A

APPENDIX A

Public Participation Materials

Shishebogama & Gunlock Lakes Management Planning Project

Kick-Off Presentation

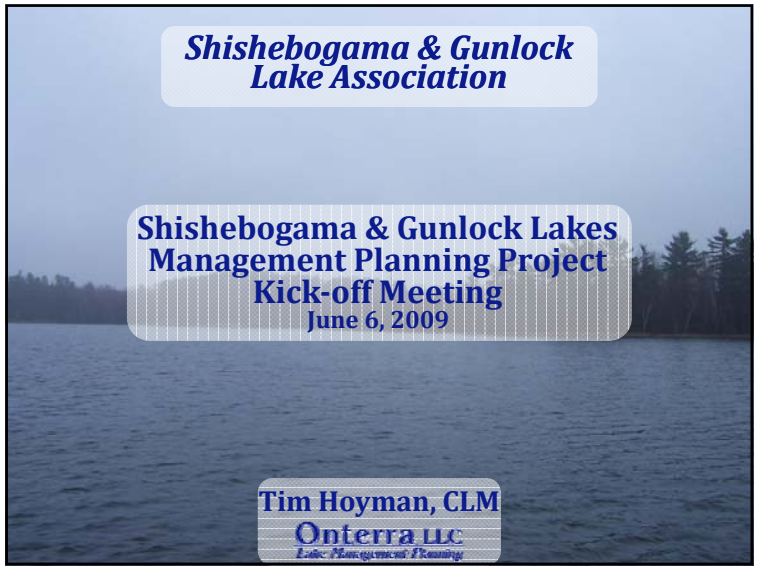
June 6, 2009 - 9:30 AM

Arbor Vitae Town Hall, 10672 Big Arbor Vitae Drive

Aquatic ecologist, Tim Hoyman, speaks to a lake group in Waushara County about their lake management plan. Public participation will be integral part of the Shishebogama & Gunlock Lakes project.

The Shishebogama and Gunlock Lakes Association has received three grants totaling $30,000 from the Wisconsin Department of Natural Resources to partially fund the completion of comprehensive management plans for Shishebogama and Gunlock Lakes. The design for the planning project has been finalized and approved by the WDNR and includes two primary objectives: 1) the completion of in-depth studies including multiple plant surveys, water quality sampling, and watershed investigations; and 2) the completion of a realistic management plan for the lakes and their watersheds. Most of the studies will be completed during this spring, summer and fall. The tasks associated with the analysis of the data will be completed during the fall and winter. The project will also incorporate opportunities for stakeholder education and input, which are both very important components of all lake management planning efforts. The first opportunity for your participation in the process will be at the Spring Association Meeting to be held on Saturday, June 6th at 9:30 am at the Arbor Vitae Town Hall.

Onterra, LLC, a lake management planning firm out of De Pere, has been hired to lead the project. During the meeting Tim Hoyman, an Aquatic Ecologist with Onterra, will describe the project and its importance. His presentation will include a description of the project's components, a quick course on general lake ecology, and a breakdown of how the Association's Planning Committee will be involved in the plan's completion. So, please plan on attending the meeting and do not hesitate to ask questions or make comments.



Presentation Outline

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

Onterra, LLC

- Founded in 2005
- Staff
  - Three full-time ecologists
  - Two part-time ecologists
  - Two interns
- Services
  - Science and planning
- Philosophy
  - Promote realistic planning
  - Assist, not direct

A goal without a plan is just a wish!

Why create a lake management plan?

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

Elements of an Effective Lake Management Planning Project

Data and Information Gathering

Environmental & Sociological

Planning Process

Brings it all together

Data and information gathering

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

Water Quality Analysis

- General water chemistry
- Nutrient analysis
  - Lake trophic state (Eutrophication)
  - Limiting plant nutrient
- Supporting data for watershed modeling

Watershed Assessment

- Delineation of drainage basin
- Modeling
  - Land cover
  - Phosphorus loading
  - Scenario development

Aquatic Plant Surveys

- Concerned with both native and non-native plants

Non-native Aquatic Plants

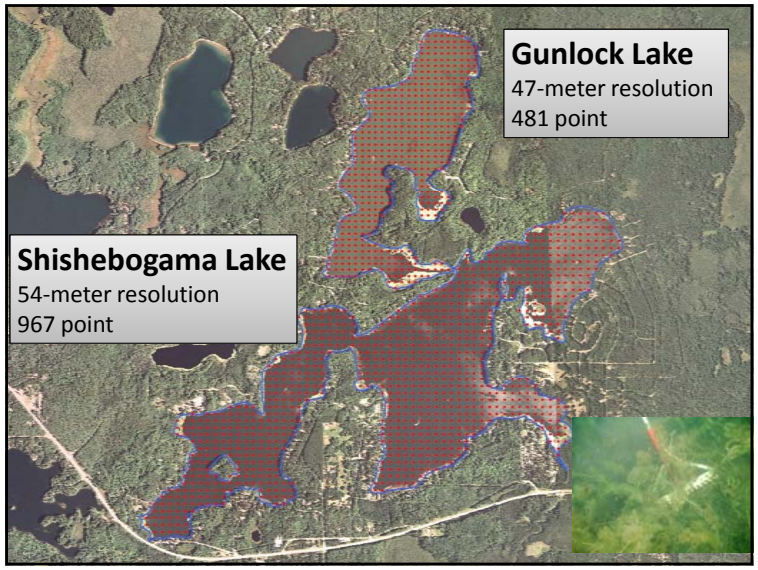
Curly-leaf Pondweed

Non-native Aquatic Plants

Eurasian Water Milfoil

Aquatic Plant Surveys

- Concerned with both native and non-native plants
- Multiple surveys used in assessment
  - Curly-leaf pondweed survey
  - Point-intercept survey



Aquatic Plant Surveys

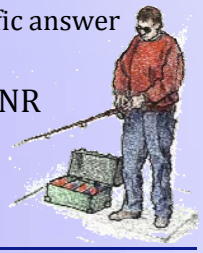
- Concerned with both native and non-native plants
- Multiple surveys used in assessment
  - Curly-leaf pondweed survey
  - Point-intercept survey
  - Plant community mapping
  - Volunteer survey findings

Fisheries Data Integration

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

Stakeholder Survey

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



Planning Process

Planning Committee Meetings

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

Implementation Plan

Thank You

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

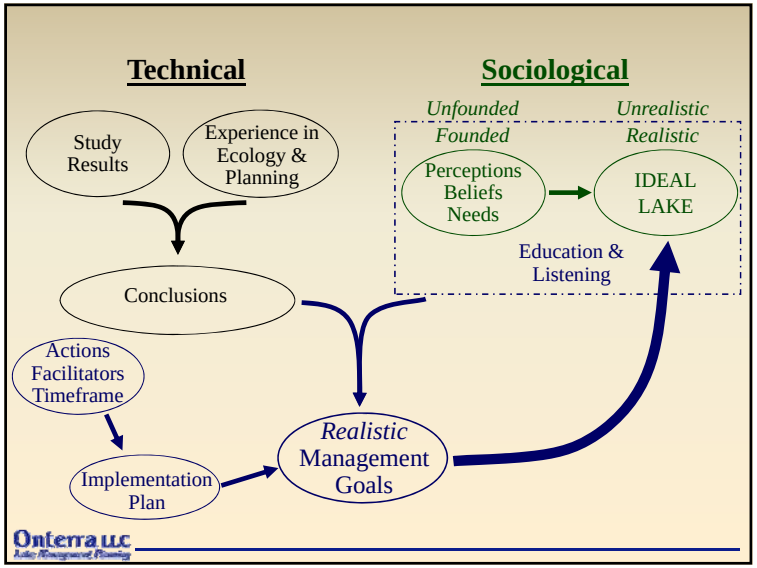
Wisconsin Lakes Partnership

UWEX Extension

Wisconsin Dept. of Natural Resources

The Planning Process

…it's not as easy as you may think.



Shishebogama and Gunlock Lakes Protection and Rehabilitation District

Shishebogama and Gunlock Lakes
Management Planning Project
Planning Meeting I
August 3, 2010

Tim Hoyman
Onterra LLC
Lake Management Planning

Presentation Outline

- Lake Management Planning Project Overview
- Study Results
  - Water Quality
  - Watershed
  - Aquatic Plants
  - Miscellaneous Findings
- "Big Picture"
- Goals and Actions Discussion

Study and Plan Goals

- Collect & Analyze Data
- Construct Long-Term & Useable Plan

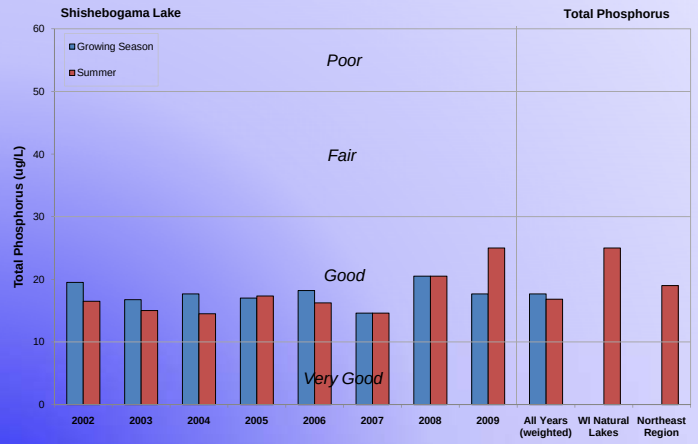
Overall Lake Health

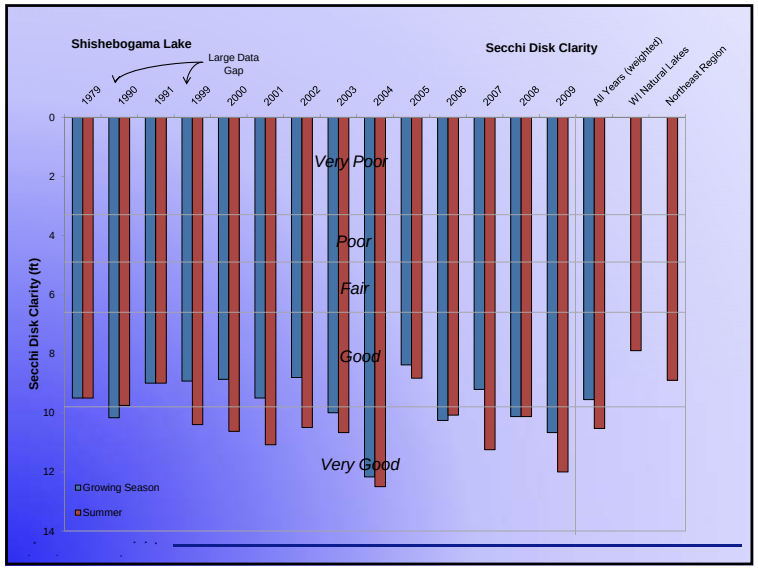
- Very good for both lakes
  - Water quality
  - Watershed
  - Aquatic Plants
- Management Plan: Protection Mode

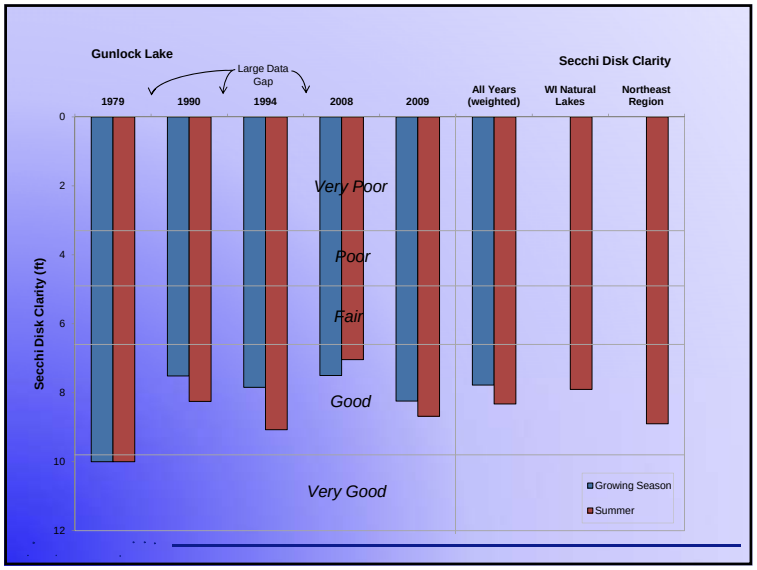
Water Quality

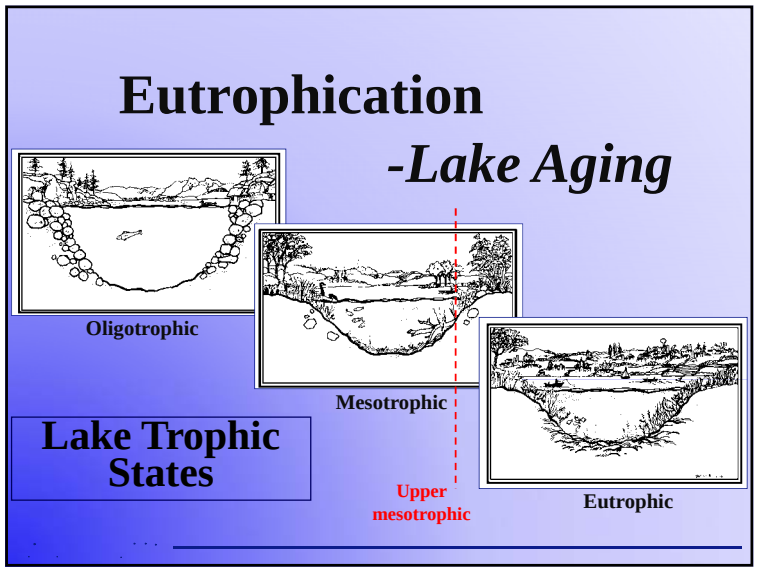
- Phosphorus (Limiting Plant Nutrient)
- Chlorophyll-*a* (Algal Abundance)
- Water Clarity (Secchi Disk)

Lillie Mason Regions



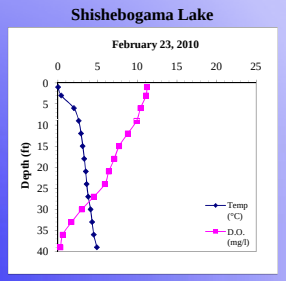


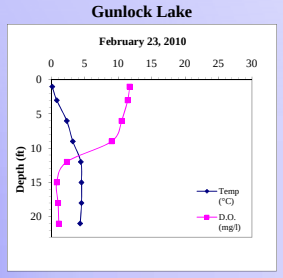


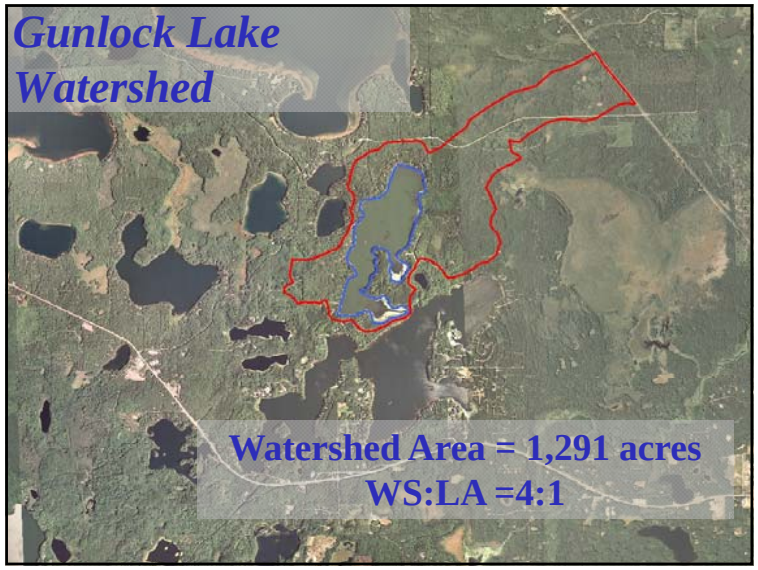


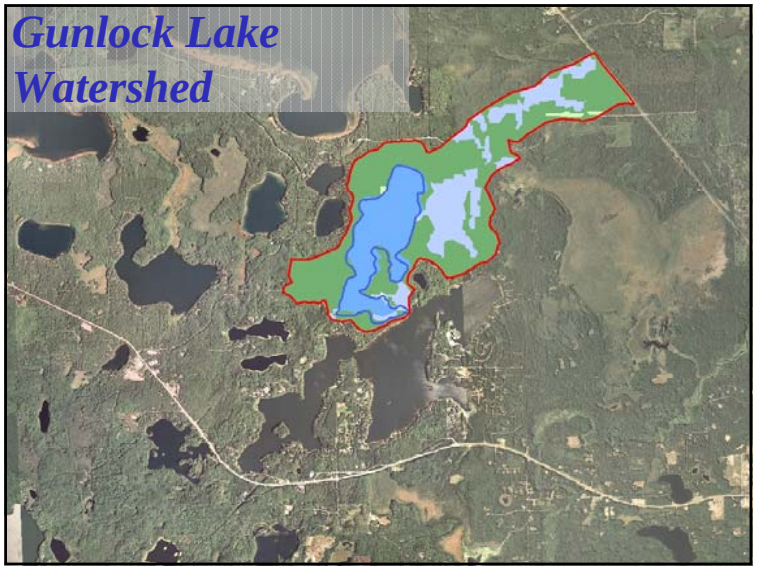
Additional Water Quality Results

- Dissolved Oxygen and Temperature Profiles
  - Both lakes stratify in winter only
  - Very limited anoxia occurs near lake bottom during summer
  - Larger anoxic zone in winter, though still no concern for fish-kills






Gunlock Lake
Watershed
Watershed Area = 1,291 acres
WS:LA =4:1


Gunlock Lake
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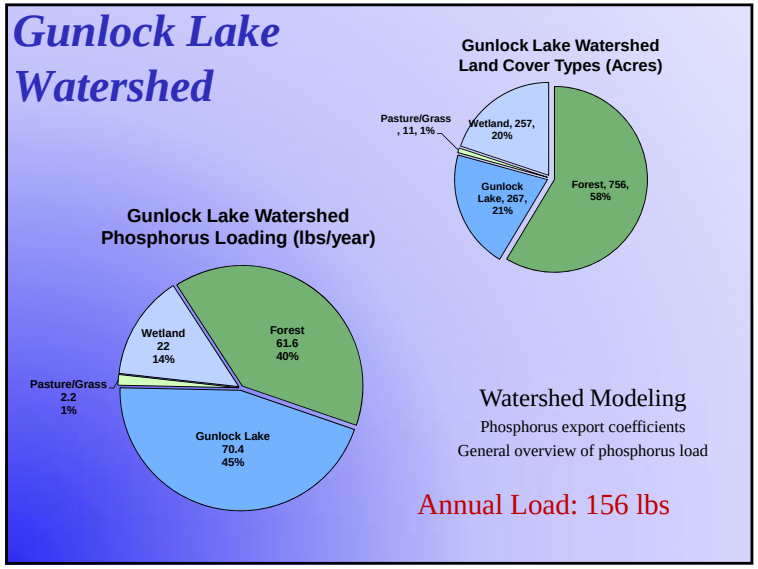
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Watershed
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Land Cover Types (Acres)
Pasture/Grass , 11, 1%
Wetland, 257, 20%
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Forest, 756, 58%
Gunlock Lake Watershed
Phosphorus Loading (lbs/year)
Wetland 22 14%
Forest 61.6 40%
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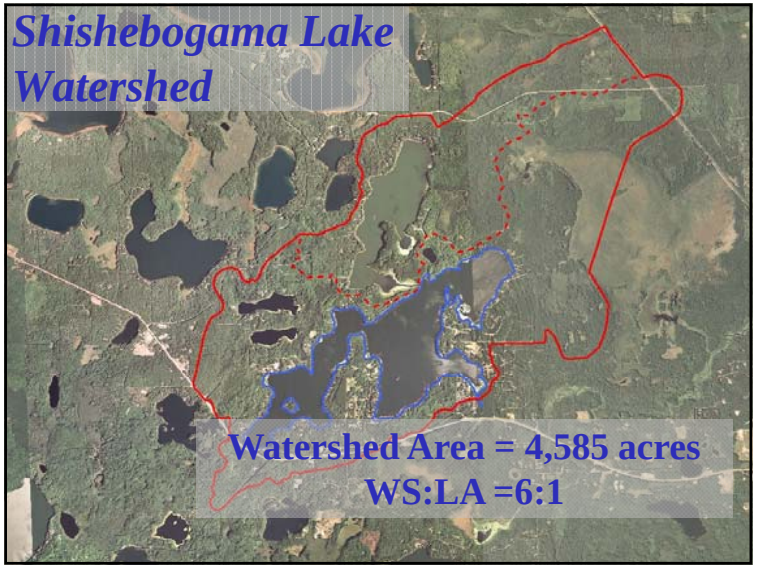
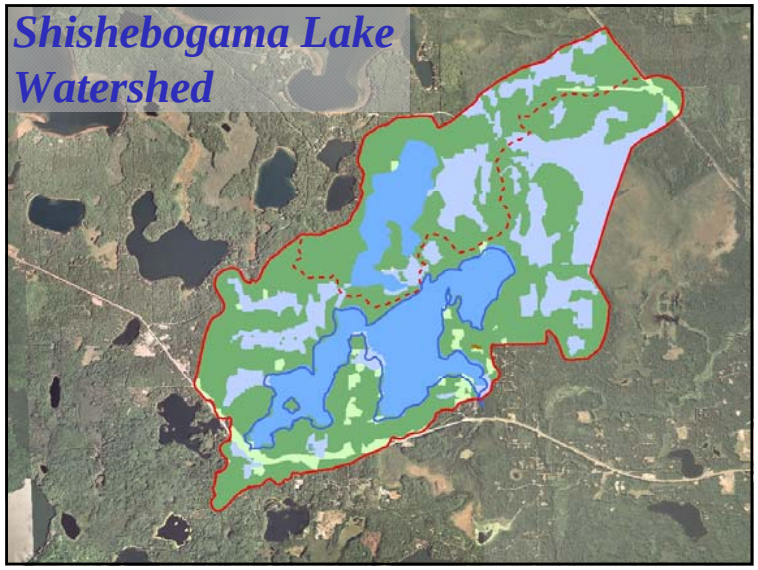
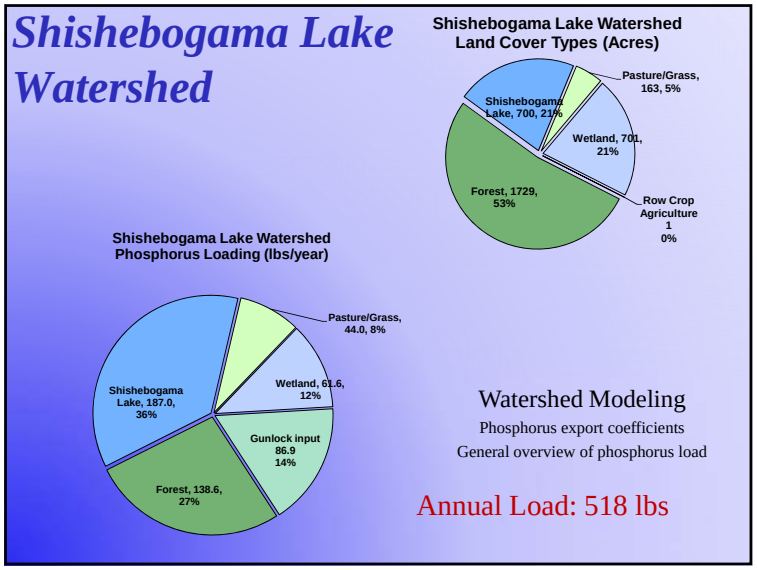
Gunlock Lake 70.4 45%
Watershed Modeling
Phosphorus export coefficients
General overview of phosphorus load
Annual Load: 156 lbs


Shishebogama Lake
Watershed
Watershed Area = 4,585 acres
WS:LA =6:1


Shishebogama Lake Watershed


Shishebogama Lake Watershed
Shishebogama Lake Watershed Land Cover Types (Acres)
Shishebogama Lake, 700, 21%
Pasture/Grass, 163, 5%
Wetland, 701, 21%
Forest, 1729, 53%
Row Crop Agriculture 1 0%
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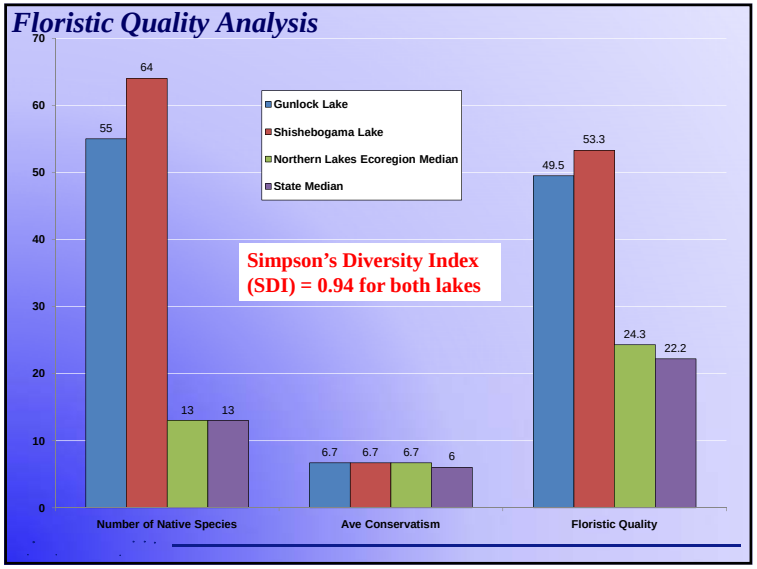
Aquatic Plants
Wisconsin Ecoregions
Northern Lakes and Forests
Shishebogama and Gunlock Lakes
North Central Hardwood Forests
Driftless Area
Southeastern Wisconsin Till Plains


Floristic Quality Analysis
70
60
50
40
30
20
10
0
Gunlock Lake
Shishebogama Lake
Northern Lakes Ecoregion Median
State Median
55
64
13
13
6.7
6.7
6.7
6
49.5
53.3
24.3
22.2
Simpson's Diversity Index (SDI) = 0.94 for both lakes
Number of Native Species
Ave Conservatism
Floristic Quality

Conclusions

- Water quality is very good in both lakes
  - Moderate phosphorus concentrations, great water clarity
  - Need to establishWQ monitoring on Gunlock Lake
    - Advanced CLMN or other volunteer efforts
- Overall watershed is in great condition.
  - Watersheds are small and contain land cover that exports minimal phosphorus.
  - Largest, *controllable* contributor is likely shoreland properties.

Conclusions

- Aquatic plant community
  - Based upon standard analysis, native community is of excellent quality indicative of an undisturbed system.
  - Both lakes hold a very high species richness.
  - No submersed exotic plants (Eurasian water milfoil, curly-leaf pondweed) discovered.
    - Continue CBCW surveillance
    - Continue volunteer shoreland sweeps

Thank You

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

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Shishebogama and Gunlock Lakes Association

Shishebogama and Gunlock Lakes
Management Planning Project
Project Wrap-up Meeting
August 21, 2010

Tim Hoyman
Onterra LLC
Lake Management Planning

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- "Big Picture"
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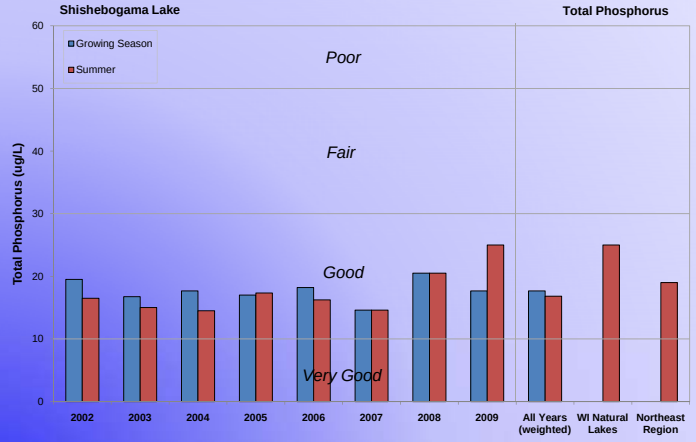
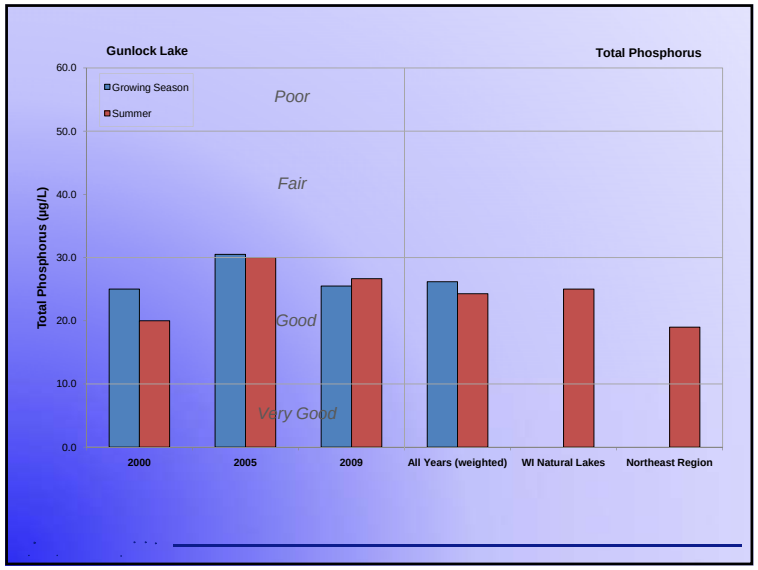
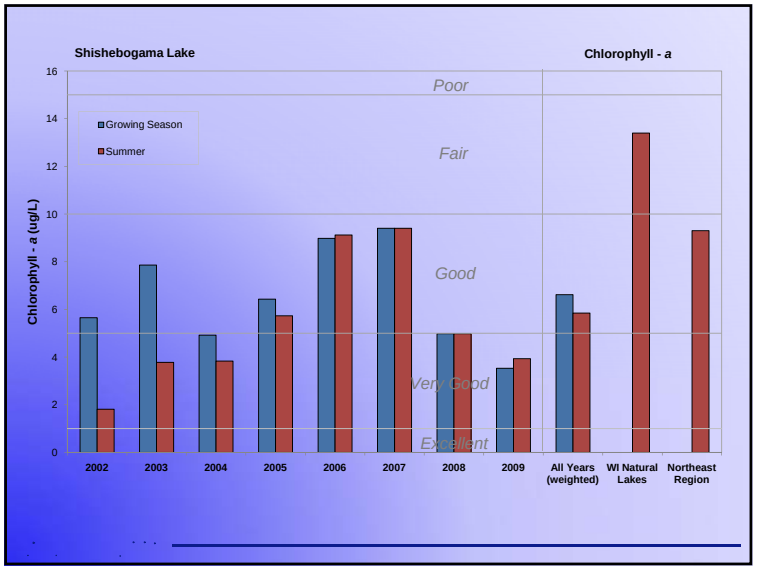
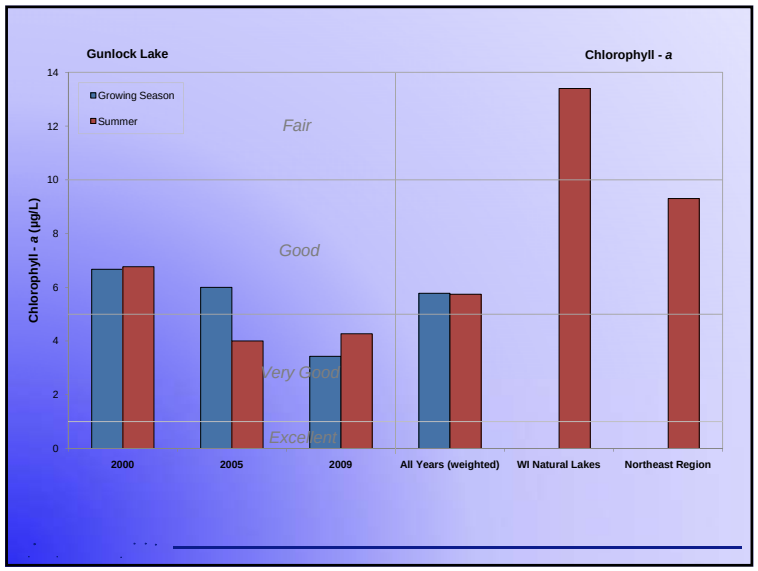



Gunlock Lake
Total Phosphorus
Growing Season
Summer
Poor
Fair
Good
Very Good
Total Phosphorus (µg/L)
60.0
50.0
40.0
30.0
20.0
10.0
0.0
2000
2005
2009
All Years (weighted)
WI Natural Lakes
Northeast Region


Shishebogama Lake
Chlorophyll - a
Growing Season
Summer
Poor
Fair
Good
Very Good
Excellent
Chlorophyll - a (ug/L)
16
14
12
10
8
6
4
2
0
2002
2003
2004
2005
2006
2007
2008
2009
All Years (weighted)
WI Natural Lakes
Northeast Region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8
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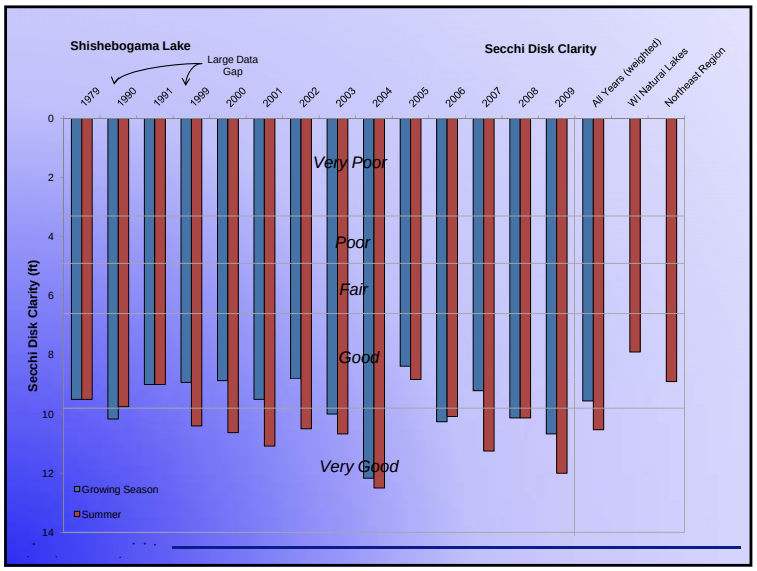
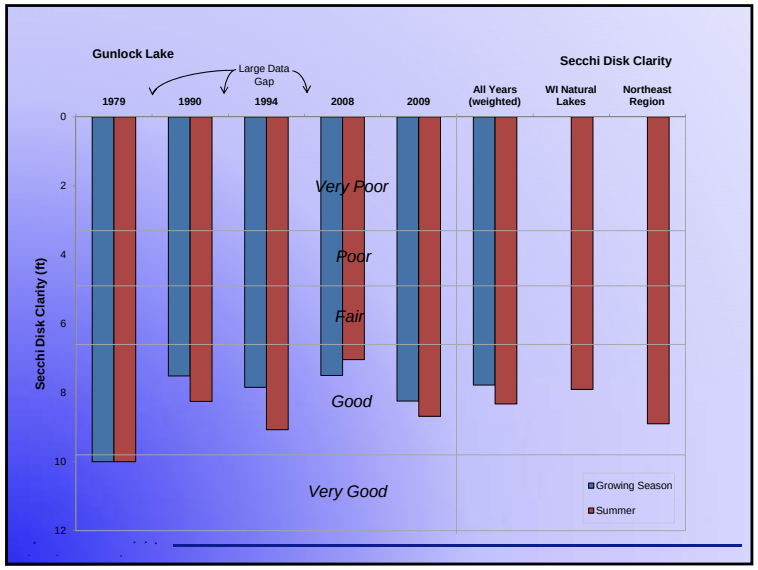
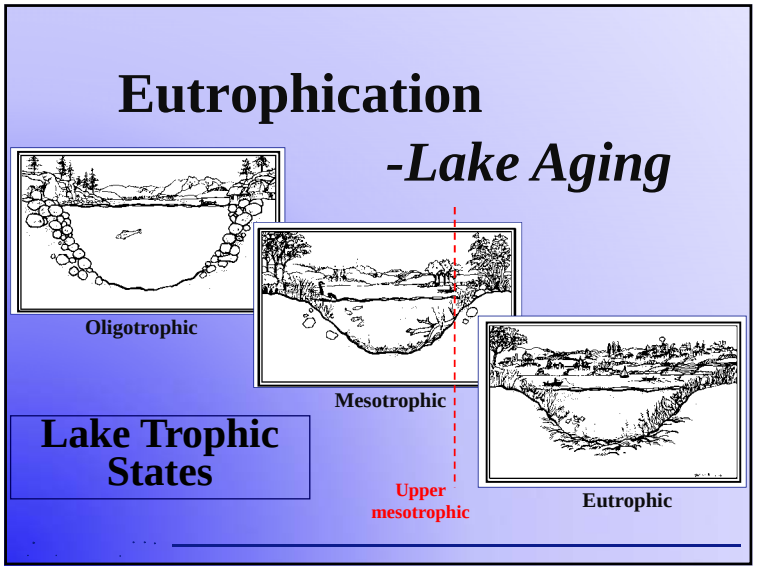

Shishebogama Lake
Secchi Disk Clarity
Large Data Gap
1979
1990
1991
1989
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
All Years (weighted)
WI Natural Lakes
Northeast Region
Very Poor
Poor
Fair
Good
Very Good
Growing Season
Summer
Secchi Disk Clarity (ft)
0
2
4
6
8
10
12
14





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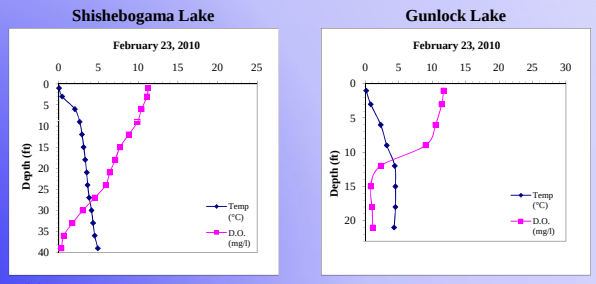
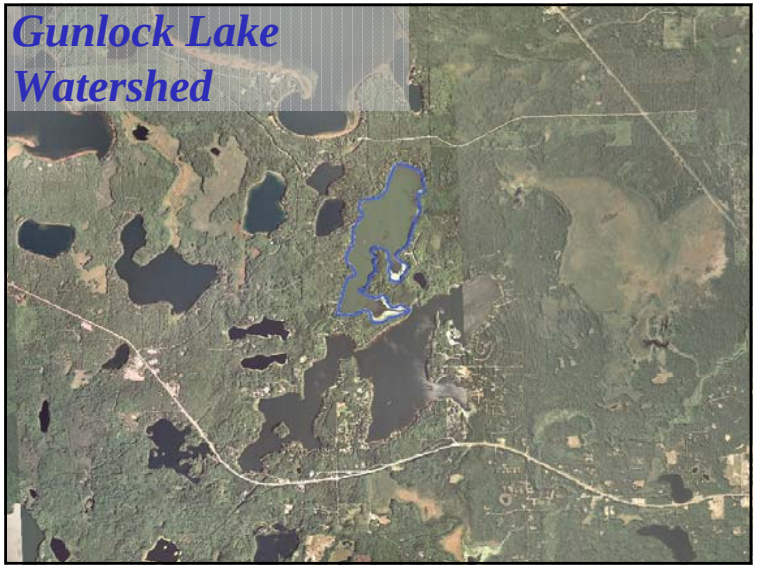
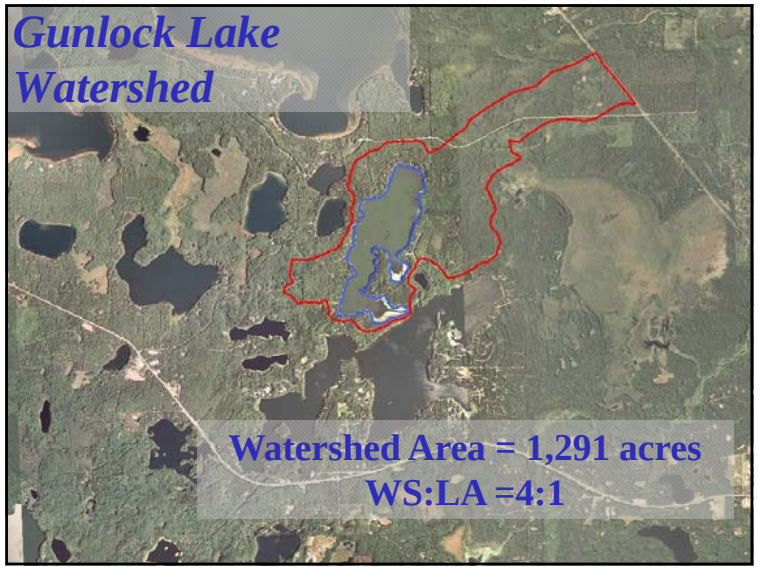
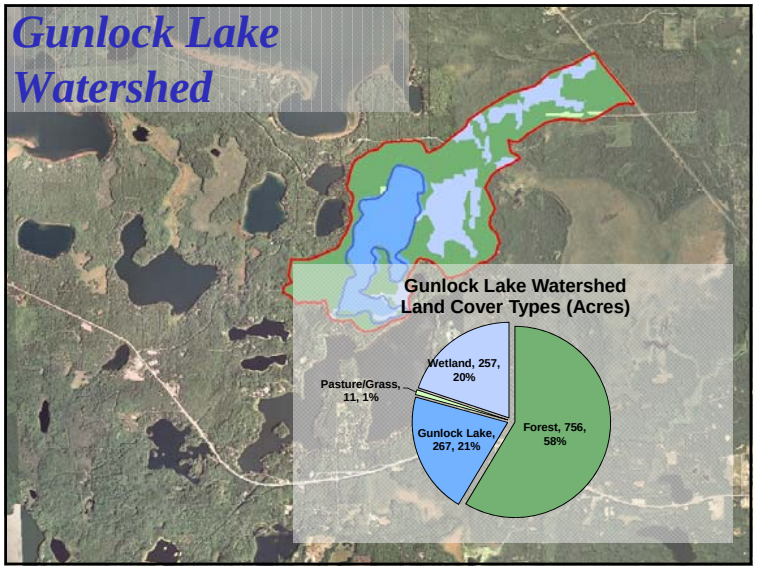





Gunlock Lake Watershed
Watershed Area = 1,291 acres
WS:LA =4:1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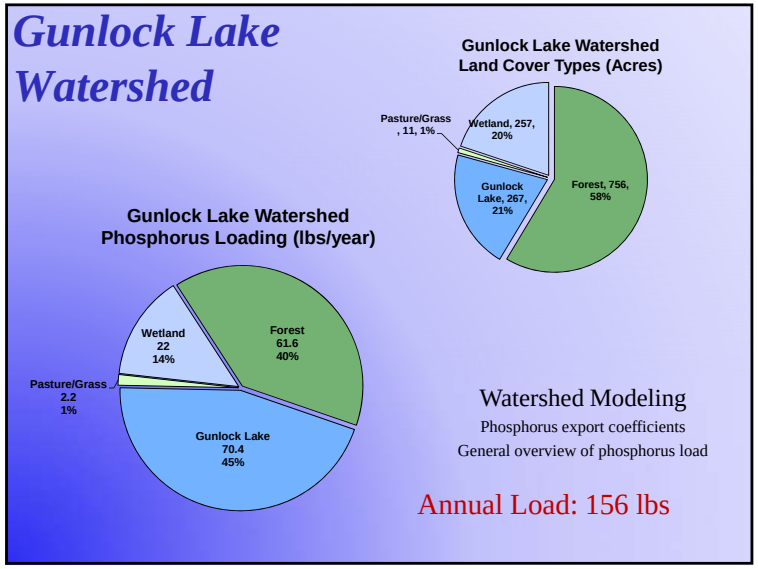
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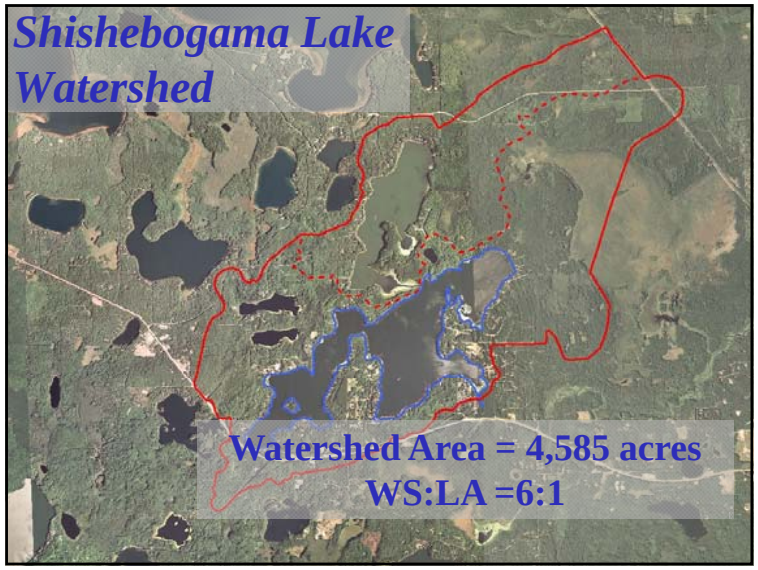
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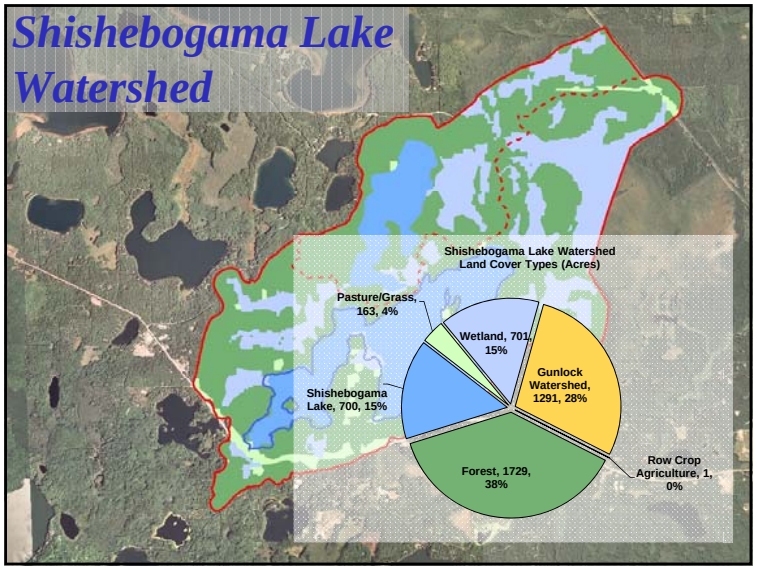
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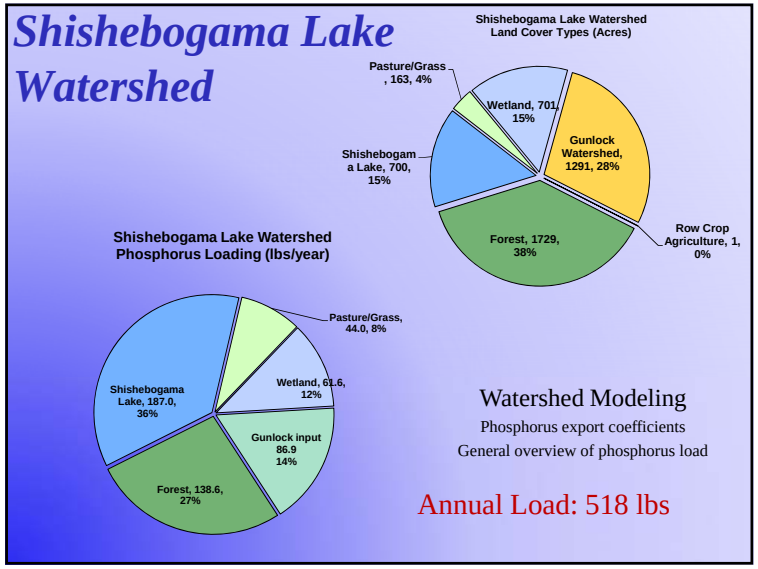
Row Crop Agriculture, 1, 0%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Aquatic Plants


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North Central Hardwood Forests
Driftless Area
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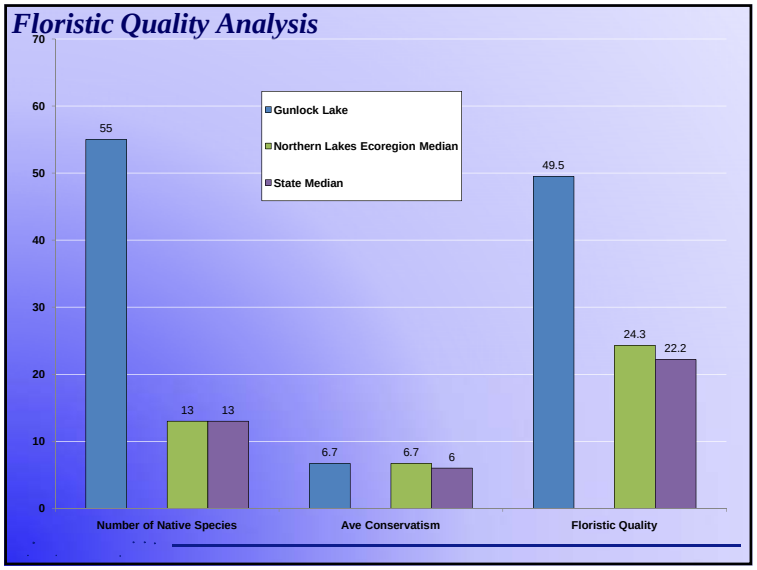
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Northern Lakes Ecoregion Median
State Median
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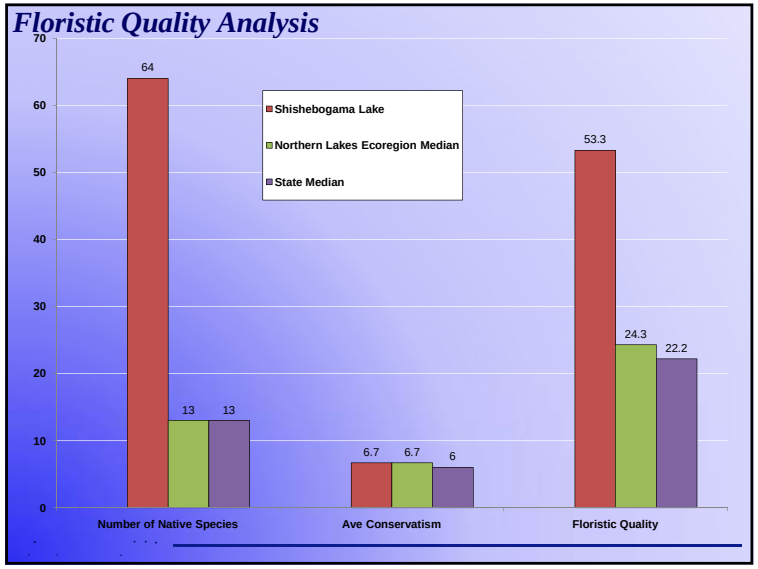
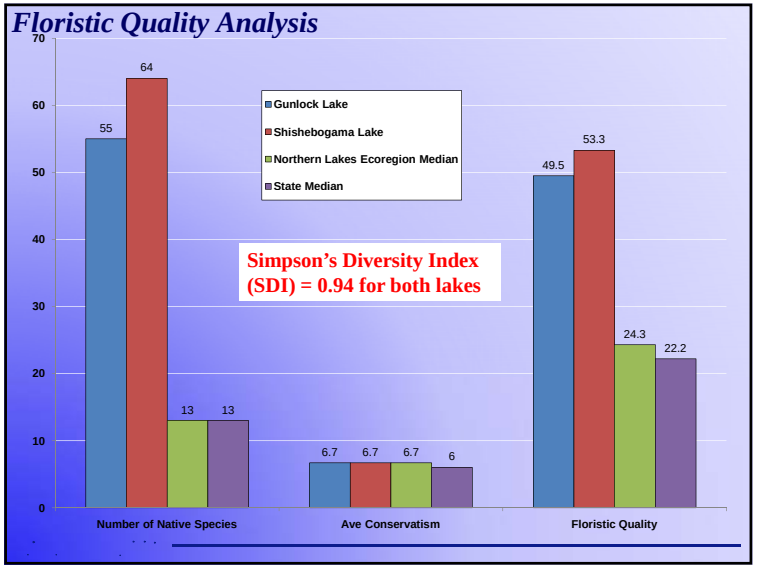
13
13
6.7
6.7
6
49.5
24.3
22.2
Number of Native Species
Ave Conservatism
Floristic Quality


Floristic Quality Analysis
Shishebogama Lake
Northern Lakes Ecoregion Median
State Median
64
13
13
6.7
6.7
6
53.3
24.3
22.2
Number of Native Species
Ave Conservatism
Floristic Quality


Floristic Quality Analysis
Gunlock Lake
Shishebogama Lake
Northern Lakes Ecoregion Median
State Median
Simpson's Diversity Index (SDI) = 0.94 for both lakes
55
64
13
13
6.7
6.7
6.7
6
49.5
53.3
24.3
22.2
Number of Native Species
Ave Conservatism
Floristic Quality

Conclusions

- Water quality is very good in both lakes
  - Moderate phosphorus concentrations, great water clarity
  - Need to establishWQ monitoring on Gunlock Lake
    - Advanced CLMN or other volunteer efforts
- Overall watershed is in great condition.
  - Watersheds are small and contain land cover that exports minimal phosphorus.
  - Largest, *controllable* contributor is likely shoreland properties.

Conclusions

- Aquatic plant community
  - Based upon standard analysis, native community is of excellent quality indicative of an undisturbed system.
  - Both lakes hold a very high species richness.
  - No submersed exotic plants (Eurasian water milfoil, curly-leaf pondweed) discovered.
    - Continue CBCW surveillance
    - Continue volunteer shoreland sweeps

Planning Process

Planning Committee Meetings

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

↓

Implementation Plan

Implementation Plan – Potential Elements

- **Current Management Activities (continue & enhance)**
  - **AIS Prevention**
    - Shoreline Sweeps
      - Update training
    - Clean Boats Clean Waters
      - Expand number of volunteers and time landings are covered
      - Work with Town of LDF
  - **Stakeholder Education**
    - Newsletter
    - Develop and update SGLA website
  - **Existing Partnerships - Strengthen**
    - Town Lakes Committee
    - Vilas County Lakes Association
    - Lac du Flambeau Tribe

Implementation Plan – Potential Elements

- **New and Developing Goals and Actions**
  - **Maintain Current Water Quality Conditions**
    - Continue CLMN collections on Shish and start on Gunlock
    - Educate riparian property owners on the benefits of shoreland restoration
  - **Create a Better Understanding of Fishery**
    - Incorporate LDF Tribe data and information
    - Define tribal and other agency roles and possibilities
  - **Minimize Lake User Conflicts**
    - Educational initiative to:
      - Increase user understanding of boating rules
      - Increase tolerance & responsibility among user types

Thank You

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

Wisconsin Lakes Partnership

UW Extension

Wisconsin Dept. of Natural Resources

B

APPENDIX B

Stakeholder Survey Response Charts and Comments

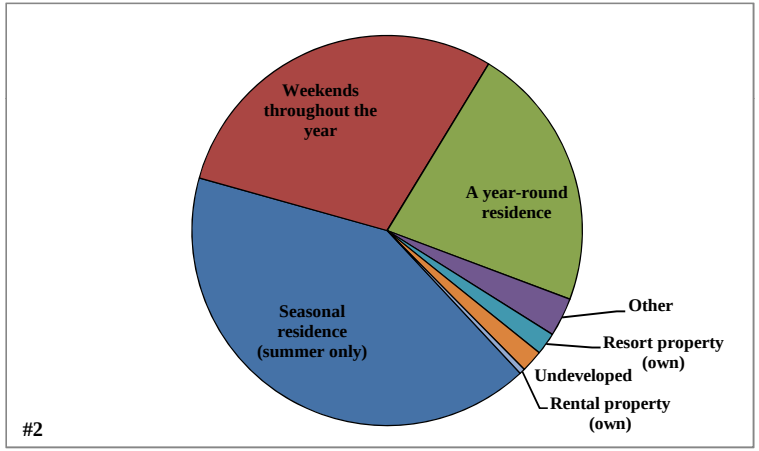
Returned Surveys	214
Sent Surveys	324
Response Rate (%)	66.0

#1 On which lake is your property located?

	Total	*%*
Shishebogama Lake	169	*78.6*
Gunlock Lake	46	*21.4*
	215	*100.0*

#2 What is the primary use of your property on the lake?

	Total	*%*
Seasonal residence (summer only)	90	*41.3*
Weekends throughout the year	64	*29.4*
A year-round residence	48	*22.0*
Other	7	*3.2*
Resort property (own)	4	*1.8*
Undeveloped	4	*1.8*
Rental property (own)	1	*0.5*
	218	*100.0*

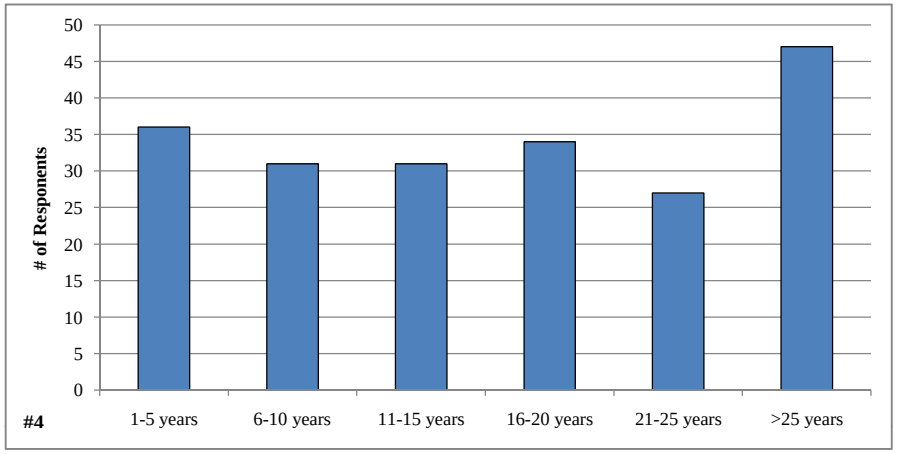


#3 How many days each year is your property used by you or others?

Answered Question	183
Average	139.8
Standard deviation	116.2

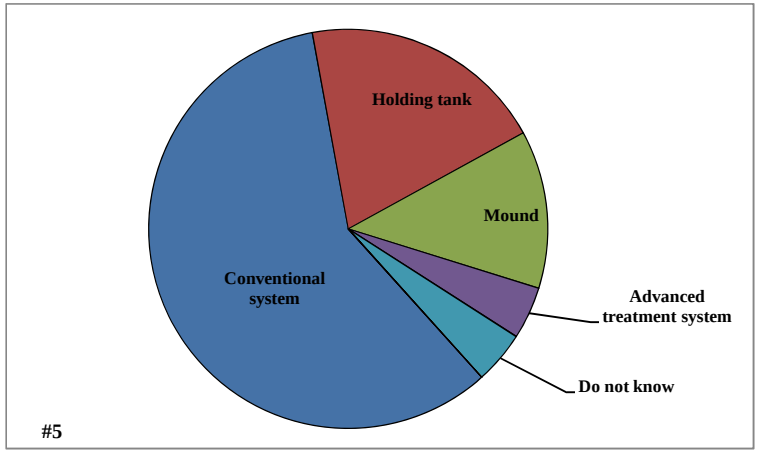
#4 How many years have you owned this property on the lake?

	Total	%
1-5 years	36	*17.5*
6-10 years	31	*15.0*
11-15 years	31	*15.0*
16-20 years	34	*16.5*
21-25 years	27	*13.1*
>25 years	47	*22.8*
	206	*100.0*



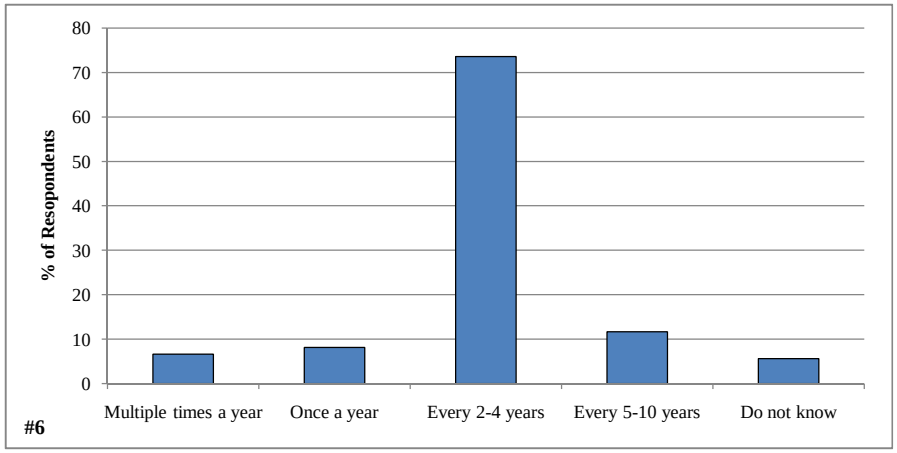
#5 What type of septic system does your property utilize?

	Total	%
Conventional system	124	*58.8*
Holding tank	42	*19.9*
Mound	27	*12.8*
Advanced treatment system	9	*4.3*
Do not know	9	*4.3*
Municipal Sewer	0	*0.0*
	211	*100.0*



#6 How often is the septic system on your property pumped?

	Total	%
Multiple times a year	13	*6.6*
Once a year	16	*8.1*
Every 2-4 years	145	*73.6*
Every 5-10 years	23	*11.7*
Do not know	11	*5.6*
	197	*100.0*

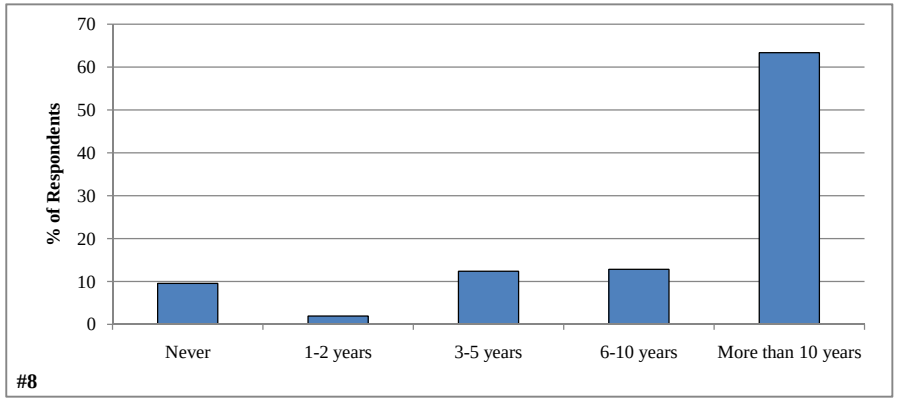


#7 What is the estimated age (in years) of your septic system?

Answered Question	180
Average	16.2
Standard deviation	13.9

#8 For how many years have you fished your lake?

	Total	%
Never	20	*9.5*
1-2 years	4	*1.9*
3-5 years	26	*12.4*
6-10 years	27	*12.9*
More than 10 years	133	*63.3*
	210	*100.0*



#9 Have you personally fished on your lake in the past 3 years?

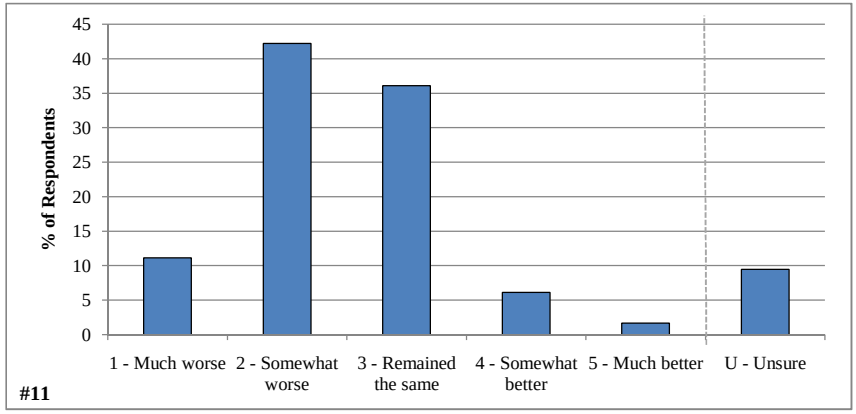
Yes	177
No	16

#10 How would you describe the current quality of fishing on your lake?

	Total	%
1 - Very poor	1	*0.6*
2 - Poor	19	*10.6*
3 - Fair	95	*52.8*
4 - Good	62	*34.4*
5 - Excellent	3	*1.7*
U - Unsure	11	*6.1*
	180	*100.0*

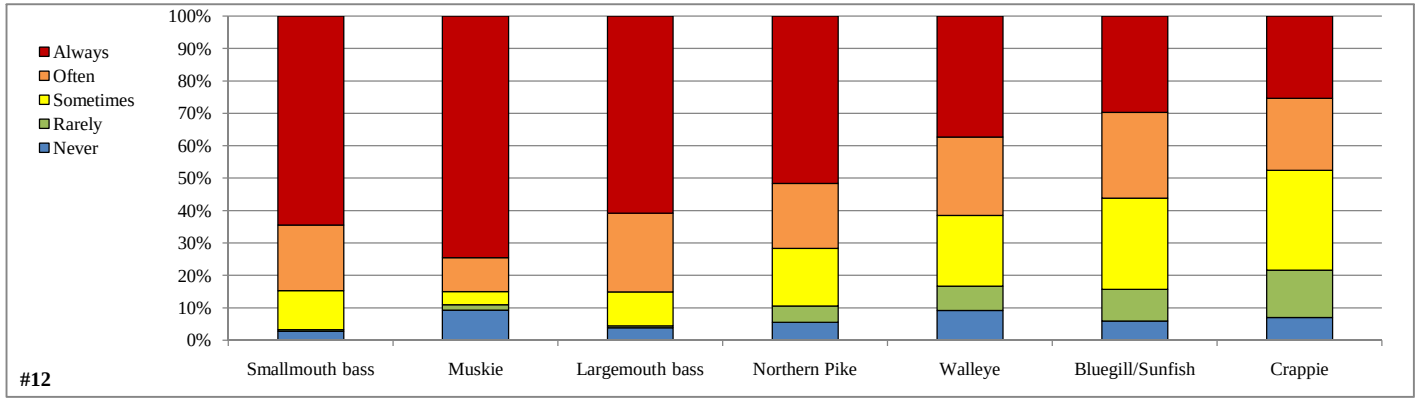
#11 How has the quality of fishing changed on your lake since you have owned this property?

	Total	%
1 - Much worse	20	*11.1*
2 - Somewhat worse	76	*42.2*
3 - Remained the same	65	*36.1*
4 - Somewhat better	11	*6.1*
5 - Much better	3	*1.7*
U - Unsure	17	*9.4*
	175	*97.2*



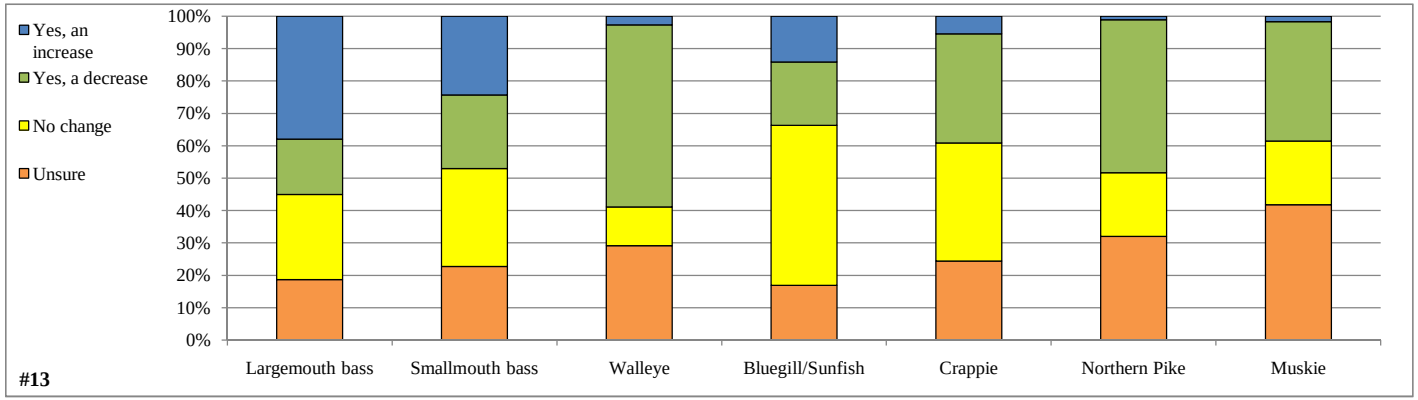
#12 Do you practice catch and release?

	Never	Rarely	Sometimes	Often	Always	Total	*Average*
Smallmouth bass	5	1	22	37	118	183	*4.4*
Muskie	16	3	7	18	129	173	*4.4*
Largemouth bass	7	1	19	44	110	181	*4.4*
Northern Pike	10	9	32	36	93	180	*4.1*
Walleye	16	13	38	42	65	174	*3.7*
Bluegill/Sunfish	11	18	52	49	55	185	*3.6*
Crappie	13	27	57	41	47	185	*3.4*



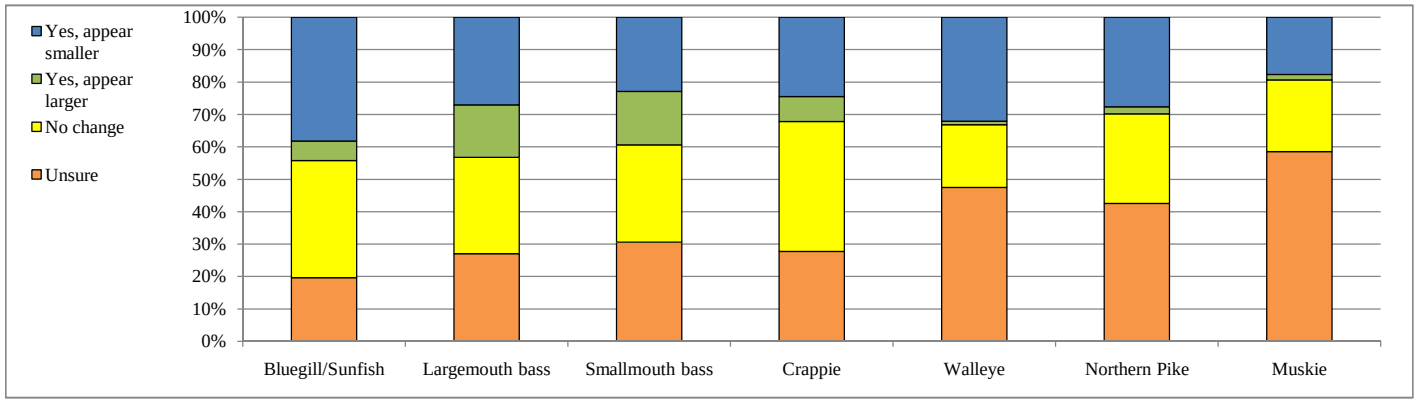
#13 Do you feel there has been a change in the abundance of fish species listed below since you started fishing on your lake?

	Yes, an increase	Yes, a decrease	No change	Unsure	Total	*Average*
Largemouth bass	71	32	49	35	187	*2.3*
Smallmouth bass	45	42	56	42	185	*2.5*
Walleye	5	104	22	54	185	*2.7*
Bluegill/Sunfish	26	36	91	31	184	*2.7*
Crappie	10	62	67	45	184	*2.8*
Northern Pike	2	87	36	59	184	*2.8*
Muskie	3	68	36	77	184	*3.0*



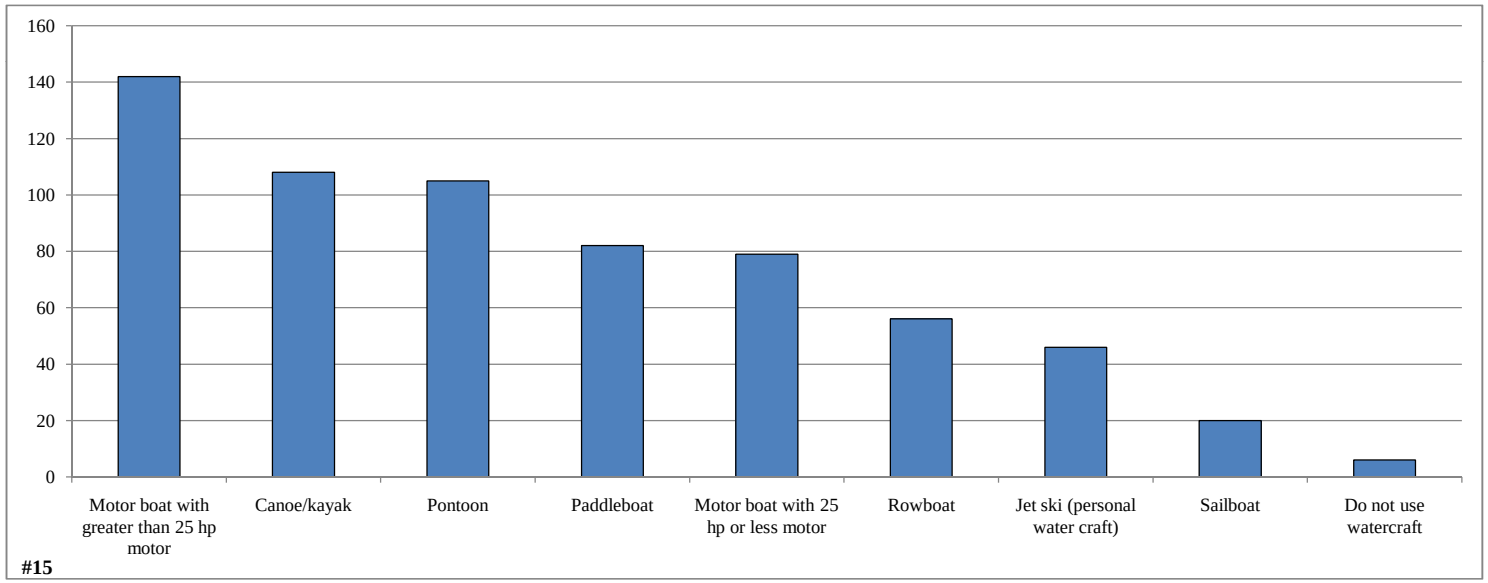
#14 Have you seen a change in the size of fish species listed below since you started fishing on your lake?

	Yes, appear smaller	Yes, appear larger	No change	Unsure	Total	*Average*
Bluegill/Sunfish	70	11	66	36	183	*2.4*
Largemouth bass	50	30	55	50	185	*2.6*
Smallmouth bass	42	30	55	56	183	*2.7*
Crappie	44	14	72	50	180	*2.7*
Walleye	58	2	35	86	181	*2.8*
Northern Pike	50	4	50	77	181	*2.9*
Muskie	32	3	40	106	181	*3.2*



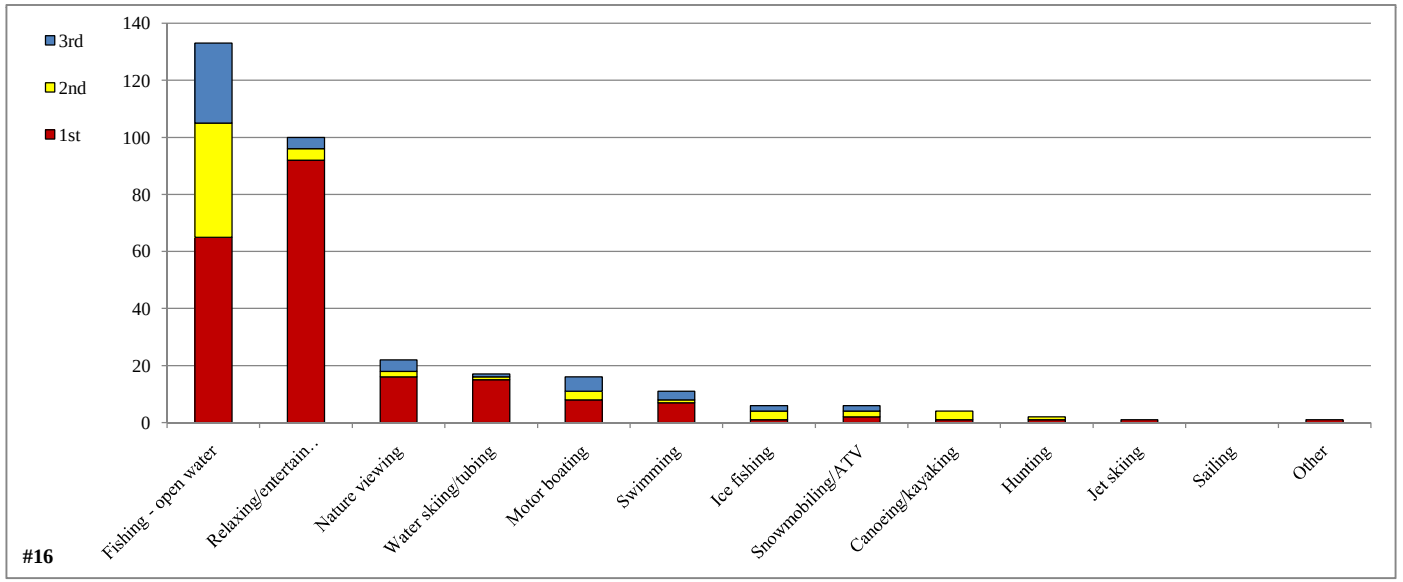
#15 What types of watercraft do you or others that use your property, currently use on the lake?

	Total
Motor boat with greater than 25 hp motor	142
Canoe/kayak	108
Pontoon	105
Paddleboat	82
Motor boat with 25 hp or less motor	79
Rowboat	56
Jet ski (personal water craft)	46
Sailboat	20
Do not use watercraft	6
	638



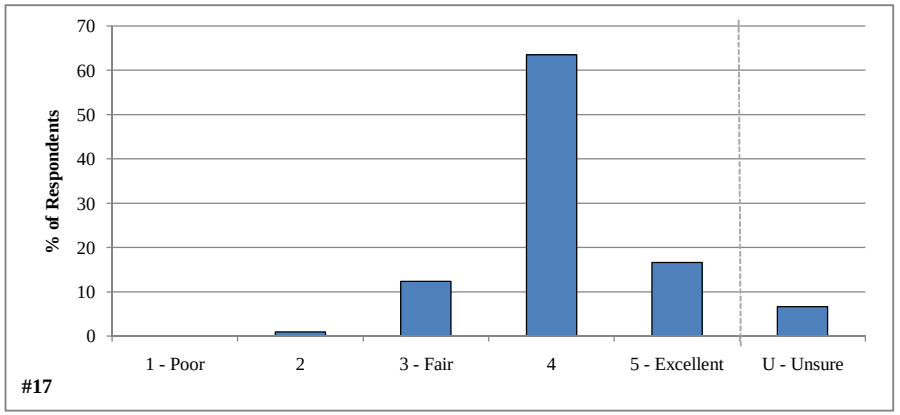
#16 Please rank up to three activities that are important reasons for owning your property on your lake?

	1st	2nd	3rd	*% ranked*
Fishing - open water	65	40	28	*21.1*
Relaxing/entertaining	92	4	4	*15.9*
Nature viewing	16	2	4	*3.5*
Water skiing/tubing	15	1	1	*2.7*
Motor boating	8	3	5	*2.5*
Swimming	7	1	3	*1.7*
Ice fishing	1	3	2	*1.0*
Snowmobiling/ATV	2	2	2	*1.0*
Canoeing/kayaking	1	3	0	*0.6*
Hunting	1	1	0	*0.3*
Jet skiing	1	0	0	*0.2*
Sailing	0	0	0	*0.0*
Other	1	0	0	*0.2*
	210	60	49	*50.6*



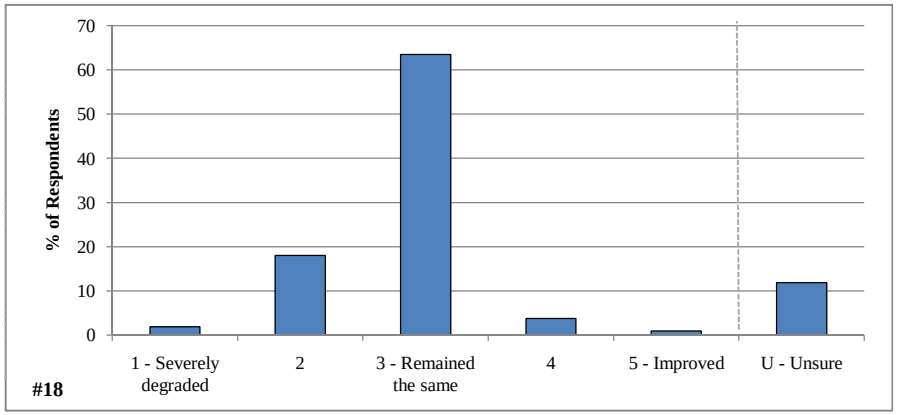
#17 How would you describe the current water quality of your lake?

	Total	%
1 - Poor	0	*0.0*
2	2	*0.9*
3 - Fair	26	*12.3*
4	134	*63.5*
5 - Excellent	35	*16.6*
U - Unsure	14	*6.6*
	211	*100.0*



#18 How has the water quality changed in your lake since you obtained your property?

	Total	%
1 - Severely degraded	4	*1.9*
2	38	*18.0*
3 - Remained the same	134	*63.5*
4	8	*3.8*
5 - Improved	2	*0.9*
U - Unsure	25	*11.8*
	211	*100.0*



#19 Have you ever heard of aquatic invasive species?

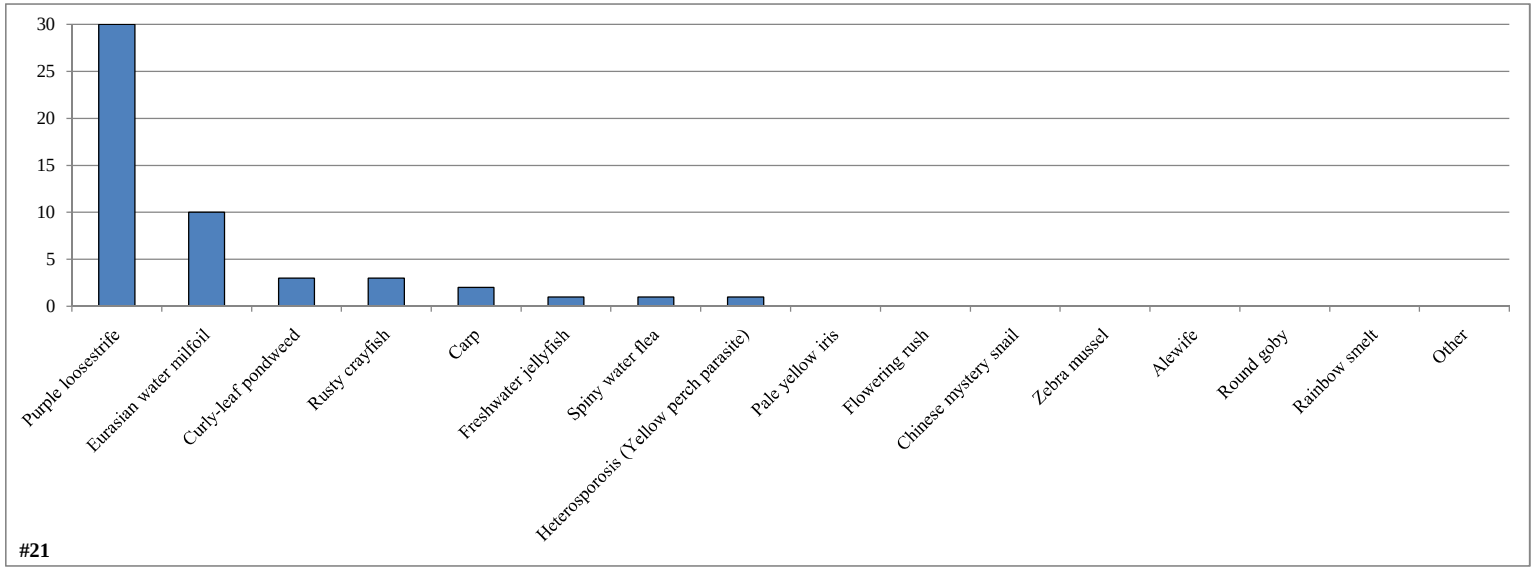
	Total	%
Yes	208	*98.1*
No	4	*1.9*
	212	*100.0*

#20 Are you aware of aquatic invasive species in Shishebogama or Gunlock Lake?

	Total	%
Yes	41	*19.4*
No	170	*80.6*
	211	*100.0*

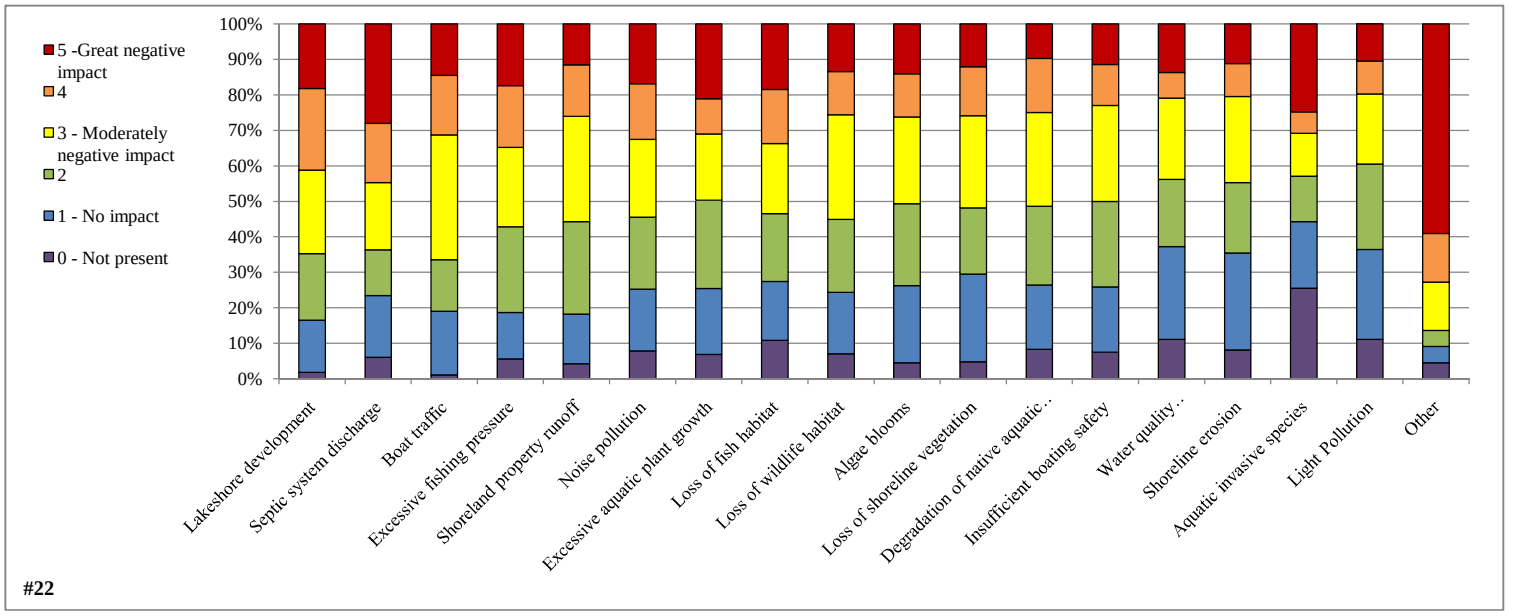
#21 Which aquatic species are you aware of in your lake?

Purple loosestrife	30
Eurasian water milfoil	10
Curly-leaf pondweed	3
Rusty crayfish	3
Carp	2
Freshwater jellyfish	1
Spiny water flea	1
Heterosporosis (Yellow perch parasite)	1
Pale yellow iris	0
Flowering rush	0
Chinese mystery snail	0
Zebra mussel	0
Alewife	0
Round goby	0
Rainbow smelt	0
Other	0



#22 To what level do you believe each the following factors are negatively impacting your lake?

	0 - Not present	1 - No impact	2	3 - Moderately negative impact	4	5 -Great negative impact	Unsure	*Total*	*Average*
Lakeshore development	3	25	32	40	39	31	32	*199*	*3.2*
Septic system discharge	8	23	17	25	22	37	73	*197*	*3.1*
Boat traffic	2	32	26	63	30	26	26	*203*	*2.9*
Excessive fishing pressure	9	21	39	36	28	28	40	*192*	*2.9*
Shoreland property runoff	7	23	43	49	24	19	37	*195*	*2.7*
Noise pollution	14	31	36	39	28	30	26	*190*	*2.7*
Excessive aquatic plant growth	11	30	40	30	16	34	42	*192*	*2.7*
Loss of fish habitat	17	26	30	31	24	29	45	*185*	*2.7*
Loss of wildlife habitat	11	27	32	46	19	21	46	*191*	*2.6*
Algae blooms	7	34	36	38	19	22	48	*197*	*2.6*
Loss of shoreline vegetation	8	41	31	43	23	20	36	*194*	*2.6*
Degradation of native aquatic plants	12	26	32	38	22	14	57	*189*	*2.5*
Insufficient boating safety	13	32	42	47	20	20	31	*192*	*2.5*
Water quality degradation/pollution	17	40	29	35	11	21	45	*181*	*2.4*
Shoreline erosion	13	44	32	39	15	18	41	*189*	*2.3*
Aquatic invasive species	38	28	19	18	9	37	52	*163*	*2.3*
Light Pollution	18	41	39	32	15	17	41	*185*	*2.2*
Other	1	1	1	3	3	13	21	*42*	*4.0*

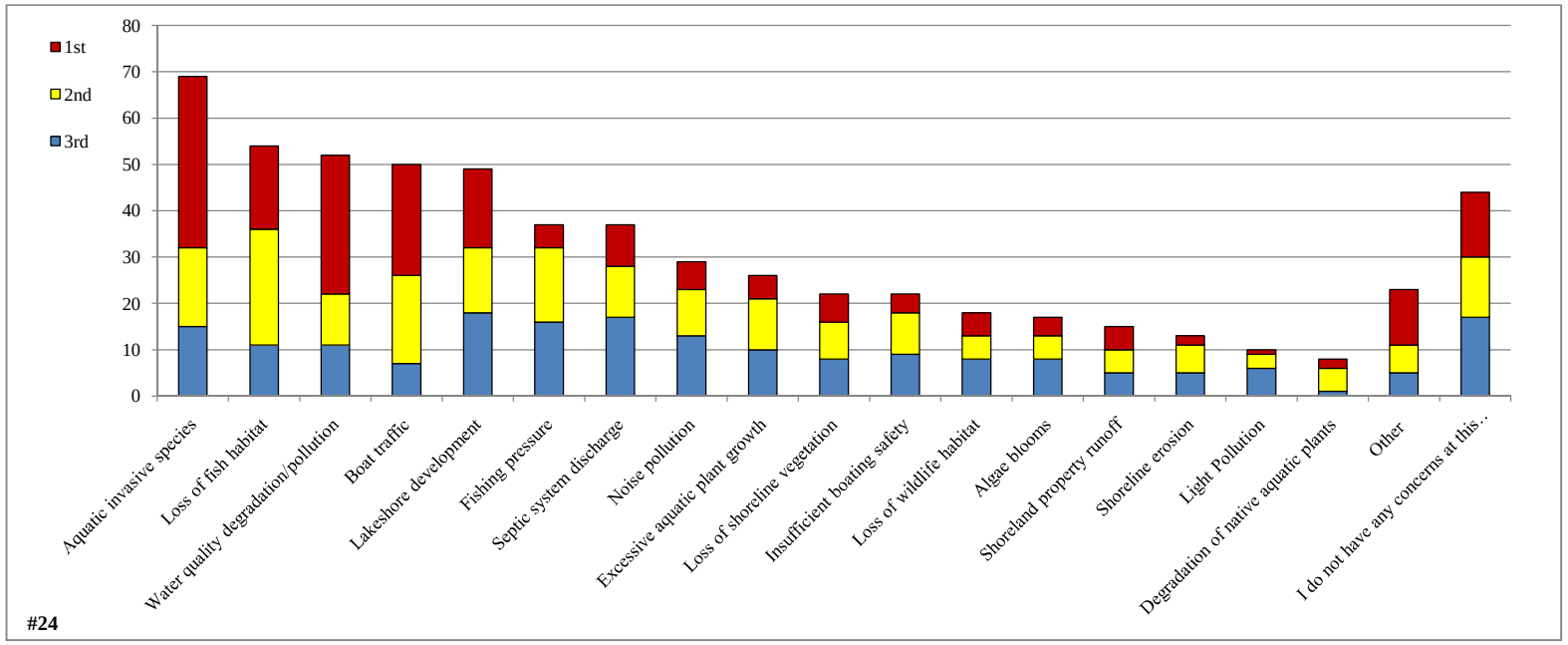


#23 Do you feel incidences of swimmers itch have increased on your lake since you have owned your property?

	Total	%
Yes	27	*12.7*
No	116	*54.5*
Unsure	70	*32.9*
	213	*100.0*

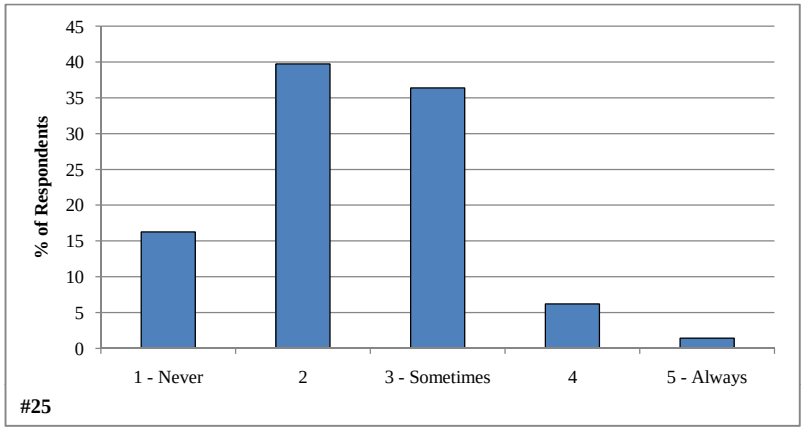
#24 From the list below, please rank up to three concerns regarding your lake.

	1st	2nd	3rd	% Ranked
Aquatic invasive species	37	17	15	*13.1*
Loss of fish habitat	18	25	11	*10.2*
Water quality degradation/pollution	30	11	11	*9.8*
Boat traffic	24	19	7	*9.5*
Lakeshore development	17	14	18	*9.3*
Fishing pressure	5	16	16	*7.0*
Septic system discharge	9	11	17	*7.0*
Noise pollution	6	10	13	*5.5*
Excessive aquatic plant growth	5	11	10	*4.9*
Loss of shoreline vegetation	6	8	8	*4.2*
Insufficient boating safety	4	9	9	*4.2*
Loss of wildlife habitat	5	5	8	*3.4*
Algae blooms	4	5	8	*3.2*
Shoreland property runoff	5	5	5	*2.8*
Shoreline erosion	2	6	5	*2.5*
Light Pollution	1	3	6	*1.9*
Degradation of native aquatic plants	2	5	1	*1.5*
Other	12	6	5	*4.4*
I do not have any concerns at this time	14	13	17	*8.3*
	180	180	168	*112.7*



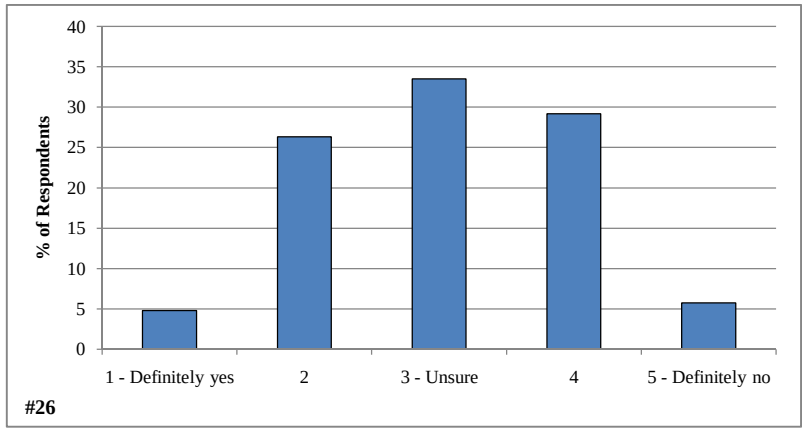
#25 During open water season how often does aquatic plant growth (not including floating algae or algal blooms) negatively impact your enjoyment of the lake?

	Total	%
1 - Never	34	*16.3*
2	83	*39.7*
3 - Sometimes	76	*36.4*
4	13	*6.2*
5 - Always	3	*1.4*
	209	*100.0*



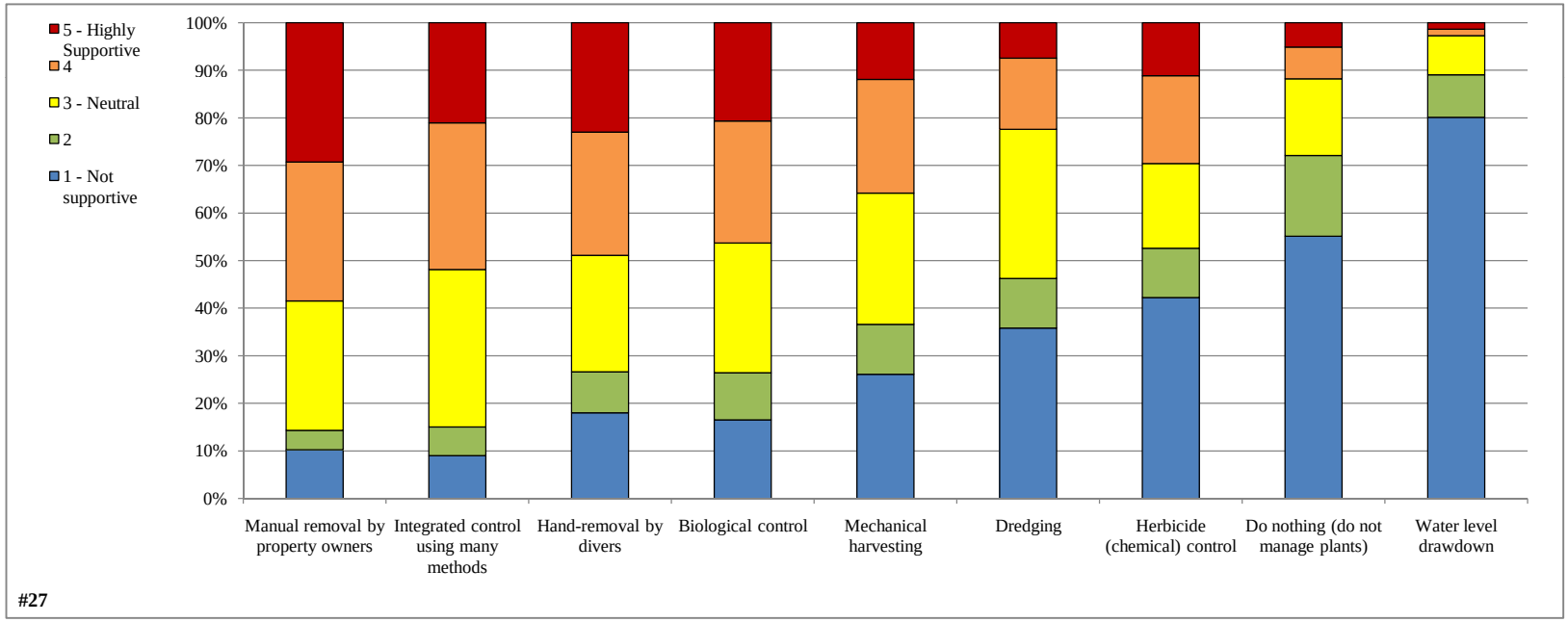
#26 Considering your answer to the question above, do you believe aquatic plant control is needed on your lake?

	Total	%
1 - Definitely yes	10	*4.8*
2	55	*26.3*
3 - Unsure	70	*33.5*
4	61	*29.2*
5 - Definitely no	12	*5.7*
	208	*99.5*



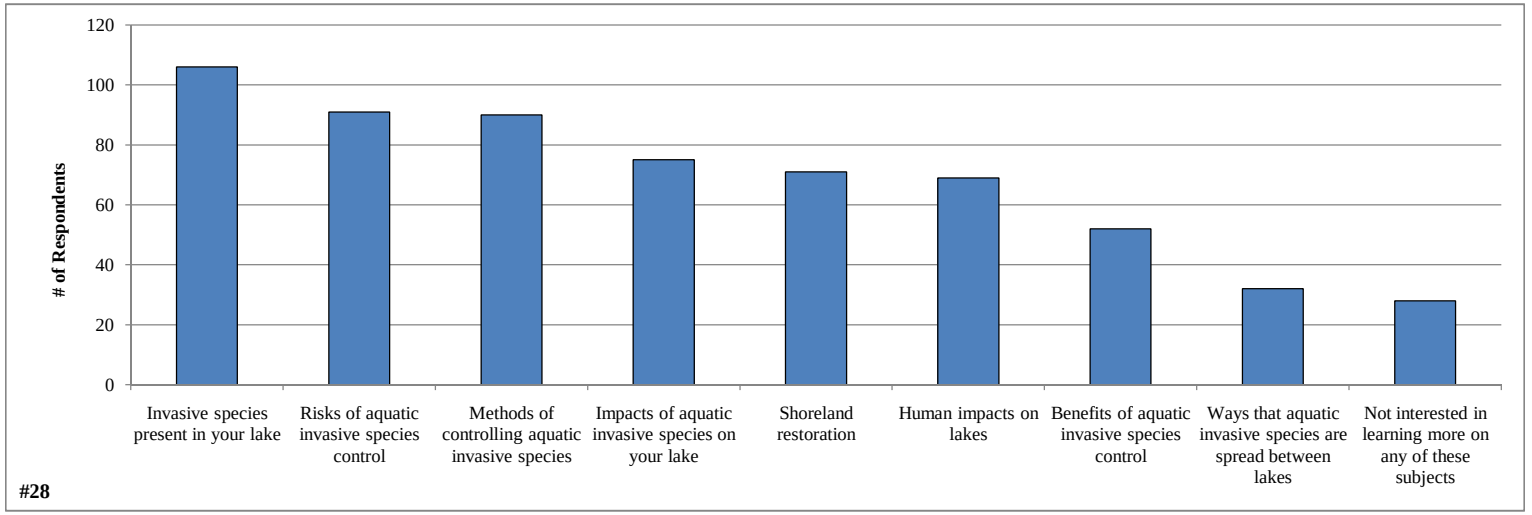
#27 What is your level of support for the responsible use of the following techniques on your lake?

	1 - Not supportive	2	3 - Neutral	4	5 - Highly Supportive	*Total*	*Average*
Manual removal by property owners	15	6	40	43	43	*147*	*3.6*
Integrated control using many methods	12	8	44	41	28	*133*	*3.5*
Hand-removal by divers	25	12	34	36	32	*139*	*3.3*
Biological control	20	12	33	31	25	*121*	*3.3*
Mechanical harvesting	35	14	37	32	16	*134*	*2.9*
Dredging	48	14	42	20	10	*134*	*2.5*
Herbicide (chemical) control	57	14	24	25	15	*135*	*2.5*
Do nothing (do not manage plants)	75	23	22	9	7	*136*	*1.9*
Water level drawdown	117	13	12	2	2	*146*	*1.4*



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

	Total	%
Invasive species present in your lake	106	*17.3*
Risks of aquatic invasive species control	91	*14.8*
Methods of controlling aquatic invasive species	90	*14.7*
Impacts of aquatic invasive species on your lake	75	*12.2*
Shoreland restoration	71	*11.6*
Human impacts on lakes	69	*11.2*
Benefits of aquatic invasive species control	52	*8.5*
Ways that aquatic invasive species are spread between lakes	32	*5.2*
Not interested in learning more on any of these subjects	28	*4.6*
	614	*100.0*



#29 Before receiving this mailing, have you ever heard of the Shishebogama and Gunlock Lakes Association?

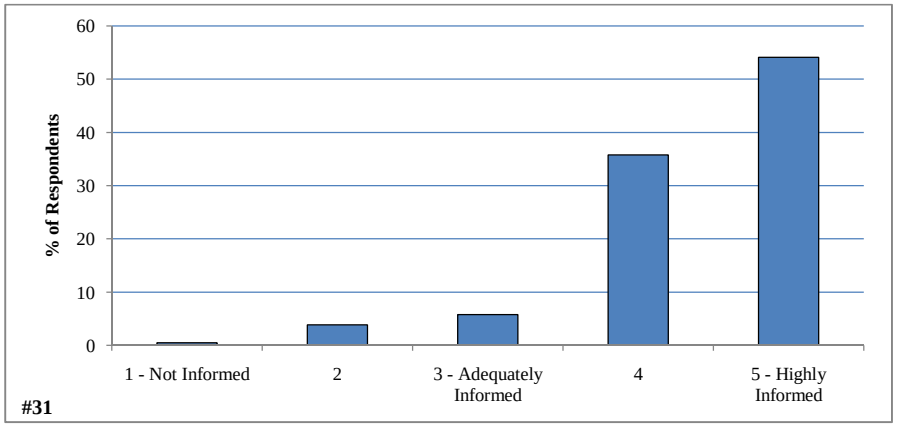
	Total	%
Yes	209	*98.6*
No	3	*1.4*
	212	*100.0*

#30 Are you currently a member of the Shishebogama and Gunlock Lakes Association?

	Total	%
Yes	194	*91.5*
No	16	*7.5*
	210	*99.1*

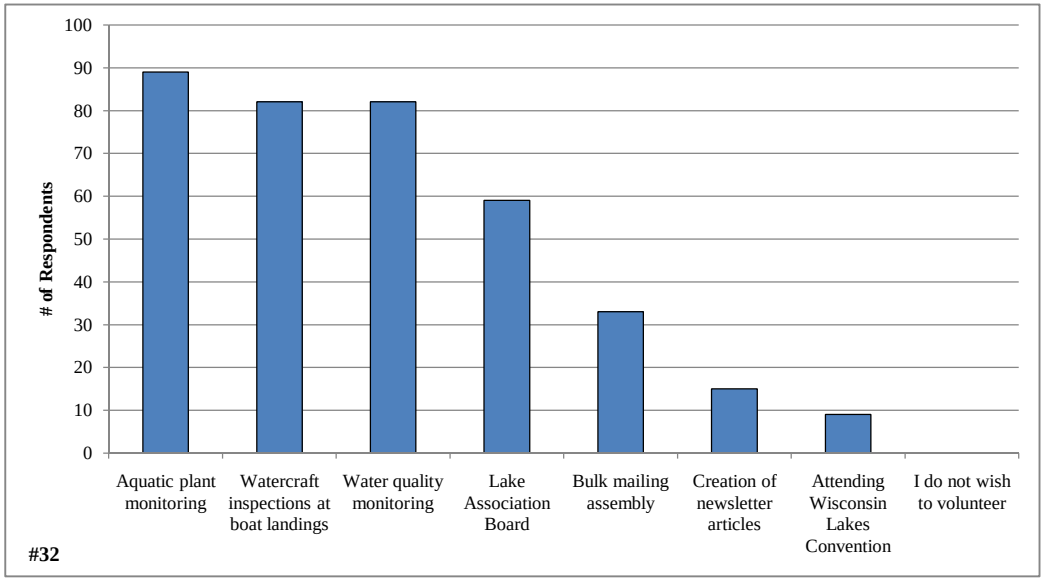
#31 Do you believe the Shishebogama and Gunlock Lake Association has kept you adequately informed regarding issues with your lake and its management?

	Total	%
1 - Not Informed	1	*0.5*
2	8	*3.9*
3 - Adequately Informed	12	*5.8*
4	74	*35.7*
5 - Highly Informed	112	*54.1*
	207	*100.0*



#32 Please circle the activities you would be willing to participate in if called upon.

	Total
Aquatic plant monitoring	89.0
Watercraft inspections at boat landings	82.0
Water quality monitoring	82.0
Lake Association Board	59.0
Bulk mailing assembly	33.0
Creation of newsletter articles	15.0
Attending Wisconsin Lakes Convention	9.0
I do not wish to volunteer	0.0
	369



Survey #	Question specific and general comments
1	
2	
3	Things we look forward to: -the beauty of the water, woods and sky- the water is so still at times that it makes a perfect reflection of the clouds and trees, -at night the starts so shinning bright in the night sky- with no yard light on and no traffic with headlights, - The eagles and hawks circling over head, -sounds of loons, -Watching the fishing boats and the sail boast- not as many as used to be around.
4	
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8	Walleye are rarely found can we increase planting?
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14	Why do we need cribs in the lake when we have plenty vegetation? So people who don't know how to fish can catch fish? Let's do something about all the bass in the lake no body keeps them because they taste to fishy. everyone who owns property on the lake should have to join the lake association- so if we need later on to get rid of bad weeds we can pay to have it done right. Everyone used the lake not only the 2nd people. Enjoy fishing and relaxing and the north woods your doing a great job.
15	I would like to have more feed back about minutes on discussion of the meeting for those of us that cannot make the meeting.
16	Dredge the channel between the 2 lakes. If we continue to use boat ramp on shish drive dredge and no road work. Build fish cribs.
17	
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20	
21	Our reward for resourcing and maintaining shoreline plants and aquatic 22) People who use my property for a public beach, lounge and dog run every weekend- parking chairs and boats in the water on the sandy beach. 24) Weekend parties on the lake over beach.
22	Having been upset by the disregard for others by the operators of jet skis and high powered in board out board boats on a small lake when two of our large pines fell into the lake last year because of the undermining caused by heaving waves, I felt it was time to both restrict and police this activity- the jet skiers and the boats are coming far to close to piers and shores on the north end of gunlock lake- there are laws on distance from others boats-piers and they should be enforced- all the mud created by the wake of theses crafts is going back into the lake. In 1960 when we came to gunlock it was mostly sand on the west shore of the north end- now its mud- a limit on top speed for boats and skis and hours of 8:00 am to 4:30 pm for skier would help
23	
24	There are no reasonable time limits set or enforced for jet skis water-skiing and tubing. Fisherman, those riding in canoes/ kayaks and those of us that just want to enjoy the peaceful quiet beauty and nature of the Northwood's should have an equal number of waking/day light hours to have a peaceful lake as those tearing it up with these noisy disruptive water sports. Over the 25 years we've had a property on the lake, this issue has gotten significantly worse.
25	Last summer lake users spent days with their pontoon boats anchored on the shore off peoples private property using private property for their bathrooms. We are also concerned about the lack of participation in maintaining boat landing- a few doing it can not be very effective- we need people at the landing on a constant base. 22) Disregard for private property- using front yards for restrooms
26	
27	22) water level
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31	Re-stocking walleye and Muskie. Respectful boater…no wake w/in boats fishing and docks
32	
33	Shoreline development has eliminated a lot of fish habitat by the removal of logs and down trees. Species that used to use that structure are now relating to rocks. It also seems that a lot of old thick musky or cabbage weed beds are gone or very thinned out. Could that be the result of chemical runoff from property owner yards? Not sure but I feel that education and regulations is needed in that area.
34	
35	Our family has always enjoyed our lakes and do our best to keep it healthy and natural. I cannot offer too much judgment on the lakes because the lakes always have been just beautiful to us and we are not always there. We trust you to do what is right for our lakes and go with the consensus if need be
36	
37	22) Boat landing
38	
39	22) Quiet time for fishermen
40	
41	Aquatic invasive species will only be stopped in our lakes if all boat landings are closed. Only property owners should be able to get on their lakes. If somebody else wants to fish a lake they need to rent a boat already on that lake. This will create new business and stop the spread of the bad stuff. Anything else is foolishness
42	

Survey #	Question specific and general comments
43	2) Several weeks per month
44	Having lived on gunlock my place is open for 55 years. I really haven't noticed anything different- my grandparents bought our place back in the 1920's- the trees have grown but the lake stays the same. I love the way it is and I hope it stays that way for my 2 sons and all their kids. Seems to me whatever is being done now should continue
45	22) Boating manners
46	
47	Thanks for all the work the association has done, Dennis, you have done a great job of bringing the various groups together with a common goal and a positive working relationship given the initial strong feelings, don't think it would have worked without your effort and everyone working toward a common goal.
48	We have had no issues until the last 2-3 years on our beautiful lake- manage the Indians- we have had theft over spearing and disruptive late nights w/ old beat up vehicles disrupting our lifestyle and safety- 1 stolen boat and motor I think a neighborhood crime watch is much more important then invasive plants- safety 1st- go ahead call once, have the tribal guys come out and tell you "your boat was a prime spearing boat" not sure who took it though. How about cornet block stored on our lot across the road (80-100)all stolen- lets protect property rights before we worry about lake management. P.S. people have also taken rocks from our landscaping rocks- Bullwinkle was just broken into a few weeks ago- this is what shish/gunlock people need to be informed about. 22) Too many rules and regulations 24) Bad boat landing on Shish
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53	The lake association board is trying to improve the lakes and for that a well done.
54	
55	The walleye fish changed after the 1980's spearing now we have a bass/ Muskie lake. I have fished this lake since 1970's. In the south bay of the lake there is a island in the west side of the island is a rock bar and on the east side is a massive part with a swim raft and piers just pass the swim raft is a sunken island about 2 ft deep. People come speeding through. 22) Speeding around the island should be a no wake
56	
57	I am very grateful to the leadership on the association for all that they do. Thank you. I am also pleased that people have bonded together and are moving forward after the unpleasant "lake district" controversy. I think that both sides had a reasonable basis for their respective positions but the concern about taxing authority was very polarizing.
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64	Association should help pay for additional fingerlings through dues or donations. Thanks for the survey and the work on the volunteers
65	
66	
67	The lake is much greater with for less boat traffic and for less fishing pressure then existed 35 years ago. Yes there has been some building on previously vacant lots but not that much when spread over 35 year ago. I am far less concerned about the lakes future today then I was 35 years ago. This improvement has come about largely at the result of a reduction in the number of resorts and the elimination of the campground rather than a result of anyone actually "managing the lake". 2) 1/2 time throughout the year
68	
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71	Safety on holidays is a great concern- Jet Ski people do not do a good job paying attention of other people on lake. Holidays- heavy boat and water craft on lake- operators could watch to have a certain rotation around lake.
72	Id like to see more emphasis upon improving the walleye population in our lake
73	
74	
75	1- stop opening or clearing lake frontage. I thought there was a law prohibiting more than 20% shoreline removal. If so- why isn't it enforced? 2- Stop any future boat houses- 90% are not used as boat houses- but as day cottage on the lake front. Our lake frontage is being ruined by boat lifts with multi-colored tops. Or any top actually- it is not necessary to have any boat lifts- 99% of the time we are not subject to damaging winds. The prestine beauty of our lakes is being more and more ruined every year by the above causes.
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80	Two issues: 1) unsafe boating traffic is more prevalent including high speed/high wake too close to shore. 2) a) I am a fairly prolific walleye angler but despite the stocking the walleyes are scarce. b) The largemouth population is way out of control. c) The crappie fishing and Muskie fishing is terrific and the northern populations seems to be down.
81	I can't remember the last financial statement I received
82	

Survey #	Question specific and general comments
83	
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85	I do not want to see our lake turned into a bass fishing tournament lake because it has 18 inch large mouth bass. The size of the large mouth bass has not increased over the years because of the restriction to 18 size limit.
86	
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89	being over eighty years old and not coming up north like I used to but I do have kids and their families still love it up north. I will let them know about doing what they can to keep things beautiful 22) film
90	1) would like to see improvements made to the Joe's bay public landing on shish. 2) allow none Rockwood property owners to join the Rockwood association to use the boat landing. 3) if 1 and 2 above are not possible seek to widen and deepen the entrance to the channel between shish and gunlock.
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93	2) 6 months
94	
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96	22) fireworks
97	I would like to see jet skiers consider the impact on the fishery when operating in shallow areas just because they can run in shallow areas doesn't mean they should. The weed beds are critical for cover and spawning for some fish species. Also I would like to see boaters show more consideration for fishermen and have a little more respect
98	
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102	At the 2009 annual meeting a number of members expressed concerns regarding fireworks. The concerns were both for safety as one shore station cover had burned holes as well as lake quality as chemicals in fireworks affect water quality and safety. I would encourage the board to at minimum reinforce the laws regarding fireworks thru the newsletter and informational articles regarding the issue of chemicals and water safety since that is the primary area the board has been pursuing. By doing nothing we continues to condone illegal and possibly dangerous activities. What about lead weights?
103	Fireworks are out of control. Much of the debre ends up in the lakes. A nice fireworks display is fun unless they are going off right over your boats and or home. Perhaps the association could get all the willing donors to have on display in a safe location at a decent hour. The current situation has fireworks going off all over the place and at all hours. It is just a matter of time before we have a serious personal injury or property damage situation on our lakes. These are explosive devices being set off by amateurs
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110	Will gunlock receive walleye stocking? Or any fish stocking and if so what fish and how often. Will personal water craft hours be established or do they exist? Is there any evidence of fish virus in our immediate area? Is this also a concern which has not been addressed by this survey? Keep up the good work.
111	Require user's fees for no property owners; use these funds for lake resteratiun costs. Stop charging property owners for others mess
112	2) Mostly summer but some at other times
113	I would like to eliminate use of jet skies on Gunlock Lake and control the speed and amount of large motor boats and skiing. Also- noise of boats and radios on shore have gotten. Also, we have noticed more use of fire cracker and noise makers all summer long
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118	With both of us working, our ability to be at the lake is severely impacted. We are sometimes only able to be there on the spur of the moment. This makes it difficult for us to commit to assist with any activities were lake presence is required. We are willing to do whatever we can from our home base or that which can be accomplished on a visit to the lake. Down the road a bit, when we are able to retire we hope to be able to spend much more time at the lake. Unfortunately for us it is still quite a ways off. 2) Whenever possible throughout the year
119	
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121	Jet Ski noise can get obnoxious. Too much chopped plant material from boats. If people want lawns down to shore go live in a city. To many night lights just left on at night all the time on shoreline. I saw an article a while back about how bad chemicals in fireworks are for lake water.
122	I feel the continuation of water quality surveys and Lake Sweeps for early defection of AIS are important. Some how we need to learn more about the effect if any of septic systems on our lake and how to address negative impact.
123	
124	

Survey #	Question specific and general comments
125	I think the water skiers are a bit out of control coming to close to fishing boats creating sometimes large wakes. Suggest they stay out of the bays
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128	22) Jet skis
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131	16) Fresh air
132	
133	16) Unifying more with family
134	
135	First off thank you to the lake association for all the efforts the committees have done to keep us informed. We plan to semi retire on the lake in the next 4 years I would like to take a more active role then so please keep up the good work and I will take my turn next.
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138	16) Size of fish
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142	22) Loss of walleye population
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146	16) xc skiing / snow shoeing
147	Shish lake home owners since 76. I've noticed a decrease in # of people/ boaters on the lake especially last 10 years including decrease in water sports plus jet skis are quieter. My opinion these don't need to be regulated but my suspicion is that the shish/ gunlock association is skewed towards fishing/fisherman and I could get caught up in trying to police the lake (enforce times for water sports). My preference would be to focus on water quality. Weed growth including invasive species and abundance of fish. Finally I would comment that the loss thru attrition of campgrounds and resorts has made our lake much quieter and less populated/- populated and less need of "human on lake" regulation. Now that we have more private lake homeowners, septic runoff could be an issue to address. * walleyes have been significantly reduced in size and numbers for many years- back to pike nets and advent of spearing from what I can tell- but correlation doesn't always mean causation
148	22) Decrease in property value due to presence of invasive species
149	
150	Believe thicker weed growth and more algies growing problems. Believe lower water levels from drought has contributed to this as sunlight penetrates deeper. Shoreline run off and septic seepage could also be problems. Would like to see dying of septic systems become mandatory. Prevention of aquatic invasive species is also very important
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159	22) Resale of property
160	22) Water level
161	Aquatic invasive species prevention is a must. Enforcement of the good neighbors policy is a must. Enforcement of boating regulations is a must. Water quality management is a must. Fish management with stocking is a must. Shoreline protection is a must. This list is of current and medium range importance. The list could be 10x this long but in my opinion is the best start of topics
162	More historic information would be great. Those who have this historic info should be urged to give this information to any lake association member or workers. The goal should be the publication of a lake history document.
163	
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166	Good idea- reinstate no power boats/ water skiing- jet skis after 6:00
167	
168	I don't believe we currently have aquatic invasive species problems so I don't support an extensive aquatic plant management program at this time. 22) Increase jet ski use
169	Some thing should be done about the rude water skiers and jet skiers they think they think they own the lake by coming to close to shore, docks, fishing boats and chasing the loons. 22) Rude jet skiers and water skiers
170	
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Survey #	Question specific and general comments
174	
175	As a mobile owner in Lakeland Village Park I feel they own the lake property and they should participate. We are retired part time occupants and not physically able to participate
176	We have noticed people are operating huge boats and motors and aren't obeying boating rules and safety. For instance, our family was anchored in a bay having some snacks a huge boat made a big swamp around us and then went into their residence. It cause our boat/ pontoon to rock and roll and spill our snacks. People are skiing and wakeboarding too close to shore and near fishing boats. They are stirring up the water and making it muddy with the huge motors. It is also causing shore erosion. People are skiing up to 8pm (this should be fishing time).
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182	Even though I have only had my place for 14 years I have been using the lake for 40 plus years. Fishing pressure has increased, size of numbers have decreased, but I do believe catch and release has helped. My big concern, pet peeve, is the light pollution at night. The amount of lights on the shoreline- boats house, yard lights, mercury vapor lighting, and bright house lights pointed toward the lake are unbelievably irritating, especially when left on all night. When star gazing or enjoying the night sky nothing says northwoods like the bright lights lighting up the sky. These lights also present a navigation hazard. They can be blinding when approaching a shoreline. Lets make people aware of this, turn off lights or use shielding around them so light is deflected downward. I really don't think the crime rate around the lake deserves all that lighting. Mid June to mid August as expected are the worst. All summer long fireworks are getting to be annoying. I spend 80% of my time fishing after dark- the above destroys the experience.
183	I am not a fan of some of the large homes being built on the lake and corresponding piers. Also I dislike the over use of huge yard lights.
184	As a 58 year resident of shish I must comment on the effort of the lake association everything they have done has been environmentally positive and responsible. In the 70's lowlands were drained into joe's bay to the detriment of water quality, plant life and most of all wildlife and aquatic species. It has taken 30 plus years to recover. It is difficult to witness the change of focus of the users of the lake. I am grateful for the efforts of the association to remind to people to respect the land and the water. Thank you for reminding people about the use of herbicides at the shish meeting in august the DNR does not enforce the rules and regulations about destroying the natural shoreline habitat. That is evident when one takes a cruise around the lake. As a loaner of the north woods since the age of 4 I can only hope the efforts of this generation will benefit our lakes for many years to come
185	16) Pontoon use for fishing, swimming, water skiing/tubing
186	The lake association rule for no water skiing early morning and in the evening is unfair- for bare footers this is the best water and usually the only time they can ski. With increased boat traffic water skiers have a hard time finding good water. We have encountered too many situations where fisherman purposely hinder our skiing. We choose shore line where no fisherman are present- then once we start skiing the shoreline fishermen pull up anchor, move to open area and drop anchor in the middle of our run. Sometimes actually pull in front of our ski boat while we are puling a skier. Laws are so that skiers need to respect fishing times but fishermen don't need to respect skiing times?
187	22) Jet skis
188	
189	
190	
191	As property owner we pay a lot in taxes to live along our lakes the general public use our lakes with no additional charge. We all want our lakes to be clean and usable. If we start paying for these things the DNR will do nothing. This seems like another start to a lake district. 16) Enjoy living on the lake
192	
193	this survey is crazy I think have too much time on their hand let the lake be. It will be fine
194	I feel lake management has to be performed by every individual that uses the lake. Owners of lake property have to advise and assist our guest users of the lakes, also informing them on how we expect them to treat other users. Unwritten conduct rules of distance from fishermen with PWC's or safety related uses of speed/ boaters vs pontooners. In these ways we will self police our guests and keep peace amongst all types of users.
195	
196	Jet skis- wild and improper use near fisherman and wildlife is a major problem along with the excessive noise. There should be an authorized use time period for such water craft and penalties for abuse. Fireworks sometimes are excessive. 22) Jet skis
197	I have been coming to shish and gunlock for 35 years staying on shish until we bought our place on gunlock my grandparents still have their place on shish. My concern is construction, clearing shoreline, boat traffic, the increase in algae blooms, and water quality. This is a lot but they are all important and related. I know we cant go back to the old days but lack of control at some level is dangerous today as it seems people don't care. The weekend warriors are reckless. 22) Spearing
198	2) Spring, summer, fall
199	
200	Thanks for the great survey. Education for stakeholders should continue to be a focus. I know likes of fishery management however see that is a key to get one group of citizens involved. Human impact of all joint activities would be a great topic of education/ interests. Shoreline alteration or restoration ? patterns in wildlife habitat/ does heavy boating/ skiing/ jet ski use impact nesting/ breading etc……illegible???…. 22) Fireworks, detritus/noise

Survey #	Question specific and general comments
201	I was a member of the old gunlock lake association. From beginning to end and would like to share a little history. The association was formed by a few individuals who owned property on the naturally weedy shallow much bay on the south end. Their personal agenda was to have all lake residents chip in to remove weeds from in front of their homes. Two years failed to convince anyone. The association survived with new leadership addressing real issues. Back then gunlock was over populated with undersized bluegills a multi-year program was developed with the DNR and tribe. Bass fingerlings were stocked and gunlock became a designated bass trophy lake with a one fish limit of 18". Within a few years the bluegill population was under control and the fish sized exploded. In the late 90's our association felt that we accomplished our goals and there were no other issues, so we discontinued the association. I am proud of what our association accomplished. They took a worthless bluegill fishery and poor bass fishery and turned it into the excellent bass and panfish lake it is today
202	
203	
204	16) Lakeland village
205	
206	
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208	22) Spearing
209	22) Jet skis
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212	22) Jet skis
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215	

C

APPENDIX C

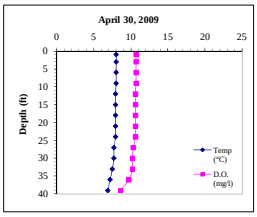
Water Quality Data

Shishebogama Lake

Date: 04-30-09
Time: 9:15
Weather: Foggy, 45°F, light dirzzle
Ent: BTB **Verf:**

Max Depth (ft): 40.7
SLS Depth (ft): 3.0
SLB Depth (ft): 38.0
Secchi Depth (ft): 8.0

Depth (ft)	Temp (°C)	D.O. (mg/l)	pH	Sp. Cond (µS/cm)
1.0	8.0	10.7	7.4	104
3.0	8.0	10.7	7.3	105
6.0	8.0	10.7	7.1	105
9.0	8.0	10.7	7.0	105
12.0	7.9	10.6	7.0	105
15.0	7.9	10.6	6.9	105
18.0	7.9	10.6	6.8	105
21.0	7.9	10.6	6.8	104
24.0	7.9	10.6	6.8	105
27.0	7.7	10.3	6.8	104
30.0	7.7	10.2	6.8	105
33.0	7.5	10.2	6.8	104
36.0	7.2	9.7	6.8	104
39.0	6.9	8.6	6.6	105



Parameter	SLS	SLB
Total P (µg/L)	14.000	23.000
Dissolved P (µg/L)	ND	ND
Chl a (µg/L)	1.67	NA
TKN (µg/L	400.00	340.00
NO3+NO2-N (µg/L)	ND	ND
NH3-N (µg/L)	ND	53.000
Total N (µg/L)	400.00	340.00
Lab Cond. (µS/cm)	110	110
Lab pH	7.58	7.33
Alkal (mg/l CaCO3)	44	43
Total Susp Sol (mg/l)	ND	2
Calcium (mg/l)	13.5	NA

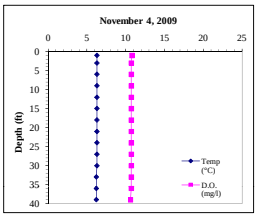
Data collected by TAH and EJH (Onterra)

Shishebogama Lake

Date: 11-04-09
Time: 3:10
Weather: 100% Clouds, 36°F
Ent: BTB **Verf:**

Max Depth (ft): 40.2
SLS Depth (ft): 3.0
SLB Depth (ft): 37.0
Secchi Depth (ft): 8.6

Depth (ft)	Temp (°C)	D.O. (mg/l)	pH	Sp. Cond (µS/cm)
1.0	6.3	10.8	7.8	109
3.0	6.3	10.7	7.9	109
6.0	6.3	10.7	7.9	109
9.0	6.3	10.7	7.8	109
12.0	6.3	10.7	7.8	109
15.0	6.3	10.7	7.8	109
18.0	6.3	10.7	7.8	109
21.0	6.3	10.7	7.8	109
24.0	6.3	10.7	7.8	109
27.0	6.3	10.7	7.8	109
30.0	6.3	10.7	7.8	109
33.0	6.2	10.7	7.8	109
36.0	6.2	10.7	7.8	109
39.0	6.2	10.6	7.8	109



Parameter	SLS	SLB
Total P (µg/L)	20.000	NA
Dissolved P (µg/L)	19.000	NA
Chl a (µg/L)	6.88	NA
TKN (µg/L	410.00	NA
NO3+NO2-N (µg/L)	ND	NA
NH3-N (µg/L)	ND	NA
Total N (µg/L)	410.00	NA
Lab Cond. (µS/cm)	NA	NA
Lab pH	NA	NA
Alkal (mg/l CaCO3)	NA	NA
Total Susp Sol (mg/l)	ND	ND
Calcium (mg/l)	NA	NA

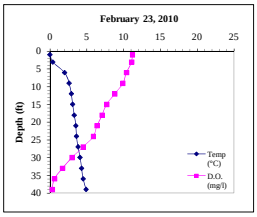
Data collected by: TAH and EJH (Onterra)

Shishebogama Lake

Date: 02-23-10
Time: 13:40
Weather: 100% Clouds, Snowing, 25°F, breezy
Ent: BTB **Verf:**

Max Depth (ft): 39.6
SLS Depth (ft): 3.0
SLB Depth (ft): 36.0
Secchi Depth (ft): 10.2

Depth (ft)	Temp (°C)	D.O. (mg/l)	pH	Sp. Cond (µS/cm)
1.0	0.0	11.2	7.1	119
3.0	0.4	11.1	7.1	117
6.0	2.0	10.4	7.1	114
9.0	2.6	9.9	7.1	113
12.0	2.9	8.8	7.0	114
15.0	3.1	7.7	6.9	115
18.0	3.3	7.1	6.8	116
21.0	3.5	6.4	6.8	117
24.0	3.6	5.9	6.8	118
27.0	3.8	4.5	6.8	120
30.0	4.1	3.0	6.7	122
33.0	4.3	1.7	6.7	127
36.0	4.5	0.6	6.6	130
39.0	4.9	0.3	6.8	161



Parameter	SLS	SLB
Total P (µg/L)		
Dissolved P (µg/L)		
Chl a (µg/L)		
TKN (µg/L		
NO3+NO2-N (µg/L)		
NH3-N (µg/L)		
Total N (µg/L)		
Lab Cond. (µS/cm)		
Lab pH		
Alkal (mg/l CaCO3)		
Total Susp Sol (mg/l)		
Calcium (mg/l)		

Data collected by: TAH, EJH, BTB, DAC (Onterra)
Ice: 1.5 ft

Water Quality Data

2009/2010	Surface		Bottom	
Parameter	Count	Mean	Count	Mean
Secchi Depth (feet)	3	8.9	NA	NA
Total P (µg/L)	2	17.0	1	23.0
Dissolved P (µg/L)	1	19.0	1	ND
Chl a (µg/L)	2	4.3	NA	NA
TKN (µg/L	2	405.0	1	340.0
NO3+NO2-N (µg/L)	0	ND	1	ND
NH3-N (µg/L)	0	ND	1	53.0
Total N (µg/L)	2	405.0	1	340.0
Lab Cond. (µS/cm)	1	110.0	1	110.0
Lab pH	1	7.6	1	7.3
Alkal (mg/l CaCO3)	1	43.5	1	43.1
Total Susp Sol (mg/l)	0	ND	1	2.0
Calcium (µg/L)	1	13.5	NA	NA

Morphological / Geographical Data

Parameter	Value
Acreage	699.9
Volume (acre-feet)	11,332
Perimeter (miles)	10.2
Shoreland Development	
Maximum Depth (feet)	42
County	Oneida County
WBIC	1539600
Lillie Mason Region(1983)	Northeast Region
Nichols Ecoregion(1999)	NLFF

Watershed Data

WiLMS Class	Acreage	kg/yr	lbs/yr
Forest	2485.0	91	200.0
Open Water	700.0	85	187.0
Pasture/Grass	173.0	21	46.2
Row Crops	1.0	0	0.0
Urban - Rural Residential			
Wetland	1225.0	50	110.0

Watershed to Lake Area 6:1

Wisconsin Trophic State Index (WTSI)

Year	TP	Chla	SD
1979			44.67
1990			44.30
1991			45.45
1999			43.37
2000			43.05
2001			42.45
2002	49.96	39.22	43.23
2003	49.21	44.74	43.00
2004	48.95	44.84	40.71
2005	50.34	47.86	45.72
2006	49.84	51.34	43.82
2007	49.00	51.57	42.23
2008	51.65	46.80	43.74
2009	53.19	45.03	41.30
All Years (weighted)	50.11	48.01	43.19
WI Natural Lakes	53.19	54.23	47.33
Northeast Region	51.05	51.49	45.61

	Secchi (feet)				Chlorophyll a (µg/L)				Phosphorus (µg/L)				Phosphorus (µg/L)			
	Growing Season		Summer		Growing Season		Summer		Growing Season				Spring Turnover		Fall Turnover	
Year	Count	Mean	Count	Mean	Count	Mean	Count	Mean	Count	Mean	Count	Mean	Count	Mean	Count	Mean
1979	1	9.5	1	9.5												
1990	3	10.17	1	9.75												
1991	1	9	1	9												
1999	6	8.93	4	10.4												
2000	8	8.87	4	10.63												
2001	10	9.5	6	11.08												
2002	4	8.81	1	10.5	4	5.65	2	1.81	4	19.5	2	16.5				
2003	4	10	3	10.67	4	7.86	3	3.78	4	16.75	3	15				
2004	3	12.17	2	12.5	3	4.92	2	3.83	3	17.67	2	14.5				
2005	4	8.38	3	8.83	4	6.43	3	5.73	4	17	3	17.33				
2006	5	10.26	4	10.08	4	8.98	3	9.12	5	18.2	4	16.25				
2007	7	9.21	4	11.25	4	9.4	4	9.4	5	14.6	5	14.6				
2008	4	10.13	4	10.13	4	4.98	4	4.98	4	20.5	4	20.5				
2009	3	10.67	1	12	3	3.53	1	3.93	3	17.67	1	25				
All Years (weighted)		9.6		10.5		6.6		5.8		17.7		16.8				
WI Natural Lakes				7.9				13.4				25				
Northeast Region				8.9				9.3				19				

Summer 2009 N: 410.00
Summer 2009 P: 20.000

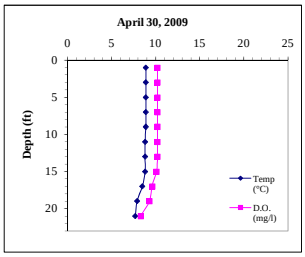
Summer 2009 N:P 21 :1

GunlockLake

Date: 04-30-09
Time: 10:00
Weather: Foggy, 45 °F, slight breeze
Ent: BTB **Verf:**

Max Depth (ft): 23.8
GLS Depth (ft): 3.0
GLB Depth (ft): 20.0
Secchi Depth (ft): 8.0

Depth (ft)	Temp (°C)	D.O. (mg/l)	pH	Sp. Cond (µS/cm)
1.0	8.9	10.2	7.2	107
3.0	8.9	10.2	7.2	107
5.0	8.9	10.2	7.3	107
7.0	8.9	10.2	7.3	107
9.0	8.9	10.2	7.3	107
11.0	8.8	10.2	7.3	107
13.0	8.8	10.2	7.3	107
15.0	8.8	10.1	7.3	107
17.0	8.5	9.6	7.3	107
19.0	7.9	9.3	7.2	107
21.0	7.7	8.3	7.1	104



Parameter	GLS	GLB
Total P (µg/L)	22.000	27.000
Dissolved P (µg/L)	ND	ND
Chl a (µg/L)	0.90	NA
TKN (µg/L	390.00	470.00
NO3+NO2-N (µg/L)	ND	ND
NH3-N (µg/L)	17.000	23.000
Total N (µg/L)	390.00	470.00
Lab Cond. (µS/cm)	112	111
Lab pH	7.73	7.41
Alkal (mg/l CaCO3)	48	47
Total Susp Sol (mg/l)	ND	ND
Calcium (mg/l)	15.0	NA

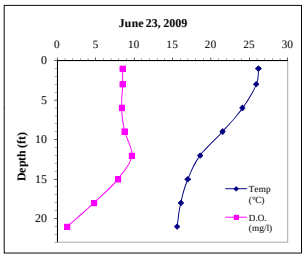
Data collected by TAH and EJH (Onterra)

GunlockLake

Date: 06-23-09
Time: 1:00
Weather: Light breeze, 100 % Sun, 88F
Ent: BTB **Verf:**

Max Depth (ft): 22.8
GLS Depth (ft): 3.0
GLB Depth (ft): NA
Secchi Depth (ft): 9.1

Depth (ft)	Temp (°C)	D.O. (mg/l)	pH	Sp. Cond (µS/cm)
1.0	26.2	8.5	8.2	112
3.0	25.9	8.5	8.2	112
6.0	24.1	8.4	7.9	112
9.0	21.5	8.8	7.9	111
12.0	18.6	9.7	7.8	110
15.0	17.0	7.9	7.4	109
18.0	16.1	4.8	7.1	112
21.0	15.6	1.3	6.9	112



Parameter	GLS	GLB
Total P (µg/L)	22.000	NA
Dissolved P (µg/L)	NA	NA
Chl a (µg/L)	3.35	NA
TKN (µg/L	440.00	NA
NO3+NO2-N (µg/L)	ND	NA
NH3-N (µg/L)	ND	NA
Total N (µg/L)	440.00	NA
Lab Cond. (µS/cm)	NA	NA
Lab pH	NA	NA
Alkal (mg/l CaCO3)	NA	NA
Total Susp Sol (mg/l)	NA	NA
Calcium (mg/l)	NA	NA

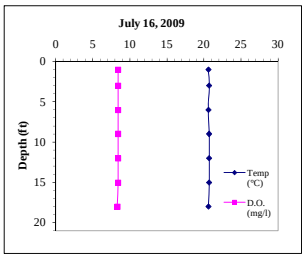
Data collected by: BTB and TWH (Onterra)

GunlockLake

Date: 07-16-09
Time: 3:15
Weather: 65°F, 100% Clouds, Windy
Ent: BTB **Verf:**

Max Depth (ft): 21.4
GLS Depth (ft): 3.0
GLB Depth (ft): NA
Secchi Depth (ft): 7.1

Depth (ft)	Temp (°C)	D.O. (mg/l)	pH	Sp. Cond (µS/cm)
1.0	20.6	8.4	7.9	112
3.0	20.7	8.4	8.1	112
6.0	20.6	8.4	8.1	112
9.0	20.7	8.4	8.2	113
12.0	20.7	8.4	8.2	113
15.0	20.7	8.4	8.2	113
18.0	20.6	8.3	8.3	113



Parameter	GLS	GLB
Total P (µg/L)	26.000	NA
Dissolved P (µg/L)	NA	NA
Chl a (µg/L)	3.42	NA
TKN (µg/L	490.00	NA
NO3+NO2-N (µg/L)	ND	NA
NH3-N (µg/L)	16.000	NA
Total N (µg/L)	490.00	NA
Lab Cond. (µS/cm)	NA	NA
Lab pH	NA	NA
Alkal (mg/l CaCO3)	NA	NA
Total Susp Sol (mg/l)	NA	NA
Calcium (mg/l)	NA	NA

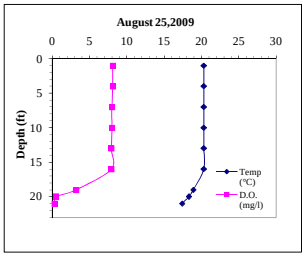
Data collected by: BTB and TWH (Onterra)

GunlockLake

Date: 08-25-09
Time: 12:28
Weather: 100% Clouds, 65°F
Ent: BTB **Verf:**

Max Depth (ft): 21.2
GLS Depth (ft): 3.0
GLB Depth (ft): NA
Secchi Depth (ft): 5.7

Depth (ft)	Temp (°C)	D.O. (mg/l)	pH	Sp. Cond (µS/cm)
1.0	20.3	8.1	8.2	114.0
4.0	20.3	8.1	8.3	115.0
7.0	20.3	8.0	8.2	115.0
10.0	20.3	8.0	8.2	115.0
13.0	20.3	7.9	8.2	115.0
16.0	20.3	7.9	8.2	115.0
19.0	18.9	3.2	7.3	118.0
20.0	18.3	0.5	7.2	121.0
21.0	17.4	0.3	7.2	146.0



Parameter	GLS	GLB
Total P (µg/L)	32.00	NA
Dissolved P (µg/L)	NA	NA
Chl a (µg/L)	6.03	NA
TKN (µg/L	340.00	NA
NO3+NO2-N (µg/L)	ND	NA
NH3-N (µg/L)	ND	NA
Total N (µg/L)	340.00	NA
Lab Cond. (µS/cm)	NA	NA
Lab pH	NA	NA
Alkal (mg/l CaCO3)	NA	NA
Total Susp Sol (mg/l)	NA	NA
Calcium (mg/l)	NA	NA

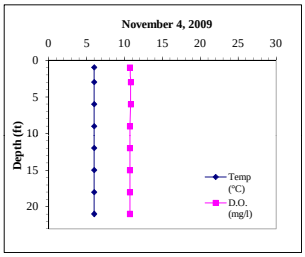
Data collected by: DAC and TWH (Onterra)

GunlockLake

Date: 11-04-09
Time: 3:45
Weather: 100% Clouds, 36°F, Light breeze
Ent: BTB **Verf:**

Max Depth (ft): 22.6
GLS Depth (ft): 3.0
GLB Depth (ft): 19.0
Secchi Depth (ft): 9.1

Depth (ft)	Temp (°C)	D.O. (mg/l)	pH	Sp. Cond (µS/cm)
1.0	6.0	10.7	8.0	112.0
3.0	6.0	10.8	8.0	112.0
6.0	6.0	10.8	8.0	112.0
9.0	6.0	10.7	8.0	112.0
12.0	6.0	10.7	8.0	112.0
15.0	6.0	10.7	8.0	112.0
18.0	6.0	10.7	8.0	112.0
21.0	6.0	10.7	8.0	112.0



Parameter	GLS	GLB
Total P (µg/L)	25.000	22.000
Dissolved P (µg/L)	NA	NA
Chl a (µg/L)	5.49	NA
TKN (µg/L	520.00	NA
NO3+NO2-N (µg/L)	ND	NA
NH3-N (µg/L)	19.000	NA
Total N (µg/L)	520.00	NA
Lab Cond. (µS/cm)	NA	NA
Lab pH	NA	NA
Alkal (mg/l CaCO3)	NA	NA
Total Susp Sol (mg/l)	ND	ND
Calcium (mg/l)	NA	NA

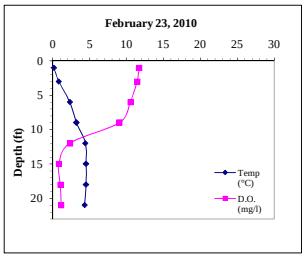
Data collected by: TAH and EJH (Onterra)

GunlockLake

Date: 02-23-10
Time: 14:30
Weather: 100% Clouds, Snowing, 25°F, breezy
Ent: BTB **Verf:**

Max Depth (ft): 22.7
GLS Depth (ft): 3.0
GLB Depth (ft): 19.0
Secchi Depth (ft): 10.2

Depth (ft)	Temp (°C)	D.O. (mg/l)	pH	Sp. Cond (µS/cm)
1.0	0.13	11.7	7.4	127
3.0	0.8	11.4	7.4	126
6.0	2.3	10.5	7.4	121
9.0	3.2	9.0	7.2	120
12.0	4.4	2.3	6.9	132
15.0	4.5	0.8	6.8	133
18.0	4.5	1.0	6.8	132
21.0	4.3	1.1	6.8	133



Parameter	GLS	GLB
Total P (µg/L)		
Dissolved P (µg/L)		
Chl a (µg/L)		
TKN (µg/L		
NO3+NO2-N (µg/L)		
NH3-N (µg/L)		
Total N (µg/L)		
Lab Cond. (µS/cm)		
Lab pH		
Alkal (mg/l CaCO3)		
Total Susp Sol (mg/l)		
Calcium (mg/l)		

Data collected by: TAH, EJH, BTB, DAC (Onterra)
Ice: 1.6 ft

Water Quality Data

2009/2010	Surface		Bottom	
Parameter	Count	Mean	Count	Mean
Secchi Depth (feet)	6	8.2	NA	NA
Total P (µg/L)	5	25.4	2	24.5
Dissolved P (µg/L)	1	ND	1	ND
Chl a (µg/L)	5	3.8	NA	NA
TKN (µg/L	5	436.0	1	470.0
NO3+NO2-N (µg/L)	6	ND	1	ND
NH3-N (µg/L)	6	17.3	1	23.0
Total N (µg/L)	5	436.0	1	470.0
Lab Cond. (µS/cm)	1	112.0	1	111.0
Lab pH	1	7.7	1	7.4
Alkal (mg/l CaCO3)	1	47.6	1	47.2
Total Susp Sol (mg/l)	2	ND	0	#DIV/0!
Calcium (µg/L)	1	15.0	NA	NA

Wisconsin Trophic State Index (WTSI)

Year	TP	Chla	SD
1979			43.93
1990			46.70
1994			45.34
2008			48.99
2009	53.69	45.65	45.97
All Years (weighted)	53.69	45.65	46.58
WI Natural Lakes	53.19	54.23	47.33
Northeast Region	51.05	51.49	45.61

Morphological / Geographical Data

Parameter	Value
Acreage	266.9
Volume (acre-feet)	3,211
Perimeter (miles)	
Shoreland Development	
Maximum Depth (feet)	26
County	Vilas County
WBIC	1539700
Lillie Mason Region(1983)	Northeast Region
Nichols Ecoregion(1999)	NLFF

Watershed Data

WiLMS Class	Acreage	kg/yr	lbs/yr
Forest	756.3	28	61.6
Lake Surface	266.9	32	70.4
Pasture/Grass	10.6	1	2.2
Row Crops			
Urban - Rural Residential			
Wetland	256.8	10	22.0

Watershed to Lake Area	4:1

	Secchi (feet)				Chlorophyll a (µg/L)				Phosphorus (µg/L)				Phosphorus (µg/L)			
	Growing Season		Summer		Growing Season		Summer		Growing Season				Spring Turnover		Fall Turnover	
Year	Count	Mean	Count	Mean	Count	Mean	Count	Mean	Count	Mean	Count	Mean	Count	Mean	Count	Mean
1979	1	10	1	10												
1990	22	7.51	13	8.25												
1994	7	7.84	5	9.07												
2008	10	7.5	6	7.04												
2009	13	8.24	9	8.68	4	3.43	3	4.27	4	25.5	3	26.67				
All Years (weighted)		7.8		8.3		3.4		4.3		25.5		26.7				
WI Natural Lakes				7.9				13.4				25				
Northeast Region				8.9				9.3				19				

Summer 2009 N: 465.00
Summer 2009 P: 24.000

Summer 2009 N:P 19 :1

D

APPENDIX D

Watershed Analysis WiLMS Results

Date: 6/29/2010 Scenario: Shishebogama Lake Current

Lake Id: 1539600
Watershed Id: 0

Hydrologic and Morphometric Data

Tributary Drainage Area: 3884.7 acre
Total Unit Runoff: 14.00 in.
Annual Runoff Volume: 4532.1 acre-ft
Lake Surface Area <As>: 699.9 acre
Lake Volume <V>: 11332.0 acre-ft
Lake Mean Depth <z>: 16.2 ft
Precipitation - Evaporation: 5.5 in.
Hydraulic Loading: 6166.3 acre-ft/year
Areal Water Load <qs>: 8.8 ft/year
Lake Flushing Rate <p>: 0.54 1/year
Water Residence Time: 1.84 year
Observed spring overturn total phosphorus (SPO): 14.0 mg/m^3
Observed growing season mean phosphorus (GSM): 17.7 mg/m^3
% NPS Change: 0%
% PS Change: 0%

NON-POINT SOURCE DATA

Land Use	Acre	Low	Most Likely	High	Loading %	Low	Most Likely	High
	(ac)	Loading (kg/ha-year)				Loading (kg/year)		
Row Crop AG	1.2	0.50	1.00	3.00	0.2	0	0	1
Mixed AG	0.0	0.30	0.80	1.40	0.0	0	0	0
Pasture/Grass	173.1	0.10	0.30	0.50	7.3	7	21	35
HD Urban (1/8 Ac)	0.0	1.00	1.50	2.00	0.0	0	0	0
MD Urban (1/4 Ac)	0.0	0.30	0.50	0.80	0.0	0	0	0
Rural Res (>1 Ac)	0.0	0.05	0.10	0.25	0.0	0	0	0
Wetlands	1225.0	0.10	0.10	0.10	17.3	50	50	50
Forest	2485.4	0.05	0.09	0.18	31.6	50	91	181
Lake Surface	699.9	0.10	0.30	1.00	29.7	28	85	283

POINT SOURCE DATA

Point Sources	Water Load (m^3/year)	Low (kg/year)	Most Likely (kg/year)	High (kg/year)	Loading %
Gunlock Lake	1.62E+006	0.0	39.5	0.0	13.8

SEPTIC TANK DATA

Description		Low	Most Likely	High	Loading %
Septic Tank Output (kg/capita-year)		0.30	0.50	0.80	
# capita-years	0.0				
% Phosphorus Retained by Soil		98.0	90.0	80.0	
Septic Tank Loading (kg/year)		0.00	0.00	0.00	0.0

TOTALS DATA

Description	Low	Most Likely	High	Loading %
Total Loading (lb)	298.6	630.7	1213.3	100.0
Total Loading (kg)	135.4	286.1	550.4	100.0
Areal Loading (lb/ac-year)	0.43	0.90	1.73	
Areal Loading (mg/m^2-year)	47.82	101.00	194.31	
Total PS Loading (lb)	0.0	87.1	0.0	13.8
Total PS Loading (kg)	0.0	39.5	0.0	13.8
Total NPS Loading (lb)	236.1	356.3	588.9	86.2
Total NPS Loading (kg)	107.1	161.6	267.1	86.2

Phosphorus Prediction and Uncertainty Analysis Module

Date: 6/29/2010 Scenario: 32
Observed spring overturn total phosphorus (SPO): 14.0 mg/m^3
Observed growing season mean phosphorus (GSM): 17.7 mg/m^3
Back calculation for SPO total phosphorus: 0.0 mg/m^3
Back calculation GSM phosphorus: 0.0 mg/m^3
% Confidence Range: 70%
Nurenberg Model Input - Est. Gross Int. Loading: 0 kg

Lake Phosphorus Model	Low Total P (mg/m^3)	Most Likely Total P (mg/m^3)	High Total P (mg/m^3)	Predicted -Observed (mg/m^3)	% Dif.
Walker, 1987 Reservoir	9	19	36	1	6
Canfield-Bachmann, 1981 Natural Lake	10	17	28	-1	-6
Canfield-Bachmann, 1981 Artificial Lake	10	17	26	-1	-6
Rechow, 1979 General	3	7	13	-11	-62
Rechow, 1977 Anoxic	12	26	50	8	45
Rechow, 1977 water load<50m/year	5	11	22	-7	-40
Rechow, 1977 water load>50m/year	N/A	N/A	N/A	N/A	N/A
Walker, 1977 General	9	18	35	4	29
Vollenweider, 1982 Combined OECD	8	15	26	-1	-6
Dillon-Rigler-Kirchner	5	10	19	-4	-29
Vollenweider, 1982 Shallow Lake/Res.	6	12	21	-4	-25
Larsen-Mercier, 1976	8	16	31	2	14
Nurnberg, 1984 Oxic	5	10	20	-8	-45

Lake Phosphorus Model	Confidence Lower Bound	Confidence Upper Bound	Parameter Fit?	Back Calculation (kg/year)	Model Type
Walker, 1987 Reservoir	11	31	FIT	0	GSM
Canfield-Bachmann, 1981 Natural Lake	5	49	FIT	1	GSM
Canfield-Bachmann, 1981 Artificial Lake	5	49	FIT	1	GSM
Rechow, 1979 General	4	12	FIT	0	GSM
Rechow, 1977 Anoxic	15	43	FIT	0	GSM
Rechow, 1977 water load<50m/year	6	19	FIT	0	GSM
Rechow, 1977 water load>50m/year	N/A	N/A	N/A	N/A	N/A
Walker, 1977 General	9	33	FIT	0	SPO
Vollenweider, 1982 Combined OECD	7	27	FIT	0	ANN
Dillon-Rigler-Kirchner	6	16	L	0	SPO
Vollenweider, 1982 Shallow Lake/Res.	6	21	FIT	0	ANN
Larsen-Mercier, 1976	10	26	P Pin	0	SPO
Nurnberg, 1984 Oxic	5	18	FIT	0	ANN

Water and Nutrient Outflow Module

Date: 6/29/2010 Scenario: 20
Average Annual Surface Total Phosphorus: 17.7mg/m^3
Annual Discharge: 6.17E+003 AF => 7.61E+006 m^3
Annual Outflow Loading: 284.0 LB => 128.8 kg

Date: 6/29/2010 Scenario: Gunlock Lake Current

Lake Id: 1539700
Watershed Id: 0

Hydrologic and Morphometric Data

Tributary Drainage Area: 1023.7 acre
Total Unit Runoff: 14 in.
Annual Runoff Volume: 1194.3 acre-ft
Lake Surface Area <As>: 266.9 acre
Lake Volume <V>: 3211 acre-ft
Lake Mean Depth <z>: 12.0 ft
Precipitation - Evaporation: 5.5 in.
Hydraulic Loading: 1316.6 acre-ft/year
Areal Water Load <qs>: 4.9 ft/year
Lake Flushing Rate <p>: 0.41 1/year
Water Residence Time: 2.44 year
Observed spring overturn total phosphorus (SPO): 22.0 mg/m^3
Observed growing season mean phosphorus (GSM): 25.5 mg/m^3
% NPS Change: 0%
% PS Change: 0%

NON-POINT SOURCE DATA

Land Use	Acre	Low	Most Likely	High	Loading %	Low	Most Likely	High
	(ac)	Loading (kg/ha-year)				Loading (kg/year)		
Row Crop AG	0.0	0.50	1.00	3.00	0.0	0	0	0
Mixed AG	0.0	0.30	0.80	1.40	0.0	0	0	0
Pasture/Grass	10.6	0.10	0.30	0.50	1.8	0	1	2
HD Urban (1/8 Ac)	0.0	1.00	1.50	2.00	0.0	0	0	0
MD Urban (1/4 Ac)	0.0	0.30	0.50	0.80	0.0	0	0	0
Rural Res (>1 Ac)	0.0	0.05	0.10	0.25	0.0	0	0	0
Wetlands	256.8	0.10	0.10	0.10	14.5	10	10	10
Forest	756.3	0.05	0.09	0.18	38.5	15	28	55
Lake Surface	266.9	0.10	0.30	1.00	45.2	11	32	108

POINT SOURCE DATA

Point Sources	Water Load (m^3/year)	Low (kg/year)	Most Likely (kg/year)	High (kg/year)	Loading %

SEPTIC TANK DATA

Description		Low	Most Likely	High	Loading %
Septic Tank Output (kg/capita-year)		0.3	0.5	0.8	
# capita-years	0.0				
% Phosphorus Retained by Soil		98	90	80	
Septic Tank Loading (kg/year)		0.00	0.00	0.00	0.0

TOTALS DATA

Description	Low	Most Likely	High	Loading %
Total Loading (lb)	81.4	157.9	387.2	100.0
Total Loading (kg)	36.9	71.6	175.6	100.0
Areal Loading (lb/ac-year)	0.31	0.59	1.45	0.0
Areal Loading (mg/m^2-year)	34.19	66.32	162.62	0.0
Total PS Loading (lb)	0.0	0.0	0.0	0.0
Total PS Loading (kg)	0.0	0.0	0.0	0.0
Total NPS Loading (lb)	57.6	86.5	149.1	100.0
Total NPS Loading (kg)	26.1	39.2	67.6	100.0

Phosphorus Prediction and Uncertainty Analysis Module

Date: 6/29/2010 Scenario: 31
Observed spring overturn total phosphorus (SPO): 22.0 mg/m^3
Observed growing season mean phosphorus (GSM): 25.5 mg/m^3
Back calculation for SPO total phosphorus: 0.0 mg/m^3
Back calculation GSM phosphorus: 0.0 mg/m^3
% Confidence Range: 70%
Nurenberg Model Input - Est. Gross Int. Loading: 0 kg

Lake Phosphorus Model	Low Total P (mg/m^3)	Most Likely Total P (mg/m^3)	High Total P (mg/m^3)	Predicted -Observed (mg/m^3)	% Dif.
Walker, 1987 Reservoir	12	23	55	-3	-12
Canfield-Bachmann, 1981 Natural Lake	11	18	33	-8	-31
Canfield-Bachmann, 1981 Artificial Lake	11	17	30	-9	-35
Rechow, 1979 General	3	5	12	-21	-82
Rechow, 1977 Anoxic	15	29	70	4	16
Rechow, 1977 water load<50m/year	5	10	25	-16	-63
Rechow, 1977 water load>50m/year	N/A	N/A	N/A	N/A	N/A
Walker, 1977 General	10	20	48	-2	-9
Vollenweider, 1982 Combined OECD	9	16	33	-8	-34
Dillon-Rigler-Kirchner	6	11	27	-11	-50
Vollenweider, 1982 Shallow Lake/Res.	7	12	27	-12	-51
Larsen-Mercier, 1976	9	17	42	-5	-23
Nurnberg, 1984 Oxic	5	10	25	-16	-63

Lake Phosphorus Model	Confidence Lower Bound	Confidence Upper Bound	Parameter Fit?	Back Calculation (kg/year)	Model Type
Walker, 1987 Reservoir	14	44	Tw	0	GSM
Canfield-Bachmann, 1981 Natural Lake	6	52	FIT	1	GSM
Canfield-Bachmann, 1981 Artificial Lake	5	49	FIT	1	GSM
Rechow, 1979 General	3	10	L	0	GSM
Rechow, 1977 Anoxic	18	56	FIT	0	GSM
Rechow, 1977 water load<50m/year	6	20	FIT	0	GSM
Rechow, 1977 water load>50m/year	N/A	N/A	N/A	N/A	N/A
Walker, 1977 General	10	41	FIT	0	SPO
Vollenweider, 1982 Combined OECD	8	31	FIT	0	ANN
Dillon-Rigler-Kirchner	7	21	L	0	SPO
Vollenweider, 1982 Shallow Lake/Res.	6	24	FIT	0	ANN
Larsen-Mercier, 1976	11	33	P Pin	0	SPO
Nurnberg, 1984 Oxic	5	21	FIT	0	ANN

Water and Nutrient Outflow Module

Date: 6/29/2010 Scenario: 19
Average Annual Surface Total Phosphorus: 25.5mg/m^3
Annual Discharge: 1.32E+003 AF => 1.62E+006 m^3
Annual Outflow Loading: 87.1 LB => 39.5 kg

E

APPENDIX E

2009 Aquatic Plant Survey Data

Point Number	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Depth (ft)	Sediment type (M=muck, S=Sand, R=Rock	Rope (R); Pole (P); Visual (V)	Notes	Brasenia schreberi	Ceratophyllum demersum	Chara sp.	Dulichium arundinaceum	Elatine minima	Eleocharis acicularis	Eleocharis palustris	Elodea canadensis	Equisetum fluviatile	Eriocaulon aquaticum	Heteranthera dubia	Isoetes lacustris	Juncus pelocarpus	Lemna minor	Lemna trisulca	Lobelia dortmanna	Megalodonta beckii	Myriophyllum sibiricum	Myriophyllum tenellum	Myriophyllum verticillatum	Najas flexilis	Nitella sp.	Nuphar variegata	Nymphaea odorata	Pontederia cordata	Potamogeton amplifolius	Potamogeton epihydrus	Potamogeton friesii	Potamogeton gramineus	Potamogeton illinoensis	Potamogeton praelongus	Potamogeton pusillus	Potamogeton richardsonii	Potamogeton robbinsii	Potamogeton spirillus	Potamogeton vaseyi	Potamogeton zosteriformis	Ranunculus aquatilis	Sagitaria sp. (rosette)	Schoenoplectus acutus	Schoenoplectus tabernaemontani	Schoenoplectus subterminalis	Sparganium angustifolium	Sparganium eurycarpum	Sparganium fluctuans	Spirodela polyrhiza	Stuckenia pectinata	Utricularia intermedia	Utricularia vulgaris	Vallisneria americana	Myriophyllum alterniflorum	Potamogeton hybrid sp	Sagittaria cristata
1	45.88752	-89.84372	4	M	P									1									1	1																		2																
2	45.88703	-89.84373				Fisherman																																																					
3	45.88849	-89.84303	5	M	P												1										1						1	1	1					1	1			1																
4	45.88800	-89.84303	8	M	P			2						1																								2					1																	
5	45.88751	-89.84303	10	M	P			1																2																			2																
6	45.88703	-89.84303				Fisherman																																																				
7	45.88654	-89.84303	6	M	P																																			3																			
8	45.88897	-89.84233	5	M	P			1						1										1																2			1													1			
9	45.88849	-89.84233	5	M	P			1																																1																			
10	45.88800	-89.84233	10	M	P			1																1															1					1																
11	45.88751	-89.84233	14		R	No Vegetation																																																				
12	45.88703	-89.84233	15		R			1																																			1																
13	45.88654	-89.84234	9	M	P			3																3																			1																
14	45.88946	-89.84163				On Shore																																																				
15	45.88897	-89.84163	6	M	P																		1																	3																			
16	45.88848	-89.84163	6	M	P			1																														1		1				1															
17	45.88800	-89.84164	12	M	P			2																														1					1																
18	45.88751	-89.84164	16		R			1																																																		
19	45.88703	-89.84164	15		R	No Vegetation																																																				
20	45.88654	-89.84164	12	M	P	No Vegetation		1																																			2																
21	45.89432	-89.84092	2	M	P		1		1					1						1								1	1	1	1				1																			1			1				
22	45.89383	-89.84092				Not reachable																																																				
23	45.89334	-89.84092				Not reachable																																																				
25	45.88946	-89.84094	8	M	P			1																																1			1													1		1	
25	45.88897	-89.84094	9	M	P			1																													1	2					1																
26	45.88848	-89.84094	10	M	P			2																													1																							
27	45.88800	-89.84094	14		R			1																																																		
28	45.88751	-89.84094	15		R			2																														1					2																
29	45.88703	-89.84094	10	M	P			2									1							1																			1																
30	45.88654	-89.84094	10	M	P	No Vegetation																																																				
31	45.89431	-89.84023	6	M	P																			1				1	1			1									1			1																
32	45.89383	-89.84023	5	M	P			1						1																										1																			
33	45.89334	-89.84023	5	R	P	No Vegetation																																																				
34	45.89043	-89.84024	5	M	P												1										3							1							1																			
35	45.88994	-89.84024	7	R	P																						1																																
36	45.88945	-89.84024	6	M	P			2																																			1																
37	45.88897	-89.84024	10	M	P			2																																			1																
38	45.88848	-89.84024	14		R			2																																																		
39	45.88800	-89.84024	15		R			1						1																								1																					
40	45.88751	-89.84025	3	R	P				1							1								1			1																																
41	45.88702	-89.84025	6	M	P			1																							1								2			1																
42	45.88654	-89.84025	8	M	P			2																1																			1																
43	45.89480	-89.83953	2	S	P							1						1							1										1																									1
44	45.89431	-89.83953	1	M	P			1																1														1		1			1																
45	45.89383	-89.83953	11	M	P			1																																			1																
46	45.89334	-89.83953	12	M	P			1																			1															1																
47	45.89286	-89.83953	3	S	P				1									1									1		1	1					1																					1			
48	45.89188	-89.83954	3	R	P		1																								1								1			1													1			
49	45.89140	-89.83954	5	M	P	No Vegetation																																																				
50	45.89091	-89.83954	7	M	P									1																										2			1													1			
51	45.89043	-89.83954	6	M	P			1																1																			1																
52	45.88994	-89.83954	10	M	P			1																			1										1																					
53	45.88945	-89.83954	15		R			1																																																		
54	45.88897	-89.83954	17		R																																	1																					
55	45.88848	-89.83955	16		R			1																																																	
56	45.88800	-89.83955	2	R	P												1										1																																
57	45.89431	-89.83883	13		R			1																			1										3																					
58	45.89383	-89.83883	17			No Vegetation																																																				
59	45.89334	-89.83884				No Vegetation																																																				
60	45.89285	-89.83884	16		R			1																																																	
61	45.89237	-89.83884	11	M	P			2																			1											1	1																				
62	45.89188	-89.83884	8	R	P			1	1							1								1			1	1										1		1																			
63	45.89140	-89.83884	9	M	P			2																														1																					
64	45.89091	-89.83884	9	R	P			1						1										1								1								1			1													1			
65	45.89042	-89.83884	7	R	P			1																2				1							1				1		1																			
66	45.88994	-89.83885	15		R			2																			1										1					1																
67	45.88945	-89.83885				Too Deep																																																				
68	45.88897	-89.83885				Too Deep																																																				
69	45.88848	-89.83885	14		R	No Vegetation																																																				
70	45.89480	-89.83814	6	M	P									1										1									1		1				1		1			1																
71	45.89431	-89.83814	17		R	No Vegetation																																																				
72	45.89383	-89.83814				Too Deep																																																				
73	45.89334	-89.83814				Too Deep																																																				
74	45.89285	-89.83814				Too Deep																																																				
75	45.89237	-89.83814	17		R																																																				
76	45.89188	-89.83814	16		R			1																			2																																
77	45.89140	-89.83815				Too Deep																																																				
78	45.89091	-89.83815	2	R	P																																						1												1		
79	45.89042	-89.83815	15		R																						1										1																					

Point Number	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Depth (ft)	Sediment type (M=muck, S=Sand, R=Rock	Rope (R); Pole (P); Visual (V)	Notes	Brasenia schreberi	Ceratophyllum demersum	Chara sp.	Dulichium arundinaceum	Elatine minima	Eleocharis acicularis	Eleocharis palustris	Elodea canadensis	Equisetum fluviatile	Eriocaulon aquaticum	Heteranthera dubia	Isoetes lacustris	Juncus pelocarpus	Lemna minor	Lemna trisulca	Lobelia dortmanna	Megalodonta beckii	Myriophyllum sibiricum	Myriophyllum tenellum	Myriophyllum verticillatum	Najas flexilis	Nitella sp.	Nuphar variegata	Nymphaea odorata	Pontederia cordata	Potamogeton amplifolius	Potamogeton epihydrus	Potamogeton friesii	Potamogeton gramineus	Potamogeton illinoensis	Potamogeton praelongus	Potamogeton pusillus	Potamogeton richardsonii	Potamogeton robbinsii	Potamogeton spirillus	Potamogeton vaseyi	Potamogeton zosteriformis	Ranunculus aquatilis	Sagitaria sp. (rosette)	Schoenoplectus acutus	Schoenoplectus tabernaemontani	Schoenoplectus subterminalis	Sparganium angustifolium	Sparganium eurycarpum	Sparganium fluctuans	Spirodela polyrhiza	Stuckenia pectinata	Utricularia intermedia	Utricularia vulgaris	Vallisneria americana	Myriophyllum alterniflorum	Potamogeton hybrid sp	Sagittaria cristata
80	45.88994	-89.83815	16		R	No Vegetation																																																			
81	45.88945	-89.83815				Too Deep																																																			
82	45.88897	-89.83815	16		R	No Vegetation																																																			
83	45.88848	-89.83815	6	M	P																											1								1			1	1													
84	45.89480	-89.83744	7	M	P			1															1	1								1					1				2			1													
85	45.89431	-89.83744				Too Deep																																																		
86	45.89382	-89.83744				Too Deep																																																		
87	45.89334	-89.83744				Too Deep																																																		
88	45.89285	-89.83745				Too Deep																																																		
89	45.89237	-89.83745				Too Deep																																																		
90	45.89188	-89.83745	17		R	No Vegetation																																																			
91	45.89042	-89.83745	8	M	P			1							1		1																										1			1											
92	45.88994	-89.83745	12	M	P			2																																	1			2											
93	45.88945	-89.83746	13	M	P			1																																	1			1											
94	45.88896	-89.83746	12	M	P			2																																	1			1											
95	45.88848	-89.83746	7	M	P																							1														3										1		
96	45.89480	-89.83674	17		R																							1																											
97	45.89431	-89.83675				Too Deep																																																		
98	45.89382	-89.83675				Too Deep																																																		
99	45.89334	-89.83675				Too Deep																																																		
100	45.89285	-89.83675				Too Deep																																																		
101	45.89237	-89.83675				Too Deep																																																		
102	45.88994	-89.83676	8	M	P			3																																																
103	45.88945	-89.83676	8	M	P			2																																	1	1					1										
104	45.88896	-89.83676	6	M	P																		1											1							3													
105	45.88848	-89.83676	2	M	P		1										1										1		1	1																								
106	45.89528	-89.83605	7	M	P																						1					1								2										1		
107	45.89479	-89.83605				Too Deep																																																		
108	45.89431	-89.83605				Too Deep																																																		
109	45.89382	-89.83605				Too Deep																																																		
110	45.89334	-89.83605				Too Deep																																																		
111	45.89285	-89.83605				Too Deep																																																		
112	45.89236	-89.83605				Too Deep																																																		
113	45.89188	-89.83606	9	S	P												1							1				1							1	1						1												
114	45.89042	-89.83606				On Shore																																																		
115	45.88993	-89.83606	9	M	P			1																					1																										
116	45.88945	-89.83606	6	M	P	No Vegetation																																																		
117	45.89528	-89.83535	7	S	P			1	1															1																			1	1												
118	45.89479	-89.83535				Too Deep																																																		
119	45.89431	-89.83535				Too Deep																																																		
120	45.89382	-89.83535				Too Deep																																																		
121	45.89334	-89.83536				Too Deep																																																		
122	45.89285	-89.83536				Too Deep																																																		
123	45.89236	-89.83536				Too Deep																																																		
124	45.89188	-89.83536				Too Deep																																																		
125	45.89139	-89.83536	15		R																							1														1													
126	45.89091	-89.83536	5	M	P			1										1												1										1														
127	45.89042	-89.83536	6	M	P																																		1			1												1		
128	45.88993	-89.83537	9		R			2																1															1					1										
129	45.89528	-89.83465	4		R			1																					1											1	1													
130	45.89479	-89.83466	16		R	No Vegetation																																																		
131	45.89431	-89.83466				Too Deep																																																		
132	45.89382	-89.83466				Too Deep																																																		
133	45.89333	-89.83466				Too Deep																																																		
134	45.89285	-89.83466				Too Deep																																																		
135	45.89236	-89.83466				Too Deep																																																		
136	45.89188	-89.83466				Too Deep																																																		
137	45.89139	-89.83467				Too Deep																																																		
138	45.89090	-89.83467	11		R																																				1														
139	45.89042	-89.83467	9	M	P			1																																			1													
140	45.88993	-89.83467	9		R																			1															1	1	2														
141	45.89528	-89.83396	2	S	P				1			1						1										1							1																				1
142	45.89479	-89.83396	4	S	P									1																		1			1			1			1														
143	45.89431	-89.83396	16		R	No Vegetation																																																		
144	45.89382	-89.83396				Too Deep																																																		
145	45.89333	-89.83396				Too Deep																																																		
146	45.89285	-89.83397				Too Deep																																																		
147	45.89236	-89.83397				Too Deep																																																		
148	45.89188	-89.83397				Too Deep																																																		
149	45.89139	-89.83397				Too Deep																																																		
150	45.89090	-89.83397				Too Deep																																																		
151	45.89042	-89.83397	13		R																							1																										
152	45.88993	-89.83397	9		R																																																		
153	45.89430	-89.83326	6	M	P																																					1													
154	45.89382	-89.83327				Too Deep																																																		
155	45.89333	-89.83327				Too Deep																																																		
156	45.89285	-89.83327				Too Deep																																																		
157	45.89236	-89.83327				Too Deep																																																		
158	45.89187	-89.83327				Too Deep																																																		

Point Number	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Depth (ft)	Sediment type (M=muck, S=Sand, R=Rock	Rope (R); Pole (P); Visual (V)	Notes	Brasenia schreberi	Ceratophyllum demersum	Chara sp.	Dulichium arundinaceum	Elatine minima	Eleocharis acicularis	Eleocharis palustris	Elodea canadensis	Equisetum fluviatile	Eriocaulon aquaticum	Heteranthera dubia	Isoetes lacustris	Juncus pelocarpus	Lemna minor	Lemna trisulca	Lobelia dortmanna	Megalodonta beckii	Myriophyllum sibiricum	Myriophyllum tenellum	Myriophyllum verticillatum	Najas flexilis	Nitella sp.	Nuphar variegata	Nymphaea odorata	Pontederia cordata	Potamogeton amplifolius	Potamogeton epihydrus	Potamogeton friesii	Potamogeton gramineus	Potamogeton illinoensis	Potamogeton praelongus	Potamogeton pusillus	Potamogeton richardsonii	Potamogeton robbinsii	Potamogeton spirillus	Potamogeton vaseyi	Potamogeton zosteriformis	Ranunculus aquatilis	Sagitaria sp. (rosette)	Schoenoplectus acutus	Schoenoplectus tabernaemontani	Schoenoplectus subterminalis	Sparganium angustifolium	Sparganium eurycarpum	Sparganium fluctuans	Spirodela polyrhiza	Stuckenia pectinata	Utricularia intermedia	Utricularia vulgaris	Vallisneria americana	Myriophyllum alterniflorum	Potamogeton hybrid sp	Sagittaria cristata
159	45.89139	-89.83327				Too Deep																																																			
160	45.89090	-89.83328				Too Deep																																																			
161	45.89042	-89.83328				Too Deep																																																		
162	45.88993	-89.83328	15		R																			1				1						1				1																		
163	45.88944	-89.83328	9		R																			1														1				1															
164	45.88896	-89.83328	5	M	P		1	1																					1																												1
165	45.89819	-89.83256	2	M	P																									1	1																											
166	45.89771	-89.83256	11		R			1																3				1																											
167	45.89722	-89.83256	7		R			2																2																															
168	45.89673	-89.83256				Fisherman																																																		
169	45.89625	-89.83256	8	M	P			2																																																	
170	45.89576	-89.83256	13		R																																		3																		
171	45.89528	-89.83257	15		R																																		3		1																
172	45.89479	-89.83257	16		R																							1											1																		
173	45.89430	-89.83257				Too Deep																																																		
174	45.89382	-89.83257				Too Deep																																																		
175	45.89333	-89.83257				Too Deep																																																		
176	45.89285	-89.83257				Too Deep																																																		
177	45.89236	-89.83257				Too Deep																																																		
178	45.89187	-89.83258				Too Deep																																																		
179	45.89139	-89.83258				Too Deep																																																		
180	45.89090	-89.83258				Too Deep																																																		
181	45.89042	-89.83258	14		R			1																																															
182	45.88993	-89.83258	16		R	No Vegetation																																																		
183	45.88944	-89.83258				No Vegetation																																																		
184	45.88896	-89.83258	11		R			1																					1											1																		
185	45.89868	-89.83186	4	M	P		1																						1	1	1								1	1																	
186	45.89819	-89.83186	10		R																							1																												
187	45.89770	-89.83186				Too Deep																																																		
188	45.89722	-89.83186	15		R	No Vegetation																																																		
189	45.89673	-89.83187	10		R																																		1																		
190	45.89625	-89.83187	12		R			2																															1																		
191	45.89576	-89.83187	7	M	P			1						1										1								1			1			1																1		
192	45.89527	-89.83187	15		R			1																				1											1		1																
193	45.89479	-89.83187	17		R	No Vegetation																																																		
194	45.89430	-89.83187				Too Deep																																																	
195	45.89382	-89.83187				Too Deep																																																		
196	45.89333	-89.83188				Too Deep																																																		
197	45.89284	-89.83188				Too Deep																																																		
198	45.89236	-89.83188	14		R			1																					1											1																		
199	45.89187	-89.83188	8	M	P																																				1																1		
200	45.89139	-89.83188	8	S	P																																			1		2					1										
201	45.89090	-89.83188	8	S	P	No Vegetation																																																	
202	45.89041	-89.83188				Too Deep																																																	
203	45.88993	-89.83189	15		R																							1											1																		
204	45.88944	-89.83189	14		R			1																																1																		
205	45.88896	-89.83189	10		R			2																					1											1																		
206	45.88847	-89.83189	2	S	P			1										1																																							
207	45.89868	-89.83116	12		R																							1											1																		
208	45.89819	-89.83117	12		R	No Vegetation																																																	
209	45.89770	-89.83117	18		R	Too Deep																																																	
210	45.89722	-89.83117	16		R	No Vegetation																																																	
211	45.89673	-89.83117	11		R																																		3																		
212	45.89625	-89.83117	4	S	P				1			1		1				1																																							1
213	45.89576	-89.83117	6	M	P																		1															1			1																
214	45.89527	-89.83117	13		R																																				2																		
215	45.89479	-89.83118				Too Deep																																																	
216	45.89430	-89.83118				Too Deep																																																	
217	45.89382	-89.83118				Too Deep																																																	
219	45.89333	-89.83118				Too Deep																																																	
219	45.89284	-89.83118				Too Deep																																																	
220	45.89236	-89.83118	3	S	P																							1					1																						
221	45.88993	-89.83119	11		R																							1											1																		
222	45.88944	-89.83119	15		R	No Vegetation																																																	
223	45.88896	-89.83119	5	M	P			1									1																										1																
224	45.88847	-89.83119				On Shore																																																	
225	45.89916	-89.83047				On Shore																																																	
226	45.89867	-89.83047				Too Deep																																																	
227	45.89819	-89.83047	19		R	Too Deep																																																	
228	45.89770	-89.83047				Too Deep																																																	
229	45.89722	-89.83047	15		R	No Vegetation																																																	
230	45.89673	-89.83047	14		R			1																	2														1	1																	
231	45.89624	-89.83047	7		R			1																	1																1			1														
232	45.89576	-89.83048	8	M	P			1																															1			1																
233	45.89527	-89.83048	4	S	P				1																			1												1																		
234	45.89479	-89.83048	11		R																								1											1																1		
235	45.89430	-89.83048				No Vegetation																																																	
236	45.89381	-89.83048	15	M	P																								1											1																		
237	45.89333	-89.83048	7	M	P			1						1																					2						1	2															

Point Number	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Depth (ft)	Sediment type (M=muck, S=Sand, R=Rock	Rope (R); Pole (P); Visual (V)	Notes	Brasenia schreberi	Ceratophyllum demersum	Chara sp.	Dulichium arundinaceum	Elatine minima	Eleocharis acicularis	Eleocharis palustris	Elodea canadensis	Equisetum fluviatile	Eriocaulon aquaticum	Heteranthera dubia	Isoetes lacustris	Juncus pelocarpus	Lemna minor	Lemna trisulca	Lobelia dortmanna	Megalodonta beckii	Myriophyllum sibiricum	Myriophyllum tenellum	Myriophyllum verticillatum	Najas flexilis	Nitella sp.	Nuphar variegata	Nymphaea odorata	Pontederia cordata	Potamogeton amplifolius	Potamogeton epihydrus	Potamogeton friesii	Potamogeton gramineus	Potamogeton illinoensis	Potamogeton praelongus	Potamogeton pusillus	Potamogeton richardsonii	Potamogeton robbinsii	Potamogeton spirillus	Potamogeton vaseyi	Potamogeton zosteriformis	Ranunculus aquatilis	Sagitaria sp. (rosette)	Schoenoplectus acutus	Schoenoplectus tabernaemontani	Schoenoplectus subterminalis	Sparganium angustifolium	Sparganium eurycarpum	Sparganium fluctuans	Spirodela polyrhiza	Stuckenia pectinata	Utricularia intermedia	Utricularia vulgaris	Vallisneria americana	Myriophyllum alterniflorum	Potamogeton hybrid sp	Sagittaria cristata
238	45.88993	-89.83049	5	M	P		1																	1					1	1																1									
239	45.88944	-89.83050	8	M	P			2																															1	1			1													
240	45.88895	-89.83050	10	M	P			1																			1												1	1															
241	45.90159	-89.82976	3	S	P				1			1																	1															1											
242	45.89916	-89.82977	8	M	P																																		1	2			1										1	
243	45.89867	-89.82977	13		R																							1										1														
244	45.89819	-89.82977	11		R			1																2				1										1		1													
245	45.89770	-89.82977	16		R	No Vegetation																																															
246	45.89722	-89.82978	15		R	No Vegetation																																														
247	45.89673	-89.82978	16		R	No Vegetation																																														
248	45.89624	-89.82978				Too Deep																																													
249	45.89576	-89.82978	15	M	P																							1										1														
250	45.89527	-89.82978	2	M	P		1																									1																				
251	45.89479	-89.82978	1	S	P																				1																											
252	45.89430	-89.82978				On Shore																																														
253	45.90207	-89.82906	2	S	P		1						1								1						1			1																							1		
254	45.90159	-89.82907	14		R			1																			1																										
255	45.90110	-89.82907	8	M	P			2																2																	1													
256	45.90062	-89.82907	7	M	P																						1					1																				
257	45.90013	-89.82907	13		R																							1										1														
258	45.89964	-89.82907	16		R																							1																									
259	45.89916	-89.82907				Too Deep																																														
260	45.89867	-89.82908	16		R			3																															1	1		1												
261	45.89819	-89.82908	7	M	P																															1			1				1											
262	45.89770	-89.82908	17		R	No Vegetation																																														
263	45.89721	-89.82908			R	No Vegetation																																														
264	45.89673	-89.82908	16		R	No Vegetation																																														
265	45.89624	-89.82908			R	No Vegetation																																														
266	45.89576	-89.82908	1	M	P																								1	1	V															1								
267	45.90207	-89.82837	2	S	P				1																1						1															1								
268	45.90159	-89.82837	8	M	P			1																1																	1	1												
269	45.90110	-89.82837			R																							2																									
270	45.90062	-89.82837	16		R																																			1													
271	45.90013	-89.82837				Too Deep																																														
272	45.89964	-89.82838				Too Deep																																														
273	45.89916	-89.82838	14		R																							1																									
274	45.89867	-89.82838	14		R																							2																									
275	45.89819	-89.82838	17		R	Too Deep																																														
276	45.89770	-89.82838	16		R																							1																									
277	45.89721	-89.82838	10		R																							1																									
278	45.89673	-89.82839	16		R																							1												1													
279	45.89624	-89.82839	10		R																							1																									
280	45.90207	-89.82767	2	S	P																																														1		
281	45.90159	-89.82767	16		R																							1										1														
282	45.90110	-89.82768				Too Deep																																														
283	45.90061	-89.82768	18			Too Deep																																														
284	45.90013	-89.82768				Too Deep																																														
285	45.89964	-89.82768				Too Deep																																														
286	45.89916	-89.82768	9		R																																			1													1	
287	45.89867	-89.82768	3	S	P				1																																												
288	45.89818	-89.82768	6	S	P				1																		1										1														
289	45.89770	-89.82769	16	M	P																													1					1														1
290	45.89721	-89.82769	8	S	P												1										1								1	1				1													
291	45.89673	-89.82769	3	M	P				1			1						1									1									1				1													
292	45.89624	-89.82769	3	M	P		1																						1	1	1																							
293	45.90207	-89.82698	5	S	P				1															1								1						1		1												1	
294	45.90159	-89.82698				Too Deep																																														
295	45.90110	-89.82698				Too Deep																																														
296	45.90061	-89.82698																																																		
297	45.90013	-89.82698																																																		
298	45.89964	-89.82698				Too Deep																																														
299	45.89916	-89.82699	1	S	P																															1											1						
300	45.90207	-89.82628	9	M	P			1						1										1														1	2														
301	45.90158	-89.82628	15		R																							1										1														
302	45.90110	-89.82628				Too Deep																																														
303	45.90061	-89.82628				Too Deep																																														
304	45.90013	-89.82629				Too Deep																																														
305	45.89964	-89.82629				Too Deep																																														
306	45.90207	-89.82558	1	S	P					1			1			1									1						1															1								
307	45.90158	-89.82559	6	M	P			1																																1	1			1										1	
308	45.90110	-89.82559				Too Deep																																														
309	45.90061	-89.82559				Too Deep																																														
310	45.90013	-89.82559				Too Deep																																														
311	45.89964	-89.82559				Too Deep																																														
312	45.90158	-89.82489				Too Deep																																														
313	45.90110	-89.82489	12		R																																				1													
314	45.90061	-89.82489	6	S	P																			1				1											1													1	
315	45.90012	-89.82489				Too Deep																																														
316	45.89964	-89.82490	3	S	P																								1		1															1								

Point Number	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Depth (ft)	Sediment type (M=muck, S=Sand, R=Rock)	Rope (R); Pole (P); Visual (V)	Notes	Brasenia schreberi	Ceratophyllum demersum	Chara sp.	Dulichium arundinaceum	Elatine minima	Eleocharis acicularis	Eleocharis palustris	Elodea canadensis	Equisetum fluviatile	Eriocaulon aquaticum	Heteranthera dubia	Isoetes lacustris	Juncus pelocarpus	Lemna minor	Lemna trisulca	Lobelia dortmanna	Megalodonta beckii	Myriophyllum sibiricum	Myriophyllum tenellum	Myriophyllum verticillatum	Najas flexilis	Nitella sp.	Nuphar variegata	Nymphaea odorata	Pontederia cordata	Potamogeton amplifolius	Potamogeton epihydrus	Potamogeton friesii	Potamogeton gramineus	Potamogeton illinoensis	Potamogeton praelongus	Potamogeton pusillus	Potamogeton richardsonii	Potamogeton robbinsii	Potamogeton spirillus	Potamogeton vaseyi	Potamogeton zosteriformis	Ranunculus aquatilis	Sagitaria sp. (rosette)	Schoenoplectus acutus	Schoenoplectus tabernaemontani	Schoenoplectus subterminalis	Sparganium angustifolium	Sparganium eurycarpum	Sparganium fluctuans	Spirodela polyrhiza	Stuckenia pectinata	Utricularia intermedia	Utricularia vulgaris	Vallisneria americana	Myriophyllum alterniflorum	Potamogeton hybrid sp	Sagittaria cristata
317	45.90012	-89.82420	9	S	P																			1			1					1						1		1																			
318	45.89964	-89.82420				Too Deep																																																						
319	45.89915	-89.82420	5	S	P												1										1					1							1	1																1			
320	45.89867	-89.82420	3	S	P				1																				1																	1													
321	45.89818	-89.82420	3	S	P													1												1	1														1											1			
322	45.89769	-89.82421	3	S	P				1				1														1		1						1																								
323	45.89721	-89.82421	3	S	P														1										1		1																												
324	45.89672	-89.82421	3	M	P		1		1																		1		1	1	1																												
325	45.90012	-89.82350				Too Deep																																																					
326	45.89964	-89.82350				Too Deep																																																					
327	45.89915	-89.82350				Too Deep																																																					
328	45.89866	-89.82351	16		R	No Vegetation																																																					
329	45.89818	-89.82351				Too Deep																																																					
330	45.89769	-89.82351				Too Deep																																																					
331	45.89721	-89.82351	15		R																							3										1																					
332	45.89672	-89.82351	2	S	P																									1	1																												
333	45.90061	-89.82280	3	S	P				1			1						1																	1		1								1											1			
334	45.90012	-89.82281				Too Deep																																																					
335	45.89964	-89.82281				Too Deep																																																					
336	45.89915	-89.82281				Too Deep																																																					
337	45.89866	-89.82281				Too Deep																																																					
338	45.89818	-89.82281				Too Deep																																																					
339	45.89769	-89.82281				Too Deep																																																					
340	45.89721	-89.82281	15		R	No Vegetation																																																					
341	45.88991	-89.82284	6	M	P																																			2																			
342	45.88943	-89.82284	3	M	P		1	1						1			1							1			1		1									1		2			1	1												1			
343	45.90109	-89.82211	3	S	P				1			1															1																																
344	45.90061	-89.82211	6	S	P																			1								1					1						1																
345	45.90012	-89.82211				Too Deep																																																					
346	45.89963	-89.82211				Too Deep																																																					
347	45.89915	-89.82211				Too Deep																																																					
348	45.89866	-89.82211				Too Deep																																																					
349	45.89818	-89.82212				Too Deep																																																					
350	45.89769	-89.82212				Too Deep																																																					
351	45.89720	-89.82212	5	S	P				1															1			1					1		1	1				1																	1			
352	45.89672	-89.82212	3	S	P				1			1															1								1				1																				
353	45.89623	-89.82212	2	S	P																						1		1		1				1										1		1									1			
354	45.89429	-89.82213	2	S	P																						1																										1						
355	45.89380	-89.82213	1	S	P																						1				1			1					1				1		1								1						
356	45.89332	-89.82213	1	S	P																						1								1				1		1		1						1							1			
357	45.89283	-89.82213	2	S	P																						1								1						1		1																
358	45.89137	-89.82214	9	M	P			1																1														1		1																			
359	45.89089	-89.82214	14		R			2																				1																															
360	45.89040	-89.82214	12		R			1																																		1																	
361	45.88991	-89.82214	13		R			2																														1					1																
362	45.88943	-89.82214	2	S	P																						1								1																								
363	45.90158	-89.82141	3	S	P				1																1		1								1																								
364	45.90109	-89.82141	3	S	P				1																		1					1			1									1												1			
365	45.90061	-89.82141				Too Deep																																																					
366	45.90012	-89.82141				Too Deep																																																					
367	45.89963	-89.82141				Too Deep																																																					
368	45.89915	-89.82142				Too Deep																																																					
369	45.89866	-89.82142				Too Deep																																																					
370	45.89817	-89.82142				Too Deep																																																					
371	45.89769	-89.82142	14		R																							2										2																					
372	45.89720	-89.82142	9	M	P			1															1	1																1			1													1			
373	45.89672	-89.82142	17		R																							2																															
374	45.89623	-89.82143	7	M	P																			2															1	1																			
375	45.89574	-89.82143	2	S	P				2																		1																																
376	45.89526	-89.82143	14		R																			1															1	1																			
377	45.89477	-89.82143	14		R																							1										1																		1			
378	45.89429	-89.82143				Too Deep																																																					
379	45.89380	-89.82143				Too Deep																																																					
380	45.89331	-89.82144	9	M	P			1																1														1	1	1																1			
381	45.89283	-89.82144	9	M	P																			2														2	1	1																1			
382	45.89234	-89.82144				Too Deep																																																					
383	45.89186	-89.82144				Too Deep																																																					
384	45.89137	-89.82144	16		R																							2										1																					
385	45.89088	-89.82144	14		R																							3																															
386	45.89040	-89.82144	13		R			1																																																			
387	45.88991	-89.82145	11	M	P			1																															1																				
388	45.90206	-89.82071	1	S	P					1			1						1			1			1																															1			
389	45.90158	-89.82071	2	S	P				1																		2								1																					1			
390	45.90109	-89.82071				Too Deep																																																					
391	45.90060	-89.82072				Too Deep																																																					
392	45.90012	-89.82072				Too Deep																																																					
393	45.89963	-89.82072				Too Deep																																																					
394	45.89915	-89.82072				Too Deep																																																					
395	45.89866	-89.82072				Too Deep																																																					

Point Number	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Depth (ft)	Sediment type (M=muck, S=Sand, R=Rock	Rope (R); Pole (P); Visual (V)	Notes	Brasenia schreberi	Ceratophyllum demersum	Chara sp.	Dulichium arundinaceum	Elatine minima	Eleocharis acicularis	Eleocharis palustris	Elodea canadensis	Equisetum fluviatile	Eriocaulon aquaticum	Heteranthera dubia	Isoetes lacustris	Juncus pelocarpus	Lemna minor	Lemna trisulca	Lobelia dortmanna	Megalodonta beckii	Myriophyllum sibiricum	Myriophyllum tenellum	Myriophyllum verticillatum	Najas flexilis	Nitella sp.	Nuphar variegata	Nymphaea odorata	Pontederia cordata	Potamogeton amplifolius	Potamogeton epihydrus	Potamogeton friesii	Potamogeton gramineus	Potamogeton illinoensis	Potamogeton praelongus	Potamogeton pusillus	Potamogeton richardsonii	Potamogeton robbinsii	Potamogeton spirillus	Potamogeton vaseyi	Potamogeton zosteriformis	Ranunculus aquatilis	Sagitaria sp. (rosette)	Schoenoplectus acutus	Schoenoplectus tabernaemontani	Schoenoplectus subterminalis	Sparganium angustifolium	Sparganium eurycarpum	Sparganium fluctuans	Spirodela polyrhiza	Stuckenia pectinata	Utricularia intermedia	Utricularia vulgaris	Vallisneria americana	Myriophyllum alterniflorum	Potamogeton hybrid sp	Sagittaria cristata
396	45.89817	-89.82072				Too Deep																																																
397	45.89769	-89.82073				Too Deep																																																
398	45.89720	-89.82073				Too Deep																																																
399	45.89672	-89.82073				Too Deep																																																
400	45.89623	-89.82073				Too Deep																																																
401	45.89574	-89.82073				Too Deep																																																
402	45.89526	-89.82073				Too Deep																																																
403	45.89477	-89.82073				Too Deep																																																
404	45.89429	-89.82074				Too Deep																																																
405	45.89380	-89.82074				Too Deep																																																
406	45.89331	-89.82074				Too Deep																																																
407	45.89283	-89.82074				Too Deep																																																
408	45.89234	-89.82074				Too Deep																																																
409	45.89186	-89.82074				Too Deep																																																
410	45.89137	-89.82075	13		R			1																				2						1				1																				
411	45.89088	-89.82075	15		R																							2										1																				
412	45.89040	-89.82075	10		R			1																				2														1																
413	45.88991	-89.82075	3	S	P				2			1						1														1			1			1						1												1			
414	45.90206	-89.82001	3	S	P				1									1																	1																								
415	45.90157	-89.82002				Too Deep																																																
416	45.90109	-89.82002				Too Deep																																																
417	45.90060	-89.82002				Too Deep																																																
418	45.90012	-89.82002				Too Deep																																																
419	45.89963	-89.82002				Too Deep																																																
420	45.89914	-89.82002				Too Deep																																																
421	45.89866	-89.82003				Too Deep																																																
422	45.89817	-89.82003				Too Deep																																																
423	45.89769	-89.82003				Too Deep																																																
424	45.89720	-89.82003				Too Deep																																																
425	45.89671	-89.82003				Too Deep																																																
426	45.89623	-89.82003				Too Deep																																																
427	45.89574	-89.82004				Too Deep																																																
428	45.89526	-89.82004				Too Deep																																																
429	45.89477	-89.82004				Too Deep																																																
430	45.89428	-89.82004				Too Deep																																																
431	45.89380	-89.82004				Too Deep																																																
432	45.89331	-89.82004				Too Deep																																																
433	45.89283	-89.82004				Too Deep																																																
434	45.89234	-89.82005				Too Deep																																																
435	45.89185	-89.82005				Too Deep																																																
436	45.89137	-89.82005	16		R																			1				2																														
437	45.89088	-89.82005	13		R			1																														2																				
438	45.89040	-89.82005	13		R			1																1				1																														
439	45.88991	-89.82005	4	S	P				1			1						1									1																	1												1			
440	45.90255	-89.81932	2	S	P																						1								1																								
441	45.90206	-89.81932	13		R			1																2								1									1				1												1			
442	45.90157	-89.81932				Too Deep																																																
443	45.90109	-89.81932				Too Deep																																																
444	45.90060	-89.81932				Too Deep																																																
445	45.90012	-89.81932				Too Deep																																																
446	45.89963	-89.81933				Too Deep																																																
447	45.89914	-89.81933				Too Deep																																																
448	45.89866	-89.81933				Too Deep																																																
449	45.89817	-89.81933				Too Deep																																																
450	45.89769	-89.81933				Too Deep																																																
451	45.89720	-89.81933				Too Deep																																																
452	45.89671	-89.81934				Too Deep																																																
453	45.89623	-89.81934				Too Deep																																																
454	45.89574	-89.81934				Too Deep																																																
455	45.89526	-89.81934				Too Deep																																																
456	45.89477	-89.81934				Too Deep																																																
457	45.89428	-89.81934				Too Deep																																																
458	45.89380	-89.81935				Too Deep																																																
459	45.89331	-89.81935				Too Deep																																																
460	45.89283	-89.81935				Too Deep																																																
461	45.89234	-89.81935				Too Deep																																																
462	45.89185	-89.81935				Too Deep																																																
463	45.89137	-89.81935	16		R																							2																														
464	45.89088	-89.81935	14		R																							1																														
465	45.89040	-89.81936	7	M	P			1						1									1											1									1													1			
466	45.88991	-89.81936	3	S	P																				1		1					1												1												1			
467	45.90303	-89.81862	2	S	P				1																1																																		
468	45.90254	-89.81862	8	M	P																						1					1			1				1	1																1			
469	45.90206	-89.81862				Too Deep																																																
470	45.90157	-89.81862				Too Deep																																																
471	45.90109	-89.81863				Too Deep																																																
472	45.90060	-89.81863				Too Deep																																																
473	45.90011	-89.81863				Too Deep																																																
474	45.89963	-89.81863				Too Deep																																																

Point Number	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Depth (ft)	Sediment type (M=muck, S=Sand, R=Rock	Rope (R); Pole (P); Visual (V)	Notes	Brasenia schreberi	Ceratophyllum demersum	Chara sp.	Dulichium arundinaceum	Elatine minima	Eleocharis acicularis	Eleocharis palustris	Elodea canadensis	Equisetum fluviatile	Eriocaulon aquaticum	Heteranthera dubia	Isoetes lacustris	Juncus pelocarpus	Lemna minor	Lemna trisulca	Lobelia dortmanna	Megalodonta beckii	Myriophyllum sibiricum	Myriophyllum tenellum	Myriophyllum verticillatum	Najas flexilis	Nitella sp.	Nuphar variegata	Nymphaea odorata	Pontederia cordata	Potamogeton amplifolius	Potamogeton epihydrus	Potamogeton friesii	Potamogeton gramineus	Potamogeton illinoensis	Potamogeton praelongus	Potamogeton pusillus	Potamogeton richardsonii	Potamogeton robbinsii	Potamogeton spirillus	Potamogeton vaseyi	Potamogeton zosteriformis	Ranunculus aquatilis	Sagitaria sp. (rosette)	Schoenoplectus acutus	Schoenoplectus tabernaemontani	Schoenoplectus subterminalis	Sparganium angustifolium	Sparganium eurycarpum	Sparganium fluctuans	Spirodela polyrhiza	Stuckenia pectinata	Utricularia intermedia	Utricularia vulgaris	Vallisneria americana	Myriophyllum alterniflorum	Potamogeton hybrid sp	Sagittaria cristata
475	45.89914	-89.81863				Too Deep																																																					
476	45.89866	-89.81863				Too Deep																																																					
477	45.89817	-89.81864				Too Deep																																																					
478	45.89768	-89.81864				Too Deep																																																					
479	45.89720	-89.81864				Too Deep																																																					
480	45.89671	-89.81864				Too Deep																																																					
481	45.89623	-89.81864				Too Deep																																																					
482	45.89574	-89.81864				Too Deep																																																					
483	45.89525	-89.81864				Too Deep																																																					
484	45.89477	-89.81865				Too Deep																																																					
485	45.89428	-89.81865				Too Deep																																																					
486	45.89380	-89.81865				Too Deep																																																					
487	45.89331	-89.81865				Too Deep																																																					
488	45.89282	-89.81865				Too Deep																																																					
489	45.89234	-89.81865				Too Deep																																																					
490	45.89185	-89.81866				Too Deep																																																					
491	45.89137	-89.81866	16		R																							3																																
492	45.89088	-89.81866	12		R			1																										1																										
493	45.89039	-89.81866	1	S	P																														1											1														
494	45.90303	-89.81792	2	S	P				1			1													1		1								1																					1			
495	45.90254	-89.81792	14		R																																	3																						
496	45.90206	-89.81793				Too Deep																																																					
497	45.90157	-89.81793				Too Deep																																																					
498	45.90109	-89.81793				Too Deep																																																					
499	45.90060	-89.81793				Too Deep																																																					
500	45.90011	-89.81793				Too Deep																																																					
501	45.89963	-89.81793				Too Deep																																																					
502	45.89914	-89.81794				Too Deep																																																					
503	45.89866	-89.81794				Too Deep																																																					
504	45.89817	-89.81794				Too Deep																																																					
505	45.89768	-89.81794				Too Deep																																																					
506	45.89720	-89.81794				Too Deep																																																					
507	45.89671	-89.81794				Too Deep																																																					
508	45.89623	-89.81795				Too Deep																																																					
509	45.89574	-89.81795				Too Deep																																																					
510	45.89525	-89.81795				Too Deep																																																					
511	45.89477	-89.81795				Too Deep																																																					
512	45.89428	-89.81795				Too Deep																																																					
513	45.89380	-89.81795				Too Deep																																																					
514	45.89331	-89.81795				Too Deep																																																					
515	45.89282	-89.81796				Too Deep																																																					
516	45.89234	-89.81796				Too Deep																																																					
517	45.89185	-89.81796	7	S	P																		1	2										1					1	1																				
518	45.89137	-89.81796	3	S	P				2			1															1																	1													1			
519	45.89088	-89.81796	2	S	P				1			1							1					1			1																														1			
520	45.90351	-89.81723	2	S	P																										1				1																						1			
521	45.90303	-89.81723	13		R																																	1																						
522	45.90254	-89.81723				Too Deep																																																					
523	45.90206	-89.81723				Too Deep																																																					
524	45.90157	-89.81723				Too Deep																																																					
525	45.90108	-89.81723				Too Deep																																																					
526	45.90060	-89.81723				Too Deep																																																					
527	45.90011	-89.81724				Too Deep																																																					
528	45.89963	-89.81724				Too Deep																																																					
529	45.89914	-89.81724				Too Deep																																																					
530	45.89865	-89.81724				Too Deep																																																					
531	45.89817	-89.81724				Too Deep																																																					
532	45.89768	-89.81724				Too Deep																																																					
533	45.89720	-89.81725				Too Deep																																																					
534	45.89671	-89.81725				Too Deep																																																					
535	45.89622	-89.81725				Too Deep																																																					
536	45.89574	-89.81725				Too Deep																																																					
537	45.89525	-89.81725				Too Deep																																																					
538	45.89477	-89.81725				Too Deep																																																					
539	45.89428	-89.81726				Too Deep																																																					
540	45.89379	-89.81726				Too Deep																																																					
541	45.89331	-89.81726				Too Deep																																																					
542	45.89282	-89.81726				Too Deep																																																					
543	45.89234	-89.81726	10		R			1															1	1														1	1	1			1																	
544	45.89185	-89.81726	5	S	P																		1				1					1		1																						1			
545	45.89136	-89.81727	4	S	P																											1		1	1			1	1																	1			
546	45.89088	-89.81727	1	S	P																						1								1											1														
547	45.90351	-89.81653	6	S	P				1															1											1		1		1	1																1			
548	45.90303	-89.81653				Too Deep																																																					
549	45.90254	-89.81653				Too Deep																																																					
550	45.90206	-89.81653				Too Deep																																																					
551	45.90157	-89.81654				Too Deep																																																					
552	45.90108	-89.81654				Too Deep																																																					
553	45.90060	-89.81654				Too Deep																																																					

Point Number	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Depth (ft)	Sediment type (M=muck, S=Sand, R=Rock	Rope (R); Pole (P); Visual (V)	Notes	Brasenia schreberi	Ceratophyllum demersum	Chara sp.	Dulichium arundinaceum	Elatine minima	Eleocharis acicularis	Eleocharis palustris	Elodea canadensis	Equisetum fluviatile	Eriocaulon aquaticum	Heteranthera dubia	Isoetes lacustris	Juncus pelocarpus	Lemna minor	Lemna trisulca	Lobelia dortmanna	Megalodonta beckii	Myriophyllum sibiricum	Myriophyllum tenellum	Myriophyllum verticillatum	Najas flexilis	Nitella sp.	Nuphar variegata	Nymphaea odorata	Pontederia cordata	Potamogeton amplifolius	Potamogeton epihydrus	Potamogeton friesii	Potamogeton gramineus	Potamogeton illinoensis	Potamogeton praelongus	Potamogeton pusillus	Potamogeton richardsonii	Potamogeton robbinsii	Potamogeton spirillus	Potamogeton vaseyi	Potamogeton zosteriformis	Ranunculus aquatilis	Sagitaria sp. (rosette)	Schoenoplectus acutus	Schoenoplectus tabernaemontani	Schoenoplectus subterminalis	Sparganium angustifolium	Sparganium eurycarpum	Sparganium fluctuans	Spirodela polyrhiza	Stuckenia pectinata	Utricularia intermedia	Utricularia vulgaris	Vallisneria americana	Myriophyllum alterniflorum	Potamogeton hybrid sp	Sagittaria cristata
554	45.90011	-89.81654				Too Deep																																																					
555	45.89963	-89.81654				Too Deep																																																					
556	45.89914	-89.81654				Too Deep																																																					
557	45.89865	-89.81655				Too Deep																																																					
558	45.89817	-89.81655				Too Deep																																																					
559	45.89768	-89.81655				Too Deep																																																					
560	45.89720	-89.81655				Too Deep																																																					
561	45.89671	-89.81655				Too Deep																																																					
562	45.89622	-89.81655				Too Deep																																																					
563	45.89574	-89.81655				Too Deep																																																					
564	45.89525	-89.81656				Too Deep																																																					
565	45.89477	-89.81656				Too Deep																																																					
566	45.89428	-89.81656				Too Deep																																																					
567	45.89379	-89.81656				Too Deep																																																					
568	45.89331	-89.81656				Too Deep																																																					
569	45.89282	-89.81656				Too Deep																																																					
570	45.89233	-89.81657	6	S	P																		1												1		1		1				1												1			
571	45.89185	-89.81657	5	S	P																		1											2	1				1	1																	1			
572	45.89136	-89.81657	4	S	P																						1					1		1	1																								
573	45.90400	-89.81583	6	S	P			1																			1							1					1																				
574	45.90351	-89.81583				Too Deep																																																					
575	45.90303	-89.81583				Too Deep																																																					
576	45.90254	-89.81584				Too Deep																																																					
577	45.90205	-89.81584				Too Deep																																																					
578	45.90157	-89.81584				Too Deep																																																					
579	45.90108	-89.81584				Too Deep																																																					
580	45.90060	-89.81584				Too Deep																																																					
581	45.90011	-89.81584				Too Deep																																																					
582	45.89962	-89.81585				Too Deep																																																					
583	45.89914	-89.81585				Too Deep																																																					
584	45.89865	-89.81585				Too Deep																																																					
585	45.89817	-89.81585				Too Deep																																																					
586	45.89768	-89.81585				Too Deep																																																					
587	45.89719	-89.81585				Too Deep																																																					
588	45.89671	-89.81586	6	S	P																			1														1					1												1			
589	45.89622	-89.81586	13		R																							1										2																					
590	45.89574	-89.81586				Too Deep																																																					
591	45.89525	-89.81586				Too Deep																																																					
592	45.89476	-89.81586				Too Deep																																																					
593	45.89428	-89.81586	15		R																							1										1																					
594	45.89379	-89.81587	11		R																							1										1																					
595	45.89331	-89.81587				Too Deep																																																					
596	45.89282	-89.81587				Too Deep																																																					
597	45.89233	-89.81587	6	S	P																											1		2					1																		1			
598	45.89185	-89.81587	5	S	P																		1	1			1							1	1					1																1			
599	45.89136	-89.81587	2	S	P																														1														1										
600	45.90497	-89.81513	3	S	P																														1																								
601	45.90448	-89.81513				Too Deep																																																					
602	45.90400	-89.81514				Too Deep																																																					
603	45.90351	-89.81514				Too Deep																																																					
604	45.90303	-89.81514				Too Deep																																																					
605	45.90254	-89.81514				Too Deep																																																					
606	45.90205	-89.81514				Too Deep																																																					
607	45.90157	-89.81514				Too Deep																																																					
608	45.90108	-89.81514				Too Deep																																																					
609	45.90060	-89.81515				Too Deep																																																					
610	45.90011	-89.81515				Too Deep																																																					
611	45.89962	-89.81515				Too Deep																																																					
612	45.89914	-89.81515				Too Deep																																																					
613	45.89865	-89.81515				Too Deep																																																					
614	45.89816	-89.81515				Too Deep																																																					
615	45.89768	-89.81516				Too Deep																																																					
616	45.89719	-89.81516				Too Deep																																																					
617	45.89671	-89.81516				Too Deep																																																					
618	45.89622	-89.81516	12		R																							1										1																					
619	45.89573	-89.81516				Too Deep																																																					
620	45.89525	-89.81516				Too Deep																																																					
621	45.89476	-89.81517	15		R	No Vegetation																																																					
622	45.89428	-89.81517	7	S	P																		1	3																																	1			
623	45.89379	-89.81517	3	R	P				1																										1			1																					
624	45.89330	-89.81517				Too Deep																																																					
625	45.89282	-89.81517	15		R																							2										1																					
626	45.89233	-89.81517	3	S	P			1	1																		1											1																					
627	45.89185	-89.81518	2	S	P			1																			1								1																				1			
628	45.90594	-89.81443	3	M	P			1						1									1																	1											1								
629	45.90545	-89.81443	4	M	P																											1								1																			
630	45.90497	-89.81444	3	R	P			1																																																			
631	45.90448	-89.81444	12		R	No Vegetation																																																					
632	45.90400	-89.81444				Too Deep																																																					

Point Number	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Depth (ft)	Sediment type (M=muck, S=Sand, R=Rock	Rope (R); Pole (P); Visual (V)	Notes	Brasenia schreberi	Ceratophyllum demersum	Chara sp.	Dulichium arundinaceum	Elatine minima	Eleocharis acicularis	Eleocharis palustris	Elodea canadensis	Equisetum fluviatile	Eriocaulon aquaticum	Heteranthera dubia	Isoetes lacustris	Juncus pelocarpus	Lemna minor	Lemna trisulca	Lobelia dortmanna	Megalodonta beckii	Myriophyllum sibiricum	Myriophyllum tenellum	Myriophyllum verticillatum	Najas flexilis	Nitella sp.	Nuphar variegata	Nymphaea odorata	Pontederia cordata	Potamogeton amplifolius	Potamogeton epihydrus	Potamogeton friesii	Potamogeton gramineus	Potamogeton illinoensis	Potamogeton praelongus	Potamogeton pusillus	Potamogeton richardsonii	Potamogeton robbinsii	Potamogeton spirillus	Potamogeton vaseyi	Potamogeton zosteriformis	Ranunculus aquatilis	Sagitaria sp. (rosette)	Schoenoplectus acutus	Schoenoplectus tabernaemontani	Schoenoplectus subterminalis	Sparganium angustifolium	Sparganium eurycarpum	Sparganium fluctuans	Spirodela polyrhiza	Stuckenia pectinata	Utricularia intermedia	Utricularia vulgaris	Vallisneria americana	Myriophyllum alterniflorum	Potamogeton hybrid sp	Sagittaria cristata
633	45.90351	-89.81444				Too Deep																																																						
634	45.90302	-89.81444				Too Deep																																																						
635	45.90254	-89.81444				Too Deep																																																						
636	45.90205	-89.81445				Too Deep																																																						
637	45.90157	-89.81445				Too Deep																																																						
638	45.90108	-89.81445				Too Deep																																																						
639	45.90059	-89.81445				Too Deep																																																						
640	45.90011	-89.81445				Too Deep																																																						
641	45.89962	-89.81445	14		R																							1																																
642	45.89914	-89.81446	14		R			1																				1											1				1																	
643	45.89865	-89.81446	12		R			1															1	1								1							1																		1			
644	45.89816	-89.81446				Too Deep																																																						
645	45.89768	-89.81446				Too Deep																																																						
646	45.89719	-89.81446				Too Deep																																																						
647	45.89671	-89.81446	14		R																							1																																
648	45.89622	-89.81446				Too Deep																																																						
649	45.89573	-89.81447				Too Deep																																																						
650	45.89525	-89.81447				Too Deep																																																						
651	45.89476	-89.81447				Too Deep																																																						
652	45.89428	-89.81447	15		R																																																						
653	45.89379	-89.81447	8	S	P			1																1										1			1	2	1																				
654	45.89330	-89.81447	1	R	P																				1										1																								
655	45.89282	-89.81448	1	S	P				1																		1								1										1														
656	45.89233	-89.81448	1	S	P				1										1								1		1		1																										1			
657	45.90497	-89.81374	11		R			1																				1																																
658	45.90448	-89.81374				Too Deep																																																						
659	45.90400	-89.81374				Too Deep																																																						
660	45.90351	-89.81374				Too Deep																																																						
661	45.90302	-89.81375				Too Deep																																																					
662	45.90254	-89.81375				Too Deep																																																						
663	45.90205	-89.81375				Too Deep																																																					
664	45.90156	-89.81375				Too Deep																																																					
665	45.90108	-89.81375				Too Deep																																																					
666	45.90059	-89.81375				Too Deep																																																					
667	45.90011	-89.81376	14		R			1																1																																	1			
668	45.89962	-89.81376				Too Deep																																																					
669	45.89913	-89.81376	14		R			1																				1																																
670	45.89865	-89.81376				Too Deep																																																					
671	45.89816	-89.81376	13		R																																																					
672	45.89768	-89.81376				Too Deep																																																					
673	45.89719	-89.81377	4	R	P	No Vegetation																																																					
674	45.89670	-89.81377	5	R	P												1						1	1																																			
675	45.89622	-89.81377				Too Deep																																																					
676	45.89573	-89.81377				Too Deep																																																					
677	45.89525	-89.81377	5	R	P																			1																																			
678	45.89476	-89.81377	15		R																							2										1																					
679	45.89427	-89.81378	16		R																							3																																
680	45.89379	-89.81378	10	S	P			1																										1						1			1																	
681	45.89330	-89.81378	1	S	P	No Vegetation																																																					
682	45.90545	-89.81304	6	S	P																											1								1																			
683	45.90497	-89.81304				Too Deep																																																					
684	45.90448	-89.81305	16		R			1						1														1																																
685	45.90399	-89.81305	16		R	No Vegetation																																																					
686	45.90351	-89.81305				Too Deep																																																					
687	45.90302	-89.81305				Too Deep																																																					
688	45.90254	-89.81305				Too Deep																																																					
689	45.90205	-89.81305				Too Deep																																																					
690	45.90156	-89.81305	9	M	P			2															1																																		1			
691	45.90108	-89.81306	3	S	P				1																		1					1																											
692	45.90059	-89.81306	3	S	P				2			1															1																																
693	45.90011	-89.81306	2	S	P				1																										1																								
694	45.89962	-89.81306				Too Deep																																																					
695	45.89913	-89.81306	16		R	No Vegetation																																																					
696	45.89865	-89.81306	12	S	P	No Vegetation																																																					
697	45.89816	-89.81307	4	S	P																						1																													1			
698	45.89768	-89.81307	14		R	No Vegetation																																																					
699	45.89719	-89.81307	15		R																																																						
700	45.89670	-89.81307	6	M	P			1																2										1					1	1																			1	
701	45.89622	-89.81307				Too Deep																																																					
702	45.89573	-89.81307	14		R	No Vegetation																																																					
703	45.89525	-89.81308	5	S	P			1																1			1					1			1			1																			1			
704	45.89476	-89.81308	5	S	P				1																		1																													1			
705	45.89427	-89.81308	2	S	P	No Vegetation																																																					
706	45.89379	-89.81308	1	S	P														1			1																																					
707	45.90594	-89.81234	8	M													1							1														1		1																				
708	45.90545	-89.81235				Too Deep																																																					
709	45.90496	-89.81235				Too Deep																																																					
710	45.90448	-89.81235				Too Deep																																																					
711	45.90399	-89.81235	16		R																							1																																

Point Number	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Depth (ft)	Sediment type (M=muck, S=Sand, R=Rock)	Rope (R); Pole (P); Visual (V)	Notes	Brasenia schreberi	Ceratophyllum demersum	Chara sp.	Dulichium arundinaceum	Elatine minima	Eleocharis acicularis	Eleocharis palustris	Elodea canadensis	Equisetum fluviatile	Eriocaulon aquaticum	Heteranthera dubia	Isoetes lacustris	Juncus pelocarpus	Lemna minor	Lemna trisulca	Lobelia dortmanna	Megalodonta beckii	Myriophyllum sibiricum	Myriophyllum tenellum	Myriophyllum verticillatum	Najas flexilis	Nitella sp.	Nuphar variegata	Nymphaea odorata	Pontederia cordata	Potamogeton amplifolius	Potamogeton epihydrus	Potamogeton friesii	Potamogeton gramineus	Potamogeton illinoensis	Potamogeton praelongus	Potamogeton pusillus	Potamogeton richardsonii	Potamogeton robbinsii	Potamogeton spirillus	Potamogeton vaseyi	Potamogeton zosteriformis	Ranunculus aquatilis	Sagitaria sp. (rosette)	Schoenoplectus acutus	Schoenoplectus tabernaemontani	Schoenoplectus subterminalis	Sparganium angustifolium	Sparganium eurycarpum	Sparganium fluctuans	Spirodela polyrhiza	Stuckenia pectinata	Utricularia intermedia	Utricularia vulgaris	Vallisneria americana	Myriophyllum alterniflorum	Potamogeton hybrid sp	Sagittaria cristata
712	45.90351	-89.81235				Too Deep																																																						
713	45.90302	-89.81235	9	S	P																			1				1											1																					
714	45.90253	-89.81236	8	S	P																																		1	1	1																	1			
715	45.90205	-89.81236	3	S	P																		1				1																				1														
716	45.90156	-89.81236	3	S	P	No Vegetation																																																					
717	45.90108	-89.81236	2	S	P				1										1			1					1																					1													
718	45.90059	-89.81236	2	S	P				1			1															1								1																										
719	45.90010	-89.81236	2	S	P				1																1		1																															1			
720	45.89962	-89.81237	2	S	P							1															2								1																										
721	45.89670	-89.81238	1	R	P	No Vegetation																																																				
722	45.89622	-89.81238	13		R																							1						1																											
723	45.89573	-89.81238	8	M	P			1																																			1																	1	
724	45.89524	-89.81238	4	S	P				1																		1								2			1																							
725	45.89476	-89.81238	2	S	P				1			1														1																																1			
726	45.89427	-89.81238	1	S	P											1			1			1			1										1																							1			
727	45.90642	-89.81165	3	M	P																						1												1																						
728	45.90594	-89.81165				Too Deep																																																				
729	45.90545	-89.81165				Too Deep																																																					
730	45.90496	-89.81165				Too Deep																																																					
731	45.90448	-89.81165	16		R																							1																																	
732	45.90399	-89.81165	7	M	P																			1								1		1			1	1		1																					
733	45.90351	-89.81166	7	S	P																						1					1			1		1																								
734	45.90302	-89.81166	2	S	P				1																																																			
735	45.90253	-89.81166	2	S	P																														1																										
736	45.89622	-89.81168	11		R																			1				1										1					1																	
737	45.89573	-89.81168	10	M	P																																	3																						
738	45.89524	-89.81168	7	M	P																		1															1	1	1			1																	
739	45.89476	-89.81169	2	S	P				1										1								1								1																										
740	45.90642	-89.81095	6	M	P																						1																																		
741	45.90593	-89.81095	16		R																							1																																	
742	45.90545	-89.81095				Too Deep																																																					
743	45.90496	-89.81095				Too Deep																																																					
744	45.90399	-89.81096	4	M	P		1																						1	1	1				1									1							1								
745	45.90302	-89.81096	3	M	P		1																						1	1	1													1															
746	45.89670	-89.81098	3	M	P		1	1																					1	1																													
747	45.89621	-89.81098	9	M	P			1																1				1										1		1																1			
748	45.89573	-89.81099	12		R																																	2					1																	
749	45.89524	-89.81099	10	M	P			1																														2																						
750	45.89476	-89.81099	9	M	P																																																						
751	45.90642	-89.81025	10	M	P			2																1																1																			
752	45.90593	-89.81026	11		R																			1					1																											1			
753	45.90545	-89.81026				Too Deep																																																				
754	45.90496	-89.81026				Too Deep																																																					
755	45.90448	-89.81026	12		R																							3																																	
756	45.90399	-89.81026	15		R			1																				1										1					1																	
757	45.90350	-89.81026	13		R																							3																																	
758	45.90302	-89.81027	5	M	P		1	1																					1														1																	
759	45.89718	-89.81029	3	S	P													1									1								1																										
760	45.89670	-89.81029	7	M	P			2																																1			1																	
761	45.89621	-89.81029	10	M	P			1																														1					1																	
762	45.89573	-89.81029	14		R			1																														1					3																	
763	45.89524	-89.81029	11	M	P																																	3																						
764	45.89475	-89.81029	7	S	P																																			2			1																	
765	45.90642	-89.80956	5	M	P																						1					1		1																										
766	45.90593	-89.80956	7	M	P			1																1													1																			1			
767	45.90545	-89.80956				Too Deep																																																				
768	45.90496	-89.80956				Too Deep																																																					
769	45.90447	-89.80956	17		R	No Vegetation																																																				
770	45.90399	-89.80957	15		R																							3																																	
771	45.90204	-89.80957	6																																																								
772	45.89718	-89.80959	7	M	P			1																			1													2			1																	
773	45.89670	-89.80959	8	M	P			1																1														1					1																	
774	45.89621	-89.80959	10	M	P			1																														3					1																	
775	45.89573	-89.80959	13		R			2																																			3																	
776	45.89524	-89.80960	12	M	P			1																														3					1																	
777	45.89475	-89.80960	4	S	P																						2																																		
778	45.90739	-89.80886	5	M	P																																			1																			
779	45.90690	-89.80886	8	M	P	No Vegetation																																																				
780	45.90642	-89.80886	14		R																							3																																	
781	45.90593	-89.80886	14		R																							3										1																						
782	45.90545	-89.80886				Too Deep																																																					
783	45.90496	-89.80887				Too Deep																																																					
784	45.90447	-89.80887	18			Too Deep																																																					
785	45.90399	-89.80887	14		R			2																				2																																	
786	45.90350	-89.80887				Rocks																																																					
787	45.90301	-89.80887	5	M	P			1															1									V								1																					
788	45.90253	-89.80887	5	M	P			1																1					1											3																			
789	45.90204	-89.80888	4	M	P																																																						
790	45.90156	-89.80888	2	M	P																																																						

Point Number	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Depth (ft)	Sediment type (M=muck, S=Sand, R=Rock)	Rope (R); Pole (P); Visual (V)	Notes	Brasenia schreberi	Ceratophyllum demersum	Chara sp.	Dulichium arundinaceum	Elatine minima	Eleocharis acicularis	Eleocharis palustris	Elodea canadensis	Equisetum fluviatile	Eriocaulon aquaticum	Heteranthera dubia	Isoetes lacustris	Juncus pelocarpus	Lemna minor	Lemna trisulca	Lobelia dortmanna	Megalodonta beckii	Myriophyllum sibiricum	Myriophyllum tenellum	Myriophyllum verticillatum	Najas flexilis	Nitella sp.	Nuphar variegata	Nymphaea odorata	Pontederia cordata	Potamogeton amplifolius	Potamogeton epihydrus	Potamogeton friesii	Potamogeton gramineus	Potamogeton illinoensis	Potamogeton praelongus	Potamogeton pusillus	Potamogeton richardsonii	Potamogeton robbinsii	Potamogeton spirillus	Potamogeton vaseyi	Potamogeton zosteriformis	Ranunculus aquatilis	Sagitaria sp. (rosette)	Schoenoplectus acutus	Schoenoplectus tabernaemontani	Schoenoplectus subterminalis	Sparganium angustifolium	Sparganium eurycarpum	Sparganium fluctuans	Spirodela polyrhiza	Stuckenia pectinata	Utricularia intermedia	Utricularia vulgaris	Vallisneria americana	Myriophyllum alterniflorum	Potamogeton hybrid sp	Sagittaria cristata
791	45.90107	-89.80888				On Shore																																																						
792	45.89718	-89.80889	2	S	P																						1																														1			
793	45.89670	-89.80889	6	S	P			1																1																1		2																		1			
794	45.89621	-89.80890	11	M	P																																		3					1																		
795	45.89572	-89.80890	10	M	P			1																															2																					
796	45.89524	-89.80890	13		R			1																					1									1					2																		
797	45.89475	-89.80890	8	S	P																																			1	2																				
798	45.90787	-89.80816	1	S	P		1																				1	1	1		1				1													1													
799	45.90739	-89.80816	7	M	P			1																1																	1																	1			
800	45.90690	-89.80816	15		R			1																					1																															
801	45.90642	-89.80817	16		R	No Vegetation																																																				
802	45.90593	-89.80817				Too Deep																																																				
803	45.90544	-89.80817				Too Deep																																																				
804	45.90496	-89.80817				Too Deep																																																				
805	45.90447	-89.80817	20		R	No Vegetation																																																				
806	45.90399	-89.80817	10		R																							1																															
807	45.90350	-89.80818	13		R			1																					1																															
808	45.90301	-89.80818	9	M	P			1																3																																			
809	45.90253	-89.80818	4	M	P		1		1					1			1												1	1																													
810	45.90204	-89.80818	3	M	P																																																					
811	45.90156	-89.80818	6	M	P																																																					
812	45.90107	-89.80818	5	S	P																																																					
813	45.89670	-89.80820	3	S	P																								1						1																										
814	45.89621	-89.80820	6	R	P	No Vegetation																																																				
815	45.89572	-89.80820	12	M	P			2																															1					1																		
816	45.89524	-89.80820	10	M	P			1																															1					1																		
817	45.89475	-89.80821	12		R			1																					1						1											1																		
818	45.89427	-89.80821				Too Deep																																																				
819	45.90787	-89.80746	3	M	P			1																						1	1																													
820	45.90739	-89.80747	12		R			1																																																1			
821	45.90690	-89.80747	15		R	No Vegetation																																																				
822	45.90641	-89.80747				Too Deep																																																				
823	45.90593	-89.80747				Too Deep																																																				
824	45.90544	-89.80747	16		R	No Vegetation																																																				
825	45.90496	-89.80747				Too Deep																																																				
826	45.90447	-89.80748	17		R	No Vegetation																																																				
827	45.90398	-89.80748				Too Deep																																																				
828	45.90350	-89.80748	14		R																							3																															
829	45.90301	-89.80748	14		R																							1									1					1																		
830	45.90253	-89.80748	5	M	P		3										1							1				1	1													1																				
831	45.90204	-89.80748	1	M	P																																																					
832	45.90155	-89.80749	6	M	P									1									1																			3																				
833	45.90107	-89.80749	3	S	P																																																					
834	45.89572	-89.80751	10	M	P			1																3																				1																		
835	45.89524	-89.80751	7	M	P			1																																					1																		
836	45.89475	-89.80751	9		R			1																2															1					1																		
837	45.89426	-89.80751	5	M	P																																					3				1															1			
838	45.89378	-89.80751				Too Deep																																																				
839	45.90787	-89.80677	3	M	P																						1					1																														
840	45.90739	-89.80677	14		R																							3																															
841	45.90690	-89.80677	17		R	No Vegetation																																																				
842	45.90641	-89.80677				Too Deep																																																				
843	45.90593	-89.80677	15		R	No Vegetation																																																				
844	45.90544	-89.80678	15		R																																																					
845	45.90496	-89.80678				Too Deep																																																				
846	45.90447	-89.80678				Too Deep																																																				
847	45.90398	-89.80678	12		R																							1																															
848	45.90350	-89.80678	13		R																							3																															
849	45.90301	-89.80678	11		R																							1																															
850	45.90253	-89.80679	12		R	No Vegetation																																																				
851	45.90204	-89.80679	9		R																																																					
852	45.90155	-89.80679	9	M	P									1									1																			2																				
853	45.90107	-89.80679	6	M	P									2																																													
854	45.90058	-89.80679	6	M	P																		1																					1																	
855	45.89572	-89.80681				No GPS Signal																																																				
856	45.89524	-89.80681	10	M	P			1																2																				2																		
857	45.89475	-89.80681	9	M	P			1																1															1		2			1																		
858	45.89426	-89.80681	7	M	P			1						1									1																			3																				
859	45.89378	-89.80682	6	M	P																											1									2																				
860	45.89329	-89.80682	3	M	P		1	1																						1														1																1				
861	45.89280	-89.80682				Too Deep																																																				
862	45.90787	-89.80607	5	M	P			1																			1					1								1	1																				
863	45.90738	-89.80607	15		R																							1																															
864	45.90690	-89.80607				Too Deep																																																				
865	45.90641	-89.80608				Too Deep																																																				
866	45.90593	-89.80608	16		R	No Vegetation																																																				
867	45.90544	-89.80608	16		R																																																					
868	45.90495	-89.80608	12		R	No Vegetation																																																				
869	45.90447	-89.80608	10		R																							1									1																							

Point Number	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Depth (ft)	Sediment type (M=muck, S=Sand, R=Rock	Rope (R); Pole (P); Visual (V)	Notes	Brasenia schreberi	Ceratophyllum demersum	Chara sp.	Dulichium arundinaceum	Elatine minima	Eleocharis acicularis	Eleocharis palustris	Elodea canadensis	Equisetum fluviatile	Eriocaulon aquaticum	Heteranthera dubia	Isoetes lacustris	Juncus pelocarpus	Lemna minor	Lemna trisulca	Lobelia dortmanna	Megalodonta beckii	Myriophyllum sibiricum	Myriophyllum tenellum	Myriophyllum verticillatum	Najas flexilis	Nitella sp.	Nuphar variegata	Nymphaea odorata	Pontederia cordata	Potamogeton amplifolius	Potamogeton epihydrus	Potamogeton friesii	Potamogeton gramineus	Potamogeton illinoensis	Potamogeton praelongus	Potamogeton pusillus	Potamogeton richardsonii	Potamogeton robbinsii	Potamogeton spirillus	Potamogeton vaseyi	Potamogeton zosteriformis	Ranunculus aquatilis	Sagitaria sp. (rosette)	Schoenoplectus acutus	Schoenoplectus tabernaemontani	Schoenoplectus subterminalis	Sparganium angustifolium	Sparganium eurycarpum	Sparganium fluctuans	Spirodela polyrhiza	Stuckenia pectinata	Utricularia intermedia	Utricularia vulgaris	Vallisneria americana	Myriophyllum alterniflorum	Potamogeton hybrid sp	Sagittaria cristata
870	45.90398	-89.80608	8	M	P																		1	1													1		1																	
871	45.90350	-89.80609	11		R			1																																		1															
872	45.90301	-89.80609	13		R																						2											1																	
873	45.90252	-89.80609	10		R																						2																											
874	45.90204	-89.80609	12		R																																																		
875	45.90155	-89.80609	10	M	P			1																1														1		1																
876	45.90107	-89.80610	9	M	P																																				3															
877	45.90058	-89.80610	5	M	P																												V								3															
878	45.90009	-89.80610	3	M	P		1							1			1												1	1											1															
879	45.89572	-89.80611				No GPS Signal																																																		
880	45.89523	-89.80612	4	M	P																																				3															
881	45.89475	-89.80612	2	S	P							1						1									1								1	1							1													
882	45.89426	-89.80612	1	R	P																																																		1		
883	45.89378	-89.80612	6	M	P																																				3															
884	45.89329	-89.80612	4	M	P		1							1															1												2															
885	45.89280	-89.80612	3	M	P		1	1																1			1		1	1	1							1				1					1									
886	45.89232	-89.80613	3	M	P		1																						1	1																									2		
887	45.89183	-89.80613	2	M	P		1																				1		1	1			1																					3		
888	45.90884	-89.80537	1	M	P		V																						V	V	V																V									
889	45.90836	-89.80537	14		R	No Vegetation																																																		
890	45.90787	-89.80538	14		R																						1																											
891	45.90738	-89.80538	16		R	No Vegetation																																																	
892	45.90690	-89.80538	15		R	No Vegetation																																																	
893	45.90641	-89.80538				Too Deep																																			1															
894	45.90593	-89.80538	17		R	No Vegetation																																																	
895	45.90544	-89.80538	12		R			1																				1											1															
896	45.90495	-89.80539						1																1													1		1														1		
897	45.90447	-89.80539	6	S	P			1																					V															1											
898	45.90398	-89.80539	12		R			1																																															
899	45.90350	-89.80539	11		R			2																1																															
900	45.90301	-89.80539	13		R			1																																							1									
901	45.90252	-89.80539	7	S	P																		1																										1									
902	45.90204	-89.80540	5	M	P																																																			
903	45.90155	-89.80540	2	S	P																						1																													1
904	45.89523	-89.80542	2	S	P			1											1								2				1			1					1		1								1									
905	45.89377	-89.80542	3	M	P		1	1													1							1	1						1																			1	1		
906	45.89329	-89.80543	3	M	P		1							1															1	1	1																	1									
907	45.89280	-89.80543				Too Deep																																																	
908	45.90884	-89.80468	9	M	P																																				1		1													
909	45.90835	-89.80468	12		R			1																				1																											
910	45.90787	-89.80468	15		R																																																		
911	45.90738	-89.80468	15		R	No Vegetation																																																	
912	45.90690	-89.80468	16		R	No Vegetation																																																	
913	45.90641	-89.80468	7	M	P			3																	1														1																
914	45.90592	-89.80469	15		R																						1																											
915	45.90544	-89.80469	8	M	P																		1	1														1		1																
916	45.90495	-89.80469	8	M	P			1																1																1															1		
917	45.90447	-89.80469	15		R			1																1				1																											
918	45.90398	-89.80469	12		R																																			3															
919	45.90349	-89.80469	10	M	P																			1																															
920	45.90301	-89.80470	4	S	P																						1					1																					
921	45.90884	-89.80398	4	S	P									1																		1								1															
922	45.90835	-89.80398	13		R			1																				1																											
923	45.90787	-89.80398	16		R																																																	
924	45.90738	-89.80398	18			Too Deep																																																
925	45.90689	-89.80399	16		R	No Vegetation																																																
926	45.90641	-89.80399	15		R																						2																											
927	45.90592	-89.80399	15		R			1																				1																											
928	45.90544	-89.80399	7	R	P																									1	1											1															
929	45.90495	-89.80399	14		R																						3																											
930	45.90446	-89.80399	15		R																						3																											
931	45.90398	-89.80400	12		R			2																				1														2															
932	45.90349	-89.80400	5	M	P		1	1			1																1		1	1	1																1									
933	45.90884	-89.80328	3	S	P																						1					1																V							
934	45.90835	-89.80328	14		R			1																				2												1															
935	45.90787	-89.80329				Too Deep																																																
936	45.90738	-89.80329	16		R	No Vegetation																																																
937	45.90689	-89.80329	15		R	No Vegetation																																																
938	45.90641	-89.80329	13		R	No Vegetation																																																
939	45.90592	-89.80329	16		R																						1																											
940	45.90544	-89.80330	10		R																						2																											
941	45.90495	-89.80330	7	M	R																																				1															
942	45.90446	-89.80330	3	S	P			1																			1					1																					
943	45.90398	-89.80330	3	M	P																						1																											
944	45.90349	-89.80330	4			On Shore																																															
945	45.90884	-89.80259	2	M	P			2						1																																							
946	45.90835	-89.80259	13		R	No Vegetation																																															
947	45.90786	-89.80259	8	M	P																																															
948	45.90738	-89.80259	8	M	P			1																																	1		3													

Point Number	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Depth (ft)	Sediment type (M=muck, S=Sand, R=Rock	Rope (R); Pole (P); Visual (V)	Notes	Brasenia schreberi	Ceratophyllum demersum	Chara sp.	Dulichium arundinaceum	Elatine minima	Eleocharis acicularis	Eleocharis palustris	Elodea canadensis	Equisetum fluviatile	Eriocaulon aquaticum	Heteranthera dubia	Isoetes lacustris	Juncus pelocarpus	Lemna minor	Lemna trisulca	Lobelia dortmanna	Megalodonta beckii	Myriophyllum sibiricum	Myriophyllum tenellum	Myriophyllum verticillatum	Najas flexilis	Nitella sp.	Nuphar variegata	Nymphaea odorata	Pontederia cordata	Potamogeton amplifolius	Potamogeton epihydrus	Potamogeton friesii	Potamogeton gramineus	Potamogeton illinoensis	Potamogeton praelongus	Potamogeton pusillus	Potamogeton richardsonii	Potamogeton robbinsii	Potamogeton spirillus	Potamogeton vaseyi	Potamogeton zosteriformis	Ranunculus aquatilis	Sagitaria sp. (rosette)	Schoenoplectus acutus	Schoenoplectus tabernaemontani	Schoenoplectus subterminalis	Sparganium angustifolium	Sparganium eurycarpum	Sparganium fluctuans	Spirodela polyrhiza	Stuckenia pectinata	Utricularia intermedia	Utricularia vulgaris	Vallisneria americana	Myriophyllum alterniflorum	Potamogeton hybrid sp	Sagittaria cristata
949	45.90689	-89.80259	6	M	P																																1	1		1			1													1			
950	45.90641	-89.80260	14		R																							1																															
951	45.90592	-89.80260	15		R																							2										1																					
952	45.90543	-89.80260	3	S	P																																														V									
953	45.90495	-89.80260	1	S	P							1																																							1									1
954	45.90884	-89.80189	1	S	P																								1		V																			1	1									
955	45.90835	-89.80189	4	M	P		V							1									1									1				1			1	1																			
956	45.90786	-89.80189	3	M	P			1						1																		1														1													
957	45.90738	-89.80190	6	S	P																		1									1								1			1													1			
958	45.90689	-89.80190	8	M	P			2																															1				1																
959	45.90641	-89.80190	14		R																							3										1					1																
960	45.90592	-89.80190	6	M	P																			1																1			1																
961	45.90786	-89.80120	2	M	P			1																								1				1										V													
962	45.90738	-89.80120	4	S	P			1																								1			1								1			V													
963	45.90689	-89.80120	11		R			1																																																			
964	45.90640	-89.80120	13		R	No Vegetation																																																					
965	45.90592	-89.80120				On Shore																																																					
966	45.90689	-89.80051	3	S	P																														1																								
967	45.90640	-89.80051	2	M	P			1						1			1																						1	1																1			

Point Number	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Depth (ft)	Sediment type (M=muck, S=Sand, R=Rock)	Rope (R); Pole (P); Visual (V)	Notes	Brasenia schreberi	Ceratophyllum demersum	Chara sp.	Dulichium arundinaceum	Elatine minima	Eleocharis acicularis	Elodea canadensis	Heteranthera dubia	Isoetes lacustris	Juncus pelocarpus	Lemna minor	Lemna trisulca	Megalodonta beckii	Myriophyllum sibiricum	Myriophyllum tenellum	Najas flexilis	Nitella sp.	Nuphar variegata	Nymphaea odorata	Pontederia cordata	Potamogeton amplifolius	Potamogeton foliosus	Potamogeton friesii	Potamogeton gramineus	Potamogeton illinoensis	Potamogeton natans	Potamogeton praelongus	Potamogeton pusillus	Potamogeton richardsonii	Potamogeton robbinsii	Potamogeton vaseyi	Potamogeton zosteriformis	Ranunculus aquatilis	Ranunculus flammula	Schoenoplectus acutus	Sparganium angustifolium	Sparganium fluctuans	Spirodela polyrhiza	Typha angustifolia	Utricularia intermedia	Utricularia vulgaris	Vallisneria americana	Potamogeton hybrid sp	Potamogeton alpinus	Carex vesicaria	Sagittaria cristata
1	45.90577	-89.82701	5	M	P		V															1		V												1															
2	45.90534	-89.82701	3	S	P																	2																															
3	45.90492	-89.82701	3	M	P									1																					1			1	1														
4	45.90450	-89.82701	2	S	P		1																	1	1	1														1												
5	45.90704	-89.82640	6	M	P																	1																1														
6	45.90661	-89.82640	5	M	P			1														1														1			1													
7	45.90619	-89.82640	11	M	P			3												1																																	
8	45.90577	-89.82640	9		R			3																																												
9	45.90534	-89.82640	13		R	No Vegetation																																														
10	45.90492	-89.82640	11	M	P			1																																											
11	45.90450	-89.82640	3	M	P			2																														1														
12	45.91127	-89.82578	6	M	P			3												1																				1													
13	45.91084	-89.82578	9	M	P			2												1																																	
14	45.90830	-89.82579	8	S	P	No Vegetation																																														
15	45.90788	-89.82579	13		R																		3														1														
16	45.90746	-89.82579	13		R																		1																													
17	45.90704	-89.82579	11		R			2																																													
18	45.90661	-89.82579	14		R			1																																												
19	45.90619	-89.82579	15		R			1					1																										1														
20	45.90577	-89.82579	14		R																																		1														
21	45.90534	-89.82580	14		R	No Vegetation																																														
22	45.90492	-89.82580	14		R	No Vegetation																																														
23	45.90450	-89.82580	4	S	P		1	1				1								1				1	1		1												1														1
24	45.91211	-89.82517	8	S	P				1					1								1		1		1			1												1			1		1							
25	45.91169	-89.82517	16		R	No Vegetation																																														
26	45.91126	-89.82517				Too Deep																																														
27	45.91084	-89.82517				Too Deep																																														
28	45.91042	-89.82517	7	M	P																								1										1														
29	45.90873	-89.82518	6	S	P																									1																						

Point Number	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Depth (ft)	Sediment type (M=muck, S=Sand, R=Rock)	Rope (R); Pole (P); Visual (V)	Notes	Brasenia schreberi	Ceratophyllum demersum	Chara sp.	Dulichium arundinaceum	Elatine minima	Eleocharis acicularis	Elodea canadensis	Heteranthera dubia	Isoetes lacustris	Juncus pelocarpus	Lemna minor	Lemna trisulca	Megalodonta beckii	Myriophyllum sibiricum	Myriophyllum tenellum	Najas flexilis	Nitella sp.	Nuphar variegata	Nymphaea odorata	Pontederia cordata	Potamogeton amplifolius	Potamogeton foliosus	Potamogeton friesii	Potamogeton gramineus	Potamogeton illinoensis	Potamogeton natans	Potamogeton praelongus	Potamogeton pusillus	Potamogeton richardsonii	Potamogeton robbinsii	Potamogeton vaseyi	Potamogeton zosteriformis	Ranunculus aquatilis	Ranunculus flammula	Schoenoplectus acutus	Sparganium angustifolium	Sparganium fluctuans	Spirodela polyrhiza	Typha angustifolia	Utricularia intermedia	Utricularia vulgaris	Vallisneria americana	Potamogeton hybrid sp	Potamogeton alpinus	Carex vesicaria	Sagittaria cristata
30	45.90830	-89.82518	15		R			1					1																																						
31	45.90788	-89.82518	16		R	No Vegetation																																													
32	45.90746	-89.82518	14		R																		1														1														
33	45.90703	-89.82518	15		R																		1																												
34	45.90661	-89.82519	16		R	No Vegetation																																													
35	45.90619	-89.82519	16		R																																			1												
36	45.90577	-89.82519	15		R	No Vegetation																																													
37	45.90534	-89.82519	15		R	No Vegetation																																													
38	45.90492	-89.82519	14		R			1																															1												
39	45.90450	-89.82519	2	S	P									1										1	1																											1
40	45.91465	-89.82455	5	S	P																			1																1												
41	45.91422	-89.82456	9	M	P																					1										1	1		1	1									1			1	
42	45.91380	-89.82456	4	S	P									1								1							1	2				1	1	1															
43	45.91338	-89.82456	4	S	P							1										1		1																											1			
44	45.91296	-89.82456	5	S	P									1								3							1							1													1			
45	45.91253	-89.82456	8	M	P																	1	1						1						2	1		1												
46	45.91211	-89.82456				Too Deep																																												
47	45.91169	-89.82456				Too Deep																																												
48	45.91126	-89.82456				Too Deep																																												
49	45.91084	-89.82457				Too Deep																																												
50	45.91042	-89.82457			R	No Vegetation																																												
51	45.90999	-89.82457	6	M	P																															1	2												1			
52	45.90957	-89.82457	6	S	P																	1		V	V					1																					
53	45.90873	-89.82457	14		R																																													
54	45.90830	-89.82457	15		R								1																																						
55	45.90788	-89.82458	15		R	No Vegetation																																													
56	45.90746	-89.82458	13		R								1										1																1												
57	45.90703	-89.82458	16		R																																		1												
58	45.90661	-89.82458	16		R																1																		2												

Point Number	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Depth (ft)	Sediment type (M=muck, S=Sand, R=Rock)	Rope (R); Pole (P); Visual (V)	Notes	Brasenia schreberi	Ceratophyllum demersum	Chara sp.	Dulichium arundinaceum	Elatine minima	Eleocharis acicularis	Elodea canadensis	Heteranthera dubia	Isoetes lacustris	Juncus pelocarpus	Lemna minor	Lemna trisulca	Megalodonta beckii	Myriophyllum sibiricum	Myriophyllum tenellum	Najas flexilis	Nitella sp.	Nuphar variegata	Nymphaea odorata	Pontederia cordata	Potamogeton amplifolius	Potamogeton foliosus	Potamogeton friesii	Potamogeton gramineus	Potamogeton illinoensis	Potamogeton natans	Potamogeton praelongus	Potamogeton pusillus	Potamogeton richardsonii	Potamogeton robbinsii	Potamogeton vaseyi	Potamogeton zosteriformis	Ranunculus aquatilis	Ranunculus flammula	Schoenoplectus acutus	Sparganium angustifolium	Sparganium fluctuans	Spirodela polyrhiza	Typha angustifolia	Utricularia intermedia	Utricularia vulgaris	Vallisneria americana	Potamogeton hybrid sp	Potamogeton alpinus	Carex vesicaria	Sagittaria cristata
59	45.90619	-89.82458	13		R	No Vegetation																																													
60	45.90576	-89.82458	15		R	No Vegetation																																1														
61	45.90534	-89.82458	15		R			1																																										
62	45.90492	-89.82458	13		R																		1															1												
63	45.90450	-89.82459	5	S	P																			1																										1
64	45.91507	-89.82395	3	S	P																			1	1	1												1												
65	45.91465	-89.82395	12		R																		3												2														
66	45.91422	-89.82395	15		R																																													
67	45.91380	-89.82395				Too Deep																																												
68	45.91338	-89.82395	15		R	No Vegetation																																												
69	45.91295	-89.82395				Too Deep																																												
70	45.91253	-89.82395				Too Deep																																												
71	45.91211	-89.82396				Too Deep																																												
72	45.91169	-89.82396	9	M	P															1																															
73	45.91126	-89.82396			R	No Vegetation																																												
74	45.91084	-89.82396				Too Deep																																												
75	45.91042	-89.82396				Too Deep																																												
76	45.90999	-89.82396				Too Deep																																												
77	45.90957	-89.82396			R	No Vegetation																																												
78	45.90915	-89.82397	19			Too Deep																																												
79	45.90872	-89.82397				Too Deep																																												
80	45.90830	-89.82397	16		R	No Vegetation																																												
81	45.90788	-89.82397	15		R																		1																											
82	45.90746	-89.82397	6	M	P																	1														1														
83	45.90703	-89.82397	6		P																			V													1													
84	45.90661	-89.82397	10		R			3																														1													
85	45.90619	-89.82397	15		R	No Vegetation																																												
86	45.90576	-89.82398	16		R																																													
87	45.90534	-89.82398	13		R																																		1												

Point Number	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Depth (ft)	Sediment type (M=muck, S=Sand, R=Rock)	Rope (R); Pole (P); Visual (V)	Notes	Brasenia schreberi	Ceratophyllum demersum	Chara sp.	Dulichium arundinaceum	Elatine minima	Eleocharis acicularis	Elodea canadensis	Heteranthera dubia	Isoetes lacustris	Juncus pelocarpus	Lemna minor	Lemna trisulca	Megalodonta beckii	Myriophyllum sibiricum	Myriophyllum tenellum	Najas flexilis	Nitella sp.	Nuphar variegata	Nymphaea odorata	Pontederia cordata	Potamogeton amplifolius	Potamogeton foliosus	Potamogeton friesii	Potamogeton gramineus	Potamogeton illinoensis	Potamogeton natans	Potamogeton praelongus	Potamogeton pusillus	Potamogeton richardsonii	Potamogeton robbinsii	Potamogeton vaseyi	Potamogeton zosteriformis	Ranunculus aquatilis	Ranunculus flammula	Schoenoplectus acutus	Sparganium angustifolium	Sparganium fluctuans	Spirodela polyrhiza	Typha angustifolia	Utricularia intermedia	Utricularia vulgaris	Vallisneria americana	Potamogeton hybrid sp	Potamogeton alpinus	Carex vesicaria	Sagittaria cristata
88	45.90492	-89.82398	10	S	P	No Vegetation																																														
89	45.91761	-89.82333	5	M	P			1															V													1				1											
90	45.91718	-89.82333	13	M	P			2																																											
91	45.91676	-89.82334	9	S	P			1												1																															
92	45.91634	-89.82334	4	S	P							1										2			1					1																					
93	45.91549	-89.82334	5	S	P																	2														1		1													1
94	45.91507	-89.82334	17			Too Deep																																													
95	45.91465	-89.82334				Too Deep																																													
96	45.91422	-89.82334				Too Deep																																													
97	45.91380	-89.82334				Too Deep																																													
98	45.91338	-89.82335				Too Deep																																													
99	45.91295	-89.82335				Too Deep																																													
100	45.91253	-89.82335				Too Deep																																													
101	45.91211	-89.82335				Too Deep																																													
102	45.91168	-89.82335	14		R	No Vegetation																																													
103	45.91126	-89.82335	5	M	P			1												1														1																
104	45.91084	-89.82335				Too Deep																																													
105	45.91042	-89.82336				Too Deep																																													
106	45.90999	-89.82336	15		R																		1																												
107	45.90957	-89.82336	20		R	No Vegetation																																													
108	45.90915	-89.82336				Too Deep																																													
109	45.90872	-89.82336				Too Deep																																													
110	45.90830	-89.82336	13		R								1																																						
111	45.90788	-89.82336	13		R			1															1															1												
112	45.90745	-89.82336				On Shore																																													
113	45.90661	-89.82337	11	M	P																																			1											
114	45.90619	-89.82337	9	M	P			3	1																											1		1												
115	45.90576	-89.82337	10	M	P			1																														1												
116	45.90534	-89.82337	7	M	P			1												1															1	1		1												

Point Number	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Depth (ft)	Sediment type (M=muck, S=Sand, R=Rock)	Rope (R); Pole (P); Visual (V)	Notes	Brasenia schreberi	Ceratophyllum demersum	Chara sp.	Dulichium arundinaceum	Elatine minima	Eleocharis acicularis	Elodea canadensis	Heteranthera dubia	Isoetes lacustris	Juncus pelocarpus	Lemna minor	Lemna trisulca	Megalodonta beckii	Myriophyllum sibiricum	Myriophyllum tenellum	Najas flexilis	Nitella sp.	Nuphar variegata	Nymphaea odorata	Pontederia cordata	Potamogeton amplifolius	Potamogeton foliosus	Potamogeton friesii	Potamogeton gramineus	Potamogeton illinoensis	Potamogeton natans	Potamogeton praelongus	Potamogeton pusillus	Potamogeton richardsonii	Potamogeton robbinsii	Potamogeton vaseyi	Potamogeton zosteriformis	Ranunculus aquatilis	Ranunculus flammula	Schoenoplectus acutus	Sparganium angustifolium	Sparganium fluctuans	Spirodela polyrhiza	Typha angustifolia	Utricularia intermedia	Utricularia vulgaris	Vallisneria americana	Potamogeton hybrid sp	Potamogeton alpinus	Carex vesicaria	Sagittaria cristata
117	45.90492	-89.82337	2	S	P																									1								1			1											
118	45.91761	-89.82273	6	M	P																															2				1											
119	45.91718	-89.82273	13		R																		3																												
120	45.91676	-89.82273	13		R																		1																												
121	45.91634	-89.82273	13		R																		2																												
122	45.91591	-89.82273				Too Deep																																													
123	45.91549	-89.82273	16																																															
124	45.91507	-89.82273	18			Too Deep																																													
125	45.91464	-89.82274				Too Deep																																													
126	45.91422	-89.82274				Too Deep																																													
127	45.91380	-89.82274				Too Deep																																													
128	45.91338	-89.82274				Too Deep																																													
129	45.91295	-89.82274				Too Deep																																													
130	45.91253	-89.82274				Too Deep																																													
131	45.91211	-89.82274				Too Deep																																													
132	45.91168	-89.82275				Too Deep																																													
133	45.91126	-89.82275	15		R	No Vegetation																																													
134	45.91084	-89.82275				Too Deep																																													
134	45.91041	-89.82275	5	M	P								2																											1											
135	45.90999	-89.82275	15		R			1															1																												
137	45.90957	-89.82275	16		R																		1																												
138	45.90915	-89.82275	16		R																		2																												
139	45.90872	-89.82275	15		R																		1																												
140	45.90830	-89.82276	7	M	P			1																													2	1												
141	45.90788	-89.82276	1	S	P															1						1																1									1
142	45.90661	-89.82276	2	S	P																			1		1																1									
143	45.90618	-89.82276	6	M	P			2																															1											
144	45.90576	-89.82276	9	M	P			1																															2											
145	45.90534	-89.82277	8	M	P			1																													1		2											

Point Number	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Depth (ft)	Sediment type (M=muck, S=Sand, R=Rock)	Rope (R); Pole (P); Visual (V)	Notes	Brasenia schreberi	Ceratophyllum demersum	Chara sp.	Dulichium arundinaceum	Eleatine minima	Eleocharis acicularis	Elodea canadensis	Heteranthera dubia	Isoetes lacustris	Juncus pelocarpus	Lemna minor	Lemna trisulca	Megalodonta beckii	Myriophyllum sibiricum	Myriophyllum tenellum	Najas flexilis	Nitella sp.	Nuphar variegata	Nymphaea odorata	Pontederia cordata	Potamogeton amplifolius	Potamogeton foliosus	Potamogeton friesii	Potamogeton gramineus	Potamogeton illinoensis	Potamogeton natans	Potamogeton praelongus	Potamogeton pusillus	Potamogeton richardsonii	Potamogeton robbinsii	Potamogeton vaseyi	Potamogeton zosteriformis	Ranunculus aquatilis	Ranunculus flammula	Schoenoplectus acutus	Sparganium angustifolium	Sparganium fluctuans	Spirodela polyrhiza	Typha angustifolia	Utricularia intermedia	Utricularia vulgaris	Vallisneria americana	Potamogeton hybrid sp	Potamogeton alpinus	Carex vesicaria	Sagittaria cristata
146	45.91761	-89.82212	6	S	P																	1							1																							
147	45.91718	-89.82212	15		R																																																
148	45.91676	-89.82212				Too Deep																																														
149	45.91634	-89.82212				Too Deep																																														
150	45.91591	-89.82213				Too Deep																																														
151	45.91549	-89.82213				Too Deep																																														
152	45.91507	-89.82213	17			Too Deep																																														
153	45.91464	-89.82213				Too Deep																																														
154	45.91422	-89.82213				Too Deep																																														
155	45.91380	-89.82213				Too Deep																																														
156	45.91337	-89.82213				Too Deep																																														
157	45.91295	-89.82214				Too Deep																																														
158	45.91253	-89.82214				Too Deep																																														
159	45.91211	-89.82214	8	S	P																																														1				
160	45.91168	-89.82214	8	S	P																								1							1																
161	45.91126	-89.82214	15		R																		1																													
162	45.91084	-89.82214	6	M	P			1																			1								1															1				
163	45.91041	-89.82214	14		R																		1																													
164	45.90999	-89.82214	14		R																		1																													
165	45.90957	-89.82215				Too Deep																																														
166	45.90914	-89.82215	5	S	P																																															1
167	45.90872	-89.82215	4	S	P																																									1						
168	45.90618	-89.82216	6	M	P			1					1																								1		1														
169	45.90576	-89.82216	7	M	P																																1		3														
170	45.90534	-89.82216	6	M	P			1																													1		3														
171	45.90491	-89.82216	5	M	P																																1																
172	45.91760	-89.82151	6	S	P	No Vegetation																																														
173	45.91718	-89.82152				Too Deep																																														
174	45.91676	-89.82152				Too Deep																																														

Point Number	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Depth (ft)	Sediment type (M=muck, S=Sand, R=Rock)	Rope (R); Pole (P); Visual (V)	Notes	Brasenia schreberi	Ceratophyllum demersum	Chara sp.	Dulichium arundinaceum	Elatine minima	Eleocharis acicularis	Elodea canadensis	Heteranthera dubia	Isoetes lacustris	Juncus pelocarpus	Lemna minor	Lemna trisulca	Megalodonta beckii	Myriophyllum sibiricum	Myriophyllum tenellum	Najas flexilis	Nitella sp.	Nuphar variegata	Nymphaea odorata	Pontederia cordata	Potamogeton amplifolius	Potamogeton foliosus	Potamogeton friesii	Potamogeton gramineus	Potamogeton illinoensis	Potamogeton natans	Potamogeton praelongus	Potamogeton pusillus	Potamogeton richardsonii	Potamogeton robbinsii	Potamogeton vaseyi	Potamogeton zosteriformis	Ranunculus aquatilis	Ranunculus flammula	Schoenoplectus acutus	Sparganium angustifolium	Sparganium fluctuans	Spirodela polyrhiza	Typha angustifolia	Utricularia intermedia	Utricularia vulgaris	Vallisneria americana	Potamogeton hybrid sp	Potamogeton alpinus	Carex vesicaria	Sagittaria cristata
175	45.91634	-89.82152				Too Deep																																														
176	45.91591	-89.82152				Too Deep																																														
177	45.91549	-89.82152				Too Deep																																														
178	45.91507	-89.82152	19			Too Deep																																													
179	45.91464	-89.82152				Too Deep																																													
180	45.91422	-89.82152				Too Deep																																													
181	45.91380	-89.82153				Too Deep																																													
182	45.91337	-89.82153				Too Deep																																													
183	45.91295	-89.82153				Too Deep																																													
184	45.91253	-89.82153	10	S	P																																														
185	45.91126	-89.82153	7	M	P									1																							1														
186	45.91084	-89.82154	4	S	P			1														1					1																					1		
187	45.91041	-89.82154	4	R	P																	1														1													1
188	45.90999	-89.82154	7	M	P			1	1													1		V											1													1
189	45.90957	-89.82154	5	S	P																	1													1													1
190	45.90618	-89.82155	5	M	P			1		1																											1		1										
191	45.90576	-89.82155	5	M	P			1		1																	1									1												
192	45.90534	-89.82155	6	M	P					1																										2		1										
193	45.90491	-89.82155	5	M	P																														2		2										
194	45.90449	-89.82156	3	M	P																														2		2										
195	45.90407	-89.82156	2	M	P		1	1		1														1	1										1										1				
196	45.91760	-89.82091	15		R																																1												
197	45.91718	-89.82091				Too Deep																																													
198	45.91676	-89.82091				Too Deep																																													
199	45.91633	-89.82091				Too Deep																																													
200	45.91591	-89.82091				Too Deep																																													
201	45.91549	-89.82091				Too Deep																																													
202	45.91507	-89.82092	20			Too Deep																																													
203	45.91464	-89.82092				Too Deep																																													

Point Number	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Depth (ft)	Sediment type (M=muck, S=Sand, R=Rock)	Rope (R); Pole (P); Visual (V)	Notes	Brasenia schreberi	Ceratophyllum demersum	Chara sp.	Dulichium arundinaceum	Eleatine minima	Eleocharis acicularis	Elodea canadensis	Heteranthera dubia	Isoetes lacustris	Juncus pelocarpus	Lemna minor	Lemna trisulca	Megalodonta beckii	Myriophyllum sibiricum	Myriophyllum tenellum	Najas flexilis	Nitella sp.	Nuphar variegata	Nymphaea odorata	Pontederia cordata	Potamogeton amplifolius	Potamogeton foliosus	Potamogeton friesii	Potamogeton gramineus	Potamogeton illinoensis	Potamogeton natans	Potamogeton praelongus	Potamogeton pusillus	Potamogeton richardsonii	Potamogeton robbinsii	Potamogeton vaseyi	Potamogeton zosteriformis	Ranunculus aquatilis	Ranunculus flammula	Schoenoplectus acutus	Sparganium angustifolium	Sparganium fluctuans	Spirodela polyrhiza	Typha angustifolia	Utricularia intermedia	Utricularia vulgaris	Vallisneria americana	Potamogeton hybrid sp	Potamogeton alpinus	Carex vesicaria	Sagittaria cristata
204	45.91422	-89.82092				Too Deep																																														
205	45.91380	-89.82092				Too Deep																																														
206	45.91337	-89.82092				Too Deep																																													
207	45.91295	-89.82092				Too Deep																																													
208	45.91253	-89.82092	4	S	P																	1								1																				
209	45.90618	-89.82094	3	M	P			1	1				1	1						1				1	1											2		1	1											
210	45.90576	-89.82095	5	M	P			2					2																							1		1												
211	45.90534	-89.82095	7	M	P			1	1																																								
212	45.90491	-89.82095	7	M	P			1																												1		1											
213	45.90449	-89.82095	6	M	P			1					1																							3		2											
214	45.90407	-89.82095	3	M	P		1						1						1			1		1	1											2		1											
215	45.90364	-89.82095	2	M	P			1					1	1											1	1				1					1	1		1										1			1		
216	45.91803	-89.82030				BOAT IN WAY																																														
217	45.91760	-89.82030				Too Deep																																													
218	45.91718	-89.82030				Too Deep																																													
219	45.91676	-89.82030				Too Deep																																													
220	45.91633	-89.82031				Too Deep																																													
221	45.91591	-89.82031				Too Deep																																													
222	45.91549	-89.82031				Too Deep																																													
223	45.91506	-89.82031	11	M	P			3												1			1															1												
224	45.91464	-89.82031				Too Deep																																													
225	45.91422	-89.82031				Too Deep																																													
226	45.91380	-89.82031				Too Deep																																													
227	45.91337	-89.82032				Too Deep																																													
228	45.91295	-89.82032				Too Deep																																													
229	45.91253	-89.82032	14		R																	1	1						1																				
230	45.90618	-89.82034	4	M	P			1					2																						1		1												
231	45.90576	-89.82034	5	M	P			1					1																							3													
232	45.90533	-89.82034	7	M	P			1					1																							2		1											

Point Number	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Depth (ft)	Sediment type (M=muck, S=Sand, R=Rock)	Rope (R); Pole (P); Visual (V)	Notes	Brasenia schreberi	Ceratophyllum demersum	Chara sp.	Dulichium arundinaceum	Eleatine minima	Eleocharis acicularis	Elodea canadensis	Heteranthera dubia	Isoetes lacustris	Juncus pelocarpus	Lemna minor	Lemna trisulca	Megalodonta beckii	Myriophyllum sibiricum	Myriophyllum tenellum	Najas flexilis	Nitella sp.	Nuphar variegata	Nymphaea odorata	Pontederia cordata	Potamogeton amplifolius	Potamogeton foliosus	Potamogeton friesii	Potamogeton gramineus	Potamogeton illinoensis	Potamogeton natans	Potamogeton praelongus	Potamogeton pusillus	Potamogeton richardsonii	Potamogeton robbinsii	Potamogeton vaseyi	Potamogeton zosteriformis	Ranunculus aquatilis	Ranunculus flammula	Schoenoplectus acutus	Sparganium angustifolium	Sparganium fluctuans	Spirodela polyrhiza	Typha angustifolia	Utricularia intermedia	Utricularia vulgaris	Vallisneria americana	Potamogeton hybrid sp	Potamogeton alpinus	Carex vesicaria	Sagittaria cristata
233	45.90491	-89.82034	6	M	P			1																												1		3														
234	45.90449	-89.82034	3	M	P		1						1														1									2																
235	45.90407	-89.82035	3	M	P		1		1										1					1	1																							1				
236	45.91845	-89.81969	4	M	P																	1													1																
237	45.91802	-89.81969	8	M	P			1																														1														
238	45.91760	-89.81970				Too Deep																																													
239	45.91718	-89.81970				Too Deep																																													
240	45.91676	-89.81970				Too Deep																																													
241	45.91633	-89.81970				Too Deep																																													
242	45.91591	-89.81970				Too Deep																																													
243	45.91549	-89.81970				Too Deep																																													
244	45.91506	-89.81970	20			Too Deep																																													
245	45.91464	-89.81971				Too Deep																																													
246	45.91422	-89.81971				Too Deep																																													
247	45.91379	-89.81971	8	M	P			1												1			1																												
248	45.91337	-89.81971	4	S	P			1					1														1			1				1	1		1											1			
249	45.91295	-89.81971	15		R			3															2											1			1													
250	45.91252	-89.81971	15		R																		2																												
251	45.91210	-89.81971	4	M	P									1				1				1		1	1												1	1		1											1
252	45.90618	-89.81973	4	M	P		1						1				1					1			1	1		1								1										1			1		
253	45.90576	-89.81973	5	M	P		1						1							1				1	1							1				1											1				
254	45.90533	-89.81974	6	M	P			1					1																								3		1												
255	45.90491	-89.81974	6	M	P			1					1																								3		1												
256	45.90449	-89.81974	3	M	P		1	2					1					1						1	1												1														
257	45.90406	-89.81974				Not navigable																																													
258	45.91972	-89.81908	3	S	P							1										1		1	1	1																							1				
259	45.91929	-89.81908	7	M	P																															2	1											1			
260	45.91887	-89.81909	13		R																		2																												
261	45.91845	-89.81909	12		R			1															3																												

Point Number	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Depth (ft)	Sediment type (M=muck, S=Sand, R=Rock)	Rope (R); Pole (P); Visual (V)	Notes	Brasenia schreberi	Ceratophyllum demersum	Chara sp.	Dulichium arundinaceum	Elatine minima	Eleocharis acicularis	Elodea canadensis	Heteranthera dubia	Isoetes lacustris	Juncus pelocarpus	Lemna minor	Lemna trisulca	Megalodonta beckii	Myriophyllum sibiricum	Myriophyllum tenellum	Najas flexilis	Nitella sp.	Nuphar variegata	Nymphaea odorata	Pontederia cordata	Potamogeton amplifolius	Potamogeton foliosus	Potamogeton friesii	Potamogeton gramineus	Potamogeton illinoensis	Potamogeton natans	Potamogeton praelongus	Potamogeton pusillus	Potamogeton richardsonii	Potamogeton robbinsii	Potamogeton vaseyi	Potamogeton zosteriformis	Ranunculus aquatilis	Ranunculus flammula	Schoenoplectus acutus	Sparganium angustifolium	Sparganium fluctuans	Spirodela polyrhiza	Typha angustifolia	Utricularia intermedia	Utricularia vulgaris	Vallisneria americana	Potamogeton hybrid sp	Potamogeton alpinus	Carex vesicaria	Sagittaria cristata
262	45.91802	-89.81909	14		R			2												1																		1														
263	45.91760	-89.81909				Too Deep																																															
264	45.91718	-89.81909				Too Deep																																														
265	45.91675	-89.81909				Too Deep																																														
266	45.91633	-89.81909				Too Deep																																														
267	45.91591	-89.81910				Too Deep																																														
268	45.91549	-89.81910				Too Deep																																														
269	45.91506	-89.81910	21			Too Deep																																														
270	45.91464	-89.81910				Too Deep																																														
271	45.91422	-89.81910	15		R																		2																													
272	45.91379	-89.81910	2	S	P				2																													1													
273	45.91337	-89.81910	15		R			1															1															1													
274	45.91295	-89.81910	15		R															1			3																												
275	45.91252	-89.81911	16		R																		1																												
276	45.91210	-89.81911	15		R																		1																												
277	45.91168	-89.81911	7	S	P									1						1		1							1									1													1
278	45.90576	-89.81913				Not navigable																																														
279	45.90533	-89.81913	4	M			1		1				1					1						1	1		1							1			1													
280	45.90491	-89.81913	6	M	P			1										1																																	
281	45.90449	-89.81913				Not navigable																																														
282	45.90406	-89.81913				Not navigable																																														
283	45.92098	-89.81847	2	S	P										1					1		1		V	V	V													1						1						
284	45.92056	-89.81847	3	M	P			3																V	V													1												
285	45.92014	-89.81848	11	M	P			2												1																																
286	45.91971	-89.81848	14	M	P																		1																												
287	45.91929	-89.81848	14		R																		1																												
288	45.91887	-89.81848	14		R	No Vegetation																																													
289	45.91845	-89.81848	16			Too Deep																																													
290	45.91802	-89.81848				Too Deep																																													

Point Number	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Depth (ft)	Sediment type (M=muck, S=Sand, R=Rock)	Rope (R); Pole (P); Visual (V)	Notes	Brasenia schreberi	Ceratophyllum demersum	Chara sp.	Dulichium arundinaceum	Elatine minima	Eleocharis acicularis	Elodea canadensis	Heteranthera dubia	Isoetes lacustris	Juncus pelocarpus	Lemna minor	Lemna trisulca	Megalodonta beckii	Myriophyllum sibiricum	Myriophyllum tenellum	Najas flexilis	Nitella sp.	Nuphar variegata	Nymphaea odorata	Pontederia cordata	Potamogeton amplifolius	Potamogeton foliosus	Potamogeton friesii	Potamogeton gramineus	Potamogeton illinoensis	Potamogeton natans	Potamogeton praelongus	Potamogeton pusillus	Potamogeton richardsonii	Potamogeton robbinsii	Potamogeton vaseyi	Potamogeton zosteriformis	Ranunculus aquatilis	Ranunculus flammula	Schoenoplectus acutus	Sparganium angustifolium	Sparganium fluctuans	Spirodela polyrhiza	Typha angustifolia	Utricularia intermedia	Utricularia vulgaris	Vallisneria americana	Potamogeton hybrid sp	Potamogeton alpinus	Carex vesicaria	Sagittaria cristata
291	45.91760	-89.81848				Too Deep																																													
292	45.91718	-89.81849				Too Deep																																													
293	45.91675	-89.81849				Too Deep																																												
294	45.91633	-89.81849				Too Deep																																												
295	45.91591	-89.81849				Too Deep																																												
296	45.91548	-89.81849				Too Deep																																												
297	45.91506	-89.81849	23			Too Deep																																												
298	45.91464	-89.81849				Too Deep																																												
299	45.91422	-89.81849				Too Deep																																												
300	45.91379	-89.81850				Too Deep																																												
301	45.91337	-89.81850				Too Deep																																												
302	45.91295	-89.81850				Too Deep																																												
303	45.91252	-89.81850	17		R	No Vegetation																																												
304	45.91210	-89.81850				Too Deep																																												
305	45.91168	-89.81850	17		R	No Vegetation																																												
306	45.91125	-89.81850	15		R	No Vegetation																																												
307	45.91083	-89.81851	7	M	P																	1														1													
308	45.91041	-89.81851	3	M	P																	1							1						1					1									
309	45.90998	-89.81851	6	M	P			1																1	1											3		1											
310	45.90956	-89.81851	6	M	P								1											1	1											3		1											
311	45.90914	-89.81851	4	M	P		2	1																1	1													1								1			
312	45.90872	-89.81851	4	M	P		1	1					1											1	1	V	1								1			1								1			
313	45.90491	-89.81853	4	M				1														1																											
314	45.90449	-89.81853			P																																													
315	45.92141	-89.81787	5	M	P																										1				1			1									1			
316	45.92098	-89.81787	10	M	P			1																														1											
317	45.92056	-89.81787	11	M	P																																	1											
318	45.92014	-89.81787	12		R																																	1											
319	45.91971	-89.81787	14		R																																												

Point Number	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Depth (ft)	Sediment type (M=muck, S=Sand, R=Rock)	Rope (R); Pole (P); Visual (V)	Notes	Brasenia schreberi	Ceratophyllum demersum	Chara sp.	Dulichium arundinaceum	Elatine minima	Eleocharis acicularis	Elodea canadensis	Heteranthera dubia	Isoetes lacustris	Juncus pelocarpus	Lemna minor	Lemna trisulca	Megalodonta beckii	Myriophyllum sibiricum	Myriophyllum tenellum	Najas flexilis	Nitella sp.	Nuphar variegata	Nymphaea odorata	Pontederia cordata	Potamogeton amplifolius	Potamogeton foliosus	Potamogeton friesii	Potamogeton gramineus	Potamogeton illinoensis	Potamogeton natans	Potamogeton praelongus	Potamogeton pusillus	Potamogeton richardsonii	Potamogeton robbinsii	Potamogeton vaseyi	Potamogeton zosteriformis	Ranunculus aquatilis	Ranunculus flammula	Schoenoplectus acutus	Sparganium angustifolium	Sparganium fluctuans	Spirodela polyrhiza	Typha angustifolia	Utricularia intermedia	Utricularia vulgaris	Vallisneria americana	Potamogeton hybrid sp	Potamogeton alpinus	Carex vesicaria	Sagittaria cristata
320	45.91929	-89.81787	15		R	No Vegetation																																													
321	45.91887	-89.81787	18		R	No Vegetation																																													
322	45.91844	-89.81787				Too Deep																																												
323	45.91802	-89.81788			R	No Vegetation																																												
324	45.91760	-89.81788				Too Deep																																												
325	45.91718	-89.81788				Too Deep																																												
326	45.91675	-89.81788				Too Deep																																												
327	45.91633	-89.81788				Too Deep																																												
328	45.91591	-89.81788				Too Deep																																												
329	45.91548	-89.81788				Too Deep																																												
330	45.91506	-89.81789	23			Too Deep																																												
331	45.91464	-89.81789				Too Deep																																												
332	45.91421	-89.81789				Too Deep																																												
333	45.91379	-89.81789				Too Deep																																												
334	45.91337	-89.81789				Too Deep																																												
335	45.91295	-89.81789				Too Deep																																												
336	45.91252	-89.81789				Too Deep																																												
337	45.91210	-89.81790				Too Deep																																												
338	45.91168	-89.81790	6	M	P																			1																										
339	45.91083	-89.81790	11	M	P			1																																										
340	45.91041	-89.81790	6	M	P			2																																1										
341	45.90998	-89.81790	7	M	P			3																												1		1											
342	45.90956	-89.81790	6	M	P			1					1														1								3														
343	45.90914	-89.81791	4	M	P			1												1				1	1										1														
344	45.90871	-89.81791	4	M	P		1	1					1							1				1	1									1				1								1			
345	45.90491	-89.81792	6	M				1														1							1																			
346	45.90448	-89.81792			P																																												
347	45.92140	-89.81726	8	M	P			1																										1					1										
348	45.92098	-89.81726	11	M	P			1																																										

Point Number	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Depth (ft)	Sediment type (M=muck, S=Sand, R=Rock)	Rope (R); Pole (P); Visual (V)	Notes	Brasenia schreberi	Ceratophyllum demersum	Chara sp.	Dulichium arundinaceum	Elatine minima	Eleocharis acicularis	Elodea canadensis	Heteranthera dubia	Isoetes lacustris	Juncus pelocarpus	Lemna minor	Lemna trisulca	Megalodonta beckii	Myriophyllum sibiricum	Myriophyllum tenellum	Najas flexilis	Nitella sp.	Nuphar variegata	Nymphaea odorata	Pontederia cordata	Potamogeton amplifolius	Potamogeton foliosus	Potamogeton friesii	Potamogeton gramineus	Potamogeton illinoensis	Potamogeton natans	Potamogeton praelongus	Potamogeton pusillus	Potamogeton richardsonii	Potamogeton robbinsii	Potamogeton vaseyi	Potamogeton zosteriformis	Ranunculus aquatilis	Ranunculus flammula	Schoenoplectus acutus	Sparganium angustifolium	Sparganium fluctuans	Spirodela polyrhiza	Typha angustifolia	Utricularia intermedia	Utricularia vulgaris	Vallisneria americana	Potamogeton hybrid sp	Potamogeton alpinus	Carex vesicaria	Sagittaria cristata
349	45.92056	-89.81726	11		R			1																													1														
350	45.92014	-89.81726	14		R	No Vegetation																																														
351	45.91971	-89.81726	15		R			1																																											
352	45.91929	-89.81727	17		R	No Vegetation																																													
353	45.91887	-89.81727	18		R	No Vegetation																																													
354	45.91844	-89.81727				Too Deep																																													
355	45.91802	-89.81727			R	No Vegetation																																													
356	45.91760	-89.81727				Too Deep																																													
357	45.91717	-89.81727				Too Deep																																													
358	45.91675	-89.81727				Too Deep																																													
359	45.91633	-89.81728				Too Deep																																													
360	45.91591	-89.81728				Too Deep																																													
361	45.91548	-89.81728				Too Deep																																													
362	45.91506	-89.81728	23			Too Deep																																													
363	45.91464	-89.81728				Too Deep																																													
364	45.91421	-89.81728				Too Deep																																													
365	45.91379	-89.81728				Too Deep																																													
366	45.91337	-89.81729				Too Deep																																													
367	45.91294	-89.81729				Too Deep																																													
368	45.91252	-89.81729				Too Deep																																													
369	45.91210	-89.81729	7	S	P																															1	1														
370	45.91041	-89.81730	5	M	P								1																								2		2														
371	45.90998	-89.81730	7	M	P			1																													3		1														
372	45.90956	-89.81730	6	M	P																						1								1	3		1														
373	45.90914	-89.81730	4	M	P		1	2												1		1		1	1		1									2															
374	45.90871	-89.81730	4	M	P		1	1					1							1				1	1																									1			1
376	45.90533	-89.81731	6	M	P		1															1					1					1					1														
376	45.90491	-89.81731				Not navigable																																													
377	45.92140	-89.81665	7	M	P			1																									1					1														

Point Number	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Depth (ft)	Sediment type (M=muck, S=Sand, R=Rock)	Rope (R); Pole (P); Visual (V)	Notes	Brasenia schreberi	Ceratophyllum demersum	Chara sp.	Dulichium arundinaceum	Eleatine minima	Eleocharis acicularis	Elodea canadensis	Heteranthera dubia	Isoetes lacustris	Juncus pelocarpus	Lemna minor	Lemna trisulca	Megalodonta beckii	Myriophyllum sibiricum	Myriophyllum tenellum	Najas flexilis	Nitella sp.	Nuphar variegata	Nymphaea odorata	Pontederia cordata	Potamogeton amplifolius	Potamogeton foliosus	Potamogeton friesii	Potamogeton gramineus	Potamogeton illinoensis	Potamogeton natans	Potamogeton praelongus	Potamogeton pusillus	Potamogeton richardsonii	Potamogeton robbinsii	Potamogeton vaseyi	Potamogeton zosteriformis	Ranunculus aquatilis	Ranunculus flammula	Schoenoplectus acutus	Sparganium angustifolium	Sparganium fluctuans	Spirodela polyrhiza	Typha angustifolia	Utricularia intermedia	Utricularia vulgaris	Vallisneria americana	Potamogeton hybrid sp	Potamogeton alpinus	Carex vesicaria	Sagittaria cristata
378	45.92098	-89.81665	10	M	P			1																														1													
379	45.92056	-89.81666	12		R			1																																											
380	45.92013	-89.81666	14		R																																	1													
381	45.91971	-89.81666	14		R			1																																											
382	45.91929	-89.81666	15		R	No Vegetation																																													
383	45.91887	-89.81666	9		R			2															3																												
384	45.91844	-89.81666				Too Deep																																													
385	45.91802	-89.81666				Too Deep																																													
386	45.91760	-89.81667				Too Deep																																													
387	45.91717	-89.81667				Too Deep																																													
388	45.91675	-89.81667				Too Deep																																													
389	45.91633	-89.81667				Too Deep																																													
390	45.91590	-89.81667				Too Deep																																													
391	45.91548	-89.81667				Too Deep																																													
392	45.91506	-89.81667	20			Too Deep																																													
393	45.91464	-89.81668				Too Deep																																													
394	45.91421	-89.81668				Too Deep																																													
395	45.91379	-89.81668				Too Deep																																													
396	45.91337	-89.81668				Too Deep																																													
397	45.91294	-89.81668				Too Deep																																													
398	45.91252	-89.81668	14		R																															1															
399	45.91210	-89.81668	3	S	P									1	1							1																													1
400	45.91041	-89.81669	4	M	P		1	1					2						1					1	1												1		1									1			
401	45.90998	-89.81669	3	M	P		1	1					3						1					1	1												2		1												
402	45.90956	-89.81669	3	M	P		1	1					2							1					1		1										1													
403	45.90914	-89.81669	3	M	P		1	1	1															1	1					1						1		1			1					1				1
404	45.90533	-89.81671				Not navigable																																													
405	45.90491	-89.81671	6	M	P																	1	1									1																	
406	45.92140	-89.81605	7	M	P			2																											1			1											

Point Number	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Depth (ft)	Sediment type (M=muck, S=Sand, R=Rock)	Rope (R); Pole (P); Visual (V)	Notes	Brasenia schreberi	Ceratophyllum demersum	Chara sp.	Dulichium arundinaceum	Elatine minima	Eleocharis acicularis	Elodea canadensis	Heteranthera dubia	Isoetes lacustris	Juncus pelocarpus	Lemna minor	Lemna trisulca	Megalodonta beckii	Myriophyllum sibiricum	Myriophyllum tenellum	Najas flexilis	Nitella sp.	Nuphar variegata	Nymphaea odorata	Pontederia cordata	Potamogeton amplifolius	Potamogeton foliosus	Potamogeton friesii	Potamogeton gramineus	Potamogeton illinoensis	Potamogeton natans	Potamogeton praelongus	Potamogeton pusillus	Potamogeton richardsonii	Potamogeton robbinsii	Potamogeton vaseyi	Potamogeton zosteriformis	Ranunculus aquatilis	Ranunculus flammula	Schoenoplectus acutus	Sparganium angustifolium	Sparganium fluctuans	Spirodela polyrhiza	Typha angustifolia	Utricularia intermedia	Utricularia vulgaris	Vallisneria americana	Potamogeton hybrid sp	Potamogeton alpinus	Carex vesicaria	Sagittaria cristata
407	45.92098	-89.81605	10	M	P			1												1							1						1													1				
408	45.92056	-89.81605	12		R			1																																											
409	45.92013	-89.81605	15		R	No Vegetation																																													
410	45.91971	-89.81605	14		R																		1																												
411	45.91929	-89.81605	14		R	No Vegetation																																													
412	45.91886	-89.81606	4	S	P																						1						1															1				
413	45.91844	-89.81606	4	M	P																						1																								
414	45.91802	-89.81606	15		R																		3																												
415	45.91760	-89.81606				Too Deep																																													
416	45.91717	-89.81606				Too Deep																																													
417	45.91675	-89.81606				Too Deep																																													
418	45.91633	-89.81606				Too Deep																																													
419	45.91590	-89.81606				Too Deep																																													
420	45.91548	-89.81607				Too Deep																																													
421	45.91506	-89.81607	17			Too Deep																																													
422	45.91463	-89.81607	13		R															1			1											1																
423	45.91421	-89.81607	15		R			1															2																												
424	45.91379	-89.81607	8	M	P			1								1				1														1	1			1												
425	45.91337	-89.81607	8	M	P			1												1																	1		1												
426	45.91294	-89.81607	7	M	P			1																													1		1												
427	45.91252	-89.81608	2	S	P					1					1	1										1				1													1								
428	45.90998	-89.81608				On Shore																																													
429	45.90956	-89.81609				On Shore																																													
430	45.90490	-89.81610	6	M	P			1										1																																	
431	45.92140	-89.81544	6	M	P																													1			1			1	1										
432	45.92098	-89.81544	9	M	P			1																										1					1											
433	45.92056	-89.81544	11		R																																														
434	45.92013	-89.81544	13		R	No Vegetation																																													
435	45.91971	-89.81545	13		R	No Vegetation																																													

Point Number	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Depth (ft)	Sediment type (M=muck, S=Sand, R=Rock)	Rope (R); Pole (P); Visual (V)	Notes	Brasenia schreberi	Ceratophyllum demersum	Chara sp.	Dulichium arundinaceum	Elatine minima	Eleocharis acicularis	Elodea canadensis	Heteranthera dubia	Isoetes lacustris	Juncus pelocarpus	Lemna minor	Lemna trisulca	Megalodonta beckii	Myriophyllum sibiricum	Myriophyllum tenellum	Najas flexilis	Nitella sp.	Nuphar variegata	Nymphaea odorata	Pontederia cordata	Potamogeton amplifolius	Potamogeton foliosus	Potamogeton friesii	Potamogeton gramineus	Potamogeton illinoensis	Potamogeton natans	Potamogeton praelongus	Potamogeton pusillus	Potamogeton richardsonii	Potamogeton robbinsii	Potamogeton vaseyi	Potamogeton zosteriformis	Ranunculus aquatilis	Ranunculus flammula	Schoenoplectus acutus	Sparganium angustifolium	Sparganium fluctuans	Spirodela polyrhiza	Typha angustifolia	Utricularia intermedia	Utricularia vulgaris	Vallisneria americana	Potamogeton hybrid sp	Potamogeton alpinus	Carex vesicaria	Sagittaria cristata
436	45.91929	-89.81545	13	S	P																		2																												
437	45.91886	-89.81545	13	S	P			1															1															1													
438	45.91844	-89.81545	6	M	P			1												1														1				1												
439	45.91802	-89.81545	8	M	P			3												1													1		1			1												
440	45.91759	-89.81545	7	M	P			3																									1					1												
441	45.91717	-89.81545				Too Deep																																													
442	45.91675	-89.81546	16		R	No Vegetation																																													
443	45.91633	-89.81546	15		R																		1																												
444	45.91590	-89.81546	7	M	P			1												2																1		1												
445	45.91548	-89.81546	5	S	P															1							1		1									1												
446	45.91506	-89.81546	5	M	P																																											1				
447	45.91463	-89.81546	5	M	P																						1									2		1												
448	45.91421	-89.81546	4	S	P				1			1		1	1							1								1																					1
449	45.91379	-89.81547	2	S	P				1						1						1																														1
450	45.92140	-89.81483				On Shore																																													
451	45.92098	-89.81484	7	M	P			1																																1												
452	45.92055	-89.81484	11		R			2																																1												
453	45.92013	-89.81484	11		R																																			1												
454	45.91971	-89.81484	12	M	P	No Vegetation																																													
455	45.91929	-89.81484	13	M	P			1															3																												
456	45.91886	-89.81484	7	M	P			2																												1	1		1												
457	45.91844	-89.81484	7	M	P			2												2																1															
458	45.91802	-89.81485	4	M	P			1																									1		1	1		1											1		
459	45.91759	-89.81485	2	S	P			1													1					V															1									1
460	45.91717	-89.81485	3	S	P							1											1							1										1										1
461	45.91675	-89.81485	11	S	P																																													
462	45.91632	-89.81485	11	S	P																																											1			
463	45.91590	-89.81485	2	S	P				1						1						1						1												1			1						1			
464	45.91548	-89.81485	2	S	P				1						1												1															1								1

Point Number	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Depth (ft)	Sediment type (M=muck, S=Sand, R=Rock)	Rope (R); Pole (P); Visual (V)	Notes	Brasenia schreberi	Ceratophyllum demersum	Chara sp.	Dulichium arundinaceum	Elatine minima	Eleocharis acicularis	Elodea canadensis	Heteranthera dubia	Isoetes lacustris	Juncus pelocarpus	Lemna minor	Lemna trisulca	Megalodonta beckii	Myriophyllum sibiricum	Myriophyllum tenellum	Najas flexilis	Nitella sp.	Nuphar variegata	Nymphaea odorata	Pontederia cordata	Potamogeton amplifolius	Potamogeton foliosus	Potamogeton friesii	Potamogeton gramineus	Potamogeton illinoensis	Potamogeton natans	Potamogeton praelongus	Potamogeton pusillus	Potamogeton richardsonii	Potamogeton robbinsii	Potamogeton vaseyi	Potamogeton zosteriformis	Ranunculus aquatilis	Ranunculus flammula	Schoenoplectus acutus	Sparganium angustifolium	Sparganium fluctuans	Spirodela polyrhiza	Typha angustifolia	Utricularia intermedia	Utricularia vulgaris	Vallisneria americana	Potamogeton hybrid sp	Potamogeton alpinus	Carex vesicaria	Sagittaria cristata
465	45.91506	-89.81486	1	S	P					1																															1												
466	45.92098	-89.81423	4	S	P			1																																											
467	45.92055	-89.81423	8		P			1												1																		2													
468	45.92013	-89.81423	10	M	P			1																														1													
469	45.91971	-89.81423	10	M	P			3												1																															
470	45.91928	-89.81424	7	M	P														1																	1	1		1										1		
471	45.91886	-89.81424	6	M	P			1																		1										2													
472	45.91844	-89.81424				On Shore																																													
473	45.91759	-89.81424	2	S	P							1				1								1		1				1																					
474	45.91717	-89.81424	3	S	P											1					1																						1								
475	45.91675	-89.81424	3	S	P			1	1			1			1									1			1			1												1								1
476	45.91632	-89.81425	3	S	P							1												1		1																1								
477	45.92055	-89.81363				On Shore																																													
478	45.92013	-89.81363	4	S	P			1																													1													
479	45.91971	-89.81363	3	S	P			1							1						1			1															1		1								
480	45.91928	-89.81363	3	S	P						1				1	1					1	1		1		1				1									1									1		1
481	45.91886	-89.81363	2	S	P			1									1							1	1	1												1			1								