

# 2015

## Spring Lake Management Plan

Updated and Amended 2022  
(changes highlighted in text)



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**



## **Spring Lake Management Plan**

The Spring Lake Management Plan was developed with input from residents and lake users at a series of four public planning sessions held at the Waushara County Courthouse in Wautoma, Wisconsin during January-May 2014. The inclusive community sessions were designed to identify key community concerns, assets, opportunities 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 Spring Lake Management District on: June 20, 2015.  
Date

The plan was adopted by the Town of Marion on: February 12, 2015.  
Date

The plan was adopted by Waushara County on: October 7, 2015.  
Date

The plan was approved by the Wisconsin Department of Natural Resources on: September 17, 2015.  
Date

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

## **Spring Lake Management Planning Committee Members and Resources**

### **Planning Committee**

Katherine Bogdanoff  
Rick Dill  
Vicki Dill  
Candace Eiche  
Len Narus  
Arnie Wilke  
Marty Wilke

### **Waushara County**

County Conservationist – Ed Hernandez  
Land Conservation Department  
Community, Natural Resources and Economic Development Agent –  
Patrick Nehring, University of Wisconsin-Extension

### **University of Wisconsin – Stevens Point Center for Watershed Science and Education**

Water Resources Specialists – Ryan Haney and Danielle Rupp  
Water Resources Scientist – Nancy Turyk

### **Wisconsin Department of Natural Resources**

Water Resources Management Specialist – Ted Johnson  
Fisheries Biologists – Dave Bartz and Scott Bunde

### **Golden Sands Resource Conservation & Development Council, Inc.**

Regional Aquatic Invasive Species Education Specialist – Paul Skawinski  
Regional Aquatic Invasive Species Specialist – Kaycie Stushek

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

Waushara County Watershed Lakes Council

Waushara County Staff and Citizens

Wisconsin Department of Natural Resources Professionals,  
Mark Sessing and Ted Johnson

Wisconsin Department of Natural Resources Lake Protection Grant

## Contents

Introduction.....	6
Background.....	7
The Planning Process .....	8
Goals, Objectives and Actions .....	9
Landscapes and the Lake .....	12
Water Quality.....	12
Shorelands .....	15
Watershed Land Use .....	17
In-Lake Habitat and a Healthy Lake.....	18
Fish Community .....	19
Aquatic Plants .....	22
Critical Habitat .....	25
People and the Lake .....	27
Recreation .....	27
Communication and Organization .....	28
Implementation .....	29
Updates and Revisions .....	30
Governance.....	31
References.....	34
Appendices .....	35
Appendix A: Waushara County Lakes Information Directory .....	36
Appendix B: Shoreland Survey – 2010.....	41
Appendix C: Rapid Response Plan.....	43
Appendix D: Aquatic Plant Management Plan 2015 .....	46
Appendix E: Lake User Survey Results.....	47

## Overarching Vision for Spring Lake

***Diverse plant, wildlife and fish communities will reflect excellent water quality and the presence of a variety of healthy native in-lake and shoreline habitat in Spring Lake. Lake use and the beauty and serenity of the lake will be balanced by supporting efforts, such as no-wake boating. Community members will work together to pursue lake protection efforts and maintain a healthy lake.***

## Introduction

Spring Lake is a two-lobed 50-acre lake located in the town of Marion in Waushara County, Wisconsin. Its maximum depth of 37 feet is found in the southwestern lobe. The lake receives water via numerous groundwater-fed springs, several small unnamed inlet streams and direct runoff. Water leaves Spring Lake via Sucker Creek on the eastern side of the northeastern lobe. The lake's quiet nature, wildlife and plant communities are highly valued by residents and visitors. A variety of interesting plants and animals have been observed around the northernmost inlet, including orchids, otters, mink, swans, woodpeckers, bald eagles, sandhill cranes, turtles, blue herons, brown herons and osprey.

The purpose of this plan is to provide a framework for the protection and improvement of Spring Lake. Implementing the content of this lake management plan (LMP) will enable citizens and other supporters to achieve the vision for Spring Lake now and in the years to come. The plan was developed by community members who learned about the lake and identified features important to the Spring Lake community to help guide the fate of the lake. It is a dynamic document that identifies goals and action items for the purpose of maintaining, protecting and/or creating desired conditions in a lake and identifies steps to correct past problems, improve on current conditions, and provide guidance for future boards, lake users, and technical experts. Because many entities are involved in lake and land management, it can be challenging to navigate the roles, partnerships and resources that are available; the planning process and content of this plan have been designed to identify where some key assistance exists. The actions identified in this LMP can serve as a gateway for obtaining grant funding and other resources to help implement activities outlined in the plan.

Who can use the Spring Lake Management Plan, and what are some ways that it can be used?

- **Individuals:** Individuals can use this plan to learn about the lake they love and their connection to it. People living near Spring Lake and in its watershed can have the greatest influence on the lake by understanding and choosing lake-friendly options to manage their land and the lake.
- **Spring Lake Management District:** This plan provides the District with a list of options that can readily be prioritized. Annual review of the plan will also help the District to recognize its accomplishments. Resources and funding opportunities for District management activities are more accessible by identification of goals in the lake management plan, and the District can identify partners to help achieve their goals for Spring Lake.
- **Neighboring lake groups, conservation clubs, and sporting 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 enjoyable.

- **The Town of Marion:** The Town can use the visions, wishes, and goals documented in this lake management plan when considering town-level management planning, or individual decisions within the watershed that may affect the lake and lake community.
- **Waushara County:** County professionals can identify needs, provide support, base decisions, and allocate resources to assist with some of the lake-related actions documented in this plan. This plan can also inform county board supervisors in decisions related to Waushara County lakes, streams, wetlands, and groundwater.
- **Wisconsin Department of Natural Resources (WDNR):** Professionals working with lakes in Waushara 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 Waushara County lakes have similar goals in their lake management plans, they can join together when seeking grant support to increase competitiveness for statewide resources.

## Background

One of the first steps in creating this plan was to gather and compile data about the lake and its ecosystem to understand past and current lake conditions. This was done alongside 32 other lakes as part of the Waushara County Lakes Project. The Waushara County Lakes Project was initiated by citizens in the Waushara County Watershed Lakes Council who encouraged Waushara County to work in partnership with personnel from UW-Stevens Point to assess 33 lakes in the county. This effort received funding from the Wisconsin Department of Natural Resources Lake Protection Grant Program. There was insufficient data available for many of the lakes to evaluate current water quality, aquatic plant communities, invasive species, and shorelands. The data that were available had been collected at differing frequencies or periods of time, making it difficult to compare lake conditions. Professionals and students from UW-Stevens Point and the Waushara County Land Conservation Department conducted the Waushara County Lakes Study and interpreted data for use in the development of lake management plans. Data collected by citizens, consultants, and professionals at the Wisconsin Department of Natural Resources were also incorporated into the planning process to provide a robust set of information from which informed decisions could be made. Sources of information used in the planning process are listed at the end of this document.

Several reports from the Spring Lake Study and the materials associated with the planning process and reports can be found on the Waushara County website: <http://www.co.waushara.wi.us/> (select "Departments", "Zoning and Land Conservation", "Land Conservation", and "Lake Management Planning"). Unless otherwise noted, data used in the development of this plan were detailed in the report *Waushara County Lakes Study – Spring Lake 2010-2012*, University of Wisconsin-Stevens Point.

## The Planning Process

The planning process included a series of four public planning sessions held between January and May 2014 at the Waushara County Courthouse. The Spring Lake Planning Committee consisted of property owners on or near Spring Lake. Technical assistance during the planning process was provided by the Waushara County Conservationist, the Waushara County Community, Natural Resources and Economic Development Extension Agent, and professionals from the Wisconsin Department of Natural Resources (WDNR), Golden Sands Resource Conservation and Development Council, Inc. (RC&D), University of Wisconsin-Extension (UWEX), and the University of Wisconsin-Stevens Point Center for Watershed Science and Education (CWSE).

Participation in the planning process was open to everyone and was encouraged by letters mailed to Spring 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. To involve and collect input from as many people as possible, a topic-specific survey related to the subject of each upcoming planning session was made available prior to each planning session. Property owners and interested lake users were notified about the surveys and how to access them (via postcards mailed to waterfront property owners and press releases in local newspapers). The surveys could be filled out anonymously online, or paper copies were available upon request. Survey questions and responses were shared at the planning sessions and can be found in Appendix E: Lake User Survey Results.

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

Guest experts and professionals attended 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. This information 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, planning committee members identified goals, objectives, and actions for the lake management plan that were recorded by professionals from UW-Stevens Point. Planning session notes and presentations are available on the Waushara County website.

## 2022 Lake Management Plan Update

The Spring Lake Management District Board decided to review and update the lake management plan at its May 9, 2020, board meeting. The SLMD members approved the plan update process and authorized funding for a point intercept aquatic plant survey at the 2020 annual membership meeting in July 2020. Due to a Covid-19 delay in holding the 2020 annual meeting, the aquatic plant survey could not be conducted in 2020. Golden Sands Resource Conservation & Development Council completed the point intercept aquatic plant survey on August 9-10, 2021. The survey report is attached as appendix \_\_\_\_.

The SLMD Board asked members to review and recommend changes to the stated goals and objectives of the 2015 lake management plan. Two members, Mike McMonigal and Marty Wilke, provided written comments on the goals and objectives. The SLMD Board members also reviewed the goals and objectives and considered the members' input to proposed changes in the goals and objectives at its October 9, 2021, meeting. Further review and proposed changes to the plan were considered at the January 15, 2022, and April 9, 2022, Board meetings.



## Goals, Objectives and Actions

The following goals, objectives and associated actions were derived from the values and concerns of citizens interested in Spring Lake and members of the Spring Lake Management Planning Committee, as well as the known science about Spring Lake, its ecosystem and the landscape within its watershed. A lake management plan is a living document that changes over time to meet the current needs, challenges and desires of the lake and its community. Implementing and regularly updating the goals and actions in the Spring Lake Management Plan will ensure that the vision is supported and that changes or new challenges are incorporated into the plan. **The goals, objectives and actions listed in this plan should be reviewed annually and updated with any necessary changes.**

Although each lake is different, the Wisconsin Department of Natural Resources requires that each comprehensive lake management plan address a specific list of topics affecting the character of a lake, whether each topic has been identified as a priority or as simply something to preserve. In this way, every lake management plan considers the many aspects associated with lakes. These topics comprise the chapters in this plan and have been grouped as follows:

### **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*

### **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*

### **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, Lake District*

The following goals were identified as 'high priority' by the Spring Lake Management District:

**Goal 2. Maintain vegetated shorelands where they already exist, and encourage a vegetated buffer where the shoreland is mowed to the edge.**

**Objective 2.1. Show support for healthy shoreland maintenance and restoration.**

**Goal 4. Provide support to enhance the existing fish community in Spring Lake. (Fish Community)**

**Objective 4.2. Protect a balanced fish population in Spring Lake.**

**Goal 6. Diminish populations of aquatic invasive species in and around Spring Lake. (Aquatic Plants)**

**Objective 6.1. Reduce populations of curly-leaf pondweed and Eurasian watermilfoil in Spring Lake.**

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.

**Table 1. List of organizations and acronyms used in this plan.**

<b>Resource</b>	<b>Acronym</b>
<b>WDNR Citizen Lake Monitoring Network Program</b>	<b>CLMN</b>
<b>UWSP Center for Watershed Science and Education</b>	<b>CWSE</b>
<b>North Central Conservancy Trust</b>	<b>NCCT</b>
<b>USDA Natural Resources Conservation Service</b>	<b>NRCS</b>
<b>Golden Sands Resource Conservation and Development Council, Inc.</b>	<b>RC&amp;D</b>
<b>Spring Lake Management District</b>	<b>SLMD</b>
<b>UW-Extension</b>	<b>UWEX</b>
<b>University of Wisconsin-Stevens Point</b>	<b>UWSP</b>
<b>Waushara County Watershed Lakes Council</b>	<b>WCWLC</b>
<b>Wisconsin Department of Natural Resources</b>	<b>WDNR</b>
<b>Waushara County Land Conservation Department</b>	<b>WLCD</b>
<b>UWSP Water and Environmental Analysis Laboratory</b>	<b>WEAL</b>

Contact information for organizations and individuals who support lake management in Waushara County can be found in Appendix A: Waushara County Lakes Information Directory.

## **Landscapes and the Lake**

Land use and land management practices within a lake's watershed can affect both its water quantity and quality. Forests, grasslands and wetlands allow 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 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, and 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 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, herbicides 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 mimic some of the natural processes, and the reduction or elimination of nutrients added to the landscape will help prevent 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 serve the lake by reducing contaminants, providing shelter for fish and wildlife, and decreasing shoreline erosion by providing deep roots that hold soil in place and provide a shoreland barrier from waves and wind.

The water quality in Spring Lake is the result of many factors, including the underlying geology, 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 Spring Lake was assessed by measuring different interrelated characteristics including temperature, dissolved oxygen, water clarity, water chemistry, and algae. All of these were taken into consideration when management planning decisions were made.

## **Water Quality**

Citizen survey respondents indicated that water quality in Spring Lake has an impact on both their personal enjoyment and the economic value of the lake. Spring Lake's water quality was assessed during the 2010-2012 lake study using a number of measures including temperature, dissolved oxygen, water chemistry, and phosphorus. Water quality data collected in past years was also reviewed to determine trends in Spring Lake's water quality.

Dissolved oxygen is an important measure in Spring 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 by microbes reduces oxygen in the lake. During the 2010-2012 lake study, winter samples demonstrated that at times the dissolved oxygen concentrations can become very low in Spring Lake, which limits the types of fish and other aquatic organisms that can survive in the lake.

In Spring Lake, water clarity ranged from 6.5 feet to 15.5 feet. It is typical to have variability in a lake, often based on seasonal conditions. When compared with historic data, the average water clarity measured during the study was slightly better in May, June, July, August and October, and worse in September. Water clarity in Spring Lake is typically poorer in September. This corresponds with the period when algae growth is greatest.

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 contamination. Spring Lake had elevated potassium, chloride and sodium concentrations on average during the monitoring period. Although these elements are not harmful to the aquatic ecosystem, they indicate that road salt, fertilizer, animal waste and/or septic system effluent may be entering the lake from either surface runoff or via groundwater. Atrazine (DACT), an herbicide commonly used in corn production, averaged 0.12 ug/L in the samples that were analyzed from Spring Lake. The presence of this chemical suggests that agricultural activities in the surrounding area are impacting water quality. Some toxicity studies have indicated that reproductive system abnormalities can occur in frogs at these levels (Hayes et al., 2001 and Hayes et al., 2003).

Nutrients (phosphorus and nitrogen) are important measures of water quality because they are used for growth by algae and aquatic plants. 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, 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 gets the most 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. Total phosphorus concentrations for Spring Lake ranged from 3 ug/L to 22 ug/L during the study period. The summer median total phosphorus was 14 ug/L and 10.5 ug/L in 2011 and 2012, respectively. This is below Wisconsin’s phosphorus standard of 30 ug/L for deep drainage lakes. During the study, inorganic nitrogen concentrations were high enough in the spring to enhance algal blooms throughout the summer (Shaw et al., 2000).

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

Managing nitrogen, phosphorus and soil erosion throughout the Spring Lake watershed is one of the keys to protecting the lake itself. Over-application of chemicals and nutrients should be avoided. 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 Spring Lake can be controlled by using lake-friendly land management decisions, such as the 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 Spring Lake

***Spring Lake will have minimal contaminants and a strong dataset to measure water quality trends.***

**Goal 1. Learn more about the water quality in Spring Lake and be aware of changes over time.**

**Objective 1.1. Routinely monitor water quality for lake and human health.**

Actions	Lead person/group	Resources	Start/end dates
Continue spring and fall water sampling efforts, including water sample collection, Secchi measurements.	SLMD	CLMN WEAL	Ongoing
Monitor dates of ice on/ice off and submit the information to the state database.	SLMD	CLMN	2014, Ongoing
Monitor Secchi depth and if indicated by changes in Spring/Fall sampling reports, consider adding Summer sample for additional water quality data.	SLMD	CLMN WEAL WLCD	Ongoing
Encourage private well owners around Spring Lake to test their water for nitrates and atrazine.		WLCD UWEX WEAL or other laboratories	2016
Explore possibilities for further monitoring initiatives such as surface and groundwater monitoring for contaminants and other Waushara County Lakes through public/government sector with findings provided to stakeholders.		WLCD WDNR Lake Manager WEAL or other laboratories WCWLC Consultants	As needed

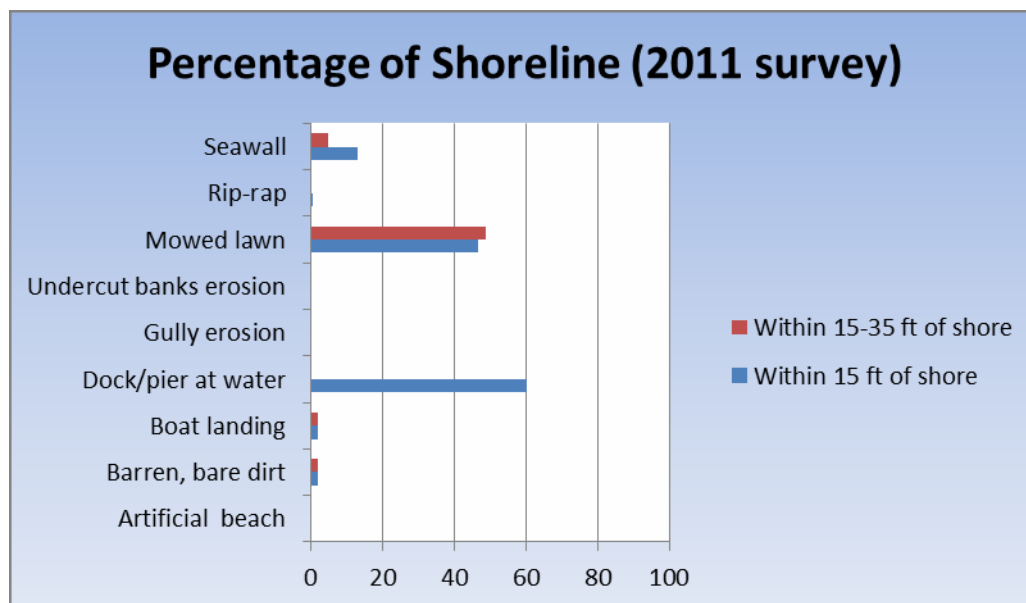
## Shorelands

Shoreland vegetation is critical to a healthy lake's ecosystem. It provides habitat for many aquatic and terrestrial animals including birds, frogs, turtles, and many 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 tall grasses/flowers, shrubs and trees which extend at least 35 feet landward from the water's edge.

To better understand the health of the Waushara County lakes, shorelands were evaluated. The survey inventoried the type and extent of shoreland vegetation. Areas with erosion, rip-rap, barren ground, seawalls, structures and docks were also inventoried. A scoring system was developed for the collected data to provide a more holistic assessment. Areas that are healthy will need strategies to keep them healthy, and areas with potential problem

areas and where management and conservation may be warranted may need strategies for improvement. The scoring system is based on the presence/absence and abundance of shoreline features, as well as their proximity to the water's edge. Values were tallied for each shoreline category and then summed to produce an overall score. Higher scores denote a healthier shoreline with good land management practices. These are areas where protection and/or conservation should be targeted. On the other hand, lower scores signify an ecologically unhealthy shoreline. These are areas where management and/or mitigation practices may be desirable for improving water quality and habitat.

The summary of scores for shorelands around Spring Lake is displayed on the map in Appendix B: Shoreland Survey – 2010. Large stretches of Spring Lake's shorelands are in good shape, but some portions have challenges that should be addressed. There were no stretches of Spring Lake shoreland that ranked as poor. Shoreland ordinances were enacted to improve water quality and habitat, and to protect our lakes. To protect our lakes, County and State (NR 115) shoreland ordinances state that vegetation should extend at least 35 feet inland from the water's edge, with the exception of an optional 30-foot viewing corridor for each shoreland lot. With a total of 66 lakefront lots, 1,980 feet (16%) of disturbed shoreland is permitted. Based on the 2011 shoreland inventory, 49% (6,197 feet) of Spring Lake's shoreland was mowed lawn. Although some properties were grandfathered in when the ordinance was adopted in 1966, following this guidance will benefit the health of the lake and its inhabitants.



## Guiding Vision for Spring Lake's Shorelands

***Spring Lake will have as much natural shoreland habitat as possible to encourage a healthy lake ecosystem for aquatic and terrestrial wildlife and to minimize runoff.***

**Goal 2. Maintain vegetated shorelands where they already exist, and encourage a vegetated buffer where the shoreland is mowed to the edge.**

**Objective 2.1. Show support for healthy shoreland maintenance and restoration.**

<b>Actions</b>	<b>Lead person/group</b>	<b>Resources</b>	<b>Start/end dates</b>
<b>Provide materials to property owners re: shoreland buffer vegetation in welcome packets, at the annual meeting, and on the website.</b>	SLMD	Educational materials from: WLCD, UWEX, WCWLC	Ongoing
<b>Maintain information and get assistance re: shoreland vegetation, help with restoration/plantings for interested property owners.</b>	SLMD	WLCD WDNR Consultants SLMD members	2015, Ongoing
<b>Commend property owners who maintain/restore a shoreland vegetation buffer using website to post information re: permitted information on locations.</b>	SLMD	SLMD	2015, Ongoing
<b>Explore posting specific locations/dates/times on website that can be viewed for examples of shoreland vegetation buffers</b>	SLMD	WLCD Consultants Waushara Co Garden Clubs	2015, Ongoing
<b>Explore obtaining a grant to conduct a beginning phase of a demonstration shoreland restoration project. Continue project through stages if possible with grant/landowner permission.</b>	SLMD/SLMD member	WLCD WDNR Consultants	2016



## Watershed Land Use

It is important to understand where Spring 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 Spring 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 and/or rain barrels; and routing drainage from pavement and roofs away from the lake. Other practices help reduce nutrients 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. These best practices of land management will require collaborative work between all the property owners and local government within the Spring Lake watershed to minimize contaminants entering the lake.

The surface watershed of Spring Lake is 1,229 acres (Figure 1). Primary land uses are agriculture with forest and developed land scattered throughout. The lake's shoreland is comprised primarily of residential development, wetlands, and forest. In general, the land closest to the lake has the greatest immediate impact on the lake, but the cumulative impacts of surrounding land use surrounding Spring Lake also play a large role in water quality.

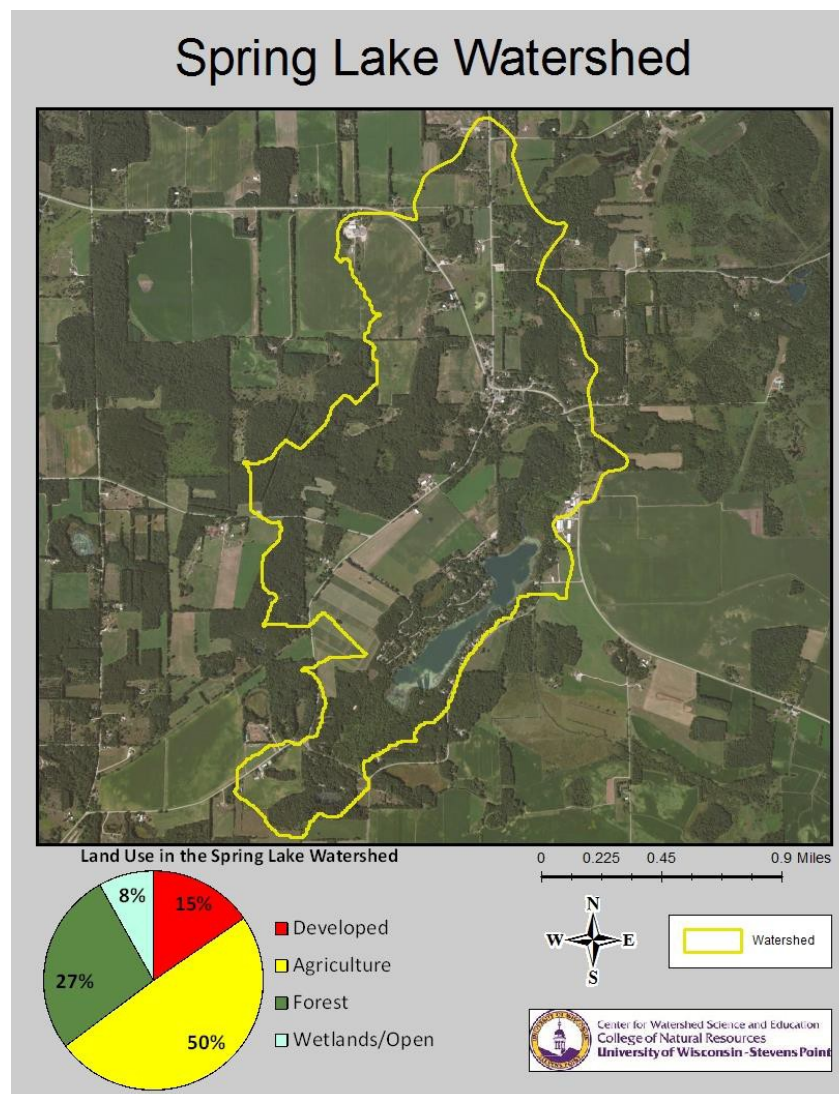


Figure 1. Spring Lake surface watershed.

## Guiding Vision for Spring Lake's Watershed

*The land around Spring Lake will be managed in a way that supports clean water and a healthy lake.*

**Goal 3. Know about and utilize resources for healthy land management.**

**Objective 3.1. Support healthy land management activities around Spring Lake.**

Actions	Lead person/group	Resources	Start/end dates
Encourage the County to support and follow-up with water quality based Best Management Practices (BMPs) within the watershed.		WLCD NRCS	Ongoing
Continue to use WLCD as a resource for land management activities.		WLCD	Ongoing
Support any landowners interested in the protection of their land via a conservation program (i.e. Conservation Easement or Purchase of Development Rights) by referring them to WLCD.		NCCT NRCS WDNR Lake Protection Grants	Ongoing

**Objective 3.2. Manage the resident Canada goose population to reduce nuisance to landowners and lake users.**

1. Manage and reduce the resident Canada Goose population summering on Spring Lake, with the assistance and permission of the Wisconsin DNR and The U.S. Fish and Wildlife Service. Management and control activities may involve egg depredation and nest removal with landowner permission, and/or resident goose population removal with the Wisconsin DNR.
2. Encourage establishment and maintenance of shoreland buffer plantings with native vegetation to reduce the nuisance of the goose population to property owners.
3. Educate property owners of property, pier and raft activities that will discourage geese and reduce nuisance.

### In-Lake Habitat and a Healthy Lake

Many lake users value Spring Lake for its fishing, wildlife and good water quality. These attributes are all interrelated, as the health of one part of the lake system may affect the health of the rest of the plant/animal community, the quality/quantity of water in the lake, and the experiences of the people spending time at the lake.

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 fallen tree limbs 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 Spring Lake includes the aquatic plants, branches and tree limbs above and below the water.

## **Fish Community**

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 nesting substrate, and water quality. 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. Ideally, the fish community can adapt to fishing without additional stocking or input because its reproductive and growth needs are met within the lake.

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 critical habitat areas.

People are an important part of a balanced fish community; their actions on the landscape and the numbers and sizes of fish added to or removed from 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. Regulations can also be adjusted as the fish community changes, and can provide for improved fishing.

Managing a lake for a sustainable 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 frequent 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 benefits 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 and provide fishing opportunities without requiring a lot of supplemental effort and associated expense to maintain these conditions.

The Wisconsin Department of Natural Resources conducted an electroshocking survey on Spring Lake in the spring of 2013 to determine current size structures, growth rates and abundances of the fish community. At the time of the survey, largemouth bass were present in above average abundance, which was an increase from a 2005 electroshocking survey; however, their growth rate was below average. Bluegill were also noted in numbers above average, with an average size structure. Recommendations given by the Wisconsin Department of Natural Resources fisheries biologist included the protection of existing habitat, improvement of areas of concern, continued monitoring for invasive species, and the use of large woody habitat in the littoral (near shore) area of Spring Lake.

According to survey responses received as part of the Spring Lake planning process, fishing is enjoyed throughout the year, with more people fishing the lake spring through fall. Northern pike, largemouth bass, panfish and trout were among the species that were commonly caught in Spring Lake by respondents. Planning participants expressed concern regarding overfishing in Spring Lake, especially during the winter months. Exploring changes to specific fishing rules to benefit the fish community was discussed with the Wisconsin Department of Natural Resources fisheries biologist, and several meeting participants either expressed interest in or attended the 2014 Conservation Congress hearing during the planning process to pursue rule changes regarding bag limits on panfish. A carp weir located at the outlet to Sucker Creek was installed years ago to help prevent carp from traveling upstream into the lake, and has started to deteriorate with time. Concerns surrounding its deterioration and support for its replacement were voiced during several of the planning meetings.

### **Guiding Vision for the Fish Community**

***Spring Lake will host healthy, abundant fish communities and the habitat to support them.***

**Goal 4. Provide support to enhance the existing fish community in Spring Lake.**

**Objective 4.1. Enhance fish habitat near shore and in Spring Lake.**

<b>Actions</b>	<b>Lead person/group</b>	<b>Resources</b>	<b>Start/end dates</b>
<b>Protect existing natural habitat including downed trees and woody features throughout the lake by informing landowners about their importance, depth of woody features placement to ensure boating safety, and by providing educational materials through SLMD annual mailing and on the Town of Marion's Spring Lake webpage (<a href="http://townshipofmarion.com">http://townshipofmarion.com</a>).</b>	SLMD Town of Marion	UWEX educational materials	Ongoing
<b>Work with WDNR to explore permitting for tree drops and fish sticks.</b>	Shoreland property owners SLMD	Fisheries Biologists - WDNR	As needed, ongoing
<b>Explore the installation of woody habitat under and around docks.</b>	Shoreland property owners SLMD	Fisheries Biologists - WDNR	Ongoing
<b>Protect emergent beds of bulrush and prevent disturbance in those areas via distribution of educational materials.</b>	Shoreland property owners SLMD	UWEX educational materials Local fishing clubs	Ongoing

#### Objective 4.2. Protect a balanced fish population in Spring Lake.

Actions	Lead person/group	Resources	Start/end dates
Consider proposing a resolution to reduce the bag limit on pan fish to 10 for submission to annual Conservation Congress, depending on DNR pan fish review and potential updates.	SLMD	Fisheries Biologists – WDNR Local fishing clubs Waushara County Conservation Congress representatives	Conservation Congress hearings are held annually in April.
The carp weir steel grates were replaced in 2019. SLMD will continue to maintain and clean the weir grates with volunteers.	SLMD	Fisheries Biologists – WDNR Local fishing clubs Spring Lake Farms, Inc	Ongoing
Manage the grasses/cattails around carp weir since buildup of these plants causes higher water levels at carp weir (which makes it easier for carp to get over into the lake).	SLMD	WDNR Lake Manager SLMD Consultants RC&D Spring Lake Farms, Inc	Ongoing
Maintain open communication with WDNR regarding regulation non-compliance concerns.	Town of Marion	WDNR Warden (see directory of lake contacts in Appendix A)	Ongoing
Inform area lake users of information and updates on any future fishing rule changes via e-mail, website, newsletter, and posting at public landings.	WDNR	WDNR	Ongoing

#### Aquatic Plants

Aquatic plants provide the forested landscape within Spring Lake. They provide food and habitat for spawning, breeding and survival for a wide range of inhabitants and lake visitors including fish, waterfowl, turtles and 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 create 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 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. The aquatic plants that attract the animals to these areas contribute to the beauty of the shoreland and lake.

During the August 2013 aquatic plant survey, twenty-five species of aquatic plants were found in Spring Lake, which was above average when compared with other lakes in the Waushara County Lakes Study (Golden Sands Resource Conservation and Development Council, Inc., 2014). The most common plants encountered were muskgrasses (*Chara* spp.) and coontail (*Ceratophyllum demersum*). One species, small purple bladderwort (*Utricularia resupinata*) is a species of special concern in Wisconsin. The areas in which this species was found should be treated with great care when considering aquatic plant management options. Another species of special concern, horsetail spikerush (*Eleocharis equisetoides*), has also been documented within the township of Marion (Wisconsin Department of Natural Resources, 2014). There is concern that additional rare plants may exist in this area, but are yet

to be documented. Two aquatic invasive plant species (AIS) were observed: Eurasian watermilfoil and curly-leaf pondweed. More detailed information can be found in the Spring Lake Aquatic Plant Management Plan, Spring Lake Aquatic Plant Report, or the Spring Lake 2010-2012 Lake Study Report.

The August 2021 aquatic plant survey identified twenty-nine species of aquatic plants. The most common plants were muskgrasses, northern water milfoil, coontail, and slender naiad. Undesirable invasive aquatic plants identified were Eurasian watermilfoil and curly-leaf pondweed. In addition, invasive purple loosestrife was identified on one property shoreline. The survey results were consistent with prior plant surveys conducted in 2005, 2013 and 2016, and indicate continued aquatic plant diversity and health of Spring Lake.

### Guiding Vision for Aquatic Plants in Spring Lake

***Spring Lake's native aquatic plant community will continue to include sensitive and rare species of plants with minimal disturbance by aquatic invasive species.***

**Goal 5. Protect native plants in and around Spring Lake.**

**Objective 5.1. Avoid disturbing the native aquatic plant community when possible.**

Actions	Lead person/group	Resources	Start/end dates
Refer to the Spring Lake Aquatic Plant Management Plan (Appendix D) for more detailed aquatic plant information, management options, and chosen actions.	SLMD	WLCD RC&D WDNR Lakes Manager Consultants	Ongoing
Minimize removal and disturbance of native vegetation via educational materials provided in annual mailing, WLCD webpage re: mitigation methods available	SLMD	UWEX WDNR Lakes Manager WLCD WCWLC	Ongoing
Learn about maintaining a healthy aquatic plant community and communicate to membership and lake users about actions that will preserve or potentially harm the desirable aquatic plants such as native reeds			



## Aquatic Invasive Species (AIS)

Aquatic invasive species are non-native aquatic plants and animals that are most often unintentionally introduced to the lake by lake users. This most commonly occurs on trailers, boats, equipment and from the release of bait.



Curly-leaf pondweed (CLP) was originally identified in Spring Lake in 2003, and was found again in August 2013 in two locations (Appendix D: Aquatic Plant Management Plan 2015). This plant can live in harmony with the rest of the aquatic plant community, but can become invasive. The die-off of large beds of CLP in June can contribute to nuisance algae blooms throughout the summer. In Spring Lake, CLP should be monitored annually in early June and management should be considered if the beds expand.

Eurasian watermilfoil (EWM) was first identified in Spring Lake in 1994. The locations of observed EWM populations in 2013 are displayed in the map in Appendix D: Aquatic Plant Management Plan 2015. In some lakes, EWM can exist as part of the plant community, while in others it can create dense beds that can damage boat motors, make areas non-navigable, and inhibit swimming and fishing. This plant can produce viable seeds, but it often spreads by fragmentation. Just a small stem fragment is enough to start a new plant, so spread can occur quickly if plants are located near points of activity such as beaches and boat launches.



If an invasive plant species not previously documented in Spring Lake is observed by any lake user, the lake user is encouraged to refer to Appendix C: Rapid Response Plan for more information on how to report it.

### Summary of Aquatic Plant Management Planning Session Discussion – April 17, 2014

Various aquatic plant management options involving the control of aquatic invasive species (CLP and EWM) were discussed at a lake management planning session on April 17, 2014. The Spring Lake Management District has been active in implementing a monitoring strategy for aquatic invasive species. Beginning in 2002, a contracted vendor has surveyed the lake each fall for invasive species, along with three summer surveys conducted by Golden Sands Resource Conservation and Development Council, Inc. Records of these surveys can be found in Spring Lake Management District files.

Attendees considered responses given to the aquatic plant survey questions about EWM control. The majority of survey respondents wanted to do something to control AIS in Spring Lake, with the most popular control option identified as manual removal by property owners. Respondents were nearly split on their support for the use of herbicides (chemical control), hand removal of EWM by divers, harvesting, and biological control by the native milfoil weevil, *Euhrychiopsis lecontei*. In addition, attendees conversed with aquatic plant specialists and learned that, based on new science, lake managers with the Wisconsin Department of Natural Resources are changing their recommendations for the control of EWM. For more details on aquatic plant management strategies and aquatic plant management in Spring Lake, refer to the Spring Lake Aquatic Plant Management Plan. Detailed survey results regarding aquatic plants can be found in the Aquatic Plant Management Plan in the appendices or on the Waushara County website.

## Guiding Vision for Aquatic Invasive Species

***Spring Lake will not be detrimentally affected by aquatic invasive species.***

**Goal 6. Diminish populations of aquatic invasive species in and around Spring Lake.**

**Objective 6.1. Reduce populations of curly-leaf pondweed and Eurasian watermilfoil in Spring Lake.**

Actions	Lead person/group	Resources	Start/end dates
In summer 2014, continue a combination of chemical spot treatments and hand pulling. Follow up at least 30 days after the treatment.	SLMD	Aquatic plant specialist – WDNR Consultants RC&D	Summer 2014, ongoing
Beginning in 2015, consider working with other area lakes to apply for a grant to hire divers to hand-pull AIS plants.	SLMD	Other local lake groups RC&D Consultants	2015
Test the DNA of milfoil plants to evaluate the presence of hybrid watermilfoil.	SLMD	RC&D	2014

**Objective 6.2. Inform lake residents and visitors about the spread of aquatic invasive species.**

Actions	Lead person/group	Resources	Start/end dates
Include information on AIS in welcome packets.	SLMD	UWEX Lakes – educational materials	Ongoing
Obtain information re: non-native narrowleaf and hybrid cattails to determine if it presents an invasive problem on Spring Lake requiring monitoring/intervention.	SLMD	RC&D WDNR UWEX Lakes Consultants	Fall 2014, Ongoing



### Objective 6.3. Learn how to identify and monitor aquatic invasive species.

Actions	Lead person/group	Resources	Start/end dates
Provide opportunities for volunteers to review how to identify aquatic invasive species in the field.	SLMD	RC&D Nearby lake groups	Ongoing
Continue to connect with RC&D when they survey Spring Lake to expand opportunities to learn about invasive species.	SLMD	RC&D Aquatic Plant Biologist – WDNR	Ongoing
Continue to monitor for AIS	SLMD	RC&D Aquatic plant specialist – WDNR Consultants	Ongoing
Continue implementation of a monitoring strategy (contracted vendor, SLMD member reports, etc.) for aquatic invasive species.	SLMD	RC&D Aquatic Plant Biologist – WDNR Consultants	Ongoing
Work with RC&D to coordinate volunteer monitoring shared with other area lakes through the Clean Boats, Clean Waters Program.	SLMD	RC&D WDNR AIS Grants (funds) Waushara County (funds)	Ongoing

### Critical Habitat

Special areas harbor habitat 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. Designating areas of the lake as critical habitat enables these areas to be located on maps and information about their importance to aquatic plants, animals and the overall health and integrity of the lake to be shared. Identifying critical habitat areas can help lake groups and landowners plan waterfront projects that will minimize impacts to important habitat and help ensure the long-term health of the lake.

Although Spring Lake does not currently have any officially designated critical habitat areas, there are areas within Spring 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, and areas with overhanging vegetation, and wetlands are elements of good quality habitat. The Spring Lake planning committee participants identified the area surrounding the northern inlet to the lake and the plants and wildlife that can be found there as exceptional habitat in Spring Lake. 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 Spring Lake's Critical Habitat**  
***Sensitive areas in and around Spring Lake will remain intact and protected.***

**Goal 7. Protect unique areas that are valuable to the water quality and habitat in Spring Lake**

**Objective 7.1. Raise awareness for the importance of healthy habitat and intact land around Spring Lake.**

<b>Actions</b>	<b>Lead person/group</b>	<b>Resources</b>	<b>Start/end dates</b>
<b>Obtain information re: official critical habitat designation, significance/impact for member discussion.</b>	SLMD	WDNR Lakes Specialist, WDNR Fisheries Biologist, WDNR Wildlife Biologist	2017, as needed
<b>Protect near-shore vegetation and woody habitat by distributing information about the importance of fish habitat.</b>	SLMD	UWEX educational materials	2015, Ongoing
<b>Educate landowners re: Spring Lake property conservancy options (i.e. could offer protection of the northern inlet and undeveloped land parcels with their varied plant/animal wildlife habitat).</b>	SLMD	NCCT NRCS WDNR Lake Protection Grants Wisconsin Stewardship Program	2017, 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. This plan summarizes the decisions of people to take proactive steps to improve and protect their lake and their community. Good decisions by lake shore residents and visitors can have a positive impact on the lake and on those who enjoy this common resource. Collaborative efforts can increase the positive impacts; therefore, communication and cooperation between the lake district, community, and suite of lake users are essential to maximize the effects of the implementation of this plan.

People are drawn to Spring Lake for many reasons, but most frequently the view, peace and calmness are cited. They enjoy spending time on the lake with family, friends and alone. With a variety of uses and interests, conflicts of use may arise on a lake from time to time. Discussions about potential or existing conflicts and identifying ways to resolve them can make a visit to the lake pleasant for everyone. Sometimes verbal agreements are enough, but at other times written guidance helps to reduce conflicts. Boating hours and fishing rules are examples of written guidance that are put into place to minimize conflicts between lake users and to balance human activities with environmental considerations for the lake.

## **Recreation**

Spring Lake is enjoyed by residents and visitors who swim, boat, fish and appreciate its beauty. The lake is used and enjoyed year-round. Spring Lake is a 'No Wake' lake, with two public boat landings on the northwestern side of the southwestern end of the lake, and one on the southeastern side of the northeastern end of the lake.

## Guiding Vision for Recreation

***The majority of visitors to Spring Lake will know about, appreciate and respect the lake and recreate responsibly.  
Spring Lake will remain a no-wake lake.***

**Goal 8. Facilitate the availability of important lake information to the public.**

**Objective 8.1. Provide lake users with information and rules necessary to make responsible decisions.**

Actions	Lead person/group	Resources	Start/end dates
Maintain signage at boat landings and around the lake with important lake, recreation, and habitat information.	Town of Marion SLMD	WDNR, Town of Marion, volunteer property owners	Ongoing
Support the no-wake designation on Spring Lake.	Town of Marion	Town of Marion	Ongoing
Support enforcement of current fishing regulations (i.e. valid fishing license, bag limits, ice fishing regulations re: fish shanties, bag limit, tip-ups, etc.).	WDNR Warden Town of Marion Boat Officer	WDNR Warden Town of Marion	Ongoing

## 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 Spring 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

***The Spring Lake Management District and planning committee will maintain and build communications internally and within the community.***

**Goal 9. Maintain open communications with lake users to keep visitors and residents informed about responsible lake stewardship and encourage involvement.**

**Objective 9.1. Distribute important lake information to residents and lake visitors.**

<b>Actions</b>	<b>Lead person/group</b>	<b>Resources</b>	<b>Start/end dates</b>
<b>Continue the distribution of a welcome packet to all new and current residents of Spring Lake via the WCWLC.</b>	SLMD	WCWLC	Ongoing
<b>Announce lake happenings and management activities, events, at the annual meeting and on the Town of Marion's Spring Lake webpage (<a href="http://townshipofmarion.com">http://townshipofmarion.com</a>).</b>	SLMD	SLMD	Ongoing, Annually
<b>Continue annual newsletter distribution in May; continue posting this information on the town website.</b>	SLMD	Town of Marion	Ongoing, Annually
Use the SLMD membership email list to communicate with members about matters of concern affecting the quality of the lake aquatic and surrounding plant and animal community. Encourage all members to provide an email address to the SLMD Board for timely communications of matters of concern.			
<b>Plan post annual meeting "coffee hour".</b> The social hour and other indoor group activities are subject to community health issues such as Covid-19 restrictions, limitations, and recommendations.	SLMD	SLMD members	2015, Ongoing

## Implementation

The implementation of the Spring Lake Management Plan will require the involvement of watershed residents, riparian landowners and lake users, and land use decisions made by Waushara County officials and the Town of Marion Board. The involvement of these multiple parties will ultimately help to make informed decisions that will result in a healthy ecosystem in Spring Lake that is enjoyed by many people.

### Guiding Vision for Implementation

***The Spring Lake Management Plan will be referenced during county and local land management and comprehensive planning decisions.***

**Goal 10.** Incorporate goals, objectives and actions outlined in the Spring Lake Management Plan into local land management and comprehensive plans.

**Objective 10.1.** Incorporate goals, objectives and actions outlined in the Spring Lake Management Plan into local land management and comprehensive plans.

Actions	Lead person/group	Resources	Start/end dates
Incorporate Spring Lake Management Plan into the Waushara County Comprehensive Plan and the Waushara County Land Management Plan and other relevant county plans and decision making processes.	WLCD SLMD	Waushara County , copies to WDNR, other appropriate officials	2015/2016
Incorporate Spring Lake Management Plan into the Town of Marion Comprehensive Plan.	WLCD SLMD	Town of Marion, copies to WDNR, other appropriate officials	2015, ongoing

## 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

***Spring Lake will have a living, regularly updated plan in place to adaptively protect and improve lake health.***

**Review plan every five years, or more frequently as needed, and update.**

**Objective 11.1. Receive input from and communicate updates with community members.**

Actions	Lead person/group	Resources	Start/end dates
Review updates to the plan at the annual meeting.	SLMD Board	SLMD WDNR Lakes Manager WDNR Fisheries Biologist WLCD RC&D Consultants	Annually

## Governance

*Written by Patrick Nehring, Community Agent, UW-Extension Waushara County.*

### ***Lake Management Plan Approval***

The draft lake management plan will be completed by the lake association/district board, a committee, or a committee of the whole. The final draft of the lake management plan will be approved through a vote of the lake association/district membership or board. The final draft will be approved by the Wisconsin Department of Natural Resources (DNR) to have met the lake management plan requirements and grant requirements. If the DNR requires modifications or additional information before approving the plan, the plan will be changed to meet DNR requirements that are acceptable to the lake association/district. The completed plan that has been approved by the lake association/district and the DNR will be presented to the municipalities containing the lake and Waushara 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/>. Waushara County offers technical and financial assistance through the Land Conservation 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 Resource Conservation and Development Council, Inc., Wisconsin Wetlands Association, and Wisconsin Trout Unlimited.

### ***Lake Regulations***

The lake management plan is superseded by federal, state, county, and municipal laws and court rulings. However, the lake management plan may influence county and municipal ordinances and enforcement, which is why the lake management plan will be reviewed and included or referenced in the county and related municipal comprehensive plans. 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 court system interprets these rules and regulations. The rules and regulations are primarily enforced by the US Army Corps of Engineers, the Wisconsin Department of Natural Resources, the Waushara County Sheriff Department, and the Waushara County Land Conservation and Zoning Office. If considering development near or on a lake, addressing problem plants or animals, or changing the lake bottom contact the Waushara County Land Conservation & Zoning Department at the Waushara County Courthouse (920) 787-0443 and/or the Wisconsin Department of Natural Resources (888) 936-7463.

### ***Comprehensive Plans***

The lake management plan and changes to the plan will be presented to the County and the Municipality for review and possible incorporation into their comprehensive plans. The comprehensive plan is intended to be used to guide future decision. Zoning, subdivision, and official mapping decisions must be consistent with the comprehensive plan.

### ***Process for Inclusion in the Municipal Comprehensive Plan***

The Municipal Plan Commission will review the lake management plan to determine if it is consistent with the municipality's comprehensive plan. If the lake management plan is found by the Municipal Plan Commission to not be consistent with the municipality's comprehensive plan, the plan commission may (a) recommend changes to the comprehensive plan or (b) ask that an aspect of the lake management plan be revisited. When the Municipal Plan Commission has reached a consensus that the lake management plan aligns with the municipality's vision, the Municipal Plan Commission will develop an amendment to the comprehensive plan referencing the lake management plan. This could include a reference to the lake management plan under local policies in the agricultural, natural and cultural resources background information and the addition of a recommendation to support the lake management plan and to implement the applicable recommendations contained in the lake management. The Municipal Plan Commission will recommend by resolution that the amendment to the comprehensive plan be adopted by the Municipal Board. A public hearing on the changes to the comprehensive plan will be held with a thirty-day class one notice. The Municipal Board will consider the recommendations from the Municipal Plan Commission. The Municipal Board may (a) adopt the recommendations to the comprehensive plan by ordinance, (b) adopt by ordinance the recommendations with changes, or (c) request the plan commission revisit the changes to the comprehensive plan.

### ***Process for Inclusion in the County Comprehensive Plan***

Waushara County Land Use Committee will review the updates to the municipality's comprehensive plan and the lake management plan as referenced by the municipality's comprehensive plan to determine if they are consistent with the County's comprehensive plan. If they are found by the land use committee to not be consistent with the municipality's comprehensive plan, the land use committee may (a) recommend changes to the County's comprehensive plan or (b) ask that an aspect of the lake management plan or municipality's comprehensive plan be revisited. When the Land Use Committee has reached a consensus that the updates to the municipality's comprehensive plan and the lake management plan aligns with the county's vision, and if it is not already consistent, it will develop an amendment to the County's comprehensive plan. The amendment may include a reference to the lake management plan under local policies in the agricultural, natural and cultural resources background information and the addition of a recommendation to support the lake management plan and to implement the applicable recommendations contained in the lake management. The Land Use Committee will recommend the amendment to the comprehensive plan to the Land, Water, and Education Committee.

The Land, Water, and Education Committee will review the amendment and if it concurs with the recommendation from the Land Use Committee, it will make a recommendation to the Planning & Zoning Committee. The Planning & Zoning Committee will hold a public hearing with a thirty-day class one notice. The Planning & Zoning Committee will recommend by resolution the amendment to the comprehensive plan or the amendment with changes be adopted by the County Board.

The County Board will consider the recommendations from the Planning & Zoning Committee. The County Board may (a) adopt the amendment to the comprehensive plan by ordinance, (b) adopt the amendment with changes, or (c) request the Land Use Committee or Planning & Zoning Committee revisit the changes to the comprehensive plan.

### ***Use of the Comprehensive Plan***

The lake management plans as referenced in the comprehensive plans will be used by the County and the Municipality to consider certain actions or in the implementation of zoning and other applicable regulations. The County Board of Adjustments and the County Planning and Zoning Committee may reference the lake management plans as referenced in the comprehensive plan when considering zone changes, variances, conditional uses, and suitable mitigation measures. The Municipality and County may take action as called for in the lake management plan as referenced in the comprehensive plan, including changes to zoning and other applicable regulations, shortly after the County's comprehensive plan has been updated or may take action as needed.

The lake organization, lake residents, riparian property owners, or other citizens may request that the Municipality or County take a specific action to implement aspects of the lake management plan as referenced in the comprehensive plan. The lake organization lake residents, riparian property owners, or other citizens may provide written or oral support to encourage the Municipality and County to reference the lake management plan when considering regulation or action that may impact the lake. The lake organization will inform the Municipality and the County when the lake management plan is updated and allow the Municipality and County an opportunity to participate in the update process.



## References

- Bartz, D. 2014. The Fishery in Deer, Lucerne, and Spring Lakes. Planning Session for Deer, Lucerne, and Spring Lakes, March 6, 2014, Waushara County Courthouse. Wisconsin Department of Natural Resources. Unpublished data.
- Boat Ed, 2013. The Handbook of Wisconsin Boating Laws and Responsibilities. Approved by Wisconsin Department of Natural Resources. [www.boat-ed.com](http://www.boat-ed.com)
- Borman, S., R. Korth, and J. Temte, 2001. Through the looking glass, a field guide to aquatic plants. Reindl Printing, Inc. Merrill, Wisconsin.
- Haney, Ryan, 2014. Water Quality in Deer, Lucerne, and Spring Lakes. Presentation given at the Waushara County Courthouse on May 8, 2014.
- Johnson, T., 2014. Aquatic Plant Management Strategies. Planning Session for Deer, Lucerne, and Spring Lakes, April 17, 2014. Waushara County Courthouse. Wisconsin Department of Natural Resources. Unpublished data.
- Panuska, J. and Lillie, 1995. Phosphorus Loadings from Wisconsin Watershed: Recommended Phosphorus Export Coefficients for Agricultural and Forested Watersheds. Bulletin Number 38, Bureau of Research, Wisconsin Department of Natural Resources.
- Shaw, B., C. Mechenich, and L. Klessig, 2000. *Understanding Lake Data*. University of Wisconsin-Extension, Stevens Point. 20 pp.
- Skawinski, P. and K. Stushek, 2014. Aquatic Invasive Species in Deer, Lucerne and Spring Lakes. Planning Session for Deer, Lucerne, and Spring Lakes, April 17, 2014, Waushara County Courthouse.
- Turyk, Nancy, 2014. The Aquatic Plants of Deer, Lucerne, and Spring Lakes. Presentation given at the Waushara County Courthouse on April 17, 2014.
- UW-Stevens Point Center for Watershed Science and Education, 2014. Waushara County Lake Study - Spring Lake 2010-2012. Final Report to Waushara County and Wisconsin Department of Natural Resources.
- UW-Stevens Point Center for Watershed Science and Education, 2013. Waushara County Lake Study - Spring Lake 2010-2012 Mini-Report. Report to Waushara County and Wisconsin Department of Natural Resources. Planning Meeting Presentations
- Vallentyne, J.R., 1974. The Algal Bowl-Lakes and Man. Ottawa Department of the Environment.
- Wetzel, R.G., 2001. Limnology, Lake and River Ecosystems, Third Edition. Academic Press. San Diego, California.
- Wisconsin Department of Natural Resources, 2014. Elements by Townrange for Waushara County. The National Heritage Inventory. Wisconsin Department of Natural Resources.

## Appendices

## Appendix A: Waushara County Lakes Information Directory

### Algae - Blue-Green

Contact: Ted Johnson  
Wisconsin Department of Natural Resources  
Phone: 920-424-2104  
E-mail: [TedM.Johnson@wisconsin.gov](mailto:TedM.Johnson@wisconsin.gov)  
Website: <http://dnr.wi.gov/lakes/bluegreenalgae/>

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

### Aquatic Invasive Species/Clean Boats Clean Water

Contact: Golden Sands RC&D  
1100 Main St., Suite 150, Stevens Point, WI 54481  
Phone: 715-343-6215  
Websites: [www.goldensandsrccd.org](http://www.goldensandsrccd.org)  
<http://dnr.wi.gov/invasives/>

### Aquatic Plant Management (Native and Invasive)

Contact: Ted Johnson  
Wisconsin Department of Natural Resources  
Phone: 920-424-2104  
E-mail: [TedM.Johnson@wisconsin.gov](mailto:TedM.Johnson@wisconsin.gov)  
Website: <http://dnr.wi.gov/lakes/plants/>

### Aquatic Plant Identification

Contact: Golden Sands RC&D  
1100 Main St., Suite 150, Stevens Point, WI 54481  
Phone: 715-343-6215  
Website: [www.goldensandsrccd.org](http://www.goldensandsrccd.org)

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

Contact: Ted Johnson  
Wisconsin Department of Natural Resources  
Phone: 920-424-2104  
E-mail: [TedM.Johnson@wisconsin.gov](mailto:TedM.Johnson@wisconsin.gov)

### Aquatic Plant Surveys/Management

Contact: Ted Johnson  
Wisconsin Department of Natural Resources  
Phone: 920-424-2104  
E-mail: [TedM.Johnson@wisconsin.gov](mailto:TedM.Johnson@wisconsin.gov)  
Website: <http://dnr.wi.gov/lakes/plants/>

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

Contact: Ed Hernandez  
Waushara County Land Conservation Department  
PO Box 1109, Wautoma, WI 54982  
Phone: 920-787-0453  
E-mail: [lcdzoning.courthouse@co.waushara.wi.us](mailto:lcdzoning.courthouse@co.waushara.wi.us)  
Website: <http://www.co.waushara.wi.us/zoning.htm>

### Boat Landings, Signage, Permissions (County)

Contact: Scott Schuman  
Waushara County Parks  
PO Box 300, Wautoma, WI 54982  
Phone: 920-787-7037  
E-mail: [wcparks.parks@co.waushara.wi.us](mailto:wcparks.parks@co.waushara.wi.us)  
Website: <http://www.co.waushara.wi.us/parks.htm>

### Boat Landings (State)

Contact: Dave Bartz  
Wisconsin Department of Natural Resources  
Hwy 22N, Box 430, Montello, WI 53949  
Phone: 608-635-4989  
E-mail: [David.Bartz@wisconsin.gov](mailto:David.Bartz@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  
211 S. Paterson St., Suite 270, Madison, WI 53703  
Phone: 608-251-9131  
E-mail: [info@gatheringwaters.org](mailto:info@gatheringwaters.org)  
Website: <http://gatheringwaters.org/>

### **Conservation Easements (cont'd)**

Contact: Ted Johnson  
Wisconsin Department of Natural Resources  
Phone: 920-424-2104  
E-mail: [TedM.Johnson@wisconsin.gov](mailto:TedM.Johnson@wisconsin.gov)

Contact: Patrick Sorge  
Wisconsin Department of Natural Resources  
PO Box 4001, Eau Claire, WI 54702  
Phone: 715-839-3794  
E-mail: [Patrick.Sorge@wisconsin.gov](mailto:Patrick.Sorge@wisconsin.gov)

Contact: North Central Conservancy Trust  
PO Box 124, Stevens Point, WI 54481  
Phone: 715-344-1910  
E-mail: [info@ncctwi.org](mailto:info@ncctwi.org)  
Website: <http://www.ncctwi.org/>

Contact: NRCS Stevens Point Service Center  
1462 Strongs Ave., Stevens Point, WI 54481  
Phone: 715-346-1325

### **Critical Habitat and Sensitive Areas**

Contact: Ted Johnson  
Wisconsin Department of Natural Resources  
Phone: 920-424-2104  
E-mail: [TedM.Johnson@wisconsin.gov](mailto:TedM.Johnson@wisconsin.gov)  
Website: <http://dnr.wi.gov/lakes/criticalhabitat/>

### **Dams**

Contact: Joe Behlen  
Wisconsin Department of Natural Resources  
473 Griffith Ave., Wisconsin Rapids, WI 54494  
Phone: 715-421-9940  
E-mail: [joseph.behlen@wisconsin.gov](mailto:joseph.behlen@wisconsin.gov)  
Website: <http://dnr.wi.gov/org/water/wm/dsfm/dams/>

### **Fertilizers/Soil Testing**

Contact: Ken Williams  
Waushara County UW-Extension  
209 S St. Marie Street, PO Box 487, Wautoma, WI 54982  
Phone: 920-787-0416  
E-mail: [ken.williams@ces.uwex.edu](mailto:ken.williams@ces.uwex.edu)  
Website: <http://waushara.uwex.edu/agriculture/services>

### **Fisheries Biologist (management, habitat)**

Contact: Adam Nickel  
Wisconsin Department of Natural Resources  
427 Tower Drive  
Wautoma, WI 54982  
Phone: (920) 424-3059  
E-mail: [Adam.nickel@wisconsin.gov](mailto:Adam.nickel@wisconsin.gov)  
<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](mailto:Andrew.badje@wisconsin.gov)  
E-mail: [WFTS@wisconsin.gov](mailto:WFTS@wisconsin.gov)

### **Grants**

Contact: Ted Johnson  
Wisconsin Department of Natural Resources  
Phone: 920-424-2104  
E-mail: [TedM.Johnson@wisconsin.gov](mailto:TedM.Johnson@wisconsin.gov)  
Website: <http://dnr.wi.gov/Aid/Grants.html#tabx8>

Contact: Ed Hernandez  
Waushara County Land Conservation Department  
PO Box 1109, Wautoma, WI 54982  
Phone: 920-787-0453  
E-mail: [lcdzoning.courthouse@co.waushara.wi.us](mailto:lcdzoning.courthouse@co.waushara.wi.us)  
Website: <http://www.co.waushara.wi.us/zoning.htm>

### **Groundwater Quality**

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

### **Groundwater Levels/Quantity**

Contact: Ed Hernandez  
Waushara County Land Conservation Department  
Address: PO Box 1109 Wautoma, WI 54982  
Phone: 920-787-0453  
E-mail: [lcdzoning.courthouse@co.waushara.wi.us](mailto:lcdzoning.courthouse@co.waushara.wi.us)

### **Groundwater Levels/Quantity (cont'd)**

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

Contact: Scott Provost  
Wisconsin Department of Natural Resources  
473 Griffith Ave., Wisconsin Rapids, WI 54494  
Phone: 715-421-7881  
E-mail: [scott.provost@wisconsin.gov](mailto:scott.provost@wisconsin.gov)  
Website: [http://prodoasext.dnr.wi.gov/inter1/hicap\\$.st artup](http://prodoasext.dnr.wi.gov/inter1/hicap$.st artup)

### **Informational Packets**

Contact: UWSP Center for Watershed Science & Education  
TNR 224, 800 Reserve St. Stevens Point, WI 54481  
Phone: 715-346-2497  
E-mail: [pclakes@uwsp.edu](mailto:pclakes@uwsp.edu)

### **Lake Groups – Friends, Associations, Districts**

Contact: Patrick Nehring  
UWEX Economic Resource Development Agent  
PO Box 487, Wautoma, WI 54982  
Phone: 920-787-0416  
E-mail: [Patrick.nehring@ces.uwex.edu](mailto:Patrick.nehring@ces.uwex.edu)

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

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

### **Lake Groups (cont'd)**

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

### **Lake Levels**

See: Groundwater

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

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

### **Land Use Plans and Zoning Ordinances**

Contact: Terri Dopp-Paukstat  
Waushara County Planning and Zoning  
PO Box 1109, Wautoma, WI 54982  
Phone: 920-787-0453  
E-mail: [lcdzoning.courthouse@co.waushara.wi.us](mailto:lcdzoning.courthouse@co.waushara.wi.us)  
Website: <http://www.co.waushara.wi.us/zoning.htm>

### **Land Use Plans and Zoning Ordinances (cont'd)**

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

### **Nutrient Management Plans**

Contact: Ed Hernandez  
Waushara County Land Conservation Department  
PO Box 1109, Wautoma, WI 54982  
Phone: 920-787-0453  
E-mail: [lcdzoning.courthouse@co.waushara.wi.us](mailto:lcdzoning.courthouse@co.waushara.wi.us)  
Website: <http://www.co.waushara.wi.us/zoning.htm>

Contact: NRCS Stevens Point Service Center  
1462 Strongs Ave., Stevens Point, WI 54481  
Phone: 715-346-1325

## **Parks (County)**

Contact: Scott Schuman  
Waushara County Parks  
PO Box 300, Wautoma, WI 54982  
Phone: 920-787-7037  
E-mail: [wcparks.parks@co.waushara.wi.us](mailto:wcparks.parks@co.waushara.wi.us)  
Website: <http://www.co.waushara.wi.us/parks.htm>

## **Purchase of Development Rights**

Contact: North Central Conservancy Trust  
PO Box 124, Stevens Point, WI 54481  
Phone: 715-341-7741  
E-mail: [info@ncctwi.org](mailto:info@ncctwi.org)  
Website: <http://www.ncctwi.org/>

## **Purchase of Land**

Contact: Ted Johnson  
Wisconsin Department of Natural Resources  
Phone: 920-424-2104  
E-mail: [TedM.Johnson@wisconsin.gov](mailto:TedM.Johnson@wisconsin.gov)  
Website: <http://dnr.wi.gov/topic/stewardship/>

## **Rain Barrels – Order**

Contact: Golden Sands RC&D  
1100 Main St., Suite 150, Stevens Point, WI 54481  
Phone: 715-343-6215  
Website: <http://www.goldensandsrcd.org/store>

## **Rain Gardens and Stormwater Runoff**

Contact: Ed Hernandez  
Waushara County Land Conservation Department  
PO Box 1109, Wautoma, WI 54982  
Phone: 920-787-0453  
E-mail: [lcdzoning.courthouse@co.waushara.wi.us](mailto:lcdzoning.courthouse@co.waushara.wi.us)  
Website: <http://www.co.waushara.wi.us/zoning.htm>

## **Septic Systems/Onsite Waste**

Contact: Terri Dopp-Paukstat  
Waushara County Planning and Zoning  
PO Box 1109, Wautoma, WI 54982  
Phone: 920-787-0453  
E-mail: [lcdzoning.courthouse@co.waushara.wi.us](mailto:lcdzoning.courthouse@co.waushara.wi.us)  
Website: <http://www.co.waushara.wi.us/zoning.htm>

## **Shoreland Management**

Contact: Ed Hernandez  
Waushara County Land Conservation Department  
PO Box 1109, Wautoma, WI 54982  
Phone: 920-787-0453  
E-mail: [lcdzoning.courthouse@co.waushara.wi.us](mailto:lcdzoning.courthouse@co.waushara.wi.us)  
Website: <http://www.co.waushara.wi.us/zoning.htm>

## **Shoreland Vegetation**

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

## **Shoreland Zoning Ordinances**

See: Land Use Plans and Zoning Ordinances

## **Soil Fertility Testing**

Contact: Ken Williams  
Waushara County UW-Extension  
209 S. St. Marie Street, PO Box 487, Wautoma, WI 54982  
Phone: 920-787-0416  
E-mail: [Ken.williams@ces.uwex.edu](mailto:Ken.williams@ces.uwex.edu)  
Website: <http://waushara.uwex.edu/index.html>

## **Water Quality Monitoring**

Contact: Ted Johnson  
Wisconsin Department of Natural Resources  
Phone: 920-424-2104  
E-mail: [TedM.Johnson@wisconsin.gov](mailto:TedM.Johnson@wisconsin.gov)

Contact: UWSP Wisconsin Environmental Analysis Laboratory  
TNR 200, 800 Reserve St., Stevens Point, WI 54481  
Stevens Point, WI 54481  
Phone: 715-346-3209  
E-mail: [weal@uwsp.edu](mailto:weal@uwsp.edu)  
Website: <http://www.uwsp.edu/cnr-ap/weal/Pages/default.aspx>

## **Water Quality Problems**

Contact: Ted Johnson  
Wisconsin Department of Natural Resources  
Phone: 920-424-2104  
E-mail: [TedM.Johnson@wisconsin.gov](mailto:TedM.Johnson@wisconsin.gov)

Contact: Nancy Turyk  
UWSP Center for Watershed Science and Education  
TNR 216, 800 Reserve St., Stevens Point, WI 54481  
Phone: 715-346-4155

E-mail: [nturyk@uwsp.edu](mailto:nturyk@uwsp.edu)

## **Wetlands**

Contact: Scott Koehnke  
Wisconsin Department of Natural Resources  
647 Lakeland Road, Shawano, WI 54166  
Phone: 715-526-4232  
E-mail: [scott.koehnke@wisconsin.gov](mailto:scott.koehnke@wisconsin.gov)  
Website: <http://dnr.wi.gov/wetlands/>

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

## **Wetland Inventory**

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

## **Woody Habitat**

Contact: Dave Bartz  
Wisconsin Department of Natural Resources  
Phone: 608-635-4989  
Address: Hwy 22N Box 430, Montello, WI 53949  
E-mail: [David.Bartz@wisconsin.gov](mailto:David.Bartz@wisconsin.gov)

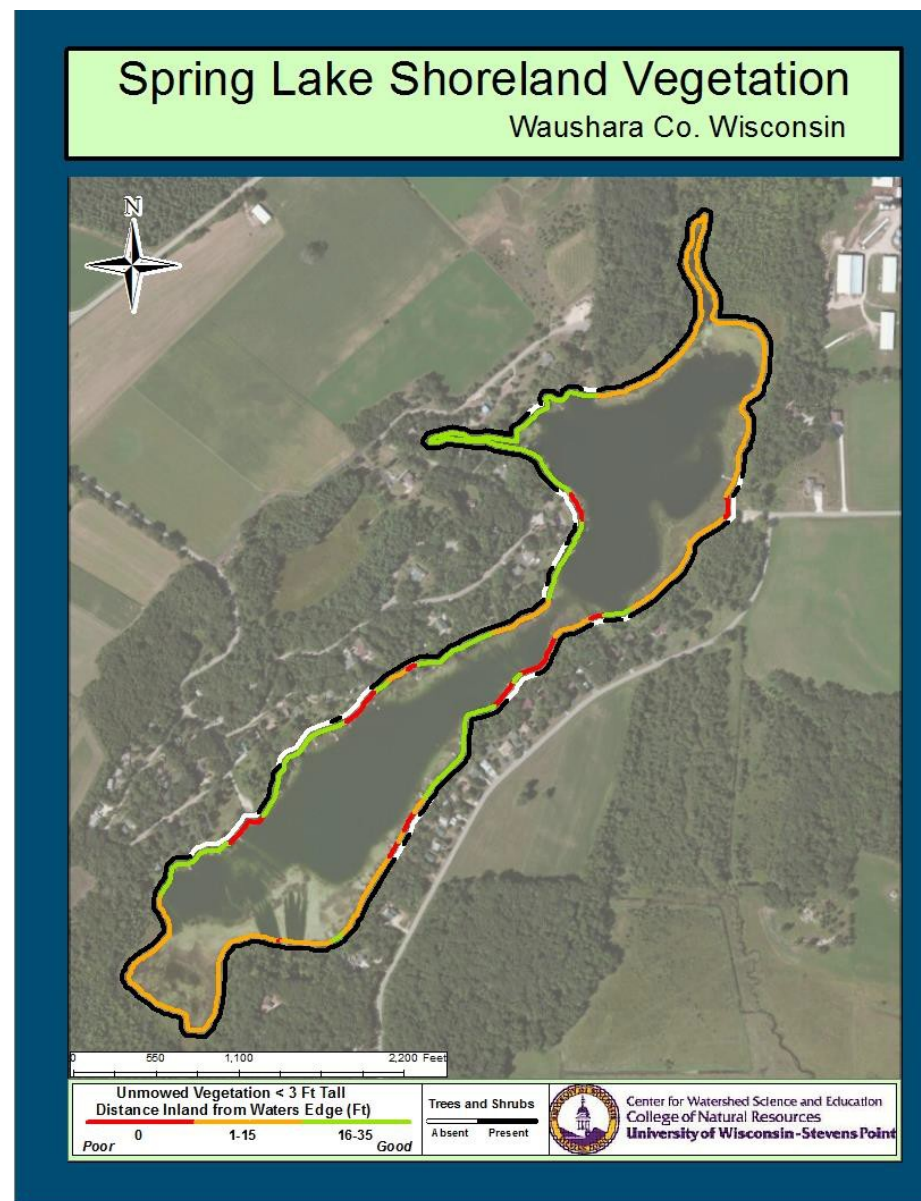
If you are looking for any information that is not listed in  
this directory, please contact:  
Ryan Haney ([wclakes@uwsp.edu](mailto:wclakes@uwsp.edu))  
UWSP Center for Watershed Science and Education  
TNR 224, 800 Reserve St., Stevens Point, WI 54481  
Phone: 715-346-2497



## Appendix B: Shoreland Survey – 2010

A scoring system was developed for the collected data to provide a more holistic assessment. Areas that are healthy will need strategies to keep them healthy, and areas with potential problem areas and where management and conservation may be warranted may need a different set of strategies for improvement. The scoring system is based on the presence/absence and abundance of shoreline features, as well as their proximity to the water's edge. Values were tallied for each shoreline category and then summed to produce an overall score. Higher scores denote a healthier shoreline with good land management practices. These are areas where protection and/or conservation should be targeted. On the other hand, lower scores signify an ecologically unhealthy shoreline. These are areas where management and/or mitigation practices may be desirable for improving water quality.

The summary of scores for shorelands around Spring Lake is displayed on the next page. The shorelands were color-coded to show their overall health based on natural and physical characteristics. Blue shorelands identify healthy shorelands with sufficient vegetation and few disturbances. Red shorelands indicate locations where changes in management or mitigation may be warranted. Large stretches of Spring Lake's shorelands are in good shape, but some portions have challenges that should be addressed. There were no stretches of Spring Lake shoreland that ranked as poor. For a more complete understanding of the ranking, an interactive map showing results of the shoreland surveys can be found on Waushara County's website at <http://gis.co.waushara.wi.us/ShorelineViewer/>.



# Waushara County

## Shoreline Assessment *SPRING LAKE*

M D&I :2011  
Al:1 D.i Apr11, 2010



**Summary**  
Shorelines are color-coded to show their overall health based on natural and physical characteristics. For example, shorelines shown in red indicate locations where management or mitigation may be warranted. Blue shorelines mark healthy riparian areas with natural vegetation and few human influences.

### Calculating Shoreline Scores

Scores are based on the presence/absence of:

+ Natural

- Structures, boathouses,

- Kiosk, i:11..-(d

- Structures



Map created by Dan McFarlane  
Center for Land Use Education

## Appendix C: Rapid Response Plan

### **SURVEY/MONITOR**

<b>1. Learn how to survey/monitor the lake.</b>	<b>Contacts:</b>  <b>Water Resource Management Specialist</b> Wisconsin Department of Natural Resources Phone: 920-424-2104 E-Mail: <a href="mailto:TedM.Johnson@wisconsin.gov">TedM.Johnson@wisconsin.gov</a>  <b>Regional Aquatic Invasive Species (AIS) Coordinator</b> Golden Sands RC&D 1100 Main St., Suite #150 Stevens Point, WI 54481 Phone: 715-343-6278 E-Mail: <a href="mailto:info@goldensandsrccd.org">info@goldensandsrccd.org</a>
<b>2. Survey/monitor the lake monthly/seasonally/annually.</b>	If you find a suspected invasive species, report it as soon as possible using the procedure below.

### **REPORTING A SUSPECTED INVASIVE SPECIES**

<b>1. Collect specimens or take photos.</b>  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.  <b>-OR-</b>  Collect a fresh sample. Enclose in a plastic bag with a moist paper towel and refrigerate.  <b>-OR-</b>  Take detailed photos (digital or film).
<b>2. Note the location where the specimen was found.</b>  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 <a href="http://TopoZone.com">TopoZone.com</a> 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: <ul style="list-style-type: none"><li>• Latitude &amp; Longitude</li><li>• UTM (Universal Transverse Mercator) coordinates</li><li>• County, Township, Range, Section, Part-section</li><li>• Precise written site description, noting nearest city &amp; road names, landmarks, local topography</li></ul>



<p><b>3. Gather information to aid in positive species identification.</b></p>	<ul style="list-style-type: none"> <li>• Collection date and county</li> <li>• Your name, address, phone, email</li> <li>• Exact location (Latitude/Longitude or UTM preferred, or Township/Range/Section)</li> <li>• Plant name (common or scientific)</li> <li>• Land ownership (if known)</li> <li>• Population description (estimated number of plants and area covered)</li> <li>• Habitat type(s) where found (forest, field, prairie, wetland, open water)</li> </ul>
<p><b>4. Mail or bring specimens and information to any of the following locations:</b></p> <p>Digital photos may be emailed.</p>	<p><b>Wisconsin Dept. Natural Resources</b>  427 E. Tower Drive, Suite 100  Wautoma, WI 54982  Phone: (920) 787-4686</p> <p><b>Regional AIS Coordinator</b>  Golden Sands RC&amp;D  1100 Main St., Suite #150  Stevens Point, WI 54481  Phone: 715-343-6214  E-Mail : <a href="mailto:info@goldensandsrca.org">info@goldensandsrca.org</a></p> <p><b>UW-Stevens Point Herbarium</b>  301 Trainer Natural Resources Building  800 Reserve Street  Stevens Point, WI 54481  Phone: 715-346-4248  E-Mail: <a href="mailto:ejudziew@uwsp.edu">ejudziew@uwsp.edu</a></p> <p><b>Wisconsin Invasive Plants Reporting &amp; Prevention Project</b>  Herbarium-UW-Madison  430 Lincoln Drive  Madison, WI 53706  Phone: (608) 267-7612  E-Mail: <a href="mailto:invasiveplants@mailplus.wisc.edu">invasiveplants@mailplus.wisc.edu</a></p>
<p><b>5. Once the specimen is dropped off or sent for positive identification, be sure to contact:</b></p>	<p><b>Regional AIS Coordinator</b>  Golden Sands RC&amp;D  1100 Main St., Suite #150  Stevens Point, WI 54481  Phone: 715-343-6214  E-Mail : <a href="mailto:info@goldensandsrca.org">info@goldensandsrca.org</a></p>

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

- **Wisconsin Department of Natural Resources**  
427 E. Tower Drive, Suite 100  
Wautoma, WI 54982  
Phone: (920) 787-4686

**The town board(s)** in which the water body is located

Town of: Marion

- **The Lake District** in which the waterbody is located.  
Spring Lake Management District  
Contact: Marty Wilke, Chair  
Phone: 920-566-4605
- **University of Wisconsin-Stevens Point**  
Water Resource Scientist  
Nancy Turyk  
Trainer Natural Resources Building  
800 Reserve Street  
Stevens Point, WI 54481 Telephone: 715-346-4155  
E-mail: [nturyk@uwsp.edu](mailto:nturyk@uwsp.edu)

- **Local Residents**
- **Spring Lake Management District**

**If an invasive species is confirmed the secretary of the Spring Lake Management District will make the following public information contacts:**

- **Newspapers:** The Argus, The Resorter

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

## **Appendix D: Aquatic Plant Management Plan 2015**

## **Appendix E: Lake User Survey Results**