# Mission Lake

## Eastern Marathon County Lake Study

## Final Study Results 2013

University of Wisconsin-Stevens Point
and
Marathon County Staff and Citizens

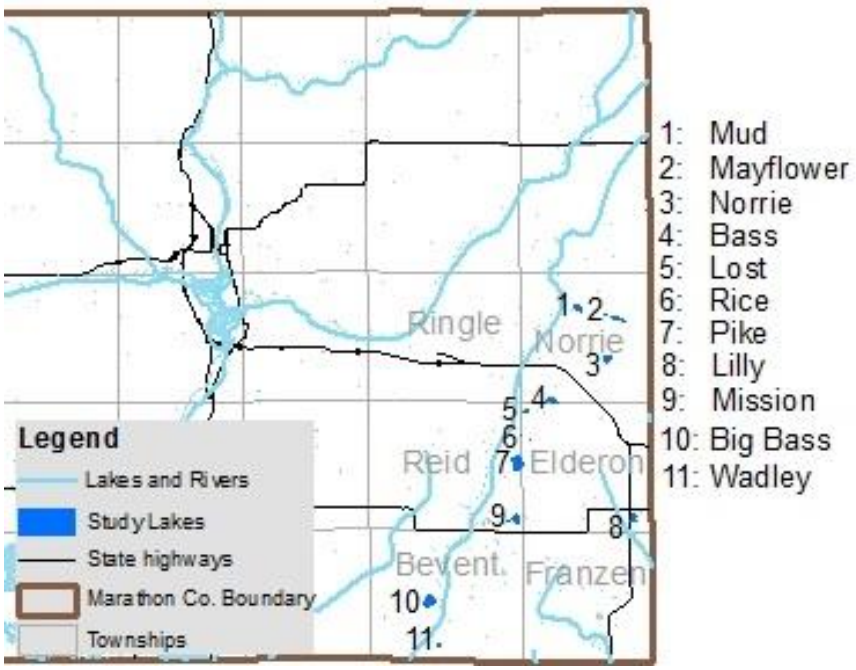
Healthy lakes add value to a community. They provide a place to relax and recreate, and can stimulate tourism. Like any infrastructure, lakes require attention and good management practices to remain healthy in developed watersheds.

The purpose of this study is to learn about the current conditions of the fishery, habitat, and aquatic ecosystems in order to help people make informed decisions to preserve what's good and correct any problems that exist.

**To protect**

**the lake** we must protect the "watershed," the land that drains or sheds its water into the lake.

# Mission Lake – Location




**Mission Lake**

**Township of Reid**

Northeast of Bevent

**Surface Area:** 108.8 acres

**Maximum Depth:** 26.9 feet

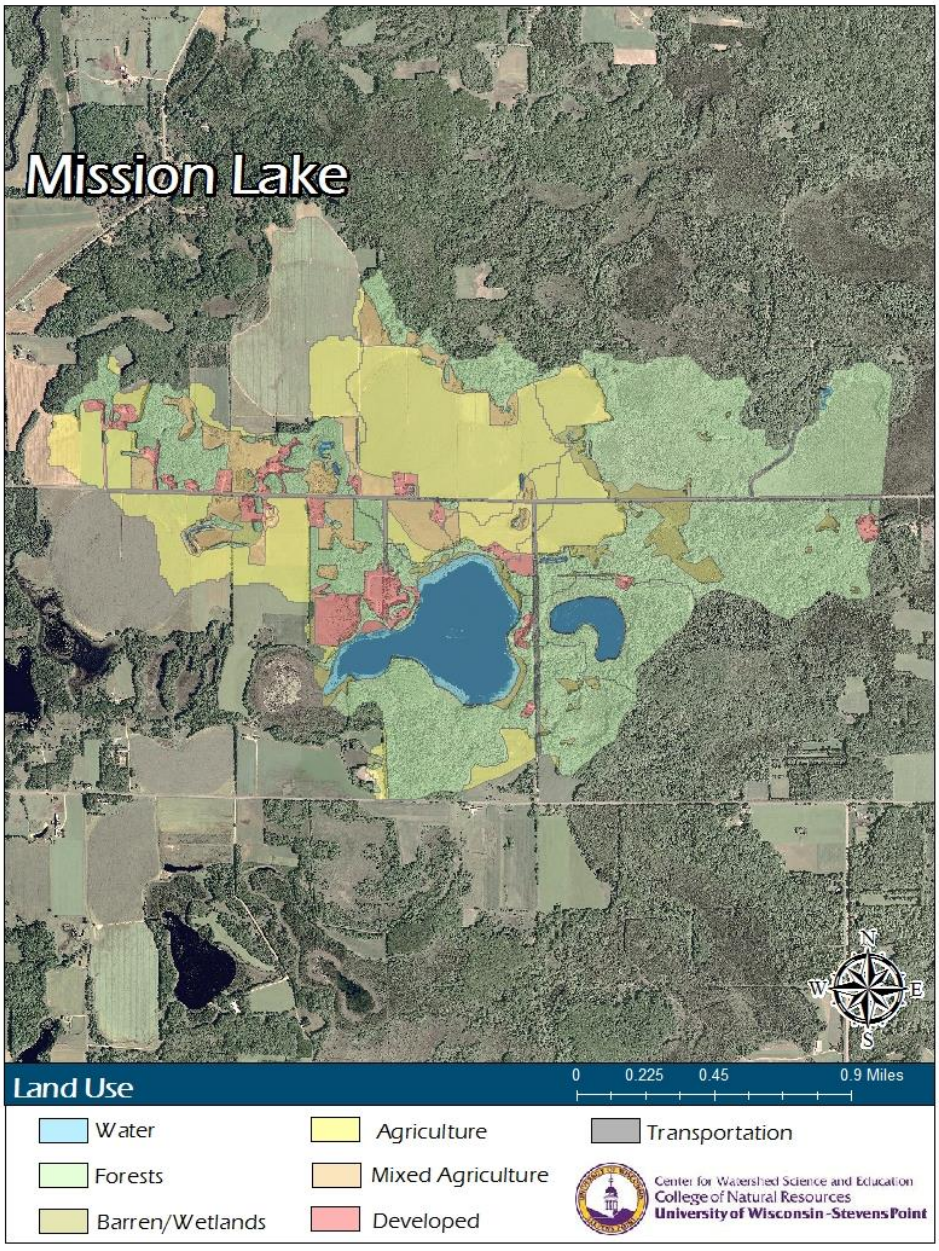
Mission Lake, Marathon Co.

## Water Flow

- Mission Lake is a seepage lake with most of the water entering the lake from groundwater.
- Surface water runoff and direct precipitation also contribute water, but to lesser extents.
- Water exits Mission Lake through groundwater.

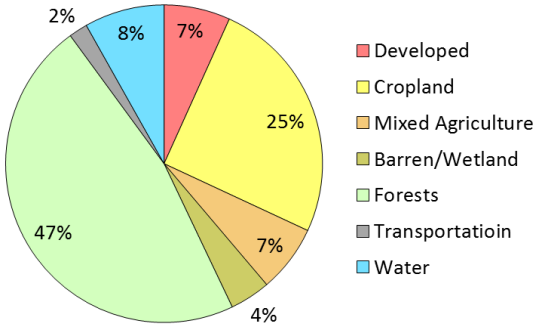
# Mission Lake – Surface Watershed

**Surface Watershed:** The area where water runs off the surface of the land and drains toward the lake.




- **Land uses** and land management practices occurring in the watershed affect the water quality in the lake.
- Land uses and land management also play major roles in how water moves across the landscape and how much water soaks into the ground (for long-term storage) or quickly runs off the land.
- The surface watershed of Mission Lake is 1,592 acres.
- The primary land uses in the Mission Lake watershed are agriculture and forests.
- Residential development is scattered throughout the watershed and is adjacent to part of the lake. In general, the land closest to the lake has the greatest immediate impact on water quality.
- Primary land uses adjacent to Mission Lake are wetlands, forests and recreation.

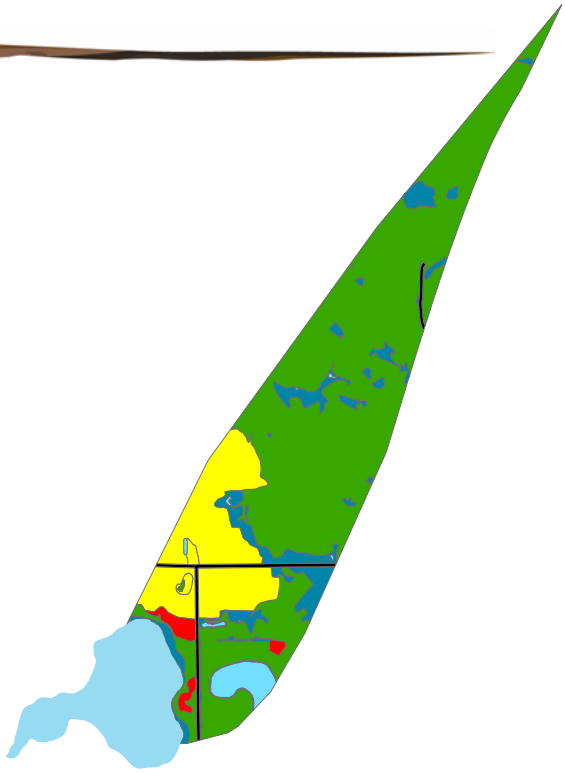
**Land Use in the Mission Lake Watershed**



# Mission Lake – Groundwater Watershed

**Groundwater Watershed:** The area where water soaks into the ground and travels below ground towards the lake.

- **Groundwater** slowly contributes water to our lakes throughout the year. Hard surfaces on the landscape prevent water from soaking into the ground and becoming groundwater. This results in less water flowing to the lake during the winter and between rains.
- The quality of groundwater reflects what is happening on the land surface. Precipitation falling on forested land produces clean groundwater, whereas precipitation falling on lands that have chemical use can leach contaminants to groundwater. Groundwater contamination in central Wisconsin may include nitrogen, pesticides, herbicides and other soluble chemicals originating from septic systems, crops, barnyards, road maintenance, etc. Once in the groundwater, these chemicals slowly move towards a lake or river.
- The groundwater watershed for Mission Lake is 368 acres.
- The primary land uses in the Mission Lake groundwater watershed are agriculture and forests.
- In general, the lands adjacent to the lake where groundwater is entering have the greatest immediate impact on water quality. Wetlands and forest are adjacent to Mission Lake where most of the groundwater enters.
- Mission Lake has residential development around some of its perimeter, also impacting water quality in Mission Lake.



| Land Use | Acres |
|---|---|
| Agriculture | 84 |
| Developed | 14 |
| Forested | 241 |
| Roads | 5 |
| Water | 19 |
| Wetland | 5 |

## *Looking at Groundwater Up Close:*

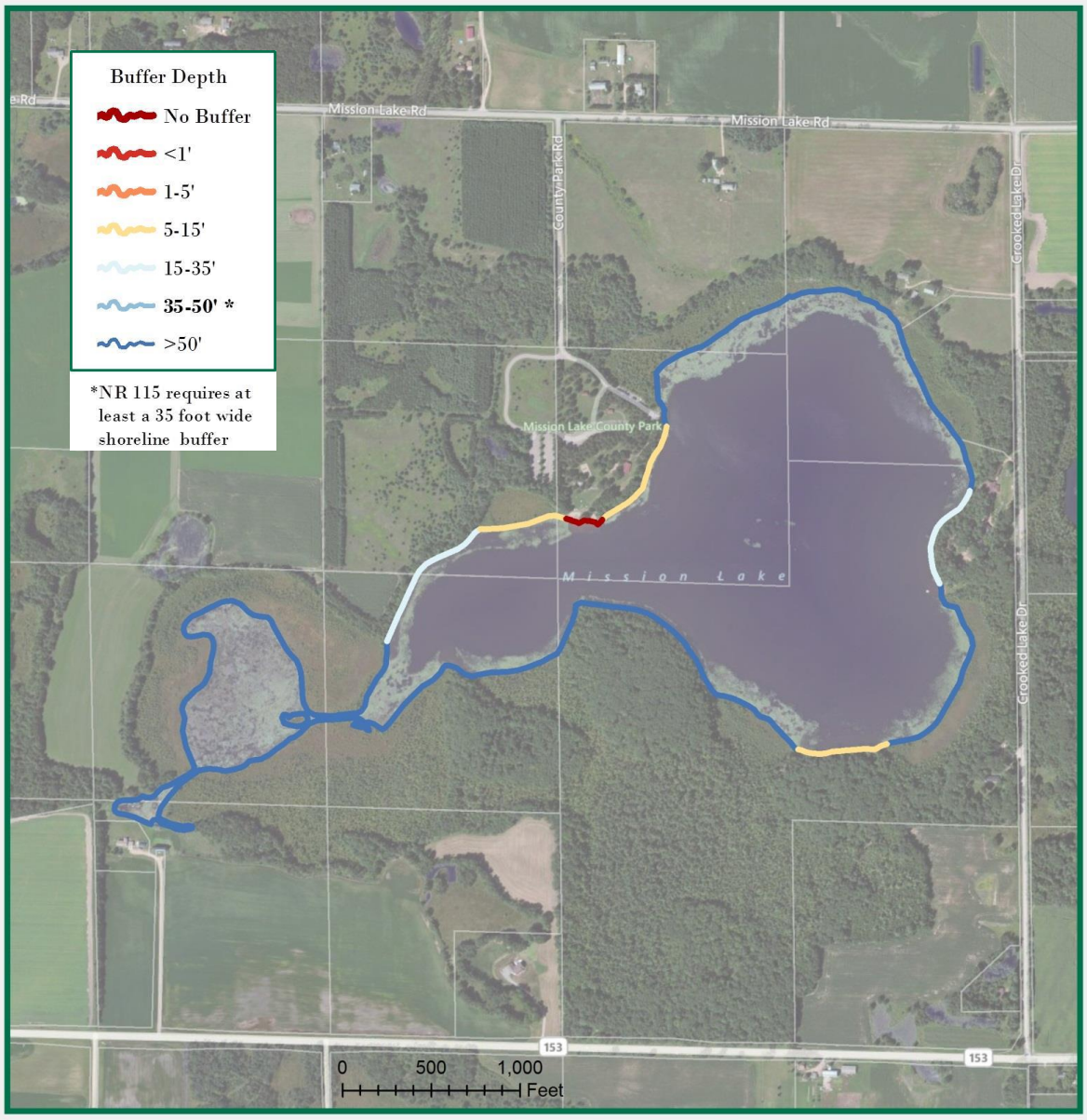
**Groundwater enters Mission Lake from the northeast.**

**There were no groundwater connections identified at the sites sampled during the groundwater survey.**

# Mission Lake – Shoreland Vegetation

**Shoreland vegetation** is critical to a healthy lake's ecosystem. It provides habitat for 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.

The map below shows how far the 0.5 to 3 foot tall vegetation exists landward from the edge of Mission Lake. A greater vegetative buffer provides more habitat and better water quality.



# Mission Lake – Lake Map

Mission Lake's shape and depth play large roles in determining:

- Where aquatic plants can and cannot grow
- Species of fish and where they live
- How fast water in the lake warms up and cools down
- The water quality of the lake
- Abundance of habitat for species living in the water and on the land

MARATHON COUNTY, WISCONSIN

University of Wisconsin-Stevens Point
Center for Watershed Science and Education,
College of Natural Resources, and the GIS
Center, College of Letters and Science.

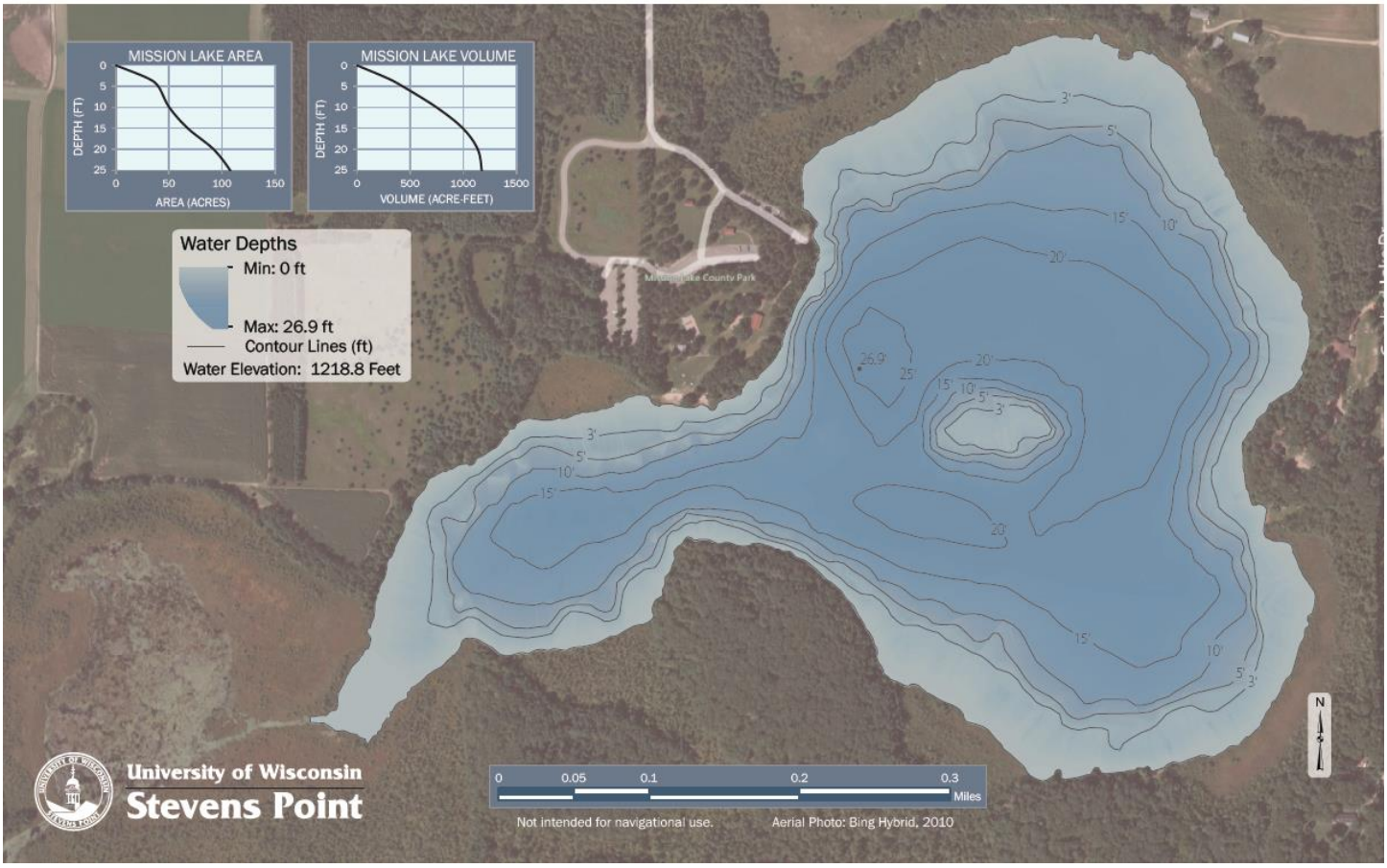
Map Cartography by Christine Koeller

## MISSION LAKE
### BATHYMETRIC MAP

Map funded by the Wisconsin
Department of Natural Resources Lake
Planning Grant Program, Marathon County,
Marathon County citizens, and
lake and fishing groups.

| | | |
|---|---|---|
| LAKE AREA | 108.8 | Acres |
| Under 3 Feet | 29.42 | Acres (27%) |
| Over 20 Feet | 16.8 | Acres (15.5%) |
| VOLUME | 1174 | Acre-feet |
| SHORELINE | 2.3 | Miles |
| MAX DEPTH | 26.9 | Feet |

GPS and Sonar Survey October, 2012



# Mission Lake – Fishery

Many factors determine which fish species thrive in a lake. Physical factors include the lake's type, depth, surface area, geology and lake bed materials. Water quality in the lake also plays a role: water clouded with sediment or algae reduces the success of visual feeders, while low levels of dissolved oxygen will limit the fish population to those that can tolerate periods with low oxygen.

**Total catch and length of species in Mission Lake, 2012 fyke net and seining surveys**

| Species | Min Length (in) | Max Length (in) | Average Length (in) | Total Catch |
|---|---|---|---|---|
| Bluegill | 0.8 | 7.0 | 4.4 | 566 |
| Yellow Perch | 3.0 | 8.1 | 5.1 | 184 |
| Black Crappie | 1.2 | 13.5 | 8.3 | 129 |
| Pumpkinseed | 4.1 | 4.1 | 4.1 | 44 |
| Blackchin Shiner | 0.9 | 1.7 | 1.3 | 35 |
| Green Sunfish | 1.9 | 7.0 | 5.0 | 27 |
| Golden Shiner | 1.5 | 7.7 | 4.0 | 13 |
| Iowa Darter | 1.5 | 2.4 | 1.9 | 12 |
| Warmouth | 4.5 | 7.4 | 6.4 | 11 |
| Least Darter | 0.9 | 1.2 | 1.1 | 8 |
| Largemouth Bass | 14.6 | 18.2 | 15.8 | 7 |
| Yellow Bullhead | 6.7 | 10.2 | 9.1 | 7 |
| Blacknose Shiner | 1.0 | 2.0 | 1.5 | 3 |
| Northern Pike | 13.1 | 26.4 | 18.7 | 3 |
| Johnny Darter | 2.1 | 2.1 | 2.1 | 2 |
| Muskellunge | 11.7 | 33.3 | 22.5 | 2 |
| White Sucker | 6.9 | 16.2 | 11.6 | 2 |
| Bluegill x Pumpkinseed hybrid | 7.2 | 7.2 | 7.2 | 1 |
| Common Shiner | 1.5 | 1.5 | 1.5 | 1 |

**Total catch and length of species in Mission Lake, 2012 boom shocking survey**

| Species | Min Length (in) | Max Length (in) | Average Length (in) | Total Catch |
|---|---|---|---|---|
| Bluegill | 1.1 | 16.5 | 4.8 | 151 |
| Pumpkinseed | 3.8 | 8 | 5.8 | 41 |
| Black Crappie | 3.3 | 13.6 | 7.8 | 36 |
| Golden shiner | 3.2 | 7.4 | 5.0 | 24 |
| Largemouth Bass | 4.1 | 15.4 | 9.7 | 21 |
| Warmouth | 5 | 6.8 | 5.7 | 10 |
| Yellow Perch | 4.4 | 6.2 | 5.2 | 8 |
| Northern Pike | 14.8 | 30 | 20.9 | 5 |
| Muskellunge | 30.1 | 30.1 | 30.1 | 1 |
| Yellow Bullhead | 9 | 9 | 9.0 | 1 |
| Mudminnow | 1.7 | 1.7 | 1.7 | 1 |

- Mission Lake supports a warm water fish community.
- Six species were documented for the first time in 2012: blackchin shiner, blacknose shiner, bluegill x pumpkinseed hybrid, green sunfish, least darter and warmouth.
- The presence of young bass and abundant sunfish indicates successful reproduction is occurring.
- Five rusty crayfish (invasive/exotic) were also captured during the sampling period.

# Mission Lake – Fishery

Historic records from the Wisconsin Department of Natural Resources have documented previous management efforts on Mission Lake (also known as Crooked Lake):

- Fish stocking records for Mission Lake date back to 1938. Prior to 1960, efforts were focused largely on stocking northern pike. After 1960, muskellunge fingerlings have been the prevalent focus of stocking in the system.
- A 1971-1972 fisheries report indicated panfish, particularly black crappie, were stunted.
- In 2004, the Wisconsin DNR identified sensitive areas along Mission Lake's shoreline that were valuable and worth protecting, including the naturally forested and vegetated areas. Trees and vegetation will protect water quality and prevent shoreline erosion.

**Species occurrence in Mission Lake in the 2012 surveys and historical Wisconsin DNR records**

| Species | 1950 | 1961 | 1967 | 1971 | 1983 | 1985 | 2003 | 2004 | 2012 |
|---|---|---|---|---|---|---|---|---|---|
| Black Crappie | x | x | x | x | x | x | x | x | x |
| Blackchin Shiner | | | | | | | | | x |
| Blacknose Shiner | | | | | | | | | x |
| Bluegill | x | x | x | x | x | x | x | x | x |
| Bluegill x Pumpkinseed hybrid | | | | | | | | | x |
| Bullhead | x | x | x | | x | x | | | |
| Common Shiner | | | | x | | | | | x |
| Emerald Shiner | | | | x | | | | | |
| Green Sunfish | | | | | | | | | x |
| Golden Shiner | | | | x | | | | | x |
| Iowa Darter | | | | | | | x | | x |
| Johnny Darter | | | | x | | | | | x |
| Least Darter | | | | | | | | | x |
| Largemouth Bass | x | x | x | x | x | x | x | x | x |
| Central Mudminnow | | | | x | | | x | | x |
| Muskellunge | | | x | x | x | x | x | x | x |
| Northern Pike | x | x | x | x | | x | | x | x |
| Pumpkinseed | x | x | x | x | x | x | x | x | x |
| Walleye | | | | | x | x | | | |
| Warmouth | | | | | | | | | x |
| White Sucker | | x | | x | | x | x | | x |
| Yellow Bullhead | | | | | | | | x | x |
| Yellow Perch | | | x | x | x | x | x | x | x |

# Mission Lake – Fishery

Habitat in and near the lake plays a major role in the composition of a fish community. Habitat is a combination of aquatic plants, woody structure, and lake substrate. Near the shore is found some of the most important fishery habitat.

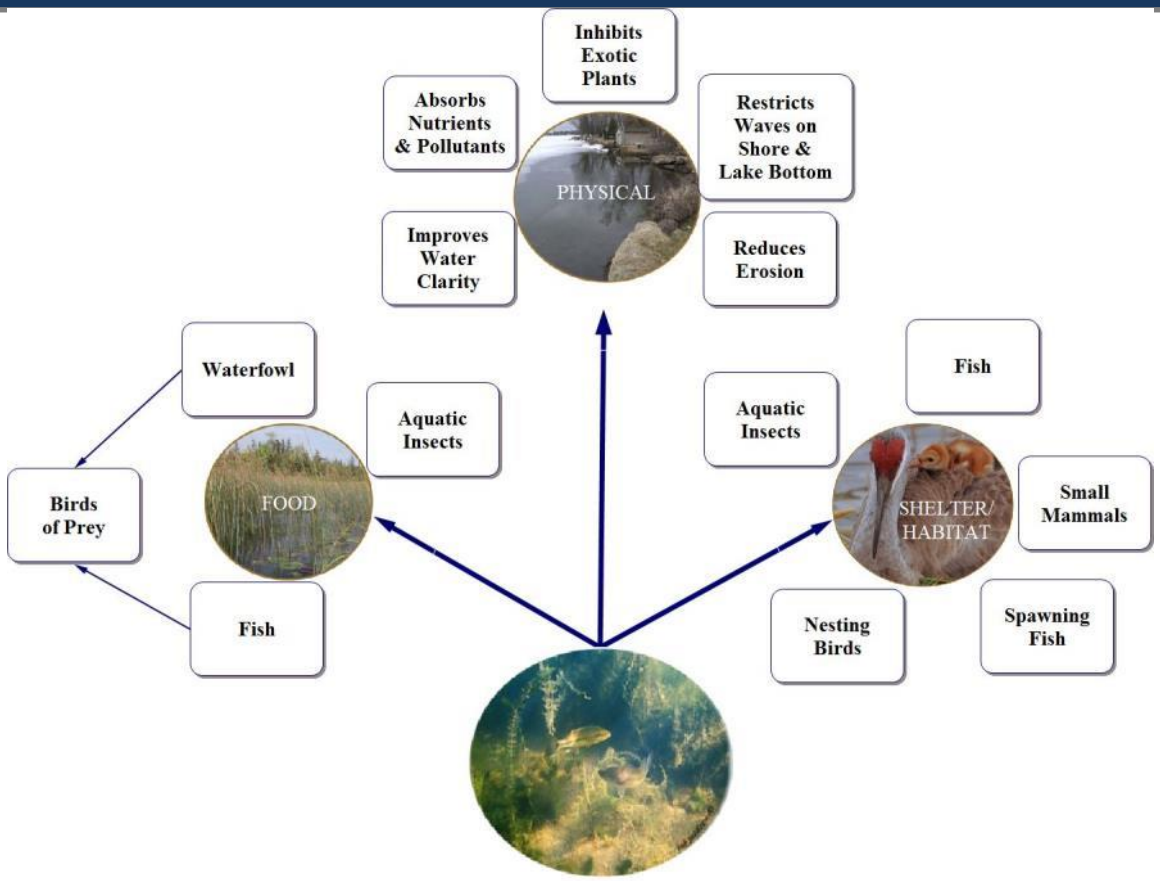
**Coarse woody habitat (CWH)** is an important component of a healthy and balanced fishery, playing a key role in the life histories of many fish species. Downed trees, logs and branches along with aquatic plants offer refuge from predators, a sheltered substrate for spawning, nurseries for young, and feeding grounds to forage for insects and algae. CWH is very important to other animals that live in or visit a lake including turtles, frogs, birds and mammals.

Coarse woody habitat (CWH) is present in Mission Lake – the fish community would benefit from the addition of CWH in areas where it is sparse.


- Northern pike use areas with emergent and floating-leaf vegetation in shallow or flooded areas for spawning. Sampling indicates that successful reproduction of northern pike may be occurring, although more intense population sampling over several seasons would be required to determine reproductive success.
- Black crappie use bulrush habitat on gravel or sand substrates where they construct nests and guard young. Bulrush is present near the outlet of Mission Lake.
- Gravel areas are used as spawning habitat for many fish, including bluegill, pumpkinseed and black bass.
- Yellow perch and walleye prefer near-shore cobble in oxygen-rich environments for spawning activity.
- In the absence of sand and coarser substrates such as gravel, largemouth bass and sunfish may build nests on softer substrates. Depressions are deepened until small amounts of coarser substrate, mostly fragments of snail shells, accumulate in the bottom of the nests.
- In areas of soft substrate, largemouth bass are also reported to nest on woody habitat swept clear of sediments.

# Mission Lake – Aquatic Plants

**Aquatic plants** are the forest landscape within a lake. They provide food for creatures including fish, ducks and turtles, and habitat for fish, invertebrates and other aquatic animals. They create oxygen in the water and utilize nutrients that would otherwise be used by algae. A healthy lake typically has a variety of aquatic plant species creating diversity that can help to prevent the establishment of aquatic invasive species.



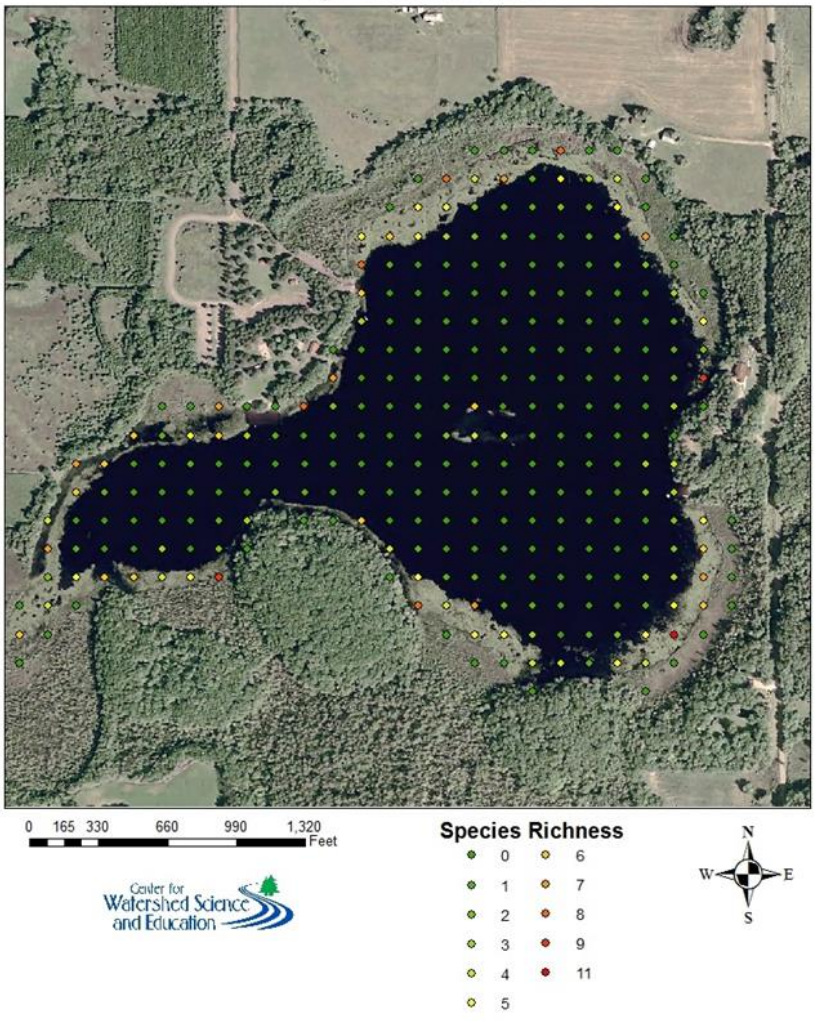

- The aquatic plant community in Mission Lake is characterized by an above average diversity when compared to other lakes in the Marathon County study. Thirty-one species of aquatic plants were identified in the 2012 aquatic plant survey of the lake, with greatest species richness found along the shorelines.
- Eurasian water milfoil was the only undesirable species in Mission Lake, and was found in a sparse patch at one location. The lake should continue to be monitored for new infestations of Eurasian water milfoil.
- The native aquatic plant community should be protected to maintain species diversity and to discourage the spread of aquatic invasive species such as Eurasian water milfoil.

# Mission Lake – Aquatic Plants

- During the 2012 aquatic plant survey of Mission Lake, 36 percent of the sample sites had vegetation.
- The average depth of sampled sites was 10 feet, with a maximum rooting depth of 16 feet.
- The three most frequently occurring species were slender naiad, white water lily and muskgrass (*Chara* spp.).

**Species Richness** is a count of the number of plant species found at a survey point. A greater number of species in a lake helps to make the aquatic plant community more resilient to year-to-year changes and aquatic invasive species. More plant species means more diverse habitat and available food sources.

Mission Lake 2012 Aquatic Plant Survey:
Species Richness





The leaves, roots and seeds of the **white water lily** are a food source for wildlife including beaver, muskrat and ducks. The leaves provide shelter and habitat for fish and invertebrates, and shade to cool the water.

**Chara** is a form of algae which resembles higher plants. It often grows in low, dense mats and is identified by its musky odor and rough texture. The water is often clear where Chara grows densely because of its ability to filter nutrients from water.

# Mission Lake – Aquatic Invasive Species

**Aquatic Invasive Species** are non-native plants or animals that may cause significant harm to a lake's ecosystem. Typically, they are introduced to a lake by hitching a ride on clothing, boats, trailers and other water recreation equipment. Aquatic invasive species are can be introduced to a lake accidentally or intentionally. Once in a lake, they may be impossible to completely remove and can be difficult and costly to control. Prevention and early detection are the best ways to keep aquatic invasive species from establishing in a lake.

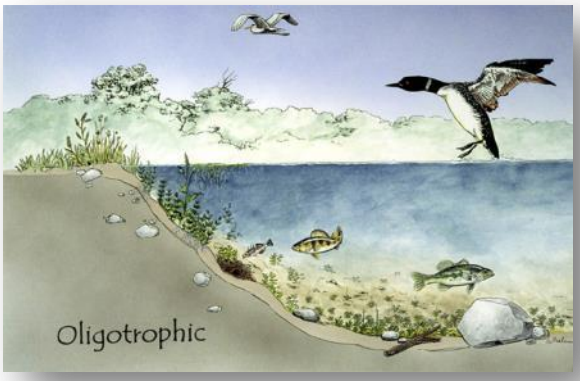
**Lakes With Aquatic Invasive Species in Marathon and Northern Portage County, 2012**

| Lake Name | Banded Mystery Snail | Chinese Mystery Snail | Rusty Crayfish | Curly-Leaf Pondweed | Eurasian Water Milfoil | Purple Loosestrife |
|---|---|---|---|---|---|---|
| *Marathon County (Shaded lakes are part of Eastern Marathon Co. Lake Study)* | | | | | | |
| **Big Bass Lake** | ✓ | | | | | |
| Big Rib River | | | ✓ | | ✓ | |
| Eau Claire Flowage | | ✓ | | | ✓ | |
| Flume Creek | | | ✓ | | | |
| Johnson Creek | | | ✓ | | | |
| Lake Wausau | | | | ✓ | | |
| Little Rib River | | | ✓ | | | |
| Little Trappe River | | | ✓ | | | |
| **Lost Lake** | | ✓ | | | | |
| **Mayflower Lake** | | ✓ | | ✓ | | |
| **Mission Lake** | ✓ | | | | ✓ | ✓ |
| **Pike Lake** | ✓ | | | ✓ | | |
| **Rice Lake** | ✓ | ✓ | | ✓ | | |
| South Branch Embarrass River | | | ✓ | | | |
| Spring Brook | | | ✓ | | | |
| Trappe River | | | ✓ | | | |
| **Wadley Lake** | ✓ | ✓ | | ✓ | ✓ | |
| Wausau Dam Lake | | | | | ✓ | |
| Wisconsin River | | | ✓ | | ✓ | |
| *Northern Portage County* | | | | | | |
| Tree Lake | ✓ | ✓ | | ✓ | | |
| Plover River | | | ✓ | | | |
| Lake Du Bay | | ✓ | ✓ | ✓ | ✓ | |

**Learn to identify invasive species & look for them in your lake!**

# Mission Lake – Water Quality

Lakes go through a natural aging process that results in increased aquatic plant growth, fish and wildlife over time. Within a lake's watershed, human activity on the land, in a wetland, or in the lake can dramatically accelerate this process. Depending on land management practices, changes in a lake that may have normally taken centuries to occur may take place in decades or even years. The amounts of nutrients, algal growth, and water clarity measures help to define the age of a lake. Based on these measures, lakes can be classified for comparison to one another.



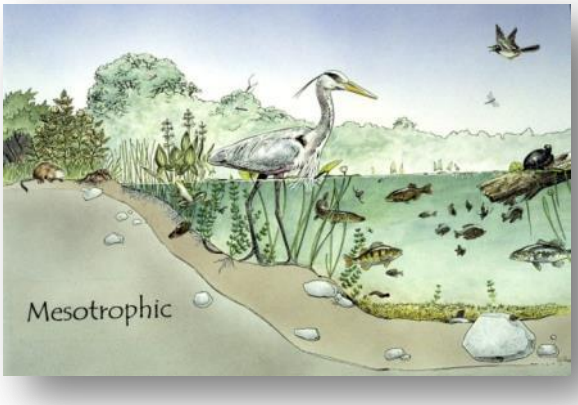

**Oligotrophic Lakes**

*Common uses*:

- ✓ Swimming
- ✓ Skiing
- ✓ Boating

*Vegetation of oligotrophic lakes*:

- ✓ Very little vegetation



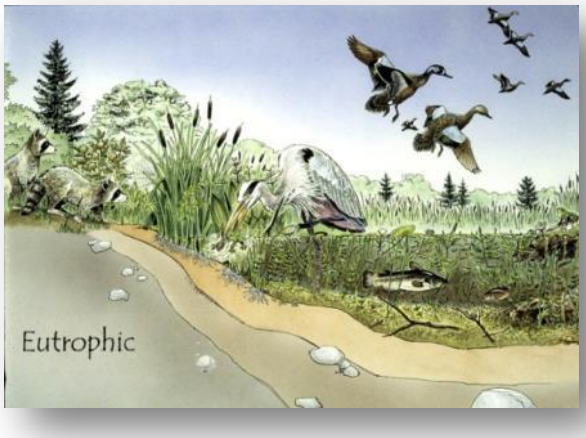

**Mesotrophic Lakes**

*Common uses*:

- ✓ Boating
- ✓ Fishing

*Vegetation of mesotrophic lakes*:

- ✓ Increased vegetation
- ✓ Occasional algal blooms




**Eutrophic Lakes**

*Common uses*:

- ✓ Fishing
- ✓ Wildlife watching

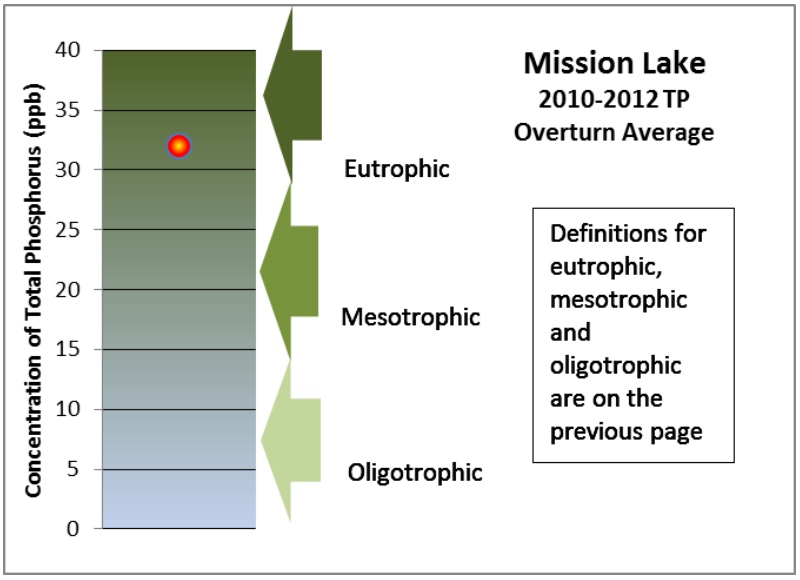
*Vegetation of eutrophic lakes*:

- ✓ Lots of aquatic plants
- ✓ Frequent algal blooms

*Winter fish kills can occur in shallow lakes due to low oxygen levels.*

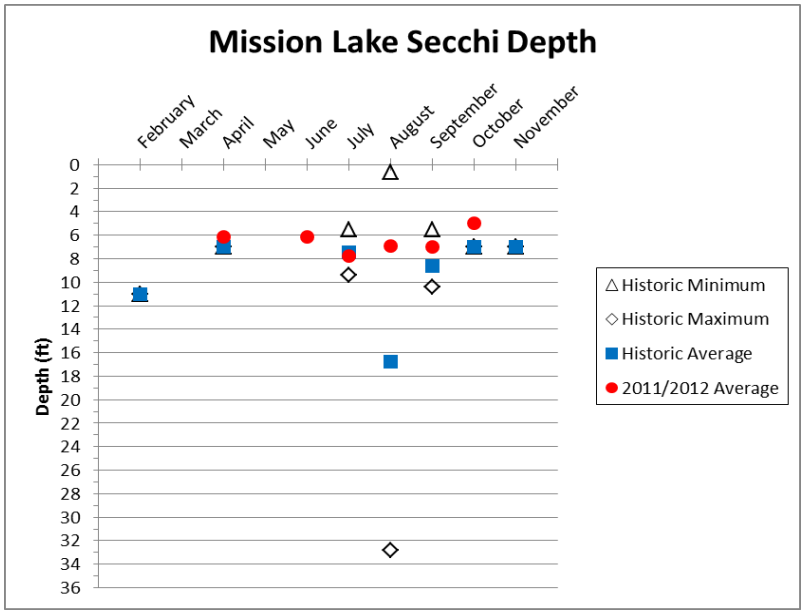
# Mission Lake – Water Quality

**Phosphorus** is a major nutrient that can lead to excessive algae and rooted aquatic plant growth in lakes. In fact, one pound of phosphorus entering a lake can result 300 to 500 pounds of algal growth. All Marathon County lakes have either sufficient or excessive nutrients for aquatic plant growth, so these lakes will benefit from limiting the addition of more nutrients. Sources of phosphorus include septic systems, animal waste, storm water runoff, soil erosion, and fertilizers for lawns, gardens and agriculture.




- Total phosphorus levels measured when Mission Lake was well-mixed (overturn) are displayed in the graph to the left.
- Overturn sampling during the 2010-2012 monitoring period indicated that Mission Lake is a eutrophic lake with a high average total phosphorus level.

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



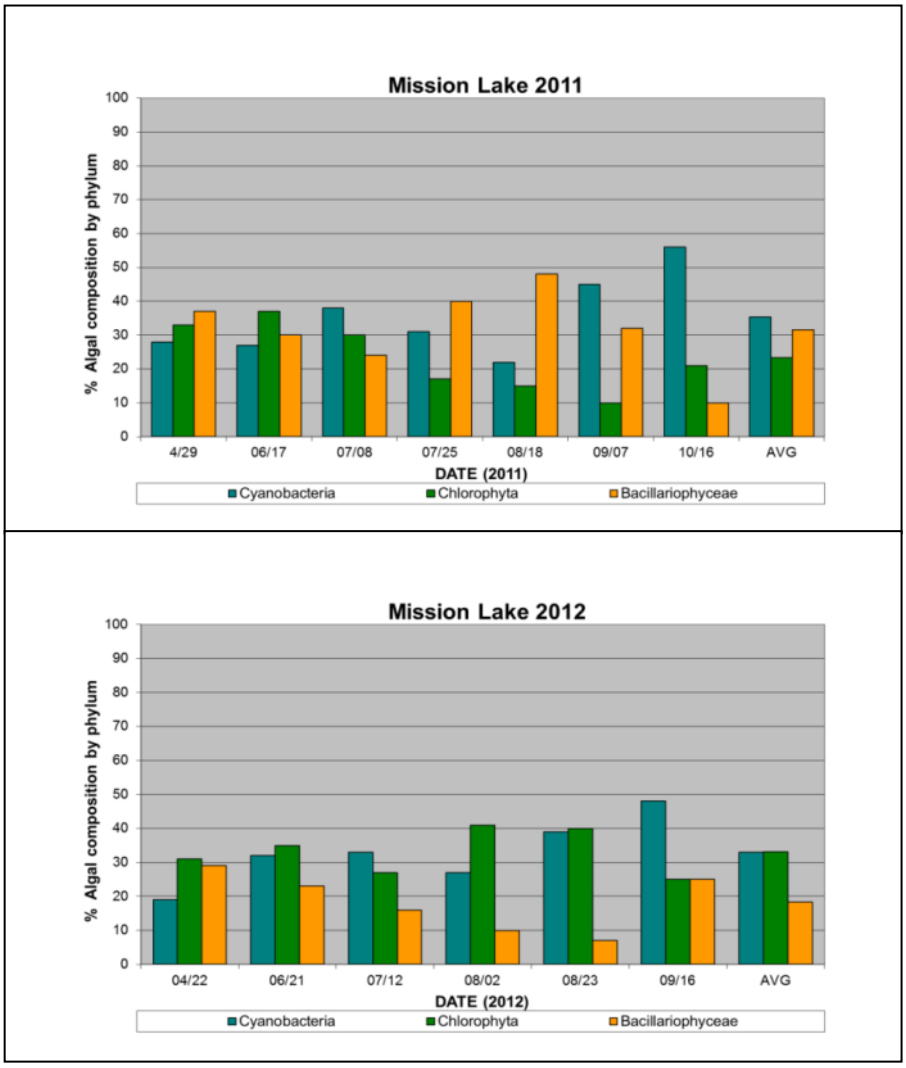

- The graph to the left shows water clarity data collected during the growing seasons in 2011 and 2012. It is typical for water clarity to vary throughout the year.
- The 2011/2012 average Secchi depth readings were relatively consistent with historic averages.

# Mission Lake – Algae

**Algae** are microscopic, photosynthetic organisms that are important food items in all aquatic ecosystems. Different algal groups increase or decrease during the year and they can be used to analyze a lake's water quality because there are more varieties of algae than fish or aquatic plants. Conclusions can be drawn about water temperature, nutrient availability, and overall water quality of a lake using algal populations.

In Marathon County lakes, there are three dominant groups of algae: blue-green algae (Cyanobacteria), green algae (Chlorophyta), and diatoms (Bacillariophyceae).

- During 2011 and 2012, the algal community in Mission Lake was characteristic of a lake tending towards eutrophic status. The early presence of the blue-green algae was followed by a tendency to dominate as the seasons passed.
- The heavy, early-season green algal populations fell as 2011 progressed, but stayed high during 2012.
- Diatom populations bloomed in late 2011, but their abundance in 2012 dropped relative to 2011.
- Events such as storms and winds can cause mixing in surface waters and stir up nutrients found in a lake. This causes nutrients to become more readily available to algae and leads to increased algal growth as water temperature changes.
- Changing algal populations that lack recognizable patterns are typical of eutrophic bodies of water. Heavy growth by the three dominant algal groups leads to a decrease in water clarity and pushes the lake into a more eutrophic state.




**PERCENT ALGAL COMPOSITION FOR MISSION LAKE IN 2011 AND 2012**

**Blue-green algae** have the widest tolerance range for temperatures and nutrient concentrations.

A few varieties of blue-greens can produce toxins that are potentially harmful to livestock, pets and humans.

# Mission Lake – Sediment Core Analysis

**Lake sediment** can help to tell the history of a lake and changes that may have affected the lake related to water quality, the abundance of aquatic plants, and sedimentation or land use changes in the watershed. These changes are assessed by evaluating the content of the upper layer of the sediment versus lower layers. This information can help to guide management decisions for a lake.

- Analysis of Mission Lake's sediment core suggests increased disturbance in the lake basin since the time of European land clearing.
- Over this time period, there have been increases in nutrients to the lake, including phosphorus, and substantial habitat changes.
- Ragweed generally increases with logging and land clearing. High ragweed pollen counts at 28-30 cm suggest that disturbance was already occurring prior to this point in the core and peaked with agricultural expansion in the first decade or two of the 20th century.
- Diatom species communities as well as sediment properties reflect an increase in phosphorus and in aquatic plants and filamentous algae found in the top of the sediment core.

Diatom species found in lake sediments in Marathon County.

Diatoms are a type of algae commonly found in sediment. They are well-preserved in sediments due to silica-based cell walls which resist degradation.

Different species of diatoms are sensitive to water quality; thus, changes in the diatom community from the bottom to the top of the sediment core can reveal how water quality in the lake has changed over time.

This sediment core was collected from Mission Lake. The darker layers indicate organic-rich sediments often due to increased growth of aquatic plants and/or soil erosion. Additional analysis of these layers can help to confirm the source(s).

# Mission Lake – What can you do to help?

**Lake Users:**

- ✓ Run boat engines efficiently
- ✓ Observe no/low wake zones
- ✓ Refuel away from water
- ✓ Dispose of trash properly
- ✓ Remove all aquatic plants from boats and trailers
- ✓ Respect wildlife and other lake users

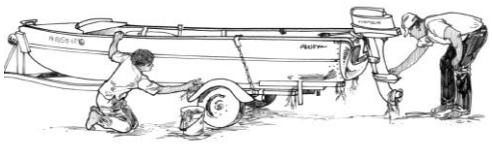
**Land Owners:**

- ✓ Control soil erosion
- ✓ Keep livestock out of lakes and streams
- ✓ Control manure runoff
- ✓ Carefully manage nutrients and pesticides
- ✓ Leave natural shoreland vegetation in place or restore if it has been removed
- ✓ Learn to identify and look for invasive species

**Home Owners:**

- ✓ Leave natural shoreland vegetation in place or restore if it has been removed
- ✓ Leave woody habitat for young fish, turtles and frogs
- ✓ Eliminate the use of fertilizer or use no phosphorus fertilizer

- ✓ Eliminate or minimize use of pesticides
- ✓ Control soil erosion
- ✓ Control runoff from rooftops and hard surfaces
- ✓ Clean up after pets
- ✓ Learn to identify and look for invasive species



## Stop the Spread of Aquatic Invasive Species!

**Wetlands and Shorelands:**

- LEARN how to identify invasive plants and animals, and who to contact if found.
- DO NOT PURCHASE prohibited and restricted species! Whenever possible purchase native plants.
- NEVER transplant water garden plants or aquarium plants into lakes, streams, wetlands, or storm water ponds. Properly dispose of unwanted plants and animals!
- REMOVE invasive exotic plants from your landscape and replace them with native plants or non-invasive exotic plants. Scout annually for new invasive plants.
- AVOID using garden plants from other regions whose invasive potential is poorly understood.

**Lakes and Rivers:**

- LEARN what Wisconsin invasive plants and animals look like and who to contact if seen in a lake or river.
- INSPECT your boat, trailer and equipment when traveling to different water bodies and REMOVE any attached aquatic plants or animals (before launching, after loading, and before transporting on a public highway).
- DRAIN all water from boats, motors, and all equipment after use at a lake.
- NEVER release live fish, bait or pets into a wetland or water body.
- BUY minnows from a Wisconsin bait dealer. Only use leftover minnows at that same water body.

Easi

# Mission Lake – Primary Researchers

**Algae**

Dr. Bob Bell (UW-Stevens Point)

**Aquatic Plants**

Jen McNelly (UW-Stevens Point)

**Cultural Survey**

Dr. Kristin Floress (UW-Stevens Point)

**Fisheries and Lake Maps**

Dr. Ron Crunkilton (UW-Stevens Point) and Dr. Justin Sipiorski (UW-Stevens Point)

Christine Koeller (UW-Stevens Point)

**Sediment Core**

Dr. Samantha Kaplan (UW-Stevens Point) and Paul Garrison (Wisconsin DNR)

**Shoreland Assessments and Build Out**

Dan McFarlane (UW-Stevens Point)

**Water Quality and Watersheds**

Nancy Turyk (UW-Stevens Point)

**Zooplankton**

Dr. Chris Hartleb (UW-Stevens Point)

UW-Stevens Point Graduate and Undergraduate Students

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- *Wisconsin DNR Lake Protection grants*
- *UW-Stevens Point and UW-Stevens Point Faculty*
- *Marathon County*
- *Marathon County Citizens*

***For more information about the study:***

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http://www.co.marathon.wi.us/Departments/ConservationPlanningZoning/ConservationDivision/LakePrograms.aspx

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