A

APPENDIX A

Public Participation Materials

Presentation Outline

- Onterra, LLC
- Why Create a Management Plan?
- Elements of this Lake Management Planning Project
  - Data & Information
  - Planning Process
- Project Deliverables

Onterra LLC Lake Management Planning

Onterra, LLC

- Founded in 2005
- Staff
  - Four full-time ecologists
  - One part-time ecologist
  - Two field technicians
  - Four summer interns
- Services
  - Science and planning
- Philosophy
  - Promote realistic planning
  - Assist, not direct

Onterra LLC Lake Management Planning

Why create a lake management plan?

- Onterra assisted in the creation of comprehensive management plan in 2006
- Studies indicated high occurrence of EWM & CLP
- Indications that fall 2012-spring 2014 drawdown significantly reduced EWM & CLP
- Considering these large changes, Ted Johnson (WDNR) recommended that the management plan be updated
- District membership voted to proceed on that course

Onterra LLC Lake Management Planning

Why create a lake management plan?

- To create a better understanding of lake's positive and negative attributes.
- To discover ways to minimize the negative attributes and maximize the positive attributes.
- To foster realistic expectations and dispel myths.
- To create a snapshot of the lake for future reference and planning.

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Elements of an Effective Lake Management Planning Project

Data and Information Gathering

Environmental & Sociological

Planning Process

Brings it all together

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Data and information gathering

- Study Components
  - Water Quality Analysis
  - Watershed Assessment
  - Aquatic Plant Surveys
  - Fisheries Data Integration
  - Shoreline Assessment
  - Stakeholder Survey

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Water Quality Analysis

- General water chemistry (current & historic)
  - Citizens Lake Monitoring Network & Professional
- Nutrient analysis
  - Lake trophic state (Eutrophication)
  - Limiting plant nutrient
- Supporting data for watershed modeling

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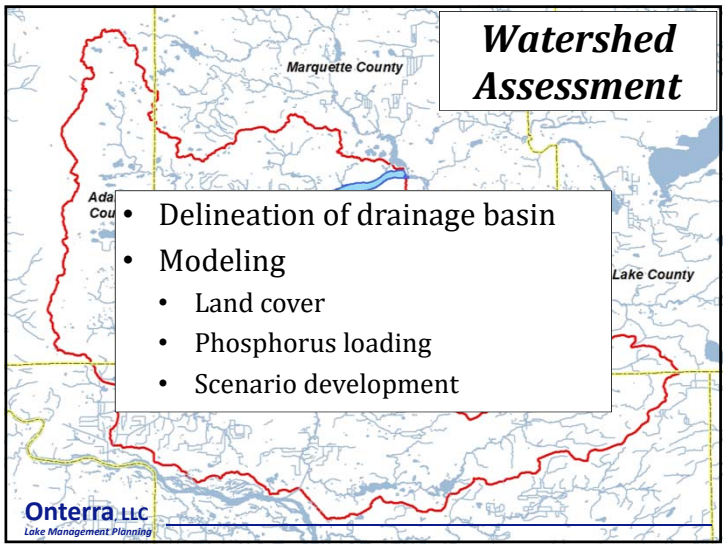
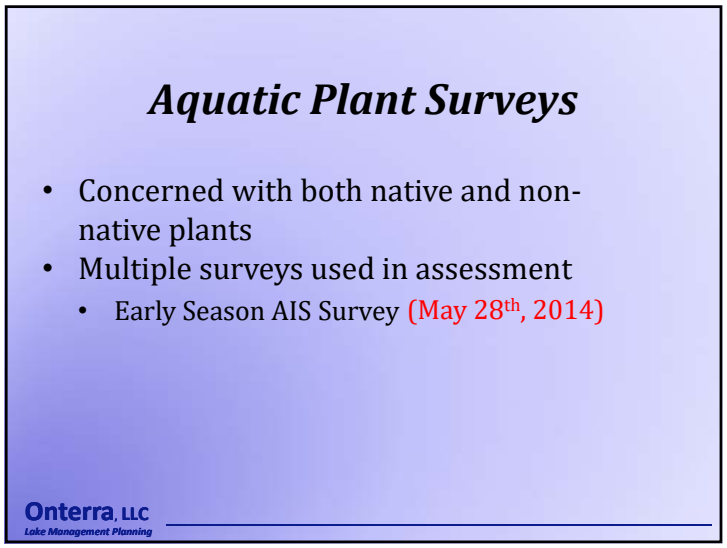
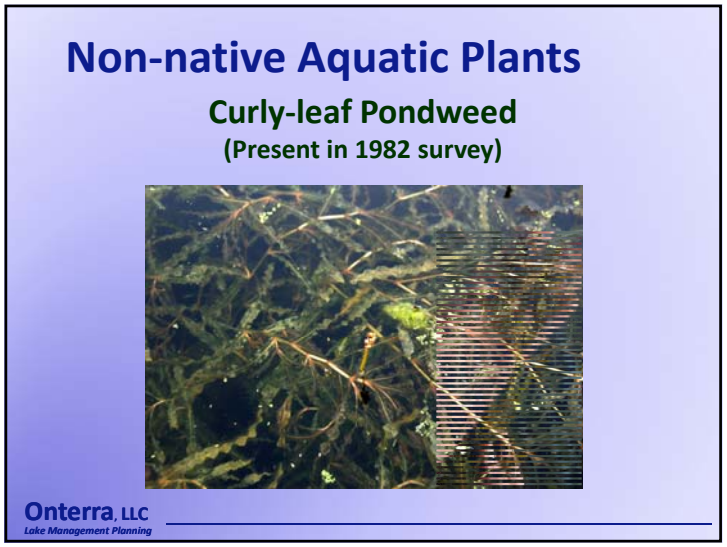
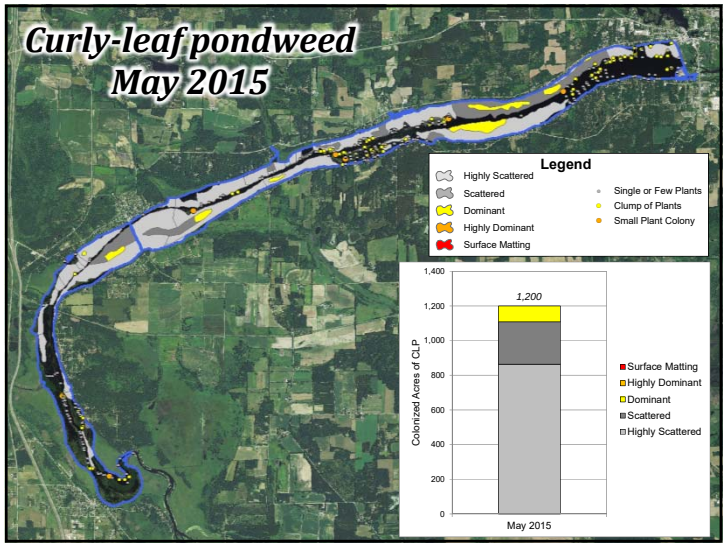

Watershed Assessment
Marquette County
Lake County
Delineation of drainage basin
Modeling
Land cover
Phosphorus loading
Scenario development
Onterra, LLC
Lake Management Planning


Aquatic Plant Surveys
Concerned with both native and non-native plants
Multiple surveys used in assessment
Early Season AIS Survey (May 28th, 2014)
Onterra, LLC
Lake Management Planning


Non-native Aquatic Plants
Curly-leaf Pondweed
(Present in 1982 survey)
Onterra, LLC
Lake Management Planning


Curly-leaf pondweed
May 2015
Legend
Highly Scattered
Scattered
Dominant
Highly Dominant
Surface Matting
Single or Few Plants
Clump of Plants
Small Plant Colony
1,400
1,200
1,000
800
600
400
200
0
Colonized Acres of CLP
1,200
May 2015
Surface Matting
Highly Dominant
Dominant
Scattered
Highly Scattered

Non-native Aquatic Plants

Eurasian Water Milfoil (First Documented 1991)

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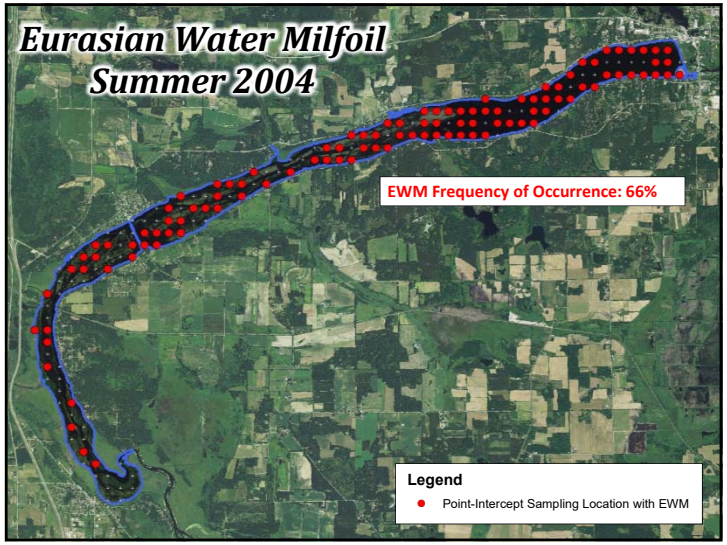

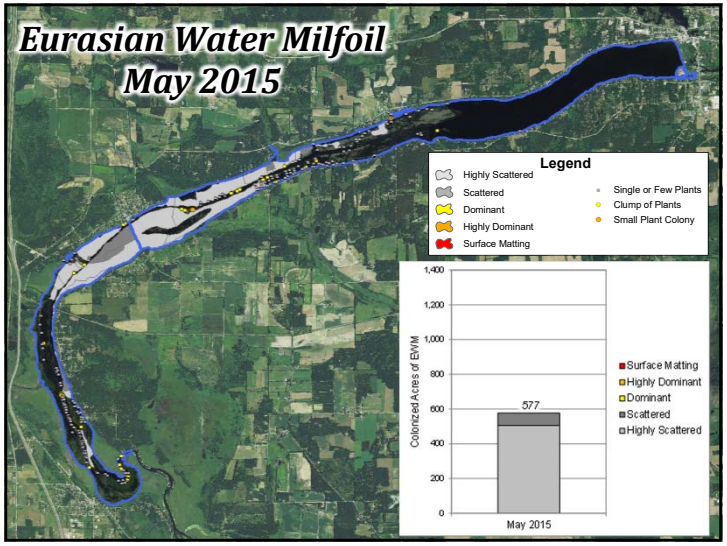

Non-native Aquatic Plants

Brittle Waternymph (Discovered in 2014)

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Aquatic Plant Surveys

- Concerned with both native and non-native plants
- Multiple surveys used in assessment
  - Early Season AIS survey
  - Point-intercept survey

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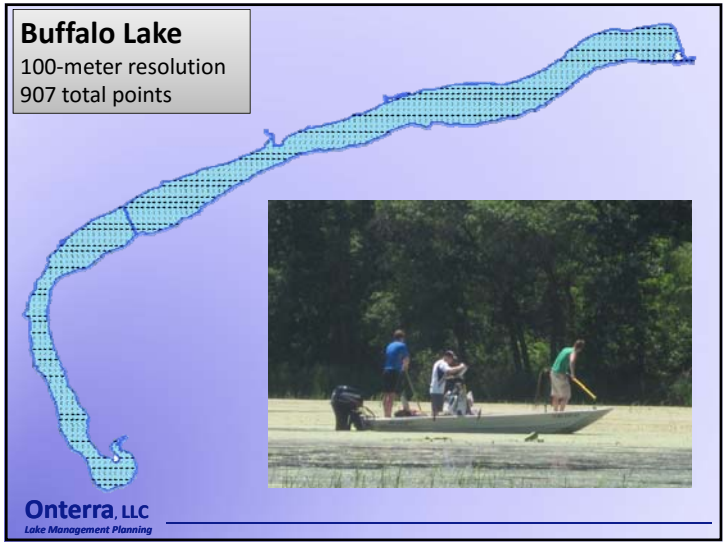

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Aquatic Plant Surveys

- Concerned with both native and non-native plants
- Multiple surveys used in assessment
  - Early Season AIS survey
  - Point-intercept survey
  - Aquatic plant community mapping

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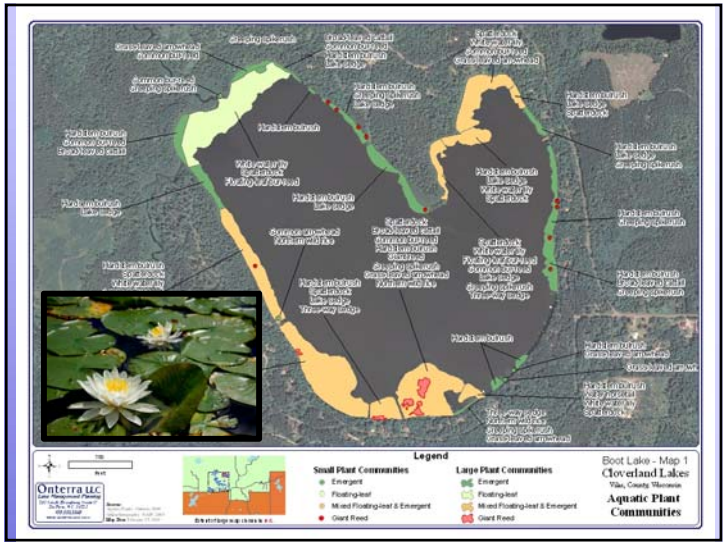

Shoreland Assessment

- Shoreland area is important for buffering runoff and provides valuable habitat for aquatic and terrestrial wildlife.
- It does not look at lake shoreline on a property-by-property basis.
- Assessment ranks shoreland area from shoreline back 35 feet

Urbanized Range **Natural**

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Fisheries Data Integration

- No fish sampling completed
- Assemble data from WDNR, USGS, USFWS
- Fish survey results summaries (if available)
- Use information in planning as applicable

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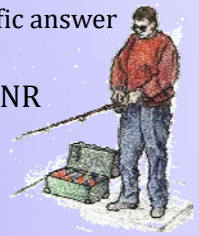
Stakeholder Survey

- Standard survey used as base
  - Planning committee develops additional questions and options
  - Must not lead respondent to specific answer through a "loaded" question
- Survey must be approved by WDNR



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Planning Process

Planning Committee Meetings

Study Results (including a stakeholder survey)
Conclusions & Initial Recommendations
Management Goals
Management Actions
Timeframe
Facilitator(s)

Implementation Plan

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Planning Process Timeline

- Growing Season 2015/Winter 2016: Studies Completed
- Fall 2015/Winter 2016: Data Analysis & Draft of Results Created
- Spring 2016: Planning Committee Meetings
  - Presentation of Results
  - Development of Implementation Plan
- Summer 2016: Submittal/Approval of Final Plan
- Fall 2016: Project Wrap-up Meeting

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Thank You

Many of the graphics used in this presentation were supplied by:

Wisconsin Lakes Partnership

UW Extension

WISCONSIN DEPT. OF NATURAL RESOURCES

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Buffalo Lake Management Planning Project

December 2015 Update

Submitted by: Brenton Butterfield, Onterra, LLC

With a Lake Management Planning Grant totaling $25,000 from the Wisconsin Department of Natural Resources (WDNR) awarded to the Buffalo Lake Protection and Rehabilitation District (BLPRD), a project is underway to create a lake management plan for Buffalo Lake (Figure 1). Following the water level drawdown between the fall of 2012 and the spring of 2014 to reconstruct the lake's dam, anecdotal reports indicated that the aquatic invasive plant species Eurasian water milfoil (*Myriophyllum spicatum*; EWM) and curly-leaf pondweed (*Potamogeton crispus*; CLP) declined significantly.

Figure 1. Buffalo Lake, Marquette County, Wisconsin.

While this project is reassessing aspects of the lake studied as part of the 2006 management plan (e.g. water quality and watershed), the primary focus of this project is to assess changes to the lake's aquatic plant community following the water level drawdown and develop a plan to prevent EWM and CLP from increasing to pre-drawdown levels. In addition, the health of the lake's immediate shoreland zone was also assessed, a study which had not been completed in the past. The lake management plan will contain historical and current data from the lake as well as provide guidance for its management by integrating stakeholder perceptions and goals with what is ecologically beneficial for the lake.

Most of the field studies have been completed on Buffalo Lake with the exception of winter water quality sampling scheduled for February of 2016. This project update is intended to provide Buffalo Lake stakeholders with a preliminary look at some of the initial observations and results from the scientific studies conducted in 2015 as well as a timeline for the remaining actions that will be taken as part of this project. While the data collected are still being analyzed, some study highlights that are available are discussed below.

Water Quality Studies

Onterra staff has so far visited Buffalo Lake six times (spring, June, July, August, October) to collect water quality samples to analyze parameters such as temperature, dissolved oxygen, and nutrients. Samples were also collected from three locations around the lake to be analyzed for the presence of zebra mussel veligers, their free-floating larval stage. One more water sampling event is scheduled for February of 2016 through the ice. These data provide ecologists with an idea of what nutrient dynamics are like within the lake over the course of the year as well as which nutrients (phosphorus or nitrogen) are driving plant production. In addition, historical data will also be analyzed to determine if Buffalo Lake's water quality is changing (for better or worse) with time. The analysis of these data is not yet complete, but initial results from the open water season of 2015 indicate chlorophyll-*a* concentrations (a measure of algal abundance) were lower than most available historical records. A full analysis of the lake's current and historical water quality will be available in spring.

Aquatic Plant Studies

All of the aquatic plant surveys were completed as scheduled, with the first being conducted on May 28, 2015 to complete the Early-Season Aquatic Invasive Species (ESAIS) Survey. The primary aim of this survey is to visually survey the entire lake and map locations of invasive plants that either reach their peak growth at this time or are flowering and are readily visible. These include CLP, which reaches its peak growth in late-spring before beginning to die back in early summer, and pale-yellow iris, which typically flowers in late-May through June. While EWM does not reach its peak growth until mid- to late-summer, it can often be mapped early in the summer also because it generally begins growing before many of our native plants.

The whole-lake point-intercept survey was completed on July 21-23 by Onterra ecologists. This is a grid-based survey designed to quantify which aquatic plant species are most abundant within the lake and where they are located. The data collected during this survey also allow for the quality of Buffalo Lake's native aquatic plant community to be compared to the quality of plant communities of other lakes within the region and the state. The aquatic plant community mapping survey was also completed at this time, the goal of which is to delineate areas of floating-leaf and emergent aquatic vegetation such as American lotus and bulrushes. The final aquatic plant survey, the EWM Peak-Biomass Survey, was completed on August 27-28, 2015 to reassess areas of EWM that were mapped in late-spring.

Curly-leaf pondweed and EWM were found growing throughout Buffalo Lake; however, neither species was overly abundant with most areas containing areas of *scattered* or *highly scattered* plants. In fact, the point-intercept survey indicates that the occurrence of EWM in Buffalo Lake has declined by approximately 83% since the last survey completed in 2004 prior to the water level drawdown. A small population of the submersed, non-native plant brittle naiad (*Najas minor*) was also located, along with the invasive shoreland plants pale-yellow iris (*Iris pseudacorus*), purple loosestrife (*Lythrum salicaria*), reed canary grass (*Phalaris arundinacea*), and giant reed (*Phragmites australis* subsp. *australis*).

Twenty-eight native aquatic plant species were located during the point-intercept survey with coontail and common waterweed being the most abundant (Figure 2). Eurasian water milfoil and CLP comprised approximately 5% and 2% of the plant community, respectively. The dominance of the plant

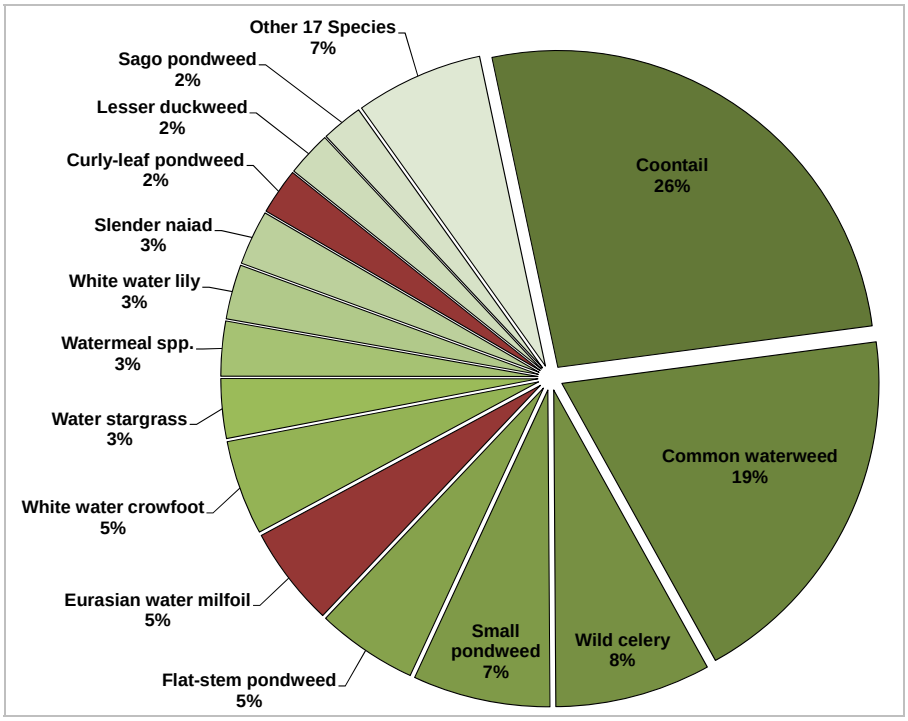


Figure 2. Relative frequency of occurrence of aquatic plant species in Buffalo Lake. Non-native species indicated with red. Created using data from 2015 whole-lake point-intercept survey.

community by coontail and common waterweed is an indicator of the high-nutrient conditions present within the lake. The 2015 aquatic plant data will continue to be analyzed to determine how it has changed since the water level drawdown, and Onterra ecologists will work with the Buffalo Lake Planning Committee to develop management strategies for the aquatic invasive species in Buffalo Lake.

Additional Lake and Lake Stakeholder Studies

In addition to water quality and aquatic plant studies, Onterra has completed surveys to assess the lake's shoreline development, examine its watershed, and evaluate fish habitat potential. Finally, an anonymous survey was sent to all Buffalo Lake stakeholders to assess their use of the lake, perceptions of historical and current water quality, concerns for the lake ecosystem and more. These results will be integrated into the management plan.

Remaining Steps

In summary, all project components are on schedule and proceeding as planned. Onterra is currently examining the study results in preparation for a spring meeting with the Buffalo Lake Planning Committee. The meeting will be held to discuss the results and begin creation of management goals and actions the BLPRD will pursue in order to manage their lake in both a recreationally enjoyable and ecologically sound manner. These management goals and an entire project summary will be presented to the general public during a project Wrap-up meeting, likely to be held in the summer of 2016.

Presentation Outline

- Lake Management Planning Project Overview
- Study Results
  - Water Quality
  - Watershed
  - Shoreland
  - Drawdown Effects (Ted Johnson)
  - Aquatic Plants
  - Fishery

  Stakeholder Survey
- "Big Picture"
- Next Steps

Onterra, LLC Lake Management Planning

Management Planning Project Overview

- Initiated to assess changes to aquatic plant community following drawdown
- Update management strategies for aquatic plants
- Collect & analyze data – completed
  - Technical & sociological
- Construct long-term & useable plan

Onterra, LLC Lake Management Planning

Summary of Project Results

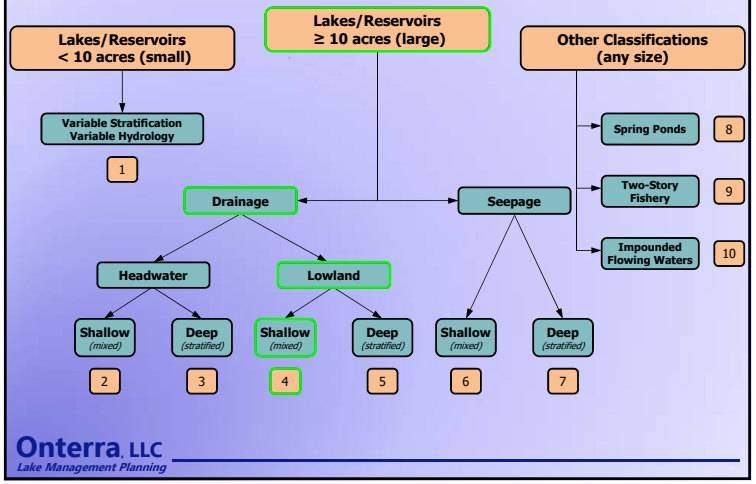
Water Quality
- Unchanged since drawdown
- Phosphorus concentrations *poor*, but chlorophyll-*a* & water clarity *good*
- Complex story – lake becomes nitrogen-limited by early summer

Watershed & Immediate Shoreline
- Large portion of watershed in agriculture
- Majority of immediate shoreland zone comprised of undeveloped shoreline

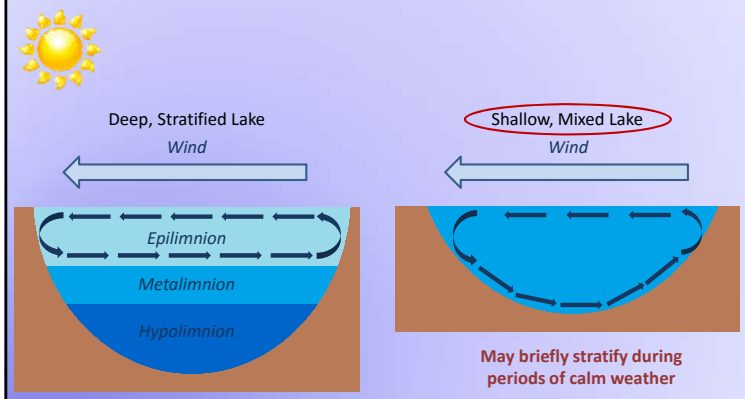
Aquatic Plant Community
- Significant changes between 2004 & 2015
- Large decline in Eurasian water milfoil
- Increase in native aquatic plant species
- Overall plant community is now healthier

Onterra, LLC Lake Management Planning

Wisconsin Lakes Natural Community Types



Wisconsin Lakes Classification

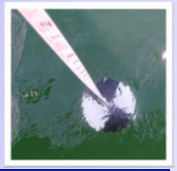


Introduction to Lake Water Quality

Phosphorus
Naturally occurring & essential for all life
Regulates phytoplankton biomass in **most** WI lakes
Most often 'limiting plant nutrient' (shortest supply)
Human activity often increases P delivery to lakes

Chlorophyll-*a*
Pigment used in photosynthesis
Used as surrogate for phytoplankton biomass

Secchi Disk Transparency
Measure of water clarity
Measured using a Secchi disk



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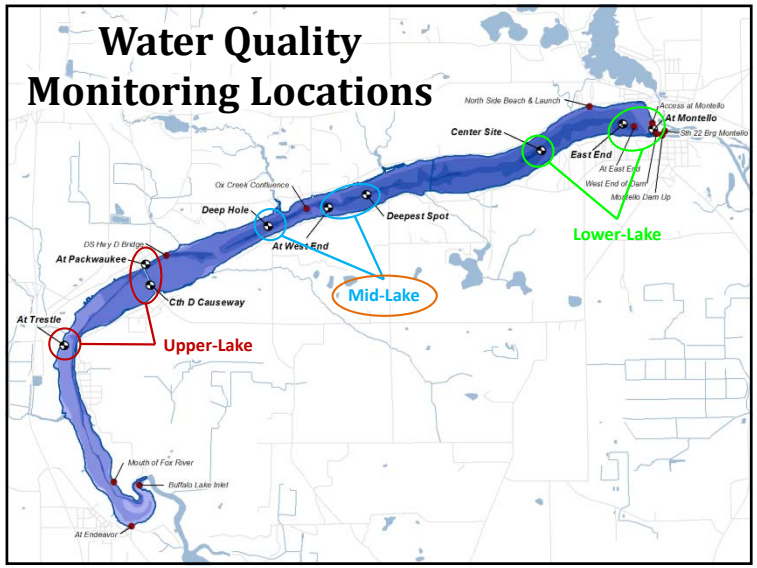
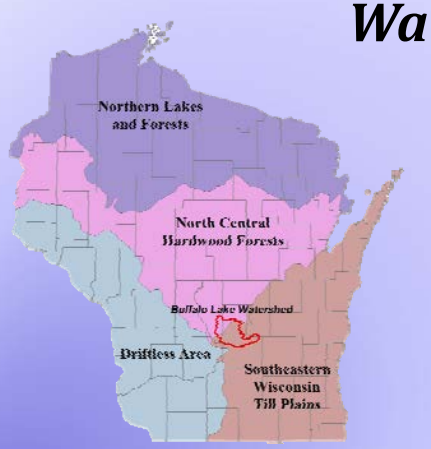
Water Quality Monitoring Locations



Water Quality



Wisconsin Ecoregions

Majority of Buffalo Lake's watershed within Southeastern WI Till Plains Ecoregion

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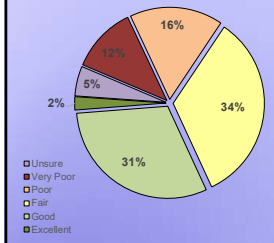
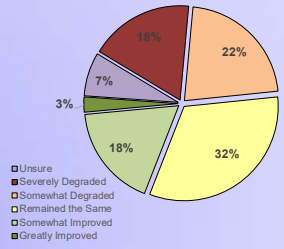
Buffalo Lake Stakeholder Perceptions of Water Quality

How would you describe the current water quality of Buffalo Lake?



How has water quality changed in Buffalo Lake since you first visited the lake?



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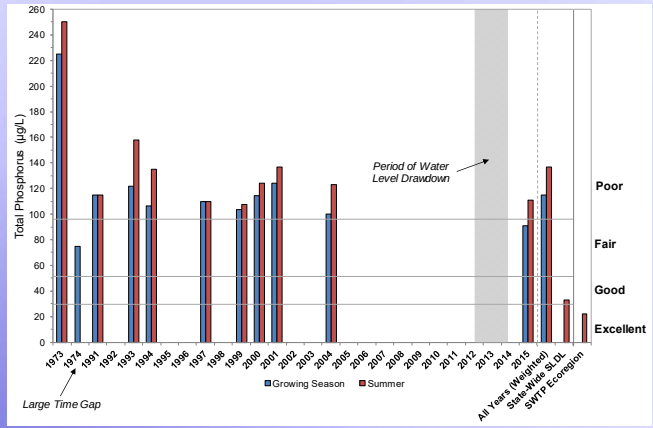
Long-Term Trends Near-Surface Total Phosphorus



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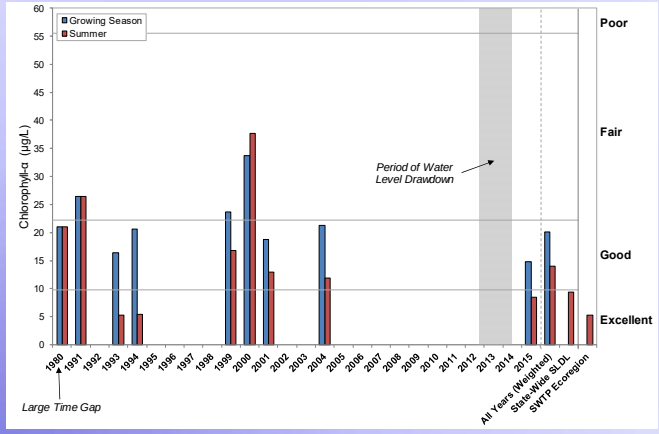
Long-Term Trends
Chlorophyll-*a*



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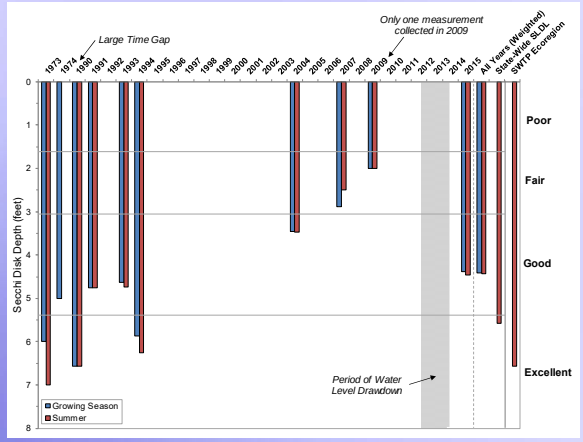
Long-Term Trends
Secchi Disk Transparency



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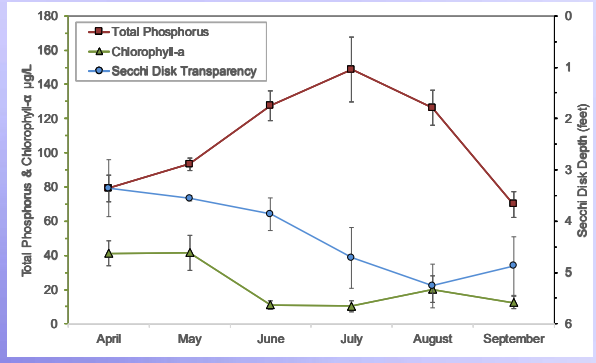
Water Quality
Seasonal Dynamics



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Water Quality
Seasonal Dynamics

Why do phosphorus concentrations increase in summer?

- Likely due to *internal nutrient loading*
  - Release of sediment-bound phosphorus into the overlying water
  - 2 Primary Processes
    - Anoxia (lack of oxygen)
    - Elevated pH (>9.0)
  - Driven by dense growth of rootless & shallowly-rooted aquatic plants (i.e. coontail, waterweed, EWM)
  - Restricts water movement & mixing
  - High rates of photosynthesis may elevate pH
- CLP senescence also likely contributor
- Sediment resuspension minimal (low summer TSS)

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Water Quality
Seasonal Dynamics

Phosphorus increases during the summer; why not chlorophyll-*a*?

- Based on summer P concentrations, predicted chl-*a* = 84 µg/L
- Actual summer chl-*a* = 14 µg/L
- Something other than P is limiting phytoplankton growth
- Nitrogen: second to P in importance
  - Look at nitrogen:phosphorus ratio to determine which nutrient is limiting

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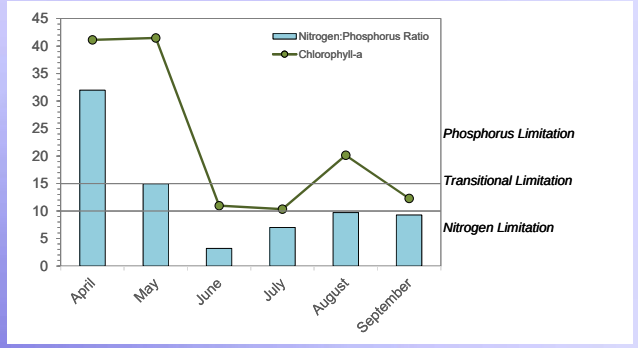
Water Quality
Seasonal Dynamics

Buffalo Lake Average Monthly Nitrogen:Phosphorus Ratios



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Water Quality
Seasonal Dynamics

While P increases in summer, N declines at a greater magnitude

- Same processes that facilitate P release from sediments also facilitate *denitrification*
  - Conversion of nitrate to nitrogen gas
  - Nitrogen gas is lost to the atmosphere
  - Wetlands likely also contribute to nitrogen reduction

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Water Quality
Seasonal Dynamics

Nitrogen limitation has been shown to favor growth of cyanobacteria (blue-green algae)

- Cyanobacteria capable of utilizing atmospheric N
- Why are they not prolific in Buffalo Lake?
- Zooplankton community likely regulates growth of blue-green algae

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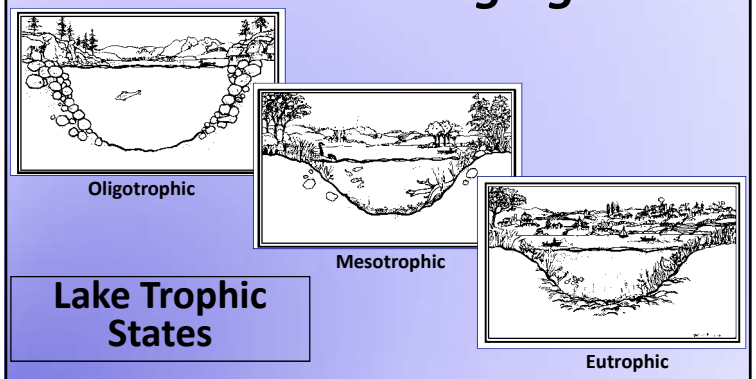
Eutrophication -Lake Aging



Lake Trophic States

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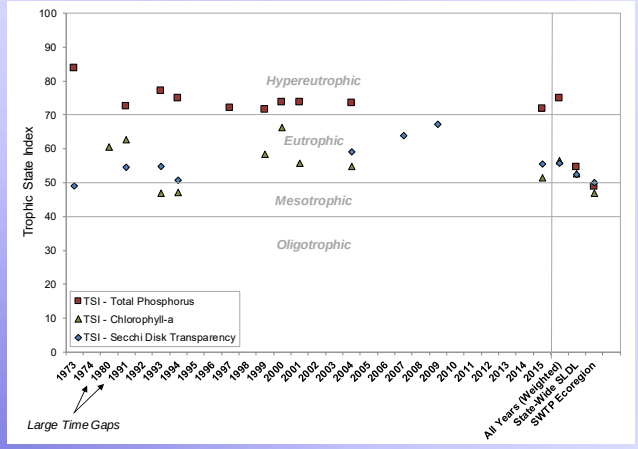
Trophic State Index



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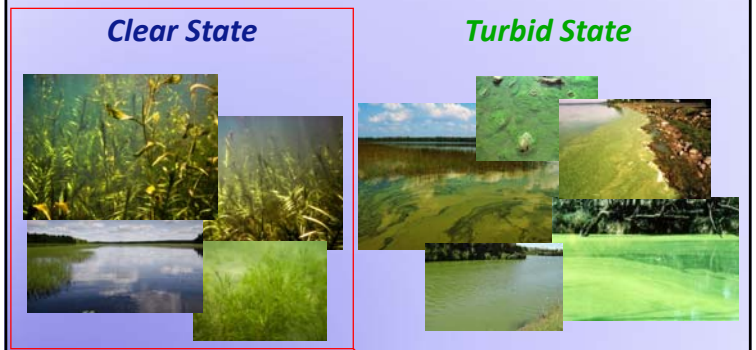
Shallow Lakes are Special



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Shallow Lakes are Special

Factors which cause loss of aquatic vegetation cause transition to turbid state

- Excessive nutrient loading
- Water level stabilization
- Benthivorous fish introduction/increase

- Once in a turbid state, very difficult to revert back to clear state
- Aquatic Plants
  - Stabilize bottom sediments
  - Provide zooplankton habitat
  - Uptake of nutrients from water (coontail, waterweed)

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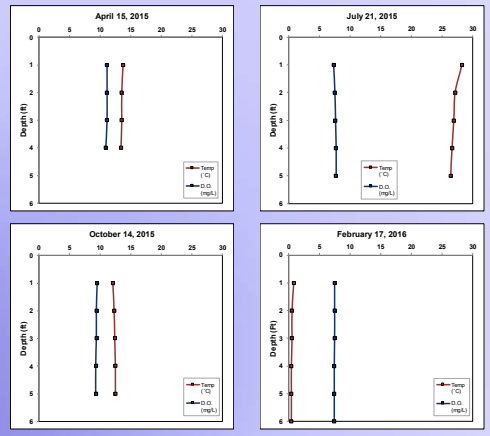
Dissolved Oxygen



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Additional Water Quality Parameters

Alkalinity – capacity to resist fluctuations in pH

- 161 as mg/$CaCO_3$ in 2015

Calcium

- 37.1 mg/L in 2015
- Along with pH (7.0-9.0), indicates water quality is suitable for zebra mussels
- Zebra mussel *veliger* samples were negative in 2015
- No adult zebra mussels observed

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Water Quality Results Summary

- Phosphorus concentrations are *poor* for WI SLDL, but…
- Chlorophyll-*a* & Secchi disk transparency are *good*
- No detectable trends occurring over time
- Despite increases in phosphorus in summer, reductions in nitrogen limit phytoplankton growth
  - Growth also likely regulated by zooplankton
- Aquatic plants essential for maintaining current water quality conditions (clear-state)

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Watershed Assessment Procedure

Determine Watershed Area and Boundaries

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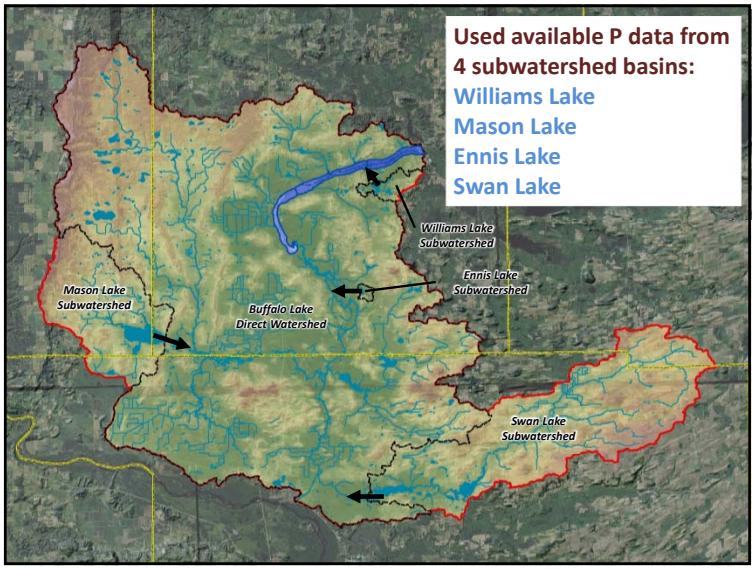

Watershed Assessment Procedure

Determine Watershed Area and Boundaries

Determine Land Cover Types and Acreages

Greater Phosphorus Export/Acre

- Urban - High Density
- Row Crops
- Urban - Med Density
- Pasture/Grass
- Open Water
- Rural Residential
- Wetlands
- Forest

Less Negative Impact on Lake

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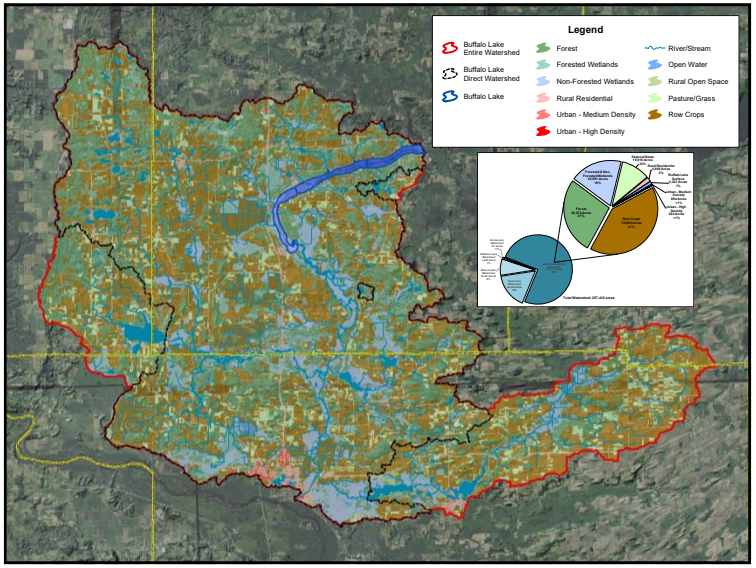
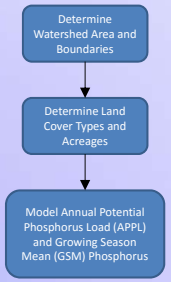


Watershed Assessment Procedure



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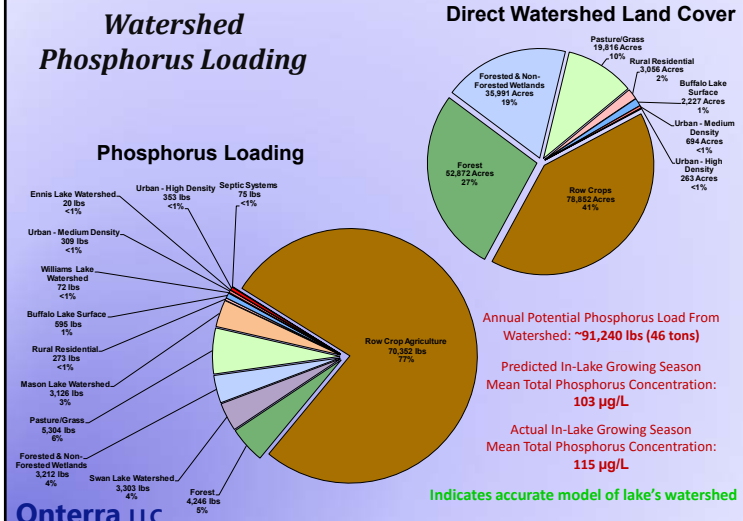
Watershed Phosphorus Loading



Annual Potential Phosphorus Load From Watershed: **~91,240 lbs (46 tons)**

Predicted In-Lake Growing Season Mean Total Phosphorus Concentration: **103 µg/L**

Actual In-Lake Growing Season Mean Total Phosphorus Concentration: **115 µg/L**

Indicates accurate model of lake's watershed

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Buffalo Lake Watershed

- WiLMS modeling focuses on phosphorus, but nitrogen regulates phytoplankton growth in summer
- Don't have a good method for modeling nitrogen
- Summer P would need to be reduced to <50 µg/L to reduce current level of phytoplankton growth
- While coontail obtains most nutrients from water, other plants (Crowfoot, EWM, CLP) obtain nutrients from sediment

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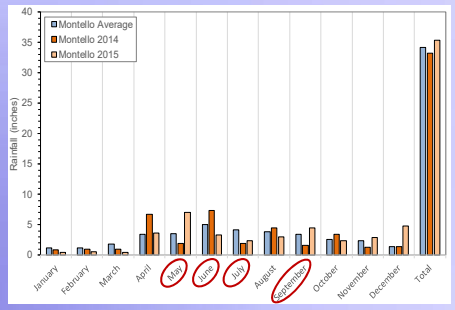
Buffalo Lake Water Levels

- Stakeholder survey indicated concerns regarding water levels following construction of new dam
- New dam was constructed to maintain same maximum water level (769.5 feet)
- Water levels may decline during periods of lower precipitation



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Buffalo Lake Water Levels

- Concerns regarding high-capacity wells in Buffalo Lake's watershed
- High-capacity well: approved pump capacity of 70 or more gallons/minute
- Studies have indicated areas with high concentrations of HCW have seen a reduction in the groundwater table
- Obtained HCW data within Buffalo Lake's watershed from 2011-2014 (cannot legally publicize well locations)
  - Reporting wells ranged from 68 (2011) to 111 (2014)
  - Annual water withdrawn ranged from 1.5 billion (2011) to 1.9 billion gallons in 2013

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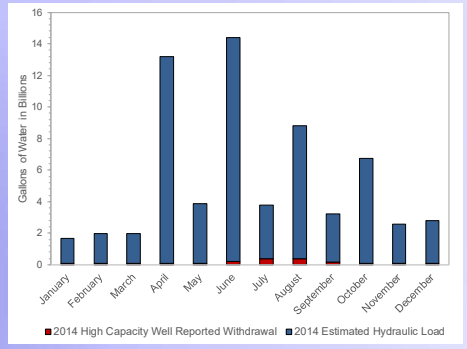
Buffalo Lake Water Levels

- Buffalo Lake 2014 estimated hydraulic load & high capacity well withdrawal
- Do not have flow/lake elevation data
- Given HCW withdrawals are small relative to total loading, highly unlikely having an impact on water levels



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Shoreland Assessment

- Shoreland area is important for buffering runoff and provides valuable habitat for aquatic and terrestrial wildlife.
- EPA National Lakes Assessment results indicate shoreland development has greatest negative impact to health of our nation's lakes.
- It does not look at lake shoreline on a property-by-property basis.
- Assessment ranks shoreland area from shoreline back 35 feet

Urbanized **Natural**

Range

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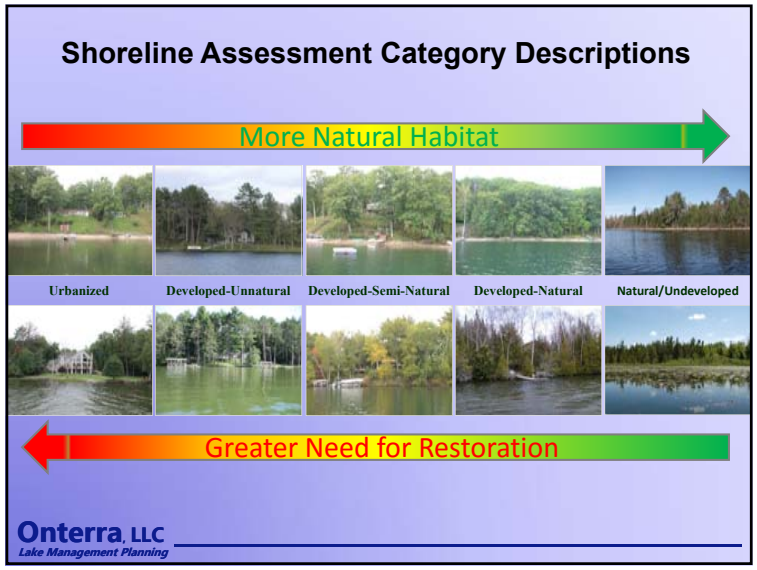

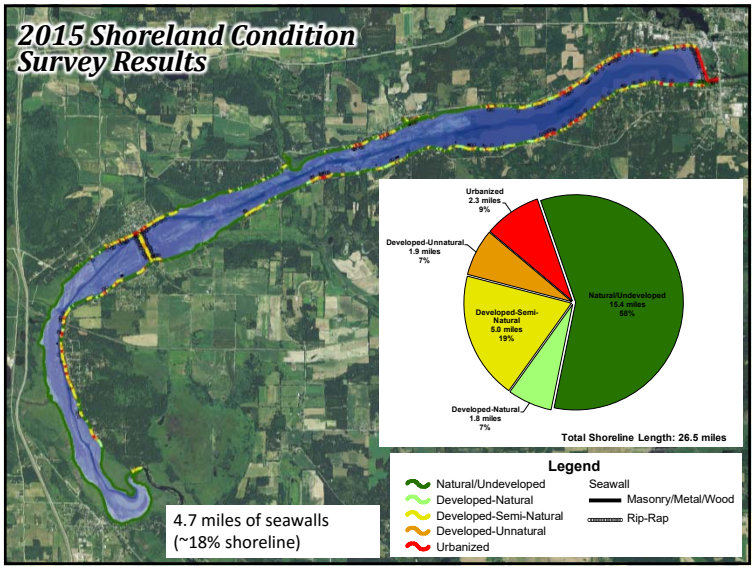

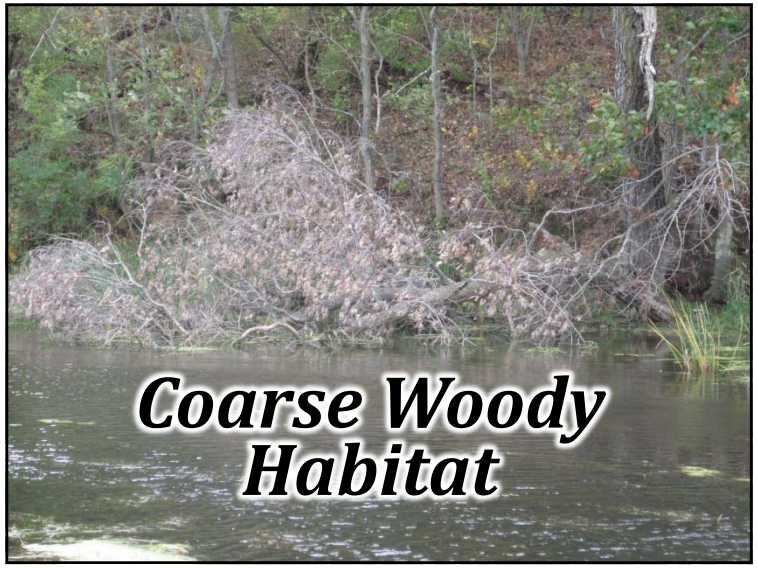

Coarse Woody Habitat

- Provides shoreland erosion control and prevents suspension of sediments.
- Preferred habitat for a variety of aquatic life.
  - Periphyton growth fed upon by insects.
  - Refuge, foraging and spawning habitat for fish.
  - Complexity of CWH important.
- Changing of logging and shoreland development practices = reduced CWH in Wisconsin lakes.
- Survey aimed at quantifying CWH in Buffalo Lake

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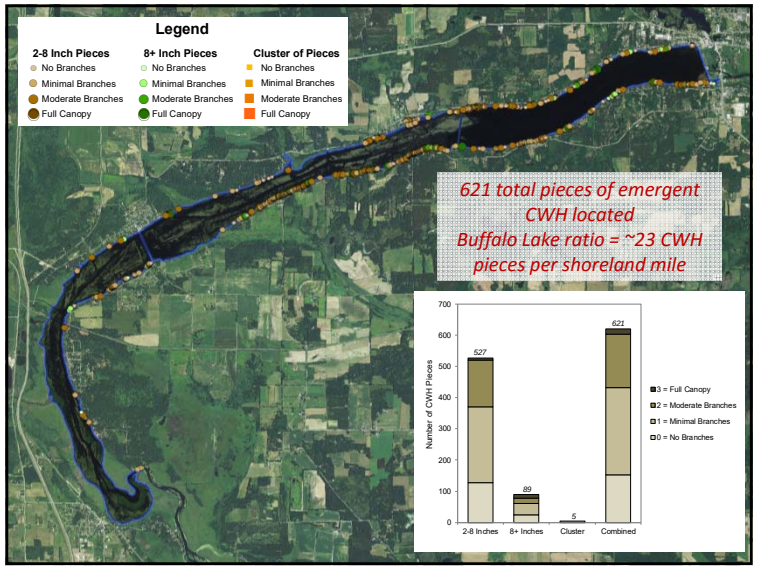

Aquatic Plant Surveys

- Determine changes in plant community between 2004 and 2015
- Assess both native and non-native populations
- Numerous surveys completed in 2015
  - Early-Season AIS Survey
  - Whole-Lake Point-Intercept Survey
  - Emergent/Floating-Leaf Community Mapping Survey
  - EWM Peak-Biomass Survey

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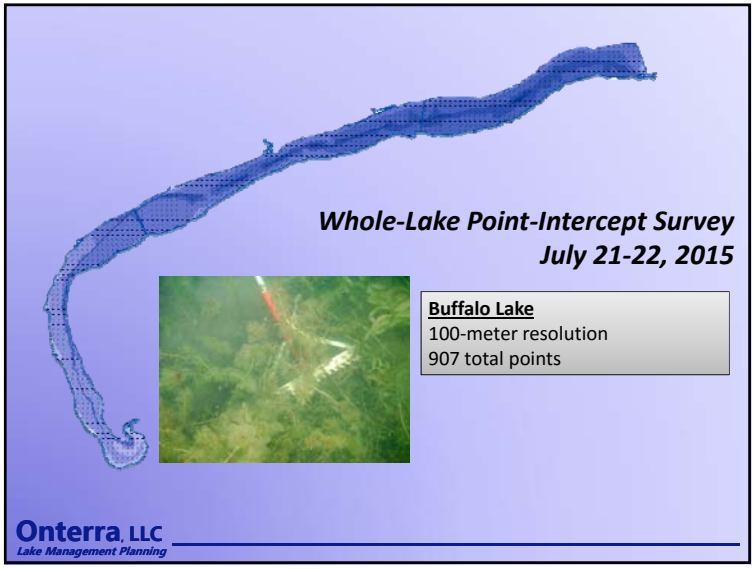

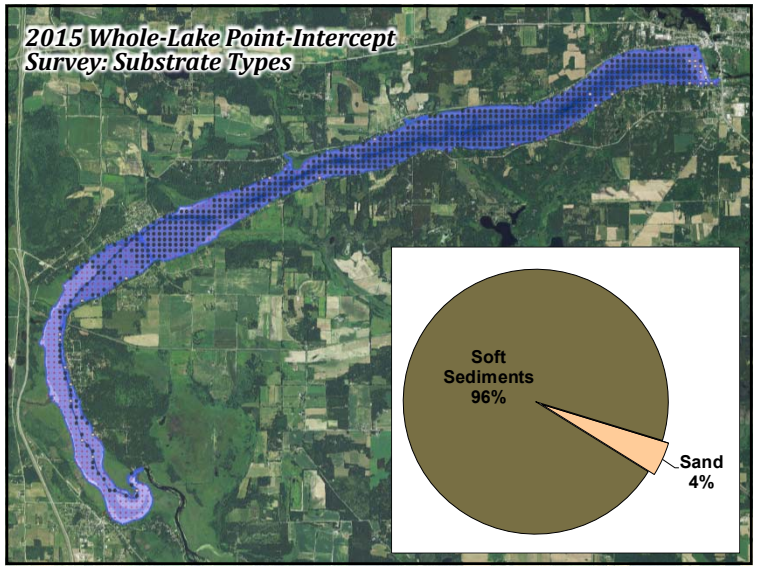

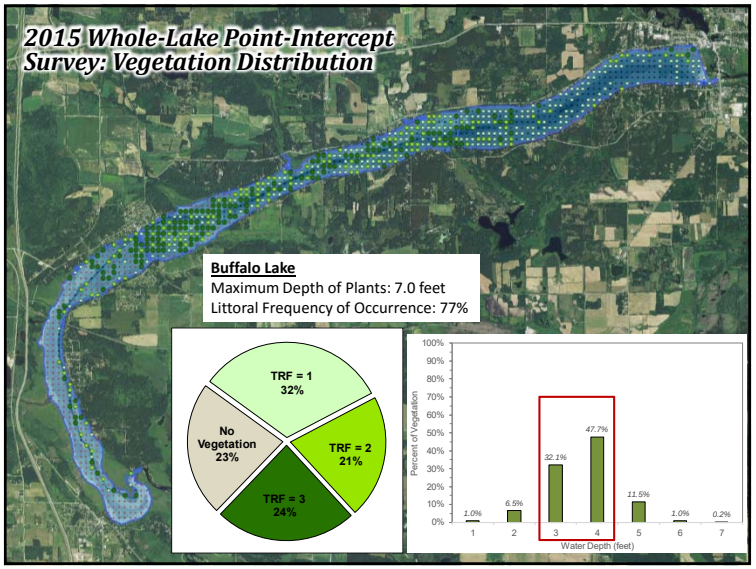

Aquatic Plant Species List

32 Native Species
7 Non-Native Species

- Pale-yellow iris
- Purple loosestrife
- Hybrid water milfoil
- Eurasian water milfoil
- Brittle naiad
- Curly-leaf pondweed
- Curly-leaf hybrid

Growth Form	Scientific Name	Common Name	Coefficient of Conservatism (C)	2004 (Onterra)	2015 (Onterra)
Emergent	*Bolboschoenus fluviatilis*	River bulrush	5		I
	Carex comosa	Bristly sedge	5		I
	Iris pseudacorus	Pale-yellow iris	Exotic		I
	Iris versicolor	Northern blue flag	5	I	I
	Juncus effusus	Soft rush	4		I
	Lythrum salicaria	Purple loosestrife	Exotic		I
	Phragmites australis subsp. americanus	Common reed	5		I
	Sagittaria latifolia	Common arrowhead	3	I	I
	Schoenoplectus acutus	Hardstem bulrush	5		X
	Schoenoplectus tabernaemontani	Softstem bulrush	4	I	I
	Sparganium eurycarpum	Common bur-reed	5		I
	Typha spp.	Cattail spp.	1	I	X
	Zizania spp.	Wild rice sp.	8	I	X
FL	*Nuphar variegata*	Spatterdock	6	I	
	Nymphaea odorata	White water lily	6	X	X
	Persicaria amphibia	Water smartweed	5	I	
FL/E	*Nelumbo lutea*	American lotus	8	X	X
Submergent	*Chara* spp.	Muskgrasses	7		X
	Ceratophyllum demersum	Coontail	3	X	X
	Elodea canadensis	Common waterweed	3	X	X
	Heteranthera dubia	Water stargrass	6	I	X
	Myriophyllum sibiricum	Northern water milfoil	7		X
	Myriophyllum sibiricum X spicatum	Hybrid water milfoil	Exotic		I
	Myriophyllum spicatum	Eurasian water milfoil	Exotic	X	X
	Najas flexilis	Slender naiad	6		X
	Najas guadalupensis	Southern naiad	7		X
	Najas minor	Brittle naiad	Exotic		I
	Potamogeton crispus	Curly-leaf pondweed	Exotic	X	X
	Potamogeton nodosus	Long-leaf pondweed	5	X	X
	Potamogeton praelongus	White-stem pondweed	8		X
	Potamogeton pusillus	Small pondweed	7		X
	Potamogeton richardsonii	Clasping-leaf pondweed	5		I
	Potamogeton X undulatus	Curly-leaf X White-stem pondweed	Exotic		I
	Potamogeton zosteriformis	Flat-stem pondweed	6	X	X
	Ranunculus aquatilis	White water crowfoot	8		X
	Stuckenia pectinata	Sago pondweed	3	I	X
	Vallisneria americana	Wild celery	6	X	X
FF	*Lemna trisulca*	Forked duckweed	6		X
	Lemna minor	Lesser duckweed	5	X	X
	Spirodela polyrhiza	Greater duckweed	5	X	X
	Wolffia spp.	Watermeal spp.	N/A	X	X

FL = Floating Leaf; FL/E = Floating Leaf and Emergent; FF = Free Floating
X = Located on rake during point-intercept survey; I = Incidental Species

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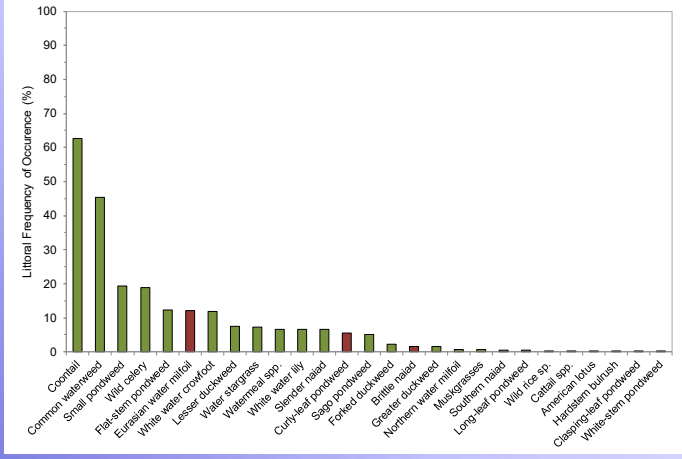
2015 Littoral Frequency of Occurrence



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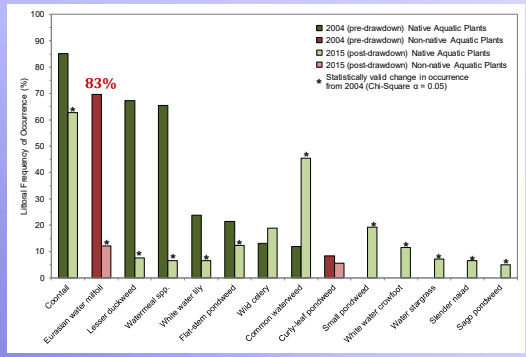
2004 & 2015 Comparison
Littoral Frequency of Occurrence

- Occurrence of vegetation declined from 89% to 77% (13% reduction)



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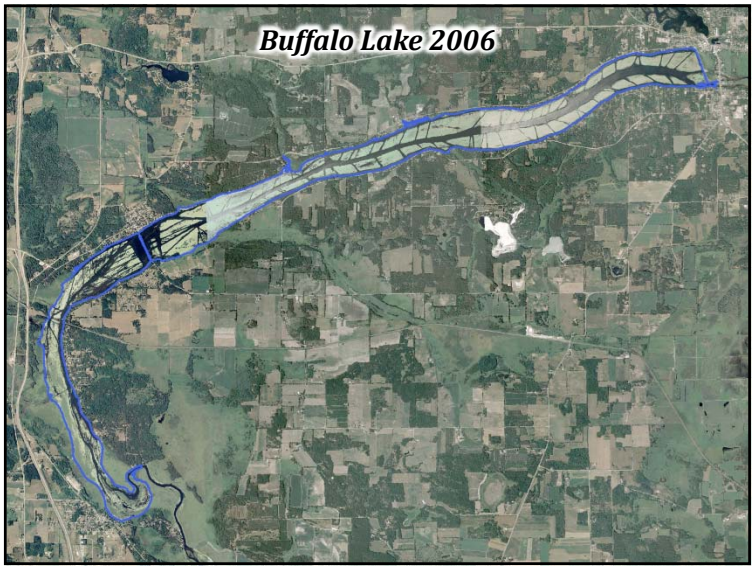
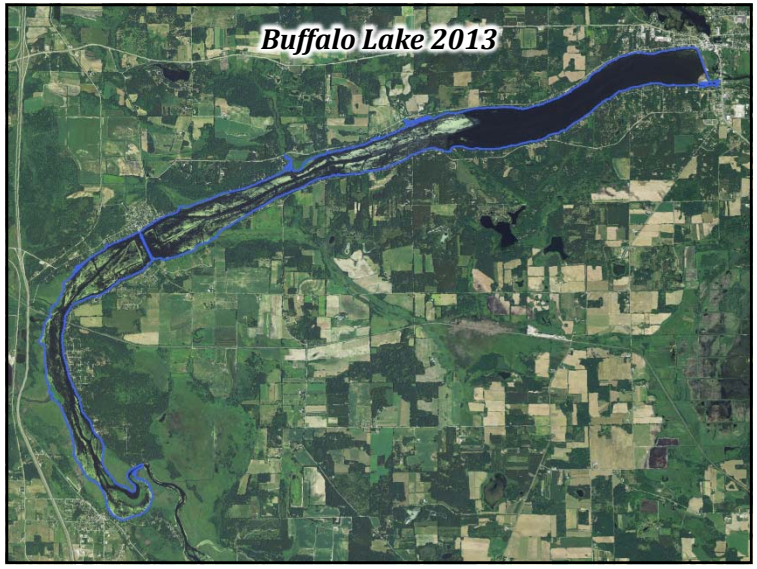
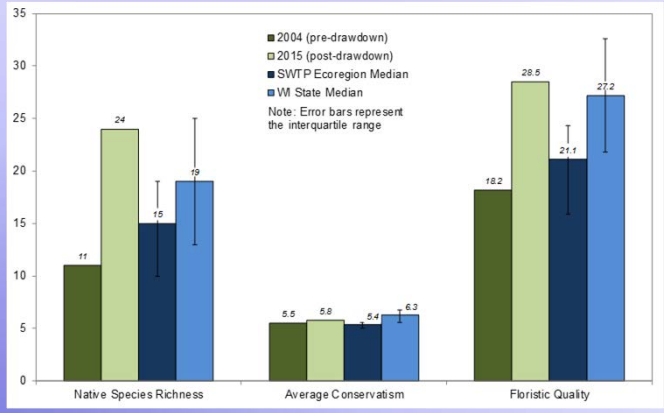




2004 & 2015 Comparison
Floristic Quality Analysis



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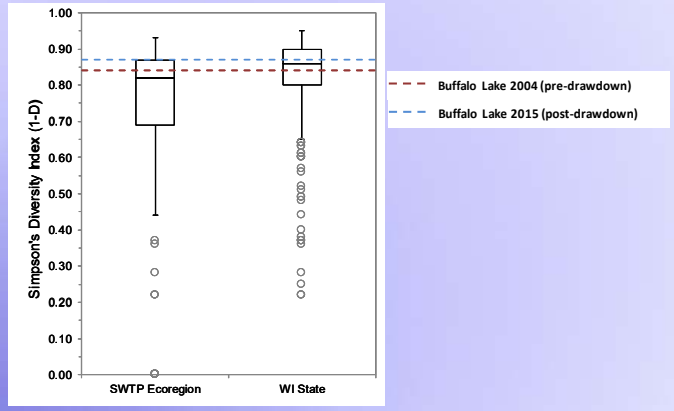
2004 & 2015 Comparison
Simpson's Diversity Index



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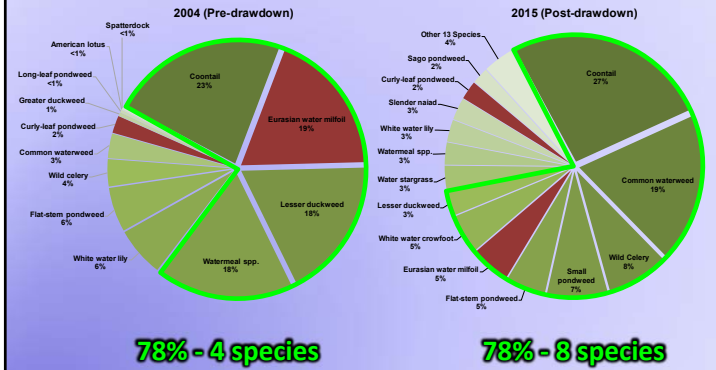
2004 & 2015 Comparison
Relative Frequency of Occurrence



78% - 4 species **78% - 8 species**

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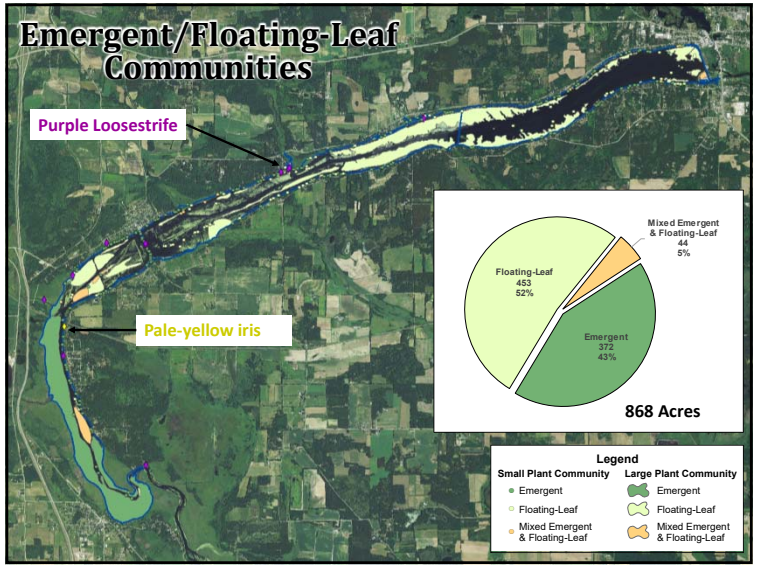
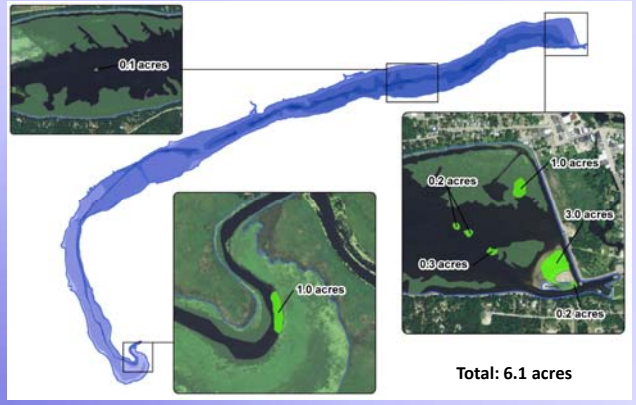
Emergent/Floating-Leaf Communities



American Lotus (Nelumbo lutea)



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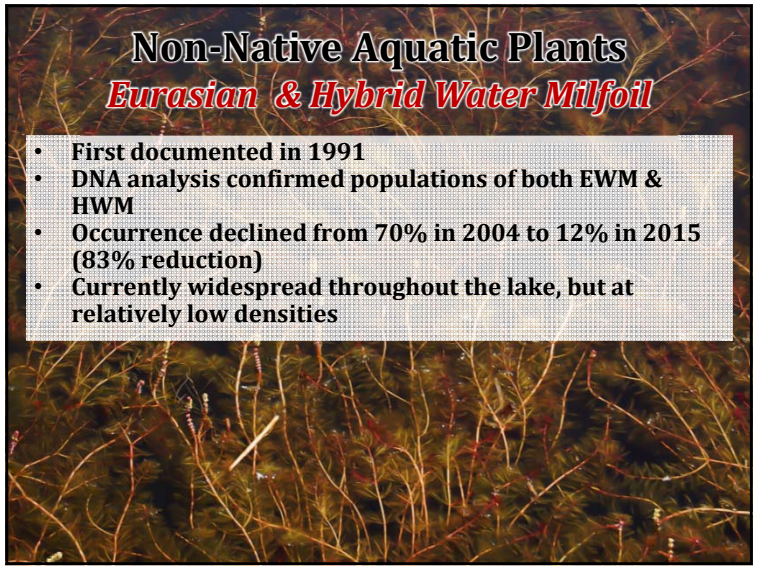
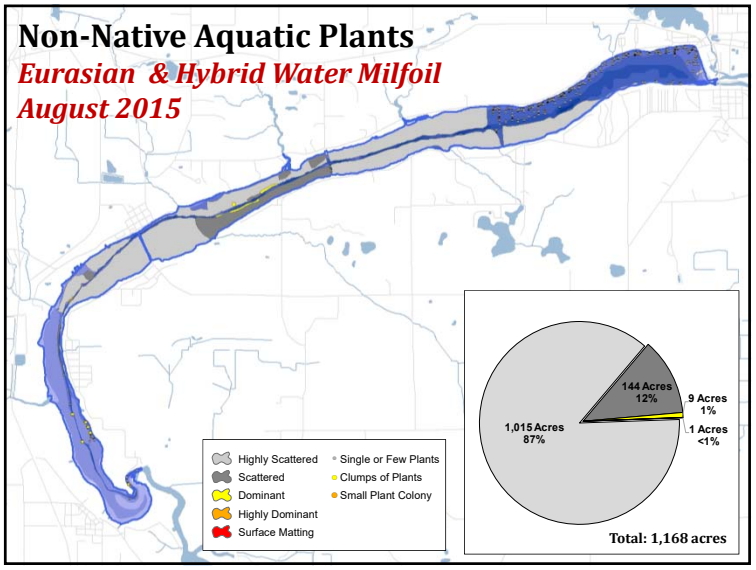
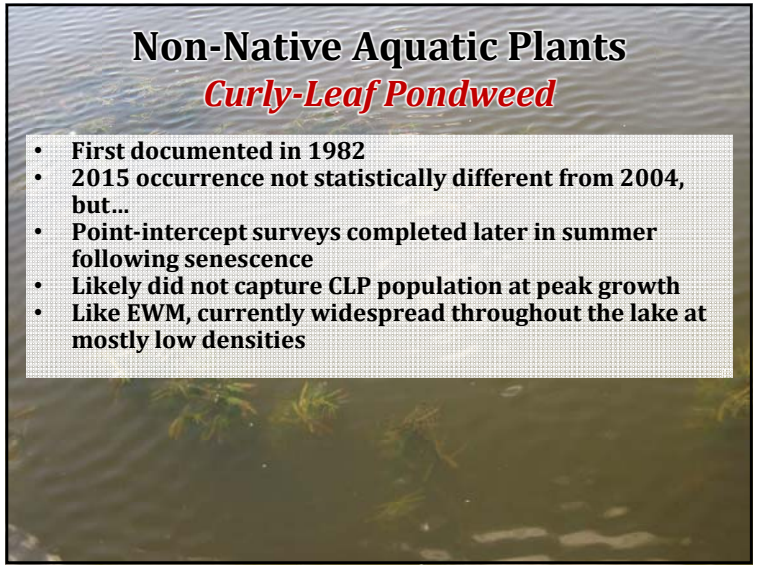
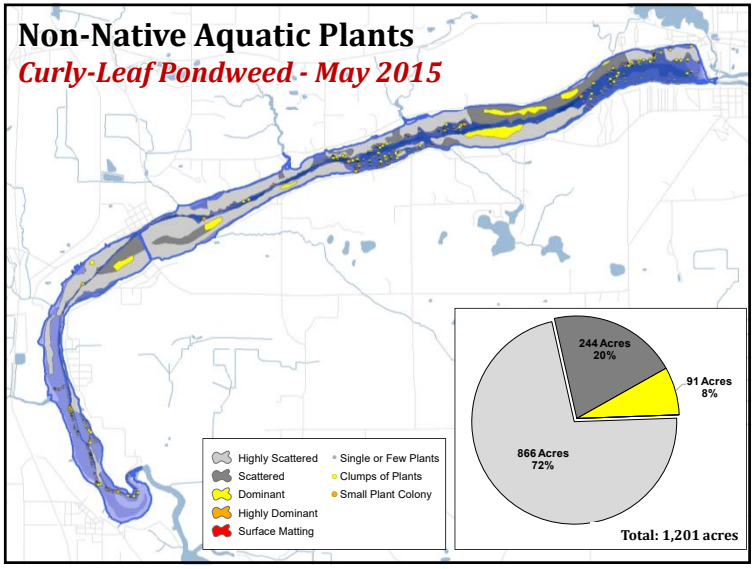

Non-Native Aquatic Plants
Eurasian & Hybrid Water Milfoil
• First documented in 1991
• DNA analysis confirmed populations of both EWM & HWM
• Occurrence declined from 70% in 2004 to 12% in 2015 (83% reduction)
• Currently widespread throughout the lake, but at relatively low densities

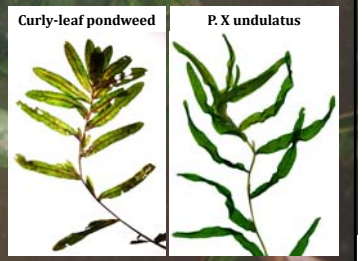

Non-Native Aquatic Plants
Eurasian & Hybrid Water Milfoil
August 2015
Highly Scattered
Scattered
Dominant
Highly Dominant
Surface Matting
Single or Few Plants
Clumps of Plants
Small Plant Colony
144 Acres 12%
9 Acres 1%
1 Acres <1%
1,015 Acres 87%
Total: 1,168 acres


Non-Native Aquatic Plants
Curly-Leaf Pondweed
• First documented in 1982
• 2015 occurrence not statistically different from 2004, but…
• Point-intercept surveys completed later in summer following senescence
• Likely did not capture CLP population at peak growth
• Like EWM, currently widespread throughout the lake at mostly low densities


Non-Native Aquatic Plants
Curly-Leaf Pondweed - May 2015
Highly Scattered
Scattered
Dominant
Highly Dominant
Surface Matting
Single or Few Plants
Clumps of Plants
Small Plant Colony
244 Acres 20%
91 Acres 8%
866 Acres 72%
Total: 1,201 acres

Non-Native Aquatic Plants
Curly-Leaf Pondweed X White-Stem Pondweed (P. X undulatus)

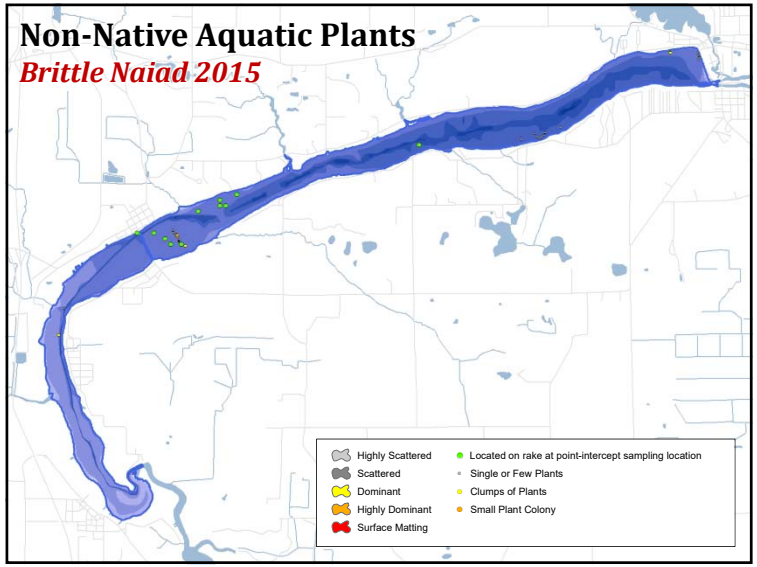
- Identified based on morphology
- DNA analysis necessary for true ID confirmation
- Distribution in WI unknown
- Found in Puckaway & Madison area lakes
- So far, doesn't appear to be aggressive
- Very small population in Buffalo Lake
- Not a concern at this time



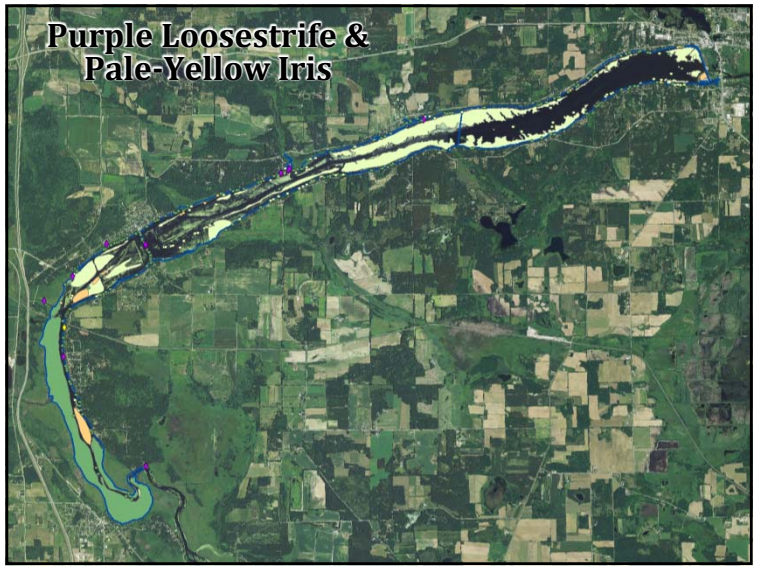
Non-Native Aquatic Plants
Brittle Naiad

- First documented in 2014
- 2015 littoral occurrence of 1.6%
- Difficult to map as it grows relatively low and is often not visible from the surface
- Overall, population is still small in Buffalo Lake

Non-Native Aquatic Plants
Brittle Naiad 2015



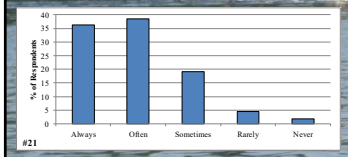
Non-Native Aquatic Plants
Purple Loosestrife & Pale-Yellow Iris



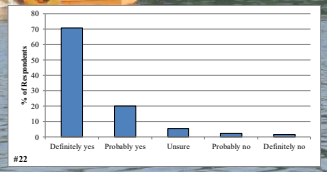
Nuisance Aquatic Plant Growth

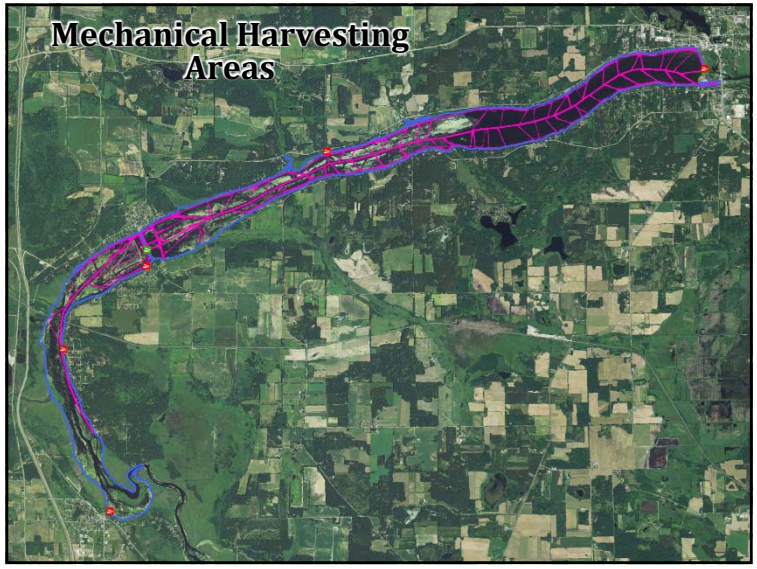
- Primarily caused by native aquatic plants in 2016
  - Coontail, waterweed, water crow-foot, white water lily
- Lake's shallow nature, nutrient-rich water & sediment, high water clarity are ideal for abundant growth
- Currently harvesting ~350 acres of navigational lanes

How often does aquatic plant growth, including algae, negatively impact your enjoyment of Buffalo Lake?



Do you believe aquatic plant control is needed on Buffalo Lake?





Conclusions

Water Quality

- Overall good for shallow lowland drainage lake
- Phosphorus is high, but phytoplankton limited by nitrogen in summer – chlorophyll-*a* & water clarity good
- Dense aquatic plant growth likely cause of increase in P and decline in N in summer
- Zooplankton likely reduce occurrence of blue-green algae
- Water quality appears unchanged after drawdown (expected)
- Aquatic plants essential for maintaining current conditions (clear-state)

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Conclusions

Watershed

- Majority of direct watershed (46%) comprised of forests & wetlands
- 41% comprised of row crop agriculture
- ~77% of annual P budget estimated to originate from row crop agriculture within direct watershed
- ~7% of P originates from Swan, Mason, Ennis, & Williams Lakes subwatersheds
- Given N-limitation in summer, P concentrations would need to be reduced by >66%, or 75% of watershed converted to forest

Immediate Shoreland Zone

- ~58% of shoreland undeveloped – focus areas for protection
- ~ 16% highly developed – focus areas for restoration
- Coarse woody habitat ratio of 23:1

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Conclusions

Aquatic Plants

- Significant changes between 2004 and 2015
- ~13% reduction in overall occurrence of vegetation
- Large reduction in EWM (and likely CLP)
- Significant increase in native species richness & diversity
- Abundant growth due to lake's shallow nature, nutrient-rich water & sediment, & higher water clarity
- Essential for maintaining water quality

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Next Steps – Planning Meeting II

- How did the drawdown impact fisheries?
- Dave Bartz at next meeting
- How can we prevent AIS from increasing to pre-drawdown levels & also maintain native aquatic plant community?
- Data indicate winter water level drawdown an effective management tool
  - How often would these need to be done (frequency)?
  - How quickly does AIS increase following drawdown?
  - What is the trigger or threshold for initiating a drawdown?
  - Need to understand impact to fishery
  - Impacts to winter recreation & economy

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Implementation Plan Example

- **Management Goal: Maintain Buffalo Lake's Current Water Quality Conditions**
  - Management Action: Initiate annual water quality monitoring through the Citizens Lake Monitoring Network Program.

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Many of the graphics used in this presentation were supplied by:

Wisconsin Lakes Partnership

UW Extension

Wisconsin Dept. of Natural Resources

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B

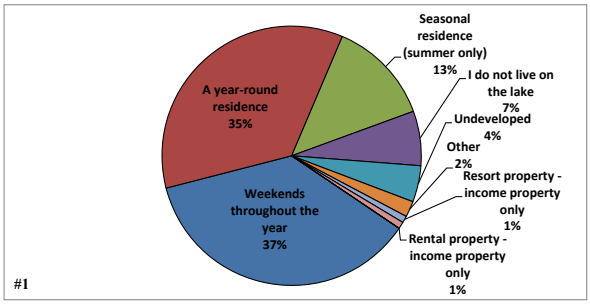
APPENDIX B

Stakeholder Survey Response Charts and Comments

Returned Surveys	354
Sent Surveys	770
Response Rate (%)	46.0

#1 How is your property on Buffalo Lake utilized?

	Total	%
Weekends throughout the year	129	*36.5*
A year-round residence	125	*35.4*
Seasonal residence (summer only)	46	*13.0*
I do not live on the lake	24	*6.8*
Undeveloped	16	*4.5*
Other	7	*2.0*
Resort property - income property only	3	*0.8*
Rental property - income property only	3	*0.8*
I am a renter and do not own the property	0	*0.0*
	353	100.0



#2 How many days each year is your property used by you or others?

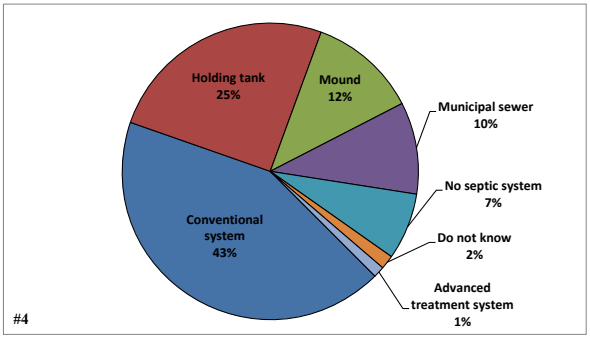
Answered Question	310	
Average	174.7	Days
Standard deviation	145.4	

#3 How long have you owned or rented your property on or near Buffalo Lake

Answered Question	331	
Average	17.8	Years
Standard deviation	13.9	

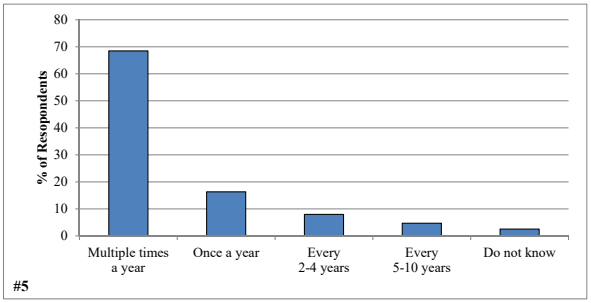
#4 What type of septic system does your property utlized

	Total	%
Conventional system	141	*42.9*
Holding tank	83	*25.2*
Mound	39	*11.9*
Municipal sewer	33	*10.0*
No septic system	24	*7.3*
Do not know	5	*1.5*
Advanced treatment system	4	*1.2*
	329	*74.8*



#5 How often is the septic tank on your property pumped?

	Total	%
Every 2-4 years	189	*68.5*
Once a year	45	*16.3*
Multiple times a year	22	*8.0*
Do not know	13	*4.7*
Every 5-10 years	7	*2.5*
	276	*100.0*



#6 How many years ago did you first visit Buffalo Lake?

Answered Question	348
Average	23.6
Standard deviation	16.6

#7 Have you personally fished on Buffalo Lake in the past five years?

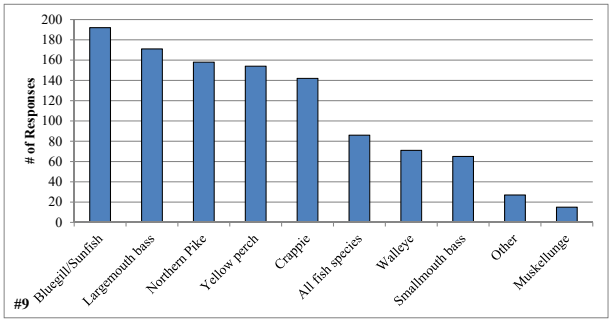
	Total	%
Yes	287	*81.1*
No	67	*18.9*
	354	*100.0*

#8 For how many years have you fished Buffalo Lake?

Answered Question	284
Average	20.5
Standard deviation	14.9

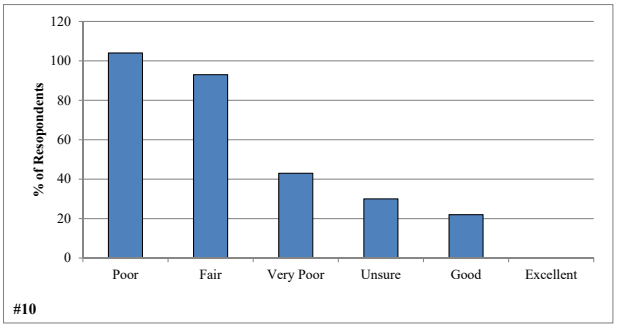
#9 What species of fish do you like to catch on Buffalo Lake?

	Total
Bluegill/Sunfish	192
Largemouth bass	171
Northern Pike	158
Yellow perch	154
Crappie	142
All fish species	86
Walleye	71
Smallmouth bass	65
Other	27
Muskellunge	15



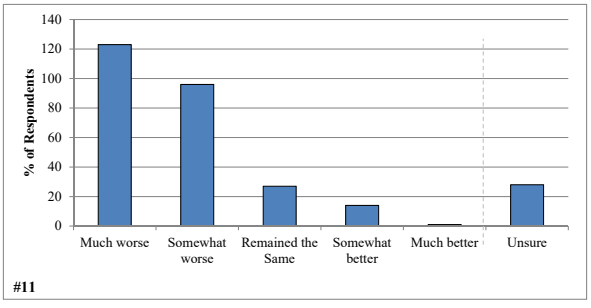
#10 How would you describe the current quality of fishing on Buffalo Lake?

	Total	%
Poor	104	*35.6*
Fair	93	*31.8*
Very Poor	43	*14.7*
Unsure	30	*10.3*
Good	22	*7.5*
Excellent	0	*0.0*
	292	*100.0*



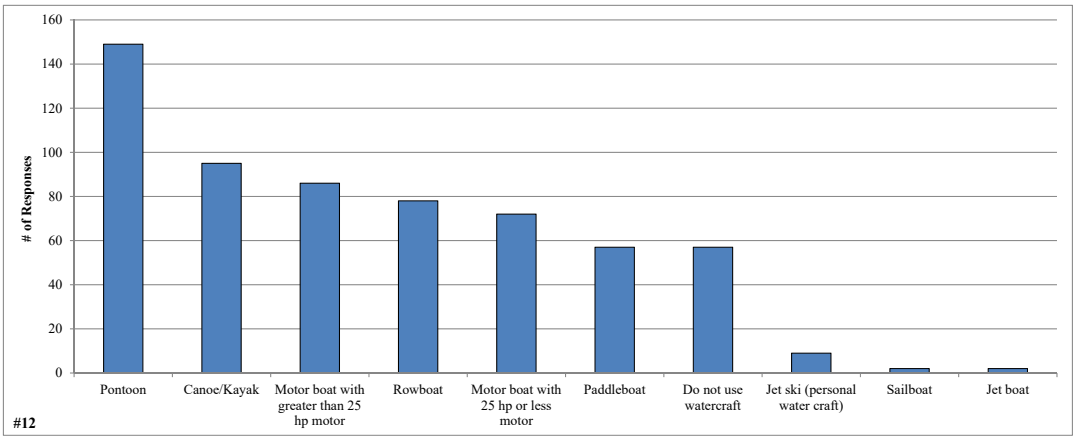
#11 How has the quality of fishing changed since you started fishing on Buffalo Lake?

	Total	%
Much worse	123	*42.6*
Somewhat worse	96	*33.2*
Remained the Same	27	*9.3*
Somewhat better	14	*4.8*
Much better	1	*0.3*
Unsure	28	*9.7*
	289	*100.0*



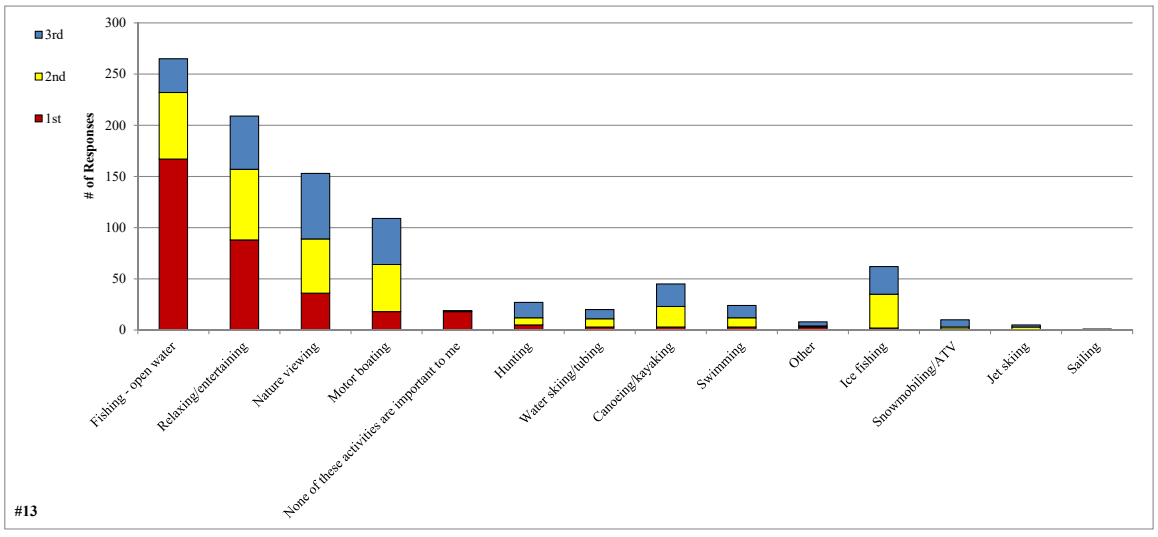
#12 What types of watercraft do you currently use on Buffalo Lake?

	Total
Pontoon	149
Canoe/Kayak	95
Motor boat with greater than 25 hp motor	86
Rowboat	78
Motor boat with 25 hp or less motor	72
Paddleboat	57
Do not use watercraft	57
Jet ski (personal water craft)	9
Sailboat	2
Jet boat	2



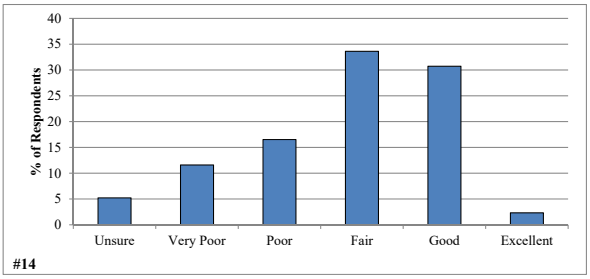
#13 Please rank up to three activities that are important reasons for owning your property on or near Buffalo Lake.

	1st	2nd	3rd	*% ranked*
Fishing - open water	167	65	33	*27.7*
Relaxing/entertaining	88	69	52	*21.8*
Nature viewing	36	53	64	*16.0*
Motor boating	18	46	45	*11.4*
None of these activities are important to me	18	1	0	*2.0*
Hunting	5	7	15	*2.8*
Water skiing/tubing	3	8	9	*2.1*
Canoeing/kayaking	3	20	22	*4.7*
Swimming	3	9	12	*2.5*
Other	3	1	4	*0.8*
Ice fishing	2	33	27	*6.5*
Snowmobiling/ATV	1	2	7	*1.0*
Jet skiing	0	3	2	*0.5*
Sailing	0	0	1	*0.1*
	347	317	293	*100.0*



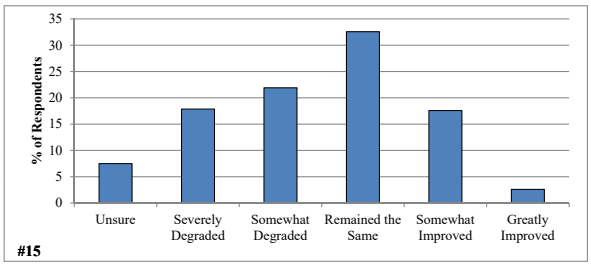
#14 How would you describe the current water quality of Buffalo Lake?

	Total	%
Unsure	18	*5.2*
Very Poor	40	*11.6*
Poor	57	*16.5*
Fair	116	*33.6*
Good	106	*30.7*
Excellent	8	*2.3*
	345	*100.0*



#15 How has the water quality changed in Buffalo Lake since you first visited the lake?

	Total	%
Unsure	26	*7.5*
Severely Degraded	62	*17.9*
Somewhat Degraded	76	*21.9*
Remained the Same	113	*32.6*
Somewhat Improved	61	*17.6*
Greatly Improved	9	*2.6*
	347	*100.0*



#16 Have you ever heard of aquatic invasive species?

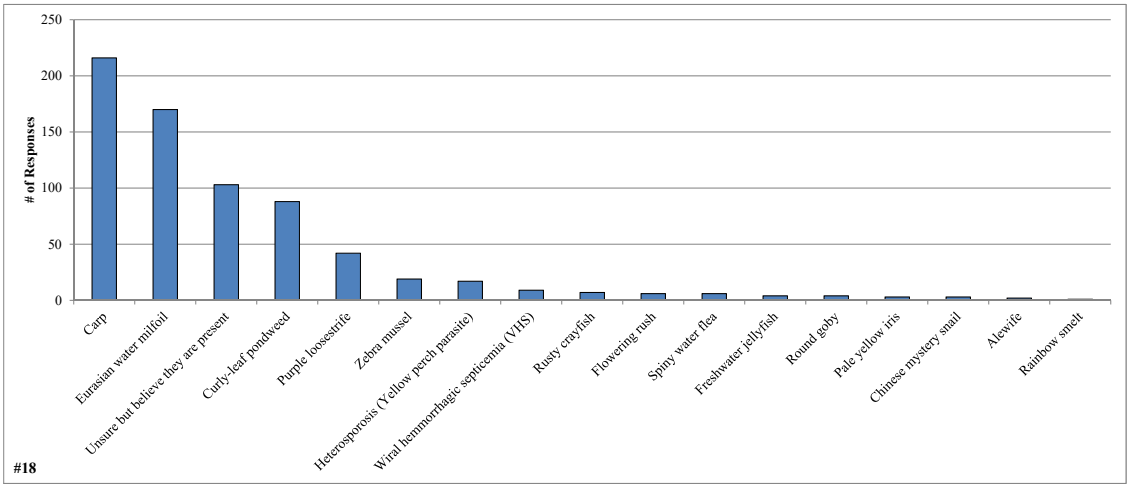
	Total	%
Yes	319	*93.0*
No	24	*7.0*
	343	*100.0*

#17 Are you aware of aquatic invasive species in the lake?

	Total	%
Yes	293	*93.9*
No	19	*6.1*
	312	*100.0*

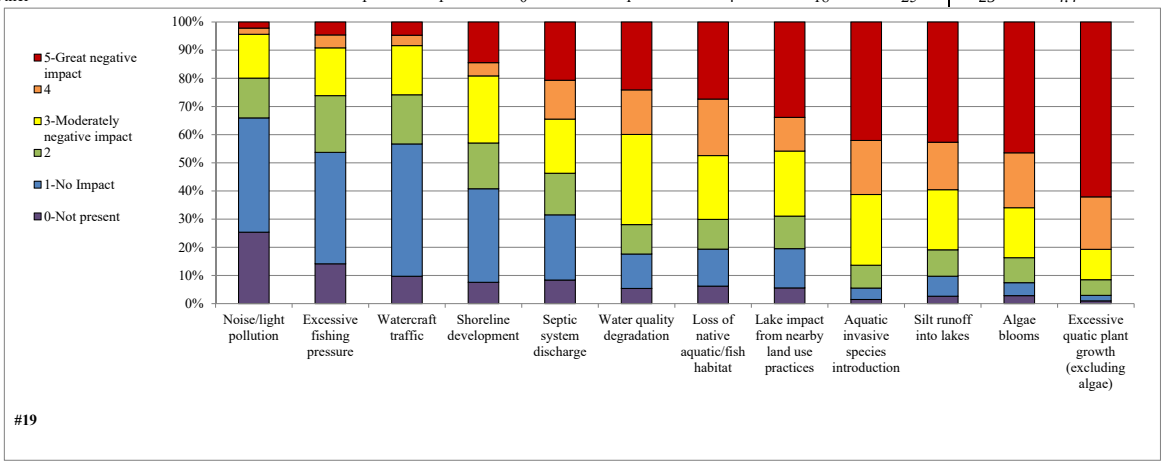
#18 Which aquatic invasive species are you aware of in the lake?

	Total
Carp	216
Eurasian water milfoil	170
Unsure but believe they are present	103
Curly-leaf pondweed	88
Purple loosestrife	42
Zebra mussel	19
Heterosporosis (Yellow perch parasite)	17
Wiral hemmorrhagic septicemia (VHS)	9
Rusty crayfish	7
Flowering rush	6
Spiny water flea	6
Freshwater jellyfish	4
Round goby	4
Pale yellow iris	3
Chinese mystery snail	3
Alewife	2
Rainbow smelt	1
Other	18



#19 To what level do you believe each of the following factors may currently be negatively impacting Buffalo Lake?

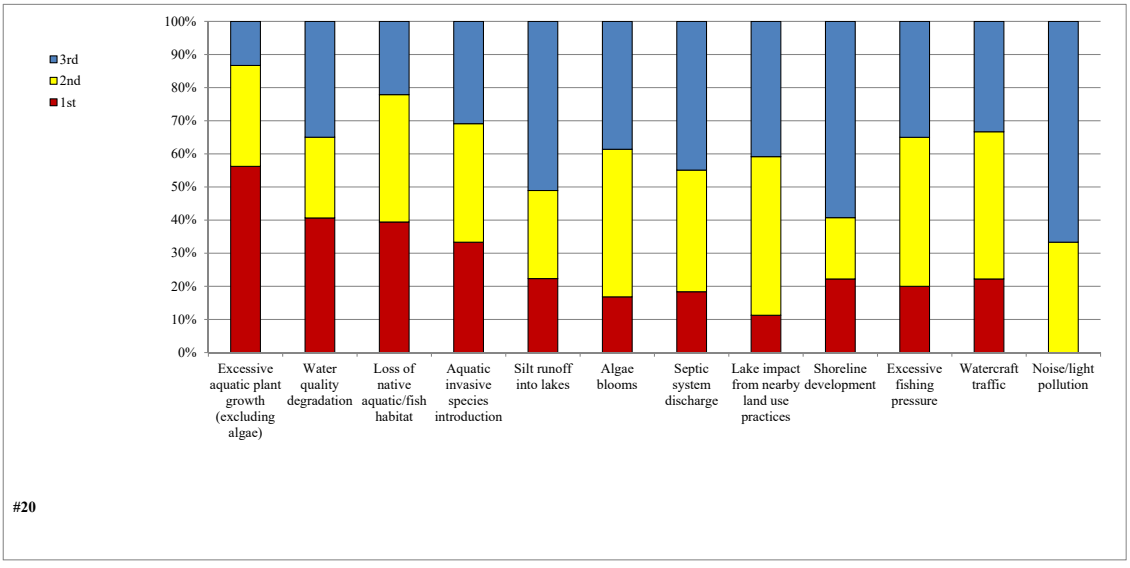
	0-Not present	1-No Impact	2	3-Moderately negative impact	4	5-Great negative impact	Unsure	*Total*	*Average*
Noise/light pollution	70	112	39	43	6	6	43	*276*	*1.4*
Excessive fishing pressure	40	112	57	48	13	13	38	*283*	*1.7*
Watercraft traffic	29	140	52	52	11	14	23	*298*	*1.7*
Shoreline development	21	92	45	66	13	40	43	*277*	*2.3*
Septic system discharge	17	47	30	39	28	42	121	*203*	*2.7*
Water quality degradation	15	34	29	89	44	67	41	*278*	*3.1*
Loss of native aquatic/fish habitat	17	36	29	62	55	75	46	*274*	*3.2*
Lake impact from nearby land use practices	14	35	29	58	30	85	74	*251*	*3.2*
Aquatic invasive species introduction	4	11	22	68	52	114	47	*271*	*3.8*
Silt runoff into lakes	7	19	25	57	45	114	59	*267*	*3.7*
Algae blooms	8	13	25	50	55	131	42	*282*	*3.9*
Excessive quatic plant growth (excluding algae)	3	6	17	33	57	190	24	*306*	*4.3*
Other	1	1	0	1	4	18	25	*25*	*4.4*



#19

#20 From the list below, please rank your top three concerns regarding Buffalo Lake.

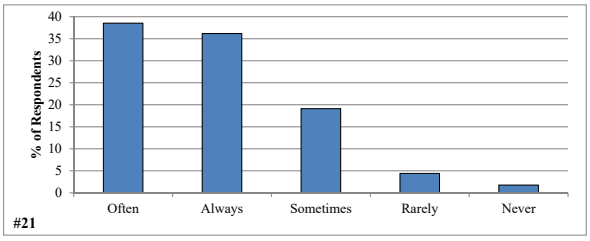
	1st	2nd	3rd	*% Ranked*
Excessive aquatic plant growth (excluding algae)	131	71	31	*23.9*
Water quality degradation	50	30	43	*12.6*
Loss of native aquatic/fish habitat	41	40	23	*10.7*
Aquatic invasive species introduction	41	44	38	*12.6*
Silt runoff into lakes	21	25	48	*9.6*
Algae blooms	17	45	39	*10.3*
Septic system discharge	9	18	22	*5.0*
Lake impact from nearby land use practices	8	34	29	*7.3*
Shoreline development	6	5	16	*2.8*
Excessive fishing pressure	4	9	7	*2.0*
Watercraft traffic	2	4	3	*0.9*
Noise/light pollution	0	1	2	*0.3*
Other	5	2	12	*1.9*
Total	335	328	313	



#20

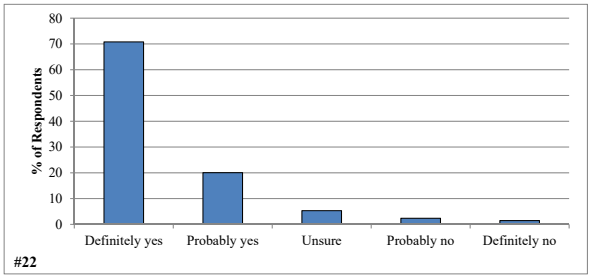
#21 During open water season how often does aquatic plant growth, including algae, negatively impact your enjoyment of Buffalo

	Total	%
Often	131	*38.5*
Always	123	*36.2*
Sometimes	65	*19.1*
Rarely	15	*4.4*
Never	6	*1.8*
	340	*100.0*



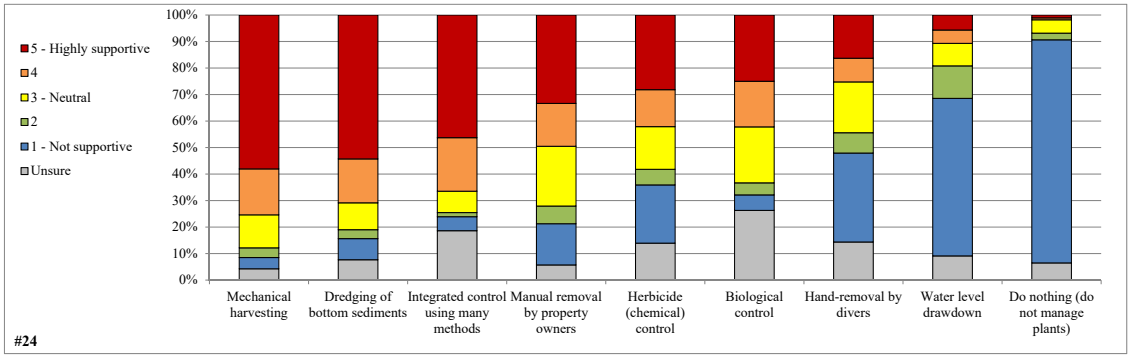
#22 Considering your answer to the question #21, do you believe aquatic plant control is needed on Buffalo Lake?

	Total	%
Definitely yes	240	*70.8*
Probably yes	68	*20.1*
Unsure	18	*5.3*
Probably no	8	*2.4*
Definitely no	5	*1.5*
	339	*100.0*



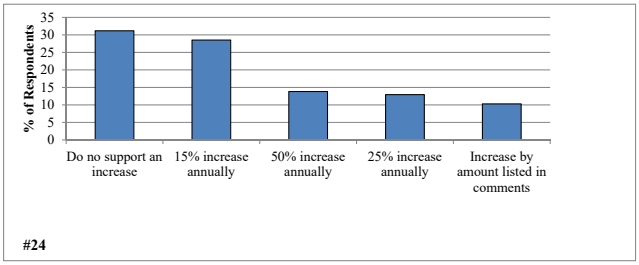
#23 Aquatic plants can be professionally managed using many techniques. What is your level of support for the responsible use of the following techniques on Buffalo Lake?

	1 - Not supportive	2	3 - Neutral	4	5 - Highly supportive	Unsure	Total	Average
Mechanical harvesting	14	12	41	57	191	14	*315*	*3.4*
Dredging of bottom sediments	26	11	33	54	177	25	*301*	*4.3*
Integrated control using many methods	17	5	26	65	149	60	*262*	*0.2*
Manual removal by property owners	49	21	71	51	105	18	*297*	*4.0*
Herbicide (chemical) control	71	19	52	45	91	45	*278*	*3.7*
Biological control	18	14	65	53	77	81	*227*	*1.2*
Hand-removal by divers	105	24	60	28	51	45	*268*	*1.5*
Water level drawdown	189	39	27	16	18	29	*289*	*0.5*
Do nothing (do not manage plants)	234	7	14	2	3	18	*260*	*0.5*



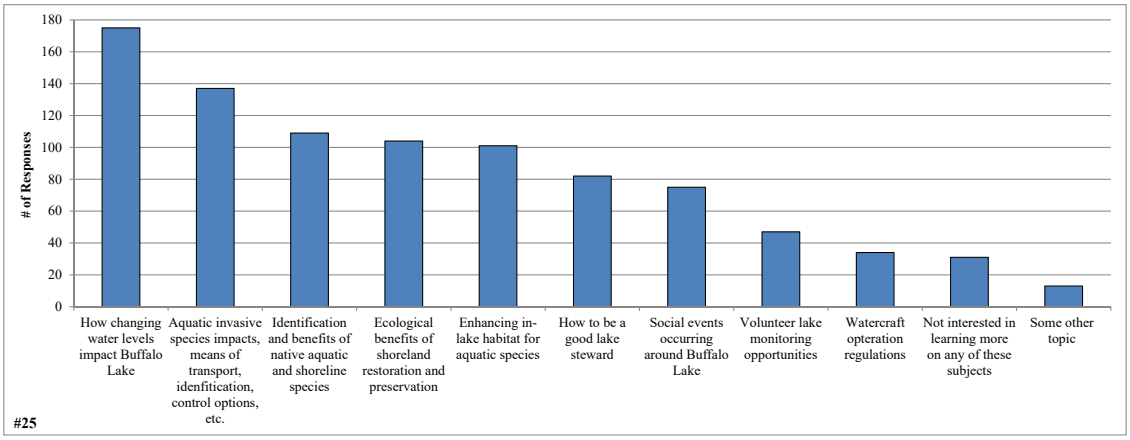
#24 During open water season how often does aquatic plant growth, including algae, negatively impact your enjoyment of Buffalo

	Total	%
Do no support an increase	106	*31.2*
15% increase annually	97	*28.5*
50% increase annually	47	*13.8*
25% increase annually	44	*12.9*
Increase by amount listed in comments	35	*10.3*
	329	*96.8*



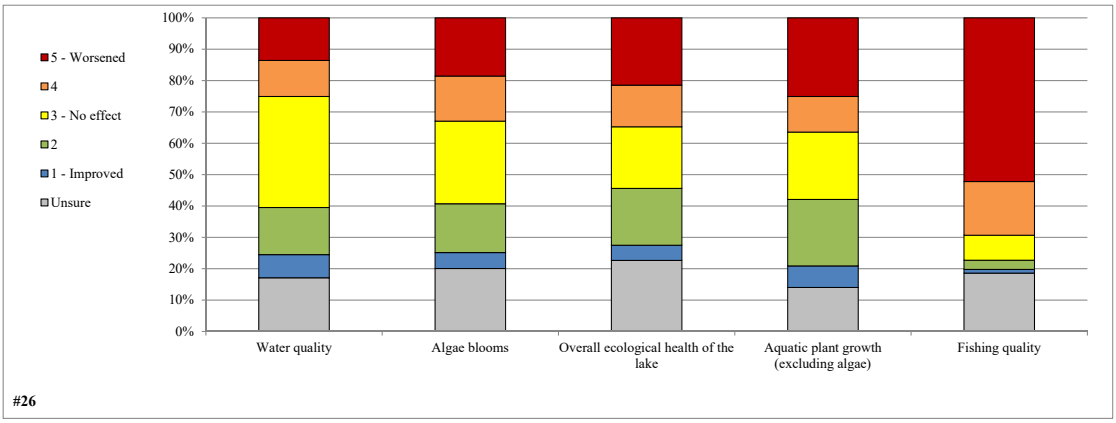
#25 Which of these subjects would you like to learn more about?

	Total
How changing water levels impact Buffalo Lake	175
Aquatic invasive species impacts, means of transport, idenfitication, con	137
Identification and benefits of native aquatic and shoreline species	109
Ecological benefits of shoreland restoration and preservation	104
Enhancing in-lake habitat for aquatic species	101
How to be a good lake steward	82
Social events occurring around Buffalo Lake	75
Volunteer lake monitoring opportunities	47
Watercraft opteration regulations	34
Not interested in learning more on any of these subjects	31
Some other topic	13



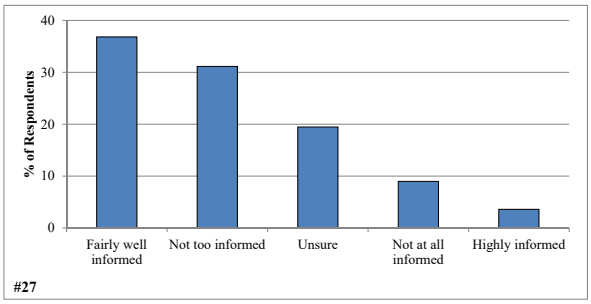
#26 What is your opinion of the drawdown's impacts on the health of Buffalo Lake

	1 - Improved	2	3 - No effect	4	5 - Worsened	Unsure	Total	Average
Water quality	25	51	120	39	46	58	*281*	*3.1*
Algae blooms	17	52	88	48	62	67	*267*	*3.3*
Overall ecological health of the lake	16	60	65	44	71	75	*256*	*3.4*
Aquatic plant growth (excluding algae)	23	71	72	38	84	47	*288*	*3.3*
Fishing quality	4	10	27	58	177	63	*276*	*4.4*



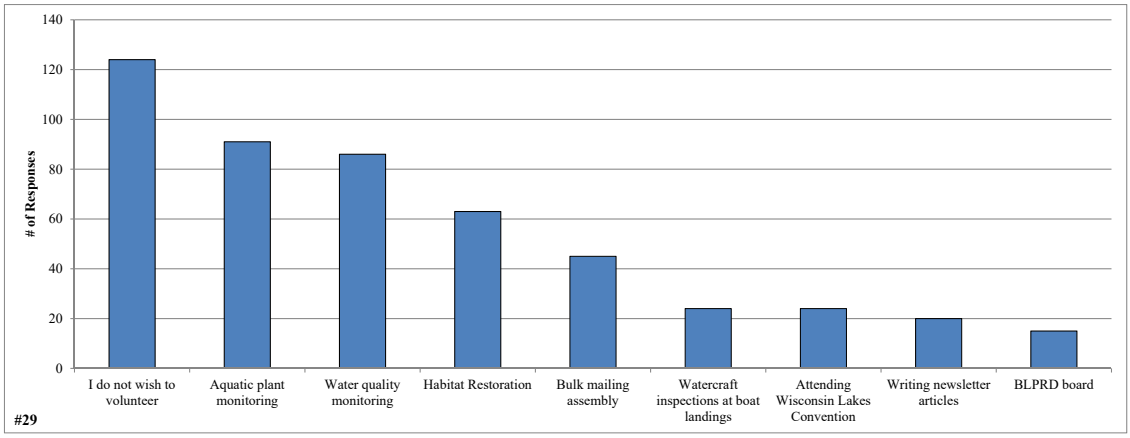
#28 How informed has the Buffalo Lake Lake Association kept you regarding issues with the lake and its management?

	Total	%
Fairly well informed	123	*36.8*
Not too informed	104	*31.1*
Unsure	65	*19.5*
Not at all informed	30	*9.0*
Highly informed	12	*3.6*
	334	*100.0*



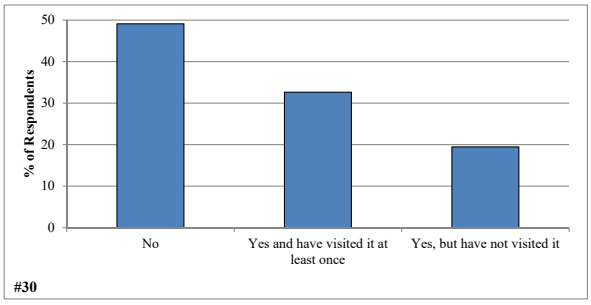
#29 Please circle the activities you would be willing to participate in if the BLPRD requires additional assistance.

	Total
I do not wish to volunteer	124
Aquatic plant monitoring	91
Water quality monitoring	86
Habitat Restoration	63
Bulk mailing assembly	45
Watercraft inspections at boat landings	24
Attending Wisconsin Lakes Convention	24
Writing newsletter articles	20
BLPRD board	15
Other	28



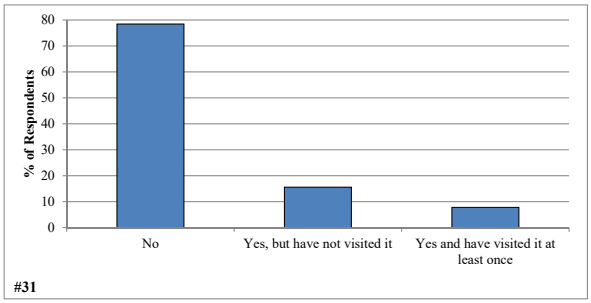
#30 Are you aware that the BLPRD maintains a District website?

	Total	%
No	164	*49.1*
Yes and have visited it at least once	109	*32.6*
Yes, but have not visited it	65	*19.5*
	338	*101.2*



#31 Are you aware that the BLPRD maintains a Facebook page?

	Total	%
No	262	*78.4*
Yes, but have not visited it	52	*15.6*
Yes and have visited it at least once	26	*7.8*
	340	*101.8*



Survey Number	1g Comment	9i Comment	13m Comment	18r Comment
1				
2			Shooting Clays	Unsure
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25	At present visit occasionally			
26				
27				
28				
29				
30				
31				
32				
33				
34				
35				
36				
37				
38				

Survey Number	19m Comment	20m Comment	24 Comment
1			
2		Poor Management	Already pay too much for property owned, set fees from visitors.
3			
4		Lake is completely useless	No that's why Im moving!!
5			
6			
7			DNR restrict my use of my land to 30%. I am unable to make a chanel for my boat - can not cut bushes or trees. DNR should pay 70% of any cost. They control lake property.
8			
9			
10			
11	Require (?) seasonal people -		None - We do not
12			The people around this lake have had their guts full of fees! The water level has to be brought up! And dredged out like it was done in the 1920!
13			10% annually for 3 years
14			Would need more info but not opposed to increase.
15			or $20.00
16			
17			
18			$50 -$75 Bu must see improvement of water and weeds.We need some weeds but not so thick you could walk across the lake on them.
19			
20			depends on what technique - in general aquatic weeds don't bother us. We don't support herbicide control of weeds. Various mechinical control is OK but not necessarily that effective. It's always going to be a shallow weedy lake unless its dredged in a major way. That's probably not cost effective. Drawdowns might help periodically.
21			We pay $200 and only seen the weed eater once.
22			
23			
24			
25			
26			
27	Mint Farm does not dredge setaling (?) pond		Mechanical harvesting would do a better job if the harvester wer not driven so fast while cutting, moving fast pushes weeds over and don't cut the weeds. Please check with equipment maker. DO DNOT ASK THE PEOPLE RUNNING THE HARVESTER. THEY DON'T HAVE COMMON CENTS.
28			
29			We don't feel our $200 is used properly as it is.
30			You can drain for all I care. Rivers are nice.
31			
32	Wild Rice		One time assessment
33			100 % increase - lake is so choked with weeds that recreational usage is almost impossible.
34			
35			if shown something would work, I would be willing to spend a little more.
36			
37			I pay $200 now & never fish or boat for 7 years.
38			

Survey Number	25k Comment	27 Comment	29j Comment
1		Comments from neighbors suggest the fishing has suffered	
2		Cannot afford license. Going from local comments and fishing activity on the lake.	
3			
4		You people ruined the lake it is now a swamp turned into a nasty stinky sespool	
5			
6			
7		I use to ice fish and catch limit in 1 - 2 hours now nothing. Also did some fishing from shore at one time very good now nothing.	
8			
9		Very poor fishing. Channel not marked clearly or kept free of weeds. Laterals not done.	
10			
11			None
12		Come on people! Where is your head in the sand! The lake is about 17" to 24" lower than it was!	
13		The compaction of silt was loosened up after filling up. The lake is shallower than before. I don't care what anyone says, it is shallower. This sucks.	
14		The fishing dropped off but seems to be coming back.	In future but not now,
15			
16			
17			
18		By next year the fishing should get better, it always takes about 3 years. Does anyone on the board remember the drawdown in 1970? The weeds were not bad this year. How will they be next year	
19			Don't live there
20			Not around enough to volunteer
21			
22			
23			
24			
25			
26			
27		A. Why were the large perch taken from Buffalo Lake and ut in Lake Delton by the DNR? B. we didn't have wild rice.	
28			
29		Of course the drawdown affected fishing. But the restocking has already brought it back up. Also the fish bridge helps bring fish in. It helped with bad weed growth and algae but this past summer weed are coming back and are starting to get very bad again.	
30			
31			
32		Could not navigate lake in boat due to plant growth. Water was stagnant. Fishing poor because could not even get through lake undesireable to look at	
33		lost usage o lake for almost 2 years and once lake returned to normal level (which I believe is too low) the weeds have been out of control making boating terrible - even pontoon boats have a terrible time navigating.	
34			
35		fishing quality left when water did- may have removed some weeds but have new ones to replaced those removed	
36			
37		Doesn't sem to be any large fish coming out of the lake now	
38			

Survey Number	Other Comments (and Question 32)
1	
2	
3	I am hopeful that the lake will recover from the drawdown. A worsening of conditions can be expected for the first few years.
4	I think everyone is overtaxed for living on a swamp!!
5	
6	
7	I own 200' on Buffalo Lake. It is a swamp unable to use it. I can not make a channel for my boat. DNR controls 70% of shoreline they should contribute to any and all expenses.
8	
9	
10	
11	We are back lot - no lake access yet you assess dues
12	It won't matter what I say! You will do what you do, which in my opinion i nothing! There is only 3 things to save this lake! 1. Dredge out as was done in 1920! 2. Spray the weeds from an airplane. 3. Start to address the septic tank run off also! The muck farms and buffalo shit run off in spring! (I have been their and seen that)
13	I feel dredging of the lake & make small islands with the sentiment woul greatly increase the use of Buffalo Lake. With a deeper channe better flow of water to keep it clear of weeds in the channel then manage the rest of the lake as needed. This would bring many more tourist to our area to help support all businesses.
14	District needs to maintain channels for navigation. West of the causeway they seem to move channel hopefully with draw down they have identified the natural channel and will mark the same each year. This year the channel on the north shore did not get cleared to the west end then back to RR bridge channel. People want to be able to navigate w/o constantly getting bogged down with weeds.
15	We truly enjoyed being involved in organizing the district. I'm too old to get involved now! I appreciate all your group does for the lake.
16	Wasted manpower. Hiring people not familiar with the lake.
17	Maintenance on the lake is poor. Channels along the shore were poorly maintained.
18	The weeds were not bad this year. We cannot let them get a strong foot hold back in the lake.
19	
20	We generally enjoy fishing, kayaking and viewing nature. None of that is partically hurt by a weedy lake. We would concentrate on maintaining a healthy weed population with possible harvesting to enable boat access to shore and whatever non-herbicide control might be needed to deal with excessive algae or invassive weeds.
21	Have no computer.
22	
23	
24	Haven't been there enough to respond
25	Whether I keep or sell family home the beauty of the lake is a treasured asset. Due to current problems can only reside on lake a few weeks each year! Thank you for this survey.
26	Water level too low
27	Poor weed harvesting - DNR will remove fish but will not restock the lake. Will not einforce no wake near property
28	I think weed cutting and removal needs to improve
29	We as well as everyone we've talked to think the way the weed cutting system has been handled is very poor. The person/persons in charge of this are doing a very poor job. Our monies should be used more adequetley regarding this.
30	
31	
32	Very frustrated with condition of lake - no fun anymore
33	I would like to see the lake become a beautiful mostly weedless body of water that is not just a fishing habitat. However, I would hate for it to turn into a crowded "Lake Geneva" type area.
34	
35	websites do not keep stakeholders up to date on information
36	It was a good idea to widen the causway but because of the big rocks or culvert(?) I can no longer fish from shore due to my age and balance.
37	
38	I came to Buffalo Lake because it was an amazing fishery and a quiet and safe lake. I believe the fishing will return to pre-drawdown levels and it remains a safe and peaceful boating environment.

Survey Number	1g Comment	9i Comment	13m Comment	18r Comment
39		Catfish		
40				
41				
43				
44				
45				
46				
47				
48				
49				
50	Vacation Home	bullhead		
51				
52				
53				
54				
55				
56				
57				
58				
59		catfish, bullheads		
60				
61				
62				lots of weeds but don't know all of them.
63				
64				
65				Rough fish coming up new ladder
66				
67				
68				
69				
70				
71				
72				
73				
74	All year every other week			
75				
76				
77				
78		unknown		
79				
80				

Survey Number	19m Comment	20m Comment	24 Comment
39			100 - 200 %
40			
41			Why do we pay dues at all. Why were dues paid during recent period of draw down.
43			Cattail growth at shoreline where we never had them before - very pervasive
44			
45			Pan fish are hard to find
46			I would be in support of an increase if there was an actual improvement over $400 per year for nothing so far!
47			
48			
49			
50			
51			
52			$15 per household if we no something is really going to be done, otherwise I would not support an increase in dues
53			
54			
55			
56			
57			
58			
59	tourism	tourism	
60			
61			
62			
63	Too shallow.	No fish after drained	Water use stickers for boats for people who use it.
64			
65			
66			
67			
68			
69			
70	Lawn Fertilizer		
71			
72	Muck farming		
73			
74			
75			
76			
77			
78			
79			
80			

Survey Number	25k Comment	27 Comment	29j Comment
39		Fish and fish sizes are down but seem to be rebounding	Establish a sewer district
40			
41		Destroyed all fishing - Fed the seagulls very well for 4 months.	
43			
44			
45			
46			
47			
48			
49			
50			
51			
52		They should have removed all the silt on the bottom of the lake before filling the lake and weed control. I would not swim in that lake! We want it to be a lake to be proud of.	
53			
54			
55		Fishing is significatly worse. Weed growth seems to have not improved	
56			
57			
58			Might help at fundraisers if available.
59	tourism limits		
60		Fishing is horrible last couple years but hopeful for good improvement in the next few years. We expected it.	
61		Due to health circumstances have not been at the cabin much this summer.	
62		We lost a lot of fish especially large mouth bass, bluegills and perch. We need to stock more.	
63		More weeds everywhere on south side of causeway.	
64	Aeration		I'm 88
65		Fewer "good" days - no fall "good" trips Fall = Sept 1 - Nov 1	Fundraisers
66			
67			
68		Rice	
69		Ruined the fishing	
70			
71			
72		Poor fishing and more rough fish	
73			
74		Fishing was very good now it is spotty. Natural bass habitat like water lilies is minimal at best. Weed cutters seem to stir things up. Would like to know the benefit of cutters.	Hard to do when not a full time resident.
75		Water seems to be a lot lower, weeds are worse than before. Water smeels from some of the weeds like a city sewer. I heard that our lake is called"Plastic Dump" from visitors.	
76		Weeds are terrible can not even run your boat motor w/o clogging up prop causing csusing damage to the water pump	
77		We use to swim in lake now way now, over growth of plants	
78		The first summer the lake was back, the weeds were not nearly as bad, but of course the fishing was terrible. This past summer, the weeds seem about as bad (in our Area) as before the draw down. I also do not think the orange weed harvesters did a very good job this past summer (2015) in our area.	
79		have not been on the lake this year so don't know the condition of open lake. However, I have noticed an increase of "beneficial" plants within 20 - 30' of shoreline. I had no plants before.	
80		After the lake was drawn down it seems the part by endeaver to Packwaukee is more like a river and less like a lake. Huge spot in the lake withh tall grass etc. So you need to be in the channels and can't cut across the lake - from Packwaukee (?) to Montello it's more like a lake.	

Survey Number	Other Comments (and Question 32)
39	I feel the best way to improve the quality of the lake and increase property values is to establish and maintain aa sewer district on both sides of Buffalo lake.
40	
41	
43	
44	
45	I think the DNR should do more towards the restocking of fish in Buffalo Lake, and this should be an ongoing effort (by Then) until fishing returns to normal
46	No change in plant life amounts - I can't even put my dock in since water levels dropped 7 or 8 years ago! Fix it! Property values not going up, no one wants to come here do to lake issues. Tourists would flock here if the lake was better. It is a wasted resource. This is my second home and people around me have heard of Buffalo Lake and won't go because they can't use boats/jetskis. What a shame.
47	
48	
49	Lived on the lake 25+ years - it is what it is! It's too bad the DNR allowed draining all the wetland around the lake. This has left a lot of muck into Buffalo Lake. Shame on the DNR!
50	
51	
52	
53	
54	I had my septic pumped out once in 30 years. Now the state says I have to have it pumped every 3 years, never had a problem. I think every 3 years is too much. I don't have a computer.
55	Fishing is much worse. Weed growth and cutting of these is bad. Cut weeds float in surrounding piers & boats making it difficult to get into lake and channel area. Essential to movement of water craft.
56	
57	
58	
59	I view the tourist from Illinois as the greatest negative impact on the lake and property values
60	We still love it!
61	
62	The weed harvesting (cutting) has been terrible. There is a great need for better & more cutiing Weeks go by in summer and there is no or very minimal cutting. The cutting plan or its execution is not at all satisfactoy.
63	Needs fish for people to come. Needs more cutting in grassy areas, not enough paths.
64	
65	
66	
67	
68	
69	Website is almost useless, not kept up to date. Machine operators did a poor job of cutting weeds this past year. My pier and shoreline were socked in all year long. I thought services were to get better, not worse.
70	
71	
72	I feel that dredging would have a positive impact on fishing and water quality
73	
74	I really enjoy the lake but it seems the fishing is worse after the drawdowwn and that fish habitat was ruined.
75	Owners who have been on the lake for years talk about how clear it was that a person could swim from north to south, the water was so good. Now you can't even swim in it and its hard to take boats out because of the weeds. There are chemicals to kill weeds that will not hurt the fish.
76	Weeds are out of control (see Q #27) Weed cutters did a very poor job this year and are a waste of time. Need to control weeds via herbicde. Supply/sell to owners for their dock areas.
77	We need to make the lake better so we can sell when we have to and get our money back
78	The DNR needs to let us address the weed problem much more aggressively and frequently. The DNR should also assist more in terms of restocking the lake.
79	
80	I don't feel that people should have to pay a fee to launch their boats if they are already paying an association fee- we should get stickers to place in our vechicles to launch our boats. I feel you are double dipping the proerty owners!

Survey Number	1g Comment	9i Comment	13m Comment	18r Comment
81				
82		Blue Catfish		
83				
84				
85				
86				
87				
88				
89				
90				
91				
92				
93				
94				
95				
96				
97				
98			Snow shoeing and XC skiing	Seaweed, cattails
99				
100				
101				
102				
103				
104				Silt from muck farms
105				
106				
107				
108		Catfish, dogfish		
109				
110				
111				
112				
113				
114				
115				
116		Bullhead		
117				
118				
119				
120				
121		catfish		

Survey Number	19m Comment	20m Comment	24 Comment
81			
82	Low water levels, muck farms		50% increase or other amount up to 100% increase if lake would be more scenic and usable with weeds eradicated
83	Too many weeds - too muddy		
84			
85	cattails		
86			
87			
88			
89			I am on a fixed disability income and cannot afford an increase. When I was working I never understood why it wasn't based on a percentage of land value or property and accessability, I would have supported that!
90			
91			
92	Weeds cut but then float they just float to shore excessively.	Weeds cut, but then just float to shore.	4250/yr. Should already cover this. Offer pportunity for landowners to help manually.
93			No can not run right with money now - why more No Increase!
94			
95			
96			
97			5% maybe even 10%
98			
99			
100			
101			
102			
103			I already pay way too much for waterfront I can't even use. All muck and cattails, too shallow.
104			We are already paying around$2000 a year for property that we can't even usethe lake! It's all muck and marsh, no boat access.
105			
106			Land owners should be allowed to remove weeds in the water along the shoreline by their docks.
107			
108	Muck Farms		
109			Current at $200 is too high
110			
111			
112			
113			
114	muck	muck	
115			
116			Yes to dredge
117			
118			
119			
120			225
121			25

Survey Number	25k Comment	27 Comment	29j Comment
81		Fishing was horrible last year after is not sure thing anymore on B. Lake	
82		By having fish ladder, lake is lower and fish such as sheepshead are present, northerns are small. Montello area is clean for now, remainder of lake is very weedy and getting worse, millfoil curly pondweed and tall weed grass uo to the top of water. Montello area that's clean is nice for fishing, boating, scenery. Rest of lake difficult to	
83			
84		Drawdown was great during summer of 2014. However, by 2015, the lake was as bad as before. More extensive cutting and overall harvesting improvement is needed	
85		Much more cattail problems	
86			
87			
88			
89		There is no longer enough water near my home to keep a boat in the water or use a pier. It filled in during the drawdown.	
90		No Quality fish size.	
91		Large increase in cattail plants and narrowing of waterway.	
92			
93		Bad	
94			
95			
96			
97		Not as many fish& size smaller	
98		After drawdown, proliferation of cattails on shoreline, can we pull these out or cut them down?	
99			
100		Lack of water depth.	
101			
102		Weeds are a lot worse. Fishing at all time low. Smell is unbearable.	
103		The lake level went down and we can't use the water. The fishing is no good, needs to be restocked. When the water level was drained reeds grew up and now we can't duck hunt our own property because other duck hunters sit in front of us in the reeds with mud motors.	
104		Cattails are thick now, can't even get to the lake Fish must have died off. Haven't been good for game and panfish.	
105		The wild rice population has taken over which we never had before. Weed cutters need to cut more paths.	
106		As stated earlier I have fishe BL for 35 years. It is going to take afew years to recover. Catching all species is very challenging currently & more stocking is needed.	
107		Fisghing very limited to couple species - Northern Pike readily avaiable, other types hit & miss. Bass, bluegill etc. very poor panfish production after drawdown.	
108		Huge amount of plant growth especially towards Endeavor	
109		Created a lot of cattails	
110			
111			
112			
113		Fishing quality has always been good to OK. It is now poor.	being part time resident makes this hard
114		Fishing is deplorable. More weeds & aquatic plants.	
115		In our area here was definitely less weeds but it looked like other areas worsened.	
116		Water level is lower. More weeds around our pier.	
117		more weeds/fewer people fishing/lack of fish	
118		This year, 2015 was worse weeds ever.	I'm 87 years old
119		Our property is upstream of the RR trestle. It has reverted back to a very narrow channel- a river. Invasive plant growth was at the worst we have ever seen i. We had trouble getting out to the channel with our pontoon.	
120			
121		Fishing is really bad, draining the lake did NOT kill of or reduce seaweed growth it is still very bad and it stinks. There is so much silt from the farmers pumping the fields dry that it is filling up the lake. Years ago it was a lot deeper and a hell of a lot less weeds & fishing was great.	

Survey Number	Other Comments (and Question 32)
81	Water level is too low - raise it or dredge
82	Since the drawdown, fishing is much worse, water level lower. Montello part near town is clean, hardly any weeds, looks great, fun to fish and boat there. Remainder of the lake many weeds the further west you go on lake the worse it gets. Difficult to fish, boat, not very scenic with weeds on top of water. In addition way too many lily pad type weeds on entire lake.
83	Need to deal with water level and weeds. Hard to get a boat thru weeds & low levels
84	
85	
86	
87	
88	
89	I just wish it was as clean and as deep as it was years ago.
90	
91	
92	Nice lake but weed cutting collection leaves a lot to be desired - this results in major work for shoreline owners.
93	You need to listen to people at the annual meeting - not ignore people. Get new people at front desk at meetings!!
94	I do not fish Buffalo Lake anymore.
95	
96	
97	I believe we should allow land owners to improve their shoreline within reason and with guidance.
98	Love the lake and appreciate the work of the board.
99	
100	
101	Ability to swim in the lake without milfoil must improve.
102	It is really embarassing to have people come and visit and see how bad the lake is with the weeds. It really is such a waste. It could be so nice.
103	Been here for 16 years. Used to fish here 30 years. Seems like the problems started when they drained the marshes that were a natural filter and used them for farm land. Those with marshland should get tax breaks for preserving them.
104	Years ago the lake was good for fishing & swimming. Since the large marshes were dredged and ditch banked and used for large farming, the silt that was dumped all ended up in the lake. Now the bottom is nothing but muck and silt, prime for weeds.
105	It is very difficult to sell a home.
106	We really need to find a way to better control the weeds. The mechnical cutters are just not enough.
107	I'm sure fishing will improve, fish stocking a good idea. No more drawdowns. Guys who cut the weeds this year sucked. No decent laterals cut, main channel not very wide. No shoreline cutting (withing 50ft of shoreline) at all. Old crew was always diligent opening up areas t get out into the lake. Very few visits around the lake, most time spendt in Packwaukee.
108	
109	
110	
111	
112	
113	
114	As a summer resident I feel any improvements are going to raise our taxes, let nature work its wonders to improve the lake and fishing. Our taxes are high enough
115	
116	Water level is too low. Weeds in way of fishing off our pier.
117	Make area more attractive like in Montello. Would like causeway area improved, signs placed appropriately - facing road, area to sit on causeway, no sitting/standing on bridge signs, clean up weeds so they don't stall motors, clean toliet at ramp more often, more weed cutting, high water level.
118	
119	This year's weed harvesting was the poorest ever on our end of the lake.
120	
121	I feel the lake needs to be dredged out to make it deeper like it use to be, it would help control weed growth and give more room for game fish it would also cut back on the bad smell from the weeds. I know people would pay for the dirt removed from the lake.

Survey Number	1g Comment	9i Comment	13m Comment	18r Comment
122				
123				
124				
125				
126				
127				
128				
129		catfish		
130				
131				
132				
133				
134				
135				
136				
137		catfish		
138				
139				
140				
141				
142	Thursday thru Sunday - 1 week per month			
143				
144				
145		catfish		
146				
147		catfish		
148				
149				
150				
151				
152				
153				
154		catfish		
155				
156		catfish		
157				cattails
158				
159				
160				

Survey Number	19m Comment	20m Comment	24 Comment
122			
123			
124			Better manage of existing funds
125			
126			
127			
128		fishing and boating are terrible lately	Our dues are being not very well utilized to date. Then paying to launch was another insult. Something must be done within reasonable costs or you will lose all lake owners.
129			
130			
131			I would approve a minimal increase if I thought it would do some good. In all the years we've had this place the lake has never been good for anything.
132			
133			
134			
135			
136			Depends on the method selected.
137			
138			Also raise the water level of the lake.
139			
140			
141			
142			
143			
144			
145			
146			1
147			No, don't know what they do with the money now.
148			
149			
150			
151			
152			
153			
154			100% increase for several years - NOT indefinitely! But it has to be measurable and obvious improvements & success. We need to get this problem resolved!!
155			
156			
157			
158			
159			
160			

Survey Number	25k Comment	27 Comment	29j Comment
122			
123		Bought property after drawdown	
124		Numbers of most fish species are down, quality and size of Bass, Northern,panfish extremely lower	
125			
126		"Was" catching large bass & northern	
127		It has only been 2 years, but all forms of poor qualities have started coming back, by end of 2016 the lake's condition will be 100% bad as before the drawdown.	
128		The lake has not been great the whole 16 years we've owned property, but we always caught fish and could motor around the weeds. The cutting is worse, less bouys more weeds, fishing is bad. So many less boats on the lake, people don't want to pay to launch and then have their motors ruined by weeds and then have bad fishing.	Happy to help IF it seems like something will be accomplished.
129		South of the train bridge is horrible. The lake is gone weeds have taken over leaving a river only.	
130		Lost a large number of fish due to the drawdown	
131			
132			
133			
134		It may take time but quality is bad and invasive fish species now can enter the lake by fish ladder	
135			
136		Fishing seems to have worsened. Did not seem to return as expected. Stocking helps. Lake should be drawn down every 10 years. Weed situation has improved but will probably worsen with time. Something has to be done about silt. At least I could clean up my shoreline during the drawdown.	
137		There is less panfish and bass on the lake after the drawdown. Buffalo Lake used to be an putstanding fishing lake.	
138		Even though the drawdown helped with weeds somewhat, it had to be followed with more cutting. Open water (?) more boating, more cutting o weeds by props, more silt stirring so it can flow out. Raising water level 6" would help a lot. A lot of info about the drawdown did not happen. Bottom did not compat s expected.	Out of State - FIB
139			
140		Fish population went down extremely! Should do some more stocking. Water is not filtered, less weeds. The depth of the lake did not increase as the DNR stated.	Fish stocking
141		Panfish and large mouth bass are not present in quantity or size.	
142			
143		No fishing after drawdown. Just as much algae. Lake is full of new (?)	
144			
145			
146			
147			
148			
149		The drawdown made the property value go down (just after a great recession. I lost over $60,000 had to sell out and the area relators keep droppng the price value of property.	Sold Property
150			
151		No game fish in 2014, slowly recovering in 2015, hope 2016 is better. We need some "good" weeds for the fishing to improve. No weeds, no fish!!	
152			
153			
154		After drawdown there have been virtually no cathces of blugills, crappie, perch. Bass cathes are reduced & size of bass is small. Lots of northern and catfish.	
155		Harder to find fish especially panfish - haven't had a meal of bluegill or perch since 3 yr ago before drawdown.	
156			
157		Less bass, northern are growing but smaller	
158		This was one of the best bass fishing lakes in the state. I always caught fish and big ones! Now the fishing is slow at best.	
159			
160			

Survey Number	Other Comments (and Question 32)
122	
123	I believe the weed cutters do a very good job with the equipment they have. I think they need smaller cutters to do a better job of shoreline maintenance. They also need more manpower.
124	It seems water levels on average are lower after dam rehab. Less or no current near shoreline. Weed harvesting almost nonexistant on Montello side of causeway. Very little harvest near shorelines, no cuts to access main channel compared to previous years.
125	
126	
127	I am 55 yrs old, my grandparents owned the place I now own. As a child we swam, fished and boated on this lake without interruption of weeds and other crap on water. I blame all of this on poor management who refuse to acknowledge and address all of the issues.
128	Seems like your efforts through a private club that we were not invited to join. Email blasts might help but there has to be a way to help people feel that their opinions really matter, even if they're not year round residents. Thanks for trying hopefully it will improve.
129	
130	
131	
132	
133	
134	
135	
136	Website does not seem to be updated in a timely manner. More has to be done about controlling silt and removing it. This lake is aging way before its time.
137	After drawdown there was a lot of bull rushes along the shoreline. Extra work for property owners to clear for their pier and boat.
138	More weeds need to be removed. An open lake draws more people who will buy, helping to increase property values. Have positive economic affect to area. Business & restaurants, bars etc. increase employment.
139	
140	Weed cutting needs to improve, some more fish stocking is needed.
141	
142	
143	
144	
145	Fire the harvester supervisor. I had to call twice to get a lateral cut to get our boats out from the pier - then they never maintained it.
146	
147	Have been trying to sell our house for 4 yrs., can no longer afford the house on senior citizen income. (?) negative comments from people who looked at the house is that they won't cinsedr buying due to the lake. We can't do anything to change the lake, we canremodel, paint & reduce the price of the house, we are stuck with the lake.
148	
149	The lake has always been a weed lake. If someone would start a good program to save this lake the Montello area would be a booming area, not a slum!!! area.
150	
151	I have been through one chemical weed killing of Buffalo Lake and it was a disaster!! No weeds, no fish for several years!! If weeds are controlled everything is fine, speaking as a fisherman. Would hate to see more jet skis!!
152	
153	It should be algae free in summer, it smells so bad.
154	I feel the overall quality of the lake environment has improved over the last few years (with the drawdown), but still has a long way to go. I'm encouraged by this survey & hope that the results of this survey generat more improvement in the Buffalo Lake environment - Thanks!
155	
156	
157	
158	We need some deep water spots. So I support dredging and maybe island formation as a result. We also need to limit the number of fishing tournaments. A lot of dead stressed fish after these events.
159	
160	

Survey Number	1g Comment	9i Comment	13m Comment	18r Comment
161				
162				
163				
164				
165				
166				
167				
168				
169				green algae, bacteria, smells like septic, ake level is too low
170				
171		Bullheads		
172		catfish		
173				
174				
175	Visit all year, months at a time			
176				
177				
178				
179				
180				
181	2-3 days a week			
182				
183				
184				
185				
186				
187				
188				
189				
190				non-native cattails
191				
192				
193				unsure
194		catfish		hydrilla
195				
196				
197				
198				
199			Owning water front property	

Survey Number	19m Comment	20m Comment	24 Comment
161			
162			
163			
164			
165			
166			
167			
168			
169	fertilzer, muck run off, lake level too low	water level	Where is the help from the Army Corp of Engineers and government grants?
170			
171			
172			
173	cattails		
174			$2000 as long as results achieved.
175			
176			
177			
178			Paid dues when the lake was drawn down and wasn't able to use lake. This year my neighbors and I did not even have a channel causing motor overheating and had a torn transducer cable actually riped in half on my pontoon boat resulting in a useless depth finder.
179			
180			
181			
182			
183			
184			Yes depending on cost & method - not certain of percentage. It seems we pay enough now.
185	Weed growth (bull rushes) since lake refilled Spring 2014		
186		To many weeds, growth - damaging to boat props, difficulty manuvering through weeds tht were not present before DNR became involved. Property values decreased.	
187			
188	Weeds & muck	Weeds Muck	OK with increase but only as long as stuff gets done!
189			
190		Low water level	Integrated control OK if it does not included herbicidal treatment
191			
192			
193			
194			
195			
196			I would like to see something that is more effective than cutting, The (?)cutting has not been good for my property/access in several years.
197			250
198			Depending on use and options. Fish restocking should be a priority. Continued harvesting and weed control is important.
199			

Survey Number	25k Comment	27 Comment	29j Comment
161			
162			
163			
164			
165		Bluegill not returned to our area. Huge carp now.	
166		Hopefully all of the above will improve	
167		The fish population was negatively affected though in a healthy environment it should return.	
168		The lake seems to be lower than before the drawdown. Fishing is poor, the lake is low etc.	
169		Water level too low, current not strong enough- no fish in areas where bass use to be. This was a great bass lake, we had bass touranments, gone. Water quality is so poor my dog can not even go in the water. The weeds along the shoreline have wrecked the dock areas, so sad because I love it here.	
170		very poor plan	
171		Lost good fishing. Seems like the weeds just took over. Fish I think went down river.	
172		It seems the bass & northern of keepable size are gone, but they seem to be coming back. I anticipate better fishing in years to come.	
173	How to remove cattails	The cattails have more than tripled & can't stop them.	
174		Before: the grasses growing were by far less After: 20x worse	
175		No fish. Were all or most killed and eaten. More carp in lake.	
176		No flood so far/ like before. More clean animals(?)	
177	The drawdown killed the fish		
178	I have noticed a definite decline in panfish population, they used to be around my pier all the time, not so anymore. Remember last drawdown in 1970 or so when DNR re-stocked the lake, fishing was great for years after, don't know why no DNR re-stocking this time? More weeds and water level seems lower.		
179			
180		Killed off large amounts of bass & Bluegills. Plant growth not decreased with drawdown. Less fish, shallower water, more plants.	
181		Seems like there are fewer perch in the lake	
182			
183			
184	We know about all of the above	We expecting fishing to change. We are catching small northerns, hoping to start catching bass again. We saw the pelicans eating fish at the drawdown time. Thank you for restocking.	
185		South (or west) of the causeway especially south of RR bridge the emergent weeds & bull rushes are of out control. I cannot fish or boat west of the main channel from Endeavor to the RR bridge. The DNR tol us that the drawdown would compact the lake floor making the lake deeper. I don't think it did. Also cold winter would freeze the weed seeds and make the lake clear fo weeds & a better lake, it didn't.	
186		Should have left well enough alone. Now have a swamp instead of a lake.	
187		Panfish & bass disappeared. Catching more pike - small	Only there on weekends
188		Don't think it did anything beneficial really. Still a lot of weeds & muck & lily pads. Fishing isn't great.	
189			
190		Fishing quality has worsened but may come around next year	
191		Lake filled in with cattails	
192			
193			
194			
195	Septic discharge into lake	Where are the fish?	
196		Weeds are thicker now than ever, not much effect on carp either.	Clerical/office type
197		Fishing quality: poor at first, is getting better. Plant growth:areas with cattails growing in the channel are overgrown. Overall excessive aquatic plants	
198		Fish population depleted due to drawdown, harsh winter and pelicans. Fishing remains top priority along with general recreational use. Homeowners need to be informed on fishing population and support on restocking measures.	
199		The fishing after the drawdown is terrible.	

Survey Number	Other Comments (and Question 32)
161	
162	
163	
164	
165	
166	
167	I feel a drawdown of lake levels every few years in some moderate form is important for the overall health of the ecosystem.
168	Raise the water level.
169	
170	Buffalo Lake has gone downhill. There must be something we can do to improve the lake quality. We need more water in the lake.
171	I'd be willing to volunteer but my age and health prevent it.
172	Although fishing isn't what it was before the drawdown, the lake itself ha been lovely. We have enjoyed being out on it more this year than ever.
173	
174	
175	
176	
177	
178	$200 a year seems to be plenty to support lake protection efforts. Many people live on fixed incomes or have not had a raise in pay in over a decade (me). Hope a lot of thought goes into raising our lake dues. I won't support that.
179	
180	Need more laterals cut to shore. Website isn't updated, should have no alcohol at shop. The purpose of buying a boat to locate weeds is ridiculus.
181	I would like to see less weeds and less silt on the bottm on the lake
182	
183	
184	Keep up the good work. The lake is beautiful. with the overabundance of weeds gone since the drawdown. We love this lake!
185	Thanks and keep up the good work.
186	Have spent 62 years on Buffalo Lake. These past years when the DNR got involved lake has been ruined in my opinon. Which once was water i now swamp - more weeds - haven't put out the pier/boat in 2 years. Property values decreased.
187	
188	We really want to see the lake healthy and easier to enjoy. And thank you for your time & doing this.
189	
190	This may be naïve but wouldn't maintaing higher water levels, as I understand was historically the case, help cut down on rooted weeds?
191	Better weed cutting along shore. Don't spend time cutting where not needed. Cut out farther from shore (shore).
192	
193	It is all about weed growth - keeps reputation as a fun lake low. 1st question on lake is answered weedy & bloom is unsightly - not fun place to boat. Property values show this. No easy fix.
194	
195	No computer
196	The weed cutting used to be done so homeowners could get to the channel. It was a series of alleys that allowed access. This worked well i the heavy weeds but has not been done in several years. Many of us can't get our boats off the shore! There seems to be favoritism to some property owners by weed cutters.
197	
198	Lake was an excellent fisheree up until drawdown - this and other circumstances greatly depleted fish. Also, concerned about the merger of 2 lake groups - in my opinion this has not been overall beneficial! Don Schoechert and crew did a great job in managing resources, raising money, (?) needs. This has fallen off.
199	

Survey Number	1g Comment	9i Comment	13m Comment	18r Comment
200				
201				
202				
203			Hiking	
204				
205				
206				?
207		dogfish		
208				
209				
210				algae
211				Weeds
212				
213				
214				
215				
216				
217				
218		Catfish		
219				
220				
221				
222				
223				
224				
225				
226				
227				
228				
229				
230				
231				
232				
233		Catfish		
234				
235				
236				
237		Bullheads & catfish		

Survey Number	19m Comment	20m Comment	24 Comment
200			
201			
202			
203			
204			
205			
206			
207			
208			0.1
209			
210			
211	Why so muddy, wasn't in the 70's 80's - sand		Do not need expensive boat to check lake
212			
213		Cattails	
214			
215			
216			
217			
218			300
219			
220			
221			
222			
223	Low water depth since the drawdown of the lake.	low water depth	
224			All shorside owners should be billed - only fair in so doing
225			
226			
227			10% but only if something is done, as in all the years I've been going up here (57yrs total) it's just gotten worse. There wasn't a weed problem only a muck problem and I have pictures to prove it.
228			Up to 50% but I want progress reports with reasonable goals to be met. Goals that can be measured by improvement to habitat for wildlife, quality of fishing and the reduction of weed growth.
229			
230			
231			
232			
233			I would like to know what the plans would be before answering this question
234			Demand a Lic. Plate fee for boat trailers.
235			Better fiscal responsibility needed
236			
237			Why should we pay more for nothing. This was the first year that the weed cutting was terrible. Do you really need 5 guys to pick up the bouy marker. That is (?)

Survey Number	25k Comment	27 Comment	29j Comment
200		Water level lower never came back. Cattails 4 times increase along shore, cattails also now in middle of lake - never there before. We are outh of the train trestle	
201			
202			
203			Contirbute funds
204			
205			
206		Catching no fish at south end of lake.	
207		Fishing has been very poor. The fundraising to restock has been great but it takes time to recover. The weeds were greatly reduced for one season and then they were back in full force by the second season.	
208		Water levels are so low we cannot use our boat. There are so many weeds it's ridiculous. Bad in Montello, worse in Packwaukee	
209		The water level is lower. Fishing is very poor. Weeds are a lot worse. Cattails have taken over shoreline	
210			
211		The lake should have been dredged while we had it drained by creating island in the middle because its wide enough. (too shalow). Buffalo Lake > Muck ! Lake	
212			Mechanical weed control/removal
213	Get rid of cattails	Cattails	
214			
215			
216			
217			Moving
218			
219			
220		My impression is that the fishing has been worse since the drawdown and the water quality around our dock is worse - smell, algae, foam etc..	
221			
222		Drawdown helped but Bulrushes grew next to shoreline. First year destroyed any fishing - second year (this year) fishing improved by size but not quanity.	
223		The water depth of Buffalo is about 4 to 5 inches below what it was before the drawdown. This is due to the spillway height after rebuilding it. Others have mentioned this on a fishing chat board. Our shoreline used to have bluegills spawning, but now it is too shallow.	
224			
225		The drawdown affected the fish population of the lake. Hopefully time and stocking will correct this	
226			
227		Fishing is horrible/too many weeds	
228		Fishing was expected to be poor for a while no matter what was said about fish returning to the lake from the fish ladder. Time & volunteer restocking efforts will improve fishing in a few years. Aquatic plant growth must be put in check. We need weeds to filter sediments and provide cover. There is just too much of it right now	
229			
230			
231		Aquatic plant growth - the cutting machines have done a worse job at our end of the lake - towards camp	
232		Fishing is terrible but assume it will get better.	
233		Panfish have not come back (b-gill, perch etc) even with the stocking. Also seems to have lost frogs and turtles(some are around but not in abundance). Also, the bass fishing we used to be known for has not rebounded yet. Great fishing lake for northern though.	
234		Lake Montello? Drawdown didn't work. Tried it 2 years later, didn't work. You can't pull the weeds out manually, the muck bottom gets you stuck in the lake! DNR introduced the millfoil, nice move! You want nice lake? Go to Minnesota!	
235			
236		There seems to be a lot more cattails that invaded the lake. Parts of the lake that use to be open are now covered with growth.	
237		Weed cutting was the worse I have ever seen. The person or persons in charge should be fired. You need somebody who knows the lake and doesn't waste money and time to line their pockets.	

Survey Number	Other Comments (and Question 32)
200	Water level has not come back - dam plus fish ladder? Cattails came ou about 10ft from shore before now they're out about 40ft. Can't see across the lake anymore because of cattails in center of lake.
201	
202	Buffalo Lake is a impound lake. They only last so lond and then silt up. Without dredging the lake won't get better.
203	
204	
205	
206	
207	It would benefit from higher water levels. By controling the weeds - the muck would be less. Cattails are also out of control. Residents should be able to protect shoreline. The natural sandy soil of our property erodes into the lake very easily. Duck weed is also nasty and the north shoreline gets it bad. Cattails and grasses block the flow. They also harbor muskrats.
208	The condition of the lake has deteriorated severly in the last 10 years.
209	
210	
211	
212	
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214	
215	
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217	
218	GET RID OF WEEDS!
219	
220	
221	
222	
223	More about lake depth. I have several measurements, the best being under the causeway bridge during the driest time of year. When the lake is at its lowest point in summer - there used to be no water going over the spillway - now -with the new spillway - water never stops flowing over it. I did discuss this with the head DNR person in charge of the project. His comment: "The spillway is exactly at the same height as the old one." Then he proceeded to send me a ton of info about WI rivers but nothing about Buffalo Lake. Also, saying so does not make it so. The spillway is not at the same height as before. I think the biggest problem facing Buffalo Lake is the biomass buildup from dead aquatic plants. Many areas in the lake are already growing non-aquatic plants. The lake is starting to fill in from this biomass. The shallower water depth just speeds this up. Thanks for the survey and the opportunity to make some comments. I appreciate your efforts.
224	
225	Buffalo is in better shape since it was drawn down. We need to start a new program to keep it that way. I think we have to start a weed control spraying to keep it that way.
226	
227	my biggest complaint is way to many weeds and not being able to improve the shoreline on lakefront propertys without so many restrictions Not being able to dredge at our own expense. Our property was dredge when I was a kid and can't re-dredge.
228	For the past 21 years we have enjoyed Buffalo Lake and the surroundin communities, We look forward to the next 21 but we realize our lake must be looked after & cared for. It's not just ROI but ROE (return on enjoyment)
229	
230	Too strict zoning enforcement is causing property owners not to make needed improvements, causing some parts of the shoreline to look delapitated.
231	Work needs to be done to control the weeds in lake
232	
233	
234	Wisc. DNR ruined it. Let DNR pay to fix it. Everyones property values have suffered, thanks.
235	
236	
237	I thought the lake was better before the drawdown. Now we have more weeds and lilypads then we had before. Now we have more weeds and less cutting. The whole lake should be treated equal not one end or the other, or weed cutters friends. List the operators and their wages and how many hours a week that they work and their job definition.

Survey Number	1g Comment	9i Comment	13m Comment	18r Comment
238				
239				
240				
241				
242				
243				
244				
245				
246				
247				
248				Weeds
249				
250				
251				
252				
253				
254				
255				
256				
257				
258				
259				
260				
261				
262				
263				
264				
265			Business	
266				
267				
268				
269		Catfish		Dogfish/Cattails
270				
271				
272				
273				
274				
275				

Survey Number	19m Comment	20m Comment	24 Comment
238			Payment of non lake property lake fee seems unreasonable, (?) empty lots.
239			
240			Many people use Buffalo Lake & do not pay dues - have a sales tax to help support the lakes
241			$20 annually
242			
243			
244			
245			
246			
247	Dam repair		Pay a percentage of the purchase price of the property.
248			
249			
250			Would support dredging
251			
252			
253			
254			
255			
256			
257			
258			0.1
259			
260			
261			I already pay fees and live 3 blocks off lake and pay yet people live a lot closer and do not pay. Can anyone explain who pays and who don't? I think everyone should pay or only the ones on the lake pay
262	Low water level	Low water level	
263			15% for 3 years
264		carp	
265			
266			
267			Better management of dues already collected. This has been an ongoing problem which has continuosly gotten worse with little to no efforts shown for monies already paid.
268			
269	Duckweed/Cattails	Duckweed/Cattails	
270	Too weedy!		5% Let owners do some clean up on their own to keep costs low.
271			
272			
273			
274			I would support an increase of 50% or less if proper ethods worked, help water quality and fish population and health.
275			If it works I would support an increase

Survey Number	25k Comment	27 Comment	29j Comment
238			
239		The fishing is considerably worse than it ever has been in the past.	
240		Should have completely drained the lake and kill allthen start over. Not drained enough to kill weeds.	
241			
242		It was a great lake to fish on. Drawdown depleted the fish a lot. No interest in wasting time to try to fish the lake I live on. Fishing from pier brings only small northerns & bass. Most of Quality fish killed by drawdown.	
243			
244			
245		Loss of fish during drawdown.	
246		Need a meeting.	
247	Ways the economy can be stimulated in and around Buffalo Lake, with economic growth come money to repair & maintain natural resources like Buffal Lake.	It seems the drawdown spurred the lake to "heal itself" by turning itself into a marsh. We have tall grass that are not cattails, that is taking over our frontage and also the neighbors on both sides. We only have some of this but I have seem frontage in other areas that were normal before the drawdown and now their frontage is gone with 100's of yards of grass.	
248		Lost too many fish. Fund raising for lake. More algae then before. Not doing good enough of cutting algae. Dry docked for too long. Couldn't get out to channel. Higher taxes for out of city users.	
249			
250		Weeds are as bad/worse than before drawdown only different kind.	
251		Weeds are worse than ever. Fishing is al but dead.	
252			
253		Barely any panfish now. Fishing was great before now its hard to find fish	Can't at this time
254		Fishing is at an 0 Alos our water level is way down which is very disappointing.	
255			
256			
257			
258		Not enough fish left in the lake. All the fisherman have been driven out of the lake cause there is nothing to catch.	
259			
260			
261		It has affected the quanity of fish.	
262			
263			
264		Weed growth increased dramatically. Water level became even more shallow than it was. More carp in the lake. Smaller space for leisure pontoon riding. Weeds were so bad we hated bringing visitors to the lake.	
265		We need DNR support for fish stocking	
266		Fish kill off	
267		Can no longer use pier due to excessive cattail invasion which has not responded to anything and water is too low for weed cutter to fix. Center of lake is so overgrown can't get the boat thru.	If some type of effort was visible in recent past history you might get a few volunteers but currently does not look like anything is getting done.
268		Drawdown wasn't necessary to complete the repairs and the majority of the fish went downstream with the water or died. The aquatic plant growth south of the causeway was as bad or worse than before the drawdown.	
269		Keeper size large mouth bass all disappeared All fish species lessened and one's caught much smaller. Weeds on Packwaukee end of the lake seem to have gotten more condensed especially the cattails making shoreline landing or use impossible.	
270	How to clean our own shoreine to improve use but not hurt lake quality.	Weeds are worse- could not get our boats out to channel this year, terrible.	
271			
272			
273		Lost a lot of fish in the drawdown. Must wait a few years to get them back.	
274		Not the same fishery (?) more weeds etc.	
275			

Survey Number	Other Comments (and Question 32)
238	
239	
240	All "voting" members should be a member of BLPRD.
241	Try to get higher water level during the summer months
242	Water depth has changed since drawdown. New dam is at least 8 in lower which makes it harder to get around our end of the lake.
243	
244	We had a very difficult time this year getting our boat out. There was no cut to get out. There should be more cuts to get out and cleared in front of houses.
245	
246	
247	I am disappointed that no pier for mooring boats has been added to the remodeled/restored dam, park, dredgebank. Buffalo is 13 miles long w/100's of cottages that would enjoy a ride on their boat to downtown Montello, tie up for a few hours, shop, eat ,drink and shop somemore. Poor Montello has been slighted of th economic opportunity. Please push to add this simple feature! By doing so the economy will benefit, cottage prices will go up and there will be much more interest for improving Buffalo Lake.
248	
249	
250	
251	I feel the lake is at its lowest level of quality after the drawdown.
252	
253	
254	We would like to see our shoreline water level return to what it was before the drawdown. We also hope the fishing will again return to an enjoyable level.
255	
256	
257	
258	
259	
260	Since this was our first year owning a place we knew it was a weedy lake but didn't know the severity. This was very hard in the maneuvering our pontoon on the lake. It is such a beautiful lake it is a shame that there are so many weeds. I feel this hurts the selling of the property on the lake also. It is hard to use it for recreational use. I would support a management method/technique of the lake. Also I would like to see updates on this survey and next steps.
261	
262	
263	
264	We love Buffalo Lake and the surrounding towns. The lake has become harder and harder to fish because of excessive weed growth. This was a great fishing lake but the carp are gaining more space every year - less for game fish.
265	Wow - awesome survey
266	Thank you for conducting this survey. It is important that all stakeholders be aware of issues and how others feel. We witnessed one fish stocking this fall that should help improve the fish species and quanity.
267	Been using this lake for more than 30 years and used to be able to go swimming but the weeds have been taking over more and more of the lake each year with no abatement, at this rate, in 10 years Packwaukee portion of Buffalo Lake will be nothing more than a marsh as waterways will be grown shut. Fishing has become miserable. 3 years ago there were ample quantities of ducks and loons now there's a handful of loons and haven't seen any ducks this summer. Would really like to see some type of action to return water levels to predrawdown levels, shallow water allows sunlight to reach weeds which causes them to grow. Furthermore shallow water prevents weed cutters from doing their jobs effetively accoss the entire lake! Dredging may be the best option to returning this to a viable useable lake. Current condition erodes not only lake quality but also people's investments & too many properties are currently for sale (and have been for a long time).
268	The water level since the drawdown is lower than before. This needs to be properly restored. The weed harvesting south of the causeway was the worst I have seen in 8 years.
269	When we bought in 1995 the fishing was good the boating enjoyable and the weeds were not mch of a problem. Since then things have gone downhill. Because of the weed growth boating is difficult (if not the muck it is the weeds), Cannot get to the pier until weeds are cut until mid June Can no longer get to most of the fishing spots I enjoyed in the past because of the weeds making it impassable. I enjoyed it in the past but cattails are taking over many shoreline properties on the northside, Packwaukee area especially We see some property owners can no longer get their piers out. It appears many property owners on the lake are selling because of the weed problem (appearance and available usage) especially on the west end (the worst end). At the pace it's going we will soon be renaming Buffalo Lake - Buffalo Marsh.
270	
271	
272	
273	
274	I really like the lake through the years. I hope the fish population returns. The weeds don't bother me much unless they are choking out fish and I don't think so.
275	

Survey Number	1g Comment	9i Comment	13m Comment	18r Comment
276				Sheepshead
277				
278				
279				
280				
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285				
286				
287				
288				
289				
290				
291				
292				
293		Catfish		
294				
295				
296				
297				
298		Catfish		
299				
300				Low water levels
301				
302				
303				
304				
305				
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307				
308				
309				
310				
311				
312				
312				
313				
314				
315				

Survey Number	19m Comment	20m Comment	24 Comment
276	Water levels too low	water levels too low	
277			
278			
279			
280			
281			
282			
283			
284			
285			
286			
287			
288			
289			
290			
291			
292	Treated lawn		
293			
294			
295			
296			
297			
298			
299			Cannot answer without knowing which techniques would be implemented.
300	Low water levels		100
301			
302			
303			
304	Too many boats operating at high speeds		
305			
306			
307	Owners using lawn fertilizers and chemicals		No more weed harvesting!We're being ripped off! They do minimum. Bad management practices!
308			An amount equal to current rate of inflation same as Social Security is given as raises to senior citizens.
309			
310			
311	Farms		
312			
312			
313			
314			
315			I would say yes but I believe it would just be put into more weedcutting machines and that I don't believe is a solution. Since they put in the new dam the lake level is lower so the only solution I see is dredging.

Survey Number	25k Comment	27 Comment	29j Comment
276		I believe the new dam and fish ladder are very beneficial However, I still think the dam allows too much water to outflow, which keeps the overall water level of Buffalo Lake too low!!	
277			
278			
279			
280			
281			
282			
283			
284			
285		Get someone who knows how to use weed cutter to "control weeds".	
286			
287			
288	Should have a club that makes fish cribs		
289			
290			
291		Where are the fish?	
292		Drawdown is very short time help we need longterm plans	
293		Lack of panfish, bass, etc. need more stocking of panfish, walleye & bass	
294		No bluegills caught in the last 2 years, no bass, very few northern pike. No bluegills spawning in the shallows as was normal in the past. Fishing is poor. Hoping 2016 will improve.	
295		As a primary reason we have our lakehouse is fishing, the fishing has worsened since the drawdown. Where we once had lilypad groupings by our house it is primarily long grass which tangle our boats and the fish do not seem to use as they did the lily pads.	
296		Prior to 2014 we regularly caught enough fish to (?) from our pier. Great for grandkids. In 2015 we caught a total of 14 fish. The amount of lily pads has multiplied significantly, making boating path more difficult to maneuver	
297			
298		When we started fishing blue gills were present. Panfish of all aren't caught. Drawdown effected the fishing. I don't think they stock the lake and not enough to improve fishing. We even donate to the stocking. I believe the DNR should stock more crappies & blue gills as having people out of town for fishing on Buffalo Lake is sad as there really isn't many panfish.	
299			
300			
301		The drawdown had a large impact upon fishing success. I understand the drawdown was necessary but this should not be a future plan. I would not support future drawdowns.	
302			
303			
304	Macrophyte identification by Chris Hammerla		Plankton surveys using my own net.
305			
306			
307	weed harvesting should be done by an experienced pers	DNR didn't stock the lake. Mazurek's Buffalo Lake Lodge & contributors did. DNR sucks!	
308			
309			
310		West end of the lake is terribly over grown; weeds, milfoil, algae etc.	
311		I think the fishing quality is starting to improve now.	
312		Used to always catch panfish from pier. Seldom able to now as they aren't around. Some different type of weed now growing near shore. Water level down.	
312			
313		Would like to swim but can't too much algae. Is Buffalo Lake really a lake??	
314			
315		The lake level is lower it is harder to navigate and there was a loss of habitat.	

Survey Number	Other Comments (and Question 32)
276	I love Buffalo Lake and have loved and fished on it my whole life. The aquatic growth is what it is and happens on so many lakes in the area. I do think however that the water level overall is allowed to be too low by regulating dam flow. I tused to be higher and has gotten worse the last 15-20 yrs.. TOO LOW!!!
277	
278	We have to remember this is a flowage. It's a great place for natural wildlife habitat.
279	I believe all septic systems on Buffalo Lake should be tested on a 3-5 year cycle.
280	
281	
282	
283	
284	
285	
286	
287	
288	The BLPRD should dredge an area of the lake every year. Even a little bit a year would be beneficial. Dredge the same area every 5 years and take the deposits and make some small islands. The lake people would pay to make the lake have more structure. We all know dredging is expensive but (?) do the same area for a couple of years you will have a least one area where it is deeper. Give people hope that you guys trying to improve the lake depth. no one is saying to dredge the whole lake just do 1 area every 5 years you have a (?) deep spots. Give people hope.
289	
290	
291	
292	Run Off, Run Off Run Off
293	Anything that can be done about fertilizer runoff from farms would help. Less bass tournaments.
294	As of now, I own the cottage. I am not able to go up there. I am 91 & homebound. So my son will answer the questions for me.
295	
296	Wedsite info should be more regularly updated. Getting contact info has been difficult. Any level of improvement, weed/water/appearance, would raise all vaalues for residents.
297	
298	Fishing and stocking is my #1 concern. 2nd concern is the cutting of weeds isn't very often. Seems the cutter is docked at the boat launch when we come there. I think they could do a much better job for people living on the lake.
299	
300	Any thoughts of possible public piers at the east end to access town.
301	I believe shoreline limitation in terms of decks etc adversely effect the lake properties. And does not encourage people to take care fo their shoreline & prerty aesthetics. Why not let people improve & enjoy their property?
302	
303	
304	We really like living here on Buffalo Lake, mostly for the wildlife and (?) close knit communities surrounding the lake. Opportunities to volunteer are numerous. We do not like it when people are rude to each other at some meetings.
305	
306	Maybe I'm in the minority but I think we are moving in the right direction- just need one more major kick in the butt and I can help!!
307	Board of directors getting paid? Ha! You people are swindling our money. Management is not doing a good job. Harvestors play cards at the launch while waiting for dump truck. Very poor, poor management. Will film them with our camcorder. Going to call for an independent investigation and audit.
308	
309	Water level seems to be lower than before the drawdown?
310	
311	
312	
312	
313	Swimming - assessments should go up not down, lets take pride. Have activities in Buffalo Lake, need to advertise lake activities.
314	
315	

Survey Number	1g Comment	9i Comment	13m Comment	18r Comment
316				
317				
318				
319				
320				
321				
322				
323				

Survey Number	19m Comment	20m Comment	24 Comment
316			Nothing more than 5% annually.
317			
318			
319			
320			
321			
322	Buffalo waste that runs into the lake		
323			

Survey Number	25k Comment	27 Comment	29j Comment
316		I live in Buffalo Lake Estates on Lake Shore Drive. There is no lake behind my house. There is a river and a wetland. Our lake area has disappeared since the drawdown.	
317		Panfishing is terrible all the birds ate the panfish.	
318			
319			
320			
321			
322		Most of the fish went down the river. It needs to be restocked!	
323			

Survey Number	Other Comments (and Question 32)
316	
317	
318	Since draining the lake, seems there are more cattails & lilypads. Have to row out to get open water ways.
319	
320	We had hopes that the Dam repair would also include raising the depth of the water - did not happen. The new dam fishing are & dredge bank path and fish ladder are very nice improvements
321	Thank you for doing this survey! Let's get the lake back where it needs t be.
322	The waste from the buffalo farm around Packwaukee is running into the lake.
323	We would like swimming but not nice enough

Survey Number	1g Comment	9i Comment	13m Comment	18r Comment
324				
325				Probably all of the above
326			Quiet Area	
326				
327				
328				
329				
330				
331				
332				
333				
334				
335				
336				
337				
338				
339				
340				
341				
342		Catfish		
343				
344				
345				
346				
347				
348				
349				
350				

Survey Number	19m Comment	20m Comment	24 Comment
324			
325		Farming	
326			
326			
327			I do not support a dues increase unless it is for property owners who live on the lake. It is not equal taxation when a vacant lot is deemed unbuildable by zoning pays $200 a yr. the same amount a person living on the lake does.
328			
329			
330			
331			
332			
333	People disposing of their garbage into the lake (tires, bikes, car batteries.		
334			$100 per year one time
335			
336			
337			
338			Consumer price index annual adjustment
339			0.1
340			
341			
342	Terrible weed cutting philosphy		Yes, but get someone or group who know they are doing
343			
344			
345			
346			
347			
348			
349			
350	Filtration from muck farms across Hwy 39		

Survey Number	25k Comment	27 Comment	29j Comment
324		Cattail growth has worsened as well as sediments (muck) allowing weeds to grw. Need to deepen water especially from (?) down	
325		Should be very obvious	
326			
326			
327		The growth of wild rice on the south end of Buffalo Lake has taken over the waterway narrowing the channel especially from the train tressel to Call of the Wild.	
328		It should have been dredged while the lake water was down!	
329			
330		Loss of fish	
331		Quantity of fish seems less. May also be related to the hot summer prior to the drawdown.	
332		The lake has turned into a swamp. It is worst I have seen it in my 30 plus years of coming to the lake. There is no water in the lake. It might as well be a river on my end of lake. You can't travel anywhere with a boat that I once use, too. Fishing is terrible.	
333		Towards Montello the algae bloom improved, west of causeway is terrible.	If I lived there I would definitely help out.
334		A. Fish population reduced tremendously. B. Now more weeds & a new spaghetti type that I never saw before the drawdown. C. More since drawdown. D. Poor because of overabundance of weeds & the water level is too low. I think before there were boards so the water level could be controlled. The water level use to be at least a foot higher. E. The weed growth is terrible, so thick it's like land or islands.	
335			
336			
337		Some areas better for lake activities and appearance some areas worse	
338			
339		At our location the lake has narrowed to hust the river due to the excessive growth of the plants	
340			
341		If the lake could have been drawdown futher everyone could have seen the reduced Eurasian milfoil growth & improved aesthetics. The fish will come back.	
342		#1 The drawdown was totlly unnecessary. Having worked for Lunda, who specializes in water work, the entire project could have been done with zero dradown. #2 The weeds came back more than ever.	Limit bass tourneys
343			
344		This past summer my kids and I couldn't catch a fish to save our lives. I think all the fish wnet downstream with the water.	
345		Fishing quality worse but I believe it is coming back and in a couple years will be very good again.	
346			
347			
348		No fish for last 2 years	
349		The weed growth in our area is awful. That is south of the causeway Packwaukee.	
350		Large amount of new growth of weeds on west end of Buffalo Lake. Lots of silt running in water of channel	

Survey Number	Other Comments (and Question 32)
324	Condition of the lake has worsened over. To much time and money is going into maintaining Lake Puckaway. Need deeper cleaner water on Buffalo. Let's put effort into recreation - boating, water ski & jet ski.
325	
326	
326	
327	
328	Cut back on fish tournaments. It has ruined the fishing & the big bass boats tear up the weeds & cause a lot of bigger waves
329	Purchased home in Oct 2015. I grew up visiting Crystal Lake in Waushara County. Grandparents then Parents owned cottage later a year round home. Lake activities included boating, sailboating, skiing, tubing and fishing. Much different than Buffalo Lake. Not necessarily good or bad.
330	
331	
332	I feel the weed cutting effort should not be done again. It has wasted my money along with all members. It didn't work ever. Drain the lake and dredge the bottom to historic levels and start over. This bandaid fixing doesn't work.
333	I don't feel like the weed cutters are doing their job removing weeds in Packwaukee. Montello looks great. Not Packwaukee. We are constantly in the lake pulling weeds but within a day it is full of weeds again. Weed cutters don't even come close to shoreline.
334	Due to the unnecassary drawdown of the lake to work on the spillway & dam, which could have been done without drawing down the lake, the weeds are worse than ever and the water level is being kept too low. We can't even start our motor by our pier. Due to the drawdown we lost a tremendous amount of large mouth bass that we saw going through the spillway. Before drawdown we would catch & release 15 to 20 bass a day, now we feel lucky to catch 1 or 2.a day. Not only the bass but panfish have disappeared also. The only positive of the drawdown is no more bass tournaments which there way too many of.
335	
336	
337	Drawdowns have an adverse effect on the local economy. My business was down 20%. Please consider this before using that tool
338	
339	
340	
341	I think the lake invasives & aesthetics should be the #1 priority, even if that means a short period of limited use. It would go a long way to improve the lake property values.
342	Get the weed cutting harvesting correctly operated.
343	
344	
345	It would really be nice to install a few piers by downtown Montello, so boaters could access the shops and restaurants. More consumers in town - better for economy.
346	
347	
348	Cattails taking over the lake. Way too many cattails on shore. Cattails growing in middle of lake and spreading. Weed cutters only cut 3 paths in the lake. This is causing too much traffic past my pier for fishing. Way too many weeds for fishing & boats. Water level at least 1 foot low. Buffalo Lake is also bringing down my house value.
349	No weed harvesting was done until after June in our area. We need open water. I don't come to my cottage to look at weeds!
350	I would like to see all people who have lake propery be allowed to be members of the BLPRD and be able to vote. We have to pay but not allowed to be members.y

Survey Number	1g Comment	9i Comment	13m Comment	18r Comment
351				
352				
353				
354				
355				

Survey Number	19m Comment	20m Comment	24 Comment
351			
352			
353			Don't even cut in front of my pier now
354			
355		Inadequate weed removal	100% increase would be reasonab;e provided it be used to control weed growth. The primary goal of the BLD should be to maintain open navigable water for as much of the year as possible. We should not allow the lake to return to becoming a "weed farm", bisected by laterals and channels

Survey Number	25k Comment	27 Comment	29j Comment
351			
352			
353		Millions on dam and nothing for restocking	Not until retired
354		The water level is too low, algae is worse. The water seems clear but can't get to many areas because of water depth.	
355	A detailed description of the weed harvesting operational plan		

Survey Number	Other Comments (and Question 32)
351	
352	
353	Lake has always been weedy not a lake for watersports. Don't try to make it into something else.
354	Increase the depth of the lake and get rid of the weeds.
355	After the drawdown was completed in the Spring of 2014 we were pleasantly surprised to find Buffalo Lake back to normal level looking beautiful. And what a pleasure it was to join other boaters taking advantage of the absence of weeds, allowing boat access to all areas of the lake; areas that are normally too thick with weeds to allow access by any kind of watercraft. But after the summer of 2015, we see the lake starting to change. Although the eastern end of the lake for some reason is still relatively clear, we see a serious encroachment of weeds as we travel west on the lake; and we are afraid the entire lake will once again become the "weed farm" that it was prior to the drawdown. We feel th BLPRD needs to start discussing the viability and cost of an aggressive weed harvesting operation in order to maintain open water for a much larger portion of the lake; much more than the narrow channel and laterals that we have had to deal with in the past. No matter how much harvesting is accomplished, this lake will always have more than sufficient habitat for fish and wildlife. A second request: Improve the detail and timeliness of information regarding the activity of the BLPRD. The website is a great vehicle for this, but it is not being used properly. And why not use email to get the word out for people to check the website, or encourage meeting attendance. The Marquette Tribune should also be used as a way to publicize the activities of the BLPRD, as well as announcing upcoming meetings and events.

C

APPENDIX C

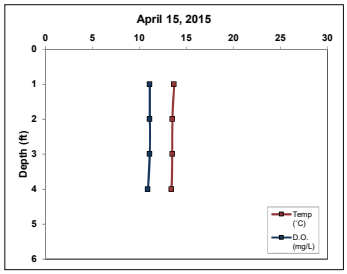
Water Quality Data

Buffalo Lake

Date: 4/15/2015
Time: 9:45
Weather: 53F, 100% sun
Entry: EEH

Max Depth: 4.9
BLS Depth (ft): 3.0
BLB Depth (ft): -
Secchi Depth (ft): 3.0

Depth (ft)	Temp (˚C)	D.O. (mg/L)	pH	Sp. Cond. (µS/cm)
1	13.7	11.1	8.6	
2	13.5	11.1	8.5	
3	13.5	11.1	8.5	
4	13.4	10.9	8.4	



Parameter	BLS	BLB
Total P (µg/L)	87.60	NA
Dissolved P (µg/L)	2.60	NA
Chl-a (µg/L)	46.60	NA
TKN (µg/L)	1550.00	NA
$NO_3 + NO_2$-N (µg/L)	1470.00	NA
NH_3-N (µg/L)	15.30	NA
Total N (µg/L)	3020.00	NA
Lab Cond. (µS/cm)	355.00	NA
Lab pH	8.16	NA
Alkalinity (mg/L $CaCO_3$)	147.00	NA
Total Susp. Solids (mg/L)	10.40	NA
Calcium (mg/L)	37.50	NA
Magnesium (mg/L)	21.80	NA
Hardness (mg/L)	184.00	NA
Color (SU)	60.00	NA
Turbidity (NTU)	NA	NA

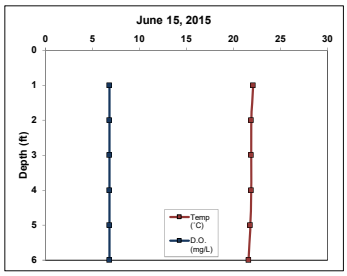
Data collected by EEH and BTB (Onterra)

Buffalo Lake

Date: 6/15/2015
Time: 9:45
Weather: 75F,100% clouds
Entry: EEH

Max Depth: 6.5
BLS Depth (ft): 3.0
BLB Depth (ft): -
Secchi Depth (ft): 3.5

Depth (ft)	Temp (˚C)	D.O. (mg/L)	pH	Sp. Cond. (µS/cm)
1	22.1	6.8		
2	21.9	6.8		
3	21.9	6.8		
4	21.9	6.8		
5	21.8	6.8		
6	21.6	6.8		



Parameter	BLS	BLB
Total P (µg/L)	116.00	NA
Dissolved P (µg/L)	NA	NA
Chl-a (µg/L)	3.43	NA
TKN (µg/L)	NA	NA
$NO_3 + NO_2$-N (µg/L)	NA	NA
NH_3-N (µg/L)	NA	NA
Total N (µg/L)	NA	NA
Lab Cond. (µS/cm)	NA	NA
Lab pH	NA	NA
Alkalinity (mg/L $CaCO_3$)	NA	NA
Total Susp. Solids (mg/L)	NA	NA
Calcium (mg/L)	NA	NA
Magnesium (mg/L)	NA	NA
Hardness (mg/L)	NA	NA
Color (SU)	NA	NA
Turbidity (NTU)	NA	NA

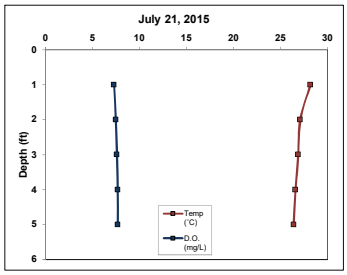
Data collected by SDF (Onterra)

Buffalo Lake

Date: 7/21/2015
Time: 13:00
Weather: 10% clouds, 80F, Breezy
Entry: EEH

Max Depth: 5.7
BLS Depth (ft): 3.0
BLB Depth (ft): -
Secchi Depth (ft): 5.2

Depth (ft)	Temp (˚C)	D.O. (mg/L)	pH	Sp. Cond. (µS/cm)
1	28.2	7.3		
2	27.1	7.5		
3	26.9	7.6		
4	26.6	7.7		
5	26.4	7.7		



Parameter	BLS	BLB
Total P (µg/L)	124.00	NA
Dissolved P (µg/L)	7.67	NA
Chl-a (µg/L)	7.88	NA
TKN (µg/L)	779.00	NA
$NO_3 + NO_2$-N (µg/L)	ND	NA
NH_3-N (µg/L)	ND	NA
Total N (µg/L)	779.00	NA
Lab Cond. (µS/cm)	378.00	NA
Lab pH	8.42	NA
Alkalinity (mg/L $CaCO_3$)	174.00	NA
Total Susp. Solids (mg/L)	2.00	NA
Calcium (mg/L)	36.70	NA
Magnesium (mg/L)	26.40	NA
Hardness (mg/L)	NA	NA
Color (SU)	40.00	NA
Turbidity (NTU)	NA	NA

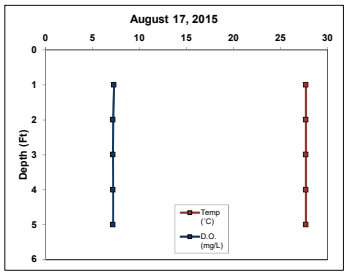
Data collected by TAH (Onterra)

Buffalo Lake

Date: 8/17/2015
Time: 14:15
Weather: 75F, 100% clouds, windy
Entry: EEH

Max Depth: 5.9
BLS Depth (ft): 3.0
BLB Depth (ft): -
Secchi Depth (ft): 4.7

Depth (ft)	Temp (˚C)	D.O. (mg/L)	pH	Sp. Cond. (µS/cm)
1	27.7	7.3		
2	27.7	7.2		
3	27.7	7.2		
4	27.7	7.2		
5	27.7	7.2		



Parameter	BLS	BLB
Total P (µg/L)	92.90	NA
Dissolved P (µg/L)	NA	NA
Chl-a (µg/L)	14.00	NA
TKN (µg/L)	NA	NA
$NO_3 + NO_2$-N (µg/L)	NA	NA
NH_3-N (µg/L)	NA	NA
Total N (µg/L)	NA	NA
Lab Cond. (µS/cm)	NA	NA
Lab pH	NA	NA
Alkalinity (mg/L $CaCO_3$)	NA	NA
Total Susp. Solids (mg/L)	NA	NA
Calcium (mg/L)	NA	NA
Magnesium (mg/L)	NA	NA
Hardness (mg/L)	NA	NA
Color (SU)	NA	NA
Turbidity (NTU)	NA	NA

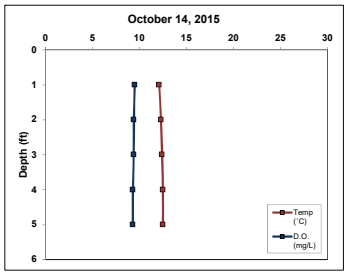
Data collected by TWH & JLW (Onterra)

Buffalo Lake

Date: 10/14/2015
Time: 9:20
Weather: 45F, calm, 100% sun
Entry: EEH

Max Depth: 6.0
BLS Depth (ft): 3.0
BLB Depth (ft): -
Secchi Depth (ft): 5.5

Depth (ft)	Temp (˚C)	D.O. (mg/L)	pH	Sp. Cond. (µS/cm)
1	12.1	9.5		
2	12.3	9.4		
3	12.4	9.4	8.4	
4	12.5	9.3		
5	12.5	9.3		



Parameter	BLS	BLB
Total P (µg/L)	35.00	NA
Dissolved P (µg/L)	NA	NA
Chl-a (µg/L)	2.25	NA
TKN (µg/L)	NA	NA
$NO_3 + NO_2$-N (µg/L)	NA	NA
NH_3-N (µg/L)	NA	NA
Total N (µg/L)	NA	NA
Lab Cond. (µS/cm)	NA	NA
Lab pH	NA	NA
Alkalinity (mg/L $CaCO_3$)	NA	NA
Total Susp. Solids (mg/L)	4.60	NA
Calcium (mg/L)	NA	NA
Magnesium (mg/L)	NA	NA
Hardness (mg/L)	NA	NA
Color (SU)	NA	NA
Turbidity (NTU)	NA	NA

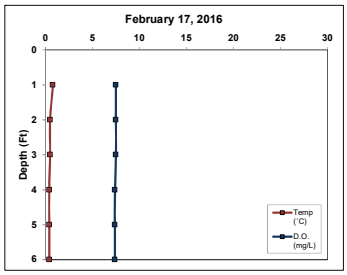
Data collected by TWH (Onterra)

Buffalo Lake

Date: 2/17/2016
Time: 11:20
Weather: 0% clouds, 23F
Entry: EEH

Max Depth: 6.1
BLS Depth (ft): 3.0
BLB Depth (ft): -
Secchi Depth (ft): hit bottom

Depth (ft)	Temp (˚C)	D.O. (mg/L)	pH	Sp. Cond. (µS/cm)
1	0.8	7.5		
2	0.5	7.5		
3	0.5	7.5		
4	0.4	7.4		
5	0.4	7.4		
6	0.4	7.4		



Parameter	BLS	BLB
Total P (µg/L)	37.30	NA
Dissolved P (µg/L)	NA	NA
Chl-a (µg/L)	NA	NA
TKN (µg/L)	720.00	NA
$NO_3 + NO_2$-N (µg/L)	2050.00	NA
NH_3-N (µg/L)	82.10	NA
Total N (µg/L)	2770.00	NA
Lab Cond. (µS/cm)	NA	NA
Lab pH	NA	NA
Alkalinity (mg/L $CaCO_3$)	NA	NA
Total Susp. Solids (mg/L)	NA	NA
Calcium (mg/L)	NA	NA
Magnesium (mg/L)	NA	NA
Hardness (mg/L)	NA	NA
Color (SU)	NA	NA
Turbidity (NTU)	NA	NA

Data collected by TWH & JLW (Onterra). Ice thickness: 1.1 ft

Water Quality Data

2015-2016	Surface		Bottom	
Parameter	Count	Mean	Count	Mean
Secchi Depth (feet)	5	4.4	NA	NA
Total P (µg/L)	6	82.1	0	NA
Dissolved P (µg/L)	2	5.1	0	NA
Chl a (µg/L)	5	14.8	0	NA
TKN (µg/L	3	1016.3	0	NA
NO3+NO2-N (µg/L)	3	1760.0	0	NA
NH3-N (µg/L)	3	48.7	0	NA
Total N (µg/L)	3	2189.7	0	NA
Lab Cond. (µS/cm)	2	366.5	0	NA
Lab pH	2	8.3	0	NA
Alkal (mg/l CaCO3)	2	160.5	0	NA
Total Susp. Solids (mg/l)	3	5.7	0	NA
Calcium (µg/L)	2	37.1	0	NA
Magnesium (mg/L)	2	24.1	0	NA
Hardness (mg/L)	1	184.0	0	NA
Color (SU)	2	50.0	0	NA
Turbidity (NTU)	0	NA	0	NA

Morphological / Geographical Data

Parameter	Value
Acreage	
Volume (acre-feet)	
Perimeter (miles)	
Shoreland Developmetnt Factor	
Maximum Depth (feet)	
County	
WBIC	
Lillie Mason Region (1983)	SWTP Ecoregion
Nichols Ecoregion (1999)	NLFL

Watershed Data

WiLMS Class	Acreage	kg/yr	lbs/yr
Forest			0.0
Open Water			0.0
Pasture/Grass			0.0
Row Crops			0.0
Urban - Rural Residential			0.0
Wetland			0.0
Watershed to Lake Area			

Trophic State Index (TSI)

Year	TP	Chl-a	Secchi
1973	83.8		49.1
1974			
1980		60.5	
1990			50.0
1991	72.6	62.7	54.6
1993	77.2	46.9	54.7
1994	74.9	47.2	50.7
1997	71.9		
1999	71.6	58.3	
2000	73.7	66.2	
2001	75.0	55.8	
2004	73.5	54.9	59.2
2007			63.9
2009			67.1
2015	72.1	51.5	55.6
All Years (Weighted)	75.1	56.5	55.7
SLDL	54.6	52.6	52.4
SWTP Ecoregion	48.7	47.0	50.0

	Secchi (feet)				Chlorophyll-a (µg/L)				Total Phosphorus (µg/L)			
	Growing Season		Summer		Growing Season		Summer		Growing Season		Summer	
Year	Count	Mean	Count	Mean	Count	Mean	Count	Mean	Count	Mean	Count	Mean
1973	2	6.0	1	7.0					2	225.0	1.0	250.0
1974	2	5.0	0						2	75.0	0.0	
1980					2	21.0	2	21.0				
1990	1	6.6	1	6.6								
1991	2	4.8	2	4.8	2	26.5	2	26.5	2	115.0	2.0	115.0
1993	14	4.6	9	4.7	16	16.3	9	5.3	16	121.6	9.0	158.1
1994	4	5.9	2	6.3	5	20.7	2	5.4	5	106.2	2.0	135.0
1997	0		0		0		0		1	110.0	1.0	110.0
1999	0		0		4	23.6	3	16.9	4	103.8	3.0	107.3
2000	0		0		4	33.8	3	37.7	4	114.3	3.0	124.0
2001	0		0		4	18.8	3	13.0	3	124.3	2.0	136.5
2004	8	3.5	6	3.5	4	21.3	2	11.9	4	100.3	2.0	123.0
2007	4	2.9	2	2.5	0		0		0		0.0	
2009	1	2.0	1	2.0	0		0		0		0.0	
2015	5	4.4	3	4.5	5	14.8	3	8.4	5	91.1	3.0	111.0
All Years (Weighted)		4.4		4.4		20.1		14.0		115.0		136.7
SLDL				5.6				9.4				33.0
SWTP Ecoregion				6.6				5.3				22.0

July 2015 N: 779.0
July 2015 P: 124.0

Summer 2015 N:P 6 :1

D

APPENDIX D

Watershed Analysis WiLMS Results

Date: 4/4/2016 Scenario: Buffalo Lake Watershed Current

Lake Id: Buffalo_WS_Current

Watershed Id: 0

Hydrologic and Morphometric Data

Tributary Drainage Area: 191544.0 acre
Total Unit Runoff: 9.7 in.
Annual Runoff Volume: 154831.4 acre-ft
Lake Surface Area <As>: 2227 acre
Lake Volume <V>: 8330 acre-ft
Lake Mean Depth <z>: 3.7 ft
Precipitation - Evaporation: 3 in.
Hydraulic Loading: 199555.8 acre-ft/year
Areal Water Load <qs>: 89.6 ft/year
Lake Flushing Rate <p>: 23.96 1/year
Water Residence Time: 0.04 year
Observed spring overturn total phosphorus (SPO): 83.0 mg/m^3
Observed growing season mean phosphorus (GSM): 114.7 mg/m^3
% NPS Change: 0%
% PS Change: 0%

NON-POINT SOURCE DATA

Land Use	Acre	Low	Most Likely	High	Loading %	Low	Most Likely	High
	(ac)	Loading (kg/ha-year)				Loading (kg/year)		
Row Crop AG	78852	0.50	1.00	3.00	77.1	15956	31911	95734
Mixed AG	0.0	0.30	0.80	1.40	0.0	0	0	0
Pasture/Grass	19816	0.10	0.30	0.50	5.8	802	2406	4010
HD Urban (1/8 Ac)	263	1.00	1.50	2.00	0.4	106	160	213
MD Urban (1/4 Ac)	694	0.30	0.50	0.80	0.3	84	140	225
Rural Res (>1 Ac)	3056	0.05	0.10	0.25	0.3	62	124	309
Wetlands	35991	0.10	0.10	0.10	3.5	1457	1457	1457
Forest	52872	0.05	0.09	0.18	4.7	1070	1926	3852
Lake Surface	2227.0	0.10	0.30	1.00	0.7	90	270	901

POINT SOURCE DATA

Point Sources	Water Load (m^3/year)	Low (kg/year)	Most Likely (kg/year)	High (kg/year)	Loading %
Ennis Lake	290000	0.0	8.9	0.0	0.0
Mason Lake	18000000	0.0	1417.9	0.0	3.4
Swan Lake	34600000	0.0	1498.4	0.0	3.6
Williams Lake	1590000	0.0	32.8	0.0	0.1

SEPTIC TANK DATA

Description		Low	Most Likely	High	Loading %
Septic Tank Output (kg/capita-year)		0.3	0.5	0.8	
# capita-years	677				
% Phosphorus Retained by Soil		98	90	80	
Septic Tank Loading (kg/year)		4.06	33.85	108.32	0.1

TOTALS DATA

Description	Low	Most Likely	High	Loading %
Total Loading (lb)	43278.1	91238.6	235469.8	100.0
Total Loading (kg)	19630.8	41385.6	106808.4	100.0
Areal Loading (lb/ac-year)	19.43	40.97	105.73	0.0
Areal Loading (mg/m^2-year)	2178.21	4592.10	11851.34	0.0
Total PS Loading (lb)	0.0	6521.2	0.0	7.1
Total PS Loading (kg)	0.0	2958.0	0.0	7.1
Total NPS Loading (lb)	43070.4	84046.7	233244.0	92.8
Total NPS Loading (kg)	19536.6	38123.3	105798.8	92.8

Phosphorus Prediction and Uncertainty Analysis Module

Date: 4/4/2016 Scenario: Buffalo Lake Watershed Current
Observed spring overturn total phosphorus (SPO): 83.0 mg/m^3
Observed growing season mean phosphorus (GSM): 114.7 mg/m^3
Back calculation for SPO total phosphorus: 0.0 mg/m^3
Back calculation GSM phosphorus: 0.0 mg/m^3
% Confidence Range: 70%
Nurenberg Model Input - Est. Gross Int. Loading: 0 kg

Lake Phosphorus Model	Low Total P (mg/m^3)	Most Likely Total P (mg/m^3)	High Total P (mg/m^3)	Predicted -Observed (mg/m^3)	% Dif.
Walker, 1987 Reservoir	52	110	284	-5	-4
Canfield-Bachmann, 1981 Natural Lake	66	129	296	14	12
Canfield-Bachmann, 1981 Artificial Lake	57	103	206	-12	-10
Rechow, 1979 General	49	103	267	-12	-10
Rechow, 1977 Anoxic	70	148	382	33	29
Rechow, 1977 water load<50m/year	52	110	285	-5	-4
Rechow, 1977 water load>50m/year	N/A	N/A	N/A	N/A	N/A
Walker, 1977 General	67	141	363	58	70
Vollenweider, 1982 Combined OECD	48	89	194	-10	-10
Dillon-Rigler-Kirchner	44	94	242	11	13
Vollenweider, 1982 Shallow Lake/Res.	41	79	181	-20	-20
Larsen-Mercier, 1976	66	140	360	57	69
Nurnberg, 1984 Oxic	53	112	290	-3	-3

Lake Phosphorus Model	Confidence Lower Bound	Confidence Upper Bound	Parameter Fit?	Back Calculation (kg/year)	Model Type
Walker, 1987 Reservoir	63	223	z Tw	0	GSM
Canfield-Bachmann, 1981 Natural Lake	40	372	FIT	1	GSM
Canfield-Bachmann, 1981 Artificial Lake	32	297	FIT	1	GSM
Rechow, 1979 General	57	212	FIT	0	GSM
Rechow, 1977 Anoxic	87	299	FIT	0	GSM
Rechow, 1977 water load<50m/year	62	225	P	0	GSM
Rechow, 1977 water load>50m/year	N/A	N/A	N/A	N/A	N/A
Walker, 1977 General	69	299	FIT	0	SPO
Vollenweider, 1982 Combined OECD	43	177	FIT	0	ANN
Dillon-Rigler-Kirchner	54	190	P L	0	SPO
Vollenweider, 1982 Shallow Lake/Res.	38	159	FIT	0	ANN
Larsen-Mercier, 1976	84	280	P Pin p	0	SPO
Nurnberg, 1984 Oxic	58	235	P L	0	ANN

E

APPENDIX E

Aquatic Plant Survey Data

Point Number	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	ID	Lake Name	County	Date	Field Crew	Point Number	Depth (Feet)	Sediment	Pole; Rope	Comments	Notes	Nuisance	Total Rake Fullness	Myriophyllum spicatum	Potamogeton crispus	Ceratophyllum demersum	Chara spp.	Elodea canadensis	Elodea nuttallii	Heteranthera dubia	Lemna minor	Lemna trisulca	Myriophyllum sibiricum	Najas flexilis	Najas guadalupensis	Nymphaea odorata	Potamogeton nodosus	Potamogeton pectinatus	Potamogeton pusillus	Potamogeton robbinsii	Potamogeton zosteriformis	Ranunculus aquatilis	Ranunculus flammula	Sagittaria cuneata	Sparganium emersum	Spirodela polyrhiza	Stuckenia pectinata	Typha spp.	Vallisneria americana	Wolffia spp.	Zizania spp.	Filamentous algae	Najas minor	Nelumbo lutea
1	43.791032	-89.339352	52	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	1	0			NONNAVIGABLE (PLANTS)																																			
2	43.791025	-89.338109	39	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	2	3	Muck	Pole	SAMPLED			0																															
3	43.791018	-89.336867	38	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	3	3	Muck	Pole	SAMPLED			3		1			2																											
4	43.791011	-89.336624	37	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	4	0			NONNAVIGABLE (PLANTS)																																			
5	43.791004	-89.334381	24	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	5	0			NONNAVIGABLE (PLANTS)																																			
6	43.790996	-89.333138	11	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	6	0			NONNAVIGABLE (PLANTS)																																			
7	43.790989	-89.331895	10	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	7	3	Muck	Pole	SAMPLED			3		1			2								1			1							1							
8	43.790182	-89.348062	98	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	8	3	Muck	Pole	SAMPLED			2			2		1			1								1							1							
9	43.790175	-89.346819	86	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	9	3	Muck	Pole	SAMPLED			2		1	2		1																		1		1					
10	43.790168	-89.345576	85	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	10	4	Muck	Pole	SAMPLED			0																															
11	43.790161	-89.344334	74	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	11	4	Muck	Pole	SAMPLED			1			1																													
12	43.790154	-89.343091	73	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	12	3	Muck	Pole	SAMPLED			1			1																													
13	43.790146	-89.341848	63	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	13	3	Muck	Pole	SAMPLED			2		1	2																													
14	43.790139	-89.340605	62	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	14	4	Muck	Pole	SAMPLED			0																															
15	43.790132	-89.339362	53	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	15	4	Muck	Pole	SAMPLED			0																															
16	43.790125	-89.338119	51	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	16	4	Muck	Pole	SAMPLED			2																										2						
17	43.790118	-89.336877	40	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	17	4	Muck	Pole	SAMPLED			0																															
18	43.790110	-89.335634	36	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	18	4	Muck	Pole	SAMPLED			2		1			2																											
19	43.790103	-89.334391	25	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	19	3	Muck	Pole	SAMPLED			2		1			2			1				1		1									1	1						
20	43.790096	-89.333148	23	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	20	3	Muck	Pole	SAMPLED			3			1		3																										
21	43.790089	-89.331905	12	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	21	0			NONNAVIGABLE (PLANTS)																																			
22	43.789296	-89.350557	111	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	22	3	Muck	Pole	SAMPLED			2		1	2																												
23	43.789289	-89.349315	99	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	23	3	Muck	Pole	SAMPLED			2			2																												
24	43.789282	-89.348072	97	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	24	4	Muck	Pole	SAMPLED			0																															
25	43.789275	-89.346829	87	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	25	4	Muck	Pole	SAMPLED			0																															
26	43.789267	-89.345586	84	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	26	4	Muck	Pole	SAMPLED			1			1																							1						
27	43.789260	-89.344343	75	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	27	4	Muck	Pole	SAMPLED			0																															
28	43.789253	-89.343101	72	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	28	4	Muck	Pole	SAMPLED			1																										1						
29	43.789246	-89.341858	64	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	29	4	Muck	Pole	SAMPLED			0																															
30	43.789239	-89.340615	61	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	30	4	Muck	Pole	SAMPLED			0																															
31	43.789232	-89.339372	54	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	31	4	Muck	Pole	SAMPLED			1																										1						
32	43.789225	-89.338129	50	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	32	5	Muck	Pole	SAMPLED			0																															
33	43.789217	-89.336887	41	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	33	4	Muck	Pole	SAMPLED			1			1																													
34	43.789210	-89.335644	35	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	34	4	Muck	Pole	SAMPLED			1			1											1																	
35	43.789203	-89.334401	26	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	35	4	Muck	Pole	SAMPLED			0																															
36	43.789196	-89.333158	22	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	36	4	Sand	Pole	SAMPLED			2																										2						
37	43.789188	-89.331915	13	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	37	3	Sand	Pole	SAMPLED			1					1																				1						
38	43.789181	-89.330672	9	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	38	4	Muck	Pole	SAMPLED			1					1							1		1																
39	43.788410	-89.353053	124	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	39	0			TERRESTRIAL																																		
40	43.788403	-89.351810	112	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	40	3	Muck	Pole	SAMPLED			1			1		1								1																		
41	43.788395	-89.350567	110	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	41	4	Muck	Pole	SAMPLED			1			1																												
42	43.788388	-89.349324	100	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	42	4	Muck	Pole	SAMPLED			1		1			1								1												1						
43	43.788381	-89.348082	96	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	43	4	Muck	Pole	SAMPLED			1			1																												
44	43.788374	-89.346839	88	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	44	5	Muck	Pole	SAMPLED			0																															
45	43.788367	-89.345596	83	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	45	5	Muck	Pole	SAMPLED			0																															
46	43.788360	-89.344353	76	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	46	5	Muck	Pole	SAMPLED			0																															
47	43.788353	-89.343110	71	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	47	5	Muck	Pole	SAMPLED			0																															
48	43.788346	-89.341868	65	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	48	5	Muck	Pole	SAMPLED			0																															
49	43.788339	-89.340625	60	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	49	5	Muck	Pole	SAMPLED			0																															
50	43.788331	-89.339382	55	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	50	5	Muck	Pole	SAMPLED			1														1																	
51	43.788324	-89.338139	49	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	51	5	Muck	Pole	SAMPLED			0																															
52	43.788317	-89.336896	42	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	52	5	Muck	Pole	SAMPLED			0																															
53	43.788310	-89.335654	34	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	53	4	Muck	Pole	SAMPLED			1																															1
54	43.788303	-89.334411	27	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	54	4	Muck	Pole	SAMPLED			0																															
55	43.788295	-89.333168	21	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	55	3	Muck	Pole	SAMPLED			0																															
56	43.788288	-89.331925	14	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	56	3	Sand	Pole	SAMPLED			1			1																						1						
57	43.788281	-89.330683	8	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	57	3	Sand	Pole	SAMPLED			1																										1						
58	43.787516	-89.354305	125	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	58	3	Muck	Pole	SAMPLED			1								1																1				1			
59	43.787509	-89.353063	123	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	59	4	Muck	Pole	SAMPLED			1					1																										
60	43.787502	-89.351820	113	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	60	5	Muck	Pole	SAMPLED			1					1								1								1										
61	43.787495	-89.350577	109	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	61	5	Muck	Pole	SAMPLED			0																															
62	43.787488	-89.349334	101	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	62	5	Muck	Pole	SAMPLED			0																															
63	43.787481	-89.348091	95	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	63	6	Muck	Pole	SAMPLED			0																															
64	43.787474	-89.346849	89	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	64	5	Muck	Pole	SAMPLED			0																															
65	43.787467	-89.345606	82	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	65	5	Muck	Pole	SAMPLED			0																															
66	43.787460	-89.344363	77	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	66	5	Muck	Pole	SAMPLED			0																															
67	43.787453	-89.343120	70	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	67	5	Muck	Pole	SAMPLED			0																															
68	43.787445	-89.341878	66	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	68	4	Muck	Pole	SAMPLED			0																															
69	43.787438	-89.340635	59	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	69	4	Muck	Pole	SAMPLED			0																															
70	43.787431	-89.339392	56	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	70	5	Muck	Pole	SAMPLED			0																															
71	43.787424	-89.338149	48	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	71	5	Muck	Pole	SAMPLED			0																															
72	43.787417	-89.336906	43	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	72	5	Muck	Pole	SAMPLED			0																															
73	43.787409	-89.335664	33	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	73	6	Muck	Pole	SAMPLED			1			1																													
74	43.787402	-89.334421	28	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	74	5	Muck	Pole	SAMPLED			0																															
75	43.787395	-89.333178	20	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	75	4	Muck	Pole	SAMPLED			0																															
76	43.787388	-89.331935	15	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	76	3	Muck	Pole	SAMPLED			1																										1						
77	43.787380	-89.330693	7	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	77	3	Sand	Pole	SAMPLED			0																															
78	43.786623	-89.355558	138	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	78	3	Muck	Pole	SAMPLED			1			1		1											1															
79	43.786616	-89.354315	126	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	79	4	Muck	Pole	SAMPLED			1			1																						1						
80	43.786609	-89.353072	122	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	80	4	Muck	Pole	SAMPLED			0																															
81	43.786602	-89.351829	114	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	81	5	Muck	Pole	SAMPLED			0																															
82	43.786595	-89.350587	108	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	82	5	Muck	Pole	SAMPLED			0																															
83	43.786588	-89.349344	102	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	83	5	Muck	Pole	SAMPLED			0																															
84	43.786581	-89.348101	94	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	84	5	Muck	Pole	SAMPLED			0																															
85	43.786574	-89.346858	90	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	85	5	Muck	Pole	SAMPLED			0																															
86	43.786566	-89.345616	81	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	86	4	Muck	Pole	SAMPLED			0																															

Point Number	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	ID	Lake Name	County	Date	Field Crew	Point Number	Depth (Feet)	Sediment	Pole; Rope	Comments	Notes	Nuisance	Total Rake Fullness	Myriophyllum spicatum	Potamogeton crispus	Ceratophyllum demersum	Chara spp.	Elodea canadensis	Elodea nuttallii	Heteranthera dubia	Lemna minor	Lemna trisulca	Myriophyllum sibiricum	Najas flexilis	Najas guadalupensis	Nymphaea odorata	Potamogeton nodosus	Potamogeton pectinatus	Potamogeton pusillus	Potamogeton robbinsii	Potamogeton zosteriformis	Ranunculus aquatilis	Ranunculus flammula	Sagittaria cristata	Sparganium emersum	Spirodela polyrhiza	Stuckenia pectinata	Typha spp.	Vallisneria americana	Wolffia spp.	Zizania spp.	Filamentous algae	Najas minor	Nelumbo lutea
87	43.786559	-89.344373	78	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	87	4	Muck	Pole	SAMPLED			0																															
88	43.786552	-89.343130	69	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	88	4	Muck	Pole	SAMPLED			0																															
89	43.786545	-89.341887	67	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	89	4	Muck	Pole	SAMPLED			0																															
90	43.786538	-89.340645	58	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	90	4	Muck	Pole	SAMPLED			0																															
91	43.786531	-89.339402	57	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	91	5	Muck	Pole	SAMPLED			0																															
92	43.786524	-89.338159	47	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	92	5	Muck	Pole	SAMPLED			0																															
93	43.786516	-89.336916	44	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	93	4	Muck	Pole	SAMPLED			0																															
94	43.786509	-89.335674	32	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	94	5	Muck	Pole	SAMPLED			1														1																
95	43.786502	-89.334431	29	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	95	5	Muck	Pole	SAMPLED			0																															
96	43.786495	-89.333188	19	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	96	5	Muck	Pole	SAMPLED			0																															
97	43.786487	-89.331945	16	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	97	4	Muck	Pole	SAMPLED			0																															
98	43.786480	-89.330703	5	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	98	0			NONNAVIGABLE (PLANTS)																																		
99	43.786473	-89.329460	6	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	99	1	Sand	Pole	SAMPLED			1							1	1														1	1							
100	43.785730	-89.356810	139	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	100	4	Muck	Pole	SAMPLED			1		1	1		1																								
101	43.785723	-89.355567	137	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	101	4	Muck	Pole	SAMPLED			1		1			1														1										
102	43.785716	-89.354325	127	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	102	5	Muck	Pole	SAMPLED			0																														
103	43.785709	-89.353082	121	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	103	6	Muck	Pole	SAMPLED			0																															
104	43.785702	-89.351839	115	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	104	5	Muck	Pole	SAMPLED			0																															
105	43.785695	-89.350596	107	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	105	5	Muck	Pole	SAMPLED			1			1																						1						
106	43.785687	-89.349354	103	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	106	4	Muck	Pole	SAMPLED			0																															
107	43.785680	-89.348111	93	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	107	4	Muck	Pole	SAMPLED			0																															
108	43.785673	-89.346868	91	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	108	4	Muck	Pole	SAMPLED			1			1																											
109	43.785666	-89.345626	80	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	109	4	Muck	Pole	SAMPLED			0																															
110	43.785659	-89.344383	79	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	110	4	Muck	Pole	SAMPLED			1			1											1																
111	43.785652	-89.343140	68	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	111	0			NONNAVIGABLE (PLANTS)																																		
112	43.785623	-89.338169	46	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	112	4	Muck	Pole	SAMPLED			0																															
113	43.785616	-89.336926	45	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	113	0			DOCK																																		
114	43.785609	-89.335684	31	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	114	4	Muck	Pole	SAMPLED			1														1										1						
115	43.785602	-89.334441	30	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	115	4	Muck	Pole	SAMPLED			0																															
116	43.785594	-89.333198	18	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	116	4	Sand	Pole	SAMPLED			1			1				1						1														1			
117	43.785587	-89.331955	17	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	117	0			DOCK																																	
118	43.785580	-89.330713	1	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	118	4	Sand	Pole	SAMPLED			1			1																											
119	43.785573	-89.329470	2	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	119	7	Sand	Pole	SAMPLED			0																															
120	43.785565	-89.328227	3	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	120	4	Sand	Pole	SAMPLED			1																										1					
121	43.785558	-89.326984	4	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	121	0			OTHER																																	
122	43.784843	-89.359305	151	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	122	3	Muck	Pole	SAMPLED			1			1		1																									
123	43.784836	-89.358063	150	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	123	4	Muck	Pole	SAMPLED			1			1		1																									
124	43.784829	-89.356820	140	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	124	4	Muck	Pole	SAMPLED			1			1																											
125	43.784822	-89.355577	136	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	125	5	Muck	Pole	SAMPLED			0																															
126	43.784815	-89.354334	128	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	126	6	Muck	Pole	SAMPLED			0																															
127	43.784808	-89.353092	120	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	127	5	Muck	Pole	SAMPLED			0																															
128	43.784801	-89.351849	116	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	128	4	Muck	Pole	SAMPLED			1			1		1																									
129	43.784794	-89.350606	106	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	129	5	Muck	Pole	SAMPLED			0																															
130	43.784787	-89.349364	104	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	130	4	Muck	Pole	SAMPLED			0																															
131	43.784780	-89.348121	92	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	131	4	Muck	Pole	SAMPLED			2			2		2								1																
132	43.783957	-89.361800	165	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	132	1	Muck	Pole	SAMPLED			1			1						1		1												1	1					
133	43.783950	-89.360558	164	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	133	4	Muck	Pole	SAMPLED			1		1	1		1																								
134	43.783943	-89.359315	152	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	134	4	Muck	Pole	SAMPLED			0																															
135	43.783936	-89.358072	149	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	135	4	Muck	Pole	SAMPLED			1																													1		
136	43.783929	-89.356829	141	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	136	5	Muck	Pole	SAMPLED			0																															
137	43.783922	-89.355587	135	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	137	5	Sand	Pole	SAMPLED			0																															
138	43.783915	-89.354344	129	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	138	5	Muck	Pole	SAMPLED			0																															
139	43.783908	-89.353101	119	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	139	5	Muck	Pole	SAMPLED			1			1		1																									
140	43.783901	-89.351859	117	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	140	4	Muck	Pole	SAMPLED			0																															
141	43.783894	-89.350616	105	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	141	4	Sand	Pole	SAMPLED			1														1																
142	43.783070	-89.364295	179	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	142	3	Muck	Pole	SAMPLED			1			1						1				1											1				1		
143	43.783063	-89.363053	178	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	143	4	Muck	Pole	SAMPLED			0																															
144	43.783057	-89.361810	166	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	144	4	Muck	Pole	SAMPLED			0																															
145	43.783050	-89.360567	163	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	145	4	Muck	Pole	SAMPLED			0																															
146	43.783043	-89.359325	153	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	146	5	Muck	Pole	SAMPLED			1			1																											
147	43.783036	-89.358082	148	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	147	6	Muck	Pole	SAMPLED			0																															
148	43.783029	-89.356839	142	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	148	5	Muck	Pole	SAMPLED			0																															
149	43.783022	-89.355596	134	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	149	4	Muck	Pole	SAMPLED			1					1																							1		
150	43.783015	-89.354354	130	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	150	4	Muck	Pole	SAMPLED			1			1																										
151	43.783008	-89.353111	118	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	151	4	Muck	Pole	SAMPLED			1					1																								
152	43.782191	-89.368033	205	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	152	3	Muck	Pole	SAMPLED			1			1																	1									
153	43.782184	-89.366790	192	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	153	3	Muck	Pole	SAMPLED			3			2		1																		1			3			
154	43.782177	-89.365547	191	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	154	4	Muck	Pole	SAMPLED			0																														
155	43.782170	-89.364305	180	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	155	4	Muck	Pole	SAMPLED			1					1																									
156	43.782163	-89.363062	177	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	156	4	Muck	Pole	SAMPLED			1			1																											
157	43.782156	-89.361819	168	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	157	5	Muck	Pole	SAMPLED			1																												1		
158	43.782149	-89.360577	162	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	158	5	Muck	Pole	SAMPLED			0																														
159	43.782142	-89.359334	154	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	159	7	Muck	Pole	SAMPLED			0																															
160	43.782135	-89.358091	147	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	160	5	Muck	Pole	SAMPLED			0																															
161	43.782128	-89.356849	143	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	161	5	Muck	Pole	SAMPLED			1			1		1																							1		
162	43.782121	-89.355606	133	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	162	4	Muck	Pole	SAMPLED			1					1																								
163	43.782114	-89.354363	131	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	163	2	Sand	Pole	SAMPLED			2			1				2																			1			
164	43.781379	-89.384197	133	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	164	3	Muck	Pole	SAMPLED			1			1																										
165	43.781372	-89.382954	146	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	165	3	Muck	Pole	SAMPLED			3			3						1																				
166	43.781365	-89.381712	147	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	166	3	Muck	Pole	SAMPLED			0																														
167	43.781358	-89.380469	160	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	167	3	Muck	Pole	SAMPLED			3			3		1																									
168	43.781352	-89.379226	260	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	168	4	Muck	Pole	SAMPLED			1			1		1														1										
169	43.781345	-89.377984	259	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	169	4	Muck	Pole	SAMPLED			1		1	1																										
170	43.781338	-89.376741	246	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	170	4	Muck	Pole	SAMPLED			1			1		1				1					1													1		
171	43.781331	-89.375498	245	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	171	4	Muck	Pole	SAMPLED			1			1		1				1					1													1		
172	43.781325	-89.374256	232	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	172	4	Muck	Pole	SAMPLED			1		1	1																										

Point Number	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	ID	Lake Name	County	Date	Field Crew	Point Number	Depth (Feet)	Sediment	Pole; Rope	Comments	Notes	Nuisance	Total Rake Fullness	Myriophyllum spicatum	Potamogeton crispus	Ceratophyllum demersum	Chara spp.	Elodea canadensis	Elodea nuttallii	Heteranthera dubia	Lemna minor	Lemna trisulca	Myriophyllum sibiricum	Najas flexilis	Najas guadalupensis	Nymphaea odorata	Potamogeton nodosus	Potamogeton pectinatus	Potamogeton pusillus	Potamogeton robbinsii	Potamogeton zosteriformis	Ranunculus aquatilis	Ranunculus flammula	Sagittaria cuneata	Spirodela polyrhiza	Stuckenia pectinata	Typha spp.	Vallisneria americana	Wolffia spp.	Zizania spp.	Filamentous algae	Najas minor	Nelumbo lutea
173	43.781318	-89.373013	231	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	173	4	Muck	Pole	SAMPLED			3			3		2								1										1							
174	43.781311	-89.371770	218	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	174	4	Muck	Pole	SAMPLED			0																														
175	43.781304	-89.370528	217	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	175	4	Muck	Pole	SAMPLED			1			1																												
176	43.781297	-89.369285	206	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	176	4	Muck	Pole	SAMPLED			1			1																												
177	43.781290	-89.368042	204	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	177	4	Muck	Pole	SAMPLED			1	1		1															1												
178	43.781284	-89.366800	193	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	178	4	Muck	Pole	SAMPLED			0																														
179	43.781277	-89.365557	190	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	179	4	Muck	Pole	SAMPLED			1			1																												
180	43.781270	-89.364314	181	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	180	4	Muck	Pole	SAMPLED			2			1		1																				2					
181	43.781263	-89.363072	176	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	181	5	Muck	Pole	SAMPLED			0																														
182	43.781256	-89.361829	167	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	182	7	Muck	Pole	SAMPLED			0																														
183	43.781249	-89.360586	161	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	183	5	Muck	Pole	SAMPLED			1			1																												
184	43.781242	-89.359344	155	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	184	5	Muck	Pole	SAMPLED			1					1																										
185	43.781235	-89.358101	146	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	185	5	Muck	Pole	SAMPLED			0																														
186	43.781228	-89.356858	144	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	186	4	Muck	Pole	SAMPLED			1			1																												
187	43.781221	-89.355616	132	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	187	0			DOCK																																		
188	43.780518	-89.391662	96	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	188	2	Muck	Pole	SAMPLED			2			2		1			1																							
189	43.780512	-89.390419	107	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	189	2	Muck	Pole	SAMPLED			2			1					1						1																
190	43.780505	-89.389177	108	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	190	3	Muck	Pole	SAMPLED			2		1	1						1																				
191	43.780498	-89.387934	120	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	191	3	Muck	Pole	SAMPLED			1			1		1											1			1											
192	43.780492	-89.386691	121	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	192	4	Muck	Pole	SAMPLED			1			1																												
193	43.780485	-89.385449	132	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	193	4	Muck	Pole	SAMPLED			3			3																												
194	43.780478	-89.384206	134	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	194	5	Muck	Pole	SAMPLED			1																										1					
195	43.780472	-89.382963	145	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	195	4	Muck	Pole	SAMPLED			1		1																												
196	43.780465	-89.381721	148	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	196	5	Muck	Pole	SAMPLED			1		1	1		1																										
197	43.780458	-89.380478	159	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	197	4	Muck	Pole	SAMPLED			1			1		1								1																
198	43.780451	-89.379236	261	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	198	4	Muck	Pole	SAMPLED			1			1										1																
199	43.780445	-89.377993	258	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	199	4	Muck	Pole	SAMPLED			1					1																										
200	43.780438	-89.376750	247	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	200	4	Muck	Pole	SAMPLED			3			3		1								1						1										
201	43.780431	-89.375508	244	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	201	4	Muck	Pole	SAMPLED			0																														
202	43.780424	-89.374265	233	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	202	4	Muck	Pole	SAMPLED			1								1					1														1			
203	43.780417	-89.373022	230	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	203	4	Muck	Pole	SAMPLED			3			2		1																										
204	43.780411	-89.371780	219	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	204	4	Muck	Pole	SAMPLED			1					1																										
205	43.780404	-89.370537	216	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	205	4	Muck	Pole	SAMPLED			1					1																										
206	43.780397	-89.369294	207	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	206	4	Muck	Pole	SAMPLED			1			1																												
207	43.780390	-89.368052	203	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	207	5	Muck	Pole	SAMPLED			2			1																								2				
208	43.780383	-89.366809	194	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	208	5	Muck	Pole	SAMPLED			0																														
209	43.780376	-89.365567	189	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	209	6	Muck	Pole	SAMPLED			0																														
210	43.780369	-89.364324	182	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	210	5	Muck	Pole	SAMPLED			0																														
211	43.780362	-89.363081	175	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	211	5	Muck	Pole	SAMPLED			0																														
212	43.780356	-89.361839	169	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	212	5	Muck	Pole	SAMPLED			1					1																						1				
213	43.78034858	-89.36059599	160	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	213	4	Muck	Pole	SAMPLED			1			1		1																						1				
214	43.78034162	-89.35935336	156	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	214	5	Muck	Pole	SAMPLED			0																														
215	43.78033465	-89.35811073	145	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	215	4	Muck	Pole	SAMPLED			1			1		1																				1					
216	43.77963103	-89.39415632	85	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	216	3	Muck	Pole	SAMPLED			3			3		1																										
217	43.77962443	-89.39291369	95	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	217	3	Muck	Pole	SAMPLED			1			1		1			1					1																
218	43.77961783	-89.39167107	97	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	218	3	Muck	Pole	SAMPLED			2			2					1					1						1										
219	43.7796112	-89.39042845	106	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	219	4	Muck	Pole	SAMPLED			2			2		1											1														
220	43.77960457	-89.38918582	109	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	220	4	Muck	Pole	SAMPLED			0																														
221	43.77959792	-89.3879432	119	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	221	5	Muck	Pole	SAMPLED			0																														
222	43.77959126	-89.38670057	122	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	222	4	Muck	Pole	SAMPLED			2		1	1																						1					
223	43.77958459	-89.38545795	131	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	223	4	Muck	Pole	SAMPLED			0																														
224	43.7795779	-89.38421533	135	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	224	5	Muck	Pole	SAMPLED			2			2		1																										
225	43.7795712	-89.38297271	144	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	225	4	Muck	Pole	SAMPLED			1			1																												
226	43.77956448	-89.38173009	149	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	226	5	Muck	Pole	SAMPLED			2					1												1										2				
227	43.77955775	-89.38048746	158	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	227	4	Muck	Pole	SAMPLED			2		1	1											2															
228	43.77955101	-89.37924484	262	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	228	4	Muck	Pole	SAMPLED			1			1																												
229	43.77954425	-89.37800222	257	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	229	4	Muck	Pole	SAMPLED			1		1	1		1																										
230	43.77953748	-89.3767596	248	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	230	4	Muck	Pole	SAMPLED			2																												2				
231	43.7795307	-89.37551698	243	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	231	4	Muck	Pole	SAMPLED			3			1																								3				
232	43.7795239	-89.37427437	234	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	232	5	Muck	Pole	SAMPLED			2																												2				
233	43.77951709	-89.37303175	229	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	233	4	Muck	Pole	SAMPLED			3			1																								3				
234	43.77951027	-89.37178913	220	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	234	5	Muck	Pole	SAMPLED			0																														
235	43.7950343	-89.37054651	215	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	235	6	Muck	Pole	SAMPLED			0																														
236	43.77949658	-89.36930389	208	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	236	5	Muck	Pole	SAMPLED			0																														
237	43.77948972	-89.36806128	202	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	237	5	Muck	Pole	SAMPLED			0																														
238	43.77948284	-89.36681866	195	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	238	4	Muck	Pole	SAMPLED			2																												2				
239	43.77947595	-89.36557605	188	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	239	5	Muck	Pole	SAMPLED			1			1																												
240	43.77946905	-89.36433343	183	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	240	5	Muck	Pole	SAMPLED			0																														
241	43.77946213	-89.36309082	174	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	241	5	Muck	Pole	SAMPLED			0																														
242	43.7794552	-89.3618482	170	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	242	4	Muck	Pole	SAMPLED			1			1																												
243	43.77944825	-89.36060559	159	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	243	4	Muck	Pole	SAMPLED			1			1		1							1														1				
244	43.77944129	-89.35936297	157	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	244	0			DOCK																																		
245	43.77874384	-89.39665063	74	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	245	3	Muck	Pole	SAMPLED			2			1		1																										
246	43.77873727	-89.39540802	84	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	246	3	Muck	Pole	SAMPLED			1																	1														
247	43.77873069	-89.39416541	86	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	247	4	Muck	Pole	SAMPLED			2			2		1											1		1												
248	43.7787241	-89.3929228	94	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	248	4	Muck	Pole	SAMPLED			1	1		1		1						1																		
249	43.77871749	-89.3916802	98	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	249	4	Muck	Pole	SAMPLED			1											1																		
250	43.77871087	-89.39043759	105	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	250	4	Muck	Pole	SAMPLED			1			1																												
251	43.77870424	-89.38919499	110	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	251	4	Muck	Pole	SAMPLED			1			1		1											1														
252	43.77869759	-89.38795238	118	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	252	5	Muck	Pole	SAMPLED			1					1											1														
253	43.77869093	-89.38670978	123	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	253	5	Muck	Pole	SAMPLED			1			1																								1				
254	43.77868425	-89.38546717	130	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	254	4	Muck	Pole	SAMPLED			3																												3				
255	43.77867756	-89.38422457	136	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	255	4	Muck	Pole	SAMPLED			3																												3				
256	43.77867086	-89.38298197	143	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	256	5	Muck	Pole	SAMPLED			3																												3				
257	43.77866415	-89.38173936	150	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	257	5	Muck	Pole	SAMPLED			2			1		1																						2				
258	43.77865742	-89.38049676	157	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	258	6	Muck	Pole	SAMPLED			0																														

Point Number	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	ID	Lake Name	County	Date	Field Crew	Point Number	Depth (Feet)	Sediment	Pole, Rope	Comments	Notes	Nuisance	Total Rake Fullness	Myriophyllum spicatum	Potamogeton crispus	Ceratophyllum demersum	Chara spp.	Elodea canadensis	Elodea nuttallii	Heteranthera dubia	Lemna minor	Lemna trisulca	Myriophyllum sibiricum	Najas flexilis	Najas guadalupensis	Nymphaea odorata	Potamogeton nodosus	Potamogeton praelongus	Potamogeton pusillus	Potamogeton robbinsii	Potamogeton zosteriformis	Ranunculus aquatilis	Ranunculus flammula	Sphenoplerais sancta	Spirodela polyrhiza	Stuckenia pectinata	Typha spp.	Valisneria americana	Wolffia spp.	Zizania spp.	Filamentous algae	Najas minor	Nelumbo lutea
259	43.77865068	-89.37925416	263	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	259	6	Muck	Pole	SAMPLED			0																														
260	43.77864392	-89.37801156	256	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	260	6	Muck	Pole	SAMPLED			0																														
261	43.77863715	-89.37676896	249	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	261	5	Muck	Pole	SAMPLED			0																														
262	43.77863037	-89.37552636	242	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	262	5	Muck	Pole	SAMPLED			1			1																							1					
263	43.77862357	-89.37428376	235	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	263	4	Muck	Pole	SAMPLED			2																											2					
264	43.77861676	-89.37304116	228	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	264	4	Muck	Pole	SAMPLED			0																														
265	43.77860994	-89.37179856	221	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	265	4	Muck	Pole	SAMPLED			1																											1					
266	43.7786031	-89.37055596	214	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	266	4	Muck	Pole	SAMPLED			0																														
267	43.77859625	-89.36931336	209	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	267	4	Muck	Pole	SAMPLED			1			1		1																										
268	43.77858939	-89.36807076	201	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	268	4	Muck	Pole	SAMPLED			1			1		1																						1					
269	43.77858251	-89.36682816	196	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	269	5	Muck	Pole	SAMPLED			0																														
270	43.77857562	-89.36558557	187	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	270	5	Muck	Pole	SAMPLED			1			1																												
271	43.77856872	-89.36434297	184	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	271	4	Muck	Pole	SAMPLED			1			1		1																										
272	43.7785618	-89.36310037	173	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	272	4	Muck	Pole	SAMPLED			1					1																						1					
273	43.77855487	-89.36185778	171	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	273	4	Muck	Pole	SAMPLED			1			1		1																				1						
274	43.77854792	-89.36061518	158	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	274	0			TERRESTRIAL																																		
275	43.7786312	-89.40038745	62	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	275	3	Muck	Pole	SAMPLED			1	1		1					1																							
276	43.77785659	-89.39914486	63	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	276	3	Muck	Pole	SAMPLED			1					1						1								1											
277	43.77785005	-89.39790227	73	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	277	4	Muck	Pole	SAMPLED			2			1		2						1																			
278	43.7778435	-89.39665968	75	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	278	4	Muck	Pole	SAMPLED			1					1															1										
279	43.77783694	-89.39541709	83	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	279	4	Muck	Pole	SAMPLED			2			2																												
280	43.77783036	-89.3941745	87	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	280	4	Muck	Pole	SAMPLED			0																														
281	43.7778376	-89.39293191	93	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	281	5	Muck	Pole	SAMPLED			2			1		1		1																							
282	43.77781715	-89.39168933	99	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	282	4	Muck	Pole	SAMPLED			3			1				1																				3					
283	43.77781053	-89.39044674	104	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	283	4	Muck	Pole	SAMPLED			3			1																								3					
284	43.7778039	-89.38920415	111	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	284	4	Muck	Pole	SAMPLED			3																											3					
285	43.77779725	-89.38796157	117	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	285	5	Muck	Pole	SAMPLED			1					1		1				1					1														
286	43.77779059	-89.38671898	124	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	286	4	Muck	Pole	SAMPLED			3			1				1									1											2					
287	43.77778392	-89.38547639	129	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	287	6	Muck	Pole	SAMPLED			0																														
288	43.77777723	-89.38423381	137	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	288	6	Muck	Pole	SAMPLED			0																														
289	43.77777053	-89.38299122	142	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	289	5	Muck	Pole	SAMPLED			0																														
290	43.77776381	-89.38174864	151	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	290	5	Muck	Pole	SAMPLED			0																														
291	43.77775708	-89.38050606	156	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	291	5	Muck	Pole	SAMPLED			1			1		1																										
292	43.77775034	-89.37926347	264	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	292	4	Muck	Pole	SAMPLED			1					1																										
293	43.77774359	-89.37802089	255	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	293	4	Muck	Pole	SAMPLED			1																												1					
294	43.77773682	-89.37677831	250	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	294	4	Muck	Pole	SAMPLED			1			1																												
295	43.77773004	-89.37553573	241	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	295	4	Muck	Pole	SAMPLED			1			1		1																										
296	43.77772324	-89.37429314	236	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	296	4	Muck	Pole	SAMPLED			1			1																		1										
297	43.77771643	-89.37305056	227	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	297	4	Muck	Pole	SAMPLED			3																												3					
298	43.77770961	-89.37180798	222	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	298	4	Muck	Pole	SAMPLED			1			1																												
299	43.77770277	-89.3705654	213	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	299	4	Muck	Pole	SAMPLED			1					1																										
300	43.77769992	-89.36932282	210	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	300	4	Muck	Pole	SAMPLED			0																														
301	43.77768906	-89.36808024	200	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	301	4	Muck	Pole	SAMPLED			1			1																												
302	43.77768218	-89.36683766	197	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	302	4	Muck	Pole	SAMPLED			1			1		1																							1					
303	43.77767529	-89.36559509	186	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	303	4	Muck	Pole	SAMPLED			1			1		1																										
304	43.77766838	-89.36435251	185	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	304	0			TERRESTRIAL																																		
305	43.77766147	-89.36310993	172	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	305	0			TERRESTRIAL																																		
306	43.77698228	-89.40412416	39	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	306	2	Sand	Pole	SAMPLED			3			2	1	1			1			1								1								1	1			
307	43.77697579	-89.40288159	50	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	307	3	Muck	Pole	SAMPLED			0																														
308	43.7769693	-89.40163902	51	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	308	4	Muck	Pole	SAMPLED			1	1	1			1																										
309	43.77696278	-89.40039645	61	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	309	4	Muck	Pole	SAMPLED			2			1		1				1		1								1					1						
310	43.77695626	-89.39915387	64	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	310	4	Muck	Pole	SAMPLED			2					1																						2					
311	43.77694972	-89.3979113	72	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	311	4	Muck	Pole	SAMPLED			1		1	1																												
312	43.77694317	-89.39666873	76	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	312	4	Muck	Pole	SAMPLED			1			1																												
313	43.7769366	-89.39542616	82	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	313	4	Muck	Pole	SAMPLED			3			1																								3					
314	43.77693002	-89.39418359	88	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	314	6	Muck	Pole	SAMPLED			0																														
315	43.77692343	-89.39294102	92	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	315	6	Muck	Pole	SAMPLED			1							1																								
316	43.77691682	-89.39169845	100	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	316	5	Muck	Pole	SAMPLED			0																														
317	43.7769102	-89.39045589	103	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	317	5	Muck	Pole	SAMPLED			1																												1					
318	43.77690357	-89.38921332	112	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	318	5	Muck	Pole	SAMPLED			2																	1											2					
319	43.77689692	-89.38797075	116	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	319	5	Muck	Pole	SAMPLED			3			1		1												1											3					
320	43.77689026	-89.38672818	125	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	320	4	Muck	Pole	SAMPLED			3			1		1												1											2					
321	43.77688358	-89.38548562	128	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	321	5	Muck	Pole	SAMPLED			2			2																												
322	43.7768769	-89.38424305	138	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	322	5	Muck	Pole	SAMPLED			1																										1					
323	43.77687019	-89.38300048	141	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	323	5	Muck	Pole	SAMPLED			1	1		1																												
324	43.77686348	-89.38175792	152	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	324	4	Muck	Pole	SAMPLED			1			1											1																	
325	43.77685675	-89.38051535	155	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	325	5	Muck	Pole	SAMPLED			2		1	2																												
326	43.77685001	-89.37927279	265	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	326	4	Muck	Pole	SAMPLED			2																												2					
327	43.77684325	-89.37803022	254	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	327	4	Muck	Pole	SAMPLED			2			2																		1						2					
328	43.77683649	-89.37678766	251	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	328	4	Muck	Pole	SAMPLED			1					1																						1					
329	43.7768297	-89.3755451	240	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	329	4	Muck	Pole	SAMPLED			3																												3					
330	43.77682291	-89.37430253	237	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	330	4	Muck	Pole	SAMPLED			1			1		1																										
331	43.7768161	-89.37305997	226	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	331	4	Muck	Pole	SAMPLED			2			1																									2					
332	43.77680927	-89.37181741	223	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	332	4	Muck	Pole	SAMPLED			0																														
333	43.7768024	-89.37057485	212	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	333	4	Muck	Pole	SAMPLED			1			1		1															1										
334	43.77679559	-89.36933229	211	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	334	4	Muck	Pole	SAMPLED			1	1				1									1			1														
335	43.77678873	-89.36808972	199	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	335	4	Muck	Pole	SAMPLED			1					1							1														1					
336	43.77678185	-89.36684716	198	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	336	0			TERRESTRIAL																																		
337	43.77609487	-89.40661821	29	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	337	3	Muck	Pole	SAMPLED			0																														
338	43.77608841	-89.40537566	38	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	338	3	Muck	Pole	SAMPLED			3			2		3																										
339	43.77608194	-89.4041331	40	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	339	4	Muck	Pole	SAMPLED			2			1		1						1						1														
340	43.77607546	-89.40289055	49	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	340	4	Muck	Pole	SAMPLED			1					1																						1					
341	43.77606896	-89.401648	52	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	341	4	Muck	Pole	SAMPLED			3	1		3								1								1											
342	43.77606245	-89.40040544	60	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	342	4	Muck	Pole	SAMPLED			3			3		2		1		1		1					1			1										
343	43.77605592	-89.39916289	65	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	343	4	Muck	Pole	SAMPLED			1		1	1														1														
344	43.77604938	-89.39792034	71	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	344	6	Muck	Pole	SAMPLED			0																														

Point Number	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	ID	Lake Name	County	Date	Field Crew	Point Number	Depth (Feet)	Sediment	Pole, Rope	Comments	Notes	Nuisance	Total Rake Fullness	Myriophyllum spicatum	Potamogeton crispus	Ceratophyllum demersum	Chara spp.	Elodea canadensis	Elodea nuttallii	Heteranthera dubia	Lemna minor	Lemna trisulca	Myriophyllum sibiricum	Najas flexilis	Najas guadalupensis	Nymphaea odorata	Potamogeton nodosus	Potamogeton praelongus	Potamogeton pusillus	Potamogeton robbinsii	Potamogeton zosteriformis	Ranunculus aquatilis	Ranunculus flammula	Sphenoplerlis sancta	Spirodela polyrhiza	Stuckenia pectinata	Typha spp.	Vallisneria americana	Wolffia spp.	Zizania spp.	Filamentous algae	Najas minor	Nelumbo lutea
345	43.77604283	-89.39667778	77	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	345	5	Muck	Pole	SAMPLED			2			1		1										1														
346	43.77603626	-89.39543523	81	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	346	4	Muck	Pole	SAMPLED			2			1																					1				
347	43.77602968	-89.39419268	89	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	347	4	Muck	Pole	SAMPLED			2			2								1				1												1		
348	43.77602309	-89.39295013	91	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	348	5	Muck	Pole	SAMPLED			1			1																		1							
349	43.77601648	-89.39170758	101	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	349	5	Muck	Pole	SAMPLED			1			1					1																				
350	43.77600986	-89.39046503	102	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	350	5	Muck	Pole	SAMPLED			3			2																					3				
351	43.77600323	-89.38922248	113	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	351	4	Muck	Pole	SAMPLED			2		1	2															1										
352	43.77599658	-89.38797993	115	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	352	4	Muck	Pole	SAMPLED			2			2		1						1																
353	43.77598992	-89.38673738	126	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	353	4	Muck	Pole	SAMPLED			3			1			1																		3				
354	43.77598325	-89.38549484	127	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	354	4	Muck	Pole	SAMPLED			3			1																					3				
355	43.77597656	-89.38425229	139	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	355	4	Muck	Pole	SAMPLED			3			1																					3				
356	43.77596986	-89.38300974	140	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	356	4	Muck	Pole	SAMPLED			2			2		1			1																				
357	43.77596315	-89.38176719	153	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	357	4	Muck	Pole	SAMPLED			1			1		1																							
358	43.77595642	-89.38052465	154	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	358	4	Muck	Pole	SAMPLED			1					1																							
359	43.77594968	-89.3792821	266	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	359	4	Muck	Pole	SAMPLED			1			1															1										
360	43.77594292	-89.37803956	253	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	360	4	Muck	Pole	SAMPLED			1																												
361	43.77593615	-89.37679701	252	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	361	4	Muck	Pole	SAMPLED			1			1						1		1					1												
362	43.77592937	-89.37555447	239	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	362	4	Muck	Pole	SAMPLED			2			1		1		1														2						
363	43.77592257	-89.37431192	238	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	363	4	Muck	Pole	SAMPLED			1					1																			1				
364	43.77591577	-89.37306938	225	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	364	3	Sand	Pole	SAMPLED			2			2	1							1									1					1				
365	43.77590894	-89.37182683	224	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	365	0			TERRESTRIAL																																
366	43.77522023	-89.41159726	17	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	366	3	Muck	Pole	SAMPLED			2			2		1			1	1																			
367	43.77521383	-89.41035473	18	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	367	3	Muck	Pole	SAMPLED			1			1																									
368	43.77520741	-89.40911219	19	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	368	3	Muck	Pole	SAMPLED			1			1		1																							
369	43.77520098	-89.40786965	28	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	369	4	Muck	Pole	SAMPLED			1			1		1																							
370	43.77519453	-89.40662712	30	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	370	4	Muck	Pole	SAMPLED			1	1		1															1										
371	43.77518808	-89.40538458	37	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	371	4	Muck	Pole	SAMPLED			3			1													1								3				
372	43.7751816	-89.40414204	41	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	372	4	Muck	Pole	SAMPLED			3			1		1		2																	3				
373	43.77517512	-89.40289951	48	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	373	4	Muck	Pole	SAMPLED			3			1		1																			3				
374	43.77516862	-89.40165697	53	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	374	6	Muck	Pole	SAMPLED			0																												
375	43.77516211	-89.40041444	59	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	375	5	Muck	Pole	SAMPLED			1			1																										
376	43.77515558	-89.3991719	66	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	376	4	Muck	Pole	SAMPLED			2		1	2		1											1												
377	43.77514905	-89.39792937	70	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	377	4	Muck	Pole	SAMPLED			3			2		1											1		1										
378	43.77514249	-89.39668684	78	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	378	5	Muck	Pole	SAMPLED			1																									1				
379	43.77513593	-89.3954443	80	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	379	4	Muck	Pole	SAMPLED			2			1		1						1		1			1											
380	43.77512935	-89.39420177	90	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	380	4	Muck	Pole	SAMPLED			2			1		1											1											
381	43.77509625	-89.38798912	114	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	381	3	Muck	Pole	SAMPLED			0																												
382	43.77434537	-89.41657617	169	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	382	2	Muck	Pole	SAMPLED			3			3					1										1								1			
383	43.7743902	-89.41533365	161	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	383	3	Muck	Pole	SAMPLED			3	1		2		2						1					1		1									
384	43.77433266	-89.41409113	1	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	384	3	Muck	Pole	SAMPLED			2			1		1				1				1				1	1						2			
385	43.77432628	-89.41284861	8	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	385	4	Muck	Pole	SAMPLED			1	1		1		1			1								1			1					1	1		
386	43.77431989	-89.41160609	9	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	386	4	Muck	Pole	SAMPLED			1	1		1		1						1							1									
387	43.77431349	-89.41036357	16	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	387	4	Muck	Pole	SAMPLED			3	1		1		1																			2				
388	43.77430707	-89.40912105	20	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	388	4	Muck	Pole	SAMPLED			3	1		3		1											1		1									
389	43.77430064	-89.40787854	27	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	389	3	Muck	Pole	SAMPLED			3			2		1			1	1		1							1	1				2			1	
390	43.77429419	-89.40663602	31	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	390	5	Muck	Pole	SAMPLED			2					1																			2				
391	43.77428774	-89.4053935	36	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	391	6	Muck	Pole	SAMPLED			2			2		1											1											
392	43.77428127	-89.40415098	42	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	392	5	Muck	Pole	SAMPLED			2			1													1								1				
393	43.77427478	-89.40290847	47	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	393	4	Muck	Pole	SAMPLED			1			1		1											1											
394	43.77426828	-89.40166595	54	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	394	4	Muck	Pole	SAMPLED			1																									1				
395	43.77426177	-89.40042343	58	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	395	4	Muck	Pole	SAMPLED			1			1		1																							
396	43.77425525	-89.39918092	67	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	396	4	Muck	Pole	SAMPLED			2	1		1		1																			1				
397	43.7742487	-89.3979384	69	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	397	4	Muck	Pole	SAMPLED			1		1																							1				
398	43.77424216	-89.39669589	79	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	398	4	Muck	Pole	SAMPLED			3			2		2											2			1					1				
399	43.77345769	-89.41906993	177	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	399	0			NONNAVIGABLE (PLANTS)																																
400	43.77345136	-89.41782743	170	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	400	3	Muck	Pole	SAMPLED			3	1		2		1																			1				
401	43.77344503	-89.41658493	168	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	401	3	Muck	Pole	SAMPLED			3			1		3																						1		
402	43.77343868	-89.41534242	162	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	402	4	Muck	Pole	SAMPLED			2			2		1						1					1			1								
403	43.77343232	-89.41409992	2	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	403	5	Muck	Pole	SAMPLED			2	1		1													1								1				
404	43.77342594	-89.41285742	7	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	404	7	Muck	Pole	SAMPLED			0																												
405	43.77341955	-89.41161492	10	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	405	6	Muck	Pole	SAMPLED			0																												
406	43.77341315	-89.41037242	15	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	406	6	Muck	Pole	SAMPLED			1			1																										
407	43.77340673	-89.40912992	21	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	407	5	Muck	Pole	SAMPLED			2			1													1								2				
408	43.7734003	-89.40788742	26	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	408	4	Muck	Pole	SAMPLED			3			2		1		2		1		1					1											
409	43.77339386	-89.40664492	32	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	409	5	Muck	Pole	SAMPLED			1			1		1											1											
410	43.7733874	-89.40540242	35	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	410	4	Muck	Pole	SAMPLED			1			1				1																					
411	43.77338093	-89.40415992	43	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	411	4	Muck	Pole	SAMPLED			1			1													1											
412	43.77337444	-89.40291742	46	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	412	4	Muck	Pole	SAMPLED			2			1		1											1		1									
413	43.77336795	-89.40167493	55	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	413	4	Muck	Pole	SAMPLED			1			1		1						1																
414	43.77336143	-89.40043243	57	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	414	4	Muck	Pole	SAMPLED			2			1								1					1								2				
415	43.77335491	-89.39918993	68	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	415	4	Muck	Pole	SAMPLED			2		1	1		1			1							1												
416	43.7725825	-89.42404859	289	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	416	0			SHALLOW																															
417	43.77256365	-89.42032113	178	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	417	0			NONNAVIGABLE (PLANTS)																																
418	43.77255735	-89.41907865	176	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	418	3	Muck	Pole	SAMPLED			2	1		2		1											1			1					1				
419	43.77255102	-89.41783616	171	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	419	5	Muck	Pole	SAMPLED			1	1				1																							
420	43.77254469	-89.41659368	167	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	420	5	Muck	Pole	SAMPLED			1				1																					1				
421	43.77253834	-89.4153512	163	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	421	4	Muck	Pole	SAMPLED			3			1		1																			3				
422	43.77253198	-89.41410871	3	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	422	3	Muck	Pole	SAMPLED			3		1	1		2																			2				
423	43.7725256	-89.41286623	6	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	423	4	Muck	Pole	SAMPLED			3			2		2		1	1	1						1		1	1									
424	43.77251921	-89.41162375	11	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	424	4	Muck	Pole	SAMPLED			1			1																					1				
425	43.77251281	-89.41038127	14	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	425	3	Muck	Pole	SAMPLED			2	1		1		1											1			1									
426	43.77250639	-89.40913878	22	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	426	4	Muck	Pole	SAMPLED			1														1														
427	43.77249996	-89.4078963	25	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	427	4	Muck	Pole	SAMPLED			1			1				1	1					1														
428	43.77249352	-89.40665382	33	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	428	4	Muck	Pole	SAMPLED			1			1													1												
429	43.77248706	-89.40541134	34	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	429	4	Muck	Pole	SAMPLED			2		1	1		1											1												
430	43.77248059	-89.40416886	44	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	430	4	Muck	Pole	SAMPLED			1			1				1	1	1		1		1						1			1						

Point Number	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	ID	Lake Name	County	Date	Field Crew	Point Number	Depth (Feet)	Sediment	Pole, Rope	Comments	Notes	Nuisance	Total Rake Fullness	Myriophyllum spicatum	Potamogeton crispus	Ceratophyllum demersum	Chara spp.	Elodea canadensis	Elodea nuttallii	Heteranthera dubia	Lemna minor	Lemna trisulca	Myriophyllum sibiricum	Najas flexilis	Najas guadalupensis	Nymphaea odorata	Potamogeton nodosus	Potamogeton praelongus	Potamogeton pusillus	Potamogeton robbinsii	Potamogeton zosteriformis	Ranunculus aquatilis	Ranunculus flammula	Sphenoplectus spicata	Sporobolus poiyphza	Stuckenia pectinata	Typha spp.	Vallisneria americana	Wolffia spp.	Zizania spp.	Filamentous algae	Najas minor	Nelumbo lutea
431	43.77247411	-89.40292638	45	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	431	5	Muck	Pole	SAMPLED			1			1		1						1					1														
432	43.77246761	-89.4016839	56	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	432	3	Muck	Pole	SAMPLED			3			1		1						3					1									1					
433	43.77168216	-89.42405723	290	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	433	3	Muck	Pole	SAMPLED			2			2		1			1										1							1				
434	43.77167589	-89.42281476	185	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	434	4	Muck	Pole	SAMPLED			3			2		1													1											
435	43.77166961	-89.4215723	184	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	435	0			NONNAVIGABLE (PLANTS)																																	
436	43.77166331	-89.42032983	179	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	436	5	Muck	Pole	SAMPLED			1			1																										
437	43.77165701	-89.41908736	175	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	437	6	Muck	Pole	SAMPLED			0																														
438	43.77165068	-89.4178449	172	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	438	4	Muck	Pole	SAMPLED			3	1		2		1													1							1					
439	43.77164435	-89.41660243	166	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	439	4	Muck	Pole	SAMPLED			1			1		1																								
440	43.771638	-89.41535997	164	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	440	4	Muck	Pole	SAMPLED			3	1		1		2			1								1		1											
441	43.77163164	-89.4141175	4	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	441	3	Muck	Pole	SAMPLED			0																														
442	43.77162526	-89.41287504	5	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	442	4	Muck	Pole	SAMPLED			1			1		1																								
443	43.77161887	-89.41163257	12	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	443	3	Muck	Pole	SAMPLED			1																1														
444	43.77161247	-89.41039011	13	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	444	4	Muck	Pole	SAMPLED			1			1	1	1																								
445	43.77160605	-89.40914765	23	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	445	3	Muck	Pole	SAMPLED			2			1		1		1								1					1								
446	43.77159962	-89.40790519	24	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	446	3	Muck	Pole	SAMPLED			2	1				1			1			1				1									1				
447	43.77080054	-89.42779322	280	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	447	1	Sand	Pole	SAMPLED			2			1		2			1		1								1							1				
448	43.77079431	-89.42655077	281	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	448	4	Muck	Pole	SAMPLED			2	1		1		1			1			1														1		1		
449	43.77078807	-89.42530832	288	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	449	4	Muck	Pole	SAMPLED			1			1		1													1											
450	43.77078182	-89.42406587	291	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	450	4	Muck	Pole	SAMPLED			1			1																										
451	43.77077555	-89.42282342	186	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	451	4	Muck	Pole	SAMPLED			2	1		1		1																								
452	43.77076927	-89.42158097	183	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	452	7	Muck	Pole	SAMPLED			0																														
453	43.77076297	-89.42033853	180	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	453	4	Muck	Pole	SAMPLED			3	1		3		1											1		1											
454	43.77075666	-89.41909608	174	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	454	4	Muck	Pole	SAMPLED			2	1		1		1													1							2				
455	43.77075034	-89.41785363	173	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	455	3	Muck	Pole	SAMPLED			3			1		1																				2				
456	43.77074401	-89.41661118	165	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	456	1	Sand	Pole	SAMPLED			3			2	1			1	1			1							1							1		1		
457	43.76991261	-89.43028667	271	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	457	3	Muck	Pole	SAMPLED			2	1		1															1											
458	43.76990641	-89.42904423	272	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	458	3	Muck	Pole	SAMPLED			2	1		1		1											1										1				
459	43.7699002	-89.4278018	279	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	459	4	Muck	Pole	SAMPLED			1	1		1		1											1		1											
460	43.76989397	-89.42655937	282	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	460	4	Muck	Pole	SAMPLED			3	2		2		1			1										1											
461	43.76988773	-89.42531694	287	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	461	5	Muck	Pole	SAMPLED			1	1	1	1																										
462	43.76988147	-89.42407451	292	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	462	6	Muck	Pole	SAMPLED			0																														
463	43.76987521	-89.42283208	187	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	463	4	Muck	Pole	SAMPLED			2			2		1													1											
464	43.76986893	-89.42158965	182	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	464	4	Muck	Pole	SAMPLED			1			1		1																								
465	43.76986263	-89.42034722	181	Buffalo Lake	Marquette	7/21/2015	TWH & NLS	465	4	Muck	Pole	SAMPLED			1			1		1			1																	1				
466	43.76903078	-89.43402246	203	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	466	2	Muck	Pole	SAMPLED			2			2		1					1																		
467	43.76902463	-89.43278004	192	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	467	2	Muck	Pole	SAMPLED			2			2		1																						1		
468	43.76901845	-89.43153763	191	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	468	3	Muck	Pole	SAMPLED			3			2		1			1										1									1		
469	43.76901227	-89.43029521	270	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	469	4	Muck	Pole	SAMPLED			2	1		1		1													1	1										
470	43.76900607	-89.4290528	273	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	470	4	Muck	Pole	SAMPLED			1	1		1		1											1												
471	43.76899985	-89.42781039	278	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	471	4	Muck	Pole	SAMPLED			3	3		1		1																								
472	43.76899363	-89.42656797	283	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	472	4	Muck	Pole	SAMPLED			2	1		1																						2				
473	43.76898739	-89.42532556	286	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	473	4	Muck	Pole	SAMPLED			3	1		2										1					1											
474	43.76898113	-89.42408315	293	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	474	4	Muck	Pole	SAMPLED			1			1		1													1											
475	43.76897487	-89.42284074	294	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	475	3	Muck	Pole	SAMPLED			3	1		3		1													1											
476	43.76815494	-89.43900053	228	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	476	0			NONNAVIGABLE (PLANTS)																																	
477	43.76814884	-89.43775814	227	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	477	0			NONNAVIGABLE (PLANTS)																																	
478	43.76814272	-89.43651574	225	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	478	0			NONNAVIGABLE (PLANTS)																																	
479	43.76813659	-89.43527334	202	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	479	4	Muck	Pole	SAMPLED			2			1		1													1											1
480	43.76813044	-89.43403095	201	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	480	3	Muck	Pole	SAMPLED			2	1		1		1													1											
481	43.76812428	-89.43278855	193	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	481	4	Muck	Pole	SAMPLED			2			1		1														1											
482	43.76811811	-89.43154615	190	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	482	4	Muck	Pole	SAMPLED			3	1		1		2																								
483	43.76811192	-89.43030376	269	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	483	4	Muck	Pole	SAMPLED			2			1		1																				2				
484	43.76810572	-89.42906136	274	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	484	6	Muck	Pole	SAMPLED			0																														
485	43.76809951	-89.42781897	277	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	485	4	Muck	Pole	SAMPLED			2	2				1			1										1	1											
486	43.76809328	-89.42657658	284	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	486	4	Muck	Pole	SAMPLED			1		1																												
487	43.76808704	-89.42533418	285	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	487	2	Muck	Pole	SAMPLED			1			1																												
488	43.76726677	-89.44149371	242	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	488	0			NONNAVIGABLE (PLANTS)																																	
489	43.76726069	-89.44025133	224	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	489	3	Muck	Pole	SAMPLED			3			1		2								1					1								1		1		
490	43.7672546	-89.43900895	223	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	490	3	Muck	Pole	SAMPLED			2	1		2		1					1						1		1									1	1	1
491	43.76724849	-89.43776657	213	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	491	3	Muck	Pole	SAMPLED			3			2		1					1								1	1								1		
492	43.76724237	-89.43652419	212	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	492	3	Muck	Pole	SAMPLED			2	2		1		1											1										1				
493	43.7673624	-89.43528181	204	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	493	4	Muck	Pole	SAMPLED			1			1		1											1													
494	43.7672301	-89.43403944	200	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	494	4	Muck	Pole	SAMPLED			3	1		3				1	1										1											
495	43.76722394	-89.43279706	194	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	495	4	Muck	Pole	SAMPLED			3			1													1									3				
496	43.76721777	-89.43155468	189	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	496	6	Muck	Pole	SAMPLED			0																														
497	43.76721158	-89.4303123	268	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	497	4	Muck	Pole	SAMPLED			2			2		1											1		1					1						
498	43.76720538	-89.42906993	275	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	498	4	Muck	Pole	SAMPLED			1	1		1		1																								
499	43.76719917	-89.42782755	276	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	499	3	Muck	Pole	SAMPLED			2			1															1										1		
500	43.76638457	-89.44522917	258	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	500	0			NONNAVIGABLE (PLANTS)																																	
501	43.76637854	-89.44398681	257	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	501	0			NONNAVIGABLE (PLANTS)																																	
502	43.76637249	-89.44274445	243	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	502	0			NONNAVIGABLE (PLANTS)																																	
503	43.76636642	-89.44150209	241	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	503	0			NONNAVIGABLE (PLANTS)																																	
504	43.76636034	-89.44025972	226	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	504	3	Muck	Pole	SAMPLED			3			3		2													1								1		1		
505	43.76635425	-89.43901736	222	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	505	4	Muck	Pole	SAMPLED			3		1	1		1						2							1								1		1	1	
506	43.76634815	-89.437775	214	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	506	3	Muck	Pole	SAMPLED			3			1		1		2								1													1
507	43.76634203	-89.43653264	211	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	507	4	Muck	Pole	SAMPLED			3	2		1		1											1													
508	43.7663359	-89.43529028	205	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	508	4	Muck	Pole	SAMPLED			3			1		1											2		1											
509	43.76632975	-89.43404792	199	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	509	5	Muck	Pole	SAMPLED			0																														
510	43.76632359	-89.43280557	195	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	510	4	Muck	Pole	SAMPLED			3	1	1	1																						3				
511	43.76631742	-89.43156321	188	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	511	4	Muck	Pole	SAMPLED			1		1	1		1																								
512	43.76631124	-89.43032085	267	Buffalo Lake	Marquette	7/21/2015	DAC & RAK	512	3	Muck	Pole	SAMPLED			2	1				1		1			1	1							1											
513	43.76549626	-89.44772218	274	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	513	2	Muck	Pole	SAMPLED			3	1		3		1			1										1								1	1			
514	43.76549025	-89.44647984	273	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	514	2	Muck	Pole	SAMPLED			3			3		1		1											1								1				
515	43.76548423	-89.44523749	256	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	515	3	Muck	Pole	SAMPLED			3			2		1											1		1								1		1		
516	43.76547819	-89.44399515	255	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	516	3	Muck	Pole	SAMPLED			3			2				1								1			2								1			1	

Point Number	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	ID	Lake Name	County	Date	Field Crew	Point Number	Depth (Feet)	Sediment	Pole; Rope	Comments	Notes	Nuisance	Total Rake Fullness	Myriophyllum spicatum	Potamogeton crispus	Ceratophyllum demersum	Chara spp.	Elodea canadensis	Elodea nuttallii	Heteranthera dubia	Lemna minor	Lemna trisulca	Myriophyllum sibiricum	Najas flexilis	Najas guadalupensis	Nymphaea odorata	Potamogeton nodosus	Potamogeton praelongus	Potamogeton pusillus	Potamogeton robbinsii	Potamogeton zosteriformis	Ranunculus aquatilis	Ranunculus flammula	Sagittaria graminea	Sparganium emersum	Spirodela polyrhiza	Stuckenia pectinata	Typha spp.	Vallisneria americana	Wolffia spp.	Zizania spp.	Filamentous algae	Najas minor	Nelumbo lutea
517	43.76547214	-89.44275281	240	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	517	3	Muck	Pole	SAMPLED			3			3		1										1			1													
518	43.76546608	-89.44151046	239	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	518	3	Muck	Pole	SAMPLED			3			2		1										1			1													
519	43.76546	-89.44026812	229	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	519	3	Muck	Pole	SAMPLED			3	1		2		1						1														2			1		
520	43.76545391	-89.43902578	220	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	520	3	Muck	Pole	SAMPLED			3	1		3		1		1	1										1								1	1			
521	43.7654478	-89.43778344	215	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	521	5	Muck	Pole	SAMPLED			0																													
522	43.76544169	-89.43654109	210	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	522	5	Muck	Pole	SAMPLED			2																											2					
523	43.76543555	-89.43529875	206	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	523	4	Muck	Pole	SAMPLED			0																														
524	43.76542941	-89.43405641	198	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	524	4	Muck	Pole	SAMPLED			1					1																									
525	43.76542325	-89.43281407	196	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	525	4	Muck	Pole	SAMPLED			3	1		1		1										1															
526	43.76461386	-89.45145744	305	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	526	3	Muck	Pole	SAMPLED			3	1		1		1																					3					
527	43.76460789	-89.45021512	290	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	527	6	Muck	Pole	SAMPLED			0																														
528	43.76460191	-89.44897279	289	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	528	7	Muck	Pole	SAMPLED			1			1																								1					
529	43.76459592	-89.44773046	275	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	529	4	Muck	Pole	SAMPLED			1			1		1										1															
530	43.76458991	-89.44648814	272	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	530	6	Muck	Pole	SAMPLED			0																														
531	43.76458388	-89.44524581	259	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	531	5	Muck	Pole	SAMPLED			2			1		1										2															
532	43.76457785	-89.44400349	254	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	532	5	Muck	Pole	SAMPLED			1			1												1															
533	43.7645718	-89.44276116	244	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	533	4	Muck	Pole	SAMPLED			1							1																							
534	43.76456573	-89.44151884	238	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	534	5	Muck	Pole	SAMPLED			2			1		1		1								1										1					
535	43.76455965	-89.44027651	230	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	535	5	Muck	Pole	SAMPLED			2	1		1		1										1		1													
536	43.76455356	-89.43903419	219	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	536	3	Muck	Pole	SAMPLED			3			3		1			1																					
537	43.76454746	-89.43779187	216	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	537	4	Muck	Pole	SAMPLED			0																														
538	43.76454134	-89.43654955	208	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	538	4	Muck	Pole	SAMPLED			3			2		1																					1	1		1		
539	43.76453521	-89.43530722	207	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	539	3	Muck	Pole	SAMPLED			3	1		1		3																					1				
540	43.76452907	-89.4340649	197	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	540	0			NONNAVIGABLE (PLANTS)																																	
541	43.76372541	-89.45395029	319	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	541	2	Muck	Pole	SAMPLED			2			2		1										1		1													
542	43.76371947	-89.45270798	306	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	542	6	Muck	Pole	SAMPLED			0																														
543	43.76371352	-89.45146567	304	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	543	3	Muck	Pole	SAMPLED			3			1		1		1												1	2								1		
544	43.76370755	-89.45022336	291	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	544	3	Muck	Pole	SAMPLED			2			2																	1						1		1		
545	43.76370156	-89.44898105	288	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	545	3	Muck	Pole	SAMPLED			3			3																	1						1				
546	43.76369557	-89.44773875	276	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	546	3	Muck	Pole	SAMPLED			3			2					1												2									
547	43.76368956	-89.44649644	271	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	547	3	Muck	Pole	SAMPLED			3			2																	1						1				
548	43.76368354	-89.44525413	260	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	548	4	Muck	Pole	SAMPLED			3			2		2										1															
549	43.7636775	-89.44401183	253	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	549	4	Muck	Pole	SAMPLED			3	1		3		1											1														
550	43.76367145	-89.44276952	245	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	550	5	Muck	Pole	SAMPLED			1			1												1															
551	43.76366539	-89.44152721	237	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	551	4	Muck	Pole	SAMPLED			2	1		1		2										1		1	1												
552	43.76365931	-89.44028491	231	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	552	4	Muck	Pole	SAMPLED			1	1		1		1														1										
553	43.76365322	-89.4390426	218	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	553	4	Muck	Pole	SAMPLED			3			2		1								1															
554	43.76364711	-89.4378003	217	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	554	3	Muck	Pole	SAMPLED			3	1		1		3								1		1												1		
555	43.763641	-89.436558	209	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	555	0			NONNAVIGABLE (PLANTS)																																	
556	43.76283099	-89.45520077	320	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	556	5	Muck	Pole	SAMPLED			3			2		1										1												2				
557	43.76282507	-89.45395848	318	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	557	3	Muck	Pole	SAMPLED			3	1		1		2			1							1												1	1			
558	43.76281912	-89.45271619	307	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	558	3	Muck	Pole	SAMPLED			3			2		2		1												1										
559	43.76281317	-89.4514739	303	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	559	3	Muck	Pole	SAMPLED			2			2		1		1								1			1											
560	43.7628072	-89.45023161	292	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	560	3	Muck	Pole	SAMPLED			3			1				1								2		1	1												
561	43.76280122	-89.44898932	287	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	561	3	Muck	Pole	SAMPLED			3	1		2		3														1							1		1		
562	43.76279522	-89.44774703	277	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	562	4	Muck	Pole	SAMPLED			3			3		1														1								1		
563	43.76278921	-89.44650474	270	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	563	4	Muck	Pole	SAMPLED			3			2		1										2														
564	43.76278319	-89.44526245	261	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	564	4	Muck	Pole	SAMPLED			1	1		1		1										1														
565	43.76277715	-89.44402016	252	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	565	3	Muck	Pole	SAMPLED			3			1																							3				
566	43.7627711	-89.44277788	246	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	566	4	Muck	Pole	SAMPLED			3			2		2																									
567	43.76276504	-89.44153559	236	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	567	3	Muck	Pole	SAMPLED			3			1		1		1				1								1										
568	43.76275896	-89.4402933	232	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	568	3	Muck	Pole	SAMPLED			3			2		2																							1		
569	43.76275287	-89.43905102	221	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	569	0			NONNAVIGABLE (PLANTS)																				1														
570	43.76194246	-89.45769348	335	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	570	5	Muck	Pole	SAMPLED			2			2		1										1														1	
571	43.76193056	-89.45645121	325	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	571	6	Muck	Pole	SAMPLED			1			1		1																									
572	43.76193065	-89.45520894	321	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	572	3	Muck	Pole	SAMPLED			3			2				2																						1		
573	43.76192472	-89.45396667	317	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	573	3	Muck	Pole	SAMPLED			2			1		1										2														1	1
574	43.76191878	-89.4527244	308	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	574	3	Muck	Pole	SAMPLED			3			1		2		2												1								1		
575	43.76191282	-89.45148212	302	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	575	3	Muck	Pole	SAMPLED			3			3		1		1								1														1	
576	43.76190685	-89.45023985	293	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	576	3	Muck	Pole	SAMPLED			2			1		1						1				1														
577	43.76190087	-89.44899758	286	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	577	3	Muck	Pole	SAMPLED			3	1		2		1																					3				
578	43.76189488	-89.44775531	278	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	578	4	Muck	Pole	SAMPLED			2			1		1						1				2														
579	43.76188887	-89.44651304	269	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	579	3	Muck	Pole	SAMPLED			2	1		2												1			1												
580	43.76188284	-89.44527077	262	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	580	4	Muck	Pole	SAMPLED			2			1		1										1														
581	43.76187681	-89.4440285	251	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	581	3	Muck	Pole	SAMPLED			2			1		1														1										
582	43.76187078	-89.44278623	247	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	582	3	Muck	Pole	SAMPLED			3			1		3										1		1													
583	43.76186469	-89.44154397	234	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	583	2	Muck	Pole	SAMPLED			2					2																								1	
584	43.76185862	-89.4403017	233	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	584	0			NONNAVIGABLE (PLANTS)																																	
585	43.76105388	-89.46018613	527	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	585	3	Muck	Pole	SAMPLED			2			2		1	1									1		1												
586	43.761048	-89.45894387	526	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	586	4	Muck	Pole	SAMPLED			2			2		1										1		1									1				
587	43.76104211	-89.45770162	334	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	587	4	Muck	Pole	SAMPLED			3			2		1										1											2				
588	43.7610303	-89.45521711	322	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	588	3	Muck	Pole	SAMPLED			3	3		1		1		1								1														
589	43.76102437	-89.45397486	316	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	589	3	Muck	Pole	SAMPLED			3			3		1		1	1							1		1	1								1				
590	43.76101843	-89.4527326	309	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	590	3	Muck	Pole	SAMPLED			3			3		1		1																							
591	43.76101247	-89.45149035	301	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	591	3	Muck	Pole	SAMPLED			2			1		2										1			1								1				1
592	43.76100651	-89.4502481	294	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	592	4	Muck	Pole	SAMPLED			1			1		1										1														
593	43.76100052	-89.44900584	285	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	593	3	Muck	Pole	SAMPLED			2	1		1		1		1												1										
594	43.76099453	-89.44776359	279	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	594	3	Muck	Pole	SAMPLED			2												1				1											2				
595	43.76098852	-89.44652134	268	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	595	3	Muck	Pole	SAMPLED			1					1							1																	
596	43.7609825	-89.44527909	263	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	596	3	Muck	Pole	SAMPLED			3	1		2		1										1									1						
597	43.76097646	-89.44403684	249	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	597	3	Muck	Pole	SAMPLED			3			1		2																									
598	43.76097041	-89.44279459	248	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	598	3	Muck	Pole	SAMPLED			2			2																	1							1				
599	43.76096435	-89.44155234	235	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	599	0			NONNAVIGABLE (PLANTS)																																	
600	43.76016523	-89.4626787	529	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	600	4	Muck	Pole	SAMPLED			2			2		1																									
601	43.76015939	-89.46143646	528	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	601	0			NONNAVIGABLE (PLANTS)																																	
602	43.76015353	-89.46019422	524	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	602	5	Muck	Pole	SAMPLED			1																											1				

Point Number	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	ID	Lake Name	County	Date	Field Crew	Point Number	Depth (Feet)	Sediment	Pole; Rope	Comments	Notes	Nuisance	Total Rake Fullness	Myriophyllum spicatum	Potamogeton crispus	Ceratophyllum demersum	Chara spp.	Elodea canadensis	Elodea nuttallii	Heteranthera dubia	Lemna minor	Lemna trisulca	Myriophyllum sibiricum	Najas flexilis	Najas guadalupensis	Nymphaea odorata	Potamogeton nodosus	Potamogeton praelongus	Potamogeton pusillus	Potamogeton robbinsii	Potamogeton zosteriformis	Ranunculus aquatilis	Ranunculus flammula	Sagittaria cristata	Spirodela polyrhiza	Stuckenia pectinata	Typha spp.	Vallisneria americana	Wolffia spp.	Zizania spp.	Filamentous algae	Najas minor	Nelumbo lutea
603	43.76014765	-89.45895199	525	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	603	0			NONNAVIGABLE (PLANTS)																																		
604	43.76014177	-89.45770975	333	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	604	3	Muck	Pole	SAMPLED			3			1		1										1										3					
605	43.76013587	-89.45646751	332	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	605	4	Muck	Pole	SAMPLED			3	1		2		1													1						3					
606	43.76012995	-89.45522528	323	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	606	3	Muck	Pole	SAMPLED			3			2				1									1			1						1	1				
607	43.76012402	-89.45398304	315	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	607	3	Muck	Pole	SAMPLED			2			2		1						1				1			1									1		
608	43.76011808	-89.45274081	310	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	608	3	Muck	Pole	SAMPLED			3	1		1															1									1		
609	43.76011213	-89.45149858	300	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	609	3	Muck	Pole	SAMPLED			3			1		2						1				1			1	1										
610	43.76010616	-89.45025634	295	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	610	3	Muck	Pole	SAMPLED			2			1		1										1														1	
611	43.76010018	-89.44901411	284	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	611	3	Muck	Pole	SAMPLED			1			1		1										1			1						1					
612	43.76009418	-89.44777187	280	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	612	3	Muck	Pole	SAMPLED			3			1		3										1														1	
613	43.76008817	-89.44652964	267	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	613	3	Muck	Pole	SAMPLED			2	1		2		1										1			1											
614	43.76008215	-89.44528741	264	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	614	3	Muck	Pole	SAMPLED			3			2		2													1									1		
615	43.76007611	-89.44404518	250	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	615	0			NONNAVIGABLE (PLANTS)																																		
616	43.75927654	-89.46517119	531	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	616	3	Muck	Pole	SAMPLED			3		1	3		1		1																							
617	43.75927072	-89.46392897	532	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	617	0			NONNAVIGABLE (PLANTS)																																		
618	43.75926489	-89.46268675	530	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	618	0			NONNAVIGABLE (PLANTS)																																		
619	43.75925904	-89.46144454	522	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	619	4	Muck	Pole	SAMPLED			2			2												1			1						1					
620	43.75925318	-89.46020232	523	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	620	0			NONNAVIGABLE (PLANTS)																																		
621	43.7592473	-89.4589601	514	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	621	3	Muck	Pole	SAMPLED			3	1		3		1		1										1	3								1		
622	43.75924142	-89.45771788	512	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	622	3	Muck	Pole	SAMPLED			3			2					1							1			1	2						1	1		1		
623	43.75923552	-89.45647566	331	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	623	3	Muck	Pole	SAMPLED			2			2																											
624	43.7592296	-89.45523345	324	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	624	3	Muck	Pole	SAMPLED			3			3		1		1								1			1											
625	43.75922368	-89.45399123	314	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	625	3	Muck	Pole	SAMPLED			3	1		3		1										1			1	1										
626	43.75921773	-89.45274902	311	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	626	3	Muck	Pole	SAMPLED			3			2		1													1						2					
627	43.75921178	-89.4515068	299	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	627	3	Muck	Pole	SAMPLED			3	1		1		3													1											
628	43.75920581	-89.45026458	298	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	628	3	Muck	Pole	SAMPLED			1	1		1		1		1																							
629	43.75919983	-89.44902237	283	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	629	3	Muck	Pole	SAMPLED			1			1		1													1											
630	43.75919383	-89.44778016	281	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	630	3	Muck	Pole	SAMPLED			3			3		3													2									1		
631	43.75918783	-89.44653794	266	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	631	2	Muck	Pole	SAMPLED			3			2		3													1							1				
632	43.7591818	-89.44529573	265	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	632	0			NONNAVIGABLE (PLANTS)																																		
633	43.75838199	-89.46642141	533	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	633	3	Muck	Pole	SAMPLED			3			3					1					2									1			1				
634	43.75837619	-89.46517921	534	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	634	0			NONNAVIGABLE (PLANTS)																																		
635	43.75837037	-89.46393701	545	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	635	0			NONNAVIGABLE (PLANTS)																																		
636	43.75836454	-89.46269481	521	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	636	3	Muck	Pole	SAMPLED			2			1		1								1											1					
637	43.75835869	-89.46145261	517	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	637	3	Muck	Pole	SAMPLED			3		1	3		2													1	1										
638	43.75835283	-89.46021041	515	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	638	0			NONNAVIGABLE (PLANTS)																																		
639	43.75834696	-89.45896821	513	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	639	0			NONNAVIGABLE (PLANTS)																																		
640	43.75834107	-89.45772601	508	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	640	3	Muck	Pole	SAMPLED			3			3		2													1	1								1		
641	43.75833517	-89.45648382	330	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	641	3	Muck	Pole	SAMPLED			3			3		1													1							1				
642	43.75832925	-89.45524162	326	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	642	3	Muck	Pole	SAMPLED			0																														
643	43.75832333	-89.45399942	313	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	643	3	Muck	Pole	SAMPLED			1			1																											
644	43.75831739	-89.45275722	312	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	644	3	Muck	Pole	SAMPLED			0																														
645	43.75831143	-89.45151502	298	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	645	3	Muck	Pole	SAMPLED			1																											1				
646	43.75830546	-89.45027283	297	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	646	0			NONNAVIGABLE (PLANTS)																																		
647	43.75829948	-89.44903063	282	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	647	0			NONNAVIGABLE (PLANTS)																																		
648	43.75749321	-89.46891378	535	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	648	3	Muck	Pole	SAMPLED			2			2												1															
649	43.75748744	-89.4676716	536	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	649	3	Muck	Pole	SAMPLED			3			1		3								1					1									1		
650	43.75748164	-89.46642941	546	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	650	0			NONNAVIGABLE (PLANTS)																																		
651	43.75747584	-89.46518723	548	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	651	0			NONNAVIGABLE (PLANTS)																																		
652	43.75747002	-89.46394505	519	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	652	4	Muck	Pole	SAMPLED			2		1	1		1										2			1											
653	43.75746419	-89.46270287	518	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	653	0			NONNAVIGABLE (PLANTS)																																		
654	43.75745834	-89.46146069	516	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	654	0			NONNAVIGABLE (PLANTS)																																		
655	43.75745248	-89.46021851	506	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	655	3	Muck	Pole	SAMPLED			1			1																									1		
656	43.75744661	-89.45897632	507	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	656	0			NONNAVIGABLE (PLANTS)																																		
657	43.75744072	-89.45773414	509	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	657	3	Muck	Pole	SAMPLED			3			3		1								1						1	1								1		
658	43.75743482	-89.45649196	329	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	658	3	Muck	Pole	SAMPLED			3			2		2										1															
659	43.75742891	-89.45524979	327	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	659	2	Muck	Pole	SAMPLED			1			1																											
660	43.75659863	-89.47016391	537	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	660	3	Muck	Pole	SAMPLED			1	1														1															
661	43.75659286	-89.46892174	542	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	661	0			NONNAVIGABLE (PLANTS)																																		
662	43.75658709	-89.46767958	547	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	662	3	Muck	Pole	SAMPLED			3			2		3			1																		1		1		
663	43.75658129	-89.46643741	336	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	663	2	Muck	Pole	SAMPLED			3			3		2																								
664	43.75657549	-89.46519525	337	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	664	4	Muck	Pole	SAMPLED			0																														
665	43.7565967	-89.46395309	520	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	665	0			NONNAVIGABLE (PLANTS)																																		
666	43.75656384	-89.46271092	501	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	666	3	Muck	Pole	SAMPLED			3			3				1						1						2	1										
667	43.75655799	-89.46146876	504	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	667	0			NONNAVIGABLE (PLANTS)																																		
668	43.75655213	-89.4602266	505	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	668	0			NONNAVIGABLE (PLANTS)																																		
669	43.75654626	-89.45898444	511	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	669	0			NONNAVIGABLE (PLANTS)																																		
670	43.75654037	-89.45774228	510	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	670	0			NONNAVIGABLE (PLANTS)																																		
671	43.75653447	-89.45650011	328	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	671	3	Muck	Pole	SAMPLED			3			2		2																								1		
672	43.75570403	-89.471414	538	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	672	3	Muck	Pole	SAMPLED			1			1		1																	1							
673	43.75569828	-89.47017185	541	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	673	0			NONNAVIGABLE (PLANTS)																																		
674	43.75569251	-89.46892971	341	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	674	0			NONNAVIGABLE (PLANTS)																																		
675	43.75568673	-89.46768756	340	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	675	0			NONNAVIGABLE (PLANTS)																																		
676	43.75568094	-89.46644541	338	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	676	5	Muck	Pole	SAMPLED			0																														
677	43.75567514	-89.46520327	499	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	677	2	Muck	Pole	SAMPLED			3	1		2		3									1															
678	43.75566932	-89.46396112	500	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	678	0			NONNAVIGABLE (PLANTS)																																		
679	43.75566349	-89.46271898	493	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	679	3	Muck	Pole	SAMPLED			3			2		3		1						1						1											
680	43.75565764	-89.46147684	502	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	680	0			NONNAVIGABLE (PLANTS)																																		
681	43.75565178	-89.46023469	503	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	681	0			NONNAVIGABLE (PLANTS)																																		
682	43.75564591	-89.45899255	490	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	682	0			NONNAVIGABLE (PLANTS)																																		
683	43.75564002	-89.45775041	491	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	683	2	Muck	Pole	SAMPLED			1			1																											
684	43.75480942	-89.47266405	539	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	684	2	Muck	Pole	SAMPLED			3			3		1			1																			1			
685	43.75480368	-89.47142192	540	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	685	0			NONNAVIGABLE (PLANTS)																																		
686	43.75479793	-89.4701798	344	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	686	0			NONNAVIGABLE (PLANTS)																																		
687	43.75479216	-89.46893767	343	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	687	0			NONNAVIGABLE (PLANTS)																																		
688	43.75478638	-89.46769554	339	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	688	6	Muck	Pole	SAMPLED			0																														

Point Number	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	ID	Lake Name	County	Date	Field Crew	Point Number	Depth (Feet)	Sediment	Pole; Rope	Comments	Notes	Nuisance	Total Rake Fullness	Myriophyllum spicatum	Potamogeton crispus	Ceratophyllum demersum	Chara spp.	Elodea canadensis	Elodea nuttallii	Heteranthera dubia	Lemna minor	Lemna trisulca	Myriophyllum sibiricum	Najas flexilis	Najas guadalupensis	Nymphaea odorata	Potamogeton nodosus	Potamogeton pectinatus	Potamogeton pusillus	Potamogeton robbinsii	Potamogeton zosteriformis	Ranunculus aquatilis	Ranunculus flammula	Sagittaria cristata	Spirodela polyrhiza	Stuckenia pectinata	Typha spp.	Vallisneria americana	Wolffia spp.	Zizania spp.	Filamentous algae	Najas minor	Nelumbo lutea
689	43.75478059	-89.46645341	498	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	689	0			NONNAVIGABLE (PLANTS)																																		
690	43.75477479	-89.46521129	495	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	690	3	Muck	Pole	SAMPLED			3			1		3																			1	1							
691	43.75476897	-89.46396916	494	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	691	3	Muck	Pole	SAMPLED			3			1		3																										
692	43.75476314	-89.46272704	492	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	692	0			NONNAVIGABLE (PLANTS)																																				
693	43.75475729	-89.46148491	488	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	693	3	Muck	Pole	SAMPLED			1			1		1																										
694	43.75475143	-89.46024279	489	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	694	2	Sand	Pole	SAMPLED			2			2					2																			1	1				
695	43.75391479	-89.47391407	544	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	695	0			NONNAVIGABLE (PLANTS)																																				
696	43.75390906	-89.47267196	543	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	696	0			NONNAVIGABLE (PLANTS)																																				
697	43.75390333	-89.47142985	347	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	697	0			NONNAVIGABLE (PLANTS)																																				
698	43.75389758	-89.47018774	346	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	698	0			NONNAVIGABLE (PLANTS)																																				
699	43.75389181	-89.46894563	345	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	699	4	Muck	Pole	SAMPLED			2			2		1											1															
700	43.75388603	-89.46770352	342	Buffalo Lake	Marquette	7/22/2015	TWH & NLS	700	0			NONNAVIGABLE (PLANTS)																																				
701	43.75388024	-89.46646141	497	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	701	0			NONNAVIGABLE (PLANTS)																																				
702	43.75387444	-89.46521931	496	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	702	0			NONNAVIGABLE (PLANTS)																																				
703	43.75386862	-89.4639772	487	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	703	0			NONNAVIGABLE (PLANTS)																																				
704	43.75386279	-89.46273509	486	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	704	3	Muck	Pole	SAMPLED			2			2		1											1															
705	43.75301444	-89.47392196	560	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	705	0			NONNAVIGABLE (PLANTS)																																				
706	43.75300871	-89.4726798	559	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	706	0			NONNAVIGABLE (PLANTS)																																				
707	43.75300298	-89.47143777	558	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	707	0			NONNAVIGABLE (PLANTS)																																				
708	43.75299722	-89.47019568	556	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	708	2	Muck	Pole	SAMPLED			2			2		1							1		1					1											
709	43.75299146	-89.46895359	557	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	709	0			NONNAVIGABLE (PLANTS)																																				
710	43.7529856	-89.4677115	483	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	710	0			NONNAVIGABLE (PLANTS)																																				
711	43.75297989	-89.46646941	482	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	711	0			NONNAVIGABLE (PLANTS)																																				
712	43.75297409	-89.46522732	484	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	712	3	Muck	Pole	SAMPLED			3			3		1																			1						1		
713	43.75296827	-89.46398523	485	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	713	0			TERRESTRIAL																																		
714	43.75211408	-89.47392984	555	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	714	0			NONNAVIGABLE (PLANTS)																																				
715	43.75210836	-89.47268777	554	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	715	0			NONNAVIGABLE (PLANTS)																																				
716	43.75210262	-89.4714457	552	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	716	6	Muck	Pole	SAMPLED			0																															
717	43.75209687	-89.47020363	553	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	717	0			NONNAVIGABLE (PLANTS)																																				
718	43.75209111	-89.46896155	479	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	718	0			NONNAVIGABLE (PLANTS)																																				
719	43.75208533	-89.46771948	480	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	719	4	Muck	Pole	SAMPLED			2	1		1													1											2				
720	43.7520795	-89.46647741	481	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	720	2	Muck	Pole	SAMPLED			2			2					1					1														1			
721	43.75121944	-89.47517979	551	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	721	0			NONNAVIGABLE (PLANTS)																																				
722	43.75121373	-89.47393773	550	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	722	0			NONNAVIGABLE (PLANTS)																																				
723	43.75120801	-89.47269568	549	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	723	7	Muck	Pole	SAMPLED			0																															
724	43.75120227	-89.47145362	477	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	724	0			NONNAVIGABLE (PLANTS)																																				
725	43.75119652	-89.47021157	478	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	725	3	Sand	Pole	SAMPLED			1	1		1																												
726	43.75031909	-89.47518765	475	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	726	0			NONNAVIGABLE (PLANTS)																																				
727	43.75031338	-89.4739456	474	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	727	2	Muck	Pole	SAMPLED			3			3																									2			
728	43.75030766	-89.47270358	476	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	728	3	Muck	Pole	SAMPLED			1	1		1		1																						1			
729	43.74942443	-89.47643754	473	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	729	0			NONNAVIGABLE (PLANTS)																																				
730	43.74941874	-89.47519552	472	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	730	3	Muck	Pole	SAMPLED			3			3		3																										
731	43.74941303	-89.4739535	471	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	731	3	Muck	Pole	SAMPLED			2			1		1																						2			
732	43.74852408	-89.47644539	470	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	732	0			NONNAVIGABLE (PLANTS)																																				
733	43.74851838	-89.47520339	469	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	733	2	Muck	Pole	SAMPLED			3			2		3																								1			
734	43.74762941	-89.47769521	466	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	734	0			NONNAVIGABLE (PLANTS)																																				
735	43.74762373	-89.47645323	468	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	735	0			NONNAVIGABLE (PLANTS)																																				
736	43.74761803	-89.47521125	467	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	736	0			NONNAVIGABLE (PLANTS)																																				
737	43.74672906	-89.47770304	462	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	737	0			NONNAVIGABLE (PLANTS)																																				
738	43.74672337	-89.47646108	464	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	738	0			NONNAVIGABLE (PLANTS)																																				
739	43.74671768	-89.47521912	465	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	739	3	Muck	Pole	SAMPLED			1			1		1											1															
740	43.74583437	-89.47895282	458	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	740	0			NONNAVIGABLE (PLANTS)																																				
741	43.7458287	-89.47771087	461	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	741	0			NONNAVIGABLE (PLANTS)																																				
742	43.74582302	-89.47646893	460	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	742	0			NONNAVIGABLE (PLANTS)																																				
743	43.74581732	-89.47522699	463	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	743	6	Sand	Pole	SAMPLED			0																															
744	43.74493402	-89.47896063	457	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	744	0			NONNAVIGABLE (PLANTS)																																				
745	43.74492835	-89.4777187	456	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	745	0			NONNAVIGABLE (PLANTS)																																				
746	43.74492267	-89.47647678	455	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	746	0			NONNAVIGABLE (PLANTS)																																				
747	43.74491697	-89.47523485	459	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	747	6	Sand	Pole	SAMPLED			0																															
748	43.74403366	-89.47896844	451	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	748	0			NONNAVIGABLE (PLANTS)																																				
749	43.74402799	-89.47772653	452	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	749	0			NONNAVIGABLE (PLANTS)																																				
750	43.74402231	-89.47648462	453	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	750	0			NONNAVIGABLE (PLANTS)																																				
751	43.74401662	-89.47524272	454	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	751	6	Muck	Pole	SAMPLED			0																															
752	43.74312764	-89.47773436	448	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	752	0			NONNAVIGABLE (PLANTS)																																				
753	43.74312196	-89.47649247	450	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	753	0			NONNAVIGABLE (PLANTS)																																				
754	43.74311626	-89.47525058	449	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	754	7	Muck	Pole	SAMPLED			0																															
755	43.74222729	-89.47774218	445	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	755	0			NONNAVIGABLE (PLANTS)																																				
756	43.7422216	-89.47650031	446	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	756	0			NONNAVIGABLE (PLANTS)																																				
757	43.74221591	-89.47525844	447	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	757	7	Muck	Pole	SAMPLED			0																															
758	43.74132693	-89.47775001	444	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	758	0			NONNAVIGABLE (PLANTS)																																				
759	43.74132125	-89.47650816	443	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	759	0			NONNAVIGABLE (PLANTS)																																				
760	43.74131556	-89.47526631	442	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	760	2	Muck	Pole	SAMPLED			2			2		2																			1					1			
761	43.74042658	-89.47775784	430	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	761	0			NONNAVIGABLE (PLANTS)																																				
762	43.7404209	-89.476516	431	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	762	0			NONNAVIGABLE (PLANTS)																																				
763	43.7404152	-89.47527417	441	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	763	0			NONNAVIGABLE (PLANTS)																																				
764	43.74040949	-89.47403234	440	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	764	2	Sand	Pole	SAMPLED			1	1		1		1			1																					1			
765	43.73952622	-89.47776566	428	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	765	0			NONNAVIGABLE (PLANTS)																																				
766	43.73952054	-89.47652385	429	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	766	0			NONNAVIGABLE (PLANTS)																																				
767	43.73951485	-89.47528204	439	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	767	0			NONNAVIGABLE (PLANTS)																																				
768	43.73950914	-89.47404022	438	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	768	4	Muck	Pole	SAMPLED			2			1																									2			
769	43.73862587	-89.47777349	426	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	769	0			NONNAVIGABLE (PLANTS)																																				
770	43.73862019	-89.47653169	427	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	770	0			NONNAVIGABLE (PLANTS)																																				
771	43.73861449	-89.4752899	436	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	771	0			NONNAVIGABLE (PLANTS)																																				
772	43.73860879	-89.4740481	437	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	772	3	Muck	Pole	SAMPLED			3			3																												
773	43.73772551	-89.47778131	423	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	773	0			NONNAVIGABLE (PLANTS)																																				
774	43.73771983	-89.47653954	424	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	774	0			NONNAVIGABLE (PLANTS)																																				

Point Number	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	ID	Lake Name	County	Date	Field Crew	Point Number	Depth (Feet)	Sediment	Pole; Rope	Comments	Notes	Nuisance	Total Rake Fullness	Myriophyllum spicatum	Potamogeton crispus	Ceratophyllum demersum	Chara spp.	Elodea canadensis	Elodea nuttallii	Heteranthera dubia	Lemna minor	Lemna trisulca	Myriophyllum sibiricum	Najas flexilis	Najas guadalupensis	Nymphaea odorata	Potamogeton nodosus	Potamogeton pectinatus	Potamogeton pusillus	Potamogeton robbinsii	Potamogeton zosteriformis	Ranunculus aquatilis	Ranunculus flammula	Sagittaria cuneata	Spirodela polyrhiza	Stuckenia pectinata	Typha spp.	Vallisneria americana	Wolffia spp.	Zizania spp.	Filamentous algae	Najas minor	Nelumbo lutea
775	43.73771414	-89.47529776	434	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	775	0			NONNAVIGABLE (PLANTS)																																		
776	43.73770843	-89.47405598	433	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	776	0			NONNAVIGABLE (PLANTS)																																		
777	43.73770271	-89.47281421	435	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	777	1	Sand	Pole	SAMPLED			2					1			1					1											2			1				
778	43.73681948	-89.47654738	422	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	778	0			NONNAVIGABLE (PLANTS)																																		
779	43.73681378	-89.47530562	425	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	779	0			NONNAVIGABLE (PLANTS)																																		
780	43.73680808	-89.47406387	432	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	780	0			NONNAVIGABLE (PLANTS)																																		
781	43.73680236	-89.47282211	418	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	781	3	Muck	Pole	SAMPLED			2	1		2																	1								1		
782	43.7359248	-89.47779696	414	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	782	0			NONNAVIGABLE (PLANTS)																																		
783	43.73591912	-89.47655522	415	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	783	0			NONNAVIGABLE (PLANTS)																																		
784	43.73591343	-89.47531348	416	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	784	0			NONNAVIGABLE (PLANTS)																																		
785	43.73590772	-89.47407175	420	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	785	0			NONNAVIGABLE (PLANTS)																																		
786	43.735902	-89.47283001	419	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	786	5	Muck	Pole	SAMPLED			1			1				1									1														
787	43.73501877	-89.47656307	412	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	787	0			NONNAVIGABLE (PLANTS)																																		
788	43.73501307	-89.47532135	413	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	788	0			NONNAVIGABLE (PLANTS)																																		
789	43.73500737	-89.47407963	392	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	789	0			NONNAVIGABLE (PLANTS)																																		
790	43.73500165	-89.47283791	391	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	790	5	Sand	Pole	SAMPLED			0																														
791	43.73499591	-89.47159619	417	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	791	3	Muck	Pole	SAMPLED			3			3		1			1											1					1			1			
792	43.73411272	-89.47532921	411	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	792	0			NONNAVIGABLE (PLANTS)																																		
793	43.73410701	-89.47408751	394	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	793	0			NONNAVIGABLE (PLANTS)																																		
794	43.73410129	-89.4728458	393	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	794	3	Muck	Pole	SAMPLED			3			1		3		1												1											
795	43.73409556	-89.4716041	390	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	795	4	Muck	Pole	SAMPLED			2			2			1	1									1			1										
796	43.73320666	-89.47409538	395	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	796	0			NONNAVIGABLE (PLANTS)																																		
797	43.73320094	-89.4728537	396	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	797	0			NONNAVIGABLE (PLANTS)																																		
798	43.7331952	-89.47161202	389	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	798	0			NONNAVIGABLE (PLANTS)																																		
799	43.7323063	-89.47410326	421	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	799	0			NONNAVIGABLE (PLANTS)																																		
800	43.73230058	-89.4728616	397	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	800	0			NONNAVIGABLE (PLANTS)																																		
801	43.73229485	-89.47161994	398	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	801	2	Muck	Pole	SAMPLED			3			2		2														1						1				
802	43.7322891	-89.47037827	388	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	802	3	Muck	Pole	SAMPLED			3			3		2									1													1		
803	43.7314023	-89.4728695	400	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	803	0			NONNAVIGABLE (PLANTS)																																		
804	43.73139449	-89.47162785	399	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	804	2	Muck	Pole	SAMPLED			3			1		3									1													1		
805	43.73138875	-89.47038621	387	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	805	0			NONNAVIGABLE (PLANTS)																																		
806	43.73138299	-89.46914456	386	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	806	3	Muck	Pole	SAMPLED			2		1	1		1						1								1	1					1				
807	43.73049987	-89.47287739	403	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	807	0			NONNAVIGABLE (PLANTS)																																		
808	43.73049414	-89.47163577	402	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	808	0			NONNAVIGABLE (PLANTS)																																		
809	43.73048839	-89.47039414	401	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	809	0			NONNAVIGABLE (PLANTS)																																		
810	43.73048263	-89.46915252	385	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	810	0			NONNAVIGABLE (PLANTS)																																		
811	43.72959952	-89.47288529	406	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	811	0			NONNAVIGABLE (PLANTS)																																		
812	43.72959378	-89.47164368	405	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	812	0			NONNAVIGABLE (PLANTS)																																		
813	43.72958804	-89.47040208	404	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	813	2	Muck	Pole	SAMPLED			2			2					1					1																
814	43.72958228	-89.46916047	383	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	814	0			NONNAVIGABLE (PLANTS)																																		
815	43.7295765	-89.46791886	382	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	815	2	Sand	Pole	SAMPLED			1			1		1											1					1			1	1				
816	43.72869343	-89.4716516	408	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	816	0			NONNAVIGABLE (PLANTS)																																		
817	43.72868768	-89.47041001	407	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	817	5	Sand	Pole	SAMPLED			0																														
818	43.72868192	-89.46916842	384	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	818	0			NONNAVIGABLE (PLANTS)																																		
819	43.72867615	-89.46792683	380	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	819	0			NONNAVIGABLE (PLANTS)																																		
820	43.72867036	-89.46668525	381	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	820	0			NONNAVIGABLE (PLANTS)																																		
821	43.72779307	-89.47165951	409	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	821	0			NONNAVIGABLE (PLANTS)																																		
822	43.72778733	-89.47041794	410	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	822	0			NONNAVIGABLE (PLANTS)																																		
823	43.72778157	-89.46917637	377	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	823	4	Muck	Pole	SAMPLED			2			1													2		1											
824	43.72777579	-89.4679348	378	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	824	0			NONNAVIGABLE (PLANTS)																																		
825	43.72777001	-89.46669323	379	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	825	0			NONNAVIGABLE (PLANTS)																																		
826	43.72689272	-89.47166743	363	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	826	0			NONNAVIGABLE (PLANTS)																																		
827	43.72688697	-89.47042587	364	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	827	0			NONNAVIGABLE (PLANTS)																																		
828	43.72688121	-89.46918432	365	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	828	0			NONNAVIGABLE (PLANTS)																																		
829	43.72687544	-89.46794277	375	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	829	2	Muck	Pole	SAMPLED			2														1					1										
830	43.72686965	-89.46670122	376	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	830	0			NONNAVIGABLE (PLANTS)																																		
831	43.72599236	-89.47167534	360	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	831	0			NONNAVIGABLE (PLANTS)																																		
832	43.72598662	-89.47043381	361	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	832	0			NONNAVIGABLE (PLANTS)																																		
833	43.72598086	-89.46919227	362	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	833	0			NONNAVIGABLE (PLANTS)																																		
834	43.72597508	-89.46795074	373	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	834	4	Sand	Pole	SAMPLED			1			1													1														
835	43.7259693	-89.46670921	374	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	835	0			NONNAVIGABLE (PLANTS)																																		
836	43.725092	-89.47168325	359	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	836	0			NONNAVIGABLE (PLANTS)																																		
837	43.72508626	-89.47044174	356	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	837	0			NONNAVIGABLE (PLANTS)																																		
838	43.7250805	-89.46920022	357	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	838	0			NONNAVIGABLE (PLANTS)																																		
839	43.72507473	-89.46795871	371	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	839	2	Muck	Pole	SAMPLED			3			1		2			1													1				1				
840	43.72506894	-89.4667172	372	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	840	0			NONNAVIGABLE (PLANTS)																																		
841	43.7241859	-89.47044967	355	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	841	0			NONNAVIGABLE (PLANTS)																																		
842	43.72418014	-89.46920817	358	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	842	0			NONNAVIGABLE (PLANTS)																																		
843	43.72417437	-89.46796668	369	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	843	2	Muck	Pole	SAMPLED			2	1		1											1															
844	43.72416859	-89.46672519	370	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	844	0			NONNAVIGABLE (PLANTS)																																		
845	43.72327979	-89.46921612	354	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	845	0			NONNAVIGABLE (PLANTS)																																		
846	43.72327402	-89.46797465	367	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	846	0			NONNAVIGABLE (PLANTS)																																		
847	43.72326823	-89.46673317	366	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	847	3	Muck	Pole	SAMPLED			3			3		3									1															
848	43.72326243	-89.4654917	368	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	848	0			NONNAVIGABLE (PLANTS)																																		
849	43.72323324	-89.45928433	304	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	849	4	Muck	Pole	SAMPLED			2			2					1																						
850	43.72237943	-89.46922407	347	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	850	0			NONNAVIGABLE (PLANTS)																																		
851	43.72237366	-89.46798262	348	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	851	0			NONNAVIGABLE (PLANTS)																																		
852	43.72236788	-89.46674116	353	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	852	0			NONNAVIGABLE (PLANTS)																																		
853	43.72236208	-89.4654997	352	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	853	2	Muck	Pole	SAMPLED			2			1																				1		2	1				
854	43.72235626	-89.46425825	351	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	854	0			NONNAVIGABLE (PLANTS)																																		
855	43.72233288	-89.45929242	305	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	855	0			NONNAVIGABLE (PLANTS)																																		
856	43.72146752	-89.46674914	346	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	856	0			NONNAVIGABLE (PLANTS)																																		
857	43.72146172	-89.46550771	350	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	857	0			NONNAVIGABLE (PLANTS)																																		
858	43.72145591	-89.46426627	349	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	858	0			NONNAVIGABLE (PLANTS)																																		
859	43.72143253	-89.45930052	306	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	859	4	Muck	Pole	SAMPLED			1	1		1																										
860	43.72142665	-89.45805909	307	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	860	0			NONNAVIGABLE (PLANTS)																																		

Point Number	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	ID	Lake Name	County	Date	Field Crew	Point Number	Depth (Feet)	Sediment	Pole; Rope	Comments	Notes	Nuisance	Total Rake Fullness	Myriophyllum spicatum	Potamogeton crispus	Ceratophyllum demersum	Chara spp.	Elodea canadensis	Elodea nuttallii	Heteranthera dubia	Lemna minor	Lemna trisulca	Myriophyllum sibiricum	Najas flexilis	Najas guadalupensis	Nymphaea odorata	Potamogeton nodosus	Potamogeton pusillus	Potamogeton robbinsii	Potamogeton zosteriformis	Ranunculus aquatilis	Ranunculus flammula	Sagittaria cuneata	Sparganium emersum	Stuckenia pectinata	Typha spp.	Vallisneria americana	Wolffia spp.	Zizania spp.	Filamentous algae	Najas minor	Nelumbo lutea
861	43.72142075	-89.45681765	308	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	861	0			NONNAVIGABLE (PLANTS)																																
862	43.72056137	-89.46551571	344	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	862	0			NONNAVIGABLE (PLANTS)																																
863	43.72055555	-89.46427429	345	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	863	3	Muck	Pole	SAMPLED			1			1													1		1											
864	43.72054973	-89.46303287	343	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	864	2	Muck	Pole	SAMPLED			3			3		1			1						1			1				1				1	1	1			
865	43.72054389	-89.46179145	342	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	865	0			NONNAVIGABLE (PLANTS)																																
866	43.72052629	-89.4580672	309	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	866	6	Sand	Pole	SAMPLED			0																												
867	43.7205204	-89.45682578	311	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	867	0			NONNAVIGABLE (PLANTS)																																
868	43.72051449	-89.45558437	312	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	868	0			NONNAVIGABLE (PLANTS)																																
869	43.71966101	-89.46552371	336	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	869	0			NONNAVIGABLE (PLANTS)																																
870	43.7196552	-89.46428231	337	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	870	0			NONNAVIGABLE (PLANTS)																																
871	43.71964937	-89.46304091	341	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	871	0			NONNAVIGABLE (PLANTS)																																
872	43.71964353	-89.46179951	340	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	872	0			NONNAVIGABLE (PLANTS)																																
873	43.71963768	-89.46055811	339	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	873	3	Muck	Pole	SAMPLED			3			3																									
874	43.71963182	-89.45931672	338	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	874	0			NONNAVIGABLE (PLANTS)																																
875	43.71962594	-89.45807532	310	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	875	3	Muck	Pole	SAMPLED			3			3																							1			
876	43.71962004	-89.45683392	313	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	876	0			NONNAVIGABLE (PLANTS)																																
877	43.71961414	-89.45559252	314	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	877	0			NONNAVIGABLE (PLANTS)																																
878	43.71875484	-89.46429034	335	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	878	0			NONNAVIGABLE (PLANTS)																																
879	43.71874902	-89.46304895	334	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	879	0			NONNAVIGABLE (PLANTS)																																
880	43.71874318	-89.46180757	333	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	880	0			NONNAVIGABLE (PLANTS)																																
881	43.71873733	-89.46056619	332	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	881	0			NONNAVIGABLE (PLANTS)																																
882	43.71873146	-89.45932481	331	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	882	0			NONNAVIGABLE (PLANTS)																																
883	43.71872558	-89.45808343	330	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	883	0			NONNAVIGABLE (PLANTS)																																
884	43.71871969	-89.45684205	329	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	884	0			NONNAVIGABLE (PLANTS)																																
885	43.71871378	-89.45560067	328	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	885	0			NONNAVIGABLE (PLANTS)																																
886	43.71785449	-89.46429836	320	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	886	0			NONNAVIGABLE (PLANTS)																																
887	43.71784866	-89.46305699	321	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	887	0			NONNAVIGABLE (PLANTS)																																
888	43.71784282	-89.46181563	322	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	888	0			NONNAVIGABLE (PLANTS)																																
889	43.71783697	-89.46057427	323	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	889	0			NONNAVIGABLE (PLANTS)																																
890	43.71783111	-89.45933291	324	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	890	0			NONNAVIGABLE (PLANTS)																																
891	43.71782523	-89.45809155	325	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	891	0			NONNAVIGABLE (PLANTS)																																
892	43.71781934	-89.45685018	326	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	892	0			NONNAVIGABLE (PLANTS)																																
893	43.71781343	-89.45560882	327	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	893	0			NONNAVIGABLE (PLANTS)																																
894	43.71695994	-89.46554772	319	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	894	0			TERRESTRIAL																																
895	43.71695413	-89.46430638	318	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	895	0			NONNAVIGABLE (PLANTS)																																
896	43.7169483	-89.46306503	317	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	896	0			NONNAVIGABLE (PLANTS)																																
897	43.71694247	-89.46182369	316	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	897	0			NONNAVIGABLE (PLANTS)																																
898	43.71693662	-89.46058235	315	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	898	0			NONNAVIGABLE (PLANTS)																																
899	43.71693075	-89.459341	303	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	899	0			NONNAVIGABLE (PLANTS)																																
900	43.71692487	-89.45809966	302	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	900	0			NONNAVIGABLE (PLANTS)																																
901	43.71691898	-89.45685832	301	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	901	0			NONNAVIGABLE (PLANTS)																																
902	43.71605377	-89.4643144	295	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	902	0			TERRESTRIAL																																
903	43.71604795	-89.46307307	296	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	903	0			NONNAVIGABLE (PLANTS)																																
904	43.71604211	-89.46183175	297	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	904	0			NONNAVIGABLE (PLANTS)																																
905	43.71603626	-89.46059042	298	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	905	0			NONNAVIGABLE (PLANTS)																																
906	43.71603039	-89.4593491	299	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	906	0			NONNAVIGABLE (PLANTS)																																
907	43.71602452	-89.45810777	300	Buffalo Lake	Marquette	7/22/2015	DAC & RAK	907	0			NONNAVIGABLE (PLANTS)																																