local municipalities, state, and federal agencies.

Marathon County Strategic Plan: Marathon County's strategic plan states a clear intent to provide leadership and services focusing on improving land use and resource planning. This will assure the orderly development of retail and manufacturing business, agriculture/agribusiness, and residential growth while retaining the rural character of Marathon County. Specific objectives to support this leadership role are as follows:

Develop comprehensive planning and zoning ordinances that provide towns with value so that 100% request participation in county planning and zoning.

Improve water quality and residential, commercial, and industrial waste management resulting in 100% of all households, businesses, and industry sites meeting water quality standards.

Inventory water resources, determine where we have adequate supplies, and encourage development in those areas.

Develop an educational program on the quantity and quality of water supplies for local and state policy makers.

Comprehensive Plans – Marathon County and the Town of Norrie: Marathon County as well as the Town of Norrie adopted Comprehensive Plans in 2006. These plans outline the direction of future growth within the County and Town.

During the planning process, a set of guiding principles that describe broad characteristics of a desired future for local communities and Marathon County were developed. These guiding principles were used to provide a general framework for developing local and countywide goals and objectives. The guiding principles outlined in the Marathon County Comprehensive Plan are:

Respect Local Governance **-** Planning in Marathon County should build on local town, village and city government as a system that is unique, has served residents well, and is a strong component of local identity.

2. Preserve Working Agriculture **-** Agriculture has been central to the culture and economy of Marathon County for over 100 years. Farming has been a way of life for generations of county residents and is fundamental to both community and individual identity. Efforts such as protecting prime farmland from development, exploring niche markets, and supporting cooperative practices can be implemented at the local level to help maintain and preserve working agriculture.

3. Maintain a Sense of Place **-** As Marathon County's population grows and changes, communities will need to ensure that important physical features, buildings, and landscapes that exemplify their local identity are retained. These features provide a sense of heritage and continuity that contribute to a community's identity and sense of place.

4. Preserve Rural Character - Shifts in the farm economy and urban expansion are altering the County's rural landscape characterized by working farms, woodlands, rolling hills, marsh areas, and plentiful water bodies. As open spaces, farms, and woodlands are being lost or fragmented by development, Marathon County communities will need to make some important choices in order to preserve the qualities and character of the rural landscape.

5. Safeguard Natural Resources - Marathon County is graced with abundant natural resources including numerous rivers, wetlands, forests, and wildlife. Careful stewardship of natural resources is essential to protect against fragmentation and degradation and ensure these resources continue to contribute to the ecology, character, quality of life, and economy of Marathon County into the future.

6. Foster Managed Growth and Coordinated Development - Managing growth is important to ensure that no area is overwhelmed by development, land use conflicts are minimized, and development occurs in a quality manner that minimizes impacts on natural resources. Managing growth requires coordination of land uses and infrastructure, within and between communities,

From these Guiding Principles, the following goals were developed that are directly related to lake management planning and protection:

Goal 1: Enhance the natural character of Marathon County.

Objective: To encourage establishment of an open space network connecting woodlands, wetlands, shorelands, grasslands, and other natural areas.

Goal 2: Protect and enhance surface water resources and natural habitat areas.

Objective: To minimize development impacts that could affect the water quality and habitat of rivers, floodplains, and wetlands.

Objective: To provide leadership in disseminating information about shoreland, floodplain, and wetland preservation and management to County residents.

Goal 3: Protect and enhance the quantity and quality of potable groundwater and potable surface water supplies.

Objective: To continue to enforce, and update as necessary, ordinances and development standards to protect the quantity and quality of groundwater resources.

Objective: To continue to encourage local municipalities to protect groundwater quality and quantity.

Objective: To continue to work with the WDNR and others to address known contamination problems

and ensure that sufficient measures are taken to prevent additional groundwater contamination.

Goal 7: Improve coordination regarding natural resource protection.

Objective: To foster coordinated and effective enforcement of the various regulations aimed at

protecting natural resources.

Objective: To continue to serve as a liaison between State and Federal agencies and local municipalities

regarding natural resource regulations and permitting procedures.

Objective: To ensure timely and effective communication of changes to natural resource regulations and

permitting procedures.

The Town of Norrie adopted a Comprehensive Plan to guide the community's physical, social, and economic development. The Comprehensive Plan also serves to identify important physical and cultural resources that need to be protected and enhanced to maintain a desired quality of life. Comprehensive plans are not meant to serve as land use regulations in themselves; instead, they provide a rational basis for local land use decisions with a twenty-year vision for future planning and community decisions.

Town of Norrie residents are very concerned about preservation of natural resources in light of increased development pressure. Residents are particularly concerned with water bodies in the Town of Norrie, including the Plover River and numerous lakes. The Town of Norrie has developed the following goal, objectives, and policy recommendations to demonstrate its support:

Goal: Protect the aesthetic and environmental qualities of the Town of Norrie's many lakes.

Objective: To minimize intensive development around the Town of Norrie's lakes in order to protect views, water and shoreline quality, habitat or natural vegetation on the lakes.

The lake management plan, along with any proposed changes to the comprehensive plan, will be presented to the local municipality for review and possible incorporation into their comprehensive plans. Zoning, subdivision, and official mapping decisions must be consistent with the comprehensive plan.

Marathon County Land & Water Resource Management Plan

The Conservation, Planning and Zoning Department's mission is to create, advocate, and implement strategies to conserve natural and community resources. The department administers programs to implement the Land and Water Resource Management Plan which includes the Farmland Preservation Program, Managed Intensive Grazing, Lake Districts, Wildlife Damage and Abatement, as well as regulatory activities associated with the Waste Storage Facility and Nutrient Management Ordinance and the Livestock Facilities Licensing Ordinance.

The Land & Water Resource Management Plan outlines the following goals, objectives, programs, and regulations to support the implementation of the Lake Management Plan:

A. Goals and Objectives

Reduce Agricultural Nonpoint Runoff. Reduce the discharge of soil sediment, organic materials, pesticides and nutrients into surface and ground waters.

Groundwater Protection. Educate the public and users about groundwater use and resource management challenges. In April 2001, the Marathon County Groundwater Guide was updated to reflect the changing programs and policies within the county as well as to acknowledge the increased level of regulation by state agencies to protect the groundwater resources of Marathon County.

Forestry. Sustain private and public forests. The Marathon County Forest Comprehensive Land Use Plan (2006-2020) includes recommendations to guide management of forest land in Marathon County in accordance with the Parks, Recreation and Forestry Department's mission to manage and protect the county forest on a sustainable basis for ecological, economic, educational, recreational, and research needs of present and future generations.

1. **Land Conversion.** Minimize the conversion of prime agricultural lands and forests to other land uses to support watershed management and to maintain economic value of the working lands.
2. **Lake and Reservoir Management.** Support local communities to understand the environmental opportunities and challenges facing lakes. This resource concern encompasses the areas of wetland management and aquatic invasive species. There is a great participation by local landowners in securing information and resources to better protect our water resources.

B. Conservation Programs and Partnerships

1. **Aquatic Invasive Species.** In 2010, Marathon County has entered into a working relationship with the Golden Sands Resource Conservation & Development agency to conduct an inventory of lakes and flowages unassociated with the Wisconsin River for aquatic species. The inventory efforts involve educational outreach efforts to Park Department employees and students.
2. **Managed Grazing Project.** Marathon County Conservation, Planning and Zoning Department, UW-Extension, and the Natural Resources Conservation Service have joined forces to support the Central Wisconsin River Graziers Network. The Network promotes the feasibility of grazing-based farming as a profitable way of farming that enhances lifestyles and protects and improves the environment.
3. **Managed Forest Law (MFL) Program.** The MFL program provides incentives to protect privately owned woodlands from destructive timber cutting practices and over-harvesting and prevents land from becoming developed and/or converted to agricultural land use.

4. **Farmland Preservation Program.** Marathon County adopted its Farmland Preservation Plan in 2013. The goals of the program are twofold: to preserve Wisconsin farmland for production of commodities by means of local land use planning and soil conservation practices, and; to provide tax relief to landowners. For the landowner to receive tax credits they must be in compliance with current and applicable State Agricultural Performance Standards.
5. **Nutrient Management Program.** Nutrient management is defined as managing the amount, form, placement, and timing of applications of plant nutrients. The purpose of this program is to ensure a proper supply of plant nutrients for crop production while minimizing the entry of nutrients to surface water and groundwater. Marathon County requires nutrient management plans for landowners constructing and operating waste storage facilities.
6. **Federal Soil and Water Conservation Programs.** The Conservation, Planning and Zoning (CPZ) Department works closely with the United States Department of Agriculture through the Natural Resources Conservation Service (NRCS) and the Farm Service Agency (FSA). The NRCS, FSA, UW-Extension and CPZ staffs work together in the Local Work Group to identify program and funding priorities for federal and local conservation programs such as the Environmental Quality Incentive Program, Comprehensive Nutrient Management Planning, Conservation Reserve Enhancement Program and grazing initiatives.

C. **Regulations:** The lake management plan is superseded by federal, state, county, and municipal laws and court rulings; however, the plan may influence county and municipal ordinances and enforcement. Federal laws contain regulations related to water quality, wetlands, dredging, and filling. State laws contain regulations related to water quality, water and lake use, aquatic plants and animals, shoreline vegetation, safety, and development. County laws contain regulations related to development, safety, use, and aquatic plants and animals. Municipal laws contain regulation of use and safety. The rules and regulations are primarily enforced by the US Army Corps of Engineers, the Wisconsin Department of Natural Resources, the Marathon County Sheriff's Department, and the Marathon County Conservation, Planning and Zoning (CPZ) Department. If considering development near or on a lake, addressing problem plants or animals, or altering the lake bottom contacts the Marathon County CPZ Department and/or the Wisconsin Department of Natural Resources.

1. Waste Storage Facility and Nutrient Management Ordinance. Dairy cattle in the county produce over 4,000,000 gallons of manure per day. To assure that this organic matter and nutrient source is contained and managed with sound practices, Marathon County has regulated these activities since 1985.

2. Marathon County Livestock Siting Ordinance. In October 2006, Marathon County adopted the General Code of Ordinances for Marathon County Chapter 13.01 Livestock Facilities Licensing Ordinance. The purpose of the ordinance is to establish the authority, technical standards, performance standards, and monitoring protocols necessary to protect public health, safety, and the environmental resources in Marathon County.

3. Marathon County Zoning Ordinance (Chapter 17) and Land Division and Surveying Regulations (Chapter 18). The Marathon County Zoning Ordinance (Chapter 17) is adopted to promote and protect public health, safety, comfort, convenience, aesthetics and other aspects of the general welfare of the population. More specifically, the ordinance establishes standards for buildings, structures, setbacks, lot coverage, land uses, streets and highways and other land use aspects. These regulations apply to all unincorporated areas that have adopted Marathon County Zoning. However, where a town has not adopted Marathon County Zoning but has adopted local regulations, the local regulations apply. In addition, the County regulates the division of land in accordance with Chapter 18 Land Division and Surveying Regulations. The County's land

division regulations apply in all unincorporated areas of the County. However, where a town has land division regulations that are more restrictive than the County's, the local regulations apply.

4. Floodplain and Shoreland Ordinance. Shoreland, wetland, and floodplain regulations are applicable in all unincorporated areas of the County. Wisconsin law mandates counties to adopt and administer a zoning ordinance that regulates land use in shoreland/wetland and floodplain areas for the entire area of the county outside of villages and cities.

5. Nonmetallic Mining Reclamation Ordinance. Marathon County adopted the General Code of Ordinances for Marathon County Chapter 21 Nonmetallic Mining Reclamation Code in 1989. The ordinance applies to approximately 400 operating or abandoned excavations of sand, gravel, decomposed granite and stone. The ordinance requires restoration of the site to a purposeful and acceptable landscape appearance and use.

6. Private Sewage System Ordinance. Marathon County adopted Marathon County General Code of Ordinances Chapter 15 Private Sewage Systems in 1968. This ordinance is adopted to promote and protect public health and safety by assuring the proper siting, design, installation, inspection, and management of private sewage systems and non-plumbing sanitation systems, and to assure the timely repair or replacement of failing private sewage systems. All structures or premises in the County that are permanently or intermittently intended for human habitation or occupancy, which are not serviced by a public sewer or a privately owned wastewater treatment facility regulated by the Department of Natural Resources, shall have a system for holding or treatment and dispersal of sewage and wastewater which complies with the provisions of this ordinance.

7. Construction Site Erosion – WI Administrative Code NR 216. Construction site erosion and uncontrolled storm water runoff from land disturbing activities can have significant adverse impacts upon local water resources. Under subchapter III of NR 216, Wis. Adm. Code, a notice of intent shall be filed with the DNR by any landowner who disturbs one or more acres of land.

Lake Management Plan Approval

The final draft of the lake management plan will be approved through a vote of the Town Board. The final draft will be approved by the Wisconsin Department of Natural Resources (DNR) to ensure compliance lake management plan requirements and grant requirements. The completed plan that has been approved by the DNR will be presented to the municipalities containing the lake and Marathon County. The municipality may reference the lake management plan or parts of the plan in their comprehensive plan to guide municipal or county decisions.

Lake Assistance

The lake management plan will enhance the ability of the lake to apply for financial assistance. The lake management plan will be considered as part of the application for grants through the Wisconsin Department of Natural Resources. Current listings of grants available from the DNR can be found at http://dnr.wi.gov/aid/. Marathon County offers technical and financial assistance through the Conservation, Planning and Zoning Department and University of Wisconsin-Extension Department. Additional assistance may be available from other agencies and organizations, including DNR, UW-Extension Lakes Program, Golden Sands RC&D, Wisconsin Wetlands Association, and Wisconsin Trout Unlimited. Etc.

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Appendices

Appendix A: Marathon County Lake Information Directory

Algae - Blue-Green
Contact: Scott Provost, WI Dept. of Natural Resources
Phone: 715-421-7881
Address: 473 Griffith Ave., Wisconsin Rapids, WI 54494
E-mail: scott.provost@wisconsin.gov
Website: http://dnr.wi.gov/lakes/bluegreenalgae/

Contact: Wisconsin Department of Health Services
Phone: 608-267-3242
Address: PO Box 2659, Madison, WI 53701
E-mail: dhswebmaster@dhs.wisconsin.gov
Website:
www.dhs.wisconsin.gov/eh/bluegreenalgae/index.htm

Aquatic Invasive Species /Clean Boats Clean Water
Contact: Golden Sands RC&D
Phone: 715-343-6215
E-mail: info@goldensandsrcd.org
Address: 1100 Main Street, Suite #150, Stevens Point, WI 54481
Websites:
http://www.goldensandsrcd.org/
http://dnr.wi.gov/invasives/

Aquatic Plant Management
(Native and Invasive)
Contact: Scott Provost, WI Dept. of Natural Resources
Phone: 715-421-7881
Address: 473 Griffith Ave., Wisconsin Rapids, WI 54494
E-mail: scott.provost@wisconsin.gov
Website: http://dnr.wi.gov/lakes/plants/

Aquatic Plant Identification
Contact: Golden Sands RC&D
Phone: 715-343-6215
E-mail: info@goldensandsrcd.org
Address: 1100 Main Street, Suite #150, Stevens Point, WI 54481
Website: http://www.goldensandsrcd.org/

Contact: Scott Provost, WI Dept. of Natural Resources
Phone: 715-421-7881
Address: 473 Griffith Ave., Wisconsin Rapids, WI 54494
E-mail: scott.provost@wisconsin.gov
Website: http://dnr.wi.gov/lakes/plants/

Aquatic Plant Management
Contact: Scott Provost, WI Dept. of Natural Resources
Phone: 715-421-7881
Address: 473 Griffith Ave., Wisconsin Rapids, WI 54494
E-mail: scott.provost@wisconsin.gov
Website: http://dnr.wi.gov/lakes/plants/

Best Management Practices (Rain gardens, shoreland buffers, agricultural practices, runoff controls)
Contact: Marathon County CPZ
Phone: 715-261-6000
Address: 210 River Dr., Wausau, WI 54403
E-mail: cpz@co.marathon.wi.us
Website:
http://www.co.marathon.wi.us/Departments/ConservationPlanningZoning.aspx

Boat Landings (County)
(Signage, permissions, etc.)
Contact: William Duncanson
Phone: 715-261-1550
Address: 212 River Dr., Suite 2, Wausau, WI 54403
E-mail: parkforestry@co.marathon.wi.us
Website:
http://www.co.marathon.wi.us/Departments/ParksRecreationForestry.aspx

Boat Landings (State)
Contact: Tom Meronek, WI Dept. of Natural Resources
Phone: 715-359-7582
Address: 5103 Rib Mt. Drive, Wausau, WI 54401
E-mail: Thomas.Meronek@wisconsin.gov
Website:
http://dnr.wi.gov/org/land/facilities/boataccess/

Boat Landings (Town)
Contact the clerk for the specific town/village in which the boat landing is located.

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

Contact: Buzz Sorge, WI Dept. of Natural Resources
Phone: 715-839-3794
Address: PO Box 4001, Eau Claire, WI 54702
E-mail: Patrick.Sorge@wisconsin.gov
Website: http://dnr.wi.gov/aid/easements.html

Contact: North Central Conservancy Trust
Phone: 715-341-7741
Address: PO Box 124, Stevens Point, WI 54481
E-mail: info@ncctwi.org
Website: http://www.ncctwi.org/

Contact: NRCS Wausau Service Center
Phone: 715-848-2330
Address: 326 River Dr., Wausau, WI 54403

Critical Habitat and Sensitive Areas
Contact: Buzz Sorge, WI Dept. of Natural Resources
Phone: 715-839-3794
Address: PO Box 4001, Eau Claire, WI 54702
E-mail: Patrick.Sorge@wisconsin.gov
Website: http://dnr.wi.gov/lakes/criticalhabitat/

Dams (Pike Lake) Town of Reid and Elderon
Contact: Town of Reid (Kittie Milanowski, Clerk)
Phone: 715-446-3767
Address: 7089 Plover River Rd., Hatley, WI 54440
E-mail: kitmil46@yahoo.com
Website:
http://www.co.marathon.wi.us/Home/AboutMarathonCounty/Municipalities/Towns.aspx

Contact: Town of Elderon (Mary Ostrowski, Clerk)
Phone: 715-454-6845
Address: 2021 Cherry Dr., Eland, WI 54427
E-mail: tnelderon@aol.com
Website:
http://www.co.marathon.wi.us/Home/AboutMarathonCounty/Municipalities/Towns.aspx

Fertilizers/Soil Testing
Contact: Marathon County UW Extension
Phone: 715-261-1230
Address: 212 River Dr., Suite 3, Wausau, WI 54403-5476
Website:
http://marathon.uwex.edu/agriculture/agriculture-news-in-marathon-county/

Contact: NRCS Wausau Service Center
Phone: 715-848-2330
Address: 326 River Dr., Wausau, WI 54403

Fisheries Biologist (management, habitat)
Contact: Tom Meronek, WI Dept. of Natural Resources
Phone: 715-359-7582
Address: 5103 Rib Mt. Dr., Wausau, WI 54401
E-mail: Thomas.Meronek@wisconsin.gov
Website: http://dnr.wi.gov/fish/

Frog Monitoring—Citizen Based
Contact: Andrew Badje, WI Dept. of Natural Resources
Phone: 608-266-3336
E-mail: Andrew.badje@wisconsin.gov
E-mail: WFTS@wisconsin.gov

Grants
Contact: Buzz Sorge, WI Dept. of Natural Resources
Phone: 715-839-3794
Address: PO Box 4001, Eau Claire, WI 54702
E-mail: Patrick.Sorge@wisconsin.gov

Contact: Marathon County CPZ
Phone: 715-261-6000
Address: 210 River Dr., Wausau, WI 54403
E-mail: cpz@co.marathon.wi.us
Website:
http://www.co.marathon.wi.us/Departments/ConservationPlanningZoning.aspx

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

Groundwater Quantity
Contact: George Kraft, UW-Stevens Point
Phone: 715-346-2984
Address: TNR 224C, 800 Reserve St., Stevens Point, WI 54481
E-mail: George.kraft@uwsp.edu

Contact: Scott Provost, WI Dept. of Natural Resources
Phone: 715-421-7881
Address: 473 Griffith Ave., Wisconsin Rapids, WI 54494
E-mail: scott.provost@wisconsin.gov
Website:
http://prodoasext.dnr.wi.gov/inter1/hicap$.startup

Informational Packets
Contact: Ryan Haney, UWSP Center for Watershed Science and Education
Phone: 715-346-2497
Address: 224A TNR, 800 Reserve St. Stevens Point, WI 54481
E-mail: mclakes@uwsp.edu

Lake Groups – Friends, Associations, Districts
Contact: Patrick Goggin, UWEX Lakes
Phone: 715-365-8943
Address: 107 Sutliff Ave., Rhinelander, WI 54501
E-mail: pgoggin@uwsp.edu
Website:
http://www.uwsp.edu/cnr/uwexlakes/

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

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

Lake Levels
See: Groundwater

Lake Related Law Enforcement (No-wake, transporting invasives, etc.)
Contact: Ben Harzfeldt or Paul Leezer, WI Dept. of Natural Resources State Conservation Wardens
Phone: 715-359-1030 or 715-401-0644
Website: http://dnr.wi.gov/org/es/enforcement/

Land Use Planning and Shoreland Zoning
Contact: Dean Johnson, Marathon County CPZ
Phone: 715-261-6000
Address: 210 River Dr., Wausau, WI 54403
E-mail: dean.johnson@co.marathon.wi.us
Website:
http://www.co.marathon.wi.us/Departments/ConservationPlanningZoning.aspx

Contact: Marathon County CPZ
Phone: 715-261-6000
Address: 210 River Dr., Wausau, WI 54403
Website:
http://www.co.marathon.wi.us/Departments/ConservationPlanningZoning.aspx

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

Nutrient Management Plans
Marathon County Conservation, Planning, and Zoning
Contact: Kirk Langfoss
Phone: 715-261-6008
Address: 210 River Dr., Wausau, WI 54403
E-mail: kirk.langfoss@co.marathon.wi.us
Website:
http://www.co.marathon.wi.us/Departments/ConservationPlanningZoning.aspx
http://dnr.wi.gov/runoff/ag/manure.html

Parks (County)
Contact: William Duncanson
Phone: 715-261-1550
Address: 212 River Dr., Suite #2, Wausau, WI 54403
E-mail: parkforestry@co.marathon.wi.us
Website:
http://www.co.marathon.wi.us/Departments/ParksRecreationForestry.aspx

Purchase of Development Rights
Contact: North Central Conservancy Trust
Phone: 715-341-7741
Address: PO Box 124, Stevens Point, WI 54481
E-mail: info@ncctwi.org
Website: http://www.ncctwi.org/

Purchase of Land
Contact: Buzz Sorge, WI Dept. of Natural Resources
Phone: 715-839-3794
Address: PO Box 4001, Eau Claire, WI 54702
E-mail: Patrick.Sorge@wisconsin.gov
Website:
http://dnr.wi.gov/org/land/facilities/realestate/acquire.html

Rain Barrels – Order
Contact: Golden Sands RC&D
Phone: 715-343-6215
Address: 1462 Strongs Ave., Stevens Point, WI 54481
Website:
http://www.goldensandsrcd.org/downloads/rain_barrel_order_form.pdf

Rain Gardens and Runoff
Marathon County Conservation, Planning, and Zoning
Phone: 715-261-6000
Address: 210 River Dr., Wausau, WI 54403
E-mail: cpz@co.marathon.wi.us
Website:
http://www.co.marathon.wi.us/Departments/ConservationPlanningZoning.aspx

Septic Systems
Marathon County Conservation, Planning, and Zoning
Contact: Dale Dimond
Phone: 715-261-6028
Address: 210 River Dr., Wausau, WI 54403
E-mail: dale.dimond@co.marathon.wi.us
Website:
http://www.co.marathon.wi.us/Departments/ConservationPlanningZoning.aspx

Shoreland Management
Marathon County Conservation, Planning, and Zoning
Phone: 715-261-6000
Address: 210 River Dr., Wausau, WI 54403
E-mail: cpz@co.marathon.wi.us
Website:
http://www.co.marathon.wi.us/Departments/ConservationPlanningZoning.aspx
http://www.uwsp.edu/cnr/uwexlakes/ecology/shorelands/default.asp

Shoreland Zoning Ordinances
See: Land Use Planning and Shoreland Zoning Ordinances

Soil Fertility Testing
See Fertilizers/Soil Testing

Water Quality Monitoring
Contact: Buzz Sorge, WI Dept. of Natural Resources
Phone: 715-839-3794
Address: PO Box 4001, Eau Claire, WI 54702
E-mail: Patrick.Sorge@wisconsin.gov
Website:
http://dnr.wi.gov/environmentprotect/water.html
http://watermonitoring.uwex.edu/index.html

Water Quality Problems
Contact: Buzz Sorge, WI Dept. of Natural Resources
Phone: 715-839-3794
Address: PO Box 4001, Eau Claire, WI 54702
E-mail: Patrick.Sorge@wisconsin.gov
Website:
http://dnr.wi.gov/environmentprotect/water.html

Contact: Nancy Turyk, UWSP Center for Watershed Science and Education
Phone: 715-346-4155
Address: 216 TNR, 800 Reserve St., Stevens Point, WI 54481
E-mail: nturyk@uwsp.edu

Wetlands
Contact: Wisconsin Wetland Association
Phone: 608-250-9971
Address: 214 N. Hamilton St., #201, Madison, WI 53703
E-mail: info@wisconsinwetlands.org
Website: www.wisconsinwetlands.org
http://dnr.wi.gov/wetlands/

Wetland Inventory
Contact: Emmet Judziewicz, UWSP Freckmann Herbarium
Address: 310 TNR, 800 Reserve St., Stevens Point, WI 54481
E-mail: ejudziewica@uwsp.edu

Woody Habitat
Contact: Tom Meronek, WI Dept. of Natural Resources
Phone: 715-359-7582
Address: 5103 Rib Mt. Drive, Wausau, WI 54401
E-mail: Thomas.Meronek@wisconsin.gov

If you are looking for any information that is not listed in this directory please contact:

Ryan Haney, **UWSP Center for Watershed Science and Education**
224 TNR, 800 Reserve St. Stevens Point, WI 54481
Phone: 715-346-2497
E-mail: mclakes@uwsp.edu

Or **Marathon County Conservation, Planning and Zoning**
210 River Dr., Wausau, WI 54403
Phone: 715-261-6000
E-mail: cpz@co.marathon.wi.us

Appendix B: Invasive Species Rapid Response Plan 2014

SURVEY/MONITOR

1. Learn how to survey/monitor the lake.	**Contacts:** **Water Resources Management Specialist** Wisconsin Department of Natural Resources Scott Provost 473 Griffith Ave. Wisconsin Rapids, WI, 54494 Phone: 715-421-7881 E-Mail: Scott.provost@wisconsin.gov **Marathon County Aquatic Invasive Species (AIS) Coordinator** Golden Sands RC&D 1100 Main St., Suite #150 Stevens Point, WI 54481 Phone: 715-343-6278 E-Mail: info@goldensandsrcd.org
2. Survey/monitor the lake monthly/seasonally/annually.	If you find a suspected invasive species, report it as soon as possible using the procedure below.

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. You can use TopoZone.com to find the precise location on	Provide one or more of the following: • Latitude & Longitude • UTM (Universal Transverse Mercator) coordinates

a digital topographic map. Click the cursor on the exact collection site and note the coordinates (choose UTM or Latitude/Longitude).	• 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 (Latitude/Longitude or UTM preferred, or Township/Range/Section) • Plant name (common or scientific) • Land ownership (if known) • Population description (estimated number of plants and area covered) • Habitat type(s) 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** Scott Provost Water Resources Management Specialist 473 Griffith Ave. Wisconsin Rapids, WI 54494 Phone: (715) 421-7800 E-Mail: scott.provost@wisconsin.gov **Marathon County AIS Coordinator** Golden Sands RC&D 1100 Main St., Suite #150 Stevens Point, WI 54481 Phone: 715-343-6214 E-Mail : info@goldensandsrcd.org **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

5. Once the specimen is dropped off or sent for positive identification, be sure to contact:	**Marathon County AIS Coordinator** Golden Sands RC&D 1100 Main St., Suite #150 Stevens Point, WI 54481 Phone: 715-343-6214 E-Mail : info@goldensandsrcd.org

If an invasive species is confirmed, the Marathon County AIS Coordinator will make the following public information contacts:

- **Wisconsin Department of Natural Resources**
  Water Resources Management Specialist
  Scott Provost
  473 Griffith Ave.
  Wisconsin Rapids, WI, 54494
  Phone: 715-421-7881
  E-Mail: Scott.provost@wisconsin.gov

- **The town** in which the water body is located.
  Town of: Norrie
  Contact Name: Alfred King, Town Board Chair
  Contact Phone: (715) 446-3739

- **University of Wisconsin-Stevens Point**
  Water Resource Scientist
  Nancy Turyk
  Trainer Natural Resources Building
  800 Reserve Street
  Stevens Point, WI 54481Telephone: 715-346-4155
  E-mail: nturyk@uwsp.edu

- **Local Residents**

- **Norrie Lake Sportsman Club**

If an invasive species is confirmed, the Norrie Lake Sportsmans Club and/or Marathon County Land Conservation will make the following public information contacts:

- **Newspapers**: Wausau Daily Herald, Wittenberg Birnamwood Enterprise

Contact the WDNR to post notice(s) at the access point(s) to the water body.