2015

Bass 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

Bass Lake Management Plan

The Bass 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 7, 2015_____.
Date

The plan was adopted by the Town of Elderon on: July 7, 2015_____.
Date

The plan was adopted by Marathon County on _____.
Date

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

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

Bass Lake Management Planning Committee Members and Resources

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

Marathon County Concerned Citizens and Property Owners
Mayflower Lake District, Pike Lake Sportsman Club, and Wadley Lake Sportsman Club
Marathon County Environmental Fund
Wisconsin Department of Natural Resources Lake Protection Grant

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Overarching Vision for Bass Lake

Bass Lake will remain a lake of solitude for its visitors and a thriving natural lake habitat for the diverse birds, fish and other wildlife that make it a home.

Bass Lake is located part in the township of Norrie and part in the township of Elderon, east of County Highway Y, north of Bevent and southeast of Hatley. One public boat launch is located on its southwestern side. Bass Lake is a 79.7 acre seepage lake with surface runoff and groundwater contributing most of its water. The maximum depth in Bass Lake is 6 feet; the lakebed has a gradual slope. Its bottom sediments are mostly muck with some rock on the southern and southeastern parts of the lake and some sand dispersed throughout. Too shallow for most powered boats, the lake is typically quiet and visited primarily by area residents for hunting, birding and watching wildlife.

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

- Protect the natural beauty of the lake
- Lake users and residents - capacity building and stewardship

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 the steps needed to maintain, protect and/or create desired conditions in the lake ecosystem into the future. These steps 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 a way to measure success. The LMP can help to serve as a gateway for obtaining grant funding and other resources to help implement activities outlined in the plan.

Many individuals and organizations are involved in assuring that the Bass 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 Bass Lake can have the greatest influence on the lake by understanding and choosing lake-friendly options to manage their land and the lake.
- **Bass Lake stewardship group:** This plan could provide an group of lake stewards with a well thought out plan for the whole lake and lists options that can easily be prioritized. Annual review of the plan could also help the group recognize its accomplishments. Resources and funding opportunities for management activities are made more available by placement of goals into the lake management plan, and the group can identify partners to help achieve their goals for Bass 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 Towns of Norrie and Elderon**: The Towns 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 Wisconsin Department of Natural Resources to identify and prioritize needs within Wisconsin's lake community, and decide where to 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.

Background

Implementing the content of this lake management plan will enable citizens and other supporters to achieve the vision for Lake Napowan now and in the years to come.

One of the first steps in creating the Bass 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 Bass 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 Bass Lake and implement the steps that were identified as important to the Bass Lake community and for the protection and improvement of the lake. This LMP will enable citizens and other supporters to achieve the vision for Bass 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, lake users, and representatives of local municipalities with the development of the lake management plan. These meetings took place between August and November 2014. Participation in the planning process was open to everyone and was encouraged by letters sent directly to Bass 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 Bass Lake Planning Committee consisted of property owners and recreational users. 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 Bass Lake Management Planning Committee, and the known science about Bass Lake, its ecosystem and the landscape within its watershed. Implementing and regularly updating the goals and actions in the Bass 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. Contact information for organizations and individuals who support lake management in Marathon County can be found in Appendix A.

Acronym	Organization/Resource
CBCW	Clean Boats Clean Waters
CWSE	UWSP Center for Watershed Science and Education
CPZ	Marathon County Conservation, Planning, and Zoning Dept.
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

In-Lake Habitat and a Healthy Lake

Many lake users value Bass 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 Bass 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 having different food, habitat, nesting substrate and water quality needs in order to flourish. A sustainable fishery is one that seeks to be in balance with the lake's natural ability to support the fish community, and in which populations do not noticeably decline over time because of fishing practices or other human activity. Ultimately, the fish community is able to adapt to fishing without additional stocking or input because its reproductive and growth needs are met within the lake.

Species	1967	2012
Bluegill	x	x
Black bullhead	x	x
Black Crappie		x
Largemouth bass	x	
Central Mudminnow		x
Yellow Perch	x	
Pumpkinseed	x	x

Figure 1. Fish species in Bass Lake. 2012 survey and historical Wisconsin Department of Natural Resources records.

Bass Lake supports a warm water fish community. In the 2012 survey, five fish species were sampled and identified out of the seven total species that have been observed since a 1967 survey conducted by the Wisconsin Department of Natural Resources. Although most species identified in 2012 had been previously reported, central mudminnow and black crappie were newly documented. Largemouth bass and yellow perch were previously documented, but not observed during the 2012 survey. Black bullhead was most abundant during the 2012 survey, with a maximum length of 7.9 inches. The least abundant in the 2012 samples were pumpkinseed, black crappie, and central mudminnow. Although infrequently encountered, black crappie reached a maximum length of 12.2 inches. Crayfish were not encountered during the sampling period.

There is limited documentation of management activities on Bass Lake in Wisconsin Department of Natural Resources files. In 1967, winter fish kills were noted, likely due to low oxygen levels. Bullhead biomass dominance is another indicator of winterkill as bullhead is more tolerant of low dissolved oxygen than many other species. A citizen at the planning meeting on October 8, 2014, also reported a winter fish kill within the past 5 years. A proposal to dredge areas of Bass Lake was first documented in 1969; however, no documents were filed describing the proposed dredging effort. In 1988, a request for dredging was denied due to the historic use of chemicals on Bass Lake and because the lake habitat supported a variety of wildlife. Fish stocking records for Bass Lake date back to 1977 in Wisconsin Department of Natural Resources files. Stocking consisted primarily of adult northern pike, but brown trout and largemouth bass have also been stocked.

To successfully sustain a healthy fish population, a lake must have the habitat to support it. Habitat needs of fish include healthy aquatic plants and woody structure such as logs, fallen trees, and stumps. Woody structure provides places for fish to hide, as well as habitat for invertebrates that many fish species use as food sources. Many fish use lily pads and bulrushes, as well as gravel and cobble substrates, for spawning habitat.

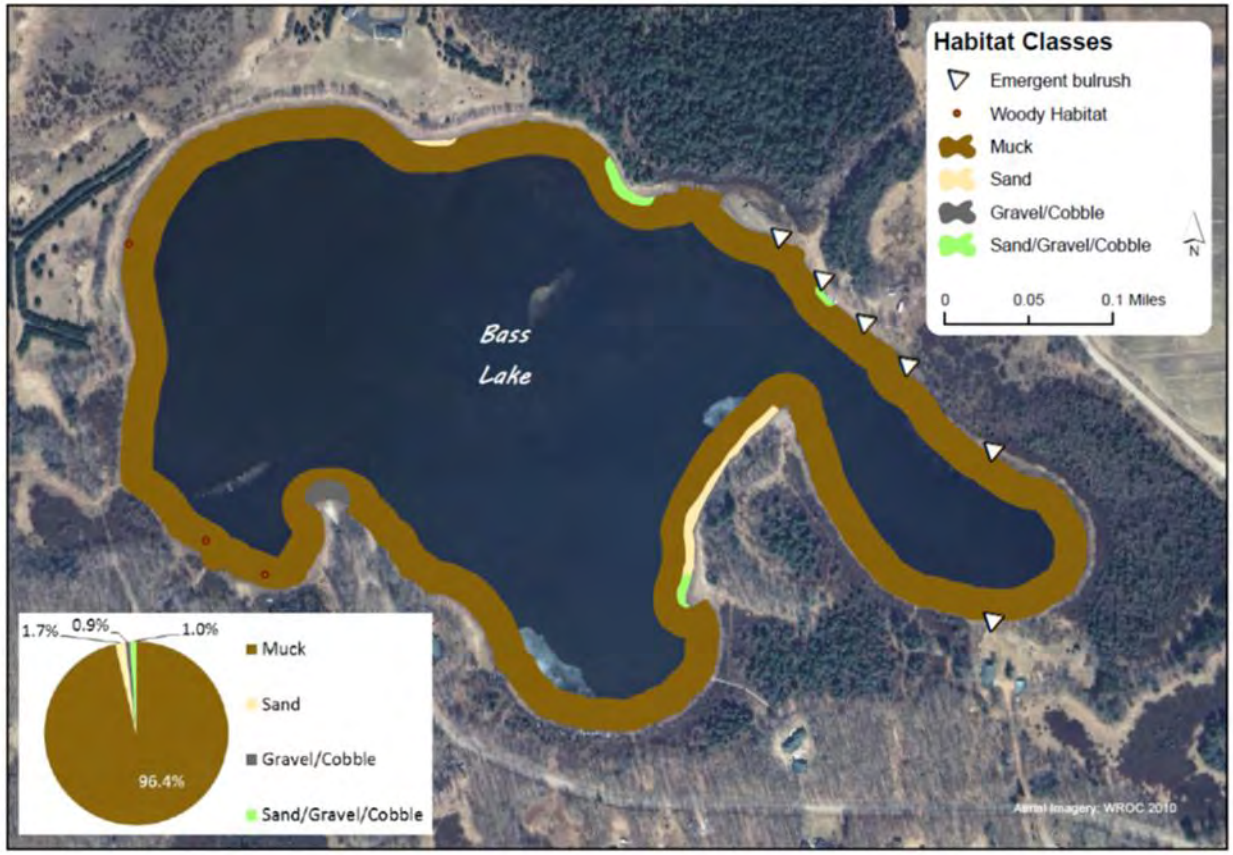


Figure 2. Distribution of substrate, coarse woody habitat, and bulrush in Bass Lake, 2012.

As part of the fishery study, in-lake habitat was examined from the shoreline to a distance of 90 feet (see 2010-2012 Bass Lake Study Report). Substrate in Bass Lake primarily consists of a soft, muck bottom (96.4%); however, harder substrates including gravel/cobble and sandy areas also exist. In the absence of sand and coarser substrates such as gravel, largemouth bass and sunfish are known to build nests on soft bottoms. Depressions are deepened until some small amounts of coarser substrate, mostly fragments of snail shells, accumulate in the bottom of the nests. In areas of soft substrate, largemouth bass are also reported to spawn on woody habitat swept clear of sediments. Gravel areas are utilized as spawning habitat for many sunfish (bluegill, pumpkinseed, black bass), where males will construct nests and guard their young.

The presence of young bluegill indicates that reproduction is successful in Bass Lake; however, determining the reproductive success of other species would require additional surveying efforts. Bulrush is present along areas of the eastern shoreline in Bass Lake. black crappie utilize the bulrush habitat on gravel or sand substrates where they construct nests and guard young. Coarse woody habitat (CWH), including downed trees and logs, are sparse in Bass Lake and could be improved. This structure is utilized by young prey fish and other aquatic organisms for foraging, protection, and spawning. The fish community may benefit from the addition of CWH. According to Tom Meronek, Fisheries Biologist with the WDNR, very little historic data exists about the fishery in Bass Lake. Aeration would be needed if an enhanced sports fishery is desired.

Guiding Vision for the Fish Community

Bass Lake will continue to support a healthy fishery.

Goal 1. Support conditions that provide healthy habitat.

Objective 1.1. Enhance and improve fish habitat in Bass Lake.

Actions	Lead person/group	Resources	Timeline
Identify areas to increase habitat with tree drops or placement of fish sticks. Work with the WDNR fisheries biologist to obtain permit.		WDNR Fisheries Biologist Local fishing clubs	Ongoing
Protect and restore emergent vegetation (bulrush) in littoral (near-shore) zone.	Shoreland property owners	WDNR Aquatic Plant Specialist RC&D	Ongoing

Aquatic Plants

Aquatic plants provide the forested landscape within Bass 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.

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.

During the 2012 aquatic plant survey, twenty species of aquatic plants were found in Bass Lake, with the greatest diversity located in the shallows on the eastern side of the lake. Bass Lake had an average number of species compared with the other lakes in the Eastern Marathon County Lakes Study.

The dominant plant species in the survey was large purple bladderwort (*Utricularia purpurea*), followed by water-thread pondweed (*Potamogeton diversifoliu*) and white water lily (*Nymphaea odorata*). Large purple bladderwort is a species of special concern in Wisconsin and offers invertebrate habitat as well as foraging sites for fish. Bladderworts are carnivorous plants using vacuums in their bladders to catch tiny insects. Water-thread pondweed is also a species of special concern in Wisconsin. The fruit it produces is an important food source for waterfowl, muskrat and beaver. The seeds produced by white water lily are also a food source for waterfowl, and the broad, floating leaves of the plant provide shade and shelter to fish and other species.

Overall, the aquatic plant community in Bass Lake can be characterized as having good species diversity and a number of relatively uncommon species for central Wisconsin. The habitat, food source, and water quality benefits of this diverse plant community should be focal points in future lake management strategies.

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

Guiding Vision for Aquatic Plants in Bass Lake

Bass Lake will have a diversity of high quality native aquatic plants that support a thriving fishery and excellent water quality.

Goal 2. Maintain the existing healthy native aquatic plant community in and near Bass Lake.

Objective 2.1. Preserve/protect the high quality aquatic plant community, bogs, and wildlife at Bass Lake.

Actions	Lead person/group	Resources	Timeline
Inform visitors and shoreland property owners 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) Wild Ones or other club Consultant	

Objective 2.2. Minimize disturbance to the native aquatic plant community.

Actions	Lead person/group	Resources	Timeline
Maintain existing no-wake hours;	Town of Norrie/Elderon		
Replace "Slow, No Wake" sign and prune shrubs around it so that it is visible.	Town of Elderon		Summer 2015
Inform visitors as well as existing and new shoreland property owners about protection of the native aquatic plant community.	CPZ	UWEX Lakes (educational materials)	Ongoing
Minimize removal of aquatic plants, particularly near the boat launch, by informing residents and visitors via signage, brochure, or other methods.	Shoreland property owners	UWEX Lakes (educational materials) Town of Norrie	Ongoing
If any aquatic plant removal is desired and falls within legal guidance, conduct any aquatic plant removal by hand.			Ongoing

Aquatic Invasive Species (AIS)

Aquatic invasive 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.

Two species of non-native shoreland plants were found near Bass Lake during the survey. Purple loosestrife (*Lythrum salicaria*) is a woody and fast-growing shoreland species that out-competes native species. It is currently widespread in Wisconsin and much of the Midwest. Reed canary grass (*Phalaris arundinacea*) was also found near Bass Lake. This invasive grass prefers disturbed, wet sites where it can form dense stands along the shoreline and into water depths of 1 to 2 feet. This non-native species has low food and habitat value and crowds out native species through its aggressive growth.

Aquatic plant management in Bass Lake should focus on preventative strategies to reduce the likelihood AIS spread into the lake.

Guiding Vision for Aquatic Invasive Species

Bass Lake will remain free of aquatic invasive species.

Goal 3. Prevent aquatic invasive species (AIS) from entering Bass Lake.

Objective 3.1. Educate and encourage visitors to Bass Lake about controlling the transport of AIS between water bodies.

Actions	Lead person/group	Resources	Timeline
Include information about the threat 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 Bass Lake.	CPZ	UW-Extension Lakes (educational materials) Marathon County CPZ Dept. Town of Norrie/Elderon	
Develop signage at the boat landing to inform users about AIS concerns and the importance of cleaning plants off trailers, draining motors and live wells, and washing boats before and after entering/leaving Bass Lake.		RC&D Clean Boats/Clean Waters Program	

Objective 3.2. Be proactive in preventing the establishment of AIS at Bass Lake.

Actions	Lead person/group	Resources	Timeline
Protect and leave in place as much native aquatic vegetation as possible.	Shoreland property owners and visitors	Town of Norrie/Elderon	Ongoing
Local citizens should learn to identify AIS and check for it when visiting Bass Lake.		RC&D WDNR Aquatic Plant Specialist	Ongoing in summer
Closely monitor for and take immediate action if AIS is observed in the lake.		Golden Sands RC&D	Summer
If AIS is found or suspected, refer to the steps in the Bass Lake Rapid Response Plan (Appendix).			As needed
If AIS is found, develop a response plan and publish it in local papers like and notify Town Chair/Clerk.		RC&D Town of Norrie/Elderon Community Shopper and Northerner	As needed

Provide a letter to RC&D* in support of their work to assist communities in AIS identification, monitoring and eradication.		Town of Norrie/Elderon Norrie Sportsman Club	Annually

***** Note: Services offered by Golden Sands RC&D are dependent on available funds through grants, lake groups, and donations.

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 Bass Lake does not have an official critical habitat area designation, there are areas within Bass 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 Bass Lake's Critical Habitat

Sensitive areas important to Bass Lake will be enhanced and protected from degradation.

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

Objective 4.1. Identify potentially special or critical habitat on and near Bass Lake.

Actions	Lead person/group	Resources	Timeline
Request Critical Habitat Designation from WI-DNR		WDNR Aquatic Biologist and Lake Managers Other local lake/fish/plant specialists	
Once special areas are identified, help others understand the value of these areas.		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 Bass 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 Bass 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 Bass 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 Bass 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 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. Concentrations of dissolved oxygen in Bass Lake ranged from approximately 5 mg/L to approximately 11 mg/L; however, oxygen was almost completely depleted in the lake in February 2011

following a long winter. In February 2012, following a relatively mild winter, surface dissolved oxygen measurements were similar to those measured in other seasons, but quickly dropped off to approximately 3 mg/L in water depths of 4 feet. **Due to its shallow depth, there is a potential for winter fish kills in Bass Lake, particularly when there are long periods of ice and snow cover.**

The water clarity measured in Bass Lake during the study was considered fair. For Bass Lake, water clarity ranged from 3 feet to 8 feet. When compared with past data (1979-2010), the average water clarity measured during the study was poorer for all comparable months. Water clarity in Bass Lake was typically poorer during the summer months, with the shallowest average water clarity measures observed in June and August.

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. Bass Lake had low average chloride and sodium concentrations over the monitoring period. The average potassium concentration, though slightly elevated, was typical for lakes in Marathon County. Although these elements would not be 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.

Phosphorus is an element that is essential in trace amounts to most living organisms, including aquatic plants and algae. Sources of phosphorus can include naturally-occurring phosphorus in 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.

One pound of phosphorus entering a lake can result in up to 500 pounds of algal growth!
(Vallentyne, 1974)

Total phosphorus concentrations in Bass Lake ranged from a high of 86 µg/L in October 2010 to a low of 12 µg/L in September 2012. The summer median total phosphorus concentrations were 31 and 36.5 µg/L in 2011 and 2012, respectively. This is below, yet near Wisconsin's phosphorus standard of 40 µg/L for shallow seepage lakes, and above the proposed flag value of 15 µg/L. Of concern is the soft water in Bass Lake which makes it particularly sensitive to phosphorus inputs and there is not enough data to establish any trends.

Chlorophyll *a* concentrations (a measure of algae) in Bass Lake varied throughout the monitoring season, ranging from a high of 15 µg/L in June 2012 to a low of 0.5 µg/L in August 2012. In Bass Lake, a relationship exists between chlorophyll *a* and total phosphorus concentrations. Generally, as total phosphorus concentrations increase, concentrations of chlorophyll *a* also increase.

Managing nitrogen, phosphorus and soil erosion throughout the Bass 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 Bass 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 Bass Lake

Water quality in Bass Lake will be maintained for its fish, wildlife and human visitors to enjoy and thrive.

Goal 5. Maintain nutrient concentrations appropriate for shallow seepage lakes and no detectable pollutants/contaminants.

Objective 5.1. Establish a decreasing or stable trend in phosphorus concentrations below 29 µg/L (summer median) over the next 5 years. This goal will be achieved when these median concentrations have been observed over three consecutive years.

Actions	Lead person/group	Resources	Timeline
Establish a water quality monitoring program to include water clarity measurements (spring-fall) and analysis of phosphorus and chlorophyll-*a* during summer to evaluate changes over time.	Interested citizen	Citizen Lake Monitoring Network Coordinator or Phosphorus samples need to be collected according to WisCALM guidance to compare to the State's phosphorus rule	Ongoing
Monitor dates of ice on/ice off and submit the information to the state database.	Interested citizen	WDNR Citizen Lake Monitoring Network	Ongoing
If indicated by changes in summer sampling results, consider adding sampling during spring/fall overturn to enhance the water quality information .		UWSP WEAL or other state-certified lab	As needed
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 sign at the boat landing.	CPZ Town of Norrie/Elderon	NRCS UWEX Lakes (educational materials)	Ongoing
Refrain from the use of fertilizers on shoreland properties (see Shorelands section). Consider	Shoreland property owners incl. Town of Norrie/Elderon	UWEX Lakes (educational materials)	

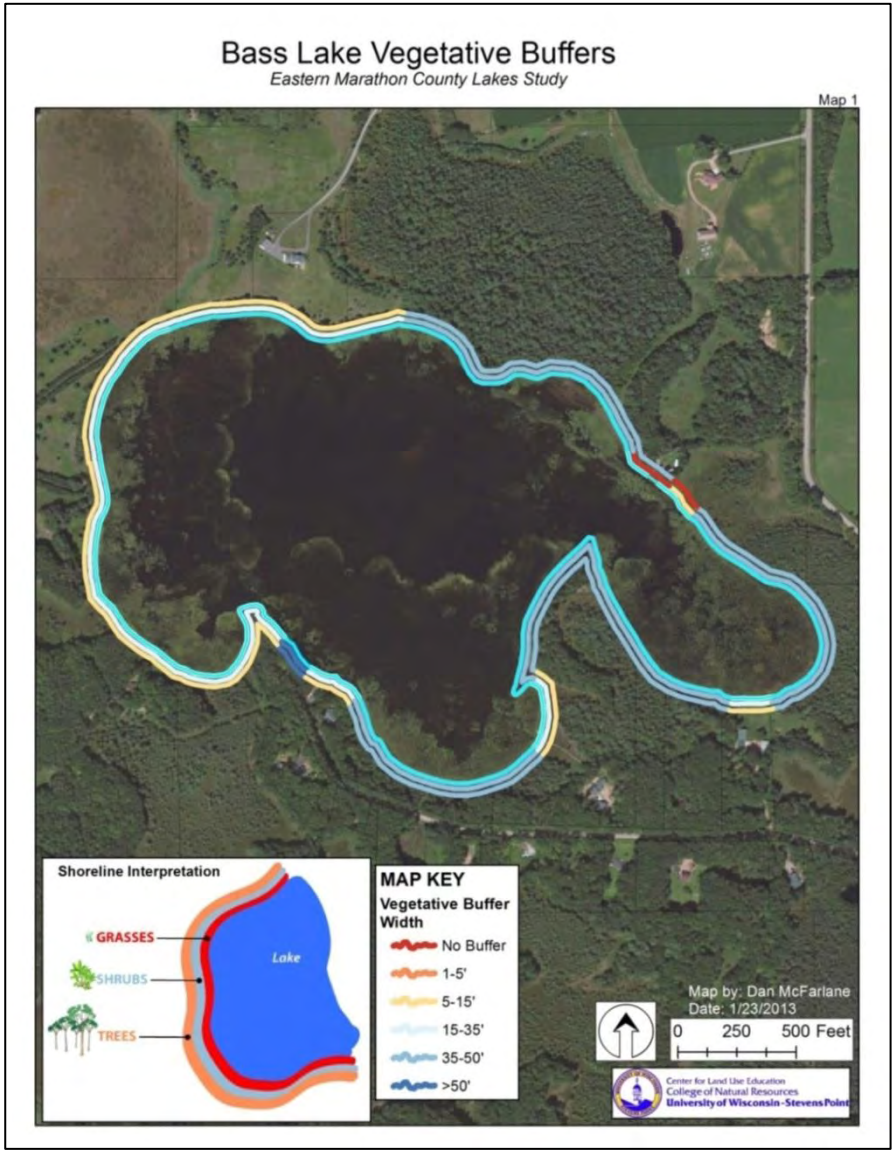
distributing educational materials around the lake.	CPZ		
Explore the establishment of a 'Lakes' subcommittee to the Town Board.	Town of Norrie/Elderon	UWEX Lakes	2015 or 2016

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.

Bass Lake's shoreland was assessed for the extent of vegetation and disturbances. Bass Lake has 1.9 miles of shoreline; most of the shoreline had adequate shoreland vegetation. The overall findings showed that 10,012 linear feet of shoreline were classified as having a grass/forb and shrub buffer depths of 35 feet, the minimum depth required by Wisconsin and Marathon County shoreland zoning ordinances. The tree layer was also abundant, especially in the 35-50 foot buffer depth category; however, over 4,000 feet of shoreline was classified as having a tree buffer width of only 5-15 feet inland from the water's edge.

Although Bass Lake's shoreland is in good shape now, changes can easily occur as development takes place. In order to minimize impacts from future development, prospective developers should have the information needed to make good decisions, and zoning should be in place to achieve habitat, water quality, and aesthetic goals for Bass Lake.



Guiding Vision for Bass Lake's Shorelands

Bass Lake's shorelands will remain natural and undisturbed.

Goal 6. Maintain natural and undisturbed conditions around Bass Lake.

Objective 6.1. Protect healthy, stable shoreland habitat near and around Bass Lake.

Actions	Lead person/group	Resources	Timeline
Explore strengthening vegetative buffer language in shoreland ordinances around Bass Lake.	Town of Norrie	MC CPZ; Wisconsin Lakes	Ongoing
Encourage property owners to plant trees and shrubs in areas where they are not currently present or where they extend for less than 35 feet from shore.		WDNR Healthy Lakes Grants	
Refrain from the use of fertilizers on shoreland properties. Consider distributing educational materials around the lake.	CPZ	Town of Norrie	Ongoing

Watershed Land Use

It is important to understand where Bass 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 Bass 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 Bass Lake is approximately 1,039 acres. Primary land use is agriculture and forest (Figure 3). The lake's shoreland is surrounded primarily by residential development, forests, wetland, and agriculture. In general, the land closest to the lake has the greatest

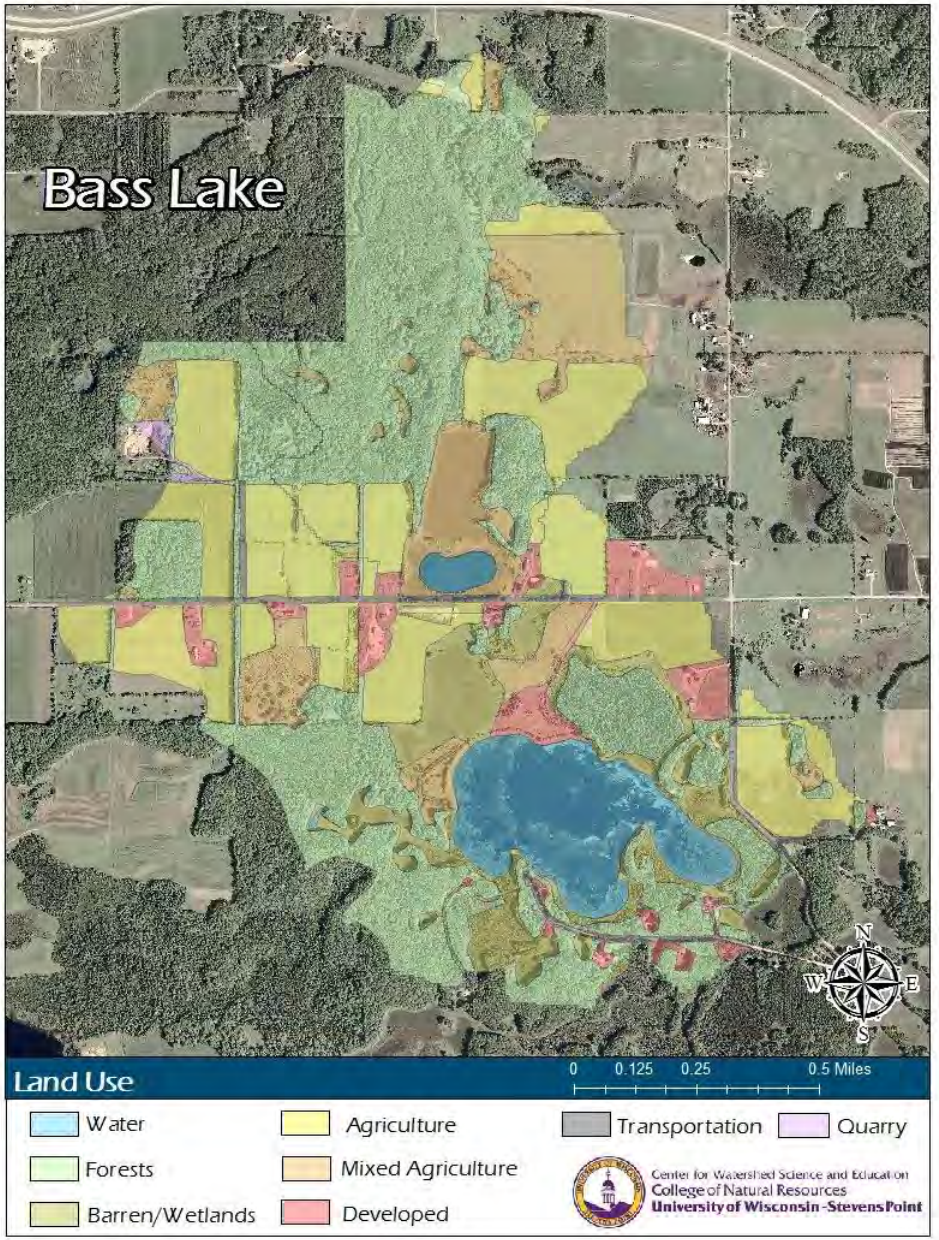


Figure 3. Bass Lake surface watershed and land uses.

immediate impact on water quality.

Estimates of phosphorus from the landscape can help to understand the phosphorus sources to Bass 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 through 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. Agriculture and forests comprised the greatest amount of land in the watershed, and modeling results indicated that agriculture had the greatest percentage of phosphorus contributions from the watershed to Bass Lake (Figure 4). The phosphorus export coefficients have been obtained from studies throughout Wisconsin (Panuska and Lillie, 1995).

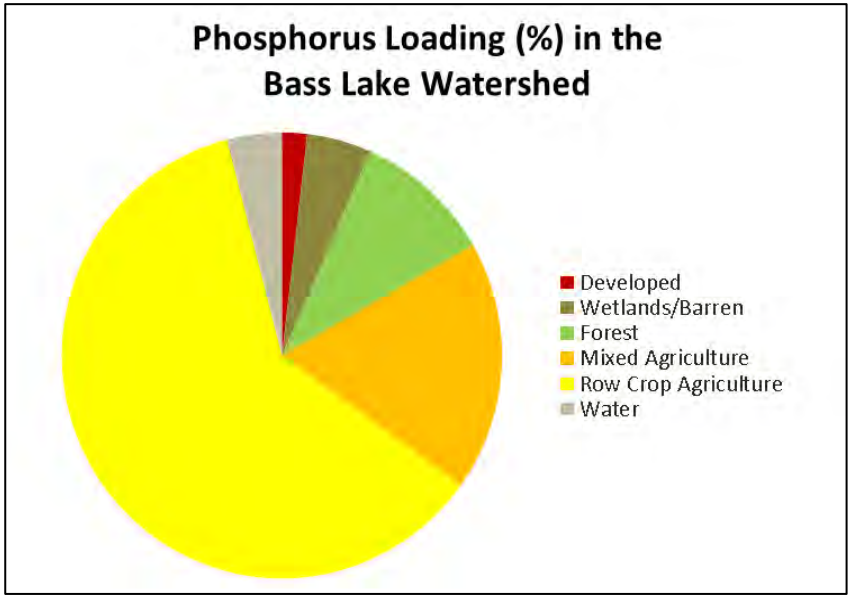


Figure 4. Estimated phosphorus loads from land uses in the Bass Lake watershed.

Guiding Vision for Bass Lake's Watershed

Bass Lake will be protected for the quality use of future generations.

Goal 7. Land use practices in the watershed will not adversely impact Bass Lake.

Objective 7.1. Protect important habitat around Bass Lake and within its watershed by informing landowners of options and opportunities to minimize their impacts to the lake.

Actions	Lead person/group	Resources	Timeline
Support those interested in the purchase of development rights that permanently protect the landscape while retaining private ownership.	Interested property owners	CPZ WDNR Lakes Protection Grant Knowles-Nelson Stewardship Funds	As needed
Support those interested in conservation easements to restrict development or uses of land that would impact critical habitat or natural features of the land.	Interested property owners	NCCT WDNR Lakes Protection Grant Knowles-Nelson Stewardship Funds	As needed

Sensitive shorelands, wetlands, and areas in the watershed that effect Bass Lake will be identified in the Town's Comprehensive Plan and zoned accordingly.	Town of Norrie/Elderon		

Objective 7.2. Limit excess runoff in the Bass Lake watershed by working with landowners to design landscapes and management practices that enhance infiltration and/or 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.	Marathon County CPZ Dept.	Cost-share programs	Ongoing
Construct roads in a way that runoff is intercepted before it gets to the lake.	Town of Norrie/Elderon Highway Depts.	CPZ	As needed

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

The lake is enjoyed by people who boat, fish, and appreciate its beauty. At the time of plan formation, Bass Lake had no high-speed boating hours and was designated a no wake lake, as shown by a deteriorating sign at the boat landing. The boat landing is owned and maintained by the Town of Elderon. Participants in the lake planning sessions indicated support for the current regulations.

Guiding Vision for Recreation

Bass Lake will remain a quiet refuge for fishing, hunting and enjoying wildlife.

Goal 8. Preserve the solitude found at Bass Lake.

Objective 8.1. Work with municipality to protect the lake.

Actions	Lead person/group	Resources	Timeline
Replace the sign at the boat landing indicating that the lake is a no-wake.		Town of Elderon	

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 Bass 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

Changes, updates and important information about the Bass Lake management plan will be communicated to those that live near the lake, the townships and lake users.

Goal 9. Develop a core group of people interested in the health and well-being of the Bass Lake ecosystem, and continue activities that develop knowledge.

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

Actions	Lead person/group	Resources	Timeline
Work with County to ensure the distribution of welcome packets to new residents. Consider a Lake District or watershed welcome packet.	CPZ	UWEX Lakes (educational materials)	Ongoing
Explore the formation of a lakes subcommittee on the town board, and/or a county-wide lake group.	Town of Norrie/Elderon	UWEX Lakes	2015 or 2016
Encourage attendance at the Lakes Convention and Lake Leaders Institute, and announce educational events such as these.			
Encourage lake residents to call in concerns to the County to provide "extra eyes" on the landscape and inform the CPZ about issues that may lead to problems within Bass Lake (examples:. activities that may lead to erosion, clear cutting shorelines, dumping sand on shorelines or other major shoreline disturbance; septic system failures; non-compliance with setbacks; new construction close to the lake, and/or new irrigation wells).		CPZ Town of Norrie Norrie 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

Bass Lake will have an up-to-date, accurate and comprehensive lake management plan that is reviewed regularly and documents desired management goals and activities.

Goal 10. Review this LMP annually and update as needed.

Objective 10.1. Communicate updates with community members and those that live around the lake.

Actions	Lead person/group	Resources	Timeline
Meet annually (as Town subcommittee or 'Friends' group) to update the plan through discussion and evaluation of available surveys, data, and other relevant information.	Town of Norrie/Elderon		Annually
Meet with others interested in lakes in the Town of Norrie	Town of Norrie/Elderon	Mayflower Lake District	Annually
Notify the town, county, and WDNR of any potential changes in the LMP.		CPZ Town of Norrie/Elderon	As needed

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 Towns of Norrie and Elderon: Marathon County as well as the Towns of Norrie and Elderon adopted Comprehensive Plans in 2006-2007. 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:

1. *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 Towns of Norrie and Elderon 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.

Town of Elderon residents place a high priority on protection of its agriculture, forestry and water resources and wishes to protect these resources from intensive development. The Town of Elderon has developed the following goal, objectives, and policy recommendations to demonstrate its support:

Goal: Protect the aesthetic and environmental qualities of Elderon's lakes.

Objective: To minimize intensive development around Elderon's lakes that could affect water quality, habitat or natural vegetation near the lakes.

Goal: Protect natural resources, including forest, wetland and lake communities from intensive development.

Objective: To continue working with Marathon County to ensure appropriate preservation of wetlands and shorelines.

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**

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

2. **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.
3. **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.
4. **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.
5. **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, Wisconsin Department of Natural Resources
Phone: 715-421-7881
Address: WDNR 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: P.O. 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, Wisconsin Department of Natural Resources
Phone: 715-421-7881
Address: WDNR 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
Website: http://www.goldensandsrcd.org/

Contact: Scott Provost, Wisconsin Department of Natural Resources
Phone: 715-421-7881
Address: WDNR 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, Wisconsin Department of Natural Resources
Phone: 715-421-7881
Address: WDNR 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, Wisconsin Department 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, Wisconsin Department of Natural Resources
Phone: 715-839-3794
Address: P.O 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: P.O. 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, Wisconsin Department of Natural Resources
Phone: 715-839-3794
Address: P.O 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 Road, 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 Drive, 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 Drive, 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, Wisconsin Department 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/fish/

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

Grants
Contact: Buzz Sorge, Wisconsin Department of Natural Resources
Phone: 715-839-3794
Address: P.O 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, Center for Watershed Science and Education UWSP
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, Wisconsin Department of Natural Resources
Phone: 715-421-7881
Address: WDNR 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, Center for Watershed Science and Education UWSP
Phone: 715-346-2497
Address: 224A TNR UWSP 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, Wisconsin Department 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: Center for Land Use Education, UWSP
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 Drive, 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: P.O. Box 124 Stevens Point, WI 54481
E-mail: info@ncctwi.org
Website: http://www.ncctwi.org/

Purchase of Land
Contact: Buzz Sorge, Wisconsin Department of Natural Resources
Phone: 715-839-3794
Address: P.O 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, Wisconsin Department of Natural Resources
Phone: 715-839-3794
Address: P.O 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, Wisconsin Department of Natural Resources
Phone: 715-839-3794
Address: P.O Box 4001 Eau Claire, WI 54702
E-mail: Patrick.Sorge@wisconsin.gov
Website: http://dnr.wi.gov/environmentprotect/water.html

Contact: Nancy Turyk, Center for Watershed Science and Education UWSP
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 UWSP 800 Reserve St. Stevens Point, WI 54481
E-mail: ejudziewica@uwsp.edu

Woody Habitat
Contact: Tom Meronek, Wisconsin Department 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 UWSP 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

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
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

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).
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 a digital topographic map. Click the cursor on the exact collection site and note the coordinates (choose UTM or Latitude/Longitude).	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
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)

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
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

  Town of: Elderon
  Contact Name: Mary Ostrowski, Town Clerk
  Phone: 715-454-6845
  E-mail: tnelderon@aol.com

- **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 Sportsmans 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.