A

APPENDIX A

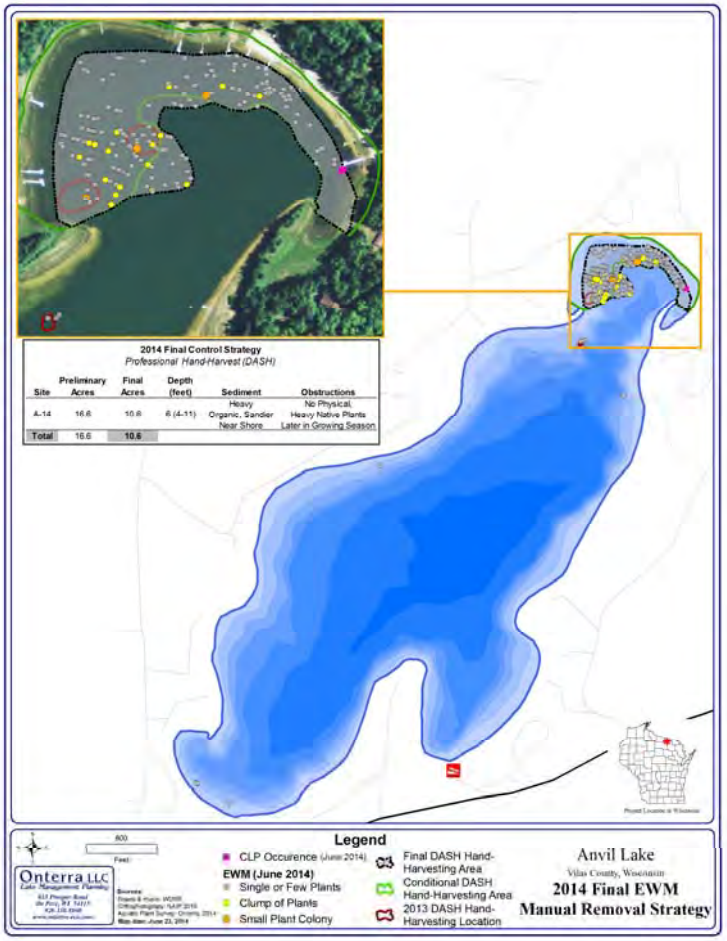
Public Participation Materials

Anvil Lake Current & Proposed Projects

The Anvil Lake Association

EWM Management

2014 Diver-Assisted Suction Harvesting Areas



Management Planning Project

Proposed to Begin Spring 2015

The development of a lake management plan is a process every lake group should undertake to assure the continued good health of their lake. Further, lakes with current and approved management plans are eligible for specific lake grants through the Wisconsin Department of Natural Resources. The Anvil Lake Association is currently working with researchers from the US Geological Survey to study the lake's water quality, as well as its ground and surface watersheds. In December 2014, The Anvil Lake Association will apply for an AIS-Education, Planning, & Prevention Grant to fund 75% of the costs of a project aimed at developing a comprehensive management plan for Anvil Lake. The project will utilize the USGS results and additional information collected by Onterra, LLC, the lake management planning firm assisting the association in monitoring EWM. The following steps will be used in the process of developing the management plan:

1. Gather Information
- Watershed Assessment (USGS)
- Shoreline Condition & Habitat Survey
- Water Quality Assessment (USGS)
- Aquatic Plant Studies
- Fisheries Data Compilation
- Stakeholder Perceptions & Needs

2. Data Analysis & Conclusion Development
- Form Initial Recommendations
- Foster Solid Understanding of Results Among Project Planning Committee

3. Create Realistic & Implementable Management Plan
- Create Management Plan Based Upon Goals and Actions
- Present to Stakeholders & Agency Partners
- Create Final Management Plan

Anvil Lake Association

Anvil Lake Comprehensive Management Planning Project

Kick-off Meeting

July 3, 2015

Tim Hoyman, CLM
Onterra LLC
Lake Management Planning

Presentation Outline

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

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?

- To create a better understanding of the 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.

A goal without a plan is just a wish!

Onterra, LLC
Lake Management Planning

Elements of an Effective Lake Management Planning Project

Data and Information Gathering

Environmental & Sociological

Planning Process

Brings it all together

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Lake Management Planning

Data and information gathering

- Study Components
  - Water Quality Analysis
  - Watershed Assessment
  - Aquatic Plant Surveys
  - Fisheries Data Integration
  - Shoreline & CWH Assessment

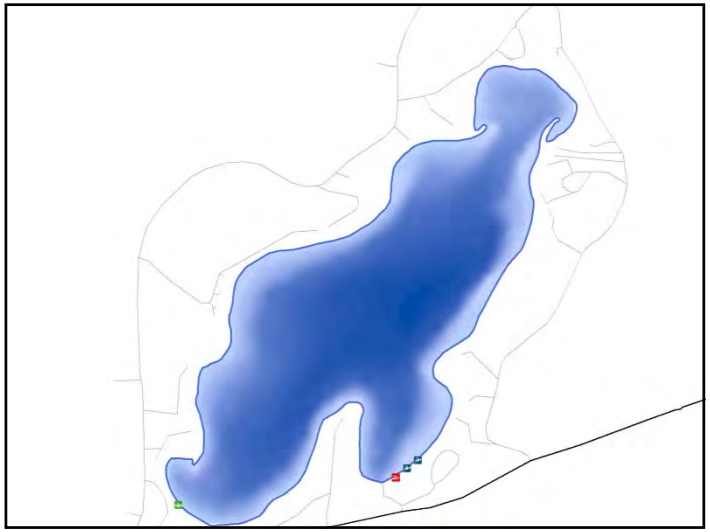
} Separate Project

Onterra, LLC
Lake Management Planning

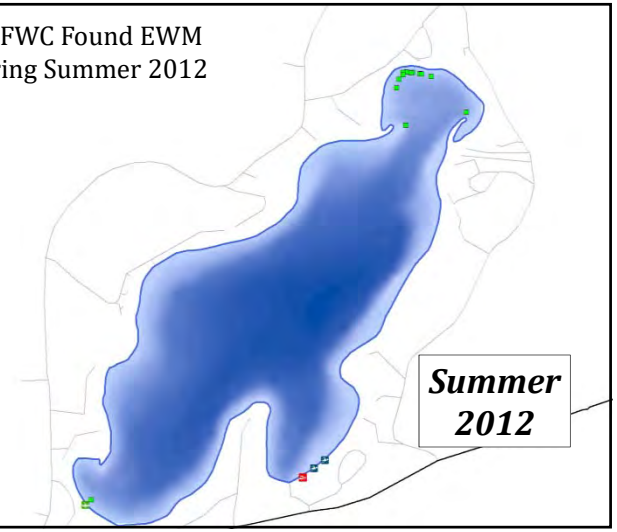
Non-native Aquatic Plants

Eurasian Water-Milfoil

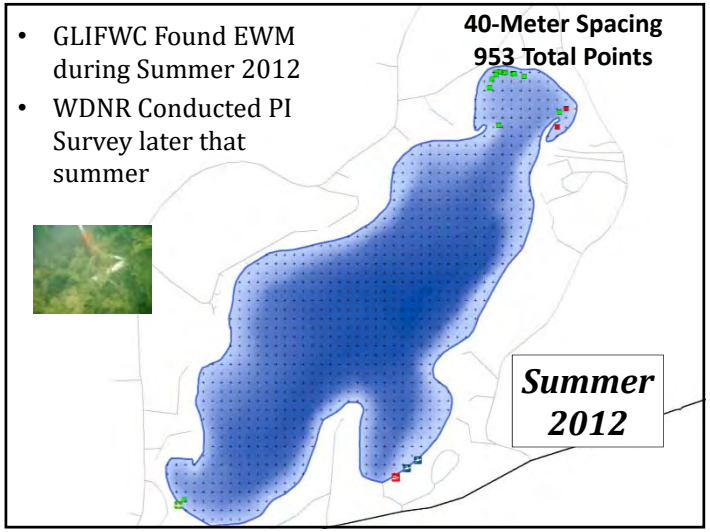
Onterra, LLC
Lake Management Planning



- GLIFWC Found EWM during Summer 2012



- GLIFWC Found EWM during Summer 2012
- WDNR Conducted PI Survey later that summer



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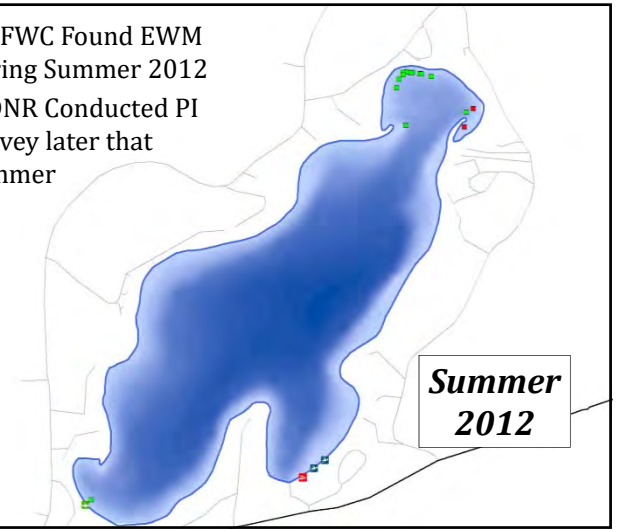
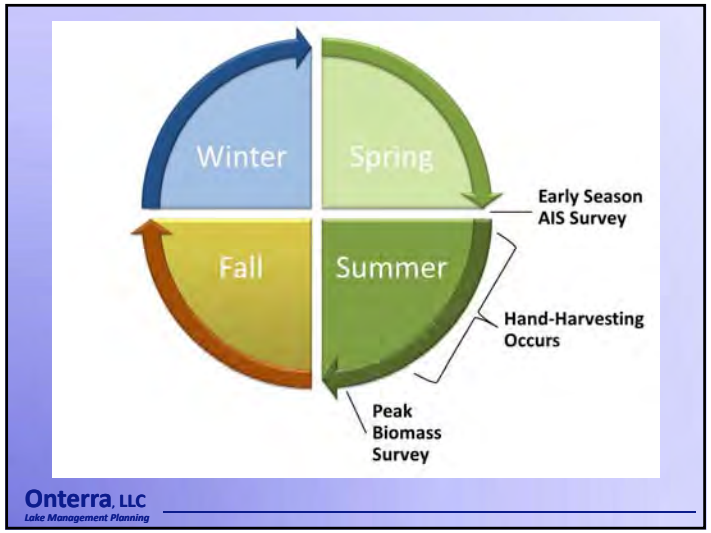
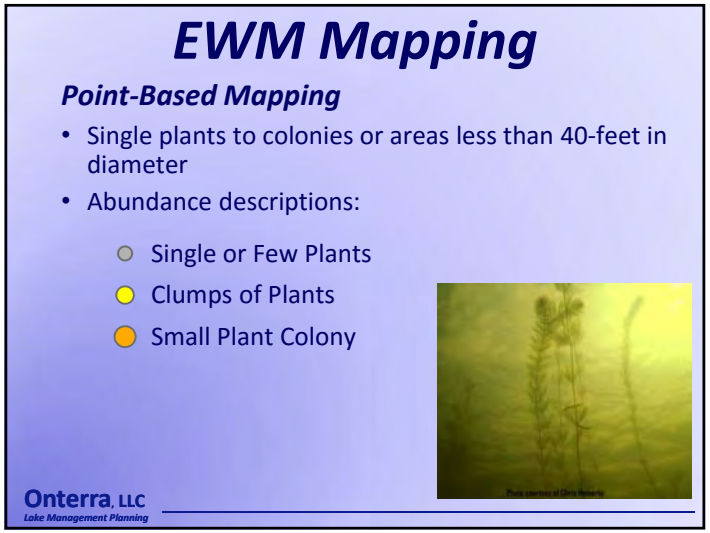


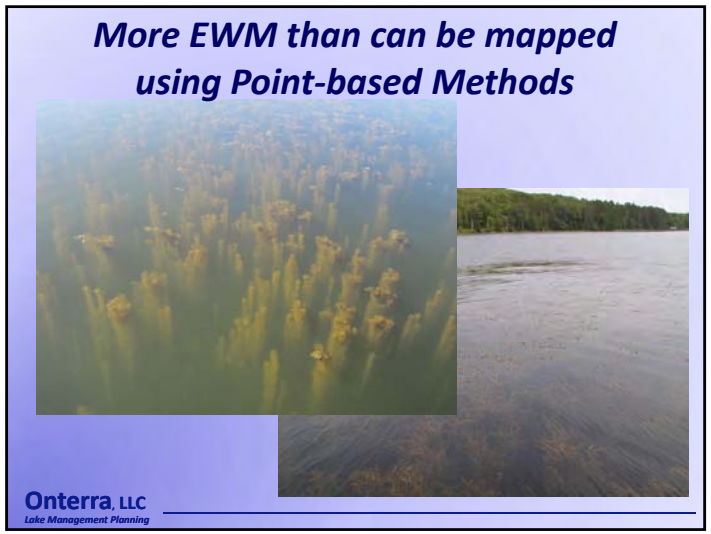
AIS-Early Detection & Response Project

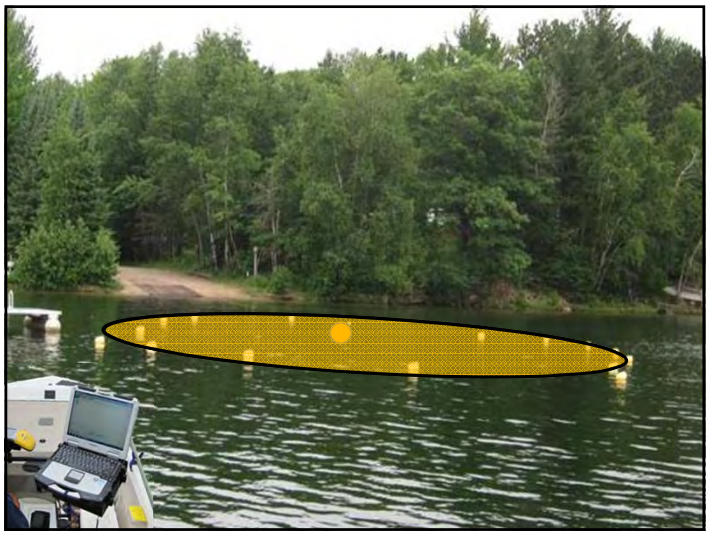
- Target new EWM population with hand-harvesting
  - Volunteer & professional efforts
  - Monitor before and after to enhance effectiveness
- AIS-EDR Project will 'end' after 2016 season
  - Management planning project will objectively review AIS-EDR project, outline future goals, actions, triggers

Onterra, LLC
Lake Management Planning


Winter
Spring
Fall
Summer
Early Season AIS Survey
Hand-Harvesting Occurs
Peak Biomass Survey
Onterra, LLC
Lake Management Planning


EWM Mapping
Point-Based Mapping
• Single plants to colonies or areas less than 40-feet in diameter
• Abundance descriptions:
Single or Few Plants
Clumps of Plants
Small Plant Colony
Onterra, LLC
Lake Management Planning


More EWM than can be mapped using Point-based Methods
Onterra, LLC
Lake Management Planning



AIS Mapping

Polygon-Based Mapping

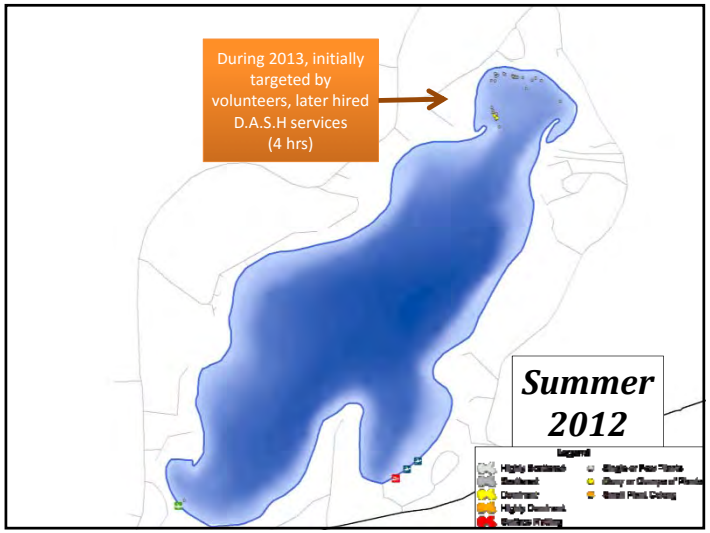
- Colonies or areas over 40-feet diameter
- Boundary at target plant extent or morphological feature (depth contour, shoreline)
- Density ratings:

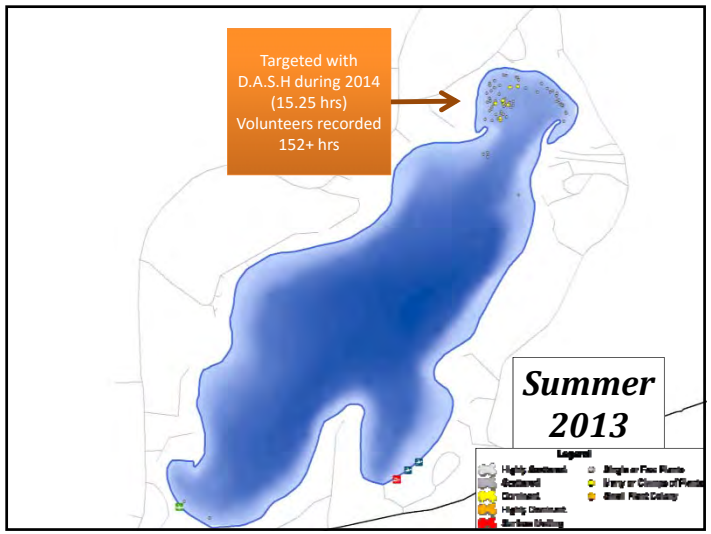
May not represent true colonies or "beds"

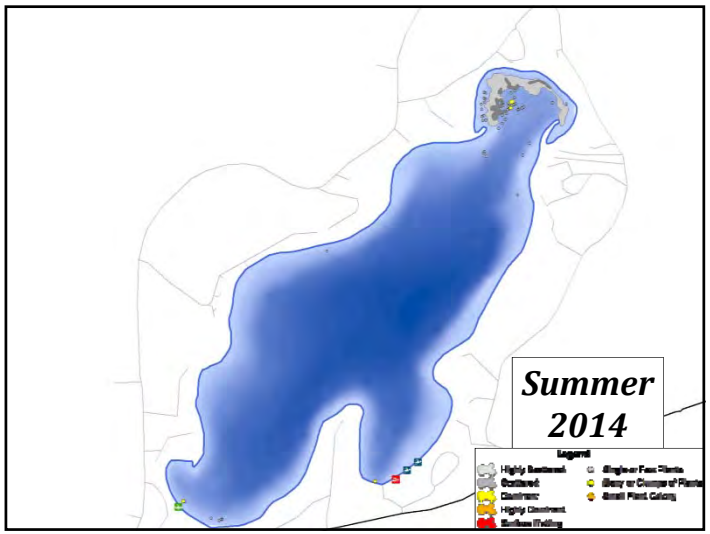
Highly Scattered
Scattered
Dominant
Highly Dominant
Surface Matting

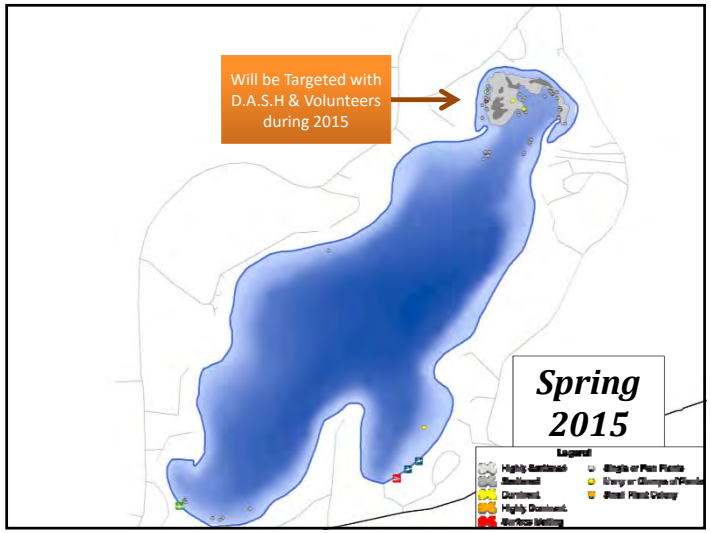
Increase in Ecological Impact

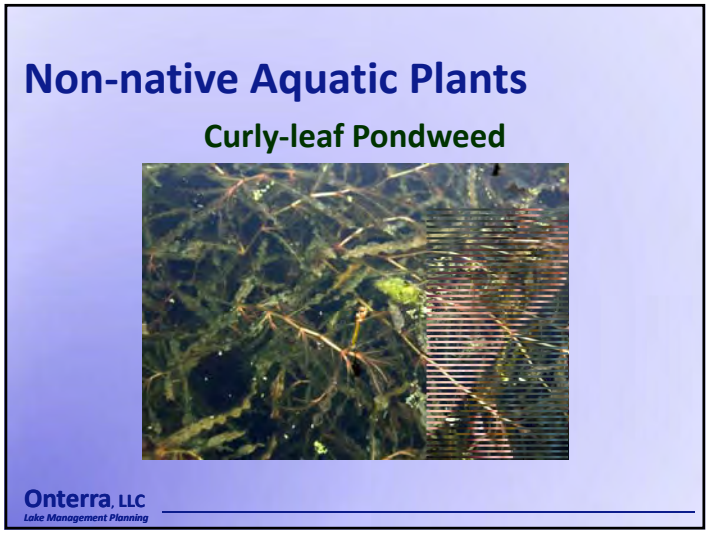
Onterra, LLC
Lake Management Planning

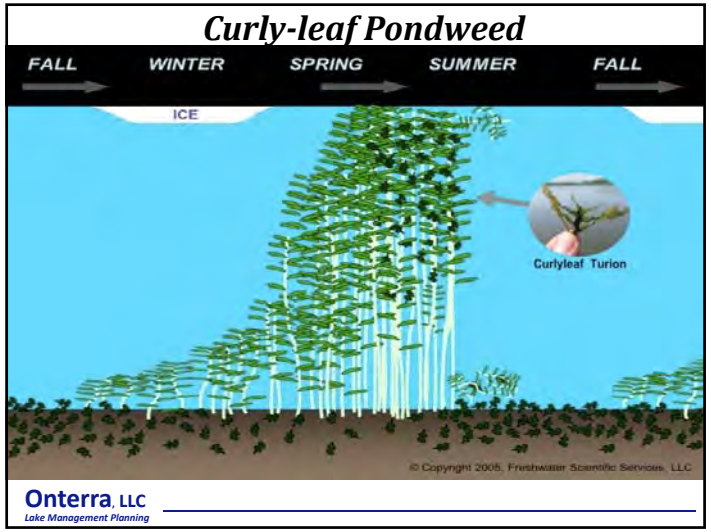


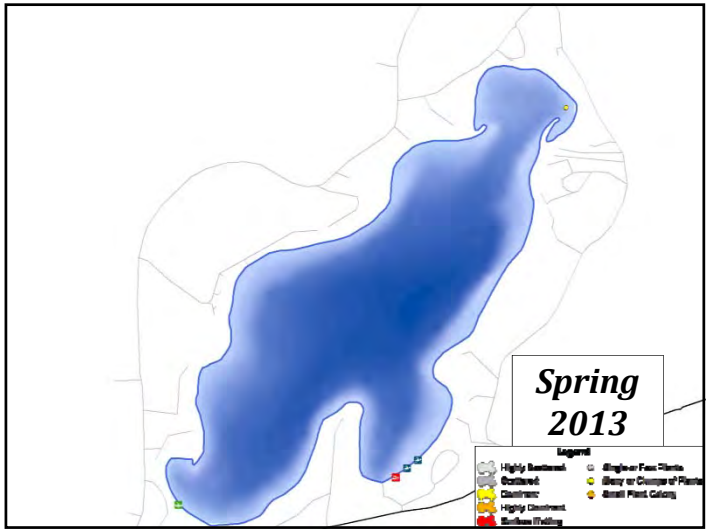


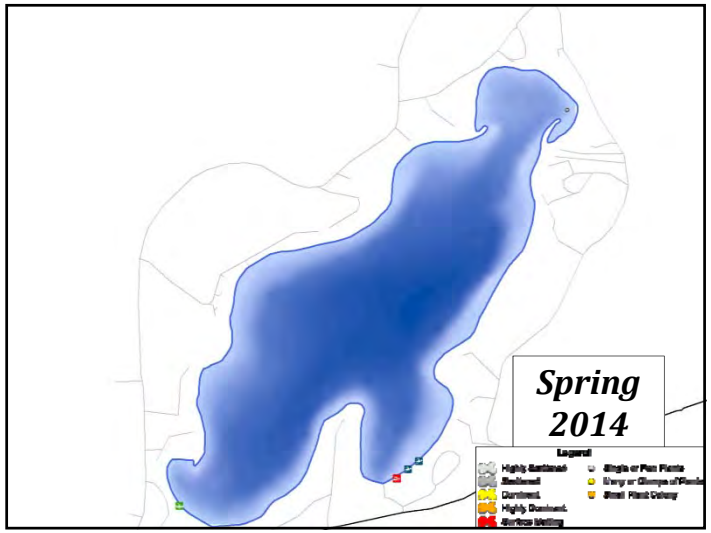


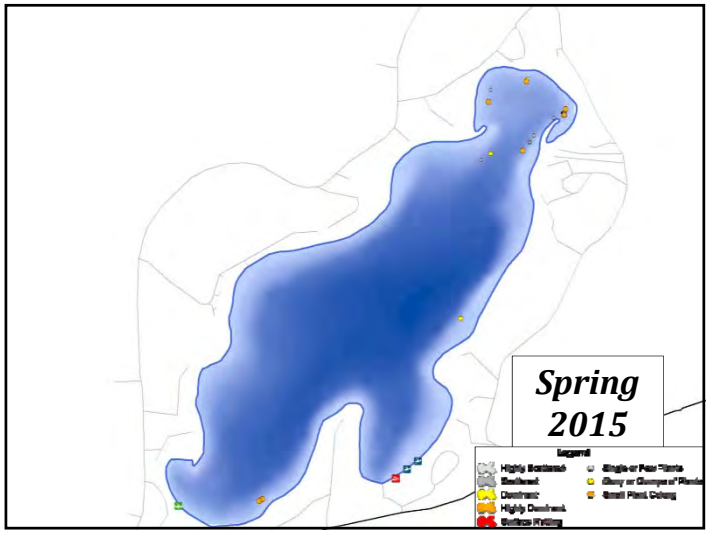

Will be Targeted with D.A.S.H & Volunteers during 2015
Spring 2015


Non-native Aquatic Plants
Curly-leaf Pondweed
Onterra, LLC
Lake Management Planning


Curly-leaf Pondweed
FALL
WINTER
SPRING
SUMMER
FALL
ICE
Curlyleaf Turion
© Copyright 2005, Freshwater Scientific Services, LLC
Onterra, LLC
Lake Management Planning


Spring 2013





Additional Plant Surveys

- Point-intercept Survey
  - Natives and non-natives
  - Compare to WDNR 2012 Survey
- Community Mapping Survey
  - Delineate floating-leaf and emergent vegetation colonies
- Acoustic Mapping Survey
  - Aquatic plant bio-volumes

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Shoreland Assessment

- Shoreland area is important for buffering runoff and provides valuable habitat for aquatic and terrestrial wildlife.
- Assessment ranks shoreland area from shoreline back 35 feet
- Assess shoreland development and habitat
  - Coarse woody habitat

Urbanized — Range — **Natural**

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Lake Management Planning

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 shoreland CWH in Anvil Lake

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Fisheries Data Integration

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

Onterra, LLC
Lake Management Planning

Planning Process

Planning Committee Meetings

Study Results (including previous stakeholder survey efforts)

Conclusions & Initial Recommendations

Management Goals

Management Actions

- Timeframe
- Facilitator(s)

↓

Implementation Plan

Onterra, LLC
Lake Management Planning

Thank You

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

Wisconsin Lakes Partnership

UW Extension

Wisconsin Dept of Natural Resources

Onterra, LLC
Lake Management Planning

Anvil Lake Association

Anvil Lake Comprehensive Management Planning Project

Planning Meeting I

April 22, 2016

Eddie Heath, Paul Garrison, Tim Hoyman
Onterra LLC
Lake Management Planning

Presentation Outline

- WDNR Studies – Paul Garrison
  - Paleoecology (Sediment Cores)
- Onterra Management Planning Components
  - Shoreland Condition Assessment
  - Fisheries Data Integration
  - Native Aquatic Plants
- Onterra AIS Monitoring Studies
  - CLP Monitoring
  - EWM Control & Monitoring

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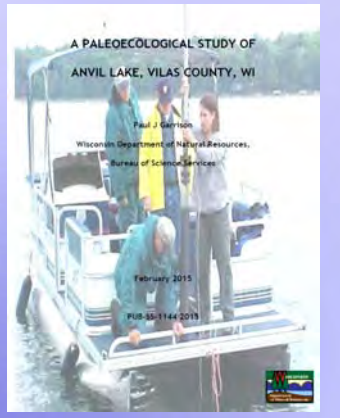
Paleoecological Study of Anvil Lake



Paul Garrison

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Lake Management Planning

Onterra LLC
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HOW DO YOU COLLECT SEDIMENT CORES?

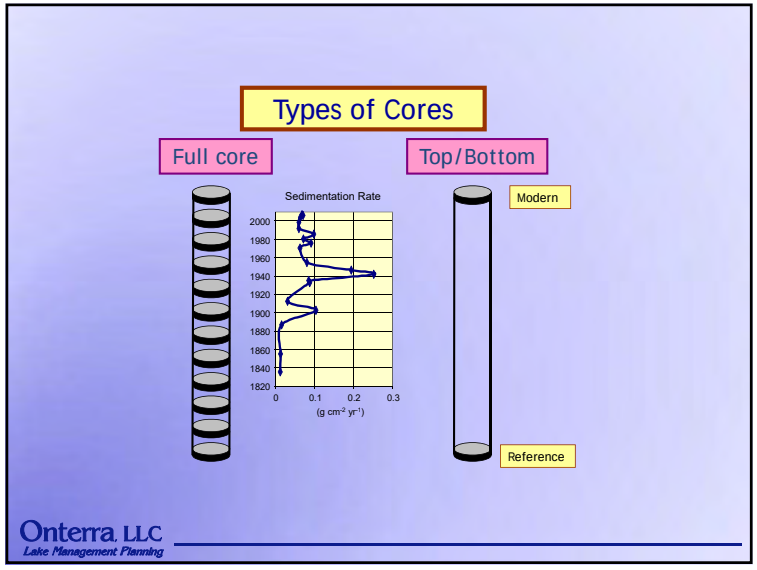
Gravity Corer

Piston Corer

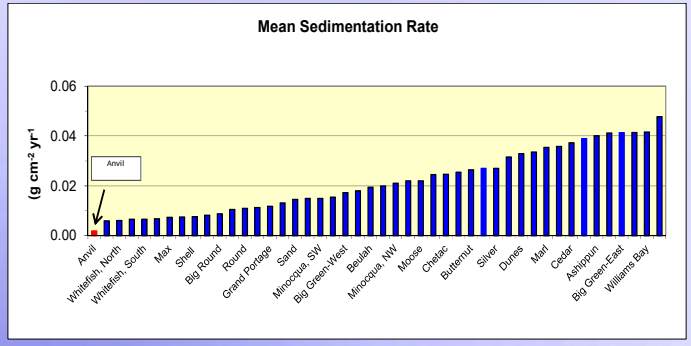
Onterra LLC
Lake Management Planning

Onterra LLC
Lake Management Planning

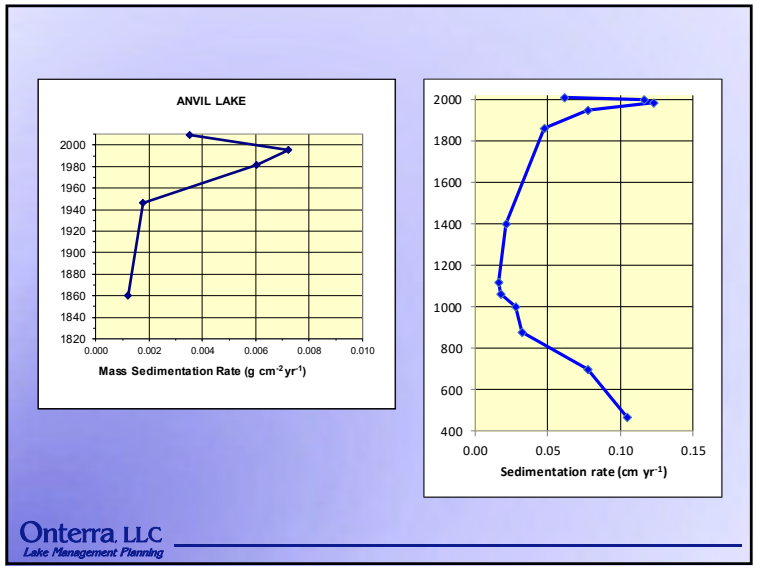
Onterra LLC
Lake Management Planning

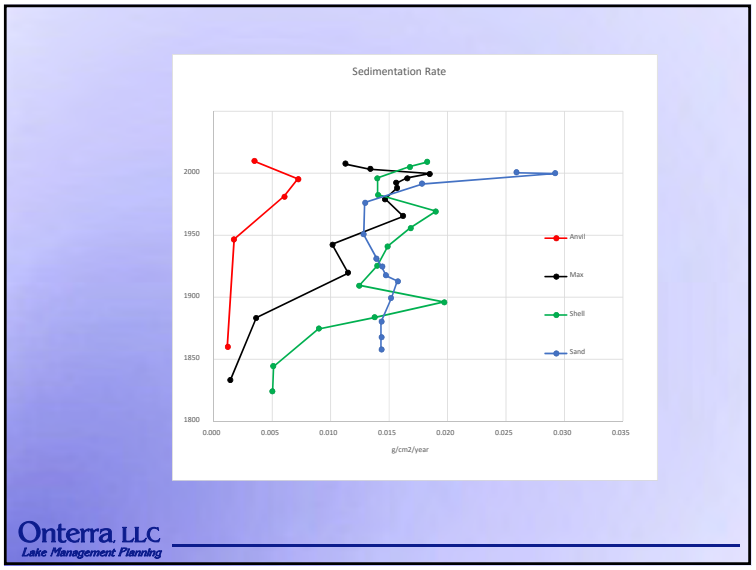


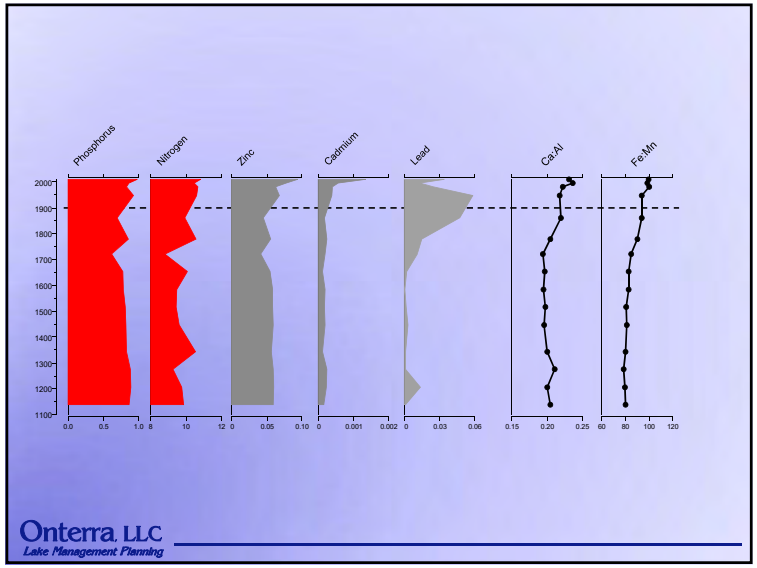
Onterra LLC
Lake Management Planning



Onterra LLC
Lake Management Planning


ANVIL LAKE
Mass Sedimentation Rate (g cm-2yr-1)
Sedimentation rate (cm yr-1)
Onterra LLC
Lake Management Planning


Sedimentation Rate
Anvil
Max
Shell
Sand
g/cm2/year
Onterra LLC
Lake Management Planning


Phosphorus
Nitrogen
Zinc
Cadmium
Lead
Ca:Al
Fe:Mn
Onterra LLC
Lake Management Planning

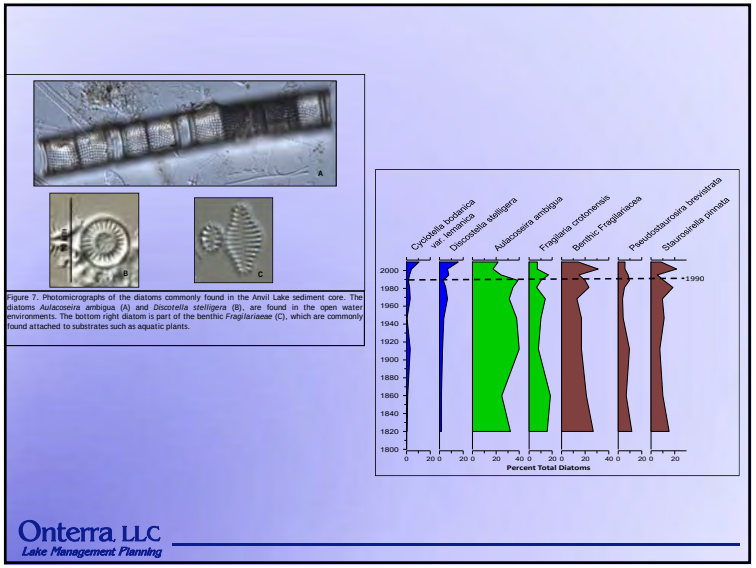
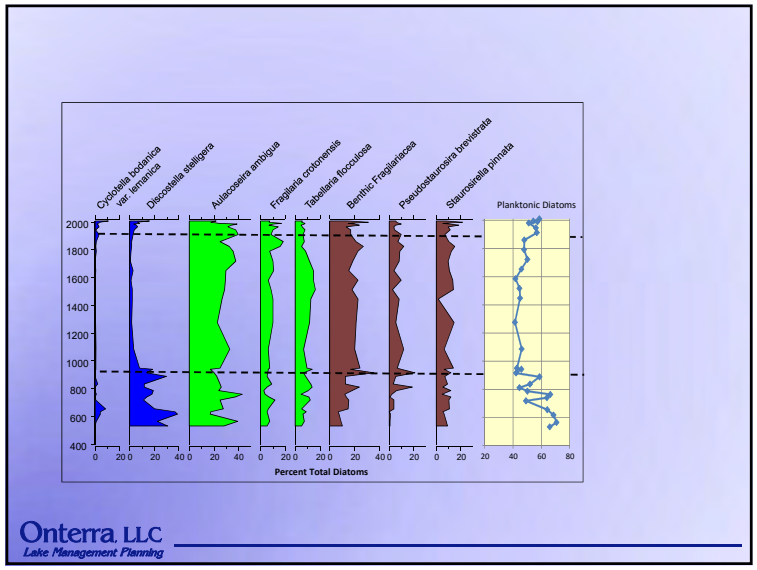
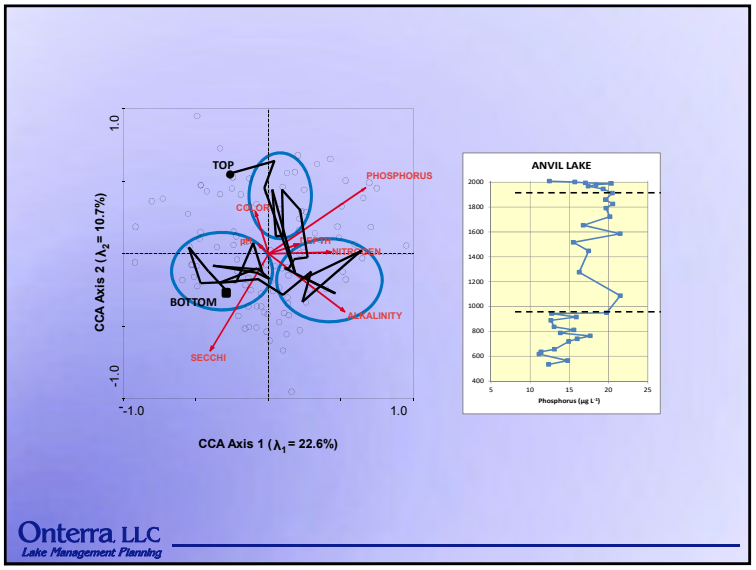
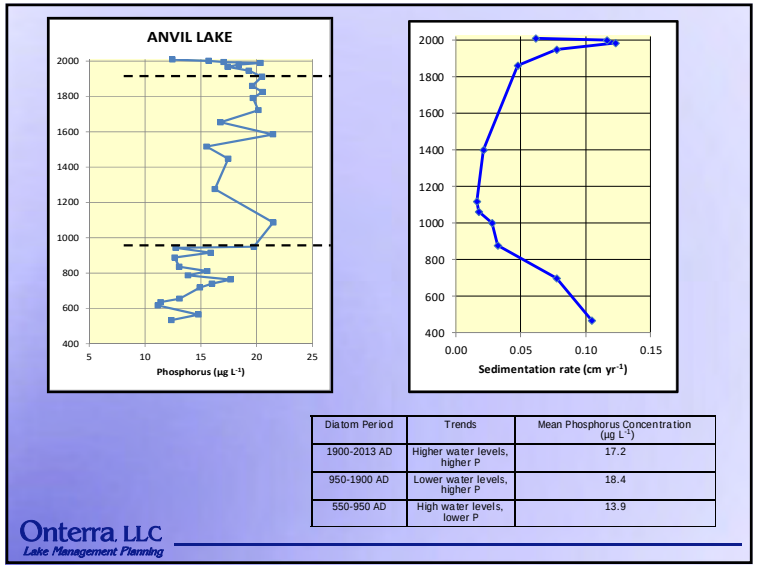


Figure 7. Photomicrographs of the diatoms commonly found in the Anvil Lake sediment core. The diatoms Aulacoseira ambigua (A) and Discotella stelligera (B), are found in the open water environments. The bottom right diatom is part of the benthic Fragilariaeae (C), which are commonly found attached to substrates such as aquatic plants.
Cyclotella bodanica var. lemanica
Discotella stelligera
Aulacoseira ambigua
Fragilaria crotonensis
Benthic Fragilariacea
Pseudostaurosira brevistriata
Staurosirella pinnata
1990
Percent Total Diatoms
Onterra LLC
Lake Management Planning







Diatom Period	Trends	Mean Phosphorus Concentration (µg L^{-1})
1900-2013 AD	Higher water levels, higher P	17.2
950-1900 AD	Lower water levels, higher P	18.4
550-950 AD	High water levels, lower P	13.9

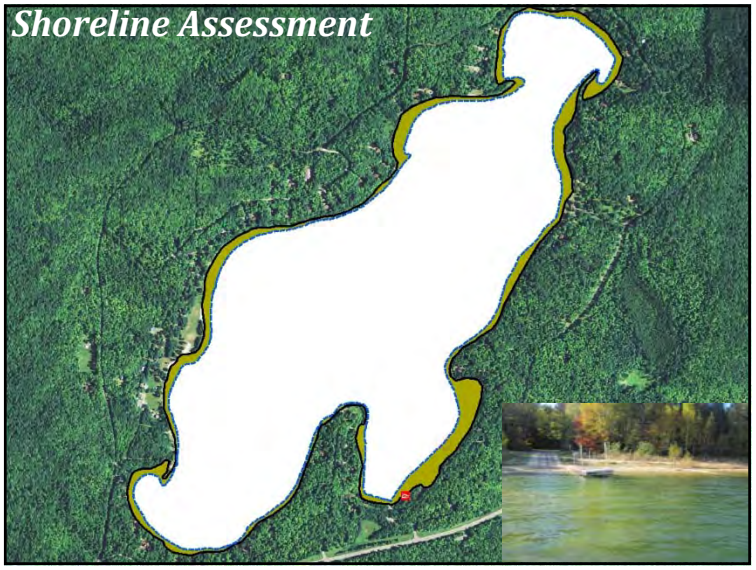
Shoreland Assessment

- 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

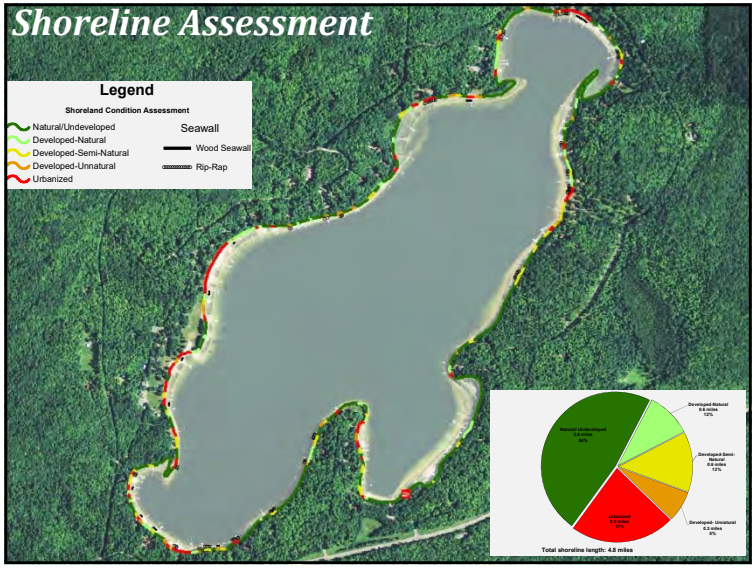
Urbanized Range **Natural**

Onterra LLC
Lake Management Planning

Shoreline Assessment



Shoreline Assessment



Coarse Woody Habitat

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- 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.
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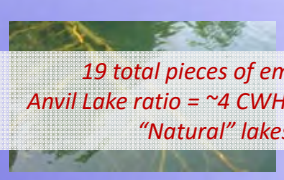
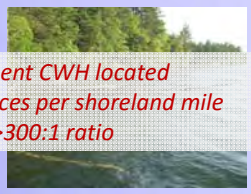
- Survey aimed at quantifying CWH in Anvil Lake





19 total pieces of emergent CWH located
Anvil Lake ratio = ~4 CWH pieces per shoreland mile
"Natural" lakes = >300:1 ratio

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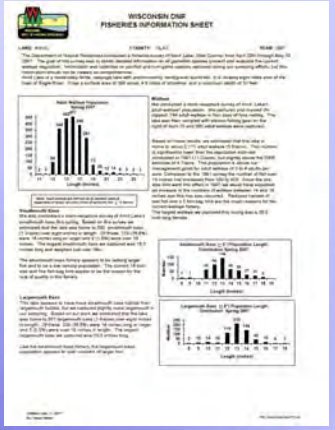
Fisheries



Onterra LLC
Lake Management Planning

Walleye Fishery

- Data suggested good recruitment in 1990's
- WDNR ceased stocking in 1991 (occurred since 1970s)
- WDNR Goal is 2-4 adult fish/acre
  - 1991 Study: 11.2 adult fish/acre
  - 2006 Study: 5.5 adult fish/acre
  - 2015 GLIFWC Study: 2.7 adult fish/acre
- WDNR attributes walleye declines to low water levels
- Fisheries rule change protecting the 20"-24" spawning slot was implemented
- Some tribal open-water spear harvest (approx. 100/year)
- Next study tentatively planned for 2017

Onterra LLC
Lake Management Planning

General Fishery

- Small- & large-mouth bass are low density and low size, attributed primarily to the harvest regulations (>14in, bag limit=5)
  - Secondarily due to low water levels and lack of near-shore CWH
  - Added half-log bass shelters (ALA/USFS)
- Contains "fair" northern pike fishery w/ no management plan of the species
- White sucker and bluegill are abundant
- Yellow perch, black crappie, pumpkinseed, & rock bass also present

Onterra LLC
Lake Management Planning

Aquatic Plants

Species List

34 Native Species in 2015 (19 on rake)

- 2 non-native Species
  - Eurasian watermilfoil
- 1 native species listed as 'special concern'
  - Vasey's pondweed

Growth Form	Scientific Name	Common Name	Coefficient of Conservatism (C)	2010 WDNR	2012 WDNR	2015 Onterra
Emergent	*Carex lasiocarpa*	Narrow-leaved woolly sedge	9			I
	Carex utriculata	Common yellow lake sedge	7			I
	Eleocharis palustris	Creeping spikerush	6		X	X
	Iris versicolor	Northern blue flag	5			I
	Juncus effusus	Soft rush	4			I
	Pontederia cordata	Pickerelweed	9		X	I
	Sagittaria latifolia	Common arrowhead	3	X		I
	Schoenoplectus acutus	Hardstem bulrush	5			I
	Schoenoplectus tabernaemontani	Softstem bulrush	4		X	I
	Scirpus cyperinus	Wool grass	4			I
	Typha spp.	Cattail spp.	1		X	I
FL	*Nuphar variegata*	Spatterdock	6			I
	Nymphaea odorata	White water lily	6			I
	Persicaria amphibia	Water smartweed	5			I
	Sparganium angustifolium	Narrow-leaf bur-reed	9	X		X
	Sparganium natans	Little bur-reed	9		X	
Submergent	*Chara* spp.	Muskgrasses	7	X	X	X
	Elatine minima	Waterwort	9	X	X	X
	Elodea canadensis	Common waterweed	3	X	X	
	Elodea nuttallii	Slender waterweed	7	X	X	X
	Eriocaulon aquaticum	Pipewort	9			X
	Isoetes spp.	Quillwort spp.	8	X	X	X
	Myriophyllum spicatum	Eurasian water milfoil	Exotic/Invasive		X	X
	Myriophyllum tenellum	Dwarf water milfoil	10	X	X	X
	Najas gracillima	Northern naiad	7	X		
	Nitella spp.	Stoneworts	7	X	X	X
	Potamogeton amplifolius	Large-leaf pondweed	7	X	X	X
	Potamogeton berchtoldii	Slender pondweed	7	X	X	X
	Potamogeton crispus	Curly-leaf pondweed	Exotic/Invasive			X
	Potamogeton epihydrus	Ribbon-leaf pondweed	8	X	X	X
	Potamogeton gramineus	Variable-leaf pondweed	7			X
	Potamogeton natans	Floating-leaf pondweed	5		I	
	Potamogeton spirillus	Spiral-fruited pondweed	8	X		X
	*Potamogeton vaseyi**	Vasey's pondweed	10	X		X
	Ranunculus flammula	Creeping spearwort	9			X
	Vallisneria americana	Wild celery	6	X	X	X
S/E	*Eleocharis acicularis*	Needle spikerush	5	X	X	X
	Juncus pelocarpus	Brown-fruited rush	8	X	X	X
	Sagittaria cristata	Crested arrowhead	9		X	

FL = Floating-leaf; S/E = Submergent and Emergent
X = Located on rake during point-intercept survey; I = Incidentally located
* Listed as a native 'species of special concern' in Wisconsin due to rarity and/or uncertainty regarding state-wide population

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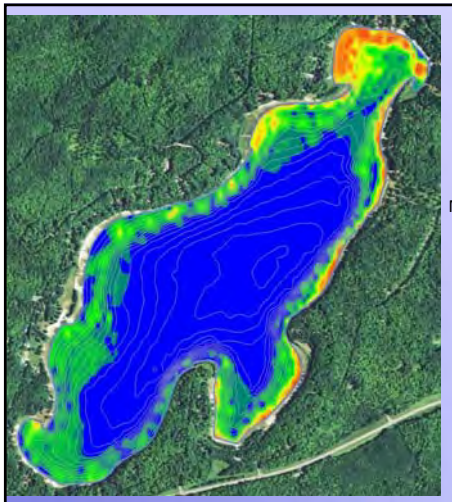
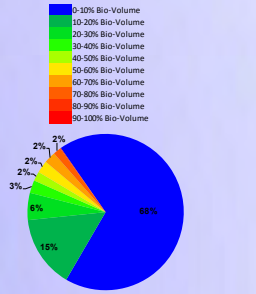


Aquatic Vegetation Distribution 2015

Maximum depth of plants = 24-28 feet



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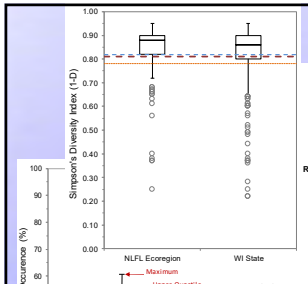
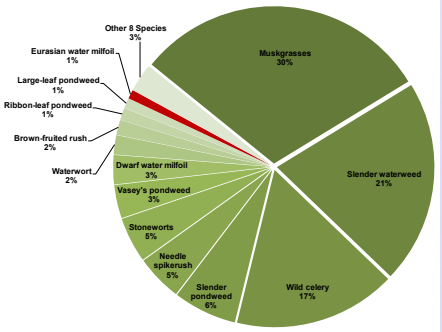
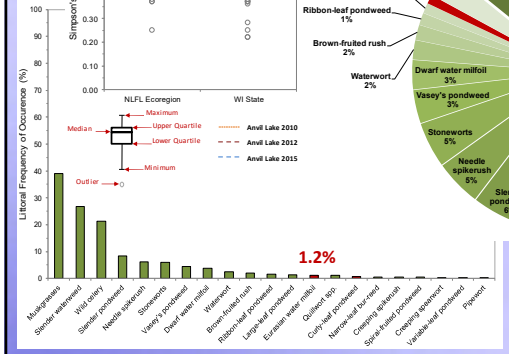
Frequency & Diversity







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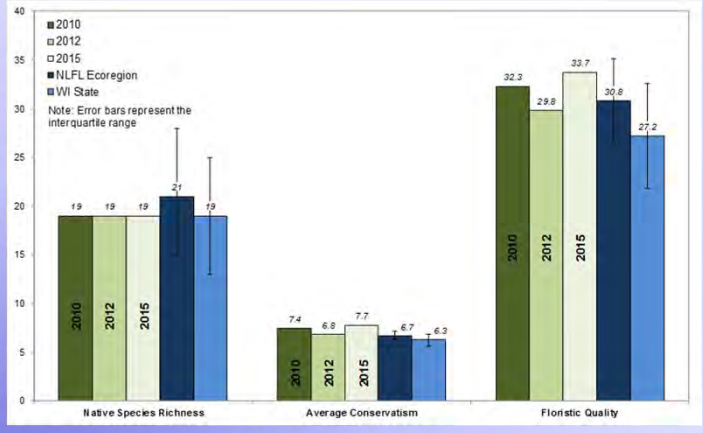
Floristic Quality Index



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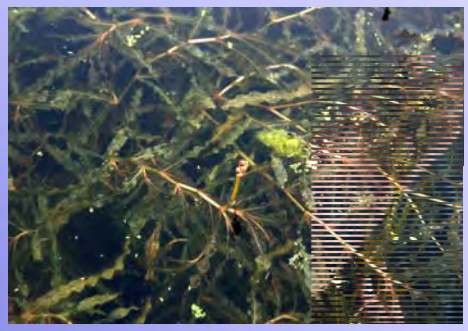
Non-native Aquatic Plants

Curly-leaf Pondweed



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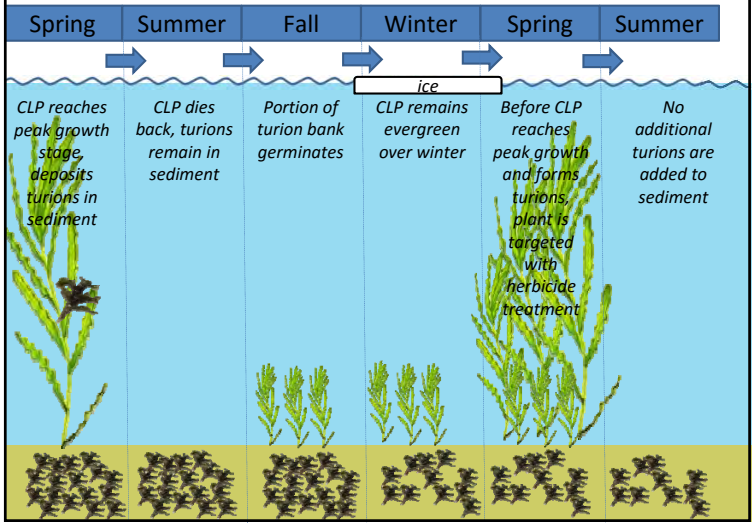
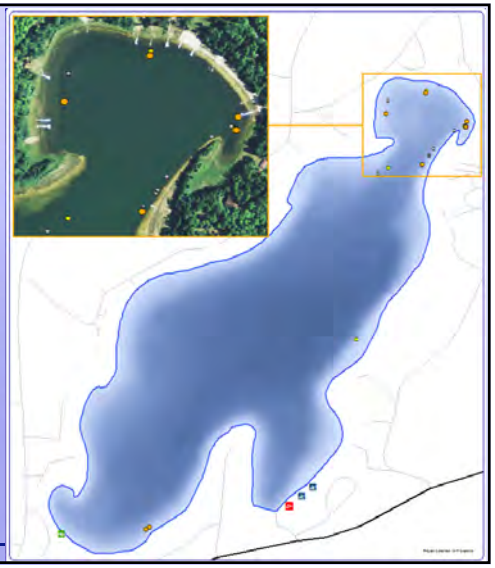
CLP Life-Cycle & Control Strategy Philosophy



Curly-leaf Pondweed



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Non-native Aquatic Plants

Eurasian Water-Milfoil

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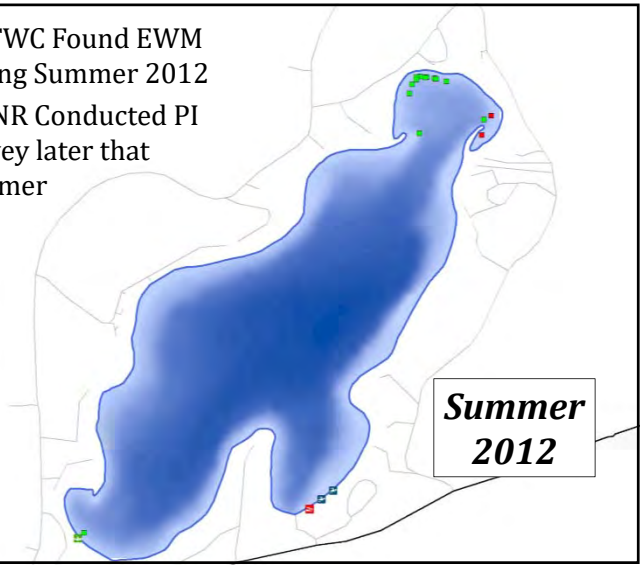
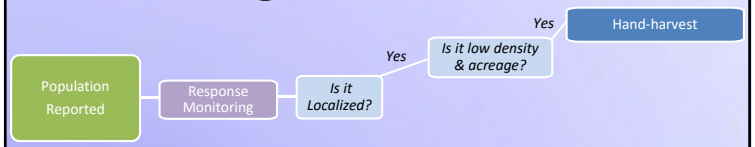
- GLIFWC Found EWM during Summer 2012
- WDNR Conducted PI Survey later that summer



AIS Management Decision Tree



AIS-Early Detection & Response Project

- Target new EWM population with hand-harvesting
  - Volunteer & professional efforts
  - Monitor before and after to enhance effectiveness
- AIS-EDR Project will 'end' after 2016 season
  - Management planning project will objectively review AIS-EDR project, outline future goals, actions, triggers

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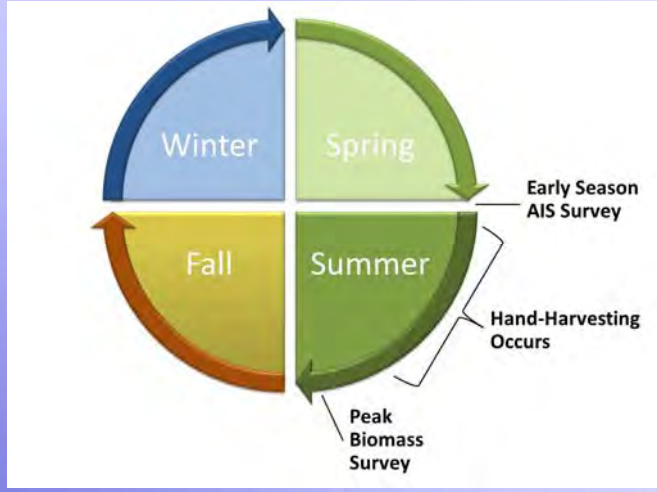
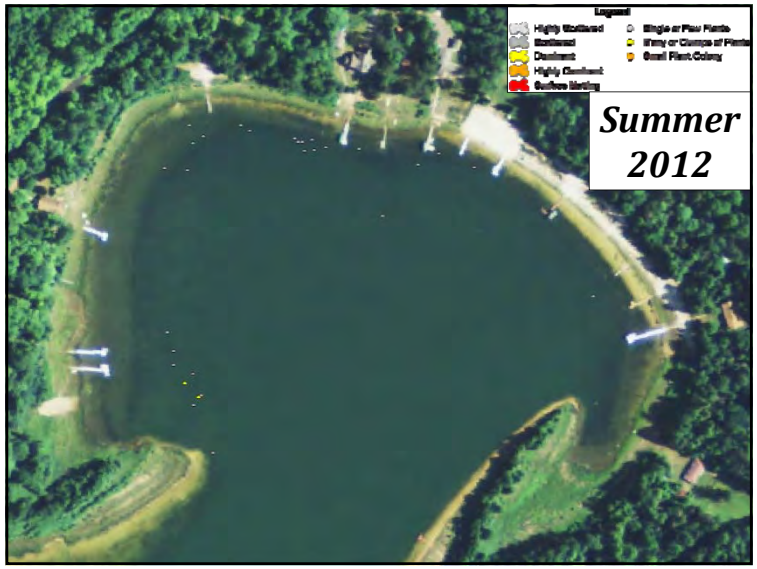
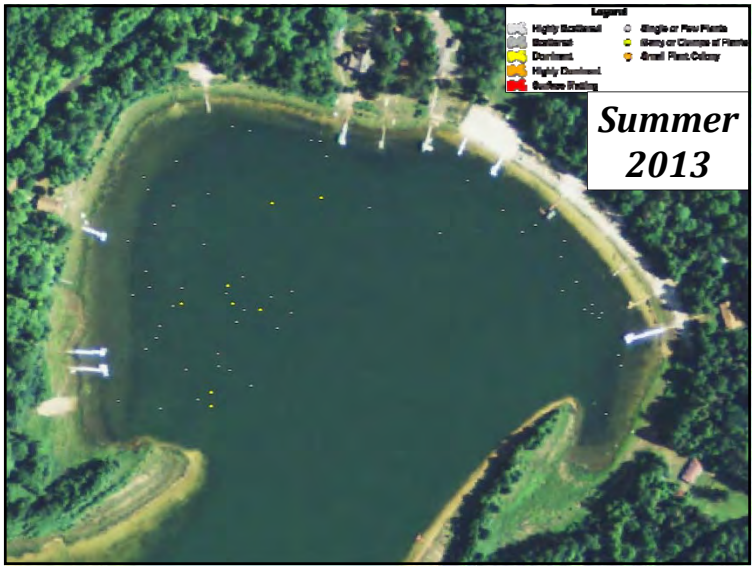
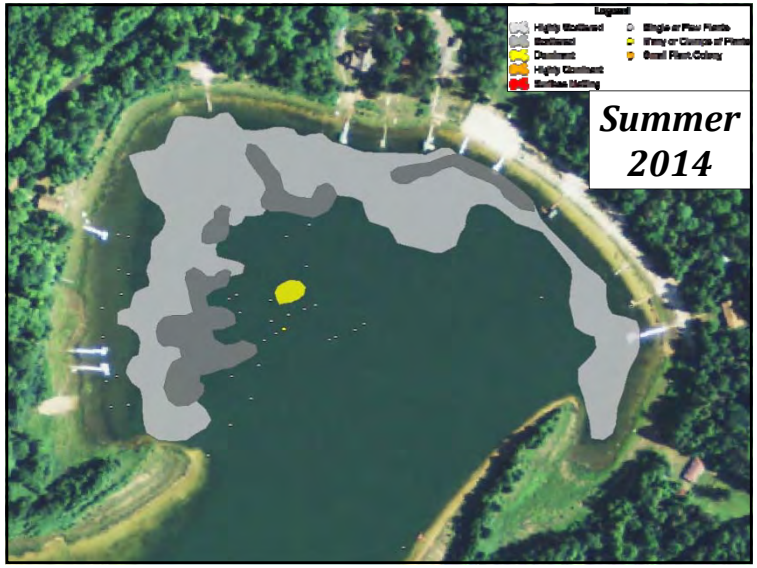
Lake Management Planning

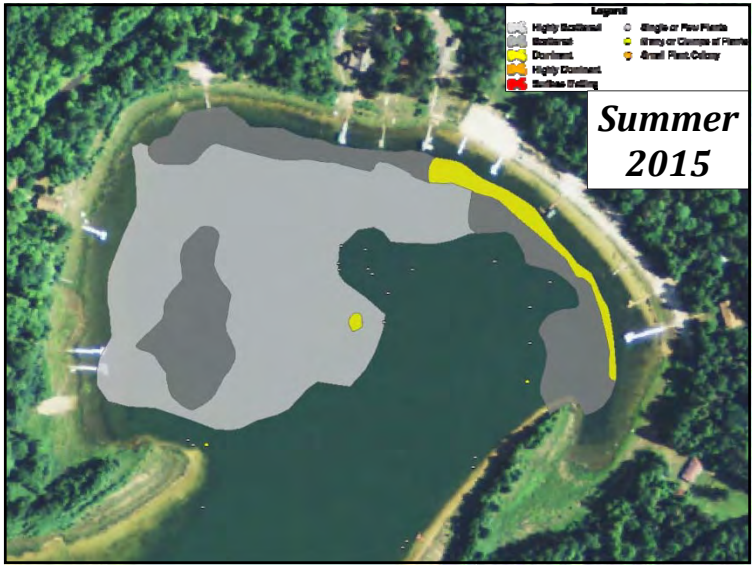


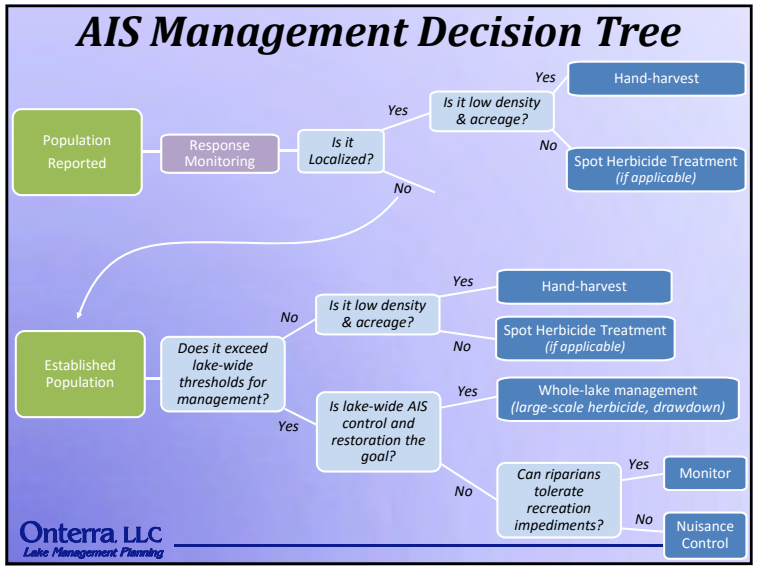
Onterra LLC
Lake Management Planning


Summer
2012


Summer
2013


Summer
2014


Summer
2015


AIS Management Decision Tree
Population Reported
Response Monitoring
Is it Localized?
Yes
Is it low density & acreage?
Yes
Hand-harvest
No
Spot Herbicide Treatment (if applicable)
No
Established Population
Does it exceed lake-wide thresholds for management?
No
Is it low density & acreage?
Yes
Hand-harvest
No
Spot Herbicide Treatment (if applicable)
Yes
Is lake-wide AIS control and restoration the goal?
Yes
Whole-lake management (large-scale herbicide, drawdown)
No
Can riparians tolerate recreation impediments?
Yes
Monitor
No
Nuisance Control
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Developing a Control Strategy & Monitoring Plan
AIS Control Strategy
Inline with lake group's lake management goals
Influenced by stage & population of AIS
Based upon lake group's support for various methods (e.g. drawdown, herbicide use)
Prioritization based upon financial limitations and/or volunteerism
Obtain support from additional management entities
AIS Monitoring Plan
Collection of pre- & post treatment data for evaluation and adaptive management decisions
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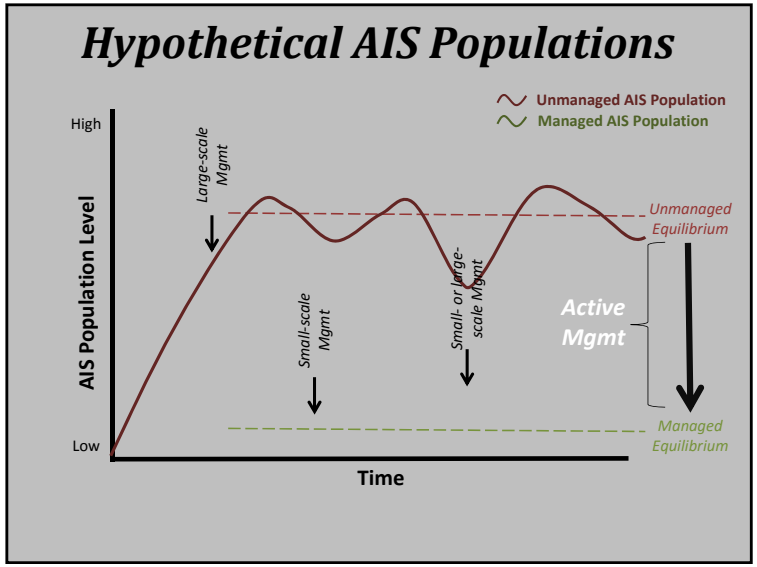
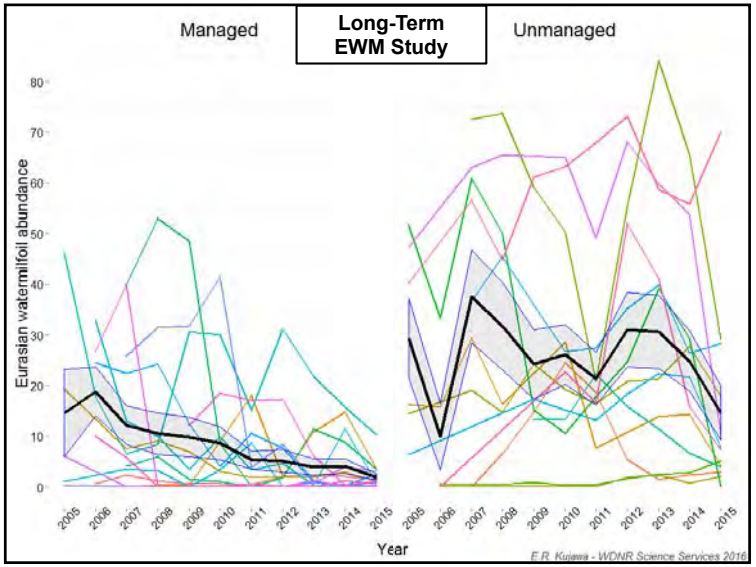

Hypothetical AIS Populations
Unmanaged AIS Population
Managed AIS Population
High
Low
AIS Population Level
Time
Large-scale Mgmt
Small-scale Mgmt
Small- or large-scale Mgmt
Active Mgmt
Unmanaged Equilibrium
Managed Equilibrium


Managed
Long-Term EWM Study
Unmanaged
Eurasian watermilfoil abundance
Year
E.R. Kujawa - WDNR Science Services 2016

AIS Active Management Discussion

Pros	Cons
• Keep AIS population low so native ecosystem can function as it did prior to AIS • Keep AIS population low so the lake is not a source population for other nearby lakes • Keep AIS population low so it does not cause recreational, navigational, or aesthetic issues	• Management action itself may be ecologically damaging to the lake, so understanding potential secondary impacts is important within the risk assessment. • Management action may not be fully supported by public • Equilibrium ***unmanaged*** AIS population may be low enough to not cause large ecosystem or user conflicts

Herbicide Control 101

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Early-season Herbicide Control Strategy

Exotic species are small, actively growing, and most vulnerable

Many native species are dormant

Minimize biomass decomposition

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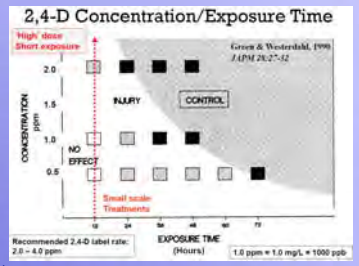
Spot Treatment

- Ecological Definition: *Herbicide applied at a scale where dissipation will not result in significant lake wide concentrations; impacts are anticipated to be localized to in/around application area.*



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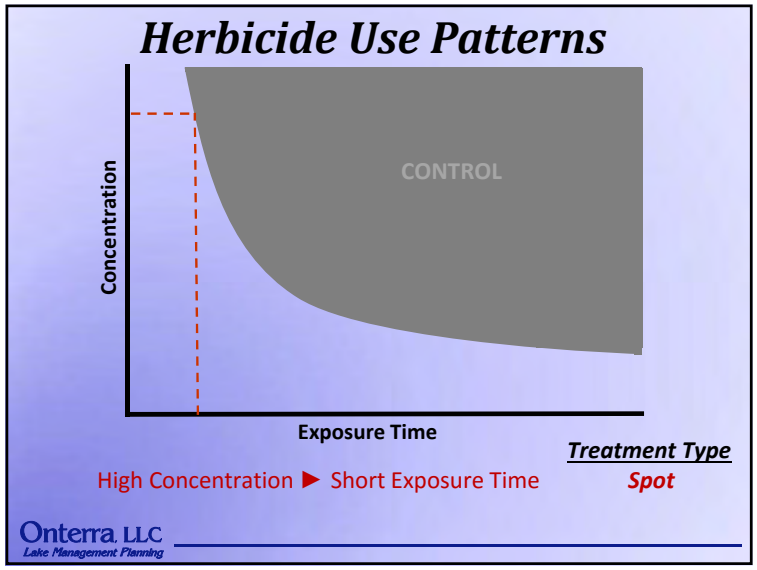
Herbicide Use Patterns
CONTROL
Concentration
Exposure Time
Treatment Type
Spot
High Concentration ▶ Short Exposure Time
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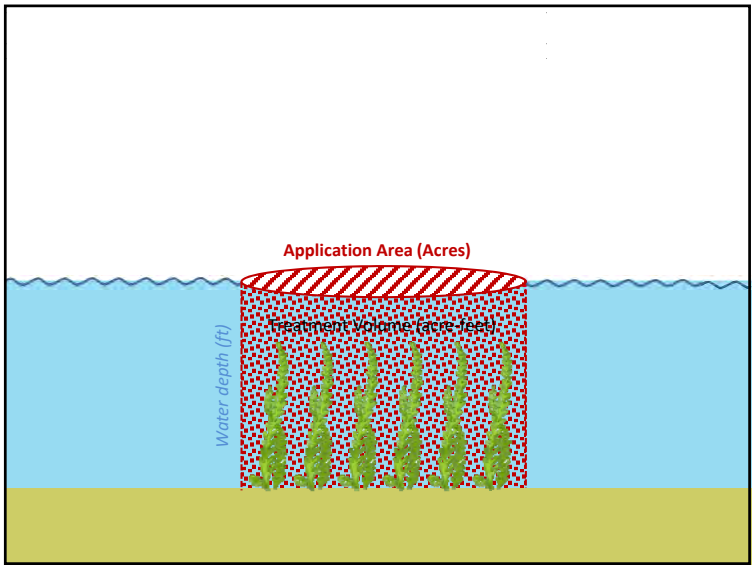
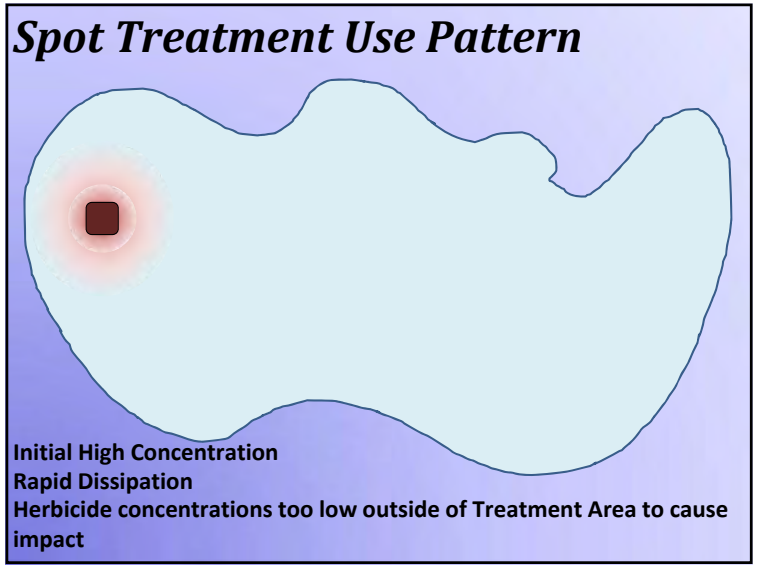
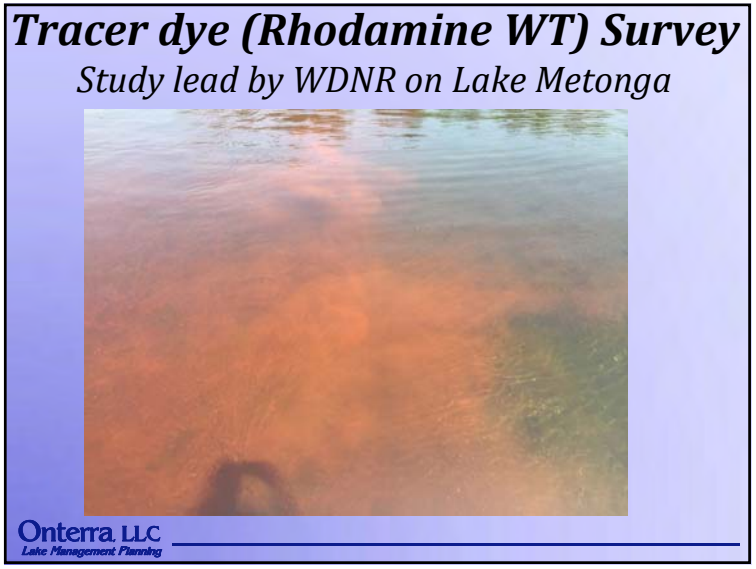

Application Area (Acres)
Water depth (ft)
Treatment Volume (acre-feet)


Spot Treatment Use Pattern
Initial High Concentration
Rapid Dissipation
Herbicide concentrations too low outside of Treatment Area to cause impact


Tracer dye (Rhodamine WT) Survey
Study lead by WDNR on Lake Metonga
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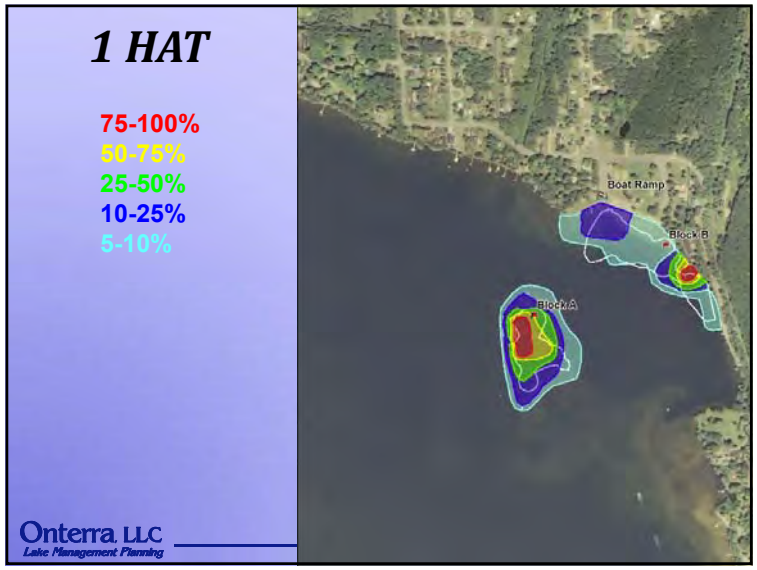
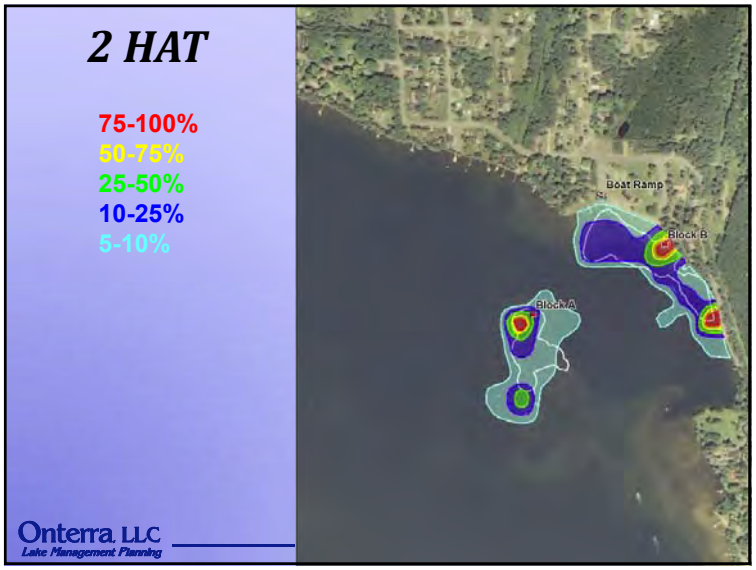
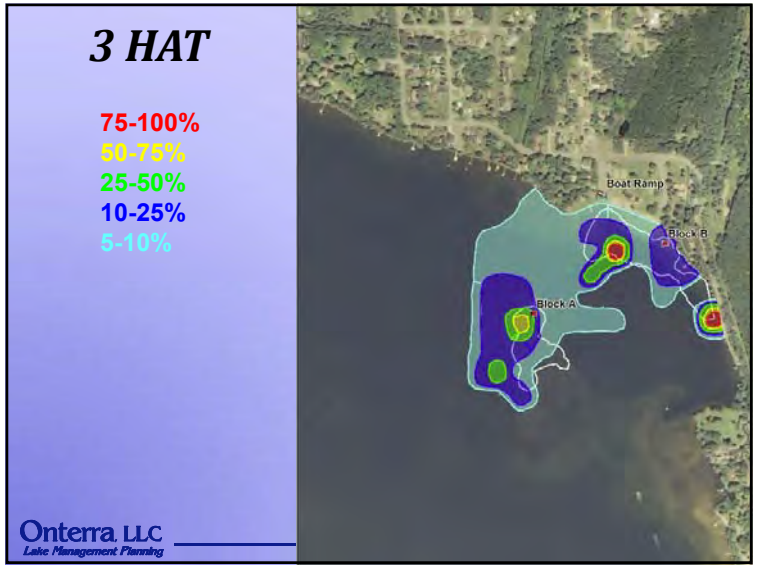
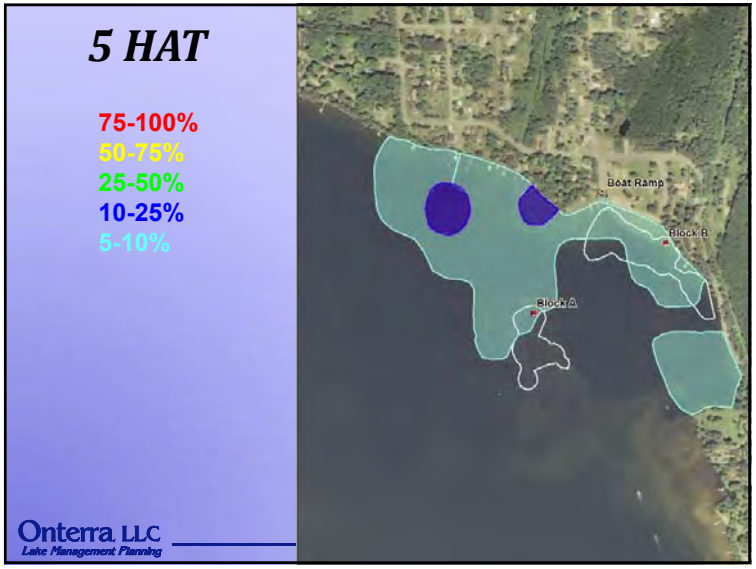

1 HAT
75-100%
50-75%
25-50%
10-25%
5-10%
Boat Ramp
Block B
Block A
Onterra LLC
Lake Management Planning


2 HAT
75-100%
50-75%
25-50%
10-25%
5-10%
Boat Ramp
Block B
Block A
Onterra LLC
Lake Management Planning


3 HAT
75-100%
50-75%
25-50%
10-25%
5-10%
Boat Ramp
Block B
Block A
Onterra LLC
Lake Management Planning


5 HAT
75-100%
50-75%
25-50%
10-25%
5-10%
Boat Ramp
Block B
Block A
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Factors that Result in Increased CET

Large Treatment Sites
- Especially over 5 acres

Broad-shaped Sites
- Long, skinny shapes act like small sites

Physical Barriers (protected bays)
- Dilution doesn't occur in all directions
- Eddy effects

Low Water Exchange
- Flow
- Wave-action

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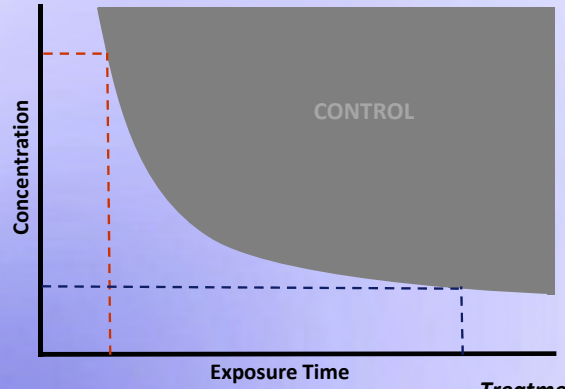
Herbicide Use Patterns



	Treatment Type
High Concentration ▶ Short Exposure Time	***Spot***
Low Concentration ▶ Long Exposure Time	***Whole-lake***

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How Will All of This be Tied Together?

- Planning Meeting I (today)
  - Results & Conclusions Discussion
- Planning Meeting II (early- to mid-summer)
  - Put Together Management Goals & Actions for AIS
  - December 10, 2016 AIS-EPP Grant Opportunity
- Planning Meeting III (late-summer to early-fall)
  - Revisit USGS/WDNR Information for Refresher
  - Put Together Remaining Management Goals & Actions

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Lake Management Planning

B

APPENDIX B

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	Chara spp.	Elatine minima	Eleocharis acicularis	Eleocharis palustris	Elodea nuttallii	Eriocaulon aquaticum	Isoetes spp.	Juncus pelocarpus	Myriophyllum tenellum	Nitella spp.	Potamogeton amplifolius	Potamogeton berchtoldii	Potamogeton epihydrus	Potamogeton gramineus	Potamogeton spirillus	Potamogeton vaseyi	Ranunculus flammula	Sparganium androcladum	Sparganium eurycarpum	Vallisneria americana	Filamentous algae
0	45.937126	-89.075508	236	Anvil Lake	Vilas	7/28/2015	TWH & RAK	0	1	Sand	Pole	SAMPLED			1						1															1	1	
1	45.937485	-89.075502	235	Anvil Lake	Vilas	7/28/2015	TWH & RAK	1	0			TERRESTRIAL																											
2	45.936403	-89.075005	264	Anvil Lake	Vilas	7/28/2015	TWH & RAK	2	4	Sand	Pole	SAMPLED			1							1			1												1	
3	45.936762	-89.074999	238	Anvil Lake	Vilas	7/28/2015	TWH & RAK	3	10	Muck	Pole	SAMPLED			3							1															2	
4	45.937121	-89.074993	237	Anvil Lake	Vilas	7/28/2015	TWH & RAK	4	9	Muck	Pole	SAMPLED			2			1				1															1	
5	45.937481	-89.074987	234	Anvil Lake	Vilas	7/28/2015	TWH & RAK	5	4	Muck	Pole	SAMPLED			2			1				1															2	
6	45.935680	-89.074502	287	Anvil Lake	Vilas	7/28/2015	TWH & RAK	6	0			TERRESTRIAL																											
7	45.936039	-89.074496	286	Anvil Lake	Vilas	7/28/2015	TWH & RAK	7	6	Sand	Pole	SAMPLED			2			1				1								1							2	
8	45.936399	-89.074490	265	Anvil Lake	Vilas	7/28/2015	TWH & RAK	8	10	Sand	Pole	SAMPLED			3																						3	
9	45.936758	-89.074484	239	Anvil Lake	Vilas	7/28/2015	TWH & RAK	9	12	Muck	Pole	SAMPLED			2			1				2							1									
10	45.937117	-89.074478	232	Anvil Lake	Vilas	7/28/2015	TWH & RAK	10	9	Muck	Pole	SAMPLED			2			1				2															1	
11	45.937477	-89.074472	233	Anvil Lake	Vilas	7/28/2015	TWH & RAK	11	3	Muck	Pole	SAMPLED			1																						1	
12	45.935676	-89.073987	288	Anvil Lake	Vilas	7/28/2015	TWH & RAK	12	4	Sand	Pole	SAMPLED			1					1		1								1							
13	45.936035	-89.073981	285	Anvil Lake	Vilas	7/28/2015	TWH & RAK	13	10	Sand	Pole	SAMPLED			2			1				1															2	
14	45.936394	-89.073975	266	Anvil Lake	Vilas	7/28/2015	TWH & RAK	14	13	Muck	Pole	SAMPLED			3			3				1																
15	45.936754	-89.073969	240	Anvil Lake	Vilas	7/28/2015	TWH & RAK	15	13	Muck	Pole	SAMPLED			2			2																				
16	45.937113	-89.073964	241	Anvil Lake	Vilas	7/28/2015	TWH & RAK	16	3	Sand	Pole	SAMPLED			1											1												
17	45.937472	-89.073958	231	Anvil Lake	Vilas	7/28/2015	TWH & RAK	17	0			TERRESTRIAL																											
18	45.935312	-89.073478	300	Anvil Lake	Vilas	7/28/2015	TWH & RAK	18	0			DOCK																											
19	45.935672	-89.073472	289	Anvil Lake	Vilas	7/28/2015	TWH & RAK	19	8	Sand	Pole	SAMPLED			1			1											1								1	
20	45.936031	-89.073466	284	Anvil Lake	Vilas	7/28/2015	TWH & RAK	20	13	Muck	Pole	SAMPLED			2			1				2																
21	45.936390	-89.073460	267	Anvil Lake	Vilas	7/28/2015	TWH & RAK	21	14	Muck	Pole	SAMPLED			2			2				1																
22	45.936750	-89.073454	263	Anvil Lake	Vilas	7/28/2015	TWH & RAK	22	13	Muck	Pole	SAMPLED			2			1				2																
23	45.937109	-89.073449	242	Anvil Lake	Vilas	7/28/2015	TWH & RAK	23	12	Sand	Pole	SAMPLED			2			1				1							1								1	
24	45.937468	-89.073443	230	Anvil Lake	Vilas	7/28/2015	TWH & RAK	24	6	Sand	Pole	SAMPLED			2			1				1															1	
25	45.937828	-89.073437	206	Anvil Lake	Vilas	7/28/2015	TWH & RAK	25	2	Sand	Pole	SAMPLED			2				1	1			1		1	1										1	
26	45.939265	-89.073413	124	Anvil Lake	Vilas	7/28/2015	TWH & RAK	26	4	Sand	Pole	SAMPLED			1			1		1			1		1											1	
27	45.939624	-89.073407	125	Anvil Lake	Vilas	7/28/2015	TWH & RAK	27	6	Sand	Pole	SAMPLED			2			1				1							1							2	
28	45.939983	-89.073401	126	Anvil Lake	Vilas	7/28/2015	TWH & RAK	28	5	Sand	Pole	SAMPLED			2			1																		2	
29	45.940343	-89.073395	127	Anvil Lake	Vilas	7/28/2015	TWH & RAK	29	4	Sand	Pole	SAMPLED			2			1				1														1	
30	45.940702	-89.073389	128	Anvil Lake	Vilas	7/28/2015	TWH & RAK	30	2	Sand	Pole	SAMPLED			1																						1	
31	45.941061	-89.073383	82	Anvil Lake	Vilas	7/29/2015	DAC & SDF	31	0			TEMPORARY OBSTACLE	boats anchored near shore																										
32	45.935308	-89.072963	299	Anvil Lake	Vilas	7/28/2015	TWH & RAK	32	4	Sand	Pole	SAMPLED			2			1						1	1											2	
33	45.935668	-89.072958	290	Anvil Lake	Vilas	7/28/2015	TWH & RAK	33	10	Sand	Pole	SAMPLED			2			1				1						1	1							2	
34	45.936027	-89.072952	283	Anvil Lake	Vilas	7/28/2015	TWH & RAK	34	14	Muck	Pole	SAMPLED			3			2				1															
35	45.936386	-89.072946	268	Anvil Lake	Vilas	7/28/2015	TWH & RAK	35	16	Muck	Pole	SAMPLED			1			1																				
36	45.936745	-89.072940	262	Anvil Lake	Vilas	7/28/2015	TWH & RAK	36	15	Muck	Pole	SAMPLED			2			2																				1
37	45.937105	-89.072934	243	Anvil Lake	Vilas	7/28/2015	TWH & RAK	37	15	Muck	Pole	SAMPLED			2			2				1																
38	45.937464	-89.072928	229	Anvil Lake	Vilas	7/28/2015	TWH & RAK	38	13	Sand	Pole	SAMPLED			1			1				1							1									
39	45.937823	-89.072922	207	Anvil Lake	Vilas	7/28/2015	TWH & RAK	39	12	Sand	Pole	SAMPLED			2			2											1					1				
40	45.938183	-89.072916	205	Anvil Lake	Vilas	7/28/2015	TWH & RAK	40	10	Muck	Pole	SAMPLED			2			1				2											1					
41	45.938542	-89.072910	182	Anvil Lake	Vilas	7/28/2015	TWH & RAK	41	10	Sand	Pole	SAMPLED			3			3				1															1	
42	45.938901	-89.072904	181	Anvil Lake	Vilas	7/28/2015	TWH & RAK	42	12	Sand	Pole	SAMPLED			2			2				1							1					1			
43	45.939261	-89.072898	123	Anvil Lake	Vilas	7/28/2015	TWH & RAK	43	12	Sand	Pole	SAMPLED			1			1				1															1	
44	45.939620	-89.072892	168	Anvil Lake	Vilas	7/28/2015	TWH & RAK	44	11	Muck	Pole	SAMPLED			2			1				1											1				1	
45	45.939979	-89.072886	150	Anvil Lake	Vilas	7/28/2015	TWH & RAK	45	10	Muck	Pole	SAMPLED			2			2											1					1			
46	45.940339	-89.072880	149	Anvil Lake	Vilas	7/28/2015	TWH & RAK	46	8	Muck	Pole	SAMPLED			3			1				2															2	
47	45.940698	-89.072874	129	Anvil Lake	Vilas	7/28/2015	TWH & RAK	47	6	Muck	Pole	SAMPLED			2			1																			1	
48	45.941057	-89.072868	81	Anvil Lake	Vilas	7/29/2015	DAC & SDF	48	3	Sand	Pole	SAMPLED			1			1																				
49	45.941416	-89.072862	83	Anvil Lake	Vilas	7/29/2015	DAC & SDF	49	1	Sand	Pole	SAMPLED			1					1					1													
50	45.935304	-89.072449	298	Anvil Lake	Vilas	7/28/2015	TWH & RAK	50	4	Sand	Pole	SAMPLED			2				1	1						2		1								1	
51	45.935663	-89.072443	291	Anvil Lake	Vilas	7/28/2015	TWH & RAK	51	11	Sand	Pole	SAMPLED			2			1				1							1					1			
52	45.936023	-89.072437	282	Anvil Lake	Vilas	7/28/2015	TWH & RAK	52	15	Muck	Pole	SAMPLED			2			2				1															
53	45.936382	-89.072431	269	Anvil Lake	Vilas	7/28/2015	TWH & RAK	53	17		Pole	SAMPLED			1			1																				
54	45.936741	-89.072425	261	Anvil Lake	Vilas	7/28/2015	TWH & RAK	54	17		Pole	SAMPLED			2			2																				
55	45.937101	-89.072419	244	Anvil Lake	Vilas	7/28/2015	TWH & RAK	55	16		Rope	SAMPLED			2			2																				
56	45.937460	-89.072413	228	Anvil Lake	Vilas	7/28/2015	TWH & RAK	56	17		Rope	SAMPLED			1			1				1																
57	45.937819	-89.072407	208	Anvil Lake	Vilas	7/28/2015	TWH & RAK	57	17		Rope	SAMPLED			3			3																				
58	45.938178	-89.072401	204	Anvil Lake	Vilas	7/28/2015	TWH & RAK	58	16		Rope	SAMPLED			3			3																				

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	Chara spp.	Eleocharis acicularis	Eleocharis palustris	Elodea nuttallii	Eriocaulon aquaticum	Isoetes spp.	Juncus pelocarpus	Myriophyllum tenellum	Nitella spp.	Potamogeton amplifolius	Potamogeton berchtoldii	Potamogeton epihydrus	Potamogeton gramineus	Potamogeton spirillus	Potamogeton vaseyi	Ranunculus flammula	Sparganium androcladum	Sparganium eurycarpum	Vallisneria americana	Filamentous algae
59	45.938538	-89.072395	183	Anvil Lake	Vilas	7/28/2015	TWH & RAK	59	17		Rope	SAMPLED			2			2																		2	
60	45.938897	-89.072389	180	Anvil Lake	Vilas	7/28/2015	TWH & RAK	60	16		Rope	SAMPLED			3			3			1															
61	45.939256	-89.072383	122	Anvil Lake	Vilas	7/28/2015	TWH & RAK	61	16		Rope	SAMPLED			3			3																			
62	45.939616	-89.072377	167	Anvil Lake	Vilas	7/28/2015	TWH & RAK	62	15	Muck	Pole	SAMPLED			3			3																			
63	45.939975	-89.072371	151	Anvil Lake	Vilas	7/28/2015	TWH & RAK	63	13	Muck	Pole	SAMPLED			3			3			1															
64	45.940334	-89.072365	148	Anvil Lake	Vilas	7/28/2015	TWH & RAK	64	12	Muck	Pole	SAMPLED			2			2			1															
65	45.940694	-89.072359	130	Anvil Lake	Vilas	7/28/2015	TWH & RAK	65	10	Muck	Pole	SAMPLED			3			1			1														2	
66	45.941053	-89.072353	80	Anvil Lake	Vilas	7/29/2015	DAC & SDF	66	6	Sand	Pole	SAMPLED			1			1			1								1						1	
67	45.941412	-89.072347	84	Anvil Lake	Vilas	7/29/2015	DAC & SDF	67	1	Sand	Pole	SAMPLED			0																					
68	45.935300	-89.071934	297	Anvil Lake	Vilas	7/28/2015	TWH & RAK	68	4	Sand	Pole	SAMPLED			1			1	1						1											
69	45.935659	-89.071928	292	Anvil Lake	Vilas	7/28/2015	TWH & RAK	69	12	Sand	Pole	SAMPLED			2			1			2							2				1				
70	45.936018	-89.071922	281	Anvil Lake	Vilas	7/28/2015	TWH & RAK	70	15	Muck	Pole	SAMPLED			2			2																		
71	45.936378	-89.071916	270	Anvil Lake	Vilas	7/28/2015	TWH & RAK	71	19		Rope	SAMPLED			1						1															
72	45.936737	-89.071910	260	Anvil Lake	Vilas	7/28/2015	TWH & RAK	72	19		Rope	SAMPLED			0																					
73	45.937096	-89.071904	245	Anvil Lake	Vilas	7/28/2015	TWH & RAK	73	19		Rope	SAMPLED			1			1			1															
74	45.937456	-89.071898	227	Anvil Lake	Vilas	7/28/2015	TWH & RAK	74	20		Rope	SAMPLED			1			1			1															
75	45.937815	-89.071892	209	Anvil Lake	Vilas	7/28/2015	TWH & RAK	75	21		Rope	SAMPLED			0																					
76	45.938174	-89.071886	203	Anvil Lake	Vilas	7/28/2015	TWH & RAK	76	21		Rope	SAMPLED			0																					
77	45.938534	-89.071880	184	Anvil Lake	Vilas	7/28/2015	TWH & RAK	77	20		Rope	SAMPLED			0																					
78	45.938893	-89.071874	179	Anvil Lake	Vilas	7/28/2015	TWH & RAK	78	20		Rope	SAMPLED			1			1																		
79	45.939252	-89.071868	121	Anvil Lake	Vilas	7/28/2015	TWH & RAK	79	18		Rope	SAMPLED			3			3																		
80	45.939612	-89.071862	166	Anvil Lake	Vilas	7/28/2015	TWH & RAK	80	17		Rope	SAMPLED			1			1																		
81	45.939971	-89.071856	152	Anvil Lake	Vilas	7/28/2015	TWH & RAK	81	16	Muck	Pole	SAMPLED			3			3																		
82	45.940330	-89.071850	147	Anvil Lake	Vilas	7/28/2015	TWH & RAK	82	14	Muck	Pole	SAMPLED			1			1			1															
83	45.940689	-89.071844	131	Anvil Lake	Vilas	7/28/2015	TWH & RAK	83	13	Muck	Pole	SAMPLED			2			2			1															
84	45.941049	-89.071838	79	Anvil Lake	Vilas	7/29/2015	DAC & SDF	84	8	Sand	Pole	SAMPLED			1			1																	1	
85	45.941408	-89.071832	85	Anvil Lake	Vilas	7/29/2015	DAC & SDF	85	6	Sand	Pole	SAMPLED			2			2			1														1	
86	45.941767	-89.071826	108	Anvil Lake	Vilas	7/29/2015	DAC & SDF	86	2	Sand	Pole	SAMPLED			0																					
87	45.942127	-89.071820	109	Anvil Lake	Vilas	7/29/2015	DAC & SDF	87	1	Sand	Pole	SAMPLED								1																
88	45.942845	-89.071808	137	Anvil Lake	Vilas	7/29/2015	DAC & SDF	88	0	Sand	Pole	SAMPLED			0																					
89	45.943205	-89.071802	167	Anvil Lake	Vilas	7/29/2015	DAC & SDF	89	0			SHALLOW																								
90	45.935296	-89.071419	296	Anvil Lake	Vilas	7/28/2015	TWH & RAK	90	3	Rock	Pole	SAMPLED			1																				1	
91	45.935655	-89.071413	293	Anvil Lake	Vilas	7/28/2015	TWH & RAK	91	9	Muck	Pole	SAMPLED			3			1			1														3	
92	45.936014	-89.071407	280	Anvil Lake	Vilas	7/28/2015	TWH & RAK	92	16	Muck	Pole	SAMPLED			2			2			1															
93	45.936374	-89.071401	271	Anvil Lake	Vilas	7/28/2015	TWH & RAK	93	20		Rope	SAMPLED			0																					
94	45.936733	-89.071395	259	Anvil Lake	Vilas	7/28/2015	TWH & RAK	94	22		Rope	SAMPLED			0																					
95	45.937092	-89.071389	246	Anvil Lake	Vilas	7/28/2015	TWH & RAK	95	22		Rope	SAMPLED			0																					
96	45.937452	-89.071383	226	Anvil Lake	Vilas	7/28/2015	TWH & RAK	96	22		Rope	SAMPLED			0																					
97	45.937811	-89.071377	210	Anvil Lake	Vilas	7/28/2015	TWH & RAK	97	23		Rope	SAMPLED			0																					
98	45.938170	-89.071371	202	Anvil Lake	Vilas	7/28/2015	TWH & RAK	98	23		Rope	SAMPLED			0																					
99	45.938529	-89.071365	185	Anvil Lake	Vilas	7/28/2015	TWH & RAK	99	23		Rope	SAMPLED			0																					
100	45.938889	-89.071359	178	Anvil Lake	Vilas	7/28/2015	TWH & RAK	100	22		Rope	SAMPLED			0																					
101	45.939248	-89.071353	120	Anvil Lake	Vilas	7/28/2015	TWH & RAK	101	20		Rope	SAMPLED			1			1																		
102	45.939607	-89.071347	165	Anvil Lake	Vilas	7/28/2015	TWH & RAK	102	18		Rope	SAMPLED			2			2			1															
103	45.939967	-89.071341	153	Anvil Lake	Vilas	7/28/2015	TWH & RAK	103	16		Rope	SAMPLED			3			3			1															
104	45.940326	-89.071335	146	Anvil Lake	Vilas	7/28/2015	TWH & RAK	104	17		Pole	SAMPLED			2			2																		
105	45.940685	-89.071329	132	Anvil Lake	Vilas	7/28/2015	TWH & RAK	105	15	Muck	Pole	SAMPLED			1			1																		1
106	45.941045	-89.071323	78	Anvil Lake	Vilas	7/29/2015	DAC & SDF	106	11	Sand	Pole	SAMPLED			2						1					2								2	
107	45.941404	-89.071317	86	Anvil Lake	Vilas	7/29/2015	DAC & SDF	107	10	Sand	Pole	SAMPLED			1			1																	1	
108	45.941763	-89.071311	107	Anvil Lake	Vilas	7/29/2015	DAC & SDF	108	6	Sand	Pole	SAMPLED			1			1																	1	
109	45.942122	-89.071305	110	Anvil Lake	Vilas	7/29/2015	DAC & SDF	109	5	Sand	Pole	SAMPLED			2			2											1							
110	45.942482	-89.071299	136	Anvil Lake	Vilas	7/29/2015	DAC & SDF	110	4	Sand	Pole	SAMPLED			2			2																		
111	45.942841	-89.071293	138	Anvil Lake	Vilas	7/29/2015	DAC & SDF	111	5	Sand	Pole	SAMPLED			1			1																	1	
112	45.943200	-89.071287	166	Anvil Lake	Vilas	7/29/2015	DAC & SDF	112	4	Sand	Pole	SAMPLED			1			1																		
113	45.943560	-89.071281	168	Anvil Lake	Vilas	7/29/2015	DAC & SDF	113	3	Sand	Pole	SAMPLED			1																				1	
114	45.943919	-89.071275	197	Anvil Lake	Vilas	7/29/2015	DAC & SDF	114	2	Sand	Pole	SAMPLED			0																					
115	45.944278	-89.071269	199	Anvil Lake	Vilas	7/29/2015	DAC & SDF	115	1	Sand	Pole	SAMPLED			0																					
116	45.944638	-89.071263	231	Anvil Lake	Vilas	7/29/2015	DAC & SDF	116	0			SHALLOW																								
117	45.935651	-89.070898	294	Anvil Lake	Vilas	7/28/2015	TWH & RAK	117	6	Sand	Pole	SAMPLED			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	Chara spp.	Elatine minima	Eleocharis acicularis	Eleocharis palustris	Elodea nuttallii	Eriocaulon aquaticum	Isoetes spp.	Juncus pelocarpus	Myriophyllum tenellum	Nitella spp.	Potamogeton amplifolius	Potamogeton berchtoldii	Potamogeton epihydrus	Potamogeton gramineus	Potamogeton spirillus	Potamogeton vaseyi	Ranunculus flammula	Sparganium androcladum	Sparganium eurycarpum	Vallisneria americana	Filamentous algae
118	45.936010	-89.070892	279	Anvil Lake	Vilas	7/28/2015	TWH & RAK	118	13	Sand	Pole	SAMPLED			2			1				1							1				1						
119	45.936369	-89.070886	272	Anvil Lake	Vilas	7/28/2015	TWH & RAK	119	19		Rope	SAMPLED			0																							
120	45.936729	-89.070880	258	Anvil Lake	Vilas	7/28/2015	TWH & RAK	120	23		Rope	SAMPLED			0																							
121	45.937088	-89.070874	247	Anvil Lake	Vilas	7/28/2015	TWH & RAK	121	24		Rope	SAMPLED			0																							
122	45.937447	-89.070868	225	Anvil Lake	Vilas	7/28/2015	TWH & RAK	122	24		Rope	SAMPLED			0																							
123	45.937807	-89.070862	211	Anvil Lake	Vilas	7/28/2015	TWH & RAK	123	24		Rope	SAMPLED			0																							
124	45.938166	-89.070856	201	Anvil Lake	Vilas	7/28/2015	TWH & RAK	124	24		Rope	SAMPLED			0																							
125	45.938525	-89.070850	186	Anvil Lake	Vilas	7/28/2015	TWH & RAK	125	24		Rope	SAMPLED			0																							
126	45.938885	-89.070844	177	Anvil Lake	Vilas	7/28/2015	TWH & RAK	126	24		Rope	SAMPLED			0																							
127	45.939244	-89.070838	119	Anvil Lake	Vilas	7/28/2015	TWH & RAK	127	22		Rope	SAMPLED			0																							
128	45.939603	-89.070832	164	Anvil Lake	Vilas	7/28/2015	TWH & RAK	128	21		Rope	SAMPLED			0																							
129	45.939962	-89.070826	154	Anvil Lake	Vilas	7/28/2015	TWH & RAK	129	20		Rope	SAMPLED			0																							
130	45.940322	-89.070820	145	Anvil Lake	Vilas	7/28/2015	TWH & RAK	130	17		Rope	SAMPLED			1			1																				
131	45.940681	-89.070814	133	Anvil Lake	Vilas	7/28/2015	TWH & RAK	131	16		Rope	SAMPLED			2			2				1																
132	45.941040	-89.070808	77	Anvil Lake	Vilas	7/29/2015	DAC & SDF	132	14		Rope	SAMPLED			3							1					3										
133	45.941400	-89.070802	87	Anvil Lake	Vilas	7/29/2015	DAC & SDF	133	12	Sand	Pole	SAMPLED			1							1					1		1								
134	45.941759	-89.070796	106	Anvil Lake	Vilas	7/29/2015	DAC & SDF	134	11	Sand	Pole	SAMPLED			2							1					2										2
135	45.942118	-89.070790	111	Anvil Lake	Vilas	7/29/2015	DAC & SDF	135	9	Sand	Pole	SAMPLED			2			2				1											1				
136	45.942478	-89.070784	135	Anvil Lake	Vilas	7/29/2015	DAC & SDF	136	9	Sand	Pole	SAMPLED			1			1												1							1
137	45.942837	-89.070778	139	Anvil Lake	Vilas	7/29/2015	DAC & SDF	137	11	Sand	Pole	SAMPLED			1			1				1															
138	45.943196	-89.070772	165	Anvil Lake	Vilas	7/29/2015	DAC & SDF	138	8	Sand	Pole	SAMPLED			1			1																			1
139	45.943556	-89.070766	169	Anvil Lake	Vilas	7/29/2015	DAC & SDF	139	8	Sand	Pole	SAMPLED			2			1																			1
140	45.943915	-89.070760	196	Anvil Lake	Vilas	7/29/2015	DAC & SDF	140	6	Sand	Pole	SAMPLED			2			2																			1
141	45.944274	-89.070754	198	Anvil Lake	Vilas	7/29/2015	DAC & SDF	141	4	Sand	Pole	SAMPLED			1			1								1											1
142	45.944633	-89.070748	230	Anvil Lake	Vilas	7/29/2015	DAC & SDF	142	3	Sand	Pole	SAMPLED			1			1																			
143	45.944993	-89.070742	232	Anvil Lake	Vilas	7/29/2015	DAC & SDF	143	0			SHALLOW																										
144	45.935647	-89.070383	295	Anvil Lake	Vilas	7/28/2015	TWH & RAK	144	1	Sand	Pole	SAMPLED			1						1				1												
145	45.936006	-89.070377	278	Anvil Lake	Vilas	7/28/2015	TWH & RAK	145	8	Sand	Pole	SAMPLED			2			2				1						1					1				
146	45.936365	-89.070371	273	Anvil Lake	Vilas	7/28/2015	TWH & RAK	146	15	Sand	Pole	SAMPLED			1			1				1							1								
147	45.936725	-89.070365	257	Anvil Lake	Vilas	7/28/2015	TWH & RAK	147	22		Rope	SAMPLED			0																							
148	45.937084	-89.070359	248	Anvil Lake	Vilas	7/28/2015	TWH & RAK	148	24		Rope	SAMPLED			0																							
149	45.937443	-89.070353	224	Anvil Lake	Vilas	7/28/2015	TWH & RAK	149	25		Rope	SAMPLED			0																							
150	45.937802	-89.070347	212	Anvil Lake	Vilas	7/28/2015	TWH & RAK	150	25		Rope	SAMPLED			0																							
151	45.938162	-89.070341	200	Anvil Lake	Vilas	7/28/2015	TWH & RAK	151	25		Rope	SAMPLED			0																							
152	45.938521	-89.070335	187	Anvil Lake	Vilas	7/28/2015	TWH & RAK	152	25		Rope	SAMPLED			0																							
153	45.938880	-89.070329	176	Anvil Lake	Vilas	7/28/2015	TWH & RAK	153	25		Rope	SAMPLED			0																							
154	45.939240	-89.070323	118	Anvil Lake	Vilas	7/28/2015	TWH & RAK	154	24		Rope	SAMPLED			0																							
155	45.939599	-89.070317	163	Anvil Lake	Vilas	7/28/2015	TWH & RAK	155	23		Rope	SAMPLED			0																							
156	45.939958	-89.070311	155	Anvil Lake	Vilas	7/28/2015	TWH & RAK	156	22		Rope	SAMPLED			0																							
157	45.940318	-89.070305	144	Anvil Lake	Vilas	7/28/2015	TWH & RAK	157	18		Rope	SAMPLED			2			2				1															
158	45.940677	-89.070299	134	Anvil Lake	Vilas	7/28/2015	TWH & RAK	158	18		Rope	SAMPLED			0																							
159	45.941036	-89.070293	76	Anvil Lake	Vilas	7/29/2015	DAC & SDF	159	17		Rope	SAMPLED			2													2										
160	45.941395	-89.070287	88	Anvil Lake	Vilas	7/29/2015	DAC & SDF	160	16	Sand	Pole	SAMPLED			0																							
161	45.941755	-89.070281	105	Anvil Lake	Vilas	7/29/2015	DAC & SDF	161	17		Rope	SAMPLED			3													3										
162	45.942114	-89.070275	112	Anvil Lake	Vilas	7/29/2015	DAC & SDF	162	17		Rope	SAMPLED			3													3										
163	45.942473	-89.070269	134	Anvil Lake	Vilas	7/29/2015	DAC & SDF	163	16		Rope	SAMPLED			3							1						2										
164	45.942833	-89.070263	140	Anvil Lake	Vilas	7/29/2015	DAC & SDF	164	17		Rope	SAMPLED			3													3										
165	45.943192	-89.070257	164	Anvil Lake	Vilas	7/29/2015	DAC & SDF	165	17		Rope	SAMPLED			3							1						3										
166	45.943551	-89.070251	170	Anvil Lake	Vilas	7/29/2015	DAC & SDF	166	15	Sand	Pole	SAMPLED			2							1						2										
167	45.943911	-89.070245	195	Anvil Lake	Vilas	7/29/2015	DAC & SDF	167	12	Sand	Pole	SAMPLED			2							1						2										
168	45.944270	-89.070239	200	Anvil Lake	Vilas	7/29/2015	DAC & SDF	168	8	Sand	Pole	SAMPLED			3			3																			2
169	45.944629	-89.070233	229	Anvil Lake	Vilas	7/29/2015	DAC & SDF	169	6	Sand	Pole	SAMPLED			1			1																1				1
170	45.944989	-89.070227	233	Anvil Lake	Vilas	7/29/2015	DAC & SDF	170	4	Sand	Pole	SAMPLED			2			2																			
171	45.945348	-89.070221	270	Anvil Lake	Vilas	7/29/2015	DAC & SDF	171	0			SHALLOW																										
172	45.936002	-89.069862	277	Anvil Lake	Vilas	7/28/2015	TWH & RAK	172	0			TERRESTRIAL																										
173	45.936361	-89.069856	274	Anvil Lake	Vilas	7/28/2015	TWH & RAK	173	9	Sand	Pole	SAMPLED			2			2																			
174	45.936720	-89.069850	256	Anvil Lake	Vilas	7/28/2015	TWH & RAK	174	17		Rope	SAMPLED			0																							
175	45.937080	-89.069844	249	Anvil Lake	Vilas	7/28/2015	TWH & RAK	175	23		Rope	SAMPLED			0																							
176	45.937439	-89.069838	223	Anvil Lake	Vilas	7/28/2015	TWH & RAK	176	25		Rope	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	Chara spp.	Elatine minima	Eleocharis acicularis	Eleocharis palustris	Elodea nuttallii	Eriocaulon aquaticum	Isoetes spp.	Juncus pelocarpus	Myriophyllum tenellum	Nitella spp.	Potamogeton amplifolius	Potamogeton berchtoldii	Potamogeton epihydrus	Potamogeton gramineus	Potamogeton spirillus	Potamogeton vaseyi	Ranunculus flammula	Sparganium androcladum	Sparganium eurycarpum	Vallisneria americana	Filamentous algae
177	45.937798	-89.069832	213	Anvil Lake	Vilas	7/28/2015	TWH & RAK	177	26		Rope	SAMPLED			0																							
178	45.938158	-89.069826	199	Anvil Lake	Vilas	7/28/2015	TWH & RAK	178	26		Rope	SAMPLED			0																							
179	45.938517	-89.069820	188	Anvil Lake	Vilas	7/28/2015	TWH & RAK	179	26		Rope	SAMPLED			0																							
180	45.938876	-89.069814	175	Anvil Lake	Vilas	7/28/2015	TWH & RAK	180	26		Rope	SAMPLED			0																							
181	45.939235	-89.069808	117	Anvil Lake	Vilas	7/28/2015	TWH & RAK	181	25		Rope	SAMPLED			0																							
182	45.939595	-89.069802	162	Anvil Lake	Vilas	7/28/2015	TWH & RAK	182	25		Rope	SAMPLED			0																							
183	45.939954	-89.069796	156	Anvil Lake	Vilas	7/28/2015	TWH & RAK	183	24		Rope	SAMPLED			0																							
184	45.940313	-89.069790	143	Anvil Lake	Vilas	7/28/2015	TWH & RAK	184	22		Rope	SAMPLED			0																							
185	45.940673	-89.069784	135	Anvil Lake	Vilas	7/28/2015	TWH & RAK	185	20		Rope	SAMPLED			1			1																			
186	45.941032	-89.069778	75	Anvil Lake	Vilas	7/29/2015	DAC & SDF	186	19		Rope	SAMPLED			0																							
187	45.941391	-89.069772	89	Anvil Lake	Vilas	7/29/2015	DAC & SDF	187	19		Rope	SAMPLED			0																							
188	45.941751	-89.069766	104	Anvil Lake	Vilas	7/29/2015	DAC & SDF	188	19		Rope	SAMPLED			1												1										
189	45.942110	-89.069760	113	Anvil Lake	Vilas	7/29/2015	DAC & SDF	189	19		Rope	SAMPLED			0																							
190	45.942469	-89.069754	133	Anvil Lake	Vilas	7/29/2015	DAC & SDF	190	19		Rope	SAMPLED			2												2										
191	45.942829	-89.069748	141	Anvil Lake	Vilas	7/29/2015	DAC & SDF	191	19		Rope	SAMPLED			2												2										
192	45.943188	-89.069742	163	Anvil Lake	Vilas	7/29/2015	DAC & SDF	192	19		Rope	SAMPLED			3							1					3										
193	45.943547	-89.069736	171	Anvil Lake	Vilas	7/29/2015	DAC & SDF	193	18		Rope	SAMPLED			3												3										
194	45.943906	-89.069730	194	Anvil Lake	Vilas	7/29/2015	DAC & SDF	194	18		Rope	SAMPLED			1												1										
195	45.944266	-89.069723	201	Anvil Lake	Vilas	7/29/2015	DAC & SDF	195	17		Rope	SAMPLED			3												3										
196	45.944625	-89.069717	228	Anvil Lake	Vilas	7/29/2015	DAC & SDF	196	9	Sand	Pole	SAMPLED			1			1																		1	
197	45.944984	-89.069711	234	Anvil Lake	Vilas	7/29/2015	DAC & SDF	197	5	Sand	Pole	SAMPLED			2			2																		1	
198	45.945344	-89.069705	269	Anvil Lake	Vilas	7/29/2015	DAC & SDF	198	2	Sand	Pole	SAMPLED			0																							
199	45.945703	-89.069699	271	Anvil Lake	Vilas	7/29/2015	DAC & SDF	199	0			TERRESTRIAL																										
200	45.936357	-89.069341	275	Anvil Lake	Vilas	7/28/2015	TWH & RAK	200	0			DOCK																										
201	45.936716	-89.069335	255	Anvil Lake	Vilas	7/28/2015	TWH & RAK	201	13	Sand	Pole	SAMPLED			2			1				1							1				1				
202	45.937075	-89.069329	250	Anvil Lake	Vilas	7/28/2015	TWH & RAK	202	20		Rope	SAMPLED			1							1															
203	45.937435	-89.069323	222	Anvil Lake	Vilas	7/28/2015	TWH & RAK	203	24		Rope	SAMPLED			0																							
204	45.937794	-89.069317	214	Anvil Lake	Vilas	7/28/2015	TWH & RAK	204	26		Rope	SAMPLED			0																							
205	45.938153	-89.069311	198	Anvil Lake	Vilas	7/28/2015	TWH & RAK	205	27		Rope	SAMPLED			0																							
206	45.938513	-89.069305	189	Anvil Lake	Vilas	7/28/2015	TWH & RAK	206	27		Rope	SAMPLED			1															1								
207	45.938872	-89.069299	174	Anvil Lake	Vilas	7/28/2015	TWH & RAK	207	27		Rope	SAMPLED			0																							
208	45.939231	-89.069293	116	Anvil Lake	Vilas	7/28/2015	TWH & RAK	208	26		Rope	SAMPLED			0																							
209	45.939591	-89.069287	161	Anvil Lake	Vilas	7/28/2015	TWH & RAK	209	26		Rope	SAMPLED			0																							
210	45.939950	-89.069281	157	Anvil Lake	Vilas	7/28/2015	TWH & RAK	210	25		Rope	SAMPLED			0																							
211	45.940309	-89.069275	142	Anvil Lake	Vilas	7/28/2015	TWH & RAK	211	24		Rope	SAMPLED			0																							
212	45.940669	-89.069269	136	Anvil Lake	Vilas	7/28/2015	TWH & RAK	212	23		Rope	SAMPLED			0																							
213	45.941028	-89.069263	74	Anvil Lake	Vilas	7/29/2015	DAC & SDF	213	21		Rope	SAMPLED			0																							
214	45.941387	-89.069257	90	Anvil Lake	Vilas	7/29/2015	DAC & SDF	214	20		Rope	SAMPLED			0																							
215	45.941746	-89.069251	103	Anvil Lake	Vilas	7/29/2015	DAC & SDF	215	20		Rope	SAMPLED			0																							
216	45.942106	-89.069245	114	Anvil Lake	Vilas	7/29/2015	DAC & SDF	216	21		Rope	SAMPLED			0																							
217	45.942465	-89.069239	132	Anvil Lake	Vilas	7/29/2015	DAC & SDF	217	21		Rope	SAMPLED			0																							
218	45.942824	-89.069233	142	Anvil Lake	Vilas	7/29/2015	DAC & SDF	218	21		Rope	SAMPLED			0																							
219	45.943184	-89.069226	162	Anvil Lake	Vilas	7/29/2015	DAC & SDF	219	20		Rope	SAMPLED			1												1										
220	45.943543	-89.06922	172	Anvil Lake	Vilas	7/29/2015	DAC & SDF	220	17		Rope	SAMPLED			0																							
221	45.943902	-89.069214	193	Anvil Lake	Vilas	7/29/2015	DAC & SDF	221	20		Rope	SAMPLED			1												1										
222	45.944262	-89.069208	202	Anvil Lake	Vilas	7/29/2015	DAC & SDF	222	20		Rope	SAMPLED			2							1					2										
223	45.944621	-89.069202	227	Anvil Lake	Vilas	7/29/2015	DAC & SDF	223	12	Sand	Pole	SAMPLED			2			2									1									2	
224	45.94498	-89.069196	235	Anvil Lake	Vilas	7/29/2015	DAC & SDF	224	8	Sand	Pole	SAMPLED			2			2																		1	
225	45.945339	-89.06919	268	Anvil Lake	Vilas	7/29/2015	DAC & SDF	225	4	Sand	Pole	SAMPLED			1			1								1			1							1	
226	45.945699	-89.069184	272	Anvil Lake	Vilas	7/29/2015	DAC & SDF	226	0			SHALLOW																										
227	45.936353	-89.068826	276	Anvil Lake	Vilas	7/28/2015	TWH & RAK	227	0			TERRESTRIAL																										
228	45.936712	-89.06882	253	Anvil Lake	Vilas	7/28/2015	TWH & RAK	228	5	Sand	Pole	SAMPLED			1							1														1	
229	45.937071	-89.068814	251	Anvil Lake	Vilas	7/28/2015	TWH & RAK	229	15	Sand	Pole	SAMPLED			2			1											1				1				
230	45.937431	-89.068808	221	Anvil Lake	Vilas	7/28/2015	TWH & RAK	230	20		Rope	SAMPLED			0																							
231	45.93779	-89.068802	215	Anvil Lake	Vilas	7/28/2015	TWH & RAK	231	25		Rope	SAMPLED			0																							
232	45.938149	-89.068796	197	Anvil Lake	Vilas	7/28/2015	TWH & RAK	232	26		Rope	SAMPLED			0																							
233	45.938508	-89.06879	190	Anvil Lake	Vilas	7/28/2015	TWH & RAK	233	27		Rope	SAMPLED			0																							
234	45.938868	-89.068784	173	Anvil Lake	Vilas	7/28/2015	TWH & RAK	234	27		Rope	SAMPLED			0																							
235	45.939227	-89.068778	115	Anvil Lake	Vilas	7/28/2015	TWH & RAK	235	27		Rope	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	Chara spp.	Elatine minima	Eleocharis acicularis	Eleocharis palustris	Elodea nuttallii	Eriocaulon aquaticum	Isoetes spp.	Juncus pelocarpus	Myriophyllum tenellum	Nitella spp.	Potamogeton amplifolius	Potamogeton berchtoldii	Potamogeton epihydrus	Potamogeton gramineus	Potamogeton spirillus	Potamogeton vaseyi	Ranunculus flammula	Sparganium androcladum	Sparganium eurycarpum	Vallisneria americana	Filamentous algae
236	45.939586	-89.068772	160	Anvil Lake	Vilas	7/28/2015	TWH & RAK	236	27		Rope	SAMPLED			0																							
237	45.939946	-89.068766	158	Anvil Lake	Vilas	7/28/2015	TWH & RAK	237	27		Rope	SAMPLED			0																							
238	45.940305	-89.06876	141	Anvil Lake	Vilas	7/28/2015	TWH & RAK	238	26		Rope	SAMPLED			0																							
239	45.940664	-89.068754	137	Anvil Lake	Vilas	7/28/2015	TWH & RAK	239	25		Rope	SAMPLED			0																							
240	45.941024	-89.068748	73	Anvil Lake	Vilas	7/29/2015	DAC & SDF	240	23		Rope	SAMPLED			0																							
241	45.941383	-89.068742	91	Anvil Lake	Vilas	7/29/2015	DAC & SDF	241	22		Rope	SAMPLED			0																							
242	45.941742	-89.068736	102	Anvil Lake	Vilas	7/29/2015	DAC & SDF	242	21		Rope	SAMPLED			0																							
243	45.942102	-89.06873	115	Anvil Lake	Vilas	7/29/2015	DAC & SDF	243	22		Rope	SAMPLED			1							1															
244	45.942461	-89.068724	131	Anvil Lake	Vilas	7/29/2015	DAC & SDF	244	22		Rope	SAMPLED			0																							
245	45.94282	-89.068717	143	Anvil Lake	Vilas	7/29/2015	DAC & SDF	245	22		Rope	SAMPLED			0																							
246	45.943179	-89.068711	161	Anvil Lake	Vilas	7/29/2015	DAC & SDF	246	21		Rope	SAMPLED			0																							
247	45.943539	-89.068705	173	Anvil Lake	Vilas	7/29/2015	DAC & SDF	247	21		Rope	SAMPLED			0																							
248	45.943898	-89.068699	192	Anvil Lake	Vilas	7/29/2015	DAC & SDF	248	22		Rope	SAMPLED			1							1															
249	45.944257	-89.068693	203	Anvil Lake	Vilas	7/29/2015	DAC & SDF	249	21		Rope	SAMPLED			0																							
250	45.944617	-89.068687	226	Anvil Lake	Vilas	7/29/2015	DAC & SDF	250	17		Rope	SAMPLED			1												1										
251	45.944976	-89.068681	236	Anvil Lake	Vilas	7/29/2015	DAC & SDF	251	10	Sand	Pole	SAMPLED			1							1					1									
252	45.945335	-89.068675	267	Anvil Lake	Vilas	7/29/2015	DAC & SDF	252	6	Sand	Pole	SAMPLED			1			1																			
253	45.945695	-89.068669	273	Anvil Lake	Vilas	7/29/2015	DAC & SDF	253	0			DOCK																									
254	45.936708	-89.068305	254	Anvil Lake	Vilas	7/28/2015	TWH & RAK	254	0			TERRESTRIAL																									
255	45.937067	-89.068299	252	Anvil Lake	Vilas	7/28/2015	TWH & RAK	255	5	Sand	Pole	SAMPLED			1			1				1		1												1
256	45.937426	-89.068293	220	Anvil Lake	Vilas	7/28/2015	TWH & RAK	256	12	Sand	Pole	SAMPLED			2			1				2							1							
257	45.937786	-89.068287	216	Anvil Lake	Vilas	7/28/2015	TWH & RAK	257	17		Rope	SAMPLED			2			2																			
258	45.938145	-89.068281	196	Anvil Lake	Vilas	7/28/2015	TWH & RAK	258	22		Rope	SAMPLED			0																							
259	45.938504	-89.068275	191	Anvil Lake	Vilas	7/28/2015	TWH & RAK	259	26		Rope	SAMPLED			0																							
260	45.938864	-89.068269	172	Anvil Lake	Vilas	7/28/2015	TWH & RAK	260	27		Rope	SAMPLED			0																							
261	45.939223	-89.068263	169	Anvil Lake	Vilas	7/28/2015	TWH & RAK	261	28			DEEP																									
262	45.939582	-89.068257	114	Anvil Lake	Vilas	7/28/2015	TWH & RAK	262	28			DEEP																									
263	45.939942	-89.068251	159	Anvil Lake	Vilas	7/28/2015	TWH & RAK	263	28			DEEP																									
264	45.940301	-89.068245	140	Anvil Lake	Vilas	7/28/2015	TWH & RAK	264	27		Rope	SAMPLED			0																							
265	45.94066	-89.068239	138	Anvil Lake	Vilas	7/28/2015	TWH & RAK	265	27		Rope	SAMPLED			0																							
266	45.941019	-89.068233	72	Anvil Lake	Vilas	7/29/2015	DAC & SDF	266	26		Rope	SAMPLED			0																							
267	45.941379	-89.068227	92	Anvil Lake	Vilas	7/29/2015	DAC & SDF	267	25		Rope	SAMPLED			0																							
268	45.941738	-89.068221	101	Anvil Lake	Vilas	7/29/2015	DAC & SDF	268	24		Rope	SAMPLED			0																							
269	45.942097	-89.068214	116	Anvil Lake	Vilas	7/29/2015	DAC & SDF	269	23		Rope	SAMPLED			0																							
270	45.942457	-89.068208	130	Anvil Lake	Vilas	7/29/2015	DAC & SDF	270	22		Rope	SAMPLED			0																							
271	45.942816	-89.068202	144	Anvil Lake	Vilas	7/29/2015	DAC & SDF	271	24		Rope	SAMPLED			0																							
272	45.943175	-89.068196	160	Anvil Lake	Vilas	7/29/2015	DAC & SDF	272	23		Pole	SAMPLED			0																							
273	45.943535	-89.06819	174	Anvil Lake	Vilas	7/29/2015	DAC & SDF	273	24		Rope	SAMPLED			0																							
274	45.943894	-89.068184	191	Anvil Lake	Vilas	7/29/2015	DAC & SDF	274	24		Rope	SAMPLED			0																							
275	45.944253	-89.068178	204	Anvil Lake	Vilas	7/29/2015	DAC & SDF	275	22		Rope	SAMPLED			0																							
276	45.944612	-89.068172	225	Anvil Lake	Vilas	7/29/2015	DAC & SDF	276	20		Rope	SAMPLED			1													1									
277	45.944972	-89.068166	237	Anvil Lake	Vilas	7/29/2015	DAC & SDF	277	15	Sand	Pole	SAMPLED			2													2									
278	45.945331	-89.06816	266	Anvil Lake	Vilas	7/29/2015	DAC & SDF	278	8	Sand	Pole	SAMPLED			1			1																			1
279	45.94569	-89.068154	274	Anvil Lake	Vilas	7/29/2015	DAC & SDF	279	2	Sand	Pole	SAMPLED			0																							
280	45.937063	-89.067784	219	Anvil Lake	Vilas	7/28/2015	TWH & RAK	280	0			TERRESTRIAL																									
281	45.937422	-89.067778	218	Anvil Lake	Vilas	7/28/2015	TWH & RAK	281	2	Sand	Pole	SAMPLED			1				1							1											
282	45.937781	-89.067772	217	Anvil Lake	Vilas	7/28/2015	TWH & RAK	282	6	Sand	Pole	SAMPLED			1														1								
283	45.938141	-89.067766	195	Anvil Lake	Vilas	7/28/2015	TWH & RAK	283	13	Sand	Pole	SAMPLED			1			1				1															
284	45.9385	-89.06776	192	Anvil Lake	Vilas	7/28/2015	TWH & RAK	284	20		Rope	SAMPLED			1			1																			
285	45.938859	-89.067754	171	Anvil Lake	Vilas	7/28/2015	TWH & RAK	285	23		Rope	SAMPLED			1			1																			
286	45.939219	-89.067748	113	Anvil Lake	Vilas	7/28/2015	TWH & RAK	286	27		Rope	SAMPLED			0																							
287	45.939578	-89.067742	108	Anvil Lake	Vilas	7/28/2015	TWH & RAK	287	28			DEEP																									
288	45.939937	-89.067736	106	Anvil Lake	Vilas	7/28/2015	TWH & RAK	288	29			DEEP																									
289	45.940297	-89.06773	107	Anvil Lake	Vilas	7/28/2015	TWH & RAK	289	28			DEEP																									
290	45.940656	-89.067724	139	Anvil Lake	Vilas	7/28/2015	TWH & RAK	290	28			DEEP																									
291	45.941015	-89.067718	71	Anvil Lake	Vilas	7/29/2015	DAC & SDF	291	27		Rope	SAMPLED			0																							
292	45.941375	-89.067712	93	Anvil Lake	Vilas	7/29/2015	DAC & SDF	292	27		Rope	SAMPLED			0																							
293	45.941734	-89.067706	100	Anvil Lake	Vilas	7/29/2015	DAC & SDF	293	26		Rope	SAMPLED			0																							
294	45.942093	-89.067699	117	Anvil Lake	Vilas	7/29/2015	DAC & SDF	294	25		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	Chara spp.	Elatine minima	Eleocharis acicularis	Eleocharis palustris	Elodea nuttallii	Eriocaulon aquaticum	Isoetes spp.	Juncus pelocarpus	Myriophyllum tenellum	Nitella spp.	Potamogeton amplifolius	Potamogeton berchtoldii	Potamogeton epihydrus	Potamogeton gramineus	Potamogeton spirillus	Potamogeton vaseyi	Ranunculus flammula	Sparganium androcladum	Sparganium eurycarpum	Vallisneria americana	Filamentous algae
295	45.942452	-89.067693	129	Anvil Lake	Vilas	7/29/2015	DAC & SDF	295	24		Rope	SAMPLED			0																							
296	45.942812	-89.067687	145	Anvil Lake	Vilas	7/29/2015	DAC & SDF	296	24		Rope	SAMPLED			0																							
297	45.943171	-89.067681	159	Anvil Lake	Vilas	7/29/2015	DAC & SDF	297	24		Rope	SAMPLED			0																							
298	45.94353	-89.067675	175	Anvil Lake	Vilas	7/29/2015	DAC & SDF	298	26		Rope	SAMPLED			0																							
299	45.94389	-89.067669	190	Anvil Lake	Vilas	7/29/2015	DAC & SDF	299	25		Rope	SAMPLED			0																							
300	45.944249	-89.067663	205	Anvil Lake	Vilas	7/29/2015	DAC & SDF	300	25		Rope	SAMPLED			0																							
301	45.944608	-89.067657	224	Anvil Lake	Vilas	7/29/2015	DAC & SDF	301	20		Rope	SAMPLED			0																							
302	45.944968	-89.067651	238	Anvil Lake	Vilas	7/29/2015	DAC & SDF	302	18		Rope	SAMPLED			3												3										
303	45.945327	-89.067645	265	Anvil Lake	Vilas	7/29/2015	DAC & SDF	303	9	Sand	Pole	SAMPLED			2			2				1														1	
304	45.945686	-89.067639	275	Anvil Lake	Vilas	7/29/2015	DAC & SDF	304	3	Sand	Pole	SAMPLED			1					1						1											
305	45.938137	-89.067251	194	Anvil Lake	Vilas	7/28/2015	TWH & RAK	305	0			TERRESTRIAL																										
306	45.938496	-89.067245	193	Anvil Lake	Vilas	7/28/2015	TWH & RAK	306	5	Sand	Pole	SAMPLED			1				1	1				1													1	
307	45.938855	-89.067239	170	Anvil Lake	Vilas	7/28/2015	TWH & RAK	307	7	Rock	Pole	SAMPLED			1			1		1		1														1	
308	45.939214	-89.067233	112	Anvil Lake	Vilas	7/28/2015	TWH & RAK	308	20		Rope	SAMPLED			0																							
309	45.939574	-89.067227	109	Anvil Lake	Vilas	7/28/2015	TWH & RAK	309	23		Rope	SAMPLED			0																							
310	45.939933	-89.067221	105	Anvil Lake	Vilas	7/28/2015	TWH & RAK	310	27		Rope	SAMPLED			0																							
311	45.940292	-89.067215	97	Anvil Lake	Vilas	7/28/2015	TWH & RAK	311	29			DEEP																										
312	45.940652	-89.067209	68	Anvil Lake	Vilas	7/29/2015	DAC & SDF	312	30			DEEP																										
313	45.941011	-89.067203	70	Anvil Lake	Vilas	7/29/2015	DAC & SDF	313	29		Rope	SAMPLED			0																							
314	45.94137	-89.067197	94	Anvil Lake	Vilas	7/29/2015	DAC & SDF	314	29		Rope	SAMPLED			0																							
315	45.94173	-89.06719	99	Anvil Lake	Vilas	7/29/2015	DAC & SDF	315	27		Rope	SAMPLED			0																							
316	45.942089	-89.067184	118	Anvil Lake	Vilas	7/29/2015	DAC & SDF	316	27		Rope	SAMPLED			0																							
317	45.942448	-89.067178	128	Anvil Lake	Vilas	7/29/2015	DAC & SDF	317	27		Rope	SAMPLED			0																							
318	45.942808	-89.067172	146	Anvil Lake	Vilas	7/29/2015	DAC & SDF	318	27		Rope	SAMPLED			0																							
319	45.943167	-89.067166	158	Anvil Lake	Vilas	7/29/2015	DAC & SDF	319	27		Rope	SAMPLED			0																							
320	45.943526	-89.06716	176	Anvil Lake	Vilas	7/29/2015	DAC & SDF	320	27		Rope	SAMPLED			0																							
321	45.943885	-89.067154	189	Anvil Lake	Vilas	7/29/2015	DAC & SDF	321	26		Rope	SAMPLED			0																							
322	45.944245	-89.067148	206	Anvil Lake	Vilas	7/29/2015	DAC & SDF	322	26		Rope	SAMPLED			0																							
323	45.944604	-89.067142	223	Anvil Lake	Vilas	7/29/2015	DAC & SDF	323	24		Rope	SAMPLED			0																							
324	45.944963	-89.067136	239	Anvil Lake	Vilas	7/29/2015	DAC & SDF	324	19		Rope	SAMPLED			0																							
325	45.945323	-89.06713	264	Anvil Lake	Vilas	7/29/2015	DAC & SDF	325	12	Sand	Pole	SAMPLED			2							1					2										
326	45.945682	-89.067124	276	Anvil Lake	Vilas	7/29/2015	DAC & SDF	326	6	Sand	Pole	SAMPLED			2			1																		1	
327	45.946041	-89.067118	294	Anvil Lake	Vilas	7/29/2015	DAC & SDF	327	0			TERRESTRIAL																										
328	45.93921	-89.066718	111	Anvil Lake	Vilas	7/28/2015	TWH & RAK	328	0			TERRESTRIAL																										
329	45.93957	-89.066712	110	Anvil Lake	Vilas	7/28/2015	TWH & RAK	329	10	Sand	Pole	SAMPLED			1			1																			
330	45.939929	-89.066706	104	Anvil Lake	Vilas	7/28/2015	TWH & RAK	330	22		Rope	SAMPLED			0																							
331	45.940288	-89.0667	98	Anvil Lake	Vilas	7/28/2015	TWH & RAK	331	26		Rope	SAMPLED			0																							
332	45.940647	-89.066694	96	Anvil Lake	Vilas	7/28/2015	TWH & RAK	332	29			DEEP																										
333	45.941007	-89.066688	69	Anvil Lake	Vilas	7/29/2015	DAC & SDF	333	30			DEEP																										
334	45.941366	-89.066681	95	Anvil Lake	Vilas	7/29/2015	DAC & SDF	334	29		Rope	SAMPLED			0																							
335	45.941725	-89.066675	98	Anvil Lake	Vilas	7/29/2015	DAC & SDF	335	28		Rope	SAMPLED			0																							
336	45.942085	-89.066669	119	Anvil Lake	Vilas	7/29/2015	DAC & SDF	336	28		Rope	SAMPLED			1													1										
337	45.942444	-89.066663	127	Anvil Lake	Vilas	7/29/2015	DAC & SDF	337	27		Rope	SAMPLED			0																							
338	45.942803	-89.066657	147	Anvil Lake	Vilas	7/29/2015	DAC & SDF	338	27		Rope	SAMPLED			0																							
339	45.943163	-89.066651	157	Anvil Lake	Vilas	7/29/2015	DAC & SDF	339	28		Rope	SAMPLED			0																							
340	45.943522	-89.066645	177	Anvil Lake	Vilas	7/29/2015	DAC & SDF	340	28		Rope	SAMPLED			0																							
341	45.943881	-89.066639	188	Anvil Lake	Vilas	7/29/2015	DAC & SDF	341	28		Rope	SAMPLED			0																							
342	45.944241	-89.066633	207	Anvil Lake	Vilas	7/29/2015	DAC & SDF	342	27		Rope	SAMPLED			0																							
343	45.9446	-89.066627	222	Anvil Lake	Vilas	7/29/2015	DAC & SDF	343	25		Rope	SAMPLED			0																							
344	45.944959	-89.066621	240	Anvil Lake	Vilas	7/29/2015	DAC & SDF	344	21		Rope	SAMPLED			0																							
345	45.945318	-89.066615	263	Anvil Lake	Vilas	7/29/2015	DAC & SDF	345	17		Rope	SAMPLED			3								1					3										1
346	45.945678	-89.066609	277	Anvil Lake	Vilas	7/29/2015	DAC & SDF	346	8	Sand	Pole	SAMPLED			2								1					1		1						2	
347	45.946037	-89.066603	295	Anvil Lake	Vilas	7/29/2015	DAC & SDF	347	0			SHALLOW																										
348	45.939565	-89.066197	103	Anvil Lake	Vilas	7/28/2015	TWH & RAK	348	0			TERRESTRIAL																										
349	45.939925	-89.066191	102	Anvil Lake	Vilas	7/28/2015	TWH & RAK	349	12	Sand	Pole	SAMPLED			2		1	1				1							1								
350	45.940284	-89.066185	99	Anvil Lake	Vilas	7/28/2015	TWH & RAK	350	22		Rope	SAMPLED			0																							
351	45.940643	-89.066179	95	Anvil Lake	Vilas	7/28/2015	TWH & RAK	351	26		Rope	SAMPLED			0																							
352	45.941003	-89.066173	12	Anvil Lake	Vilas	7/28/2015	DAC & SDF	352	29			DEEP																										
353	45.941362	-89.066166	13	Anvil Lake	Vilas	7/28/2015	DAC & SDF	353	30			DEEP																										

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	Chara spp.	Elatine minima	Eleocharis acicularis	Eleocharis palustris	Elodea nuttallii	Eriocaulon aquaticum	Isoetes spp.	Juncus pelocarpus	Myriophyllum tenellum	Nitella spp.	Potamogeton amplifolius	Potamogeton berchtoldii	Potamogeton epihydrus	Potamogeton gramineus	Potamogeton spirillus	Potamogeton vaseyi	Ranunculus flammula	Sparganium androcladum	Sparganium eurycarpum	Vallisneria americana	Filamentous algae
354	45.941721	-89.06616	96	Anvil Lake	Vilas	7/29/2015	DAC & SDF	354	29		Rope	SAMPLED			0																							
355	45.942081	-89.066154	120	Anvil Lake	Vilas	7/29/2015	DAC & SDF	355	29		Rope	SAMPLED			0																							
356	45.94244	-89.066148	126	Anvil Lake	Vilas	7/29/2015	DAC & SDF	356	28		Rope	SAMPLED			0																							
357	45.942799	-89.066142	148	Anvil Lake	Vilas	7/29/2015	DAC & SDF	357	28		Rope	SAMPLED			0																							
358	45.943158	-89.066136	156	Anvil Lake	Vilas	7/29/2015	DAC & SDF	358	29		Rope	SAMPLED			0																							
359	45.943518	-89.06613	178	Anvil Lake	Vilas	7/29/2015	DAC & SDF	359	29		Rope	SAMPLED			0																							
360	45.943877	-89.066124	187	Anvil Lake	Vilas	7/29/2015	DAC & SDF	360	27		Rope	SAMPLED			0																							
361	45.944236	-89.066118	208	Anvil Lake	Vilas	7/29/2015	DAC & SDF	361	28		Rope	SAMPLED			0																							
362	45.944596	-89.066112	221	Anvil Lake	Vilas	7/29/2015	DAC & SDF	362	27		Rope	SAMPLED			0																							
363	45.944955	-89.066106	241	Anvil Lake	Vilas	7/29/2015	DAC & SDF	363	23		Rope	SAMPLED			0																							
364	45.945314	-89.0661	262	Anvil Lake	Vilas	7/29/2015	DAC & SDF	364	19		Rope	SAMPLED			3												3										
365	45.945674	-89.066094	278	Anvil Lake	Vilas	7/29/2015	DAC & SDF	365	12	Sand	Pole	SAMPLED			2							1					2										
366	45.946033	-89.066088	293	Anvil Lake	Vilas	7/29/2015	DAC & SDF	366	1	Sand	Pole	SAMPLED			1											1											
367	45.93992	-89.065676	101	Anvil Lake	Vilas	7/28/2015	TWH & RAK	367	0			TERRESTRIAL																										
368	45.94028	-89.06567	100	Anvil Lake	Vilas	7/28/2015	TWH & RAK	368	17		Rope	SAMPLED			0																							
369	45.940639	-89.065664	94	Anvil Lake	Vilas	7/28/2015	TWH & RAK	369	23		Rope	SAMPLED			0																							
370	45.940998	-89.065658	11	Anvil Lake	Vilas	7/28/2015	DAC & SDF	370	28		Rope	SAMPLED			0																							
371	45.941358	-89.065651	14	Anvil Lake	Vilas	7/28/2015	DAC & SDF	371	29			DEEP																										
372	45.941717	-89.065645	97	Anvil Lake	Vilas	7/29/2015	DAC & SDF	372	30			DEEP																										
373	45.942076	-89.065639	121	Anvil Lake	Vilas	7/29/2015	DAC & SDF	373	30			DEEP																										
374	45.942436	-89.065633	125	Anvil Lake	Vilas	7/29/2015	DAC & SDF	374	29		Rope	SAMPLED			0																							
375	45.942795	-89.065627	149	Anvil Lake	Vilas	7/29/2015	DAC & SDF	375	29		Rope	SAMPLED			0																							
376	45.943154	-89.065621	155	Anvil Lake	Vilas	7/29/2015	DAC & SDF	376	29		Rope	SAMPLED			0																							
377	45.943514	-89.065615	179	Anvil Lake	Vilas	7/29/2015	DAC & SDF	377	29		Rope	SAMPLED			0																							
378	45.943873	-89.065609	186	Anvil Lake	Vilas	7/29/2015	DAC & SDF	378	29		Rope	SAMPLED			0																							
379	45.944232	-89.065603	209	Anvil Lake	Vilas	7/29/2015	DAC & SDF	379	29		Rope	SAMPLED			0																							
380	45.944591	-89.065597	220	Anvil Lake	Vilas	7/29/2015	DAC & SDF	380	28		Rope	SAMPLED			0																							
381	45.944951	-89.065591	242	Anvil Lake	Vilas	7/29/2015	DAC & SDF	381	25		Rope	SAMPLED			0																							
382	45.94531	-89.065585	261	Anvil Lake	Vilas	7/29/2015	DAC & SDF	382	20		Rope	SAMPLED			0																							
383	45.945669	-89.065579	279	Anvil Lake	Vilas	7/29/2015	DAC & SDF	383	13	Sand	Pole	SAMPLED			2							2					1										
384	45.946029	-89.065573	292	Anvil Lake	Vilas	7/29/2015	DAC & SDF	384	6	Sand	Pole	SAMPLED			1																						1	
385	45.939916	-89.065161	92	Anvil Lake	Vilas	7/28/2015	TWH & RAK	385	0			TERRESTRIAL																										
386	45.940276	-89.065155	91	Anvil Lake	Vilas	7/28/2015	TWH & RAK	386	12	Rock	Pole	SAMPLED			0																							
387	45.940635	-89.065149	93	Anvil Lake	Vilas	7/28/2015	TWH & RAK	387	22		Rope	SAMPLED			0																							
388	45.940994	-89.065142	10	Anvil Lake	Vilas	7/28/2015	DAC & SDF	388	26		Rope	SAMPLED			0																							
389	45.941353	-89.065136	15	Anvil Lake	Vilas	7/28/2015	DAC & SDF	389	28		Rope	SAMPLED			0																							
390	45.941713	-89.06513	308	Anvil Lake	Vilas	7/29/2015	DAC & SDF	390	0			DEEP																										
391	45.942072	-89.065124	122	Anvil Lake	Vilas	7/29/2015	DAC & SDF	391	30			DEEP																										
392	45.942431	-89.065118	124	Anvil Lake	Vilas	7/29/2015	DAC & SDF	392	29		Rope	SAMPLED			0																							
393	45.942791	-89.065112	150	Anvil Lake	Vilas	7/29/2015	DAC & SDF	393	29		Rope	SAMPLED			0																							
394	45.94315	-89.065106	154	Anvil Lake	Vilas	7/29/2015	DAC & SDF	394	29		Rope	SAMPLED			0																							
395	45.943509	-89.0651	180	Anvil Lake	Vilas	7/29/2015	DAC & SDF	395	29		Rope	SAMPLED			0																							
396	45.943869	-89.065094	185	Anvil Lake	Vilas	7/29/2015	DAC & SDF	396	29		Rope	SAMPLED			0																							
397	45.944228	-89.065088	210	Anvil Lake	Vilas	7/29/2015	DAC & SDF	397	30			DEEP																										
398	45.944587	-89.065082	219	Anvil Lake	Vilas	7/29/2015	DAC & SDF	398	28		Rope	SAMPLED			0																							
399	45.944947	-89.065076	243	Anvil Lake	Vilas	7/29/2015	DAC & SDF	399	26		Rope	SAMPLED			0																							
400	45.945306	-89.06507	260	Anvil Lake	Vilas	7/29/2015	DAC & SDF	400	22		Rope	SAMPLED			0																							
401	45.945665	-89.065064	280	Anvil Lake	Vilas	7/29/2015	DAC & SDF	401	18		Rope	SAMPLED			2													2										
402	45.946024	-89.065058	296	Anvil Lake	Vilas	7/29/2015	DAC & SDF	402	8	Sand	Pole	SAMPLED			2			2																1				0	
403	45.946384	-89.065052	34	Anvil Lake	Vilas	7/29/2015	EJH & NLS	403	0			TERRESTRIAL																										
404	45.939912	-89.064646	90	Anvil Lake	Vilas	7/28/2015	TWH & RAK	404	0			TERRESTRIAL																										
405	45.940271	-89.06464	89	Anvil Lake	Vilas	7/28/2015	TWH & RAK	405	9	Rock	Pole	SAMPLED			0																							
406	45.940631	-89.064634	88	Anvil Lake	Vilas	7/28/2015	TWH & RAK	406	23		Rope	SAMPLED			0																							
407	45.94099	-89.064627	9	Anvil Lake	Vilas	7/28/2015	DAC & SDF	407	26		Rope	SAMPLED			0																							
408	45.941349	-89.064621	16	Anvil Lake	Vilas	7/28/2015	DAC & SDF	408	28		Rope	SAMPLED			0																							
409	45.941709	-89.064615	307	Anvil Lake	Vilas	7/29/2015	DAC & SDF	409	30			DEEP																										
410	45.942068	-89.064609	0	Anvil Lake	Vilas	#########		410	0			DEEP																										
411	45.942427	-89.064603	123	Anvil Lake	Vilas	7/29/2015	DAC & SDF	411	30			DEEP																										
412	45.942786	-89.064597	151	Anvil Lake	Vilas	7/29/2015	DAC & SDF	412	30			DEEP																										

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	Chara spp.	Elatine minima	Eleocharis acicularis	Eleocharis palustris	Elodea nuttallii	Eriocaulon aquaticum	Isoetes spp.	Juncus pelocarpus	Myriophyllum tenellum	Nitella spp.	Potamogeton amplifolius	Potamogeton berchtoldii	Potamogeton epihydrus	Potamogeton gramineus	Potamogeton spirillus	Potamogeton vaseyi	Ranunculus flammula	Sparganium androcladum	Sparganium eurycarpum	Vallisneria americana	Filamentous algae
413	45.943146	-89.064591	153	Anvil Lake	Vilas	7/29/2015	DAC & SDF	413	30			DEEP																										
414	45.943505	-89.064585	181	Anvil Lake	Vilas	7/29/2015	DAC & SDF	414	29		Rope	SAMPLED			0																								
415	45.943864	-89.064579	184	Anvil Lake	Vilas	7/29/2015	DAC & SDF	415	30			DEEP																										
416	45.944224	-89.064573	211	Anvil Lake	Vilas	7/29/2015	DAC & SDF	416	30			DEEP																										
417	45.944583	-89.064567	218	Anvil Lake	Vilas	7/29/2015	DAC & SDF	417	29		Rope	SAMPLED			0																								
418	45.944942	-89.064561	244	Anvil Lake	Vilas	7/29/2015	DAC & SDF	418	27		Rope	SAMPLED			0																								
419	45.945302	-89.064555	259	Anvil Lake	Vilas	7/29/2015	DAC & SDF	419	24		Rope	SAMPLED			0																								
420	45.945661	-89.064549	281	Anvil Lake	Vilas	7/29/2015	DAC & SDF	420	19		Rope	SAMPLED			0																								
421	45.94602	-89.064543	297	Anvil Lake	Vilas	7/29/2015	DAC & SDF	421	13	Sand	Pole	SAMPLED			2							1					2										
422	45.94638	-89.064537	35	Anvil Lake	Vilas	7/29/2015	EJH & NLS	422	3	Sand	Pole	SAMPLED			2				1						1												1
423	45.937033	-89.064179	4	Anvil Lake	Vilas	7/28/2015	TWH & RAK	423	6	Muck	Pole	SAMPLED			1			1				1															
424	45.937393	-89.064173	5	Anvil Lake	Vilas	7/28/2015	TWH & RAK	424	7	Sand	Pole	SAMPLED			3			1				1															2
425	45.937752	-89.064167	15	Anvil Lake	Vilas	7/28/2015	TWH & RAK	425	7	Muck	Pole	SAMPLED			2			1				1							1								1
426	45.938111	-89.064161	16	Anvil Lake	Vilas	7/28/2015	TWH & RAK	426	5	Muck	Pole	SAMPLED			3			1				1															2
427	45.938471	-89.064155	30	Anvil Lake	Vilas	7/28/2015	TWH & RAK	427	5	Sand	Pole	SAMPLED			2			1		1		1		1										1			1
428	45.93883	-89.064149	31	Anvil Lake	Vilas	7/28/2015	TWH & RAK	428	4	Muck	Pole	SAMPLED			3			1				1															2
429	45.939189	-89.064143	48	Anvil Lake	Vilas	7/28/2015	TWH & RAK	429	4	Sand	Pole	SAMPLED			1					1																	1
430	45.939549	-89.064137	49	Anvil Lake	Vilas	7/28/2015	TWH & RAK	430	3	Rock	Pole	SAMPLED			1					1																	
431	45.939908	-89.064131	69	Anvil Lake	Vilas	7/28/2015	TWH & RAK	431	5	Rock	Pole	SAMPLED			1											1											
432	45.940267	-89.064125	70	Anvil Lake	Vilas	7/28/2015	TWH & RAK	432	11	Rock	Pole	SAMPLED			1			1											1								
433	45.940626	-89.064119	87	Anvil Lake	Vilas	7/28/2015	TWH & RAK	433	22		Rope	SAMPLED			0																							
434	45.940986	-89.064112	8	Anvil Lake	Vilas	7/28/2015	DAC & SDF	434	27		Rope	SAMPLED			0																							
435	45.941345	-89.064106	17	Anvil Lake	Vilas	7/28/2015	DAC & SDF	435	28		Rope	SAMPLED			0																							
436	45.941704	-89.0641	306	Anvil Lake	Vilas	7/29/2015	DAC & SDF	436	30			DEEP																										
437	45.942064	-89.064094	0	Anvil Lake	Vilas	#########		437	0			DEEP																										
438	45.942423	-89.064088	0	Anvil Lake	Vilas	#########		438	0			DEEP																										
439	45.942782	-89.064082	0	Anvil Lake	Vilas	#########		439	0			DEEP																										
440	45.943142	-89.064076	152	Anvil Lake	Vilas	7/29/2015	DAC & SDF	440	30			DEEP																										
441	45.943501	-89.06407	182	Anvil Lake	Vilas	7/29/2015	DAC & SDF	441	30			DEEP																										
442	45.94386	-89.064064	183	Anvil Lake	Vilas	7/29/2015	DAC & SDF	442	30			DEEP																										
443	45.944219	-89.064058	215	Anvil Lake	Vilas	7/29/2015	DAC & SDF	443	30			DEEP																										
444	45.944579	-89.064052	217	Anvil Lake	Vilas	7/29/2015	DAC & SDF	444	29		Rope	SAMPLED			0																							
445	45.944938	-89.064046	245	Anvil Lake	Vilas	7/29/2015	DAC & SDF	445	28		Rope	SAMPLED			0																							
446	45.945297	-89.06404	258	Anvil Lake	Vilas	7/29/2015	DAC & SDF	446	26		Rope	SAMPLED			1		1																				
447	45.945657	-89.064034	282	Anvil Lake	Vilas	7/29/2015	DAC & SDF	447	21		Rope	SAMPLED			0																							
448	45.946016	-89.064028	298	Anvil Lake	Vilas	7/29/2015	DAC & SDF	448	18		Rope	SAMPLED			3												3										
449	45.946375	-89.064022	36	Anvil Lake	Vilas	7/29/2015	EJH & NLS	449	8	Sand	Pole	SAMPLED			2			1				1															1
450	45.946735	-89.064016	542	Anvil Lake	Vilas	7/29/2015	TWH & RAK	450	0	Sand	Pole	SAMPLED			0																							
451	45.937029	-89.063664	3	Anvil Lake	Vilas	7/28/2015	TWH & RAK	451	14	Muck	Pole	SAMPLED			2			2				2															
452	45.937388	-89.063658	6	Anvil Lake	Vilas	7/28/2015	TWH & RAK	452	14	Muck	Pole	SAMPLED			1			1				1															
453	45.937748	-89.063652	14	Anvil Lake	Vilas	7/28/2015	TWH & RAK	453	14	Muck	Pole	SAMPLED			2			1				1							1								
454	45.938107	-89.063646	17	Anvil Lake	Vilas	7/28/2015	TWH & RAK	454	15	Muck	Pole	SAMPLED			0																							1
455	45.938466	-89.06364	29	Anvil Lake	Vilas	7/28/2015	TWH & RAK	455	13	Sand	Pole	SAMPLED			2							1							2								
456	45.938826	-89.063634	32	Anvil Lake	Vilas	7/28/2015	TWH & RAK	456	14	Sand	Pole	SAMPLED			1			1				1							1					1			
457	45.939185	-89.063628	47	Anvil Lake	Vilas	7/28/2015	TWH & RAK	457	12	Sand	Pole	SAMPLED			2			1				1															1
458	45.939544	-89.063622	50	Anvil Lake	Vilas	7/28/2015	TWH & RAK	458	16	Muck	Pole	SAMPLED			1			1																			
459	45.939904	-89.063616	68	Anvil Lake	Vilas	7/28/2015	TWH & RAK	459	17		Rope	SAMPLED			1			1				1															
460	45.940263	-89.06361	71	Anvil Lake	Vilas	7/28/2015	TWH & RAK	460	21		Rope	SAMPLED			0																							
461	45.940622	-89.063603	86	Anvil Lake	Vilas	7/28/2015	TWH & RAK	461	25		Pole	SAMPLED			0																							
462	45.940982	-89.063597	7	Anvil Lake	Vilas	7/28/2015	DAC & SDF	462	27		Rope	SAMPLED			0																							
463	45.941341	-89.063591	18	Anvil Lake	Vilas	7/28/2015	DAC & SDF	463	28		Rope	SAMPLED			0																							
464	45.9417	-89.063585	305	Anvil Lake	Vilas	7/29/2015	DAC & SDF	464	30			DEEP																										
465	45.942059	-89.063579	0	Anvil Lake	Vilas	#########		465	0			DEEP																										
466	45.942419	-89.063573	0	Anvil Lake	Vilas	#########		466	0			DEEP																										
467	45.942778	-89.063567	0	Anvil Lake	Vilas	#########		467	0			DEEP																										
468	45.943137	-89.063561	0	Anvil Lake	Vilas	#########		468	0			DEEP																										
469	45.943497	-89.063555	0	Anvil Lake	Vilas	#########		469	0			DEEP																										
470	45.943856	-89.063549	0	Anvil Lake	Vilas	#########		470	0			DEEP																										
471	45.944215	-89.063543	214	Anvil Lake	Vilas	7/29/2015	DAC & SDF	471	30			DEEP																										

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	Chara spp.	Elatine minima	Eleocharis acicularis	Eleocharis palustris	Elodea nuttallii	Eriocaulon aquaticum	Isoetes spp.	Juncus pelocarpus	Myriophyllum tenellum	Nitella spp.	Potamogeton amplifolius	Potamogeton berchtoldii	Potamogeton epihydrus	Potamogeton gramineus	Potamogeton spirillus	Potamogeton vaseyi	Ranunculus flammula	Sparganium androcladum	Sparganium eurycarpum	Vallisneria americana	Filamentous algae
472	45.944575	-89.063537	216	Anvil Lake	Vilas	7/29/2015	DAC & SDF	472	30			DEEP																										
473	45.944934	-89.063531	246	Anvil Lake	Vilas	7/29/2015	DAC & SDF	473	29		Rope	SAMPLED			0																								
474	45.945293	-89.063525	257	Anvil Lake	Vilas	7/29/2015	DAC & SDF	474	27		Rope	SAMPLED			0																								
475	45.945652	-89.063519	283	Anvil Lake	Vilas	7/29/2015	DAC & SDF	475	23		Rope	SAMPLED			0																								
476	45.946012	-89.063513	299	Anvil Lake	Vilas	7/29/2015	DAC & SDF	476	20		Rope	SAMPLED			0																								
477	45.946371	-89.063507	37	Anvil Lake	Vilas	7/29/2015	EJH & NLS	477	17		Rope	SAMPLED			2			2				1																
478	45.94673	-89.063501	541	Anvil Lake	Vilas	7/29/2015	TWH & RAK	478	7	Sand	Pole	SAMPLED			2			2				1																
479	45.937025	-89.063149	1	Anvil Lake	Vilas	7/28/2015	TWH & RAK	479	8	Sand	Pole	SAMPLED			2			1				2												1				1
480	45.937384	-89.063143	7	Anvil Lake	Vilas	7/28/2015	TWH & RAK	480	17		Rope	SAMPLED			1			1																				
481	45.937744	-89.063137	13	Anvil Lake	Vilas	7/28/2015	TWH & RAK	481	18	Muck	Pole	SAMPLED			1		1					1																
482	45.938103	-89.063131	18	Anvil Lake	Vilas	7/28/2015	TWH & RAK	482	17		Rope	SAMPLED			1			1				1																
483	45.938462	-89.063125	28	Anvil Lake	Vilas	7/28/2015	TWH & RAK	483	16		Rope	SAMPLED			0																								
484	45.938821	-89.063119	33	Anvil Lake	Vilas	7/28/2015	TWH & RAK	484	17		Rope	SAMPLED			1			1																				
485	45.939181	-89.063113	46	Anvil Lake	Vilas	7/28/2015	TWH & RAK	485	19		Rope	SAMPLED			0																								
486	45.93954	-89.063107	51	Anvil Lake	Vilas	7/28/2015	TWH & RAK	486	21		Rope	SAMPLED			0																								
487	45.939899	-89.063101	67	Anvil Lake	Vilas	7/28/2015	TWH & RAK	487	22		Rope	SAMPLED			0																								
488	45.940259	-89.063095	72	Anvil Lake	Vilas	7/28/2015	TWH & RAK	488	24		Rope	SAMPLED			0																								
489	45.940618	-89.063088	85	Anvil Lake	Vilas	7/28/2015	TWH & RAK	489	26		Rope	SAMPLED			0																								
490	45.940977	-89.063082	6	Anvil Lake	Vilas	7/28/2015	DAC & SDF	490	27		Rope	SAMPLED			0																								
491	45.941337	-89.063076	19	Anvil Lake	Vilas	7/28/2015	DAC & SDF	491	28		Rope	SAMPLED			0																								
492	45.941696	-89.06307	304	Anvil Lake	Vilas	7/29/2015	DAC & SDF	492	30			DEEP																										
493	45.942055	-89.063064	0	Anvil Lake	Vilas	#########		493	0			DEEP																										
494	45.942415	-89.063058	0	Anvil Lake	Vilas	#########		494	0			DEEP																										
495	45.942774	-89.063052	0	Anvil Lake	Vilas	#########		495	0			DEEP																										
496	45.943133	-89.063046	0	Anvil Lake	Vilas	#########		496	0			DEEP																										
497	45.943492	-89.06304	0	Anvil Lake	Vilas	#########		497	0			DEEP																										
498	45.943852	-89.063034	0	Anvil Lake	Vilas	#########		498	0			DEEP																										
499	45.944211	-89.063028	213	Anvil Lake	Vilas	7/29/2015	DAC & SDF	499	30			DEEP																										
500	45.94457	-89.063022	212	Anvil Lake	Vilas	7/29/2015	DAC & SDF	500	30			DEEP																										
501	45.94493	-89.063016	247	Anvil Lake	Vilas	7/29/2015	DAC & SDF	501	29		Rope	SAMPLED			0																								
502	45.945289	-89.06301	256	Anvil Lake	Vilas	7/29/2015	DAC & SDF	502	27		Rope	SAMPLED			0																								
503	45.945648	-89.063004	284	Anvil Lake	Vilas	7/29/2015	DAC & SDF	503	26		Rope	SAMPLED			0																								
504	45.946008	-89.062998	300	Anvil Lake	Vilas	7/29/2015	DAC & SDF	504	24		Rope	SAMPLED			0																								
505	45.946367	-89.062992	38	Anvil Lake	Vilas	7/29/2015	EJH & NLS	505	19		Rope	SAMPLED			1			1																				
506	45.946726	-89.062986	540	Anvil Lake	Vilas	7/29/2015	TWH & RAK	506	13	Sand	Pole	SAMPLED			3			3				1							1								
507	45.947085	-89.06298	524	Anvil Lake	Vilas	7/29/2015	TWH & RAK	507	4	Sand	Pole	SAMPLED			1					1						1											1
508	45.937021	-89.062634	2	Anvil Lake	Vilas	7/28/2015	TWH & RAK	508	0			TERRESTRIAL																										
509	45.93738	-89.062628	8	Anvil Lake	Vilas	7/28/2015	TWH & RAK	509	2	Sand	Pole	SAMPLED			1											1												
510	45.937739	-89.062622	12	Anvil Lake	Vilas	7/28/2015	TWH & RAK	510	15	Sand	Pole	SAMPLED			1			1				1							1								
511	45.938099	-89.062616	19	Anvil Lake	Vilas	7/28/2015	TWH & RAK	511	18		Rope	SAMPLED			0																								
512	45.938458	-89.06261	27	Anvil Lake	Vilas	7/28/2015	TWH & RAK	512	19		Rope	SAMPLED			0																								
513	45.938817	-89.062604	34	Anvil Lake	Vilas	7/28/2015	TWH & RAK	513	20		Rope	SAMPLED			0																								
514	45.939177	-89.062598	45	Anvil Lake	Vilas	7/28/2015	TWH & RAK	514	22		Rope	SAMPLED			0																								
515	45.939536	-89.062592	52	Anvil Lake	Vilas	7/28/2015	TWH & RAK	515	23		Rope	SAMPLED			1															1								
516	45.939895	-89.062586	66	Anvil Lake	Vilas	7/28/2015	TWH & RAK	516	24		Rope	SAMPLED			0																								
517	45.940254	-89.06258	73	Anvil Lake	Vilas	7/28/2015	TWH & RAK	517	24		Rope	SAMPLED			0																								
518	45.940614	-89.062573	84	Anvil Lake	Vilas	7/28/2015	TWH & RAK	518	26		Rope	SAMPLED			1															1								
519	45.940973	-89.062567	5	Anvil Lake	Vilas	7/28/2015	DAC & SDF	519	27		Rope	SAMPLED			0																								
520	45.941332	-89.062561	20	Anvil Lake	Vilas	7/28/2015	DAC & SDF	520	28		Rope	SAMPLED			0																								
521	45.941692	-89.062555	30	Anvil Lake	Vilas	7/28/2015	DAC & SDF	521	30			DEEP																										
522	45.942051	-89.062549	31	Anvil Lake	Vilas	7/28/2015	DAC & SDF	522	30			DEEP																										
523	45.94241	-89.062543	0	Anvil Lake	Vilas	#########		523	0			DEEP																										
524	45.94277	-89.062537	0	Anvil Lake	Vilas	#########		524	0			DEEP																										
525	45.943129	-89.062531	0	Anvil Lake	Vilas	#########		525	0			DEEP																										
526	45.943488	-89.062525	0	Anvil Lake	Vilas	#########		526	0			DEEP																										
527	45.943848	-89.062519	0	Anvil Lake	Vilas	#########		527	0			DEEP																										
528	45.944207	-89.062513	0	Anvil Lake	Vilas	#########		528	0			DEEP																										
529	45.944566	-89.062507	251	Anvil Lake	Vilas	7/29/2015	DAC & SDF	529	30			DEEP																										
530	45.944925	-89.062501	248	Anvil Lake	Vilas	7/29/2015	DAC & SDF	530	29		Rope	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	Chara spp.	Elatine minima	Eleocharis acicularis	Eleocharis palustris	Elodea nuttallii	Eriocaulon aquaticum	Isoetes spp.	Juncus pelocarpus	Myriophyllum tenellum	Nitella spp.	Potamogeton amplifolius	Potamogeton berchtoldii	Potamogeton epihydrus	Potamogeton gramineus	Potamogeton spirillus	Potamogeton vaseyi	Ranunculus flammula	Sparganium androcladum	Sparganium eurycarpum	Vallisneria americana	Filamentous algae
531	45.945285	-89.062495	255	Anvil Lake	Vilas	7/29/2015	DAC & SDF	531	28		Rope	SAMPLED			0																							
532	45.945644	-89.062489	285	Anvil Lake	Vilas	7/29/2015	DAC & SDF	532	27		Rope	SAMPLED			0																							
533	45.946003	-89.062483	301	Anvil Lake	Vilas	7/29/2015	DAC & SDF	533	24		Rope	SAMPLED			0																							
534	45.946363	-89.062477	39	Anvil Lake	Vilas	7/29/2015	EJH & NLS	534	22		Rope	SAMPLED			0																							
535	45.946722	-89.062471	539	Anvil Lake	Vilas	7/29/2015	TWH & RAK	535	17		Rope	SAMPLED						1																			
536	45.947081	-89.062464	523	Anvil Lake	Vilas	7/29/2015	TWH & RAK	536	12	Sand	Pole	SAMPLED			2			1				1														1	
537	45.947441	-89.062458	492	Anvil Lake	Vilas	7/29/2015	TWH & RAK	537	5	Sand	Pole	SAMPLED			2			2		1					1											1	
538	45.9478	-89.062452	491	Anvil Lake	Vilas	7/29/2015	TWH & RAK	538	1	Sand	Pole	SAMPLED			1					1						1	1										
539	45.948159	-89.062446	461	Anvil Lake	Vilas	7/29/2015	TWH & RAK	539	0			TERRESTRIAL																										
540	45.948518	-89.06244	459	Anvil Lake	Vilas	7/29/2015	TWH & RAK	540	0			TERRESTRIAL																										
541	45.948878	-89.062434	430	Anvil Lake	Vilas	7/29/2015	TWH & RAK	541	0			TERRESTRIAL																										
542	45.937376	-89.062113	9	Anvil Lake	Vilas	7/28/2015	TWH & RAK	542	0			TERRESTRIAL																										
543	45.937735	-89.062107	10	Anvil Lake	Vilas	7/28/2015	TWH & RAK	543	3	Sand	Pole	SAMPLED			1			1																			
544	45.938094	-89.062101	20	Anvil Lake	Vilas	7/28/2015	TWH & RAK	544	8	Sand	Pole	SAMPLED			2			1				1														1	
545	45.938454	-89.062095	26	Anvil Lake	Vilas	7/28/2015	TWH & RAK	545	18		Rope	SAMPLED			2			1				1							2				1				
546	45.938813	-89.062089	35	Anvil Lake	Vilas	7/28/2015	TWH & RAK	546	21		Rope	SAMPLED			0																						
547	45.939172	-89.062083	44	Anvil Lake	Vilas	7/28/2015	TWH & RAK	547	22		Rope	SAMPLED			0																						
548	45.939532	-89.062077	53	Anvil Lake	Vilas	7/28/2015	TWH & RAK	548	23		Rope	SAMPLED			0																						
549	45.939891	-89.062071	65	Anvil Lake	Vilas	7/28/2015	TWH & RAK	549	23		Pole	SAMPLED			0																						
550	45.94025	-89.062065	74	Anvil Lake	Vilas	7/28/2015	TWH & RAK	550	24		Rope	SAMPLED			0																						
551	45.94061	-89.062058	83	Anvil Lake	Vilas	7/28/2015	TWH & RAK	551	25		Pole	SAMPLED			0																						
552	45.940969	-89.062052	4	Anvil Lake	Vilas	7/28/2015	DAC & SDF	552	26		Rope	SAMPLED			0																						
553	45.941328	-89.062046	21	Anvil Lake	Vilas	7/28/2015	DAC & SDF	553	28		Rope	SAMPLED			0																						
554	45.941687	-89.06204	29	Anvil Lake	Vilas	7/28/2015	DAC & SDF	554	28		Rope	SAMPLED			0																						
555	45.942047	-89.062034	32	Anvil Lake	Vilas	7/28/2015	DAC & SDF	555	30			DEEP																										
556	45.942406	-89.062028	45	Anvil Lake	Vilas	7/28/2015	DAC & SDF	556	31			DEEP																										
557	45.942765	-89.062022	0	Anvil Lake	Vilas	#########		557	0			DEEP																										
558	45.943125	-89.062016	0	Anvil Lake	Vilas	#########		558	0			DEEP																										
559	45.943484	-89.06201	0	Anvil Lake	Vilas	#########		559	0			DEEP																										
560	45.943843	-89.062004	0	Anvil Lake	Vilas	#########		560	0			DEEP																										
561	45.944203	-89.061998	0	Anvil Lake	Vilas	#########		561	0			DEEP																										
562	45.944562	-89.061992	250	Anvil Lake	Vilas	7/29/2015	DAC & SDF	562	30			DEEP																										
563	45.944921	-89.061986	249	Anvil Lake	Vilas	7/29/2015	DAC & SDF	563	30			DEEP																										
564	45.945281	-89.06198	254	Anvil Lake	Vilas	7/29/2015	DAC & SDF	564	28		Rope	SAMPLED			0																						
565	45.94564	-89.061974	286	Anvil Lake	Vilas	7/29/2015	DAC & SDF	565	27		Rope	SAMPLED			0																						
566	45.945999	-89.061968	302	Anvil Lake	Vilas	7/29/2015	DAC & SDF	566	25		Rope	SAMPLED			0																						
567	45.946358	-89.061962	40	Anvil Lake	Vilas	7/29/2015	EJH & NLS	567	23		Rope	SAMPLED			0																						
568	45.946718	-89.061955	538	Anvil Lake	Vilas	7/29/2015	TWH & RAK	568	21		Rope	SAMPLED			0																						
569	45.947077	-89.061949	522	Anvil Lake	Vilas	7/29/2015	TWH & RAK	569	18		Rope	SAMPLED			2			2																			
570	45.947436	-89.061943	493	Anvil Lake	Vilas	7/29/2015	TWH & RAK	570	15	Sand	Pole	SAMPLED			1			1																			
571	45.947796	-89.061937	490	Anvil Lake	Vilas	7/29/2015	TWH & RAK	571	6	Sand	Pole	SAMPLED			2			1																			1	
572	45.948155	-89.061931	460	Anvil Lake	Vilas	7/29/2015	TWH & RAK	572	3	Sand	Pole	SAMPLED			2			1	1	1					1	2										
573	45.948514	-89.061925	458	Anvil Lake	Vilas	7/29/2015	TWH & RAK	573	2	Sand	Pole	SAMPLED			1			1																			1	
574	45.948874	-89.061919	429	Anvil Lake	Vilas	7/29/2015	TWH & RAK	574	3	Sand	Pole	SAMPLED			1			1																			
575	45.949233	-89.061913	428	Anvil Lake	Vilas	7/29/2015	TWH & RAK	575	1	Sand	Pole	SAMPLED			2				1	1						2									1		
576	45.937731	-89.061592	11	Anvil Lake	Vilas	7/28/2015	TWH & RAK	576	0			TERRESTRIAL																										
577	45.93809	-89.061586	21	Anvil Lake	Vilas	7/28/2015	TWH & RAK	577	3	Sand	Pole	SAMPLED			0																						
578	45.938449	-89.06158	25	Anvil Lake	Vilas	7/28/2015	TWH & RAK	578	7	Muck	Pole	SAMPLED			2			1				1						1								1	
579	45.938809	-89.061574	36	Anvil Lake	Vilas	7/28/2015	TWH & RAK	579	12	Sand	Pole	SAMPLED			2			2																			1	
580	45.939168	-89.061568	43	Anvil Lake	Vilas	7/28/2015	TWH & RAK	580	19		Rope	SAMPLED			0																						
581	45.939527	-89.061562	54	Anvil Lake	Vilas	7/28/2015	TWH & RAK	581	20		Rope	SAMPLED			1			1																			
582	45.939887	-89.061556	64	Anvil Lake	Vilas	7/28/2015	TWH & RAK	582	21		Rope	SAMPLED			0																						
583	45.940246	-89.06155	75	Anvil Lake	Vilas	7/28/2015	TWH & RAK	583	21		Rope	SAMPLED			0																						
584	45.940605	-89.061543	82	Anvil Lake	Vilas	7/28/2015	TWH & RAK	584	21		Rope	SAMPLED			1			1																			
585	45.940965	-89.061537	3	Anvil Lake	Vilas	7/28/2015	DAC & SDF	585	22		Rope	SAMPLED			1							1															
586	45.941324	-89.061531	22	Anvil Lake	Vilas	7/28/2015	DAC & SDF	586	22		Rope	SAMPLED			2							1					2										
587	45.941683	-89.061525	28	Anvil Lake	Vilas	7/28/2015	DAC & SDF	587	24		Rope	SAMPLED			0																						
588	45.942043	-89.061519	33	Anvil Lake	Vilas	7/28/2015	DAC & SDF	588	27		Rope	SAMPLED			0																						
589	45.942402	-89.061513	44	Anvil Lake	Vilas	7/28/2015	DAC & SDF	589	30			DEEP																										

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	Chara spp.	Eleocharis acicularis	Eleocharis palustris	Elodea nuttallii	Eriocaulon aquaticum	Isoetes spp.	Juncus pelocarpus	Myriophyllum tenellum	Nitella spp.	Potamogeton amplifolius	Potamogeton berchtoldii	Potamogeton epihydrus	Potamogeton gramineus	Potamogeton spirillus	Potamogeton vaseyi	Ranunculus flammula	Sparganium androcladum	Sparganium eurycarpum	Vallisneria americana	Filamentous algae
590	45.942761	-89.061507	46	Anvil Lake	Vilas	7/28/2015	DAC & SDF	590	30			DEEP																									
591	45.94312	-89.061501	60	Anvil Lake	Vilas	7/28/2015	DAC & SDF	591	31			DEEP																									
592	45.94348	-89.061495	0	Anvil Lake	Vilas	#########		592	0			DEEP																									
593	45.943839	-89.061489	0	Anvil Lake	Vilas	#########		593	0			DEEP																									
594	45.944198	-89.061483	0	Anvil Lake	Vilas	#########		594	0			DEEP																									
595	45.944558	-89.061477	0	Anvil Lake	Vilas	#########		595	0			DEEP																									
596	45.944917	-89.061471	252	Anvil Lake	Vilas	7/29/2015	DAC & SDF	596	30			DEEP																									
597	45.945276	-89.061465	253	Anvil Lake	Vilas	7/29/2015	DAC & SDF	597	28		Rope	SAMPLED			0																						
598	45.945636	-89.061459	287	Anvil Lake	Vilas	7/29/2015	DAC & SDF	598	27		Rope	SAMPLED			0																						
599	45.945995	-89.061453	303	Anvil Lake	Vilas	7/29/2015	DAC & SDF	599	26		Rope	SAMPLED			0																						
600	45.946354	-89.061446	41	Anvil Lake	Vilas	7/29/2015	EJH & NLS	600	24		Rope	SAMPLED			0																						
601	45.946714	-89.06144	537	Anvil Lake	Vilas	7/29/2015	TWH & RAK	601	23		Rope	SAMPLED			0																						
602	45.947073	-89.061434	521	Anvil Lake	Vilas	7/29/2015	TWH & RAK	602	22		Rope	SAMPLED			0																						
603	45.947432	-89.061428	494	Anvil Lake	Vilas	7/29/2015	TWH & RAK	603	18		Rope	SAMPLED			1			1																			
604	45.947791	-89.061422	489	Anvil Lake	Vilas	7/29/2015	TWH & RAK	604	16		Rope	SAMPLED			3			3																			
605	45.948151	-89.061416	462	Anvil Lake	Vilas	7/29/2015	TWH & RAK	605	12	Sand	Pole	SAMPLED			1			1																			
606	45.94851	-89.06141	457	Anvil Lake	Vilas	7/29/2015	TWH & RAK	606	5	Sand	Pole	SAMPLED			2			2		1																	2	
607	45.948869	-89.061404	431	Anvil Lake	Vilas	7/29/2015	TWH & RAK	607	3	Sand	Pole	SAMPLED			1			1	1							1										
608	45.949229	-89.061398	427	Anvil Lake	Vilas	7/29/2015	TWH & RAK	608	3	Sand	Pole	SAMPLED			2			2																		1	
609	45.949588	-89.061392	396	Anvil Lake	Vilas	7/29/2015	TWH & RAK	609	1	Sand	Pole	SAMPLED			1											1										
610	45.938086	-89.061071	22	Anvil Lake	Vilas	7/28/2015	TWH & RAK	610	0			NONNAVIGABLE (PLANTS)																									
611	45.938445	-89.061065	23	Anvil Lake	Vilas	7/28/2015	TWH & RAK	611	3	Sand	Pole	SAMPLED			1			1																			
612	45.938805	-89.061059	37	Anvil Lake	Vilas	7/28/2015	TWH & RAK	612	6	Sand	Pole	SAMPLED			2			1		2		1										1				1	
613	45.939164	-89.061053	42	Anvil Lake	Vilas	7/28/2015	TWH & RAK	613	11	Sand	Pole	SAMPLED			1			1																		1	
614	45.939523	-89.061047	55	Anvil Lake	Vilas	7/28/2015	TWH & RAK	614	11	Sand	Pole	SAMPLED			2			1				1							2							1	
615	45.939882	-89.061041	63	Anvil Lake	Vilas	7/28/2015	TWH & RAK	615	14	Sand	Pole	SAMPLED			2			1				1							2				1				
616	45.940242	-89.061035	76	Anvil Lake	Vilas	7/28/2015	TWH & RAK	616	12	Sand	Pole	SAMPLED			3			2											1				1			1	
617	45.940601	-89.061028	81	Anvil Lake	Vilas	7/28/2015	TWH & RAK	617	14	Sand	Pole	SAMPLED			3			3				1														
618	45.94096	-89.061022	2	Anvil Lake	Vilas	7/28/2015	DAC & SDF	618	11	Rock	Pole	SAMPLED			0																						
619	45.94132	-89.061016	23	Anvil Lake	Vilas	7/28/2015	DAC & SDF	619	10	Rock	Pole	SAMPLED			0																						
620	45.941679	-89.06101	27	Anvil Lake	Vilas	7/28/2015	DAC & SDF	620	20		Rope	SAMPLED			2											2										
621	45.942038	-89.061004	34	Anvil Lake	Vilas	7/28/2015	DAC & SDF	621	23		Rope	SAMPLED			1													1									
622	45.942398	-89.060998	43	Anvil Lake	Vilas	7/28/2015	DAC & SDF	622	26		Rope	SAMPLED			0																						
623	45.942757	-89.060992	47	Anvil Lake	Vilas	7/28/2015	DAC & SDF	623	29		Rope	SAMPLED			0																						
624	45.943116	-89.060986	59	Anvil Lake	Vilas	7/28/2015	DAC & SDF	624	30			DEEP																									
625	45.943476	-89.06098	61	Anvil Lake	Vilas	7/28/2015	DAC & SDF	625	30			DEEP																									
626	45.943835	-89.060974	0	Anvil Lake	Vilas	#########		626	0			DEEP																									
627	45.944194	-89.060968	0	Anvil Lake	Vilas	#########		627	0			DEEP																									
628	45.944553	-89.060962	0	Anvil Lake	Vilas	#########		628	0			DEEP																									
629	45.944913	-89.060956	288	Anvil Lake	Vilas	7/29/2015	DAC & SDF	629	30			DEEP																									
630	45.945272	-89.06095	12	Anvil Lake	Vilas	7/28/2015	EJH & NLS	630	28		Rope	SAMPLED			0																						
631	45.945631	-89.060944	11	Anvil Lake	Vilas	7/28/2015	EJH & NLS	631	26		Rope	SAMPLED			0																						
632	45.945991	-89.060937	65	Anvil Lake	Vilas	7/29/2015	EJH & NLS	632	26		Rope	SAMPLED			0																						
633	45.94635	-89.060931	42	Anvil Lake	Vilas	7/29/2015	EJH & NLS	633	25		Rope	SAMPLED			0																						
634	45.946709	-89.060925	536	Anvil Lake	Vilas	7/29/2015	TWH & RAK	634	23		Rope	SAMPLED			0																						
635	45.947069	-89.060919	520	Anvil Lake	Vilas	7/29/2015	TWH & RAK	635	23		Rope	SAMPLED			0																						
636	45.947428	-89.060913	495	Anvil Lake	Vilas	7/29/2015	TWH & RAK	636	20		Rope	SAMPLED			1			1																			
637	45.947787	-89.060907	488	Anvil Lake	Vilas	7/29/2015	TWH & RAK	637	17		Rope	SAMPLED			2			2																			
638	45.948146	-89.060901	463	Anvil Lake	Vilas	7/29/2015	TWH & RAK	638	17		Rope	SAMPLED			1			1																			1
639	45.948506	-89.060895	456	Anvil Lake	Vilas	7/29/2015	TWH & RAK	639	14	Muck	Pole	SAMPLED			1			1																			1
640	45.948865	-89.060889	432	Anvil Lake	Vilas	7/29/2015	TWH & RAK	640	10	Sand	Pole	SAMPLED			2			1				1							1				1			1	
641	45.949224	-89.060883	426	Anvil Lake	Vilas	7/29/2015	TWH & RAK	641	7	Muck	Pole	SAMPLED			3			1				1														3	
642	45.949584	-89.060877	395	Anvil Lake	Vilas	7/29/2015	TWH & RAK	642	4	Muck	Pole	SAMPLED			2			1				1								1			1			2	
643	45.949943	-89.060871	393	Anvil Lake	Vilas	7/29/2015	TWH & RAK	643	0			TERRESTRIAL																									
644	45.938441	-89.06055	24	Anvil Lake	Vilas	7/28/2015	TWH & RAK	644	0			TERRESTRIAL																									
645	45.9388	-89.060544	38	Anvil Lake	Vilas	7/28/2015	TWH & RAK	645	3	Sand	Pole	SAMPLED			1							1															
646	45.93916	-89.060538	40	Anvil Lake	Vilas	7/28/2015	TWH & RAK	646	6	Sand	Pole	SAMPLED			2			1				1								1						2	
647	45.939519	-89.060532	56	Anvil Lake	Vilas	7/28/2015	TWH & RAK	647	6	Sand	Pole	SAMPLED			2			1		2		1							1							
648	45.939878	-89.060526	62	Anvil Lake	Vilas	7/28/2015	TWH & RAK	648	7	Sand	Pole	SAMPLED			2			2																		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	Chara spp.	Elatine minima	Eleocharis acicularis	Eleocharis palustris	Elodea nuttallii	Eriocaulon aquaticum	Isoetes spp.	Juncus pelocarpus	Myriophyllum tenellum	Nitella spp.	Potamogeton amplifolius	Potamogeton berchtoldii	Potamogeton epihydrus	Potamogeton gramineus	Potamogeton spirillus	Potamogeton vaseyi	Ranunculus flammula	Sparganium androcladum	Sparganium eurycarpum	Vallisneria americana	Filamentous algae
649	45.940238	-89.06052	77	Anvil Lake	Vilas	7/28/2015	TWH & RAK	649	5	Sand	Pole	SAMPLED			1					1						1											1	
650	45.940597	-89.060513	80	Anvil Lake	Vilas	7/28/2015	TWH & RAK	650	3	Sand	Pole	SAMPLED			2					1						2												
651	45.940956	-89.060507	1	Anvil Lake	Vilas	7/28/2015	DAC & SDF	651	0			TERRESTRIAL																										
652	45.941315	-89.060501	24	Anvil Lake	Vilas	7/28/2015	DAC & SDF	652	0	Rock	Pole	SAMPLED			0																							
653	45.941675	-89.060495	26	Anvil Lake	Vilas	7/28/2015	DAC & SDF	653	6	Sand	Pole	SAMPLED			0																							
654	45.942034	-89.060489	35	Anvil Lake	Vilas	7/28/2015	DAC & SDF	654	17		Rope	SAMPLED			2												2		1								
655	45.942393	-89.060483	42	Anvil Lake	Vilas	7/28/2015	DAC & SDF	655	23		Rope	SAMPLED			0																						
656	45.942753	-89.060477	48	Anvil Lake	Vilas	7/28/2015	DAC & SDF	656	24		Rope	SAMPLED			0																						
657	45.943112	-89.060471	58	Anvil Lake	Vilas	7/28/2015	DAC & SDF	657	29		Rope	SAMPLED			0																						
658	45.943471	-89.060465	62	Anvil Lake	Vilas	7/28/2015	DAC & SDF	658	30			DEEP																										
659	45.943831	-89.060459	0	Anvil Lake	Vilas	#########		659	0			DEEP																										
660	45.94419	-89.060453	0	Anvil Lake	Vilas	#########		660	0			DEEP																										
661	45.944549	-89.060447	0	Anvil Lake	Vilas	#########		661	0			DEEP																										
662	45.944909	-89.060441	289	Anvil Lake	Vilas	7/29/2015	DAC & SDF	662	30			DEEP																										
663	45.945268	-89.060435	13	Anvil Lake	Vilas	7/28/2015	EJH & NLS	663	28		Rope	SAMPLED			0																							
664	45.945627	-89.060428	10	Anvil Lake	Vilas	7/28/2015	EJH & NLS	664	27		Rope	SAMPLED			0																							
665	45.945986	-89.060422	64	Anvil Lake	Vilas	7/29/2015	EJH & NLS	665	27		Rope	SAMPLED			0																							
666	45.946346	-89.060416	43	Anvil Lake	Vilas	7/29/2015	EJH & NLS	666	25		Rope	SAMPLED			0																							
667	45.946705	-89.06041	535	Anvil Lake	Vilas	7/29/2015	TWH & RAK	667	23		Rope	SAMPLED			0																							
668	45.947064	-89.060404	519	Anvil Lake	Vilas	7/29/2015	TWH & RAK	668	24		Rope	SAMPLED			1							1																
669	45.947424	-89.060398	496	Anvil Lake	Vilas	7/29/2015	TWH & RAK	669	22		Rope	SAMPLED			0																							
670	45.947783	-89.060392	487	Anvil Lake	Vilas	7/29/2015	TWH & RAK	670	18		Rope	SAMPLED			1			1																				
671	45.948142	-89.060386	464	Anvil Lake	Vilas	7/29/2015	TWH & RAK	671	16		Rope	SAMPLED			1			1																				1
672	45.948502	-89.06038	455	Anvil Lake	Vilas	7/29/2015	TWH & RAK	672	14	Muck	Pole	SAMPLED			1			1																				1
673	45.948861	-89.060374	433	Anvil Lake	Vilas	7/29/2015	TWH & RAK	673	13	Muck	Pole	SAMPLED			3			3				1															
674	45.94922	-89.060368	425	Anvil Lake	Vilas	7/29/2015	TWH & RAK	674	9	Muck	Pole	SAMPLED			2			1				1							1								2	
675	45.949579	-89.060362	394	Anvil Lake	Vilas	7/29/2015	TWH & RAK	675	5	Muck	Pole	SAMPLED			1			1																			1	
676	45.949939	-89.060356	392	Anvil Lake	Vilas	7/29/2015	TWH & RAK	676	0	Sand	Pole	SAMPLED			1						1																
677	45.938796	-89.060029	39	Anvil Lake	Vilas	7/28/2015	TWH & RAK	677	0			TERRESTRIAL																										
678	45.939155	-89.060023	41	Anvil Lake	Vilas	7/28/2015	TWH & RAK	678	0			TERRESTRIAL																										
679	45.939515	-89.060017	57	Anvil Lake	Vilas	7/28/2015	TWH & RAK	679	2	Sand	Pole	SAMPLED			0																							
680	45.939874	-89.060011	61	Anvil Lake	Vilas	7/28/2015	TWH & RAK	680	2	Sand	Pole	SAMPLED			0																							
681	45.940233	-89.060005	78	Anvil Lake	Vilas	7/28/2015	TWH & RAK	681	0			TERRESTRIAL																										
682	45.940593	-89.059998	79	Anvil Lake	Vilas	7/28/2015	TWH & RAK	682	0			TERRESTRIAL																										
683	45.941671	-89.05998	25	Anvil Lake	Vilas	7/28/2015	DAC & SDF	683	0			TERRESTRIAL																										
684	45.94203	-89.059974	36	Anvil Lake	Vilas	7/28/2015	DAC & SDF	684	7	Sand	Pole	SAMPLED			1							1					1	1									1	
685	45.942389	-89.059968	41	Anvil Lake	Vilas	7/28/2015	DAC & SDF	685	16		Rope	SAMPLED			2							1					2										
686	45.942748	-89.059962	49	Anvil Lake	Vilas	7/28/2015	DAC & SDF	686	23		Rope	SAMPLED			0																						
687	45.943108	-89.059956	57	Anvil Lake	Vilas	7/28/2015	DAC & SDF	687	25		Rope	SAMPLED			0																						
688	45.943467	-89.05995	63	Anvil Lake	Vilas	7/28/2015	DAC & SDF	688	28		Rope	SAMPLED			0																						
689	45.943826	-89.059944	306	Anvil Lake	Vilas	7/28/2015	TWH & RAK	689	0			DEEP																										
690	45.944186	-89.059938	307	Anvil Lake	Vilas	7/28/2015	TWH & RAK	690	30			DEEP																										
691	45.944545	-89.059932	0	Anvil Lake	Vilas	#########		691	0			DEEP																										
692	45.944904	-89.059926	290	Anvil Lake	Vilas	7/29/2015	DAC & SDF	692	30			DEEP																										
693	45.945264	-89.05992	14	Anvil Lake	Vilas	7/28/2015	EJH & NLS	693	29		Rope	SAMPLED			0																						
694	45.945623	-89.059913	9	Anvil Lake	Vilas	7/28/2015	EJH & NLS	694	28		Rope	SAMPLED			0																						
695	45.945982	-89.059907	63	Anvil Lake	Vilas	7/29/2015	EJH & NLS	695	27		Rope	SAMPLED			0																						
696	45.946342	-89.059901	44	Anvil Lake	Vilas	7/29/2015	EJH & NLS	696	26		Rope	SAMPLED			0																						
697	45.946701	-89.059895	534	Anvil Lake	Vilas	7/29/2015	TWH & RAK	697	23		Rope	SAMPLED			0																						
698	45.94706	-89.059889	518	Anvil Lake	Vilas	7/29/2015	TWH & RAK	698	22		Rope	SAMPLED			0																						
699	45.947419	-89.059883	497	Anvil Lake	Vilas	7/29/2015	TWH & RAK	699	21		Rope	SAMPLED			0																						
700	45.947779	-89.059877	486	Anvil Lake	Vilas	7/29/2015	TWH & RAK	700	19		Rope	SAMPLED			1			1																				
701	45.948138	-89.059871	465	Anvil Lake	Vilas	7/29/2015	TWH & RAK	701	16		Rope	SAMPLED			1			1																				
702	45.948497	-89.059865	454	Anvil Lake	Vilas	7/29/2015	TWH & RAK	702	16		Pole	SAMPLED			2			2																				1
703	45.948857	-89.059859	434	Anvil Lake	Vilas	7/29/2015	TWH & RAK	703	13	Muck	Pole	SAMPLED			2			2				1																1
704	45.949216	-89.059853	424	Anvil Lake	Vilas	7/29/2015	TWH & RAK	704	9	Muck	Pole	SAMPLED			2			1				2							1					1			1	
705	45.949575	-89.059847	397	Anvil Lake	Vilas	7/29/2015	TWH & RAK	705	6	Sand	Pole	SAMPLED			1			1																			1	
706	45.949935	-89.059841	391	Anvil Lake	Vilas	7/29/2015	TWH & RAK	706	1	Sand	Pole	SAMPLED			1												1										
707	45.93951	-89.059502	58	Anvil Lake	Vilas	7/28/2015	TWH & RAK	707	0			TERRESTRIAL																										

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	Chara spp.	Elatine minima	Eleocharis acicularis	Eleocharis palustris	Elodea nuttallii	Eriocaulon aquaticum	Isoetes spp.	Juncus pelocarpus	Myriophyllum tenellum	Nitella spp.	Potamogeton amplifolius	Potamogeton berchtoldii	Potamogeton epihydrus	Potamogeton gramineus	Potamogeton spirillus	Potamogeton vaseyi	Ranunculus flammula	Sparganium androcladum	Sparganium eurycarpum	Vallisneria americana	Filamentous algae
708	45.93987	-89.059496	59	Anvil Lake	Vilas	7/28/2015	TWH & RAK	708	0			TERRESTRIAL																										
709	45.940229	-89.05949	60	Anvil Lake	Vilas	7/28/2015	TWH & RAK	709	0			TERRESTRIAL																											
710	45.942026	-89.059459	37	Anvil Lake	Vilas	7/28/2015	DAC & SDF	710	2	Rock	Pole	SAMPLED			2				1	1						1												
711	45.942385	-89.059453	40	Anvil Lake	Vilas	7/28/2015	DAC & SDF	711	5	Sand	Pole	SAMPLED			1					1		1					1					1					1	
712	45.942744	-89.059447	50	Anvil Lake	Vilas	7/28/2015	DAC & SDF	712	9	Sand	Pole	SAMPLED			2							1							1								1	
713	45.943104	-89.059441	56	Anvil Lake	Vilas	7/28/2015	DAC & SDF	713	23		Rope	SAMPLED			0																							
714	45.943463	-89.059435	64	Anvil Lake	Vilas	7/28/2015	DAC & SDF	714	25		Rope	SAMPLED			0																							
715	45.943822	-89.059429	305	Anvil Lake	Vilas	7/28/2015	TWH & RAK	715	27		Rope	SAMPLED			0																							
716	45.944181	-89.059423	308	Anvil Lake	Vilas	7/28/2015	TWH & RAK	716	29			DEEP																										
717	45.944541	-89.059417	27	Anvil Lake	Vilas	7/28/2015	EJH & NLS	717	30			DEEP																										
718	45.9449	-89.059411	291	Anvil Lake	Vilas	7/29/2015	DAC & SDF	718	30			DEEP																										
719	45.945259	-89.059404	15	Anvil Lake	Vilas	7/28/2015	EJH & NLS	719	28		Rope	SAMPLED			0																							
720	45.945619	-89.059398	8	Anvil Lake	Vilas	7/28/2015	EJH & NLS	720	28		Rope	SAMPLED			0																							
721	45.945978	-89.059392	62	Anvil Lake	Vilas	7/29/2015	EJH & NLS	721	27		Rope	SAMPLED			0																							
722	45.946337	-89.059386	45	Anvil Lake	Vilas	7/29/2015	EJH & NLS	722	26		Rope	SAMPLED			0																							
723	45.946697	-89.05938	533	Anvil Lake	Vilas	7/29/2015	TWH & RAK	723	24		Rope	SAMPLED			0																							
724	45.947056	-89.059374	517	Anvil Lake	Vilas	7/29/2015	TWH & RAK	724	23		Rope	SAMPLED			0																							
725	45.947415	-89.059368	498	Anvil Lake	Vilas	7/29/2015	TWH & RAK	725	22		Rope	SAMPLED			0																							
726	45.947774	-89.059362	485	Anvil Lake	Vilas	7/29/2015	TWH & RAK	726	21		Rope	SAMPLED			0																							
727	45.948134	-89.059356	466	Anvil Lake	Vilas	7/29/2015	TWH & RAK	727	18		Rope	SAMPLED			1			1																			
728	45.948493	-89.05935	453	Anvil Lake	Vilas	7/29/2015	TWH & RAK	728	16		Rope	SAMPLED			1			1																			1
729	45.948852	-89.059344	435	Anvil Lake	Vilas	7/29/2015	TWH & RAK	729	14	Muck	Pole	SAMPLED			1			1																			1
730	45.949212	-89.059338	423	Anvil Lake	Vilas	7/29/2015	TWH & RAK	730	9	Sand	Pole	SAMPLED			2			1				1											1			2	
731	45.949571	-89.059332	398	Anvil Lake	Vilas	7/29/2015	TWH & RAK	731	6	Sand	Pole	SAMPLED			2			1				1														1	
732	45.94993	-89.059325	390	Anvil Lake	Vilas	7/29/2015	TWH & RAK	732	1	Sand	Pole	SAMPLED			3				1	1					1									3				
733	45.942381	-89.058938	39	Anvil Lake	Vilas	7/28/2015	DAC & SDF	733	2	Sand	Pole	SAMPLED			1				1	1																	
734	45.94274	-89.058932	51	Anvil Lake	Vilas	7/28/2015	DAC & SDF	734	4	Sand	Pole	SAMPLED			1																						1	
735	45.943099	-89.058926	55	Anvil Lake	Vilas	7/28/2015	DAC & SDF	735	9	Sand	Pole	SAMPLED			2			2															2				
736	45.943459	-89.05892	65	Anvil Lake	Vilas	7/28/2015	DAC & SDF	736	20		Rope	SAMPLED			3												3										
737	45.943818	-89.058914	304	Anvil Lake	Vilas	7/28/2015	TWH & RAK	737	24		Rope	SAMPLED			0																							
738	45.944177	-89.058908	309	Anvil Lake	Vilas	7/28/2015	TWH & RAK	738	27		Rope	SAMPLED			0																							
739	45.944536	-89.058902	28	Anvil Lake	Vilas	7/28/2015	EJH & NLS	739	28		Rope	SAMPLED			0																							
740	45.944896	-89.058895	26	Anvil Lake	Vilas	7/28/2015	EJH & NLS	740	30			DEEP																										
741	45.945255	-89.058889	16	Anvil Lake	Vilas	7/28/2015	EJH & NLS	741	28		Rope	SAMPLED			0																							
742	45.945614	-89.058883	7	Anvil Lake	Vilas	7/28/2015	EJH & NLS	742	28		Rope	SAMPLED			0																							
743	45.945974	-89.058877	61	Anvil Lake	Vilas	7/29/2015	EJH & NLS	743	27		Rope	SAMPLED			0																							
744	45.946333	-89.058871	46	Anvil Lake	Vilas	7/29/2015	EJH & NLS	744	26		Rope	SAMPLED			0																							
745	45.946692	-89.058865	532	Anvil Lake	Vilas	7/29/2015	TWH & RAK	745	26		Rope	SAMPLED			0																							
746	45.947052	-89.058859	516	Anvil Lake	Vilas	7/29/2015	TWH & RAK	746	24		Rope	SAMPLED			0																							
747	45.947411	-89.058853	499	Anvil Lake	Vilas	7/29/2015	TWH & RAK	747	23		Rope	SAMPLED			0																							
748	45.94777	-89.058847	484	Anvil Lake	Vilas	7/29/2015	TWH & RAK	748	21		Rope	SAMPLED			0																							
749	45.94813	-89.058841	467	Anvil Lake	Vilas	7/29/2015	TWH & RAK	749	20		Rope	SAMPLED			2			2				1															
750	45.948489	-89.058835	452	Anvil Lake	Vilas	7/29/2015	TWH & RAK	750	16		Rope	SAMPLED			1			1																			
751	45.948848	-89.058829	436	Anvil Lake	Vilas	7/29/2015	TWH & RAK	751	12	Sand	Pole	SAMPLED			2			2				1															
752	45.949207	-89.058823	422	Anvil Lake	Vilas	7/29/2015	TWH & RAK	752	9	Sand	Pole	SAMPLED			2		1	1				1											1			1	
753	45.949567	-89.058816	399	Anvil Lake	Vilas	7/29/2015	TWH & RAK	753	5	Rock	Pole	SAMPLED			2			2																			
754	45.949926	-89.05881	389	Anvil Lake	Vilas	7/29/2015	TWH & RAK	754	1	Sand	Pole	SAMPLED			2				1	1						2											
755	45.942376	-89.058423	38	Anvil Lake	Vilas	7/28/2015	DAC & SDF	755	0			TERRESTRIAL																										
756	45.942736	-89.058417	52	Anvil Lake	Vilas	7/28/2015	DAC & SDF	756	1	Sand	Pole	SAMPLED			1					1																	
757	45.943095	-89.058411	53	Anvil Lake	Vilas	7/28/2015	DAC & SDF	757	2	Sand	Pole	SAMPLED			1					1																	
758	45.943454	-89.058405	66	Anvil Lake	Vilas	7/28/2015	DAC & SDF	758	4	Sand	Pole	SAMPLED			1					1																	
759	45.943814	-89.058399	303	Anvil Lake	Vilas	7/28/2015	TWH & RAK	759	16		Rope	SAMPLED			1			1																			
760	45.944173	-89.058393	310	Anvil Lake	Vilas	7/28/2015	TWH & RAK	760	24		Rope	SAMPLED			0																							
761	45.944532	-89.058387	29	Anvil Lake	Vilas	7/28/2015	EJH & NLS	761	26		Rope	SAMPLED			0																							
762	45.944892	-89.05838	25	Anvil Lake	Vilas	7/28/2015	EJH & NLS	762	28		Rope	SAMPLED			0																							
763	45.945251	-89.058374	17	Anvil Lake	Vilas	7/28/2015	EJH & NLS	763	28		Rope	SAMPLED			0																							
764	45.94561	-89.058368	6	Anvil Lake	Vilas	7/28/2015	EJH & NLS	764	28		Rope	SAMPLED			0																							
765	45.945969	-89.058362	60	Anvil Lake	Vilas	7/29/2015	EJH & NLS	765	27		Rope	SAMPLED			0																							
766	45.946329	-89.058356	47	Anvil Lake	Vilas	7/29/2015	EJH & NLS	766	27		Rope	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	Chara spp.	Elatine minima	Eleocharis acicularis	Eleocharis palustris	Elodea nuttallii	Eriocaulon aquaticum	Isoetes spp.	Juncus pelocarpus	Myriophyllum tenellum	Nitella spp.	Potamogeton amplifolius	Potamogeton berchtoldii	Potamogeton epihydrus	Potamogeton gramineus	Potamogeton spirillus	Potamogeton vaseyi	Ranunculus flammula	Sparganium androcladum	Sparganium eurycarpum	Vallisneria americana	Filamentous algae
767	45.946688	-89.05835	531	Anvil Lake	Vilas	7/29/2015	TWH & RAK	767	26		Rope	SAMPLED			0																							
768	45.947047	-89.058344	515	Anvil Lake	Vilas	7/29/2015	TWH & RAK	768	25		Rope	SAMPLED			0																							
769	45.947407	-89.058338	500	Anvil Lake	Vilas	7/29/2015	TWH & RAK	769	23		Rope	SAMPLED			0																							
770	45.947766	-89.058332	483	Anvil Lake	Vilas	7/29/2015	TWH & RAK	770	23		Rope	SAMPLED			0																							
771	45.948125	-89.058326	468	Anvil Lake	Vilas	7/29/2015	TWH & RAK	771	21		Rope	SAMPLED			0																							
772	45.948485	-89.05832	451	Anvil Lake	Vilas	7/29/2015	TWH & RAK	772	17		Rope	SAMPLED			0																							
773	45.948844	-89.058314	437	Anvil Lake	Vilas	7/29/2015	TWH & RAK	773	15	Sand	Pole	SAMPLED			1			1				1															
774	45.949203	-89.058307	421	Anvil Lake	Vilas	7/29/2015	TWH & RAK	774	10	Muck	Pole	SAMPLED			3			1				1														3	
775	45.949563	-89.058301	400	Anvil Lake	Vilas	7/29/2015	TWH & RAK	775	6	Sand	Pole	SAMPLED			1			1												1						1	
776	45.949922	-89.058295	388	Anvil Lake	Vilas	7/29/2015	TWH & RAK	776	2	Sand	Pole	SAMPLED			1											1											
777	45.943091	-89.057896	54	Anvil Lake	Vilas	7/28/2015	DAC & SDF	777	0			TERRESTRIAL																										
778	45.94345	-89.05789	67	Anvil Lake	Vilas	7/28/2015	DAC & SDF	778	1	Sand	Pole	SAMPLED			1					1						1											
779	45.943809	-89.057884	301	Anvil Lake	Vilas	7/28/2015	TWH & RAK	779	3	Sand	Pole	SAMPLED			0																						
780	45.944169	-89.057878	311	Anvil Lake	Vilas	7/28/2015	TWH & RAK	780	7	Sand	Pole	SAMPLED			1			1						1					1								1	
781	45.944528	-89.057871	30	Anvil Lake	Vilas	7/28/2015	EJH & NLS	781	23		Rope	SAMPLED			0																						
782	45.944887	-89.057865	24	Anvil Lake	Vilas	7/28/2015	EJH & NLS	782	25		Rope	SAMPLED			0																							
783	45.945247	-89.057859	18	Anvil Lake	Vilas	7/28/2015	EJH & NLS	783	27		Rope	SAMPLED			0																							
784	45.945606	-89.057853	5	Anvil Lake	Vilas	7/28/2015	EJH & NLS	784	27		Rope	SAMPLED			0																							
785	45.945965	-89.057847	59	Anvil Lake	Vilas	7/29/2015	EJH & NLS	785	27		Rope	SAMPLED			0																							
786	45.946325	-89.057841	48	Anvil Lake	Vilas	7/29/2015	EJH & NLS	786	27		Rope	SAMPLED			0																							
787	45.946684	-89.057835	530	Anvil Lake	Vilas	7/29/2015	TWH & RAK	787	26		Rope	SAMPLED			0																							
788	45.947043	-89.057829	514	Anvil Lake	Vilas	7/29/2015	TWH & RAK	788	24		Rope	SAMPLED			0																							
789	45.947402	-89.057823	501	Anvil Lake	Vilas	7/29/2015	TWH & RAK	789	24		Rope	SAMPLED			0																							
790	45.947762	-89.057817	482	Anvil Lake	Vilas	7/29/2015	TWH & RAK	790	23		Rope	SAMPLED			0																							
791	45.948121	-89.057811	469	Anvil Lake	Vilas	7/29/2015	TWH & RAK	791	22		Rope	SAMPLED			0																							
792	45.94848	-89.057805	450	Anvil Lake	Vilas	7/29/2015	TWH & RAK	792	20		Rope	SAMPLED			0																							
793	45.94884	-89.057798	438	Anvil Lake	Vilas	7/29/2015	TWH & RAK	793	16		Rope	SAMPLED			1			1				1															
794	45.949199	-89.057792	420	Anvil Lake	Vilas	7/29/2015	TWH & RAK	794	12	Sand	Pole	SAMPLED			3			1				2							1							2	
795	45.949558	-89.057786	401	Anvil Lake	Vilas	7/29/2015	TWH & RAK	795	6	Sand	Pole	SAMPLED			2			1				1							1							2	
796	45.949918	-89.05778	387	Anvil Lake	Vilas	7/29/2015	TWH & RAK	796	2	Sand	Pole	SAMPLED			2				1	1					1											1	
797	45.950636	-89.057768	313	Anvil Lake	Vilas	7/29/2015	TWH & RAK	797	0			TERRESTRIAL																										
798	45.950995	-89.057762	315	Anvil Lake	Vilas	7/29/2015	TWH & RAK	798	0			TERRESTRIAL																										
799	45.951355	-89.057756	316	Anvil Lake	Vilas	7/29/2015	TWH & RAK	799	0			TERRESTRIAL																										
800	45.951714	-89.05775	318	Anvil Lake	Vilas	7/29/2015	TWH & RAK	800	0			TERRESTRIAL																										
801	45.943805	-89.057369	302	Anvil Lake	Vilas	7/28/2015	TWH & RAK	801	0			TERRESTRIAL																										
802	45.944164	-89.057363	33	Anvil Lake	Vilas	7/28/2015	EJH & NLS	802	0	Rock	Pole	SAMPLED			1					1																	
803	45.944524	-89.057356	31	Anvil Lake	Vilas	7/28/2015	EJH & NLS	803	3	Sand	Pole	SAMPLED			2				1	1																	
804	45.944883	-89.05735	23	Anvil Lake	Vilas	7/28/2015	EJH & NLS	804	24		Rope	SAMPLED			0																							
805	45.945242	-89.057344	19	Anvil Lake	Vilas	7/28/2015	EJH & NLS	805	25		Rope	SAMPLED			0																							
806	45.945602	-89.057338	4	Anvil Lake	Vilas	7/28/2015	EJH & NLS	806	26		Rope	SAMPLED			0																							
807	45.945961	-89.057332	58	Anvil Lake	Vilas	7/29/2015	EJH & NLS	807	27		Rope	SAMPLED			0																							
808	45.94632	-89.057326	49	Anvil Lake	Vilas	7/29/2015	EJH & NLS	808	25		Rope	SAMPLED			0																							
809	45.94668	-89.05732	529	Anvil Lake	Vilas	7/29/2015	TWH & RAK	809	25		Rope	SAMPLED			0																							
810	45.947039	-89.057314	513	Anvil Lake	Vilas	7/29/2015	TWH & RAK	810	24		Rope	SAMPLED			0																							
811	45.947398	-89.057308	502	Anvil Lake	Vilas	7/29/2015	TWH & RAK	811	22		Rope	SAMPLED			1			1				1															
812	45.947758	-89.057302	481	Anvil Lake	Vilas	7/29/2015	TWH & RAK	812	22		Rope	SAMPLED			0																							
813	45.948117	-89.057296	470	Anvil Lake	Vilas	7/29/2015	TWH & RAK	813	21		Rope	SAMPLED			0																							
814	45.948476	-89.057289	449	Anvil Lake	Vilas	7/29/2015	TWH & RAK	814	20		Rope	SAMPLED			1			1				1															
815	45.948835	-89.057283	439	Anvil Lake	Vilas	7/29/2015	TWH & RAK	815	18		Rope	SAMPLED			1			1				1															
816	45.949195	-89.057277	419	Anvil Lake	Vilas	7/29/2015	TWH & RAK	816	15		Rope	SAMPLED			1			1																			
817	45.949554	-89.057271	402	Anvil Lake	Vilas	7/29/2015	TWH & RAK	817	11	Sand	Pole	SAMPLED			3			1				1														3	
818	45.949913	-89.057265	386	Anvil Lake	Vilas	7/29/2015	TWH & RAK	818	4	Sand	Pole	SAMPLED			1				1	1				1	1											1	
819	45.950273	-89.057259	385	Anvil Lake	Vilas	7/29/2015	TWH & RAK	819	0			TERRESTRIAL																										
820	45.950991	-89.057247	312	Anvil Lake	Vilas	7/29/2015	TWH & RAK	820	4	Muck	Pole	SAMPLED			3	1						1														3	
821	45.951351	-89.057241	314	Anvil Lake	Vilas	7/29/2015	TWH & RAK	821	3	Muck	Pole	SAMPLED			2			1				1														2	
822	45.95171	-89.057235	317	Anvil Lake	Vilas	7/29/2015	TWH & RAK	822	3	Muck	Pole	SAMPLED			1	V		1																			1	
823	45.952069	-89.057229	319	Anvil Lake	Vilas	7/29/2015	TWH & RAK	823	3	Muck	Pole	SAMPLED			2	V				1		1														2	
824	45.952428	-89.057222	320	Anvil Lake	Vilas	7/29/2015	TWH & RAK	824	2	Sand	Pole	SAMPLED										1												1			
825	45.94452	-89.056841	32	Anvil Lake	Vilas	7/28/2015	EJH & NLS	825	0			TERRESTRIAL																										

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	Chara spp.	Eleocharis acicularis	Eleocharis palustris	Elodea nuttallii	Eriocaulon aquaticum	Isoetes spp.	Juncus pelocarpus	Myriophyllum tenellum	Nitella spp.	Potamogeton amplifolius	Potamogeton berchtoldii	Potamogeton epihydrus	Potamogeton gramineus	Potamogeton spirillus	Potamogeton vaseyi	Ranunculus flammula	Sparganium androcladum	Sparganium eurycarpum	Vallisneria americana	Filamentous algae
826	45.944879	-89.056835	22	Anvil Lake	Vilas	7/28/2015	EJH & NLS	826	2	Sand	Pole	SAMPLED			1				1																		
827	45.945238	-89.056829	20	Anvil Lake	Vilas	7/28/2015	EJH & NLS	827	16		Rope	SAMPLED			1			1										1									
828	45.945597	-89.056823	3	Anvil Lake	Vilas	7/28/2015	EJH & NLS	828	23		Rope	SAMPLED			0																						
829	45.945957	-89.056817	57	Anvil Lake	Vilas	7/29/2015	EJH & NLS	829	24		Rope	SAMPLED			0																						
830	45.946316	-89.056811	50	Anvil Lake	Vilas	7/29/2015	EJH & NLS	830	25		Rope	SAMPLED			0																						
831	45.946675	-89.056805	528	Anvil Lake	Vilas	7/29/2015	TWH & RAK	831	24		Rope	SAMPLED			0																						
832	45.947035	-89.056799	512	Anvil Lake	Vilas	7/29/2015	TWH & RAK	832	21		Rope	SAMPLED			0																						
833	45.947394	-89.056793	503	Anvil Lake	Vilas	7/29/2015	TWH & RAK	833	17		Rope	SAMPLED			2			2																			
834	45.947753	-89.056787	480	Anvil Lake	Vilas	7/29/2015	TWH & RAK	834	20		Rope	SAMPLED			1			1																			
835	45.948113	-89.05678	471	Anvil Lake	Vilas	7/29/2015	TWH & RAK	835	20		Rope	SAMPLED			0																						
836	45.948472	-89.056774	448	Anvil Lake	Vilas	7/29/2015	TWH & RAK	836	19		Rope	SAMPLED			3			3			1																
837	45.948831	-89.056768	440	Anvil Lake	Vilas	7/29/2015	TWH & RAK	837	18		Rope	SAMPLED			1			1			1																
838	45.94919	-89.056762	418	Anvil Lake	Vilas	7/29/2015	TWH & RAK	838	17		Rope	SAMPLED			1			1																			
839	45.94955	-89.056756	403	Anvil Lake	Vilas	7/29/2015	TWH & RAK	839	16		Rope	SAMPLED			0																						
840	45.949909	-89.05675	404	Anvil Lake	Vilas	7/29/2015	TWH & RAK	840	10	Muck	Pole	SAMPLED			3			1			1															3	
841	45.950268	-89.056744	384	Anvil Lake	Vilas	7/29/2015	TWH & RAK	841	3	Sand	Pole	SAMPLED			1										1											1	
842	45.950628	-89.056738	383	Anvil Lake	Vilas	7/29/2015	TWH & RAK	842	0			TERRESTRIAL																									
843	45.950987	-89.056732	326	Anvil Lake	Vilas	7/29/2015	TWH & RAK	843	7	Muck	Pole	SAMPLED			2			1			1							1				1				2	
844	45.951346	-89.056726	325	Anvil Lake	Vilas	7/29/2015	TWH & RAK	844	7	Muck	Pole	SAMPLED			2	V		1			1															2	
845	45.951706	-89.05672	324	Anvil Lake	Vilas	7/29/2015	TWH & RAK	845	7	Muck	Pole	SAMPLED			3	2	1				1						1									2	
846	45.952065	-89.056713	323	Anvil Lake	Vilas	7/29/2015	TWH & RAK	846	7	Muck	Pole	SAMPLED			3	V		1			1															3	
847	45.952424	-89.056707	322	Anvil Lake	Vilas	7/29/2015	TWH & RAK	847	5	Muck	Pole	SAMPLED			3			1		1		1														2	
848	45.952784	-89.056701	321	Anvil Lake	Vilas	7/29/2015	TWH & RAK	848	3	Muck	Pole	SAMPLED			2	V		1		1		1														1	
849	45.945234	-89.056314	21	Anvil Lake	Vilas	7/28/2015	EJH & NLS	849	2	Sand	Pole	SAMPLED			1				1	1																	
850	45.945593	-89.056308	2	Anvil Lake	Vilas	7/28/2015	EJH & NLS	850	8	Sand	Pole	SAMPLED			1			1																		1	
851	45.945952	-89.056302	56	Anvil Lake	Vilas	7/29/2015	EJH & NLS	851	15	Sand	Pole	SAMPLED			1			1										1									
852	45.946312	-89.056296	51	Anvil Lake	Vilas	7/29/2015	EJH & NLS	852	0	18	Rope	SAMPLED			1			1																			
853	45.946671	-89.05629	527	Anvil Lake	Vilas	7/29/2015	TWH & RAK	853	18		Rope	SAMPLED			1			1																			
854	45.94703	-89.056284	511	Anvil Lake	Vilas	7/29/2015	TWH & RAK	854	14	Sand	Pole	SAMPLED			2			1			1							1									
855	45.94739	-89.056278	504	Anvil Lake	Vilas	7/29/2015	TWH & RAK	855	13	Sand	Pole	SAMPLED			3		2	1			2																
856	45.947749	-89.056271	479	Anvil Lake	Vilas	7/29/2015	TWH & RAK	856	13	Sand	Pole	SAMPLED			1			1			1							1									
857	45.948108	-89.056265	472	Anvil Lake	Vilas	7/29/2015	TWH & RAK	857	18		Rope	SAMPLED			2			2																			
858	45.948468	-89.056259	447	Anvil Lake	Vilas	7/29/2015	TWH & RAK	858	18		Rope	SAMPLED			1			1																			
859	45.948827	-89.056253	441	Anvil Lake	Vilas	7/29/2015	TWH & RAK	859	16		Rope	SAMPLED			1			1			1																
860	45.949186	-89.056247	417	Anvil Lake	Vilas	7/29/2015	TWH & RAK	860	17		Rope	SAMPLED			1			1			1																
861	45.949546	-89.056241	406	Anvil Lake	Vilas	7/29/2015	TWH & RAK	861	17		Rope	SAMPLED			1			1																			
862	45.949905	-89.056235	405	Anvil Lake	Vilas	7/29/2015	TWH & RAK	862	15	Muck	Pole	SAMPLED			1			1			1																
863	45.950264	-89.056229	381	Anvil Lake	Vilas	7/29/2015	TWH & RAK	863	13	Muck	Pole	SAMPLED			2			1			1																
864	45.950623	-89.056223	382	Anvil Lake	Vilas	7/29/2015	TWH & RAK	864	9	Muck	Rope	SAMPLED			3			1			2							1								3	
865	45.950983	-89.056217	327	Anvil Lake	Vilas	7/29/2015	TWH & RAK	865	9	Muck	Pole	SAMPLED			3			1			1														2	1
866	45.951342	-89.05621	328	Anvil Lake	Vilas	7/29/2015	TWH & RAK	866	9	Muck	Pole	SAMPLED			3	V		1			1							1								3	
867	45.951701	-89.056204	329	Anvil Lake	Vilas	7/29/2015	TWH & RAK	867	9	Muck	Pole	SAMPLED			3	2													1				1			1	
868	45.952061	-89.056198	330	Anvil Lake	Vilas	7/29/2015	TWH & RAK	868	8	Muck	Pole	SAMPLED			3	V		1			1							1								3	
869	45.95242	-89.056192	331	Anvil Lake	Vilas	7/29/2015	TWH & RAK	869	6	Muck	Pole	SAMPLED			3	V		1			1															3	
870	45.952779	-89.056186	332	Anvil Lake	Vilas	7/29/2015	TWH & RAK	870	4	Muck	Pole	SAMPLED			3	V		1		1	2															2	
871	45.945589	-89.055793	1	Anvil Lake	Vilas	7/28/2015	EJH & NLS	871	1	Sand	Pole	SAMPLED			1									1												
872	45.945948	-89.055787	55	Anvil Lake	Vilas	7/29/2015	EJH & NLS	872	5	Sand	Pole	SAMPLED			1			1																		1	
873	45.946308	-89.055781	52	Anvil Lake	Vilas	7/29/2015	EJH & NLS	873	7	Sand	Pole	SAMPLED			1			1																		1	
874	45.946667	-89.055775	526	Anvil Lake	Vilas	7/29/2015	TWH & RAK	874	9	Sand	Pole	SAMPLED			2			1			1							1	1							2	
875	45.947026	-89.055769	510	Anvil Lake	Vilas	7/29/2015	TWH & RAK	875	9	Muck	Pole	SAMPLED			2			1			1								1							2	
876	45.947385	-89.055763	505	Anvil Lake	Vilas	7/29/2015	TWH & RAK	876	7	Sand	Pole	SAMPLED			2			1			1												1			2	
877	45.947745	-89.055756	478	Anvil Lake	Vilas	7/29/2015	TWH & RAK	877	8	Sand	Pole	SAMPLED			2			2			1															1	
878	45.948104	-89.05575	473	Anvil Lake	Vilas	7/29/2015	TWH & RAK	878	8	Muck	Pole	SAMPLED			3			1										2				1				2	
879	45.948463	-89.055744	446	Anvil Lake	Vilas	7/29/2015	TWH & RAK	879	10	Sand	Pole	SAMPLED			3			1			1							1								2	
880	45.948823	-89.055738	442	Anvil Lake	Vilas	7/29/2015	TWH & RAK	880	12	Sand	Pole	SAMPLED			3			1			1							1								2	
881	45.949182	-89.055732	416	Anvil Lake	Vilas	7/29/2015	TWH & RAK	881	15		Rope	SAMPLED			2			1			1							1				1					1
882	45.949541	-89.055726	407	Anvil Lake	Vilas	7/29/2015	TWH & RAK	882	15		Rope	SAMPLED			1			1																			
883	45.949901	-89.05572	408	Anvil Lake	Vilas	7/29/2015	TWH & RAK	883	15		Rope	SAMPLED			2			2																			1
884	45.95026	-89.055714	380	Anvil Lake	Vilas	7/29/2015	TWH & RAK	884	14	Muck	Pole	SAMPLED			2			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	Chara spp.	Eleocharis acicularis	Eleocharis palustris	Elodea nuttallii	Eriocaulon aquaticum	Isoetes spp.	Juncus pelocarpus	Myriophyllum tenellum	Nitella spp.	Potamogeton amplifolius	Potamogeton berchtoldii	Potamogeton epihydrus	Potamogeton gramineus	Potamogeton spirillus	Potamogeton vaseyi	Ranunculus flammula	Sparganium androcladum	Sparganium eurycarpum	Vallisneria americana	Filamentous algae
885	45.950619	-89.055708	379	Anvil Lake	Vilas	7/29/2015	TWH & RAK	885	12	Muck	Pole	SAMPLED			2			1																	2	
886	45.950978	-89.055701	338	Anvil Lake	Vilas	7/29/2015	TWH & RAK	886	10	Muck	Pole	SAMPLED			1	1		1			1							1									1
887	45.951338	-89.055695	337	Anvil Lake	Vilas	7/29/2015	TWH & RAK	887	9	Muck	Pole	SAMPLED			2	V		1										2								2	
888	45.951697	-89.055689	336	Anvil Lake	Vilas	7/29/2015	TWH & RAK	888	10	Muck	Pole	SAMPLED			1	V	V	1									1									1	
889	45.952056	-89.055683	335	Anvil Lake	Vilas	7/29/2015	TWH & RAK	889	9	Muck	Pole	SAMPLED			3			1			1											1			2	
890	45.952416	-89.055677	334	Anvil Lake	Vilas	7/29/2015	TWH & RAK	890	8	Muck	Pole	SAMPLED			3			1			1															3	
891	45.952775	-89.055671	333	Anvil Lake	Vilas	7/29/2015	TWH & RAK	891	3	Sand	Pole	SAMPLED			1		V				1								1			1				1	
892	45.945944	-89.055272	54	Anvil Lake	Vilas	7/29/2015	EJH & NLS	892	0			TERRESTRIAL																									
893	45.946303	-89.055266	53	Anvil Lake	Vilas	7/29/2015	EJH & NLS	893	2	Sand	Pole	SAMPLED			0																						
894	45.946663	-89.05526	525	Anvil Lake	Vilas	7/29/2015	TWH & RAK	894	3	Sand	Pole	SAMPLED			1										1											1	
895	45.947022	-89.055254	508	Anvil Lake	Vilas	7/29/2015	TWH & RAK	895	4	Muck	Pole	SAMPLED			1			1																		
896	45.947381	-89.055247	506	Anvil Lake	Vilas	7/29/2015	TWH & RAK	896	4	Sand	Pole	SAMPLED			1					1					1											
897	45.94774	-89.055241	476	Anvil Lake	Vilas	7/29/2015	TWH & RAK	897	4	Sand	Pole	SAMPLED			2					2																1	
898	45.9481	-89.055235	474	Anvil Lake	Vilas	7/29/2015	TWH & RAK	898	2	Sand	Pole	SAMPLED			1									1						1						
899	45.948459	-89.055229	445	Anvil Lake	Vilas	7/29/2015	TWH & RAK	899	1	Sand	Pole	SAMPLED			0																						
900	45.948818	-89.055223	443	Anvil Lake	Vilas	7/29/2015	TWH & RAK	900	1	Sand	Rope	SAMPLED			0																						
901	45.949178	-89.055217	414	Anvil Lake	Vilas	7/29/2015	TWH & RAK	901	2	Sand	Pole	SAMPLED			2				1	1				1												1	
902	45.949537	-89.055211	410	Anvil Lake	Vilas	7/29/2015	TWH & RAK	902	5	Sand	Pole	SAMPLED			1			1																		1	
903	45.949896	-89.055205	409	Anvil Lake	Vilas	7/29/2015	TWH & RAK	903	15	Muck	Pole	SAMPLED			2			2																			1
904	45.950256	-89.055199	378	Anvil Lake	Vilas	7/29/2015	TWH & RAK	904	15	Muck	Pole	SAMPLED			1			1																			1
905	45.950615	-89.055192	377	Anvil Lake	Vilas	7/29/2015	TWH & RAK	905	12	Muck	Pole	SAMPLED			1			1				1															1
906	45.950974	-89.055186	339	Anvil Lake	Vilas	7/29/2015	TWH & RAK	906	11	Muck	Pole	SAMPLED			1			1																		1	1
907	45.951334	-89.05518	340	Anvil Lake	Vilas	7/29/2015	TWH & RAK	907	10	Muck	Pole	SAMPLED			2			1										1								2	
908	45.951693	-89.055174	341	Anvil Lake	Vilas	7/29/2015	TWH & RAK	908	10	Muck	Pole	SAMPLED			1			1				1					1										
909	45.952052	-89.055168	342	Anvil Lake	Vilas	7/29/2015	TWH & RAK	909	10	Muck	Pole	SAMPLED			1	1		1				1															1
910	45.952411	-89.055162	343	Anvil Lake	Vilas	7/29/2015	TWH & RAK	910	7	Muck	Pole	SAMPLED			3	V						2											1			3	
911	45.952771	-89.055156	344	Anvil Lake	Vilas	7/29/2015	TWH & RAK	911	0			DOCK																									
912	45.947018	-89.054738	509	Anvil Lake	Vilas	7/29/2015	TWH & RAK	912	0			TERRESTRIAL																										
913	45.947377	-89.054732	507	Anvil Lake	Vilas	7/29/2015	TWH & RAK	913	0			TERRESTRIAL																										
914	45.947736	-89.054726	477	Anvil Lake	Vilas	7/29/2015	TWH & RAK	914	0			TERRESTRIAL																										
915	45.948096	-89.05472	475	Anvil Lake	Vilas	7/29/2015	TWH & RAK	915	0			TERRESTRIAL																										
916	45.948814	-89.054708	444	Anvil Lake	Vilas	7/29/2015	TWH & RAK	916	0			TERRESTRIAL																										
917	45.949173	-89.054702	415	Anvil Lake	Vilas	7/29/2015	TWH & RAK	917	0			TERRESTRIAL																										
918	45.949533	-89.054696	413	Anvil Lake	Vilas	7/29/2015	TWH & RAK	918	0			TERRESTRIAL																										
919	45.949892	-89.05469	411	Anvil Lake	Vilas	7/29/2015	TWH & RAK	919	0			TERRESTRIAL																										
920	45.950251	-89.054683	374	Anvil Lake	Vilas	7/29/2015	TWH & RAK	920	14	Muck	Pole	SAMPLED			2			2										1									
921	45.950611	-89.054677	376	Anvil Lake	Vilas	7/29/2015	TWH & RAK	921	13	Muck	Pole	SAMPLED			2			2																			
922	45.95097	-89.054671	350	Anvil Lake	Vilas	7/29/2015	TWH & RAK	922	12	Muck	Pole	SAMPLED			2			1				1															1
923	45.951329	-89.054665	349	Anvil Lake	Vilas	7/29/2015	TWH & RAK	923	11	Muck	Pole	SAMPLED			2			1				1														1	1
924	45.951689	-89.054659	348	Anvil Lake	Vilas	7/29/2015	TWH & RAK	924	11	Muck	Pole	SAMPLED			2			1				1															1
925	45.952048	-89.054653	347	Anvil Lake	Vilas	7/29/2015	TWH & RAK	925	10	Muck	Pole	SAMPLED			1	1						1							1								1
926	45.952407	-89.054647	346	Anvil Lake	Vilas	7/29/2015	TWH & RAK	926	8	Muck	Pole	SAMPLED			3			1				2														2	
927	45.952766	-89.054641	345	Anvil Lake	Vilas	7/29/2015	TWH & RAK	927	0			TERRESTRIAL																										
928	45.949888	-89.054175	412	Anvil Lake	Vilas	7/29/2015	TWH & RAK	928	0			TERRESTRIAL																										
929	45.950247	-89.054168	375	Anvil Lake	Vilas	7/29/2015	TWH & RAK	929	0			TERRESTRIAL																										
930	45.950606	-89.054162	373	Anvil Lake	Vilas	7/29/2015	TWH & RAK	930	13	Muck	Pole	SAMPLED			2			2																			1
931	45.950966	-89.054156	351	Anvil Lake	Vilas	7/29/2015	TWH & RAK	931	12	Muck	Pole	SAMPLED			2			2				1															
932	45.951325	-89.05415	352	Anvil Lake	Vilas	7/29/2015	TWH & RAK	932	11	Muck	Pole	SAMPLED			1			1				1															
933	45.951684	-89.054144	353	Anvil Lake	Vilas	7/29/2015	TWH & RAK	933	11	Muck	Pole	SAMPLED			2	V		2				1															
934	45.952044	-89.054138	354	Anvil Lake	Vilas	7/29/2015	TWH & RAK	934	10	Muck	Pole	SAMPLED			3			3				1														1	1
935	45.952403	-89.054132	355	Anvil Lake	Vilas	7/29/2015	TWH & RAK	935	8	Muck	Pole	SAMPLED			3	1	V					2														2	
936	45.952762	-89.054126	356	Anvil Lake	Vilas	7/29/2015	TWH & RAK	936	0			TERRESTRIAL																										
937	45.950243	-89.053653	372	Anvil Lake	Vilas	7/29/2015	TWH & RAK	937	0			NONNAVIGABLE (PLANTS)																										
938	45.950961	-89.053641	361	Anvil Lake	Vilas	7/29/2015	TWH & RAK	938	11	Muck	Pole	SAMPLED			2			2				1															
939	45.951321	-89.053635	360	Anvil Lake	Vilas	7/29/2015	TWH & RAK	939	11	Muck	Pole	SAMPLED			2			2				1															1
940	45.95168	-89.053629	359	Anvil Lake	Vilas	7/29/2015	TWH & RAK	940	11	Muck	Pole	SAMPLED			1			1				1															1
941	45.952039	-89.053623	358	Anvil Lake	Vilas	7/29/2015	TWH & RAK	941	9	Muck	Pole	SAMPLED			3			1				1														3	
942	45.952399	-89.053617	357	Anvil Lake	Vilas	7/29/2015	TWH & RAK	942	1	Sand	Pole	SAMPLED			2				1	1					1												
943	45.950239	-89.053138	371	Anvil Lake	Vilas	7/29/2015	TWH & RAK	943	0			TERRESTRIAL																										

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	Chara spp.	Elatine minima	Eleocharis acicularis	Eleocharis palustris	Elodea nuttallii	Eriocaulon aquaticum	Isoetes spp.	Juncus pelocarpus	Myriophyllum tenellum	Nitella spp.	Potamogeton amplifolius	Potamogeton berchtoldii	Potamogeton epihydrus	Potamogeton gramineus	Potamogeton spirillus	Potamogeton vaseyi	Ranunculus flammula	Sparganium androcladum	Sparganium eurycarpum	Vallisneria americana	Filamentous algae
944	45.950598	-89.053132	369	Anvil Lake	Vilas	7/29/2015	TWH & RAK	944	0			NONNAVIGABLE (PLANTS)																											
945	45.951316	-89.05312	362	Anvil Lake	Vilas	7/29/2015	TWH & RAK	945	9	Muck	Pole	SAMPLED			3							3							1								2	
946	45.951676	-89.053114	363	Anvil Lake	Vilas	7/29/2015	TWH & RAK	946	9	Muck	Pole	SAMPLED			3	1		1				2															2	
947	45.952035	-89.053108	364	Anvil Lake	Vilas	7/29/2015	TWH & RAK	947	4	Muck	Pole	SAMPLED			2					1						1											1	
948	45.950594	-89.052617	370	Anvil Lake	Vilas	7/29/2015	TWH & RAK	948	0			NONNAVIGABLE (PLANTS)																											
949	45.950953	-89.052611	366	Anvil Lake	Vilas	7/29/2015	TWH & RAK	949	2	Sand	Pole	SAMPLED			2	1						1														1			
950	45.951312	-89.052605	365	Anvil Lake	Vilas	7/29/2015	TWH & RAK	950	2	Sand	Pole	SAMPLED			1					1		1															1	
951	45.951672	-89.052599	368	Anvil Lake	Vilas	7/29/2015	TWH & RAK	951	0			TERRESTRIAL																											
952	45.951308	-89.05209	367	Anvil Lake	Vilas	7/29/2015	TWH & RAK	952	0			TERRESTRIAL																											

C

APPENDIX C

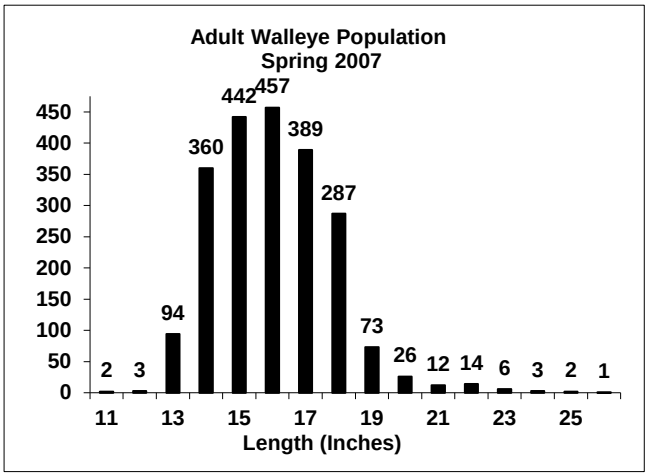
WDNR 2007 Fisheries Information Sheet

WISCONSIN DNR
FISHERIES INFORMATION SHEET

LAKE: ANVIL **COUNTY:** VILAS **YEAR:** 2007

The Department of Natural Resources conducted a fisheries survey of Anvil Lake, Vilas County, from April 20th through May 30, 2007. The goal of this survey was to obtain detailed information on all gamefish species present and evaluate the current walleye regulation. Information was collected on panfish and non-game species captured during our sampling efforts, but this information should not be viewed as comprehensive.

Anvil Lake is a moderately fertile, seepage lake with predominantly sand/gravel substrate. It is located eight miles east of the town of Eagle River. It has a surface area of 398 acres, 4.8 miles of shoreline, and a maximum depth of 32 feet.



* **Note**: Adult walleye are defined as all sexable walleye regardless of length and only those of unknown sex ≥ 15 inches

Walleye

We conducted a mark-recapture survey of Anvil Lake's adult walleye* population. We captured and marked (fin clipped) 744 adult walleye in four days of fyke netting. The lake was then sampled with electro-fishing gear on the night of April 23 and 260 adult walleye were captured.

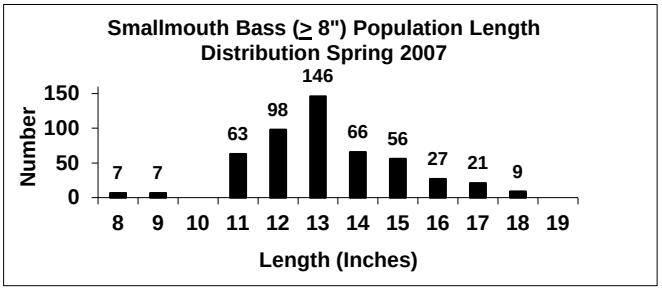
Based on these results, we estimated that this lake is home to about 2,171 adult walleye (5.5/acre). This number is significantly lower than the population estimate conducted in 1991 (11.2/acre), but slightly above the 2006 estimate of 4.7/acre. This population is above our management goals for adult walleye of 3 to 4 adults per acre. Compared to the 1991 survey the number of fish over 18 inches has increased from 109 to 425. Since the slot size limit went into effect in 1997 we would have expected an increase in the numbers of walleye between 14 and 18 inches and this has also occurred. Reduced harvest of slot fish and a 3 fish bag limit are the major reasons for the current walleye fishery.

The largest walleye we captured this spring was a 26.0 inch long female.

Smallmouth Bass

We also completed a mark-recapture survey of Anvil Lake's smallmouth bass this spring. Based on this survey we estimated that the lake was home to 500 smallmouth bass (1.3/acre) over eight inches in length. Of these, 179 (35.8%) were 14 inches long or larger and 9 (1.8%) were over 18 inches. The largest smallmouth bass we captured was 18.5 inches long and weighed just over 3lbs.

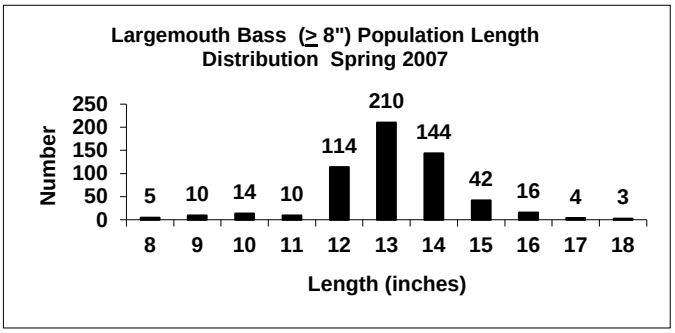
The smallmouth bass fishery appears to be lacking larger fish and to be a low density population. The current 14 inch size and five fish bag limit appear to be the reason for the lack of quality in this fishery.



Largemouth Bass

This lake appears to have more smallmouth bass habitat than largemouth habitat, but we captured slightly more largemouth in our sampling. Based on our work we estimated that the lake was home to 567 largemouth bass (1.4/acre) over eight inches in length. Of these, 209 (36.5%) were 14 inches long or larger and 3 (0.5%) were over 18 inches in length. The largest largemouth bass we captured was 18.0 inches long.

Like the smallmouth bass fishery, the largemouth bass population appears to lack numbers of larger fish.



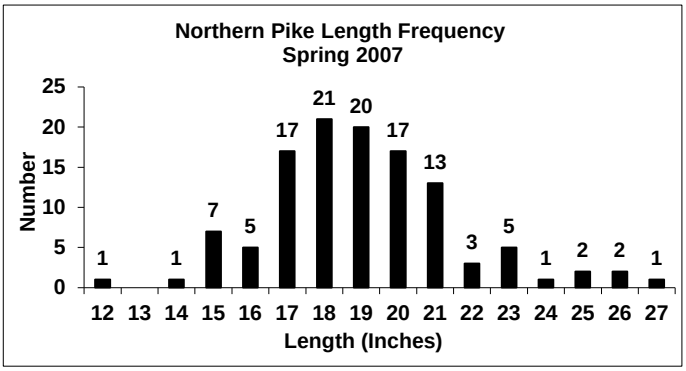
Drafted: June 11, 2007
By: Steve Gilbert

File: Anvil Summary 07.xls

Northern Pike

No attempt was made to estimate the number of Northern pike in the lake. A total of 116 pike were captured during this survey. Twenty seven (23.3%) of these were 21 inches or longer. The largest northern pike we captured was a 27.3 inch female.

Overall the pike fishery is in fair condition and has the potential to produce a few quality fish. This is not unusual for lakes in our area and there is currently no active management plan for this species on this lake.



Other Species

In this survey we captured 6 species of fish in addition to those already discussed. Modest numbers of the following species were present: yellow perch, black crappie, pumpkinseed, and rock bass. White sucker and bluegill are abundant.

2007 General Fishing Regulations for Anvil Lake, Vilas County

FISH SPECIES	OPEN SEASON	DAILY LIMIT	MINIMUM LENGTH
Walleye	May 6 - March 4	3**	14" to 18" slot, I over 18 inches
Largemouth and Smallmouth Bass	May 6 - June 16 (C&R) June 17 - March 4 (Harvest)	5	14 inches
Northern Pike	May 6 - March 4	5	None

** The bag limit is normally 5 but was adjusted due to tribal harvest of walleye that occurred in 2007

A brief summary of selected fishing regulations for Anvil Lake is included above. While the regulatory information provided was current at the time the surveys were conducted, it is not comprehensive and should not be used as a substitute for the current fishing regulation pamphlet. You may obtain a copy of the current fishing regulations when you purchase your fishing license, or download a copy from our web site at:

http://www.dnr.wi.gov

Questions about this report, fisheries management activities, and future plans for this lake should be directed to:

Stephen Gilbert, Fisheries Biologist
Wisconsin Department of Natural Resources
8770 Highway J
Woodruff, WI 54568
(715) 358-9229
Email: stephen.gilbert@dnr.wisconsin.gov

Drafted: June 11, 2007
By: Steve Gilbert

File: Anvil Summary 07.xls

D

APPENDIX D

Comments on Draft Documents

Comments to Anvil Lake Draft Comprehensive Management Plan – November 2016

Responses in red by Emily Henrigillis
Responses in blue by Eddie Heath
Responses in green by Todd Hanke

Comments from Kevin Gauthier (WDNR Water Resources Management Specialist)

1. The P budget done by Dale Robertson et al. was very interesting. I can't remember the circumstances of why Anvil was targeted for that study, but the information is tremendously useful. No response required
2. Also, the paleolimnology aspect is also important, and contributes to the thoroughness of the project. No response required
3. Together, the P budget, the paleolimnological study, the shoreland assessment, and the series of aquatic plant surveys, this is a remarkably complete picture of Anvil Lake. No response required
4. The EWM in the north bay must be frightening to ALA. Perhaps more attention could have been devoted to treating that bay separately from the rest of the lake. Perhaps focus hand-harvesting efforts at the southern edge? No response required
5. "In regards to Anvil Lake, the North Bay is a relatively protected part of the lake that if targeted with herbicides, may function like a large-scale treatment". (p. 79). I am not sure what is meant by this. Would it function like a large-scale treatment in the sense that it is more likely to be successful, or large in the sense that the herbicide will circulate around the entire lake. I expect the former is meant, but it seems like a contradictory statement. Text was added to this area for clarity.
6. NLFL is from Nichol's FQI and ACMI papers and refers to Northern Lakes and Forest, Lakes (as opposed to NLFF: Northern Lakes and Forest, Flowages) so NFL and NLFL are both referring to northern lakes, I believe. Fixed – see below
7. My only criticism is that the constant back and forth between background information and Anvil-specific results makes it hard to find the meat, and hard to follow.

· A lot of the EWM discussion and data analysis presented is specifically on North Bay, with less focus on lakewide (littoral) EWM % frequency. I agree that North Bay seems to be an area of management concern (the sub-PI and peak biomass mapping data indicate that EWM has been increasing relatively steadily over the past few years in that area; see Fig. 3.4-10 & Fig. 3.4-12), so I understand why the APM plan focuses primarily on that. However, I don't see much mention of EWM distribution on a lakewide/littoral scale, which I think is important to also include in this APM plan, especially when making comparisons to the 10-yr EWM LTT dataset. The 2012 PI (immediately after detection) found EWM at a littoral %FOO = 0.45% (3/661 sites). The most recent 2015 PI (~3 yrs after detection) found EWM at a littoral %FOO = 1.19% (9/754 sites; as well as 13 visuals). My point is not to downplay the apparent localized (i.e. North Bay) EWM increase in the lake (which I think is important to draw attention to), but rather to put the current overall state of EWM invasion into a broader lakewide context (as well as in statewide context when making comparisons to the EWM LTT dataset). If you had to try and make a comparison between Anvil Lake and one of the unmanaged NLF EWM LTT lakes, it currently seems to be on a "Hancock Lake" trajectory (low lakewide %FOO maintained over

several years) vs. a BearPaw Lake or Weber Lake trajectory (relatively rapid lakewide increase in first few years of invasion, followed by a decline). Of course, we also know that unmanaged EWM populations are more stochastic and unpredictable on an annual basis, so it's uncertain what the actual short- and long-term EWM trajectory will be in this particular lake. The concern with the statements above is that the study looked at a 10-year time frame and the beginning of the dataset is not the EWM detection date for many of the lakes. Using the 2016 point-intercept sub-sample data, the lake-wide occurrence would be 4.6% if no other sampling location contained EWM outside of the North Bay.

- Seeing that there a very few dominant plant species in Anvil, I think Fig.3.4.-6 could be expanded to include some additional species (not just those >4%). At minimum I would like to see EWM & CLP also displayed in this figure, even though they are at a low % (again, I think this helps put the low lakewide % frequency of these AIS species in broader context of the overall native community). These data are shown on Figure 3.4-5. Statistical validity of comparing species at low frequency of occurrence is tricky. For instance, the cutoff used for the current peer-reviewed paper we are working with is 10%.
- Minor typo: "Silver Lake" on pg. 69 (2nd paragraph; 1st sentence) instead of "Anvil Lake" Corrected
- The ecoregion is called "Northern Lakes and Forests" (NLF). In some places in the aquatic plant section it is referred to as " Northern Lakes and Forests Lakes" (NLFL), which I believe is incorrect terminology. It has been changed throughout the document to NLF, the graphs were also updated.
- Last sentence on p. 87: Based upon the implementation plan table, I believe this statement should say "….give this method a three-year trial before considering other management options" (the word 'year' is currently missing). Year has been added

Comments from Ashley McLaughlin (Water Resource Management - LTE)

I reviewed the management plan and application for AEPP-460-15.

Overall I think the draft plan hits very well on all the goals/topics included in the approved application. The only thing that I feel could have been done better in the management plan was to provide a precise plan to explain how they intend to educate lake-users. The management plan gives a few examples of intended communication (buoys and signs) but I would like to see a list of specific activities, awareness events, and educational materials they intend to complete. Some text was added about the steps that have been taken to date in regards to the educational initiative. With the framework outlined in implementation plan, the ALA should have the flexibility to develop the materials they feel appropriate at that time.

Comments from Steve Gilbert (WDNR Fisheries NR Region Team Supervisor)

Here are my comments:

Page 1 Graph of water levels – Where did this data come from, just curious. The water level data shown on Figure 1.0-1 has been put together mostly through the USGS with some collaboration from Paul Garrison.

Page 82 end of first paragraph. As of 2015, we no longer use this sliding bag system. All lakes, unless they have a more restrictive base reg have a three fish bag limit. Safe harvest is also now set using a new method. This is covered in the attached paper. Updated

Page 83 Last paragraph first sentence. I do not believe that 94% of the littoral zone substrate is muck. Sand maybe, but not muck. The PI actually showed that 63% was sand, 33% muck and 4% rock. The words were updated to match this data.

Page 84 Table 3.5-2. Northern pike season is May 7 to March 5. Updated

Comments from Hadley Boehm (WDNR Vilas County Fiseries Biologist)

I have a couple corrections regarding sampling methods, but nothing big. Added text tying in mark/ recapture methods leading to population estimates. It would also be useful to make the connection between how those data are used to set safe harvest. Also, you could talk about how fall electrofishing actually documented occurrence of natural walleye reproduction. Added a sentence stating the natural reproduction of walleye was documented in 2017. As it's written now, presence of NR comes off as being suspect (or at least that's how I read it). Minor edits include capitalization of "Ceded Territory" and changing wording from Indian to Tribal where applicable. Fixed these. It would probably be preferable if you included Anvil's spearing harvest over time rather than the overall Ceded Territory. The data is from Anvil specifically. Creel data would be good to include if we have it (I think there's a semi-recent creel out there but will have to look). Only found creel data from 1991 which seemed too outdated to include.

Todd Hanke and Josephine Barlament (Onterra) met in person with Hadley on 12-7-17 from which some addition minor edits were made. These included a re-wording of the survey methods section and the addition of disclaimer text in the species list and regulations portions of the document. Also added a sentence at end of the habitat section to state 'contact the fisheries biologist to discuss the applicability of the fish sticks program as it relates to fisheries habitat and management goals for the lake.

Comments from Susan Knight (Interim Director, Trout Lake Station)

I did a quick calculation from the Anvil 2010 PI, and the sediment breakdown was 58% muck and 42% sand. Using the point-intercept method to determine sediment type has its shortcomings as marl and detritus on top of sand may give the sampler the impression that the sediment is muck (one of 3 categories the sampler is forced to pick from). acoustic-based sediment sampling survey (page 61, Figure 3.4-3) during this discussion