

Appendix A:
Smoky Lake Covenants

SMOKY LAKE ESTATES COVENANTS AND RESTRICTIONS

WHEREAS, the undersigned are present owners of certain lands having frontage on Smoky Lake, in Iron County, Michigan, the legal descriptions of such lands affected by these covenants and restrictions being attached hereto as exhibits, together with the owners' names as to each of the respective parcels, said exhibits being a part hereof as if fully set forth herein; and

WHEREAS, the undersigned owners have agreed that such lands described on Exhibit A attached hereto should be restricted in certain reasonable respects for the general mutual benefit of the owners and purchasers of parts and parcels thereof so that natural advantages may be preserved and protected;

NOW, THEREFORE, in consideration of the mutual promises and covenants of the undersigned owners, it is agreed that the following restrictions shall apply to the lands described on Exhibit A attached hereto, that such restrictions shall operate as covenants running with the land, and reference thereto shall be made of record and a part of all future deeds with respect to such lands while these restrictions are in effect:

(1) No present or future owner may convey or subdivide any lands subject hereto which will have the effect of reducing any lot or parcel to a size smaller than 70,000 square feet with less than 200 feet of lake frontage, except as to lands described on Exhibit B (Lots 26 - 31), which may have no less than 166 feet of frontage.

(2) Except for tree farming, no business, trade manufacturing, or commercial enterprise of any kind shall be maintained or conducted on any lands subject hereto, or any part thereof, and such lands shall be used for private residential purposes only.

(3) No boathouse or other roofed structure shall be built out over the water of Smoky Lake after this date, and all structures or enclosures shall be set back at least five feet from the mean high water mark of said lake, said mean high water mark determined by reference to the records of the Michigan Conservation Commission through December 31, 1965,

Recorded June 20 1961 8V 210, 141
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Clinton D. Schubert Register of Deeds

provided, however, that a pier, whether or not covered (but without living quarters), may project not more than 50 feet over and into the lake from such mean high water mark.

(4) Smoky Lake Corporation, one of the undersigned owners being a party hereto, covenants and agrees that it will construct and complete a suitable gravel road or roads providing reasonable access to all lands on the shore of Smoky Lake which are sold by it subject hereto, such road or roads to be in accordance with the present Iron County, Michigan minimum road specifications, and such road or roads to be initially completed at the expense of Smoky Lake Corporation. The expense of subsequent maintenance and improvements to such road or roads shall be borne by the property owners provided access thereby on a fair and equitable basis. Prior to initial completion of said access road or roads, each owner of property subject hereto is guaranteed the right of access to his property by any reasonable route across any other property subject hereto owned by Smoky Lake Corporation or its assignee.

(5) No building may be constructed upon or moved to any lot or parcel subject hereto after this date, unless it is a building, used for private residence purposes, or a building incidental thereto, and unless such building is part of a residential unit or complex of buildings involving a minimum fair market value of \$15,000. Such value of buildings shall be established by appraisal to the satisfaction of the persons named in paragraph (7) hereof or their agent. Any dispute among such persons shall be settled by majority vote determined and measured according to ownership of lineal feet of lake frontage.

(6) Electric heating shall be installed in every residence building constructed or moved onto land covered by these covenants after this date, and each such installation shall be of permanent equipment serviced by the Wisconsin - Michigan Power Co. for a minimum period of five years.

(7) Each owner of property subject hereto, both present and future, including the undersigned and all of their heirs, devisees, grantees, personal representatives, successors and assigns, shall, in the event of any breach or threatened breach of the above conditions and restrictions, have the full right and authority, collectively and individually, to enjoin and abate any such actual or threatened violation of said covenants, conditions and agreements herein contained.

(8) The covenants and restrictions herein contained shall not be amended, modified or removed within certain

periods following the date hereof except by written consent of owners of at least a certain percentage of lake frontage lands (measured by lineal frontage foot) subject hereto at the time of such amendment, modification or removal, as follows:

<u>Years Following Date Hereof</u>	<u>Percentage Required to Amend, Modify or Remove</u>
Date hereof through 10 years	75%
10 years through 20 years	65%
20 years and thereafter	55%

(9) That for the purpose of the preceding paragraph, the term "owner" means the holder of record of an estate in possession in fee simple, or for life, in land or real property, or a vendee of record under a land contract for the sale of an estate in possession in fee simple or for life, but does not include the vendor under a land contract. A tenant in common or joint tenant shall be considered such owner to the extent of his interest.

(10) This agreement, and the covenants and restrictions herein contained shall bind the undersigned owners, and their heirs, devisees, grantees, personal representatives, successors and assigns.

IN WITNESS WHEREOF, the undersigned owners have executed these covenants and restrictions in counterparts, each of which shall be deemed to be an original, and all of which shall become effective when recorded in the office of the Register of Deeds of Iron County, Michigan, as of the date of recording of the last of such counterparts, which date shall be the date of this agreement even though certain of the undersigned have joined herein as of a different date as shown opposite their respective signatures.

SMOKY LAKE CORPORATION

By D. A. DeYoung
D. A. DeYoung, President

Attest:

Donald H. Kelsey
Donald H. Kelsey, Secretary

CORPORATE SEAL

SEAL

STATE OF WISCONSIN)
 : SS
VILAS COUNTY)

Personally came before me this 6th day of June, 1967, the above named D. A. DeYoung, President and Donald H. Kelsey, Secretary of the above named corporation, to me known to be such President and Secretary of said corporation, and acknowledged that they executed the foregoing instrument as such officers as the deed of said corporation by its authority.

Geo B. Wintona
Notary Public, Vilas County, Wis.
My Commission Expires: 3/28/71

Clarence W. Sorensen (SEAL)
Clarence W. Sorensen
Edna S. Sorensen (SEAL)
Edna S. Sorensen

Witnesses:

Howard L. Peterson
Howard L. Peterson
K. L. Vernon
K. L. Vernon

Date of Execution: 6/6/67

STATE OF Illinois)
 : SS
COUNTY OF Rock Island)

Personally came before me this 24th day of June, 1967, the above named Clarence W. Sorensen, Edna S. Sorensen, to me known to be the person(s) who executed the foregoing instrument and acknowledged the same.

Barbara J. DeVoss
Notary Public, Rock Island County,
October 18, 1967
My Commission Expires:

Drafted by:
John S. Sammond, Attorney
735 N. Water Street
Milwaukee, Wis. 53202



Owner

Smoky Lake Corporation,
Phelps, Wisconsin 54554

Description

"IN SECTION 21, T43N, R37W, IRON COUNTY, MICHIGAN:

All of Government Lot 1, and the North Half of Government Lot 3. Part of Government Lots 5, 6, 7 and 8 and the SW $\frac{1}{4}$ -SW $\frac{1}{4}$ described as follows: Beginning at the Northeast corner of Government Lot 5;

Thence S89°-57'W true bearing along the section line 568.3 feet;
Thence S23°-09'W approximately 5758 feet to the South line of Section 21;
Thence east along the south line of Section 21 approximately 560 feet to Smoky Lake;
Thence Northeasterly along the shoreline of Smoky Lake approximately 5240 feet to the meander corner at the southeast corner of Government Lot 5;
Thence N 0°-01 $\frac{1}{2}$ 'W along the East line of Government Lot 5, 743.5 feet to the point of beginning, including riparian rights."

Excepting from the foregoing, a portion of Government Lot 8 and the SW $\frac{1}{4}$ -SW $\frac{1}{4}$ described as follows: From the West quarter corner of Section 28, T43N, R37W, Iron County, Michigan, proceed N23°-09'E true bearing 3200.0 feet, thence S66°-51'E 515.4 feet to a point on the shore of Smoky Lake which is the point of beginning;
Thence N66°-51'W 515.4 feet;
Thence N23°-09'E 400.0 feet;
Thence S66°-51'E 478.7 feet to a point on the shore of Smoky Lake;
Thence Southwesterly along the shoreline approximately 405 feet to the point of beginning, including the land between the above described traverse and high water mark of Smoky Lake, and riparian rights.

"IN SECTION 28, T43N, R37W, IRON COUNTY, MICHIGAN:

All that part of Government Lot 2 lying West of a line running due North from the 1/16 corner at the Northwest corner of the NE $\frac{1}{4}$ -SW $\frac{1}{4}$, except the North 270.2 feet thereof.

All that part of Government Lots 3 and 4 lying West of the following described line: Beginning at the Quarter corner on the South line of Section 28, thence N26°-50'E 2951.1 feet to the Northeast corner of Government Lot 3.

All that part of Government Lot 5 described as follows: From the Quarter corner on the West line of Section 28 proceed S 0°-03'W true bearing along the Section line 434.8 feet, thence S66°-51'E 379.1 feet to a point on the shore of Smoky Lake which is the point of beginning;
Thence N66°-51'W 379.1 feet.

**Appendix B:
Historical Water Quality
and
Lake Habitat Data**

Smoky Lake Historic Water Quality and Lake Habitat Data from MDNR Records

Date	Survey Purpose	Survey Station(s)	Data	Notes
Aug (mid), 1938	Fish & water survey		Surface temp-70-72F, Temp at 66 ft- 48.6 F; Thermocline at 30-39 ft; DO above thermocline- 8-8.5 ppm. DO below thermocline 22 (?)ppm at 42 ft, trace DO at 66 ft; Secchi disk 15'; pH 5.8-7.2; CO2 1.0-4.0; <i>Bottom shoal sand & gravel, deep water-muck; Color-colorless.</i>	<i>Noted 13 private cottages, 1 resort, 1 boat livery; 1.2 ac shore dev; Light fishing in summer, none in winter; bathing; wooded shoreline; two small inlets; 68' max depth</i>
4/2/1941	Fisheries research-water quality	One station, map not obtained	Ice cover, air temp 43 F; 5 ft depth: 9.2 ppm O ₂ , .5 ppm CO ₂ , pH 6.8; 15 ft depth- 9.8 ppm O ₂ ; 25 ft depth- 9.0 ppm O ₂	
10/21/1953	During Cisco netting survey	South end, off 2 prominent points on west side of lake	Air 65 F, water surface 53 F, <i>bottom sand, gravel, pulpy peat, sparse cover and vegetation. No natural food observed. Clear water. High shoreline-sand & gravel.</i>	
7/1/1968	Fyke & gill net survey		Air temp 70 F, water temp 68 F, comments: <i>adequate oxygen to support fish life at all depths (no data displayed.)</i>	
7/19/1976	Fyke, trap, gill net survey	Approx 10 locations around lake	Shoreline wooded, Air 75-85F, water surface 70F, <i>clear water, bottom sand and silt near shore with some gravel & rock, submerged rock cover and sparse vegetation, natural food-abundant midges, minnows evident in shallows.</i> Boom shocking failed due to very low conductivity.	

8/12/1986	DO/Temp Profile	Deep spot	58' max depth at location; secchi reading 18'; conductivity= .03 milli-mhos/cm; Alkalinity 16 MO at surface; Depth 0ft= 71 F, 8.5 ppm DO Depth 5 ft= 70 F, 8.8 ppm DO Depth 10 ft = 70F, 8.5 ppm DO Depth 15 ft= 70 F, 8.4 ppm DO Depth 20 ft = 70 F, 8.4 ppm DO Depth 25 ft = 70 F, 8.4 ppm DO Depth 30 ft = 69F, 8.1ppm DO Depth 35ft= 60F, 9.2 ppm DO Depth 40ft= 54F, 6.8 ppm DO Depth 45ft= 51F, 1.0 ppm DO Depth 50ft= 50F, 0.7ppm DO Depth 55 ft = 50F, 0 ppm DO Depth 57 ft= 49 F, 0ppm DO, 24 MO alkilinity	
10/7/1986	Fyke 7 gill net survey	8 locations surveyed around lake	Air 56F, water surface 55F; clear water; Cover: <i>submerged logs common</i>	
9/10/1990	Fish kill investigation of prev 2-3 wks, temp & DO profile.	Unspecified	Air temp 68 F, surface- 18': 67F, Depth 22 ft: 60 F & 12.6 ppm O ₂ ; Depth 40 ft: 52 F & 2.6 ppm O ₂ ; Depth 48 ft: 50.5F & 1.0 ppm O ₂ ; Depth 50 ft: 49 F & 0 ppm O ₂ ; Depth 60 ft: 48 F & 2 ppm O ₂ ; Depth 65 ft: 47 F, no O ₂ recorded.	Ice shanty count: 1988-1994, either zero or 1 in Jan or early Feb
5/16/1989	Electrofishing survey for SMB pop structure	Circumvent southern 2/3 of lake	Night survey- water surface 55F; clear water; <i>downed trees extensive</i> ; fair conductivity	RUSTY Crayfish
4/30-5/16/1991	Fyke net Musky survey and Yellow Perch removal to Sunset Lake	18 sites, 1-8 ft depth	Air temp 50F, water surface 42-52F; Clear water; Moderate cover- deadfalls, rock, vegetation; Food: minnows, insects, forage species	
8/3/1994	MDNR Chemical Analysis Various Dickinson/Iron Lakes		Alkalinity: 19 ppm; pH:6.85	
6/13/1995	Elctrofishing survey- Species evaluation & evalulation for Smallmouth Bass size limit increase	Map not obtained	Surface temp 61F; clear water; <i>Cover-moderate-deadfalls & rock rubble; Veg-sparse; Food-minnows, sculpins; Bottom- cobble, gravel, sand; Conductivity good.</i>	

6/12/1996	Electrofishing survey for Smallmouth Bass size limit evaluation & general survey	Map not obtained	Surface- 66F; Cover- <i>Logs common</i> ; Veg- <i>none observed</i> ; Food -same as 1995; Poor conductivity	
12/5/2001	Fyke net survey-Species evaluation & Cisco evaluation	1-4' depth	Surface-38F	
8/27/2003	Collection of limnology samples	Deep hole	Air temp 72F-- have complete temp/DO profile record. Examples: Surface 73.69F, 9.1 DO Depth 15'= 73.68 F, 9.09 DO Depth 30' = 67.63 F, 11.65 DO Depth 36' = 55.72F, 13.13 DO Depth 39'= 52.13 F, 9.5 DO Depth 42'= 50.55 F, 5.72 DO Depth 45'= 49.39F, 1.98 DO Depth 51'= 47.8 F, 0.34 DO Depth 58.8 ft= 46.5 F, 0.15 DO	
10/20/2008	Electrofishing survey-WDNR	Portion of shoreline-6.2 mi	Surface temp-52F; Clarity 8.0 ft	
5/23/2010	Lake Water Annual Report WDNR	Deep hole	Surface temp = 60F; Secchi: 18', 5.5m; <i>Lake level low; Clear water; Green color</i> ; TP 9; TSI (SD) 35/ TSI (TP) 45	
7/20/2010	Lake Water Annual Report WDNR	Deep hole	Temps: 0 ft= 73.2 F, 10' = 73.2 F, 20 ft= 72.8 F, 25 ft= 72.6 F, 30 ft= 64.2 F, 40 ft 53.4 F, 50 ft= 51.8F, 60 ft 49.8F; CHL 1.49; TSI (SD) 35/ TSI (CHL) 38/ TSI (TP) 44; Secchi 18', 5.5m; <i>Clear water; Blue color</i>	
5/15/2017	Fyke Survey- Musky evaluation, management evaluation	53 lifts all around lake, creek mouth	Surface temps-49-56 F	

Appendix C:
WSLH Laboratory Reports



Wisconsin State Laboratory of Hygiene
 2601 Agriculture Drive, PO Box 7996
 Madison, WI 53707-7996
 (800)442-4618 - FAX (608)224-6213
<http://www.slh.wisc.edu>

Laboratory Report

D.F. Kurtycz, M.D., Medical Director - Prof. James J. Schauer, Ph.D., Director

Environmental Health Division

WDNR LAB ID: 113133790 NELAP LAB ID: E37658 EPA LAB ID: WI00007, WI00008 WI DATCP ID: 105-415

WSLH Sample: 335653001

Report To:
 BARB GAJEWSKI
 MANY WATERS LLC
 2527 LAKE OTTAWA RD
 IRON RIVER, MI 49935

Invoice To:
 MARJORIE HILLER
 4495 TOWN HALL RD
 PHELPS, WI 54554

Customer ID: 351334

Field #: SMOKY WQ
 Project No: LPL164517
 Collection End: 7/27/2017 3:40:00 PM
 Collection Start:
 Collected By: BARB GAJEWSKI
 Date Received: 8/15/2017
 Date Reported: 8/30/2017
 Sample Reason:

ID#: 643104
 Sample Location: SMOKY LAKE - DEEP HOLE
 Sample Description: HYPOLIMNION TP SAMPLE TAKEN WITH
 VAN DORN WATER SAMPLER
 Sample Type: SU-SURFACE WATER
 Waterbody: 1018300
 Point or Outfall:
 Sample Depth: 33F
 Program Code: FH
 Region Code: NOR
 County: 64

Inorganic Chemistry

Analyte	Analysis Method	Result	Units	LOD	LOQ
Prep Date 08/22/17 Analysis Date 08/24/17					
Phosphorus	EPA 365.1	0.0228	mg/L	0.00500	0.0160

List of Abbreviations:

LOD = Level of detection
 LOQ = Level of quantification
 ND = None detected. Results are less than the LOD
 F next to result = Result is between LOD and LOQ
 Z next to result = Result is between 0 (zero) and LOD
 if LOD=LOQ, Limits were not statistically derived

Test results for NELAP accredited tests are certified to meet the requirements of the NELAC standards. For a list of accredited analytes see <http://www.slh.wisc.edu/about/compliance/nelac-laboratory-accreditation>
 Results, LOD and LOQ values have been adjusted for analytical dilutions and percent moisture where applicable.
 Results relate only to the items tested.
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 The water microbiology unit analyzes samples as received and not all samples are tested for preservation before analysis is performed.



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Laboratory Report

D.F. Kurtycz, M.D., Medical Director - Prof. James J. Schauer, Ph.D., Director

Environmental Health Division

WDNR LAB ID: 113133790

NELAP LAB ID: E37658

EPA LAB ID: WI00007, WI00008 WI DATCP ID: 105-415

WSLH Sample: 335653001

Responsible Party

Microbiology: Sharon Kluender, Lab Manager, 608-224-6262

Inorganic Chemistry: DeWayne Kennedy-Parker, Lab Manager, 608-224-6282

Metals: DeWayne Kennedy-Parker, Lab Manager, 608-224-6282

Organic Chemistry: Al Spallato, Lab Manager, 608-224-6269

Emergency Chemical Response: Noel Stanton, Lab Manager, 608-224-6251

Environmental Toxicology: Tracy Hanke, Lab Manager, 608-224-6270



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Laboratory Report

D.F. Kurtycz, M.D., Medical Director - Prof. James J. Schauer, Ph.D., Director

Environmental Health Division

WDNR LAB ID: 113133790 NELAP LAB ID: E37658 EPA LAB ID: WI00007, WI00008 WI DATCP ID: 105-415

WSLH Sample: 338434001

Report To:
 BARB GAJEWSKI
 MANY WATERS LLC
 2527 LAKE OTTAWA RD
 IRON RIVER, MI 49935

Invoice To:
 MARJORIE HILLER
 4495 TOWN HALL RD
 PHELPS, WI 54554

Customer ID: 351334

Field #: SMOKY DEEP HOLE
 Project No: LPL164517
 Collection End: 8/28/2017 2:40:00 PM

ID#: 643104
 Sample Location: SMOKY LAKE - DEEP HOLE
 Sample Description: HYPOLIMNION TP SAMPLE TAKEN WITH
 VAN DORN WATER SAMPLER/ OTHER
 SAMPLES 2 METER INTEGRATED
 SAMPLER

Collection Start: 08/28/17 14:40
 Collected By: BARB GAJEWSKI
 Date Received: 8/29/2017
 Date Reported: 10/9/2017
 Sample Reason:

Sample Type: SU-SURFACE WATER
 Waterbody: 1018300
 Point or Outfall:
 Sample Depth: 45F
 Program Code: FH
 Region Code: NOR
 County: 64

Inorganic Chemistry

Analyte	Analysis Method	Result	Units	LOD	LOQ
Prep Date 09/06/17	Analysis Date 09/06/17				
Conductivity	SM2510B,EPA150.1, SM2320B	36.0	uS/cm	10.0	10.0
pH	SM2510B,EPA150.1, SM2320B	7.28	SU	1.00	1.00
Alkalinity	SM2510B,EPA150.1, SM2320B	14.5	mg/L	2.55	2.55
Prep Date 08/30/17	Analysis Date 08/30/17				
Color, True	SM2120B	10	SU	5.0	5.0

Metals, Total Recoverable

Analyte	Analysis Method	Result	Units	LOD	LOQ
Prep Date 09/11/17	Analysis Date 09/12/17				
Calcium	EPA 200.7	3.65	mg/L	0.100	0.300
Magnesium	EPA 200.7	1.53	mg/L	0.100	0.300



Laboratory Report

D.F. Kurtycz, M.D., Medical Director - Prof. James J. Schauer, Ph.D., Director

Environmental Health Division

WDNR LAB ID: 113133790 NELAP LAB ID: E37658 EPA LAB ID: WI00007, WI00008 WI DATCP ID: 105-415

WSLH Sample: 338434001

Inorganic Chemistry

Analyte	Analysis Method	Result	Units	LOD	LOQ
Prep Date 09/11/17 Analysis Date 09/12/17					
Phosphorus	EPA 365.1	0.0157F	mg/L	0.00500	0.0160

Inorganic Chemistry, Dissolved

Analyte	Analysis Method	Result	Units	LOD	LOQ
Prep Date 08/30/17 Analysis Date 09/13/17					
Nitrate + Nitrite (as N)	EPA 353.2	ND	mg/L	0.0190	0.0610

Inorganic Chemistry

Analyte	Analysis Method	Result	Units	LOD	LOQ
Prep Date 09/19/17 Analysis Date 09/29/17					
Total Kjeldahl Nitrogen	EPA 351.2	0.379	mg/L	0.110	0.360

List of Abbreviations:

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 if LOD=LOQ, Limits were not statistically derived

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 The water microbiology unit analyzes samples as received and not all samples are tested for preservation before analysis is performed.

Responsible Party

Microbiology: Sharon Kluender, Lab Manager, 608-224-6262
 Inorganic Chemistry: DeWayne Kennedy-Parker, Lab Manager, 608-224-6282
 Metals: DeWayne Kennedy-Parker, Lab Manager, 608-224-6282
 Organic Chemistry: Al Spallato, Lab Manager, 608-224-6269
 Emergency Chemical Response: Noel Stanton, Lab Manager, 608-224-6251
 Environmental Toxicology: Tracy Hanke, Lab Manager, 608-224-6270

Environmental Health Division

WDNR LAB ID: 113133790 NELAP LAB ID: E37658 EPA LAB ID: WI00007, WI00008 WI DATCP ID: 105-415

WSLH Sample: 346779001

Report To:
BARB GAJEWSKI
MANY WATERS LLC
2527 LAKE OTTAWA RD
IRON RIVER, MI 49935

Invoice To:
MARJORIE HILLER
4495 TOWN HALL RD
PHELPS, WI 54554

Customer ID: 351334

Field #: SMOKY DEEP HOLE
Project No: LPL164517
Collection End: 9/15/2017 3:40:00 PM
Collection Start: 09/15/17 15:30
Collected By: BARB GAJEWSKI
Date Received: 10/4/2017
Date Reported: 10/19/2017
Sample Reason:

ID#: 643104
Sample Location: SMOKY LAKE - DEEP HOLE
Sample Description: VAN DORN WATER SAMPLER
Sample Type: SU-SURFACE WATER
Waterbody: 1018300
Point or Outfall:
Sample Depth: 45F
Program Code: FH
Region Code: NOR
County: 64

Sample Comments

ACID TRACEABILITY INFORMATION NOT SUBMITTED WITH TEST REQUEST FORM

Inorganic Chemistry

Analyte	Analysis Method	Result	Units	LOD	LOQ
Prep Date 10/12/17 Analysis Date 10/16/17					
Phosphorus	EPA 365.1	0.0166	mg/L	0.00500	0.0160

List of Abbreviations:

LOD = Level of detection
LOQ = Level of quantification
ND = None detected. Results are less than the LOD
F next to result = Result is between LOD and LOQ
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Laboratory Report

D.F. Kurtycz, M.D., Medical Director - Prof. James J. Schauer, Ph.D., Director

Environmental Health Division

WDNR LAB ID: 113133790

NELAP LAB ID: E37658

EPA LAB ID: WI00007, WI00008 WI DATCP ID: 105-415

WSLH Sample: 346779001

Responsible Party

Microbiology: Sharon Kluender, Lab Manager, 608-224-6262

Inorganic Chemistry: DeWayne Kennedy-Parker, Lab Manager, 608-224-6282

Metals: DeWayne Kennedy-Parker, Lab Manager, 608-224-6282

Organic Chemistry: Al Spallato, Lab Manager, 608-224-6269

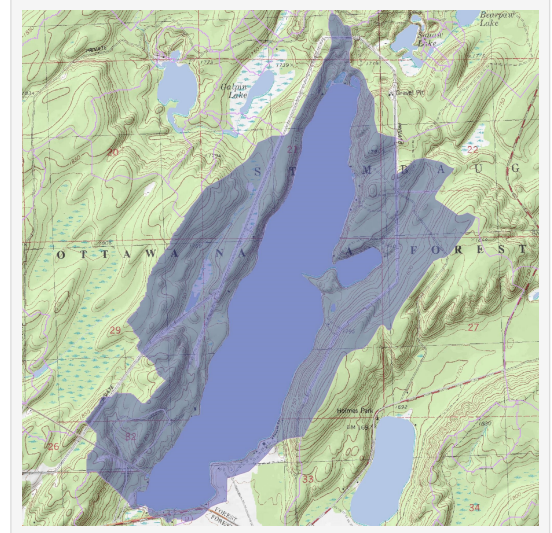
Emergency Chemical Response: Noel Stanton, Lab Manager, 608-224-6251

Environmental Toxicology: Tracy Hanke, Lab Manager, 608-224-6270

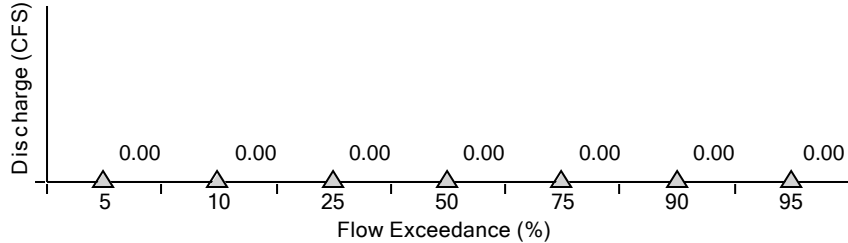
Appendix D:
WDNR Presto Report
Smoky Lake

PRESTO-Lite Watershed Delineation Report

Reach ID: 600091299
Watershed Name: Thoroughfare Creek-Deerskin River
Waterbody Name: Smoky Lake
HUC08: Upper Wisconsin
Watershed Area: 2.68 mi ²
Average Annual Precipitation: 32.83in



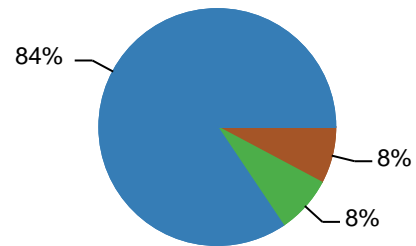
Stream Flow



Tributary Stream Type

Type	Length
Coldwater	0 ft
Cool-Cold Headwater	0 ft
Cool-Cold Mainstem	0 ft
Cold Headwater	0 ft
Cold Mainstem	0 ft
Large River	0 ft
Macroinvertebrates	0 ft
Warm Headwater	0 ft
Warm Mainstem	0 ft

Landcover



PRESTO Phosphorus Load Estimate

Avg. Annual Nonpoint Phosphorous Load (80% Confidence Interval)	20 (10 - 40) lbs
Number of Facilities (Individual Facility Information below)	0
Avg. Annual Point-source Phosphorous Load (2010 - 2012 total of all facilities)	0lbs
Most Likely Point : Nonpoint Phosphorous Ratio	0% : 100%
Low Estimate Point : Nonpoint Phosphorous Ratio (Adaptive Management)	0% : 100%

Adaptive Management Results

Facilities Discharging to the Thoroughfare Creek-Deerskin River Watershed:

Facility Name	Permit #	Outfall #	Waste Type	Receiving Water	Avg. Phosphorus Load (lbs.) (2010 - 2012)
No Facilities Found	-	-	-	-	-

Watershed Analysis Limitations

- This analysis relies on pre-defined catchments from the Wisconsin Hydrography Data-Plus and may not delineate from the exact location required. When assessing phosphorus loads for specific facility in support of efforts such as adaptive management, care should be taken to ensure that additional downstream point sources do not exist. For adaptive management information related to specific facilities please reference the PRESTO website <http://dnr.wi.gov/topic/surfacewater/presto.html>
- Delineation of watersheds is based on a topographic assessment and therefore do not account for modified drainage networks such as stormwater sewer systems and ditched agriculture.
- If a watershed requires delineation from an exact location the user may use the desktop version of PRESTO that requires ESRI ArcGIS. The PRESTO tool and default datasets can be downloaded at <http://dnr.wi.gov/topic/surfacewater/presto.html>
- Data sources for this report originate from the WDNR's Wisconsin Hydrography Data-Plus value-added dataset and the point and non-point source loading information including in the WDNR's PRESTO model.
- If you have questions about the report generated from the PRESTO-Lite application please contact: DNRWATERQUALITYMODELING@wisconsin.gov

Appendix E:
Aquatic Plant Survey Data

Entry		Depth (ft)	Dominant sediment type (M=muck, S=Sand, R=Rock)	Sampled holding rake pole (P) or rake rope (R)?	comments	Total Rake Fullness	Plant Species
	161	56					
	162	49					
	163	43					
	164	36					
	165	2.5	r	p			
	166	37					
	167	55					
	168	67					
	169	70					
	170	68					
	171	66					
	172	63					
	173	56					
	174	50					
	175	44					
	176	37					
	177	8	r	p			
	178	4	r	p			
	179	38					
	180	52					
	181	63					
	182	67					
	183	65					
	184	64					
	185	62					
	186	50					
	187	51					
	188	46					
	189	38					
	190	7.5	r	p			
	191	34					
	192	50					
	193	55					
	194	59					
	195	62					
	196	62					
	197	61					
	198	60					
	199	56					
	200	50					

	A	B	C
1	Boat Survey		
2	Lake	Smoky	
3	County	Vilas/Iron	
4	WBIC	1018300	
5	Date of Survey	8/23/2017	
6	Field Crew	B&B	
7			
8			
9			
10	Nearest Point	Species seen, habitat information	
11	5	SCCY, Carex sp., ALIN2, Sparganium sp., Typha sp.	
12	6	ALIN2, PHAR3	
13	7	SCCY, PHAR3, ALIN2	
14	8	PHAR3, ALIN2	
15	10	SPAN2, PHAR3, ELPA3	
16	22	PHAR3, ALIN2	
17	23	PHAR3, SCCY	
18	29	PHAR3, ALIN2	
19	30	PHAR3, ALIN2	
20	36	PHAR3	
21	37	PHAR3	
22	44	PHAR3, SCCY	
23	52	PHAR3, SCCY	
24	53	PHAR3	
25	60	PHAR3	
26	61	PHAR3	
27	68	PHAR3, ALIN2	
28	69	Iris sp., PHAR3, SCCY	
29	77	PHAR3	
30	78	PHAR3	
31	86	PHAR3	
32	87	PHAR3, SPAN2, Iris sp.	
33	95	PHAR3	
34	96	Iris sp., PHAR3	
35	105	PHAR3, Iris sp.	
36	124	PHAR3	
37	133	PHAR3	
38	134	SPAN2	
39	144	SPAN2	
40	154	PORI2, SPAN2, SCCY	
41	177	ALIN2	
42	178	PHAR3	
43	190	ALIN2	
44	191	Iris sp.	
45	203	PHAR3, ALIN2	
46	204	Iris sp.	
47	217	Iris sp., Sparganium sp.	
48	230	Iris sp.	
49	243	ALIN2	
50	257	ALIN2, Iris sp.	
51	271	PHAR3	

	A	B	C
52	272	PHAR3, Iris sp.	
53	286	PHAR3	
54	315	PHAR3	
55	316	SPAN2	
56	329	PHAR3, Iris sp.	
57	330	SPAN2, SCCY	
58	344	PHAR3	
59	345	Sparganium sp.	
60	358	PHAR3, ALIN2	
61	373	PHAR3, ALIN2, SCAT4	
62	387	ALIN2, PHAR3	
63	388	ALIN2, PHAR3	
64	396	ALIN2	
65	397	SCTA2, Sparganium sp.	
66	398	ALIN2, Sparganium sp.	
67	402	Iris sp., ALIN2	
68	412	ELPA3, ALIN2	
69	426	ALIN2	
70	427	ALIN2	
71	441	ALIN2, PIRE, PIST	
72	458	PHAR3	
73	459	SPAN2, PHAR3	
74	475	PHAR3, ALIN2	
75	476	PHAR3, SCCY	
76	493	ALIN2	
77	494	SCCY	
78	511	SCCY, SCAT4, ALIN2	
79	514	SCCY, ALIN2	
80	529	ALIN2	
81	530	SCTA2, SCCY	
82	547	ALIN2	
83	548	ALIN2	
84	565	SCTA2, SCCY	
85	566	ALIN2	
86	583	SPAN2, ALIN2	
87	599	ALIN2	
88	651	Sparganium sp., SCCY	
89	668	SCCY	
90	685	SCCY	
91	703	POPA2, SCTA2	
92	719	SCCY, SCAT4, ELPA3, SCTA2	
93	735	SCTA2, SCAT4	
94	752	Carex sp.	
95	751	SCAT4, PHAR3	
96	768	SCTA2, SCCY, SCAT4	
97	815	PHAR3, SCCY, SCTA2	
98	830	PHAR3, SCCY, SCTA2	
99	845	PHAR3, SCCY, SCTA2	
100	846	SPAN2	
101	862	ALIN2, SCCY, PHAR3	
102	863	SCCY, SCTA2, PHAR3	

	A	B	C
103	879	ALIN2	
104	880	SCTA2, SCCY, PHAR3	
105	897	PHAR3, ALIN2	
106	898	PHAR3, SCCY,	
107	915	PHAR3, ELPA3	
108	930	ALIN2	
109	931	PHAR3	
110	945	SPAN2, SCCY, PHAR3, ALIN2	
111	946	SCCY, Carex sp., PHAR3	
112	960	Iris sp.	
113	961	SPAN2, SCCY	
114	976	ELPA3, SCCY	
115	986	ALIN2	
116	987	ALIN22	
117	988	ALIN2	
118	989	SCCY, ALIN2	
119	990	ALIN2	
120	991	PHAR3, ELPA3	
121	1000	Carex sp., ELPA3, ALIN2	
122	1001	SCTA2	
123	1011	ALIN2	
124	1022	ALIN2, PIRE	
125	1033	ALIN2	
126	1045	ALINE2, Carex sp.	
127	1046	ELPA3	
128	1058	ALIN2, PIRE, POPA2	
129	1059	Typha sp., SPAN2, ELPA3	
130	1074	SCTA2, SPAN2	
131	1087	SPAN2, ALIN2	
132	1088	Typha sp., SCCY, GLBO	
133	1092	SCTA2?	Loons present, did not get close enough to ID
134	1093	SCTA2?	Loons present, did not get close enough to ID
135	1097	ALIN2	

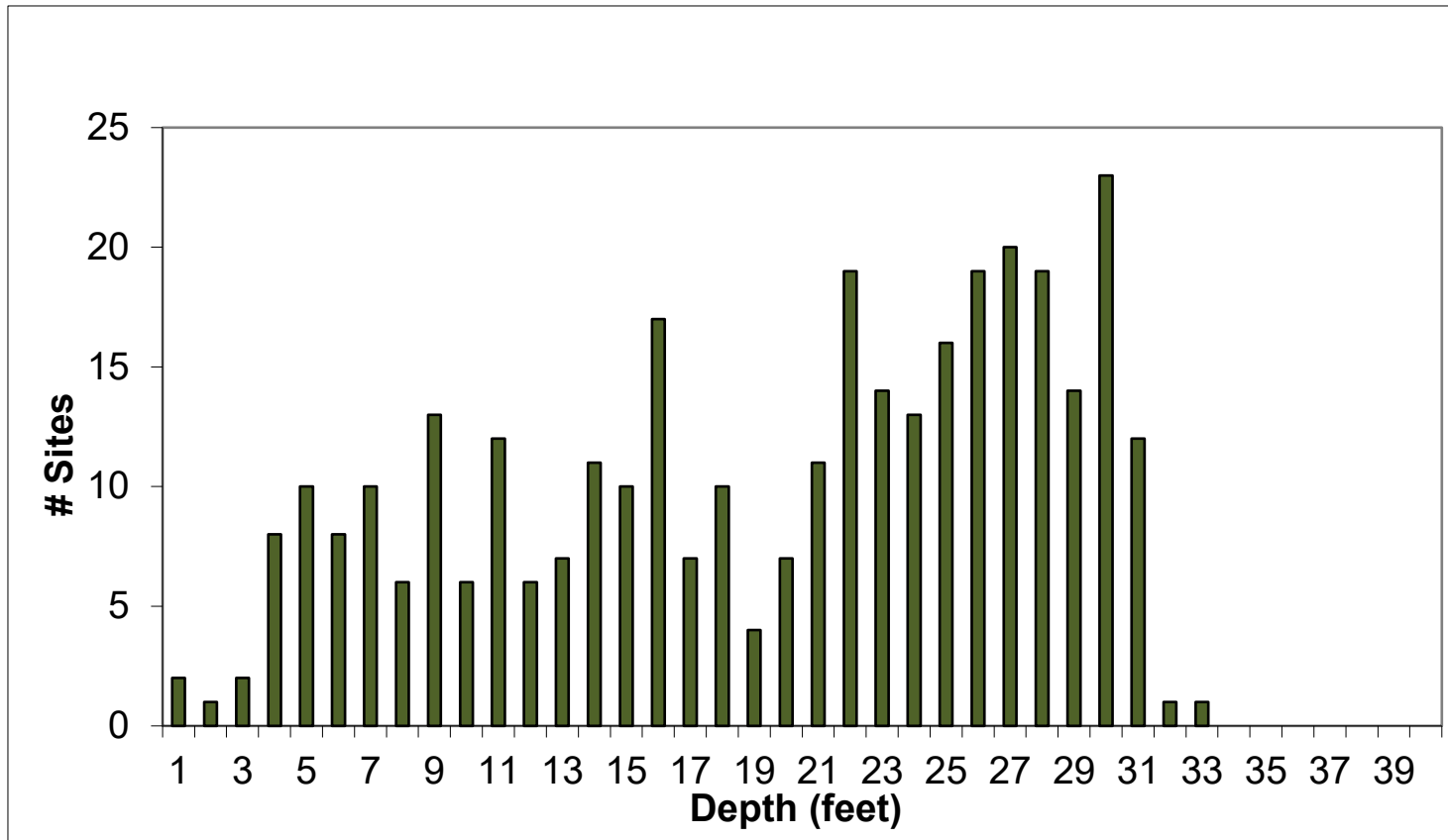
DEPTH BIN (FT)	# SITES (NO ENTRY)											5											10					
1	2	1	1																									
2	1	2																										
3	2	3	3																									
4	8	4	4	4	4	4	4	4	4	4	4																	
5	10	5	5	5	5	5	5	5	5	5	5	5																
6	8	6	6	6	6	6	6	6	6	6																		
7	10	7	7	7	7	7	7	7	7	7	7	7																
8	6	8	8	8	8	8	8																					
9	13	9	9	9	9	9	9	9	9	9	9	9	9	9														
10	6	10	10	10	10	10	10																					
11	12	11	11	11	11	11	11	11	11	11	11	11	11	11														
12	6	12	12	12	12	12	12																					
13	7	13	13	13	13	13	13	13																				
14	11	14	14	14	14	14	14	14	14	14	14	14																
15	10	15	15	15	15	15	15	15	15	15	15																	
16	17	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16									
17	7	17	17	17	17	17	17	17																				
18	10	18	18	18	18	18	18	18	18	18	18																	
19	4	19	19	19																								
20	7	20	20	20	20	20	20	20																				
21	11	21	21	21	21	21	21	21	21	21	21	21																
22	19	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22								
23	14	23	23	23	23	23	23	23	23	23	23	23	23	23	23													
24	13	24	24	24	24	24	24	24	24	24	24	24	24	24														
25	16	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25											
26	19	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26								
27	20	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27							
28	19	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28								
29	14	29	29	29	29	29	29	29	29	29	29	29	29	29	29													
30	23	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
31	12	31	31	31	31	31	31	31	31	31	31	31	31	31														
32	1	32																										
33	1	33																										
34	0																											

35	0
36	0
37	0
38	0
39	0
40	0

38

ave median
20 22

Note: The X-axis (Depth Bin) can be scaled to better fit the plant distribution data.
Click on the outermost portion of the graph, and adjust the selection box in Column A.



Lake	Smoky
County	Vilas/Iron
Date	08/23/17
Township	
Range	
Section	

Species	Common Name	C	species present=1	
<i>Acorus americanus</i>	Sweet-flag	7	0	0
<i>Alisma triviale</i>	Northern water-plantain	4	0	0
<i>Bidens beckii</i>	Water marigold	8	0	0
<i>Bolboschoenus fluviatilis</i>	River bulrush	6	0	0
<i>Brasenia schreberi</i>	Watershield	6	0	0
<i>Calla palustris</i>	Wild calla	9	0	0
<i>Callitriche hermaphroditica</i>	Autumnal water-starwort	9	0	0
<i>Callitriche heterophylla</i>	Large water-starwort	9	0	0
<i>Callitriche palustris</i>	Common water-starwort	8	0	0
<i>Carex comosa</i>	Bottle brush sedge	5	0	0
<i>Catabrosa aquatica</i>	Brook grass	10	0	0
<i>Ceratophyllum demersum</i>	Coontail	3	0	0
<i>Ceratophyllum echinatum</i>	Spiny hornwort	10	0	0
<i>Chara</i>	Muskgrasses	7	1	7
<i>Dulichium arundinaceum</i>	Three-way sedge	9	0	0
<i>Elatine minima</i>	Waterwort	9	1	9
<i>Elatine triandra</i>	Greater waterwort	9	0	0
<i>Eleocharis acicularis</i>	Needle spikerush	5	1	5
<i>Eleocharis erythropoda</i>	Bald spikerush	3	0	0
<i>Eleocharis palustris</i>	Creeping spikerush	6	0	0
<i>Elodea canadensis</i>	Common waterweed	3	1	3
<i>Elodea nuttallii</i>	Slender waterweed	7	1	7
<i>Equisetum fluviatile</i>	Water horsetail	7	0	0
<i>Eriocaulon aquaticum</i>	Pipewort	9	0	0
<i>Glyceria borealis</i>	Northern manna grass	8	1	8
<i>Gratiola aurea</i>	Golden hedge-hyssop	10	0	0
<i>Heteranthera dubia</i>	Water star-grass	6	0	0
<i>Isoetes echinospora</i>	Spiny-spored quillwort	8	0	0
<i>Isoetes lacustris</i>	Lake quillwort	8	1	8
<i>Isoetes sp.</i>	Quillwort	8	0	0
<i>Juncus pelocarpus f. submersus</i>	Brown-fruited rush	8	1	8
<i>Juncus torreyi</i>	Torrey's rush	4	0	0
<i>Lemna minor</i>	Small duckweed	4	0	0
<i>Lemna perpusilla</i>	Least duckweed	10	0	0
<i>Lemna trisulca</i>	Forked duckweed	6	0	0
<i>Littorella uniflora</i>	Littorella	10	0	0
<i>Lobelia dortmanna</i>	Water lobelia	10	1	10
<i>Ludwigia palustris</i>	Marsh purslane	4	0	0

<i>Myriophyllum alterniflorum</i>	Alternate-flowered water-	10	0	0
<i>Myriophyllum farwellii</i>	Farwell's water-milfoil	8	0	0
<i>Myriophyllum heterophyllum</i>	Various-leaved water-milf	7	0	0
<i>Myriophyllum sibiricum</i>	Northern water-milfoil	6	0	0
<i>Myriophyllum tenellum</i>	Dwarf water-milfoil	10	1	10
<i>Myriophyllum verticillatum</i>	Whorled water-milfoil	8	0	0
<i>Najas flexilis</i>	Slender naiad	6	1	6
<i>Najas gracillima</i>	Northern naiad	7	0	0
<i>Najas guadalupensis</i>	Southern naiad	8	0	0
<i>Nelumbo lutea</i>	American lotus	7	0	0
<i>Nitella</i>	Nitella	7	1	7
<i>Nuphar advena</i>	Yellow pond lily	8	0	0
<i>Nuphar microphylla</i>	Small pond lily	9	0	0
<i>Nuphar X rubrodisca</i>	Intermediate pond lily	9	0	0
<i>Nuphar variegata</i>	Spatterdock	6	0	0
<i>Nymphaea odorata</i>	White water lily	6	0	0
<i>Phragmites australis</i>	Common reed	1	0	0
<i>Polygonum amphibium</i>	Water smartweed	5	0	0
<i>Polygonum punctatum</i>	Dotted smartweed	5	0	0
<i>Pontederia cordata</i>	Pickerelweed	8	0	0
<i>Potamogeton alpinus</i>	Alpine pondweed	9	0	0
<i>Potamogeton amplifolius</i>	Large-leaf pondweed	7	0	0
<i>Potamogeton bicupulatus</i>	Snail-seed pondweed	9	0	0
<i>Potamogeton confervoides</i>	Algal-leaved pondweed	10	0	0
<i>Potamogeton diversifolius</i>	Water-thread pondweed	8	0	0
<i>Potamogeton epihydrus</i>	Ribbon-leaf pondweed	8	0	0
<i>Potamogeton foliosus</i>	Leafy pondweed	6	0	0
<i>Potamogeton friesii</i>	Fries' pondweed	8	0	0
<i>Potamogeton gramineus</i>	Variable pondweed	7	0	0
<i>Potamogeton hillii</i>	Hill's pondweed	9	0	0
<i>Potamogeton illinoensis</i>	Illinois pondweed	6	0	0
<i>Potamogeton natans</i>	Floating-leaf pondweed	5	0	0
<i>Potamogeton nodosus</i>	Long-leaf pondweed	7	0	0
<i>Potamogeton oakesianus</i>	Oakes' pondweed	10	0	0
<i>Potamogeton obtusifolius</i>	Blunt-leaf pondweed	9	0	0
<i>Potamogeton praelongus</i>	White-stem pondweed	8	0	0
<i>Potamogeton pulcher</i>	Spotted pondweed	10	0	0
<i>Potamogeton pusillus*</i>	Small pondweed	7	1	7
<i>Potamogeton richardsonii</i>	Clasping-leaf pondweed	5	1	5
<i>Potamogeton robbinsii</i>	Fern pondweed	8	1	8
<i>Potamogeton spirillus</i>	Spiral-fruited pondweed	8	1	8
<i>Potamogeton strictifolius</i>	Stiff pondweed	8	0	0
<i>Potamogeton vaseyi</i>	Vasey's pondweed	10	0	0
<i>Potamogeton zosteriformis</i>	Flat-stem pondweed	6	0	0
<i>Ranunculus aquatilis</i>	White water crowfoot	8	0	0
<i>Ranunculus flabellaris</i>	Yellow water crowfoot	8	0	0
<i>Ranunculus flammula</i>	Creeping spearwort	9	1	9

<i>Riccia fluitans</i>	Slender riccia	7	0	0
<i>Ruppia cirrhosa</i>	Ditch grass	8	0	0
<i>Sagittaria brevirostra</i>	Midwestern arrowhead	9	0	0
<i>Sagittaria cuneata</i>	Arum-leaved arrowhead	7	0	0
<i>Sagittaria graminea</i>	Grass-leaved arrowhead	9	0	0
<i>Sagittaria latifolia</i>	Common arrowhead	3	0	0
<i>Sagittaria rigida</i>	Sessile-fruited arrowhead	8	0	0
<i>Schoenoplectus acutus</i>	Hardstem bulrush	6	0	0
<i>Schoenoplectus heterochaetus</i>	Slender bulrush	10	0	0
<i>Schoenoplectus pungens</i>	Three-square bulrush	5	0	0
<i>Schoenoplectus subterminalis</i>	Water bulrush	9	0	0
<i>Schoenoplectus tabernaemontani</i>	Softstem bulrush	4	0	0
<i>Sparganium americanum</i>	American bur-reed	8	0	0
<i>Sparganium androcladum</i>	Branched bur-reed	8	0	0
<i>Sparganium angustifolium</i>	Narrow-leaved bur-reed	9	1	9
<i>Sparganium emersum</i>	Short-stemmed bur-reed	8	0	0
<i>Sparganium eurycarpum</i>	Common bur-reed	5	0	0
<i>Sparganium fluctuans</i>	Floating-leaf bur-reed	10	0	0
<i>Sparganium natans</i>	Small bur-reed	9	0	0
<i>Spirodela polyrhiza</i>	Large duckweed	5	0	0
<i>Stuckenia filiformis</i>	Fine-leaved pondweed	8	0	0
<i>Stuckenia pectinata</i>	Sago pondweed	3	0	0
<i>Stuckenia vaginata</i>	Sheathed pondweed	9	0	0
<i>Typha angustifolium</i>	Narrow-leaved cattail	1	0	0
<i>Typha latifolia</i>	Broad-leaved cattail	1	0	0
<i>Typha</i> sp.	Cattail	1	0	0
<i>Utricularia cornuta</i>	Horned bladderwort	10	0	0
<i>Utricularia geminiscapa</i>	Twin-stemmed bladderwort	9	0	0
<i>Utricularia gibba</i>	Creeping bladderwort	9	0	0
<i>Utricularia intermedia</i>	Flat-leaf bladderwort	9	0	0
<i>Utricularia minor</i>	Small bladderwort	10	0	0
<i>Utricularia purpurea</i>	Large purple bladderwort	9	0	0
<i>Utricularia resupinata</i>	Small purple bladderwort	9	1	9
<i>Utricularia vulgaris</i>	Common bladderwort	7	0	0
<i>Vallisneria americana</i>	Wild celery	6	0	0
<i>Wolffia borealis</i>	Northern watermeal	6	0	0
<i>Wolffia columbiana</i>	Common watermeal	5	0	0
<i>Zannichellia palustris</i>	Horned pondweed	7	0	0
<i>Zizania aquatica</i>	Southern wild rice	8	0	0
<i>Zizania palustris</i>	Northern wild rice	8	0	0
<i>Zizania</i> sp.	Wild rice	8	0	0
* <i>P. berchtoldii</i>				
N			19	
mean C				7.5263
FQI				32.806

CITATION: Nichols, SA. 1999. Floristic Quality Assessment of Wisconsin Lake Plant

CITATION: University of Wisconsin-Madison, 2001. Wisconsin Floristic Quality

Appendix F:
**Floating Leaf and Emergent
Plant Community Mapping**



Lake Name: Smoky Lake
 Map Date & Creator: 6.29.19, Many Water, LLC
 Source: Plants-Many Waters, Mi_GDL Lake_polygons_200403
 Survey Year: 2017
 File: EFL_Smoky

**Smoky Lake
 Emergent and Floating Leaf
 Aquatic Plant Communities
 Central View**



Lake Name: Smoky Lake
 Map Date & Creator: 6.29.19, Many Water, LLC
 Source: Plants-Many Waters, Mi_GDL Lake_polygons_200403
 Survey Year: 2017
 File: EFL_Smoky

**Smoky Lake
 Emergent and Floating Leaf
 Aquatic Plant Communities
 North View**



- Wool-grass
- Wool-grass, Tag elder
- Soft stem bulrush, Wool-grass
- Tag elder
- Tag elder
- Narrow leaf bur-reed, Tag elder
- Tag elder
- Wool-grass, Bur-reed sp.
- Fowl meadow grass, Softstem bullrush
- Black-girdled wool-grass, Reed canary grass
- Reed canary grass, Wool-grass, Soft stem bullrush
- Reed canary grass, Wool-grass, Soft stem bullrush
- Tag elder, Wool-grass, Reed canary grass
- Tag elder
- Reed canary grass, Tag elder
- Tag elder
- Tag elder
- Tag elder
- Tag elder
- Tag elder
- Tag elder
- Common spike rush, Northern mana grass, Wool-grass, Sedge sp., Tag elder
- Common spike rush, Northern mana grass, Narrow leaf bur-reed, Sedge sp., Iris sp.
- Narrow leaf bur-reed, Tag elder
- Tag elder

Lake Name: Smoky Lake
Map Date & Creator: 6.29.19, Many Water, LLC
Source: Plants-Many Waters, Mi_GDL Lake_polygons_200403
Survey Year: 2017
File: EFL_Smoky

**Smoky Lake
Emergent and Floating Leaf
Aquatic Plant Communities
South View**

Appendix G:
WDNR Aquatic Plant
Monitoring Workbook

This Excel Workbook is a tool for comparing changes in species presence/absence data, collected using the Point Intercept method, within a lake over time (e.g. before and after treatment).

- Note:
1. Arrange presence/absence data exactly as presented in worksheet "Example".
There is room for 60 species.
 2. Copy/Paste data into cell A1 of worksheet "Enter Data".
 3. Calculations are computed automatically.
 4. Click button : "Click to Move Data". Clicking here moves the data and calculations to worksheet "newsheet" so that worksheet "Enter Data" is ready for another data set. It also records the calculations as numbers instead of formulae.
 5. Your results are now in worksheet "newsheet". You will see a reminder to "Rename this Sheet". You must rename this sheet (double click on "newsheet" and rename) before you process data for another lake. If you forget to rename the sheet and you try to run another set of data, you will get an error message.
Hit "End" (Do not hit "Debug") and rename the sheet before you try again.
 6. Worksheet "ChiTest", and parts of worksheet "Enter Data" are protected and must not be altered.
 7. The significance of observed changes is determined by the Chi-square test. We have set the alpha, or Type I error rate at 0.05. This means we have accepted a 5% chance of claiming there is significant change when no real change has occurred. This level is standard in ecological studies. If the test returns a significant result, we know that there is only a 5% probability the observed change is not a true change. We have set the beta, or Type II error rate at 0.80. This means there is an 80% chance of detecting a significant change if that change is really there. This corresponds to a 20% chance of NOT detecting significant changes, even though the change evaluated was indeed significant.
 8. In order for the chi-square distribution to be valid, the calculated expected values must not be too small. If you see the warning "Expected value too small", it means there is not enough information to confidently make a statistical conclusion.

Smoky Lake: Example Sheet		
WDNR APM Workbook	776	
	659	
	PRE present	POST present
Eurasian water milfoil	1	1
Muskgrasses	33	18
Waterwort	8	7
Needle spikerush	53	37
Waterweed species*	10	2
Northern manna grass	0	1
Quillwort species*	36	25
Brown-fruited rush	7	11
Water lobelia	6	5
Dwarf water-milfoil	5	12
Slender naiad	38	15
Nitella	216	225
Ribbon-leaf pondweed	1	0
Blunt-leaf pondweed	14	0
Small pondweed*	54	20
Clasping-leaf pondweed	26	33
Fern pondweed	9	27
Spiral-fruited pondweed	1	2
Creeping spearwort	2	12
Crested arrowhead	2	1
Narrow-leaved bur-reed	0	3
Floating-leaf bur-reed	1	0
Bur-reed	0	2
Small purple bladderwort	0	1

[Click to Move](#)

Smoky Lake

	776		659		p	Significant change	Increase/Decrease (proportional to # sampling points)	+	-	Sample Size Problem
	PRE sent	POST sent	PRE sent	POST sent						
Eurasian water milfoil	1	1	1	1	0.90783	n.s.	+			Warning: Expected value too small
Muskgrasses	33	18	33	18	0.12089	n.s.	-			
Waterwort	8	7	8	7	0.95369	n.s.	+			
Needle spikerush	53	37	53	37	0.34402	n.s.	-			
Waterweed species*	10	2	10	2	0.04112	*	-			
Northern manna grass	0	1	0	1	0.27769	n.s.	+			Warning: Expected value too small
Quillwort species*	36	25	36	25	0.42883	n.s.	-			
Brown-fruited rush	7	11	7	11	0.19318	n.s.	+			
Water lobelia	6	5	6	5	0.97501	n.s.	-			
Dwarf water-milfoil	5	12	5	12	0.04008	*	+			
Slender naiad	38	15	38	15	0.00871	**	-			
Nitella	216	225	216	225	0.00986	**	+			
Ribbon-leaf pondweed	1	0	1	0	0.35660	n.s.	-			Warning: Expected value too small
Blunt-leaf pondweed	14	0	14	0	0.00053	***	-			
Small pondweed*	54	20	54	20	0.00081	***	-			
Clasping-leaf pondweed	26	33	26	33	0.11515	n.s.	+			
Fern pondweed	9	27	9	27	0.00039	***	+			
Spiral-fruited pondweed	1	2	1	2	0.47046	n.s.	+			
Creeping spearwort	2	12	2	12	0.00268	**	+			
Crested arrowhead	2	1	2	1	0.66135	n.s.	-			
Narrow-leaved bur-reed	0	3	0	3	0.05990	n.s.	+			
Floating-leaf bur-reed	1	0	1	0	0.35660	n.s.	-			Warning: Expected value too small
Bur-reed	0	2	0	2	0.12461	n.s.	+			Warning: Expected value too small
Small purple bladderwort	0	1	0	1	0.27769	n.s.	+			Warning: Expected value too small

Rename this Sheet!

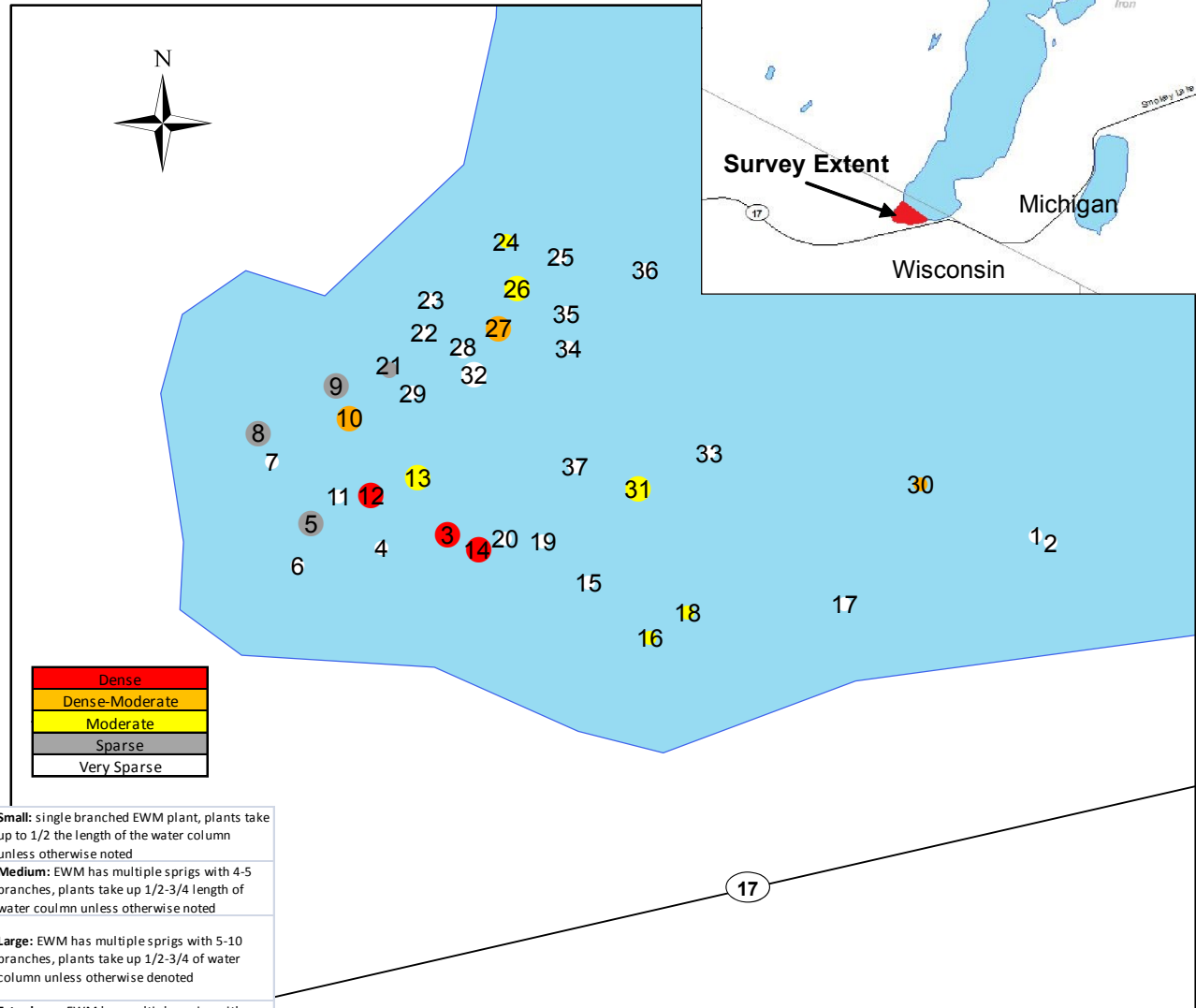
		Pre	Post		
Eurasian water milfoil	Present		1	1	2
	Absent		775	658	1433
			776	659	1435
	Exp	1.081533	0.918467		
	Exp	774.9185	658.0815	0.907833957n.s.	Warning:Expected value too small
Muskgrasses	Present		33	18	51
	Absent		743	641	1384
			776	659	1435
	Exp	27.57909	23.42091		
	Exp	748.4209	635.5791	0.120892079n.s.	
Waterwort	Present		8	7	15
	Absent		768	652	1420
			776	659	1435
	Exp	8.111498	6.888502		
	Exp	767.8885	652.1115	0.953689597n.s.	
Needle spikerush	Present		53	37	90
	Absent		723	622	1345
			776	659	1435
	Exp	48.66899	41.33101		
	Exp	727.331	617.669	0.344015283n.s.	
Waterweed species*	Present		10	2	12
	Absent		766	657	1423
			776	659	1435
	Exp	6.489199	5.510801		
	Exp	769.5108	653.4892	0.041122745*	
Northern manna grass	Present		0	1	1
	Absent		776	658	1434
			776	659	1435
	Exp	0.540767	0.459233		
	Exp	775.4592	658.5408	0.277689531n.s.	Warning:Expected value too small
Quillwort species*	Present		36	25	61
	Absent		740	634	1374
			776	659	1435
	Exp	32.98676	28.01324		
	Exp	743.0132	630.9868	0.428834195n.s.	
Brown-fruited rush	Present		7	11	18
	Absent		769	648	1417
			776	659	1435
	Exp	9.733798	8.266202		
	Exp	766.2662	650.7338	0.193184409n.s.	
Water lobelia	Present		6	5	11
	Absent		770	654	1424
			776	659	1435
	Exp	5.948432	5.051568		
	Exp	770.0516	653.9484	0.975013707n.s.	
Dwarf water-milfoil	Present		5	12	17
	Absent		771	647	1418
			776	659	1435
	Exp	9.193031	7.806969		
	Exp	766.807	651.193	0.040081349*	
Slender naiad	Present		38	15	53
	Absent		738	644	1382
			776	659	1435
	Exp	28.66063	24.33937		
	Exp	747.3394	634.6606	0.008711023**	
Nitella	Present		216	225	441
	Absent		560	434	994
			776	659	1435
	Exp	238.478	202.522		
	Exp	537.522	456.478	0.009857836**	

Ribbon-leaf pondweed	Present	1	0	1	
	Absent	775	659	1434	
		776	659	1435	
	Exp	0.540767	0.459233		
	Exp	775.4592	658.5408	0.356603543n.s.	Warning:Expected value too small
Blunt-leaf pondweed	Present	14	0	14	
	Absent	762	659	1421	
		776	659	1435	
	Exp	7.570732	6.429268		
	Exp	768.4293	652.5707	0.000530207***	
Small pondweed*	Present	54	20	74	
	Absent	722	639	1361	
		776	659	1435	
	Exp	40.01672	33.98328		
	Exp	735.9833	625.0167	0.00080984***	
Clasping-leaf pondweed	Present	26	33	59	
	Absent	750	626	1376	
		776	659	1435	
	Exp	31.90523	27.09477		
	Exp	744.0948	631.9052	0.115151778n.s.	
Fern pondweed	Present	9	27	36	
	Absent	767	632	1399	
		776	659	1435	
	Exp	19.4676	16.5324		
	Exp	756.5324	642.4676	0.000391704***	
Spiral-fruited pondweed	Present	1	2	3	
	Absent	775	657	1432	
		776	659	1435	
	Exp	1.6223	1.3777		
	Exp	774.3777	657.6223	0.470463614n.s.	
Creeping spearwort	Present	2	12	14	
	Absent	774	647	1421	
		776	659	1435	
	Exp	7.570732	6.429268		
	Exp	768.4293	652.5707	0.002679396**	
Crested arrowhead	Present	2	1	3	
	Absent	774	658	1432	
		776	659	1435	
	Exp	1.6223	1.3777		
	Exp	774.3777	657.6223	0.661353074n.s.	
Narrow-leaved bur-reed	Present	0	3	3	
	Absent	776	656	1432	
		776	659	1435	
	Exp	1.6223	1.3777		
	Exp	774.3777	657.6223	0.059904524n.s.	
Floating-leaf bur-reed	Present	1	0	1	
	Absent	775	659	1434	
		776	659	1435	
	Exp	0.540767	0.459233		
	Exp	775.4592	658.5408	0.356603543n.s.	Warning:Expected value too small
Bur-reed	Present	0	2	2	
	Absent	776	657	1433	
		776	659	1435	
	Exp	1.081533	0.918467		
	Exp	774.9185	658.0815	0.124612303n.s.	Warning:Expected value too small
Small purple bladderwort	Present	0	1	1	
	Absent	776	658	1434	
		776	659	1435	
	Exp	0.540767	0.459233		
	Exp	775.4592	658.5408	0.277689531n.s.	Warning:Expected value too small

Appendix H:
Eurasian Watermilfoil Mapping
2013-2018

2013 Distribution of Eurasian Watermilfoil Smoky Lake - Vilas County, WI & Iron County, MI

Map ID	EWM Distribution Estimate	EWM Biomass Estimate	EWM Estimated Total Extent (ft-circumference)	Notes
1	Very sparse (1 plant)	Small		
2	Very sparse (1 plant)	Small		
3	Dense	Large-At surface	35'	10' circumference dense colony, surrounded by 25' circumference sparse distribution of EWM
4	Very sparse (3 plants)	Small		
5	Sparse	Small	30'	6'-8' spacing
6	Very sparse (1 plant)	Small		Less than a foot of water-plant is to surface
7	Very sparse (1 plant)	Small		Less than a foot of water-plant is to surface
8	Sparse	Small	30'	Less than a foot of water-plant is to surface
9	Sparse	Medium	30'	6'-8' spacing
10	Dense-Moderate	Large-Plants just below surface	20'	(2) 2' dense colonies surrounded by sparse distribution of EWM
11	Very sparse (4 plants)	Small		
12	Dense	Large-Plants just below surface	30'	12' dense colony, surrounded by 20' circumference sparse distribution of EWM
13	Moderate	Medium	20'	(5-6) 2' colonies of EWM, 2-4 feet apart
14	Dense	Large-Plants just below surface	20'	(1) 6x12' dense colony of EWM, (1) 5x5' dense colony of EWM, surrounded by sparse distribution of EWM
15	Very sparse (1 plant)	Medium		
16	Moderate	Large	2'	
17	Very sparse (1 plant)	Small		
18	Moderate	Large	2'	
19	Very sparse (1 plant)	Medium		
20	Very sparse (1 plant)	Small		
21	Sparse	Medium	15'	1' dense cluster of EWM surrounded by 5 EWM outliers
22	Very sparse (1 plant)	Large		
23	Very sparse (4 plants)	Small		
24	Moderate	Medium	2'	
25	Very sparse (1 plant)	Large		
26	Moderate	Medium	25'	(3) 2' clusters of EWM 3' apart, surrounded by sparse distribution of EWM
27	Dense-Moderate	Large	35'	6x20' EWM colony, surrounded by sparse distribution of EWM
28	Very sparse (3 plants)	1 extra large, 2 medium	12'	
29	Very sparse (1 plant)	Small		
30	Moderate	Large	3'x4'	1 very large EWM plant 6' northeast of dense colony
31	Moderate	Medium	24'	
32	Very sparse (4 plants)	Medium		
33	Very sparse (1 plant)	Small		
34	Very sparse (1 plant)	Medium		
35	Very sparse (3 plants)	Large		
36	Very sparse (1 plant)	Medium		
37	Very sparse (1 plant)	Medium		



Small: single branched EWM plant, plants take up to 1/2 the length of the water column unless otherwise noted

Medium: EWM has multiple sprigs with 4-5 branches, plants take up 1/2-3/4 length of water column unless otherwise noted

Large: EWM has multiple sprigs with 5-10 branches, plants take up 1/2-3/4 of water column unless otherwise denoted

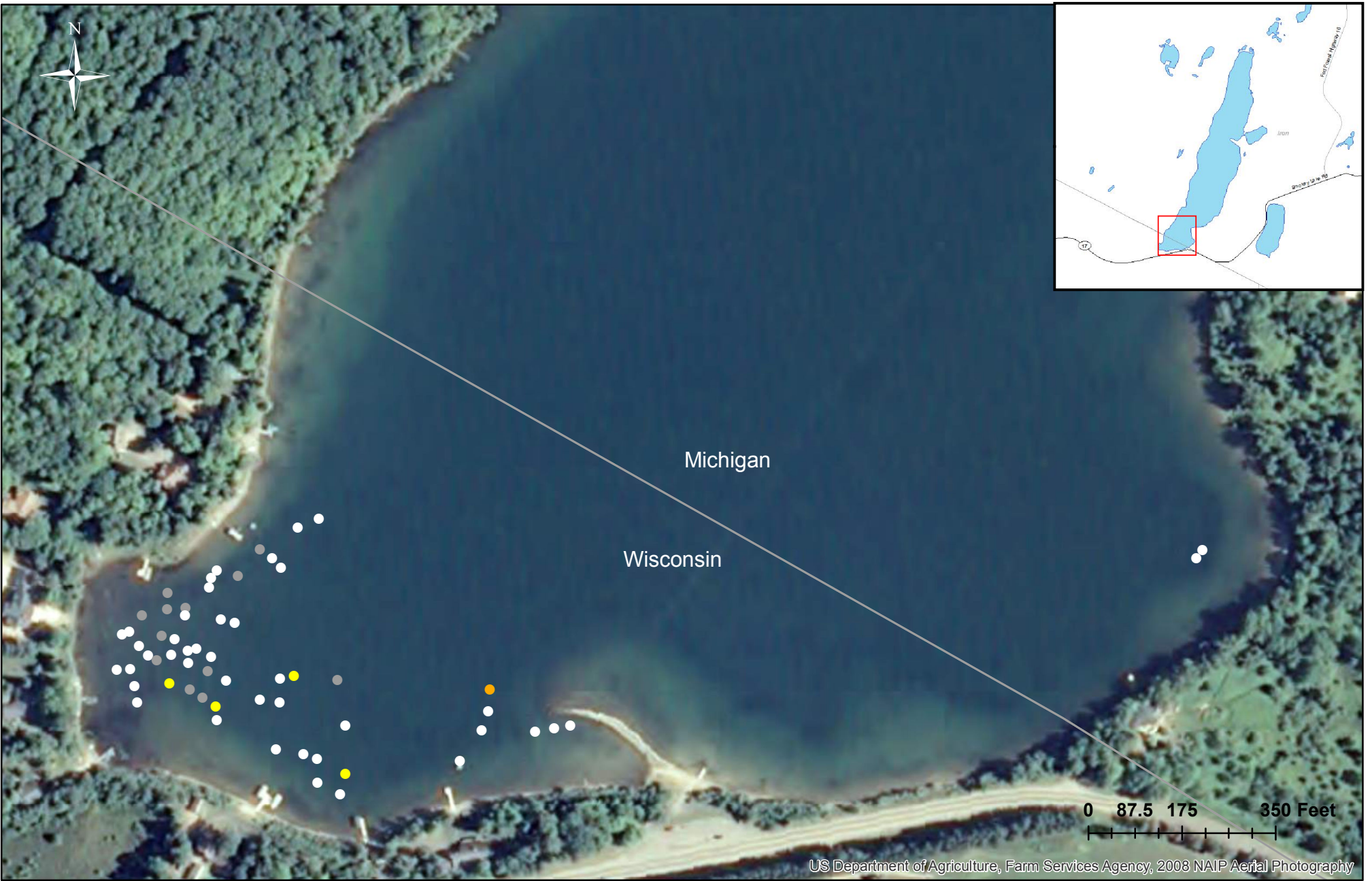
Extra large: EWM has multiple sprigs with more than 10 branches, plants take up 3/4 or more of the water column unless otherwise denoted



Created By: Many Water, LLC, 2527 Lake Ottawa Road, Iron River, MI 49935

Source: Fall_EWM_Smoky_2013, MIGDL_Lake_Polygons_200403, ESRI USA Base Map

Survey Date: October 14th 2013



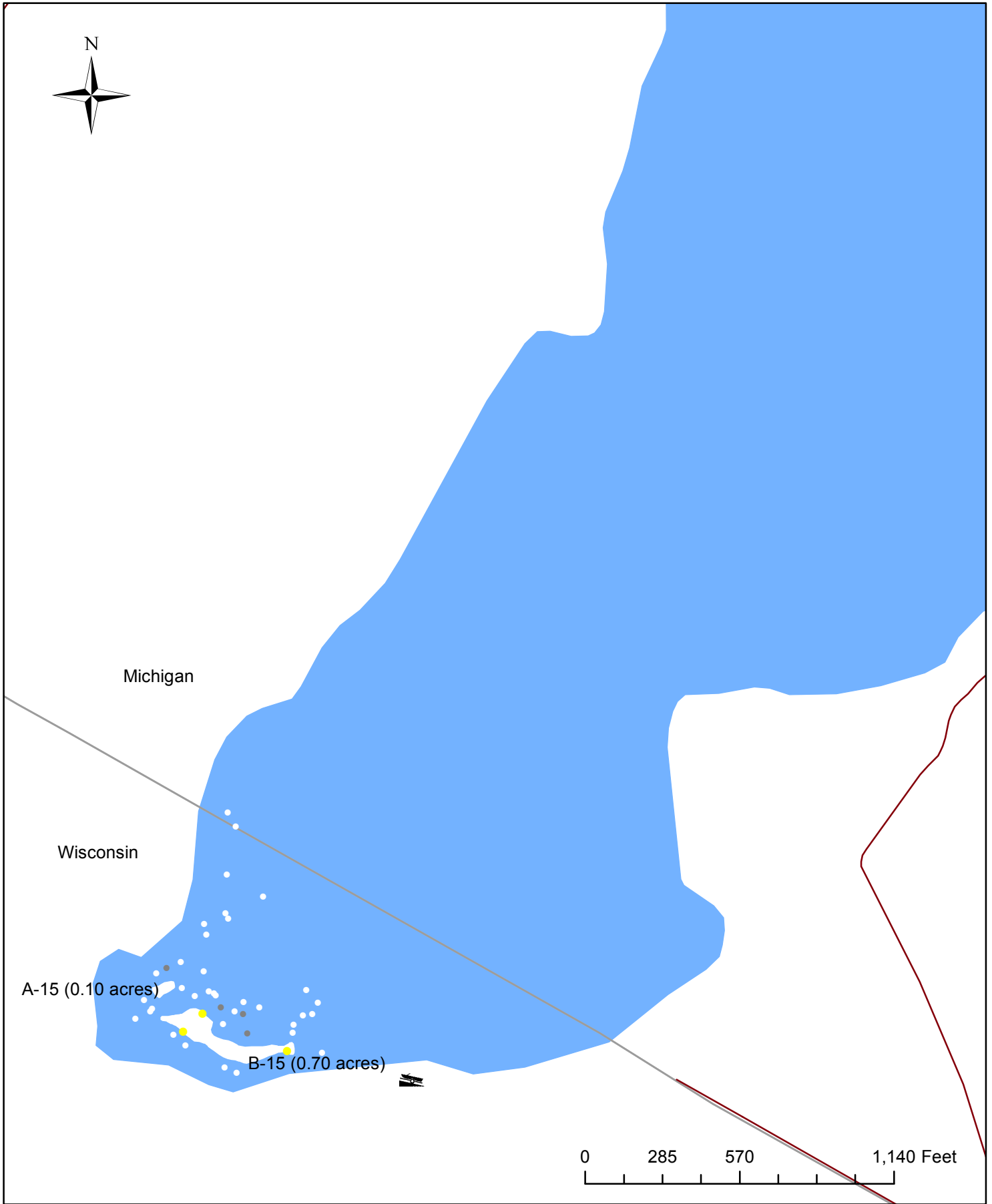
Lake: Smoky Lake, Vilas County, WI & Iron County, MI
 Source: 2008 NAIP
 File: ES_EOYE_Com_Smoky_2014
 Map Date & Creator: 2.22.2015, Many Waters, LLC

EWM Density

- Very Sparse
- Sparse
- Moderate
- Moderate-Dense
- Dense



**Smoky Lake
 2014 EWM Locations
 End of the Year Evaluation**

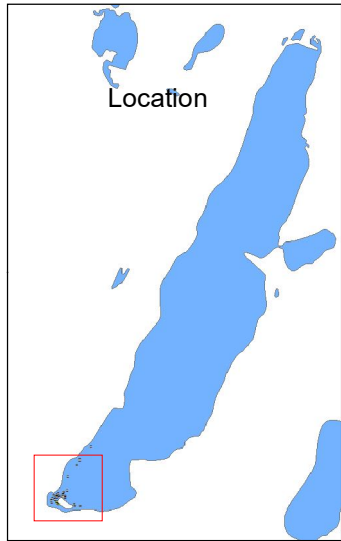


Lake: Smoky - Vilas County, WI & Iron County, MI
 Map Date & Creator: 10.30.2015, Many Waters, LLC
 Source: WDNR, MiGDL Lake_polygons_200403,
 ESRI Base Maps
 File: SmokyLakeEOY_2015

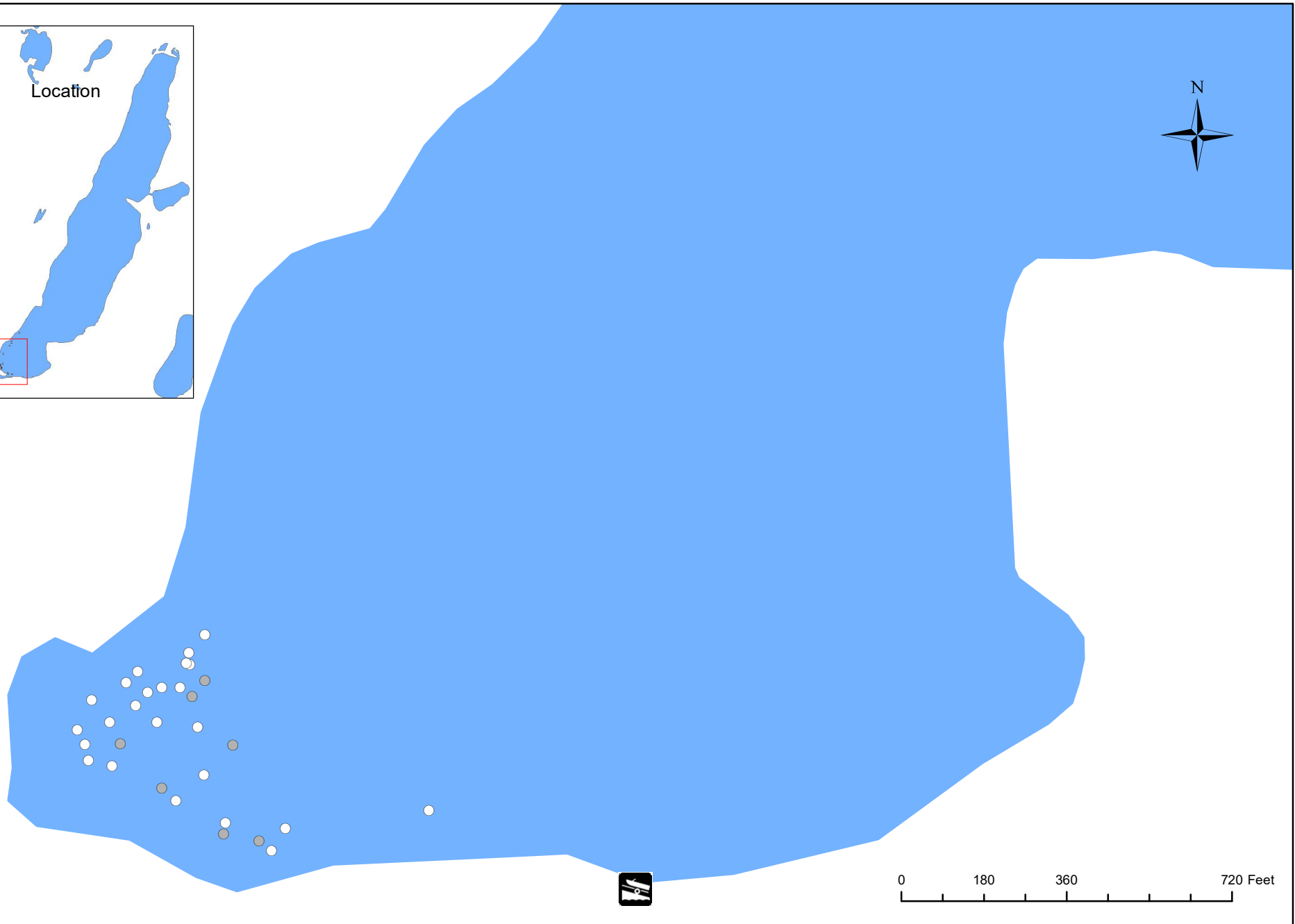
EWM Abundance Estimate

- Very Sparse
- Sparse
- Moderate
- Moderate-Dense (none)
- Dense (none)

**Smoky Lake
 Post Management Evaluation
 EWM Distribution - 2015
 Southern Extent**



Location



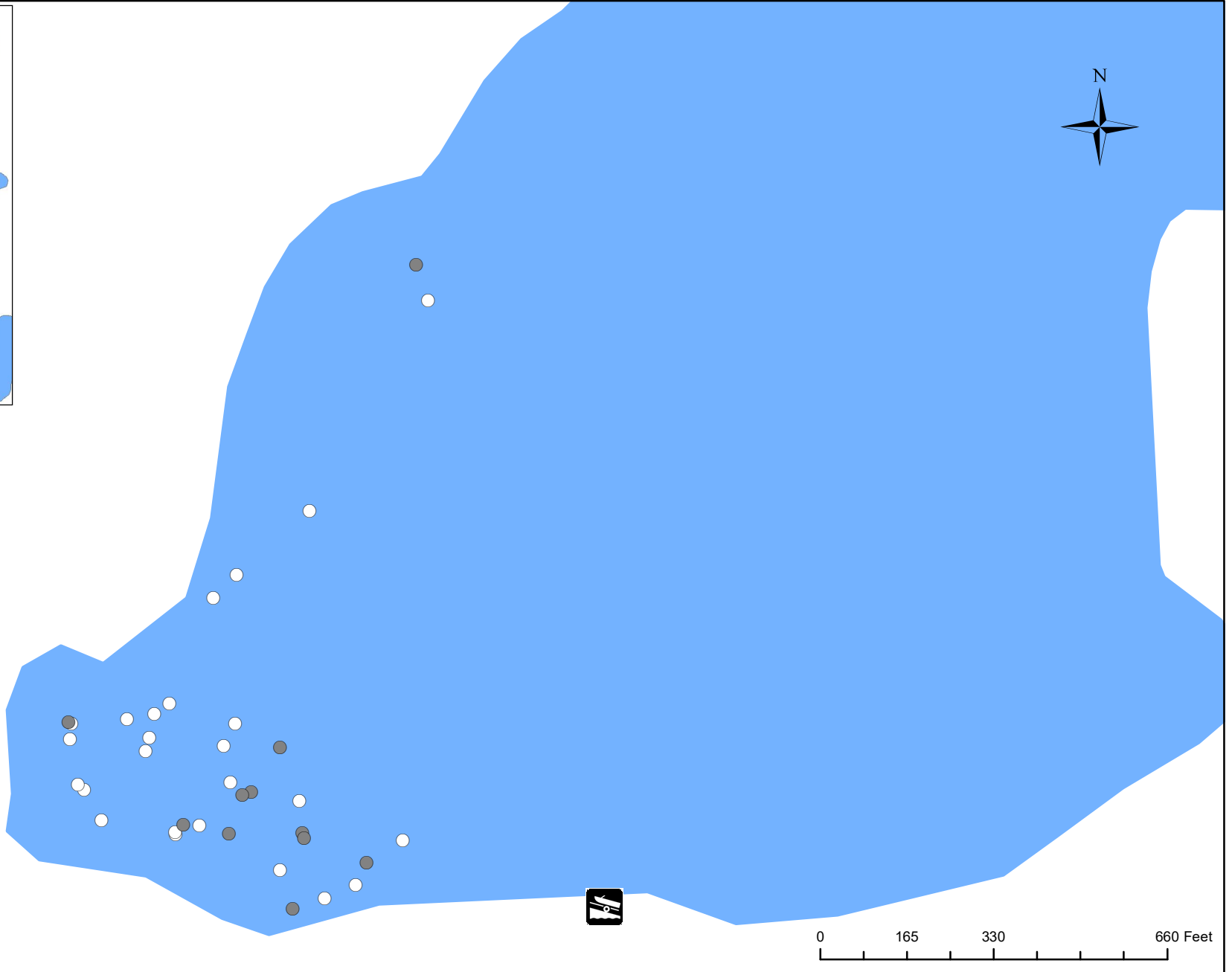
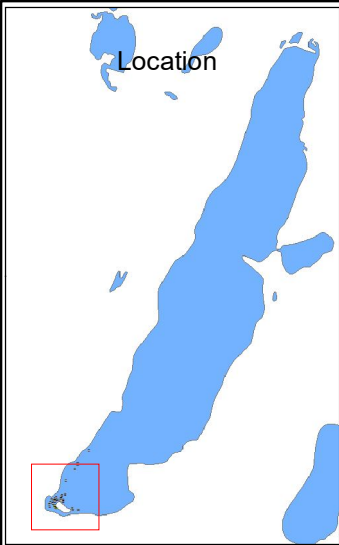
0 180 360 720 Feet

Lake Name: Smoky Lake
Map Date & Creator: 1.3.2017, Many Water, LLC
Survey Date: 10.6.2016
Source: EWM-Many Waters, Mi_GDL Lake_polygons_200403
File: ES_Smoky_2016

EWM Abundance Estimate

- Very Sparse
- Sparse
- Moderate
- Moderate-Dense
- Dense

**End of the Year EWM Survey
Smoky Lake
2016**

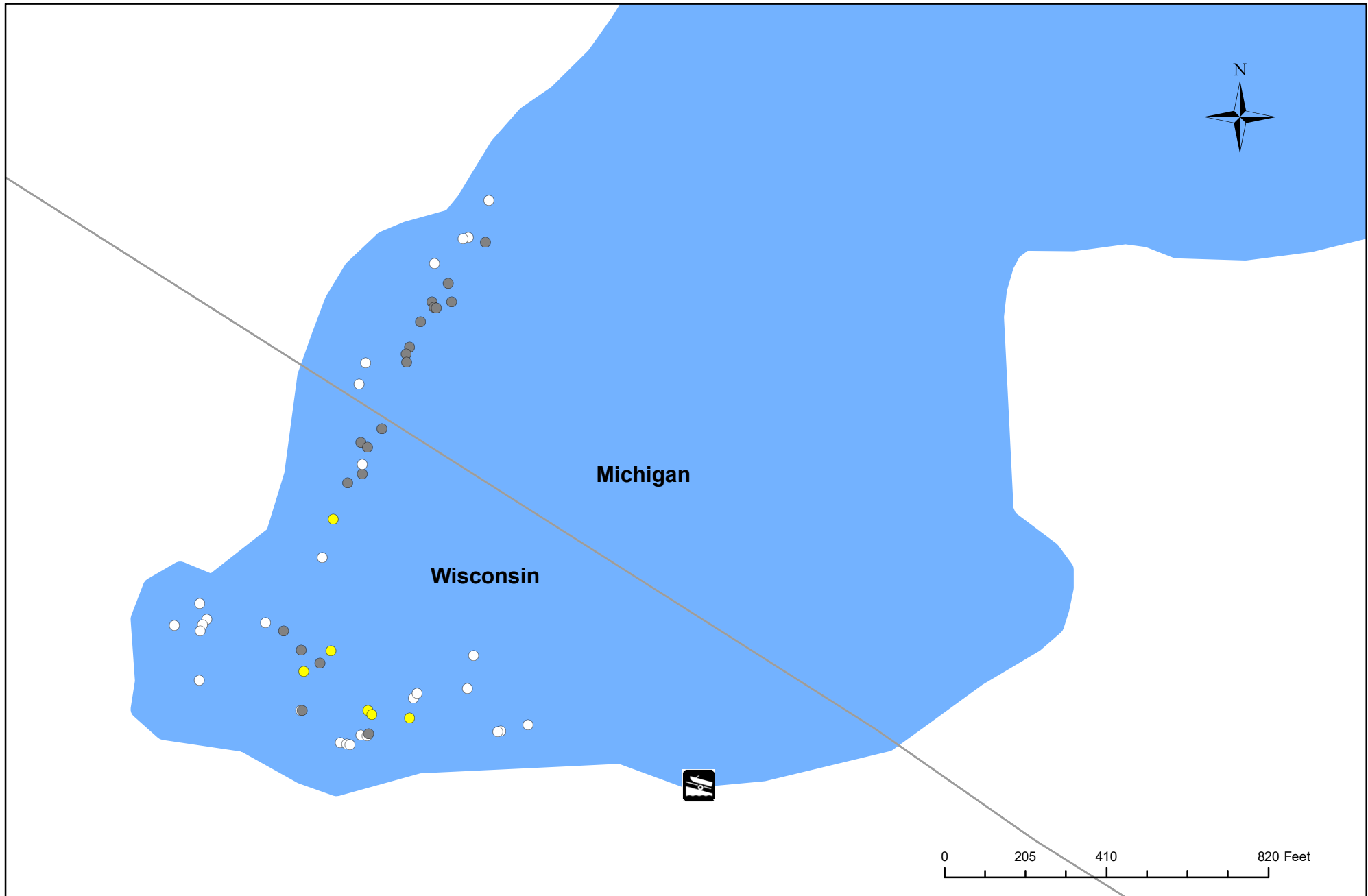


Lake Name: Smoky Lake
Map Date & Creator: 11.17.2017, Many Water, LLC
Source: EWM-Many Waters, Mi_GDL Lake_polygons_200403
File: EOY_Smoky_2017

EWM Abundance Estimate

- Very Sparse
- Sparse
- Moderate
- Moderate-Dense
- Dense

Smoky Lake
End of the Year EWM Locations
2017



Lake Name: Smoky Lake
 Map Date & Creator: 1.30.2019, Many Water, LLC
 Source: EWM-Many Waters, Mi_GDL Lake_polygons_200403
 File: MLSS_Smoky_2018

EWM Abundance Estimate

- Very Sparse
- Sparse
- Moderate
- Moderate-Dense
- Dense

**End of the Year - EWM Locations
 Smoky Lake - Vilas County, WI
 & Iron County, MI
 2018**

Appendix I:

Historical Fisheries Data

Smoky Lake - Iron County, MI/Vilas Co, WI, Fish Stocking and Management Records (1934-2019)¹

Date	Species	Number	Operation	Avg Length	Stocking Target	Other Actions (Surveys/ Management Prescriptions) by MDNR unless otherwise noted
1934	Lake Trout (LAT) ²	4000	State	Fingerling	7/ac, Fall	
	Bluegill (BLG)	10,000	State	Fingerling	17/ac, Fall	
1935	Lake Trout	31,700	State	Fingerling	54/ac, Fall	
	Small Mouth Bass (SMB)	1000	State	Fingerling	2/ac, Fall	
	Yellow Perch (YEP)	10,300	State	Fingerling	18/ac, Fall	
	Bluegill	5,000	State	Fingerling	9/ac, Fall	
1936	Walleye (WAE)	250,000	State	Fry	426/ac	
	Lake Trout	4,000	State	Fingerling	7/ac, Fall	
	Large Mouth Bass (LMB)	1,000	State	Fingerling	2/ac, Fall	
	Small Mouth Bass	400	State	Fingerling	1/ac, Fall	
	Bluegill	10,000	State	Fingerling	17/ac, Fall	
1937	Walleye	175,000	State	Fry	298/ac	
	Small Mouth Bass	1,500	State	Fingerling	3/ac, Fall	
	Bluegill	10,000	State	Fingerling	17/ac, Fall	
	Yellow Perch	5,500	State	Fingerling	9/ac, Fall	
1938						Survey: finds SMB (fair size), RKB (fair size), YEP(small), Cisco (common), LMB & CWS present
1939	Walleye	900,000	State	Fry	1533/ac	
	Bluegill	10,000	State	Fingerling	17/ac, Fall	
	Large Mouth Bass	2,000	State	Fingerling	3/ac, Fall	
1940	Bluegill	5,000	State	Fingerling	9/ac, Fall	
1941	Bluegill	6,000	State	Fingerling	10/ac, Fall	
1943	Rainbow Trout (RBT)	5,000	State	Fingerling	9/ac, Fall	
1944	Lake Trout	1,100	State	2 Yr	2/ac	
	Rainbow Trout	2,000	State	Adv Yearling	3/ac	
1945	Lake Trout	3,433	State	Adult	6/ac	
	Rainbow Trout	2,995	State	Adult	5/ac	
1947	Lake Trout	5,000	State	Yearling	9/ac	

1953						Survey: Netting survey to determine if Ciscoes abundant enough to warrant netting or spearing season. Oct '53. Caught 10 Cisco (8.5-10"), 72 YEP (6-12.6"), 1 BLG (7.7"), 4 CWS (5.6-10").
1963	Lake Trout	50,000	State	Fingerling	85/ac, Fall	
1964	Lake Trout	4,000	State	Yearling	7/ac	
1967	Rainbow Trout	1,500	State	Yearling	3/ac	
1968						Survey: Fyke & Gill Nets, Jul '68. Caught 56 Cisco (10" avg), 1 LAT (25" avg), 6 SMB (7" avg), >600 YEP, 8 BLG (6.5"), 104 RKB (6.5 avg), 21 CWS (13" avg). Few SMB caught. <i>Rx= Control YEP due to high # and discontinue trout stocking due to poor return.</i>
1974?	Muskellunge (MUS)	?	Unauth	?	Exact date uncertain	
1975	Lake Trout	570	State	Adult	1/ac	
1976						Survey: Fyke, trap & gill nets, Jul '76. Caught 3 BKT (9" avg) <i>planted by riparians</i> , 359 YEP (6.9" avg), 96 SMB (7" avg), 70 BLG (6.7" avg), 63 PKS (6.6" avg), 1057 RKB (6.5" avg), 11 Cisco (9.9" avg-deep water gill nets only), 13 CWS (18" avg).
1977						Manual removal of 603 Common White Suckers (CWS)- Bill Koski
1979	Brook Trout (BKT)	15,000	State	Fingerling	26/ac, Fall	Manual removal of 369 CWS -Bill Koski
1980						Sucker spawn collection by MDNR, May: 160 liters of eggs plus 1900 CWS removed. During sucker ops, 8 adult muskie netted (2 tiger and 6 northern from illegal riparian plant)- <i>removed but others likely remain & population may develop.</i>

1981	splake	14,700	State	Fingerling	25/ac, Fall	Manual removal 701 Suckers, May- Bill Koski. Also noted 12 BKT (12" avg), 30 SMB.
1982	splake	7,000	State	Fingerling	12/ac, Fall	Manual removal 971 Suckers- Bill Koski.
1983						Manual removal 491 Suckers- Bill Koski. Survey: Fyke nets, Oct to check on splake survival. 8 MUS, 3- 1 Yr Splake, 1- 2 Yr Splake. <i>Poor growth/survival.</i>
1984	splake Lake Trout	14,700 683	State State	Fingerling Adult	25/ac, Fall 1/ac, 17.44" avg, Fall	Manual removal unknown # suckers Fyke net YEP, June- BK: 29 YEP, mean growth index -1.5 (smaller than state avg)
1985	Lake Trout splake Lake Trout	250 20,000 1000	State State State	Adult Fingerling Adult	2/ac, May, 25.59" avg 34/ac, Fall, 5.04" avg Oct, 12.99" avg	8-28-85 Fish Mgmt Prescription: <i>Problem- Lack of acceptable cold water fishing and > # YEP and CWS. Rx: Stock LAT & SPM to increase cold water fishery and act as predator on small perch, manually remove CWS.</i>
1986	splake	8600	State	Yearling	15/ac, June, 8.46" avg	Survey: Oct, Gill nets, 8 loc, 4 hrs to check on Splake population and collect fish samples for mercury analysis
1987	splake Lake Trout Lake Trout	15,300 1000 250	State State State	Yearling Adv Yearling Adult	26/ac, May, 7.44" avg 2/ac, Sept, 8.9" avg 0.4/ac, Sept, 22.52"avg	
1988	splake	16,000	State	Yearling	27/ac, May, 6.77" avg	

1989	Lake Trout Brown Trout (BNT)	582 7500	State State	Adult Yearling	1/ac, Apr, 28.11" avg 13/ac, May, 7" avg	Electrofishing survey (May): assess SMB pop size structure. 79 SMB (3-19", 13% were > 14") pop Fair, Mean Growth Index for SMB= -2.5 (slow growth). 17 MUS observed, but only 1 caught-more numerous than survey indicates & needs follow-up (most 30-40"), CWS abundant, YEP common, RKB and splake present. Bass population is fair: growth rate slow and gets slower as fish get older. Reasonably good forage conditions- not clear why growth so slow. See 1990 Mgmt Rx.
						Rusty Crayfish noted as present ~10,000 Cisco transferred to Ottawa Lake (date unknown)
1990						Management Rx (1/9/90): <i>Problem-Public demand for trout fishing; poor survival of yrlg splake due to > YEP, abundant small YEP & suckers, lack of perch predator, declining size structure of SMB. Action List: Plant surplus broodstock LAT, introd walleye to control YEP, <u>increase min size SMB to 16"</u>. Special regs for Smoky Lake. Manual removal of 386 suckers; MUS (N=26), SMB, RKB, YEP, Splake, Cisco found. Fish kill (mostly suckers and LAT) observed early Sept.</i>
1991						Fyke net Survey (Spring): 95 MUS (30-45" tagged), Mean growth index for MUS= -2.5 297 lb YEP transferred to Sunset Lake
1993	Lake Trout Muskellunge	400 1000	State State	Adult Fingerling	0.7/ac, June, 16.38"avg 2/ac, Fall, 7.13" avg	
1994	Muskellunge	700	State	Fingerling	1/ac, Fall, 7.13"avg	

1995						Electrofishing Survey (June)= 349 SMB, only 2 legal sz, 5 MUS (11-36"). Mean growth indices: SMB= -3.0 and YEP= -0.8
1996	Lake Trout Muskellunge	300 1062	State State	Adult Fingerling	.5/ac, Jul, 15.71" avg 2/ac, Fall, 10.2" Avg	Electrofishing Survey (June)= 238 SMB incl 12 > 14" and only 2 >16". MUS (N=5) 24-38" captured. Purpose: <i>Species evaluation and SMB size limit increase evaluation. Analysis: Strong SMB population but mediocre size structure. Increased size limit for SMB has not improved size structure-- same behind avg growth as seen in 1989 (2-3" behind state avg)</i>
						<i>More analysis from 1995 survey re SMB size limit: Survey indicates increase in size limit for SMB has not achieved anticipated size structure improvement. Age-size consistent with 1989 survey. Competition for forage probable cause for slow growth- suggest transfer of suitable qty & size forage. Noted many unoccupied spawning beds- indicates may have missed the larger size bass doc in 1989 survey.</i>
1997	Lake Trout	280	State	2 Yr	0.5/ac, Jun, 11.3" avg	
2001	Muskellunge	575	State	Fingerling	1/ac, Fall, 12.01" avg	Fyke net Cisco survey (Dec): 270 Cisco (7-9"; CPE=139 fish/net night), 7 CWS, 2 RKB. Analysis: Same 8" avg size for Cisco as in '86-87.
2003	Muskellunge	600	State	Fingerling	1/ac, Fall, 11.48" avg	
2004	Rainbow Trout Muskellunge	7249 434	State State	Yearling Fingerling	12/ac, May, 7.52" avg 0.7/ac, Fall, 7.73"avg	

2005	Lake Trout Muskellunge	20,000 1200	State State	Yearling Fingerling	34/ac, May, 5.82" avg 2/ac, Fall, 10" avg	Fish Mgmt Prescription: <i>Public demand for LAT fishing, poor survival of yrlg LAT plants, MUS reprod dropped-not sustaining, history of CWS overpop.</i> Actions proposed: Plant adult LAT for fishing and as pred for cisco, plant MUS fall fingerlings at 2/ac to rebuild pop and maintain popular MUS fishery and as pred for CWS.
2008						Gill net survey (WDNR-Aug): Pelagic (middle depth) fish survey. 49 Cisco (avg 9.3"), 69 RAINBOW SMELT (avg 7.4"), 11 RKB (4-7.6"), 1 SMB (13.6"), and 4 YEP (4.5-7.1") Electrofishing Survey (WDNR-Oct): Baseline monitoring. 108 SMB (avg 8"), 1 MUS (10"), BLG present, RKB & CWS common, YEP abundant.
2015						<i>Hook & line survey to compare mean relative weight by length category for SMB betw Smoky Lk and 3 similar lakes: Big Muskellunge, Big Portage, Plum Lakes. For all the length categories, SMB weight is lower than other lakes. Smoky has high proportion SMB in 8-12" range (mean about 10"). Other lakes have mean lengths around 16". Other lakes have min size limit 18", bag limit 1, and have walleye in the lake. Smoky has 14" min, bag limit 5, and no walleye. Proposed: 14-18" protected slot, bag limit 5, no walleye.</i>
2017						Fyke net survey (May): MUS evaluation. Captured 19 MUS (avg 40.8"). Also: 147 BLG (avg 7.2"), 282 CWS (avg 17.1"), 3011 RKB (avg 7.1"), 245 SMB (avg 11.9"), and 210 YEP (avg 6.8").

2019						The following regulation change was proposed for 2020: For smallmouth bass in Smoky Lake, no minimum size limit, but no harvest of fish between 14-18", 5 fish daily limit however only one (1) smallmouth bass 18 inches or larger may be possessed. The bass regulation will change ONLY in Wisconsin waters of Smoky Lake in 2020.
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- 1) Fisheries data compiled for the Smoky Lake Management Plan from historic paper records in MDNR Fisheries at the Baraga Customer Service Center and those available on the MDNR fisheries website. Special thanks to George Madison, MDNR Fisheries Biologist, for assisting with access and technical information.

Fish Abbreviations*	
Bluegill	BLG
Brook Trout	BKT
Brown Trout	BNT
Common White Sucker	CWS
Lake Trout	LAT
Large Mouth Bass	LMB
Northern Muskellunge	MUS
Rainbow Trout	RBT
Small Mouth Bass	SMB
Walleye	WAE
Yellow Perch	YEP
splake	SPM

*As used in historic Smoky Lake fisheries records. Current day abbreviations typically two letters.

Appendix J:
Summary of Steering
Committee Meetings

Planning Steering Committee Minutes

A meeting of the SLPOA Planning Steering Committee was held on Sunday July 23, 2017 at Lew Raker's house. Present were Barb Gajewski, Leo Norden, Lydia Cooley, Lewis Raker and Walter Tarmann. The meeting was called to order at 10:30 AM.

The group considered the functions and membership of the committee:

- To oversee the planning process as described in the grant proposal.
- To review Many Waters findings and research.
- To recruit volunteers to carry out various aspects of the planning process – i.e. stakeholders survey and development of strategies and actions.
- Function as a communication hub to assure that planning information flows through defined channels – to and from the Conservation Committee, Board of Directors and Association Members.
- Meet periodically (3-4 times per year) and as needed to review consultant reports.

As to membership, the group decided that for now the committee membership should remain as is, but could expand as needs change. It was suggested that volunteer involvement could best be accomplished through expanded membership of the Conservation Committee, especially as a way to introduce new members of the lake community to various issues of the day.

Barb presented a first look at the possible contents of the stake holder survey. She explained that once the survey is drafted it must be approved by the WDNR. The thought now is that the survey would be ready for distribution in November. The committee is tasked with finding volunteers who at a minimum can tabulate survey results. A working knowledge of Excel will be required. Further committee discussion is required to iron out survey details.

The committee reviewed the Smoky Lake Management Plan outline which will be used as a handout at the annual meeting. Several wording changes will be made prior to printing (60 copies).

While Lew is officially on the meeting agenda as the topic presenter, it was felt that the presentation would be more effective if it were a team effort.

- Lew will open the presentation by discussing the background and the scope of the project.
- Barb will review the five objectives
- Lydia will discuss opportunities for the members to engage in the project.
- As incoming president, Leo will wrap up by emphasizing the importance of the project.
- Walt will assure that all attendees have a copy of the handout.

Lydia raised the matter of two culverts. George Inglis is questioning their purpose as a conduit between the Smoky Lake and Big Sand Lake watersheds. Lydia and Andy are studying the questions of why the culverts, when were they installed, and by whom.

Lydia checked administrative records but can find no information. Dave Ogilvie will do the same with financial records. The next step is to contact members of the lake community to see if they have any recollection of the matter. Lydia noted that the presence of these culverts may be relevant to our planning research, and could become a "wetlands issue" with all that that might entail.

Barb requested that she distribute cards of the annual meeting on which attendees could note what they most appreciate about Smoky Lake. She stated that this information has been fruitful in the past. The group endorsed the idea.

The next meeting will be scheduled this fall. The meeting was adjourned at 12:30 PM.

PLANNING STEERING COMMITTEE #2

NOVEMBER 18,2017

A meeting of the Planning Steering Committee was held on November 18, 2017 at Lew Raker's home. The meeting was called to order at 10:00 AM by Lew Raker. Present were Lydia Cooley, Barb Gajewski and Leo Norden. Walt Tarmann was excused.

The purpose of this meeting was to review the content of the questionnaire to be used to survey the Smoky Lake community and to discuss various issues pertaining to the survey.

Prior to the meeting Barb had distributed a draft of the questionnaire to members and the results of the "index card survey" taken at the last annual meeting. She noted that she had already spoken with Walt and Lew and both of them have made a number of suggestions.

She then led the group through a question by question review at which time several issues were discussed, and changes made. Changes include the following:

Page 1 Property 2d - Discussion about rentals

Smoky Lake Estates by covenant forbids rentals although one property owner rents on a short term basis. Non estate property owners are free to do whatever they wish as long as they are in compliance with codes and regulation. While at this time there are no additional rental situations on the lake, the topic might be appropriate for consideration as part of the plan.

Page 1 Property 8

After circle add "all that apply"

After please specify add "and note use of outhouses on property"

Page 3 Lake Use – General

Add to #1 m. Hiking, n. Hunting, o. Biking, p. Golfing

Page 4

Below Yes – No – Unsure, add "Describe impact and how frequently it occurs".

Page 4 Lake Health - Current and Historical Condition

#3 - j. Garlic Mustard, k. Marsh Thistle, l. Canadian Thistle, m. Poison Parsnip

Page 6 Questions 10

Add f. Fundraising needs

Questionnaire Comments

The group considered possible responses. By including the index card survey they hoped that this information will stimulate thinking and comments about Smoky's strengths and weaknesses including issue specific ideas.

Additional Issues Considered

Questionnaire distribution

1. Lake Association Members
2. Property owners not Association members
3. Volunteers – Jim Slings, Margaret Kubek, Eric Inglis, Jeff Kinner
4. Members of the Phelps community

Barb will seek advice from DNR

INDEX CARD SURVEY

- A reformatted version will be included in the mailing. Lydia will make changes using a column approach.

COVER LETTER

- Leo will draft a cover letter. In part the group felt that it should layout the purpose of the questionnaire within the context of the overall planning process.

MAILING PACKETS AND DNR REVIEW

- Packets will include a cover letter, the questionnaire, “the index card summary”, and an addressed and stamped return envelope.
- Lydia will prepare mailing labels based on an updated association membership list.
- Barb will submit packets to DNR for approval, specifically the questionnaire.

TIME FRAME

- Given the uncertainty in the timing of the DNR review response, no absolute deadline is possible. However, January/February will be the timeframe to prepare and mail packets.

DATA REVIEW AND ANALYSIS

- Lew will collect surveys and summarize data.
- Barb will analyze data and prepare a report.
- Report will be presented at the July Annual Meeting – time needed 30 minutes.

There being no further business the meeting was adjourned at 12:15pm

PLANNING STEERING COMMITTEE #3

May 24, 2018

A meeting of the Planning Steering Committee was called to order at 2pm on May 24, 2018. Present were Jim Kuchenbecker, Lydia Cooley, Lew Raker, Walt Tarmann, Leo Norden and Barb Gajewski.

The agenda consisted of five items:

- Smoky Lake survey results, review and discussion
- Budget review and progress report
- Volunteer hours budget and future volunteer participation
- Review of a partial draft of Smoky Lake history
- Vilas County/Stambaugh Township ordinances/ regulations

Survey Review

Barb presented a summary report (draft) which contained both written analysis and bar graphs of all questions. While all questions were reviewed, the committee focused on the following issues:

- Water Quality – The factors that affect it and the respondents perception of it. The question was raised as to what criteria should be used to measure changes in water quality. Secchi Disk readings over the years show no discernible trends and chemical analysis remains constant.
- Septic systems and out houses seem to be managed appropriately.
- Of the 17 possible activities on or around Smoky Lake, respondents listed spending time with family & friends, swimming, nature watching and boating as the top choices.
- Fishing Issues – Current and past quality. The decline in the size of small mouth bass and musky numbers were discussed. It was pointed out that in part perception of quality may be due to the lack of species variety.
- Watercraft used on other waters. The committee reviewed the cleaning routines when boats are transported from lake to lake. Of the 17 respondents who use their boats on other waters, all remove material, while 11 drain bilges, 8 drain live wells. The need for a cleaning station was discussed. The group considered locating one at the Smoky Lake landing as well as at a location which could serve all nearby lakes. Barb noted that sometimes holding tank are useful in setting up such stations. The group did not come to any conclusion at this time but felt discussions should continue.
- Issues affecting shoreline/riparian environment- The group considered the following issues.
 - Rising waters and algae growth
 - Runoff – fertilizer from golf course/ lawns and chemicals from state rte. 17
 - Shoreline development
 - Erosion
- Knowledge of and response to invasive species. The committee noted that almost all respondents were aware of Eurasian Milfoil in Smoky Lake. They noted that respondents reported that invasive species never or rarely affected their enjoyment on Smoky Lake. While most respondents support hand removal by landowners and divers, they were either divided or unsure of other techniques (herbicides, biological control, mechanical).The presence of narrow

leaf cattails(an invasive Species) was noted at the south end of the lake with no apparent effort by the landowner to contain its spread.

Following the review, the committee considered next steps. Barb and Lydia will make several minor edits and Barb will work with WDNR to look at additional statistical analysis. The committee discussed various ways to distribute survey information to Association members – through membership mailings, board reports, separate mailings and a presentation at the Annual Meeting. There was no final decision .

Barb presented a summary of the work performed in 2017 and the work pending in 2018. The budget for all work is \$26,738 while to date \$10,527 has been expensed.

Field work and data mining are on schedule; however, plan development is only 30% complete. Barb asked for a six month extension changing the ending date of December 31, 2018 to June 30, 2019. The committee suggested a nine -month extension which would move the end date past the 2019 annual meeting. Lew will follow up. (Since the meeting he has talked to Jane Malischke, Financial Assistance Specialist who suggested that we apply for a one- year extension. She requested a letter from Steve Doyen, Phelps Town Chairman.

As part of the budget update Barb listed volunteer activities and budgeted hours.

- Steering committee meetings
- Survey preparation
- Planning activities
- Plan development/revisions/editing
- Grant administration

The committee focused on the need to recruit at least 10 volunteers to participate in the planning charrette. Given the problem of winter meeting attendance, the committee concluded that the session should be held late next spring around Memorial Day Weekend. Members were asked to think about possible candidates for the ad hoc group and ways to recruit them.

Historical Information Draft

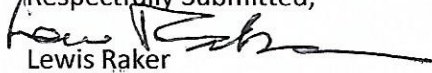
Barb distributed a draft of this three-part document. Section A is a settlement history of Smoky Lake based on Janet Oatman's Historical Sketch (2006 Rev.) Section B outlines the evolution of the Association, its mission, its structure, and its roles and responsibilities. Section C identifies challenges and threats to Smoky Lake and outlines external factors which may be considered as the plan evolves.

Shoreline Development Regulations

As part of Section C above, Barb distributed a side by side listing of Vilas County and Stambaugh Township shoreline development regulations. She suggested that as we develop the action phase of the plan, these regulations must be taken into account. The group also discussed the Smoky Lake Estates Covenants. The consensus is that time has passed them by and that they may be largely unenforceable. There was a concern expressed about subdivision of current lots and the associated shoreline impact. It was noted that this issue is covered in the Covenants; it is also addressed in the two sets of ordinances.

There being no further business, the meeting was adjourned at 5pm.

Respectfully Submitted,


Lewis Raker

PLANNING STEERING COMMITTEE #4

June 29, 2018

A meeting of the Planning Steering Committee was called to order at 10am on June 29, 2018 at Lydia Cooley's cottage. Present were Lew Raker, chairman, Lydia Cooley, Jim Kuchenbecker, Leo Norden, and Walter Tarmann. Also present was Barb Gajewski, representing Many Waters, LLC.

The agenda consisted of five items:

- Approval of May 24, 2018 minutes
- Reports to be included in the Annual Meeting mailing
- Presentation at Annual Meeting
- Discussion of need for a plan outline/table of contents
- Date for next meeting and possible agenda items

I. Approval of Minutes

A Motion was made and seconded to approve the May 29, 2018 minutes with the revision that private lawns be added to the golf course when referring to fertilizer runoff.

II. Correspondence

Lydia Cooley presented two documents for the group's consideration – Smoky Lake Comprehensive Lake Management Plan (LMP) 2018 Status Report and the 2018 Report to SLPOA and SIPA members Conservation Committee (formerly AIS Committee). Both had been circulated to the Steering Committee members prior to the meeting with a request for edits and suggested changes. Lydia explained that these reports will be included in the annual - meeting mailing scheduled to be sent shortly after the upcoming board meeting.

She stated that the LMP status report is an update and expansion of last year's report which was distributed as a handout at last year's annual meeting. She noted that rather than distributing the report at the meeting where membership is not fully represented, inclusion in the mailing will reach 100% of the membership.

The discussion focused on Section V, Association involvement in planning which lays out the roles, responsibilities and relationships of the various persons, groups and committees involved in plan development, review and approval. Lydia noted that one of the potential benefits of this structure is to promote membership engagement in the planning process as a gateway to participation in other lake preservation matters.

The group turned its attention to the Conservation Committee Report which in part details association activities over the past year. In so doing, the report establishes a framework for this committee, once the AIS Committee, as an umbrella group which coordinates preservation matters. One of them will be the responsibility to implement the Lake Management Plan. It is anticipated that the current Planning Steering Committee will be folded into the Conservation Committee. At the present time, association members are being recruited to serve on this key committee.

III. Annual Meeting Presentation

The presentation will be similar to last year's. Lew Raker will make some brief opening remarks; Leo Norden will discuss the significance of the plan; Barb will present a progress report laced with facts that members are probably not aware of; Lydia will talk about the need for membership engagement in the plan development and review process as well as participation in ongoing lake preservation matters.

The presentation is planned for forty minutes: 30 minutes for the presenters (Barb to take up the lion's share of the time, with an opportunity for questions at the conclusion).

IV. Outline/Table of Contents

Lew Raker presented a case for the development of a Table of Contents which would serve as a plan model. This notion in part came about after a conversation with Walter Tarmann, in which Walt identified the need to develop a plan outline (also a model). Up to now the grant proposal's objectives and budget have served as our reference, but as plan development proceeds, more structural detail and specificity is required to help members get a clearer understanding of the tasks which lie ahead. The group requested that Barb prepare a draft Table of Contents.

Barb noted the challenge of fitting narratives about interactive systems and subsystems into discrete chapters. She suggested that there likely will be overlapping issues in two or more chapters.

V. Next meeting and agenda

The next meeting will be scheduled to be held during the third or fourth week in August. The review of the Smoky Lake History and Table of Contents will be the focus of the meeting. There was some discussion about including the review of water quality issues at this meeting but the group decided that there would be insufficient time to fully consider this very important issue.

VI. Adjournment

The meeting was adjourned at 12:05 PM.

Respectfully Submitted,

Lewis Raker

PLANNING STEERING COMMITTEE #5

August 28, 2018

A meeting of the Planning Steering Committee was called to order at 1pm on August 28, 2018 at Jim Kuchenbecker's home. Present were Lew Raker, chairman, Lydia Cooley, Jim Kuchenbecker, Leo Norden, and Walter Tarmann. Also present was Barb Gajewski, representing Many Waters, LLC.

The meeting agenda included the following topics:

- Approval of Meeting #4 minutes
- Consultant Report
- Review of Smoky Lake History Draft
- Table of Contents Draft
- Where do we go from here?

Minutes Approval: Motion was made and seconded to approve the minutes with the following changes:

1. Section 1: change to "as revised" and delete the rest of the sentence
2. Section 2: Second to last sentence add "upon completion and acceptance of the plan"

Consultant Report: Barb reported that one field work project remains which she referred to as "Woody Work". It entails the inventory of 4" or greater diameter logs lying in 2 ft. or less of water along the entire expanse of Smoky's shoreline. She noted that such logs provide beneficial habitat for all sorts of lake creatures. She indicated that She and Bill are waiting for piers and docks to be removed prior to beginning the inventory.

Smoky Lake History: Lydia summarized a revised draft which builds on the first draft while advancing the narrative through the Smoky Lake Preservation Incorporation. At the outset she stated that Anne Hruska continued to edit and abridge Janet Oatman's original sketch. She also noted that additional information about the Native Americans is available to possibly be include in future drafts

She reviewed the history of the various stages of Smoky Lake's development from the turn of the 19th/20th century logging days to the present time. Of particular interest was the development of the Christiansen's Property originally purchased by C.M. Christiansen in the 1940's and later developed into Smoky Lake Reserve and Smoky Lake Estates by sons Phil and Robert. Lydia stated that she would be meeting with Eric Christiansen, Phil's nephew to clarify the acreage included in the Reserve and Estates.

To support the description of the various stages of property development adjacent to the lake, a property ownership map will be inserted. Lew asked Barb if such a map is feasible and was assured that it was.

The committee concurred with Lydia's recommendation to include the Smoky Lake Estates Covenants and Restrictions in the plan's appendix.

On page 2 of the draft, in reference to the logging days, Walt suggested that the word "may" be deleted from the sentence. "Some of this timber may still provide for fish habitat today". He felt, and the committee agreed, that the logs scattered across Smoky's lake bed absolutely provide fish habitat, making the word "may" inaccurate.

The group discussed the relationship between the Sylvania and Smoky Lake Reserve. Lydia dispelled the notion that C.M. Christiansen traded the Sylvania tract for the Smoky Lake property. Rather her research reveals that C.M. Christiansen sold his interest in Sylvania to raise working capital to support the Smoky Lake Reserve

development. Beyond that, the draft states that “The Reserve was inspired by the Sylvania tract property in the Upper Peninsula, where C.M. Christiansen was once a part-owner.

The group next focused on the founding of the two lake association organizations, the Smoky Lake Property Owner’s Association (SLPOA) and Smoky Lake Preservation Association (SLPA), and matters they addressed over time. In large measure this is a story of responsible people addressing the exigencies of the times.

In 1971 SLPOA agenda topics at its first meeting included such matters as Sanitary Codes, Sub Divisions, Access Roads, Boat Control, Business Usage and Tree Screens, all of which are continuing concerns.

Turning to a discussion of Association Business, Lydia explained that she has chosen to depart from a strictly chronological/narrative approach to a topical synthesis derived from research of Association minutes and other primary sources. In this way she felt that her findings can be used not only as a part of the social history but can help bring context to other matters addressed in the plan.

The topics considered include:

(A) Zoning – Early development, Greenbelt Proposals, and Business Usage

The Greenbelt section sparked a discussion. Of particular concern was an amendment to Article 8.5 (Stambaugh Township) which regulates land maintenance up to 75’ from the highwater mark. Lydia stated that current information is based on a summary taken from the Association minutes. She feels that the actual ordinance, not an unofficial summary, should be the operative document.

Walt added to the conversation by noting that his zoning research thus far reveals that the first 300’ from a lake’s high water mark comes under lake district (L1/L2) zoning ordinances. Property beyond 300’ is zoned Agricultural/Rural. Since Smoky Lake lots exceed the 300’ lake district limit, property comes under two zoning ordinances. It is unclear at this time, other than being confusing, whether or not the dual zoning is problematic.

There was also discussion about Smoky Lake’s flood plain and wetland designations. As of now these designations have not been researched. In a related matter, the question was asked how much higher does Smoky’s lake level need to rise before the culvert under State Highway 17 comes into play. The group felt that by using survey techniques and technology this question can be resolved quite easily, although by whom is unclear.

The group’s focus turned to the related zoning topic of business use of properties adjacent to Smoky Lake. This topic is longstanding dating back to the prohibition of rental properties enumerated in the Smoky Lake Estate’s Covenants. Members observed that rental properties seem to be on the rise. A related concern is the potential use of property for business purposes which would degrade Smoky Lake’s pristine recreational environment.

At the conclusion of the zoning discussion, the committee asked Walt to continue his inquiries and report back on land use regulations of the lake management plan study area.

(B) Boating Safety and Courtesy

Lydia noted that this topic is ongoing and will be addressed in 2019. The committee wondered at what age a person may operate a motor boat.

(C) Environmental Quality

This topic is expansive and will no doubt be a significant part of the Comprehensive Lake Management Plan. Lydia’s presentation divides the topic into four components – fishing; water quality, clarity and depth (lake

level); and wildlife / invasive species. The committee, following Lydia's lead, discussed each of the issues and in the process raising several points.

Referring to the first paragraph in the fishing section, Walt questioned whether walleyes had ever been stocked in Smoky Lake. Members who have an interest in fishing expressed skepticism. However, Lydia stated that it was important to report the facts as they emerge from the research documents, in this case the SLPOA minutes.

Lew responded to the comment that the most recent Smoky Lake fish survey was conducted in 1996. He distributed copies of a Wisconsin DNR fisheries information sheet detailing the results of a comprehensive fishery survey conducted in the spring of 2015. This survey became the starting point of the WDNR review process to establish a Small Mouth Bass slot limit on Smoky Lake, a longstanding objective of the Lake Association.

(D) Wildlife and Invasive Species

On the one hand Lydia's narrative provides a comprehensive summary of the Lake Association's actions to learn about, protect, and nurture wildlife which inhabit and enhance the quality of the Smoky Lake area. On the other, Lydia describes the Association's ongoing efforts to control invasive species, most notably the continuing effort to control Eurasian Milfoil spread.

(E) Basic Services

The final section addresses seven services which are integral to Smoky Lake Community life. Lydia provides a chronological narrative, using information gleaned from Association sources, to document the interface between the community and the following services: Road Access, Fire Protection, Police Protection, Phone and Internet Services, Hospital, Ambulance/ EMT, and specific local developments. It was felt that this section will serve as a valuable reference when issues arise involving one of the services.

Following Lydia's presentation, next steps were discussed. Lydia and Barb will continue to refine the history, consolidate when possible and expand when appropriate. Following up on comments and questions noted on page 13, Lydia reiterated a concern that the property development narrative is a bit unbalanced between as she puts it "the short reference to cottages on the shore" compared to the more expansive treatment of Smoky Lake Estates. She felt that the cottages represent people "with deep history on the lake" who may feel that their longstanding history on Smoky Lake has been given short shrift.

During the above presentation a host of past issues were identified, many of which continue today and likely will be of concern in the future. Some of these will be relevant to plan development while others may be outside the scope of a lake management plan, but are noteworthy. The committee felt these latter issues need to be memorialized through a plan addendum for referral to the appropriate group for consideration and possible action.

Table of Contents

At the last meeting, Barb was asked to prepare a draft table of contents, which she distributed prior to today's session. The thought is that it will serve as a model which lays out the plan's content and suggests the tasks which lie ahead.

Barb led the committee through a review of the table, during which a number of ideas were raised and questions asked.

- *Vision Statement* – prior to the meeting Lew asked Jim if he would take the lead in drafting this statement. Jim agreed and when Lew suggested this to the group, members concurred. As a reference

it was pointed out that in the grant application on page 7, the project description lays out a plan vision and four project goals. Additionally, the history, page 4, describes the original objectives of the Lake Association Founders along with a quote from Thoreau's Walden. It was suggested that these references might assist Jim.

- *Executive Summary* – There was a discussion about the content and use of an executive summary. It was pointed out that executive summaries sometimes are distributed as a condensed version of the complete plan. Barb estimates our plan will be approximately two hundred pages in length. The table, however, suggests another purpose and that is to provide context to the plan by including the social history and a project area description. The question raised is this section a true executive summary or a kind of introduction? There was no conclusion at this time.
- *Lake Owners Survey and Discussion* – Barb suggested that the complete Survey including data summary and graphs will be included in the appendix while the analysis and discussion will be presented as part of the public participatory section of the plan.
- *Charrette Methods and Summary* – With the creation of the Plan Review Group (discussed below), the Charrette Group, as envisioned in the grant application will likely be replaced by the PRG, therefore this heading will be changed to Plan Review Group (PRG) Results and Summary.
- *Lake Inventory* – The committee continued the watershed and shoreland discussion. Included were questions about identification of wetlands, effects of a rising lake level, flood plain, and Estate Covenants.
- *Goals and Objectives* – Barb told the group that at the appropriate time she will provide operational definitions of Goals and Objectives to guide the group through this phase of plan development.

Where We Go From Here

1. Policies/Ordinances/Regulations

The committee continued its discussion about the relationship between environmental related issues which may arise from Barb's research and associated legal structures. It is hoped that Walt's research/report will help clarify this subject in a way that will be useful in the plan's development.

2. Plan Review

Lew suggested that a one-day session be held to present a draft plan to the Plan Review Group (PRG). This session would provide the opportunity to elicit comments and suggestions from the volunteers. Of particular interest would be the group's reactions to the plan's goals and objectives and would replace the ten-person Charrette Group envisioned in the grant application. The Steering Committee approved holding this session.

This session will emphasize the importance of involving as many people as possible in the plan's development, thereby helping to assure a positive reception and approval by the Association Membership.

The place, date and time of the meeting was considered. The group's thinking is that it should take place in early June, that Memorial Day Weekend should be avoided as experience shows that it is not conducive to high attendance. It also cautioned that while there would be a morning and afternoon session, each should be limited in time to perhaps two hours with an hour for lunch and socialization at the end.

Lydia and Lew suggested the Wilderness Lodge as the venue as its location has worked well for the annual post meeting gatherings. It has both capacity and food service facilities. There was some question raised about the site's accessibility.

The group looked at the various steps in the approval process beyond the group session. The final step would be the Association Annual Meeting on the fourth Saturday of July. The plan will also need to be approved by the Board of Directors. Jim asked about the WDNR involvement. In response, Barb stated that the plan will at some point be submitted to the DNR for review and approval. Beyond this, timing remains unclear. Further, Leo asked what happens if an entity along the way either disapproves or approves the plan subject to change. At this point, the best answer is to involve as many people upfront in plan development as a way to help assure a favorable outcome.

3. Plan Review Group's Organization

On a related matter, the committee discussed the various steps required to organize the Plan Review Group (PRG). The first step was the volunteer signup sheet which Lydia circulated at this year's annual meeting. The response was outstanding but as was pointed out, not all members were at the meeting and thus did not have the opportunity to hear Lydia's presentation on the need for volunteers or sign up.

The group asked Leo in his capacity of Association President and a member of the Steering Committee to write a letter to the members. In it members will be briefed on the role of the Plan Review Group and its importance to the planning process. This letter will be distributed as part of a pre-planned mailing.

It is anticipated that once the Plan Review Group's membership is finalized, the Steering Committee will send a second letter to the volunteers which will explain how the review process will work, including the planned session in June. (ask for date availability)

Next Meeting

No date was set for the next meeting but Lew and Barb will stay in touch in order to determine when a meeting is needed and the subject matter to be included. In the interim much of the committee business will be conducted electronically

There being no further business, the meeting was adjourned at 4:45pm.

Respectfully Submitted,

Lewis Raker

Planning Steering Committee #6

March 11, 2019

A meeting of the Planning Steering Committee was called to order by Chairman Lewis Raker at 9:00 am on March 11, 2019 at Trees for Tomorrow conference room. Present were Lewis Raker, Lydia Cooley, Jim Kuchenbecker, Leo Norden and Barb Gajewski (representing Manny Waters LLC). Walter Tarmann attended the meeting via teleconferencing.

The meeting agenda included the following topics:

- Approval of meeting #5 minutes.
- Vision Statement discussion and approval.
- Historical, Social and Organizational Context
- Presentation of lake inventory findings presented by Barb Gajewski, followed by discussion
- Review of Lake Management Action Plan and associated issues.

Steering Committee Meeting #5 approval minutes: A motion was made and seconded to accept the minutes with the following revisions.

1. Smoky Lake History para 2, last sentence, change Robert's nephew to read Phil's and Robert's nephew.
2. Smoky Lake History page 3, Basic Services eliminate comma.

Vision Statement: The committee thanked Jim for excellent work in developing the following statement:

Preserve and enhance the ecological integrity of Smoky Lake and its surrounding habitat by promoting policies and practices that support ecosystem stability and resilience, recreational opportunities and the qualities which make Smoky Lake beautiful.

Jim stated that he had received emails from all members confirming their approval of the statement. Accordingly, a motion was made, seconded and approved to accept the above statement.

Following the motion, the group discussed the utility of vision statements in general and specifically the relationship between the above statement and the Bylaws Vision Statement. Although there are two statements, Lydia suggested that there is no legal conflict; this statement is plan specific and subject to change at any time. Other members wondered about the group's authority to approve a vision statement that would apply to the Preservation Association. It was pointed out that at some point, the Association will approve the Management Plan including the Vision Statement.

History: Lydia reported that drafting is all but complete and is currently being edited by Anne Hruska. However, several questions remain. A map of Smoky Lake depicting Smoky Lake property ownership information will be inserted in the appendix. Jim asked if a map showing

past platting and owners might be available to illustrate property development on Smoky's southeast side- farming and cottages. Lydia replied that she was unaware of such a map. She recommended that more information be gathered possibly as part of the action plan. She suggested contacting Jeff Kangas and Lorraine Mason who may have more information on this matter.

Lake Inventory Findings: Barb, using a power point presentation, reported on the findings (excluding fisheries) of Manny Water's Lake Inventory research and data gathering. Topics included aquatic plants, lake features, water quality, watershed and shoreland.

- I. Aquatic Plants: Implication in Barb's presentation was the notion that the condition of a lake's aquatic plants is an important indicator of overall health of the lake. She started her presentation with a discussion of a sampling techniques used to gather plant samples and the resultant development of a data base including species type, quantities found and their distribution throughout the lake.

As part of this discussion, she introduced the concepts of richness and diversity, richness being the number of plant species found and diversity, the distribution of these plant species throughout the lake.

From these concepts Barb calculated four measurements which mathematically quantify Smoky's plant biodiversity and plant health.

- (1) Simpson Diversity Index, combining richness and diversity, resulted in Smoky's index number of .74 on a scale of 0 to 1.
- (2) Floristic Quality Index is a measurement of the "natural" state of Smoky's aquatic plants. In 2017 Smoky's index was 32.8 compared to the Northern Wisconsin Lake's mean index of 28.3.
- (3) Smoky's species richness (number of species) is 18 in 2017 compared to Northern Wisconsin Lake's mean richness of 24.
- (4) Conservative Coefficient, similar to Floristic Quality Index, is a measure of the natural state. On a scale of 0 to 1, Smoky's is 7.5 compared to 6.9 for all Wisconsin Lakes.

The committee next reviewed various aspects of aquatic plant life in Smoky Lake. Information was presented by means of a sediment map of Smoky Lake's bottom (rock, sand and soft), a graphic displaying the species of plants and their frequency found in the lake's littoral zone and the range of depths plant life occurs from < 1ft to 38 feet.

During the course of this part of the presentation, members raised a number of questions. Leo asked about the effect of herbicide treatment targeted at EWM on other plants. Barb responded that herbicides are not totally plant specific and as such would have an effect on other plants.

Barb summarized Smoky Lake's aquatic plant situation as

- Floristic quality is above average for our region and state.
- Many species reflect pristine water.
- Richness and Diversity vary with the season.
- Low lake wide EWM populations.

II. Lake Features: Barb began this phase of the presentation with a summary of key lake characteristics.

- Seepage lake with no water inlet or outlet.
- A two story (>50 ft depth) stratified lake which can support cold water fish.
- Surface water acreage (2009 WDNR data) is 610 acres.
- Depth varies due to lake elevation change.
- Avg. depth 29.47 ft
- Estimated water volume 17567 per acre-feet
- Shoreline Complexity 1.89 - this coefficient equates the ratio of Smoky's acreage and shoreline circumference and the area of a circle and its circumference.

Smoky's shoreline is somewhat regular with a rather low complexity coefficient of 1.89. She compared Smoky's situation with that of Lac Vieux Desert, with its many islands, coves and bays with a complexity coefficient of >4.

Lake Features – Utilizing data collected in conjunction with the Discovery Center's lake elevation program, the group reviewed elevation patterns during the years 2012 – 2018, the time period when Smoky water level rose over three feet.

Lake Features – Depth – Barb presented two illustrations which depict Smoky Lake depth, a chart which compares depth to surface area and a colored contour map which identifies the deepest part of the lake in dark blue.

III. Water Quality – Trophic State and General Conditions.

Barb explained the concept, makeup and uses of Trophic State Index. Derived from a formula which combines water clarity and chlorophyll / total phosphorous measurements, TSI index serves as a way to classify lakes into three categories. – Eutrophic, Mesotrophic and Oligotrophic. Smoky is oligotrophic- typically a deep, clear lake with relatively low levels of total phosphorous and chlorophyll.

Because of the quality of Smoky's water in combination with other factors, Barb noted that Smoky meets WDNR designated use criteria for fish and aquatic life – excellent, recreation – excellent, fish consumption – good.

Water Quality – Trends.

The group reviewed a graph which shows secchi disc readings from 1990 through 2018. Barb noted that perhaps surprisingly during this period water clarity increased. There is

no ready explanation for this trend. Zebra Mussels are likely not the cause as water chemistry is not favorable to their colonization and none have been reported.

The group reviewed four graphs which track water temperature and dissolved oxygen down the water column to 65'/70'. The graphs depict data collected by the Tarmann's and Kuchenbeckers in early May, late July, late August and mid - September. They show changes in the structure and depth of the thermocline during the measurement period (4 -5 months). Dissolved oxygen levels more or less follow the temperature patterns, higher in upper column

with an abrupt decrease at the thermocline and at trace levels below 45 feet.

Barb suggested water quality "take homes"

- Water quality is stable
- Smoky meets DVDNR usage criteria
- Lake is phosphorous limited, i.e. that is phosphorous is the controlling factor for plant health.
- Water chemistry presents no current threat.

IV. Watershed –

Smoky Lake's watershed is designated a HVC (sub-watershed) Thoroughfare Creek-Deerskin and is composed of 2.68 sq. miles. Its landcover (drainage area) is comprised of 84% forest, 8% development and 8% wetland.

Accompanying this description, Barb included a drawing of Smoky Lake which defined watershed boundaries and private property plats. As a final observation Barb explained that lakes such as Smoky with a relatively small drainage area in comparison to its surface area, are more environmental sensitive to disturbances in the drainage area.

V. Shoreland –

Barb began the last part of the presentation by referring to a drawing which illustrated the three components of a shoreland – the riparian zone (inland 35ft from the bank), the bank itself (from the highwater mark to the bank toe or water edge) and the littoral zone (shallow water).

With the above definition in mind she discussed her observations of the conditions found on Smoky's shoreland properties. These findings were documented in two ways, a chart which inventoried various aspects of the shorelands environment, its riparian, bank and littoral zones and a series of bar graphs which illustrated various types of runoff conditions within and outside the shoreline.

With Barb taking the lead, the committee focused on a number of issues which potentially represent threats to the shoreland environment and by extension to the lake itself. These issues include:

- Manicured sloping lawns within the riparian zone
- Runoff caused by impervious surfaces (stairs, tunnels, trails and roads)
- Presence of bare soil within and outside the shoreland area
- Channelized water and the presence of gullies
- Point Source Runoff
- Sand and silt in the riparian zone
- Disruption of dry lake bed during periods of low water

Although there are potential threats present on the shoreland, Barb suggested that Smoky's ecosystem is functionally healthy. However, she cautioned that surrounding land use may have the largest impact to the lake. Her recommendation is to focus on education as the best way to prevent adverse human activity.

In summation the group considered the advice of U.W. Extension about the sensitivities of landowners about their property . They stress the need for empathetic relationships with and among landowners.

VI. Road Map / Action Plan

The second part of Barb's presentation involved planning the way forward, finalizing a road map and proposing timelines for key planning activities and outputs. Topics covered include:

- Plan Draft Review
- Action plan development (goals, objectives and strategies)
- Charrette process
- Board and Association Review
- Plan adoption

To accomplish this objective Barb developed a road map using an Excel platform which incorporated various inputs, Lydia's action plan, Walt's report and discussion between Lew and Barb about action plan development.

The roadmap consists of six components – Plan Contents, Committee Review function, Action Plan Development, Board Review , Charrette nuts and bolts and Association participation.

For each component Barb identified controlling activities which drive the plan and identify responsibilities, contents and time frames.

During the presentation the group raised a number of issues and questions:

- LMP Draft – The Board would like to review a draft of the Lake Management Plan prior to the meeting.
- Editing – Lew asked Jim if he would coordinate the editing function which he agreed to do.
- Document Distribution – The committee reviewed possible ways to distribute documents electronically. Members suggested several ideas – paper, thumb drive, and internet (website). Two Board members are looking at the issue and Barb was requested to do so as well.
- Action Plan – Barb reviewed the process to develop the Action Plan. In April she will distribute goals which will be explicitly derived from the Vision Statement. In turn committee members are asked to submit themes to inform Barb’s drafting of objectives. Members will have up to two weeks prior to the Charrette (Joint meeting with the Board) to propose themes. Following up on objectives, the committee will prepare alternate strategies/action which will be available at the Charrette to assist in finalizing strategies. In turn Barb will draft the Action Plan for review and subsequent approval by Committee and Board, and Association (as per the overall LMP)
- LMP to WDNR – Projected to be sent in October
- Courtesy Code – The Board and Dave Ogilvie is looking at revising and introducing a Lake Courtesy Code. Lew felt that in addition there needs to be some education on boating safety, and “rules of the road”.
- Culverts and High Water – Once again the group discussed the issue of the culvert system (under SH 17) and drainage between Smoky to Big Sand Lake
- Lew reported that Walt has been researching the situation including obtaining maps and survey information. He further reported he has personally walked from SR17 to the lake. There is an approximate four-foot barrier, possibly the old road bed, which runs from the Anderson to Ray properties thus forming a dam between the lake and the wetland. At the time there was snow on the ground and made it difficult to determine if there were culverts under the barrier.
- Plan Review Group Session – While the roadmap scheduled the session in July, the committee felt that it may need to be held in August.
- Association LMP Approval – The plan will not be completed in its final form by the time of the Annual Meeting. Consequently, the Association will authorize the Board to approve the plan prior to submission to WDNR.

There being no further business, the meeting was adjourned at 12:30 pm.

Respectfully Submitted

Lewis Raker

Planning Steering Committee #7

May 21, 2019

A meeting of the Planning Steering Committee was called to order at 12:00 noon, at Leo Norden's Cottage, Smoky Lake. Present were Lewis Raker, Lydia Cooley, Jim Kuchenbecker, Leo Norden, Walter Tarmann and Barb Gajewski (representing Manny Waters LLC).

The meeting agenda included the following topics:

- Approval of Meeting #6 Minutes
- Status of CLMP working draft
- Board engagement
- Communication Plan
- Action Plan Development
- Next meeting, date & agenda

Prior to the meeting an additional item was added:

- Report on zoning, wetlands, flood plains and lake elevation – Walt Tarmann

Approval Steering Committee Meeting #6 Minutes:

Three changes were requested. Barb pointed out the typing error in which Many Waters was written as Manny Waters. On the second page, first paragraph, Lydia asked that the following be added to the last sentence – “on the history of the development of the eastern and southern shoreline outside the reserve.” Lew suggested that the reference to #4, the Conservation Coefficient be changed to “is a measure of the natural state. On the scale of 0 to 10, Smoky's is 7.5 compared to 6.9 for all Wisconsin lakes.”

CLMP Working Draft:

Barb reported that edits have been incorporated into the previously distributed plan sections. The table of contents, introduction/ executive summary and supporting materials will be ready for distribution soon. Members were encouraged to edit these documents as quickly as possible in order to expedite the distribution of the working draft. Lydia suggested that when editing, attention should be paid to readability.

The section describing lake features includes a contour map of Smoky Lake. Barb suggested that this map can be upgraded by the purchase of a more detailed map through a company, Bio Base, for the cost of \$270. She noted that once purchased, it can be used for various purposes. The cost is covered in the budget. The committee approved this purchase.

Board Engagement:

Leo will present a summary report of this meeting at the May 25th Board Meeting. Issues concerning the CLMP draft (distribution when and how) and preparations for the upcoming combined meeting will also be topics of discussion. Lydia is in the process of asking for dates and times for the combined meeting.

Communication Plan:

Jim led a detailed discussion about the various options to distribute the working draft. One system using a Google Docs platform is available and has been tested. Two other systems were suggested, Drop Box, a document distribution and networking system similar to Google Docs, and Flash Drives, information storage devices which have come to replace floppy discs. After much discussion it was decided to test each system, possibly distributing the work plan draft to SC members using each system. Jim will coordinate the test. Barb felt that as document distribution proceeds, some hard copies will be required. The Board will also provide input into the decision (note subsequent to this and the Board meeting, a decision was made to use Google Docs).

Beyond the Board, the committee considered plans to disseminate the draft to various groups of lake stakeholders. This would be done through a linkage with the Phelps website. Lew and Jim have presented this idea to Marge and she subsequently agreed. Coordination would be between Jim and the Phelps website management firm. At this point it is understood that there would be no cost to the Association. In this way, the plan would be available and accessible for review and comment by Smoky Lake Property Owners, Members of the Smoky Lake Preservation Association, the Phelps Community (sponsors of the Planning Grant) and interested Michigan groups and individuals. Barb will provide suggestions from a Michigan perspective.

Specific individuals will be asked to review and comment on the plan. Dan Anderson, a member of the Phelps Lake Committee and a key participant in the development of the Long Lake CLMP, was suggested as was Carolyn Scholl, Head of the Vilas County Land and Water Conservation Department. Lydia noted that she planned to attend the next Iron County Lakes and Streams Partnership Meeting.

With the completion of the CLMP working draft, plan development enters a new phase in which communication with and feedback from stakeholders becomes a priority concern. The group reviewed activities and events which address this concern.

- 1) July 1 or thereabout – Lydia's letter to the Association

It was suggested that rather than including this information as part of the basic letter, it would be included as a separate enclosure.

- 2) Letter to individuals who volunteered to take part in the plan review process and other activities connected with the plan.
- 3) As suggested by a DNR email to Barb, a postcard will be mailed to stakeholders as a follows up to Lydia's letter.
- 4) Prepare program for Annual Meeting
- 5) Plan for Review Session Aug. 17 at the Wilderness.

Walt Tarmann Report & Recommendation:

As noted above this item was added to the agenda at Walt's request. The information presented is included as enclosure 1 to these minutes as prepared by Walt in a minutes format.

Action Plan Review:

Barb led the group through the details of the Action Plan, goal by goal, objective by objective, and alternative strategy by alternative strategy. This review resulted in the elimination and consolidation of a number of strategies while focusing on key issues.

Discussions included:

- The need to pay attention to terrestrial invasive species such as wild mustard, cow parsnips, and Canadian thistle. As to the last, the infestation of Canadian thistle along Smoky's shoreline has largely been eliminated due to high water conditions.
- Goal (1) Organizational Capacity: The committee discussed the organizational challenges presented by the plan. In part this goal, Barb noted, was informed by a recent article appearing in Lake Tides which she had previously distributed to the group. Lydia noted that Smoky is a small lake community with a limited number of property owners. It will be necessary to seek new volunteer involvement with particular attention paid to skillsets of new owners. The Conservation Committee has identified certain roles already, but it will continue to evaluate new roles that arise from the LMP process. It will be necessary to prioritize implementation as well.
- In reference to Goal (1), Objective (2) Alternate Strategy: Members discussed the various ways that communication with the Lake Community can be improved. Concerns were expressed about the time and expenses to accomplish various items listed in this strategy. Specifically, the time/expenses to manage a website was noted.
- The group reviewed Objective (3), Strategy (3) which transforms Walt Tarmann's research into three recommendations to Stambaugh Township.
 - 1) L2 zoning beyond 300' from Smoky's shoreline up to Smoky Lake Drive.
 - 2) Vision corridor regulatory inconsistencies.
 - 3) Delineating, clarifying, and mapping wetlands around Smoky Lake

- Goal (2), Objective Strategy (4): Beyond the routine chemical water analysis, the committee considered the need to analyze sodium content. The primary source of salt is likely the runoff from SR17. As a result, sodium concentration may be localized and vary with conditions and seasons.
- Goal (2), Objective (2) is about water levels and given today's high- water conditions was the subject of much discussion, particularly about possible degradation to property owners' shorelines. The committee deleted Strategy (2) as the Discovery Center's Program will be pegging lake elevation measurements to sea level – Smoky elevation is currently 1701 feet above sea level. Much of the discussion was centered around historical and current lake drainage patterns through the wetland connecting Smoky and Big Sand Lakes. Barb cautioned that any action designed to mitigate high water conditions should occur only after a thorough fact gathering study.
- Goal (3), Objective Strategy (2): After reviewing a sample Lake Tour Brochure and considering the costs and benefits of such a document, the committee decided to delete this strategy. As part of consideration of Goal (3), Objective (2), restoration of marginal shoreland, the pros and cons of rip rap were debated. Barb suggested that there are a number of alternatives to rip rap which are more habitat friendly for wildlife. Conversely it can be very effective in preventing erosion on shorelines subject to heavy wave action. After much discussion it was agreed that its use can be appropriate in selected circumstances but only as a last resort.
- The committee reviewed opportunities presented in Goal (3), Objective (2), Strategies (1) & (2) for landowners to make habitat improvements to their shorelands. Barb explained that on one hand Strategy (1), Healthy Lakes, is a WDNR grant program which provides funding assistance through, in our case, the Preservation Association to property owners desirous of making habitat improvements. On the other, Strategy (2) envisions a less formal referral system which aims to connect motivated landowners to consulting assistance. The purpose is to help them learn about their property and how best to manage it from a habitat improvement perspective.
- When considering such services, it was suggested that the Vilas County Land and Water Conservation Department can provide such assistance. Barb singled out Quita Sheehan, Conservation Specialist, as a person who could be particularly helpful.

Steering Committee Meeting:

The next meeting will be held on June 23, 2019 at Lydia's house. It is tentatively planned to begin at 11:00 AM.

The meeting was adjourned at 5:00 PM.

Respectfully Submitted,

Lew Raker

Enclosure 1

Walter Tarmann Report

Lew requested Walt Tarmann to present the Smoky Lake elevation data he had assembled. Mr Tarmann said he would like to take a few minutes before discussing lake water elevation information and discuss conclusions he had reached after writing the zoning regulations report. He explained he did not include any recommendations in his report because he wanted to discuss them first with the Steering Committee. The following items were presented:

1. All the Smoky Lake Estate lots and other Michigan lake parcels are zoned in the L-2 zoning district (Lake Areas) which is mapped 300 feet landward from the ordinary highwater mark. This results in lake lots having two zoning classifications since most if not all of the lots have a depth greater than 300 feet. The AR district (Rural Residential, Agriculture and Forestry) has been utilized for this area. He explained this is unusual for a zoning ordinance to set forth a distance requirement whereas usually some physical feature is used to determine locational requirements of a district (i.e. roads, lot boundaries, topography, et.).

He suggested that a request be made to the Township of Stambaugh to remove the 300 foot requirement and to zone all parcels as L-2 .

2. The Township of Stambaugh ordinance calls for the preservation of wetlands yet they do not have a wetland zoning district. The wetlands are administered by the Michigan Department of Environmental Quality and have been mapped. It would be helpful for the Township zoning ordinance administrator as well as the general public to have the wetlands mapped and administered consistent with the MDEQ regulations. It is suggested that this matter be presented to the Township of Stambaugh for their consideration.
3. Floodplains have not been mapped for the Smoky Lake watershed area. Walt advised that the MDEQ provide this service free of cost. He was not aware if they would include Wisconsin lands in their floodplain determination.
4. Vilas County Zoning Ordinance allows for 35% of the lake lot frontage to be cleared of vegetation for the purpose of creating a vision corridor to the lake. The Township of Stambaugh ordinance only allows a resident to create a trail or walkway providing

access to the lake. He suggested it might be reasonable to consider an ordinance provision allowing a 5% or 10% vision corridor.

As there was very little discussion, no conclusions were reached to include or not include any of the 4 items. However, these topics were noted in the 12t revision of the action nplaN the action plan

Next Mr. Tarmann presented information he had gathered regarding Smoky Lake water elevation. Copies of a report prepared by Jon Simonsen of the WDNR dated Nov. 16, 2018 were distributed to the Steering Committee (see attached). He explained a wetland mapped and zoned by Vilas County lies between Smoky Lake and Big Sand Lake. Near the shore of Smoky Lake lies Old Highway 17 which acts as a dike or damn inhibiting the natural flow of water from Smoky Lake into the wetland or floodplain. According to the WDNR profile the dike has an elevation of 1703.3 feet above sea level. Also located in the wetland is STH 17 which contains a culvert located at the elevation of the wetland with an unknown invert elevation. Closer to Big Sand Lake another culvert exists which is located under another road and fill area. This culvert allows cumulated water in the wetland to discharge into Big Sand Lake.

It was further stated that the 1999 USGS quadrangle map has an elevation of 1699 feet above sea level for Smoky Lake and 1697 feet for Big Sand Lake which may indicate a natural outlet may exist for Smoky Lake.

Jim Keichenbecker noted that based on the WDNR profile and the 1999 USGS elevation of Smoky Lake the lake would have to raise approximately 4 feet before it would flow into the wetland.

Recently Lew Raker was advised by the Northland Discovery Center staff that they would be establishing a sea level elevation for Smoky Lake. This will be very helpful as it can be utilized in conjunction with the profile prepared by the WDNR. This data will provide the Steering Committee and Many Waters with information to determine a future course of action regarding management of Smoky Lake water elevation.

Planning Steering Committee #8

June 23, 2019

A meeting of the Planning Steering Committee was called to order at 11:10 am, at Leo Norden's Cottage, Smoky Lake. Present were Lewis Raker, Lydia Cooley, Jim Kuchenbecker, Leo Norden, Walter Tarmann and Barb Gajewski (representing Manny Waters LLC).

The meeting agenda consisted of the following items:

- Approval of Meeting #7 Minutes
- Board Report
- Review of Draft CLMP
- Action Plan Discussion
- Plan Rollout

Approval of Minutes:

Jim noted that page numbers were omitted and his name was misspelled. He subsequently moved that the minutes be approved subject to future corrections. The motion was seconded by Walt and approved.

Board Report:

Leo summarized topics of discussion at the May 25th Board meeting. In general Board members are encouraged by the work of Manny Waters and the Steering Committee and look forward to receiving the working draft and the upcoming Joint Meeting (July 13th at 8:30 am). They are not comfortable, however, with releasing the plan in draft form to the general public via the Phelps website. They would prefer a more selected release to identified stakeholders which would include Association Members and other interested individuals.

Draft Plan Review:

The review was structured to enable each member to critique the plan and to make suggestions. Often these suggestions lead to group interaction which resulted in recommendations which Barb noted. Suggestions included:

- Soften the introduction in a way which invites the reader into the plan.
- Expand the Table of Contents to include subheadings for easy reference to specific topics
- Swap sections 3.0 and 4.0
- Align dissolved oxygen text with fish chart and enhance coloration of chart
- In the summary delete part of text about rip rap and relocate
- Current Plan Review Session date from August 13 to August 17

Although members had only received the draft plan several days ago, in general they felt it was well organized, in general well written (although another round of editing is called for), and perhaps most important met the purposes for which it is intended.

As noted above, additional editing is needed, but unlike the first round, members are requested to contact Barb with their suggestions.

Action Plan Discussion:

Barb announced that the Plan will be forwarded to the members within a day or two for review and editing. Accordingly, a meeting was scheduled for Saturday, June 29th beginning at 7:30 am at Leo's cottage at which time it will be reviewed and revised as necessary. The aim is to make whatever changes are needed so that the committee is comfortable with forwarding the plan as part of the CLMP to the Board as soon as possible.

In the interim the group was asked to edit the Action Plan using the Excel system, to be complete by Wednesday, June 26th.

Plan Roll Out Topics:

1. The Board, through comments sheets, will have the opportunity to critique the plan prior to the Joint Meeting. This process should provide the SC with a sense of Board Member's concerns and ideas.
2. As a result of timing issues, it was decided the distribution of the CLMP to Association Members should coincide with the Annual Meeting and at that time postcards would be sent reminding Association Members how to access the plan and how to provide feedback. The message would reinforce the information presented in the Annual Meeting letter. Rather than using the Phelps website linkage to Google Docs, Association Members will receive an email from Jim directing them as to how to access the plan on the Google Docs platform. Other systems such as PDF and thumb drive may also be available.
3. Annual Meeting letter: Lydia will prepare a draft to be shared with the group. The deadline to complete the mailing is around July 1.
4. Plan Approval: The plan should be ready to submit to the WDNR this fall after Board approval. The plan is to ask the membership to authorize the Board to approve the plan on their behalf at the Annual Meeting.
5. Lydia volunteered to outline a rollout schedule and time frames to complete the planning process.
6. The committee briefly discussed the plan distribution list to those outside of the Association. Suggestions should be forwarded to Barb.
7. Plan cover letter: The letter would serve as an introduction to the plan, provide information as to feedback methods, and per the WDNR recommendation pose some questions as guides to reviewing the plan.

The meeting was adjourned at 2:10 pm although informal discussion followed.

Respectfully Submitted,

Lewis Raker

Smoky Lake
Lake Management Plan Review Session
August 17, 2019
Wilderness Lodge

Present: Lew and Mary Lou Raker, Leo and Marilyn Norden, Lydia Cooley, Andy Lechtenberg, Jim Kuchenbecker, Walt and Sue Tarmann, Larry Brown, Loris Damerow, Kathy Denis, Marilyn Dixon, Lin Frederickson, Sandra Green, Colin Hughes, Kristen Hill, Paul Wegehaupt, Susan Hillman, Don Johnson, Jeff Kangas, Dave Oatman, Dave Ogilvie, Sue Rapp, Bob Virgil, Bob Zabel, Matt Zabel and Barb Gajewski .

Handouts: Smoky Lake Management Plan Review Agenda, Action Plan Power Point, and Smoky Lake Management Plan Review Questions

Introduction: Lew Raker

Lew called the meeting to order at 10:00 a.m. He welcomed attendees into the Lake Management process that has been in the works for two years under the coordination of the Steering Committee.

The Lake Management Planning document was developed over the past 6 months. This review session is the opportunity to gather the feedback necessary to move this process forward toward Board and WDNR approval. Conversation, comments and concerns are welcomed. The comments from this meeting and from others received outside the immediate lake community will be consolidated into the final draft document to be presented to the Board for its Labor Day Weekend meeting.

Barb Gajewski was thanked for her work in developing the grant, conducting the research, organizing the materials and producing the draft of the Lake Management Plan. Lew asked for a hearty round of applause to acknowledge this monumental effort.

Meeting Plan - Jim Kuchenbecker

Jim provided an overview of the meeting plan, which included presentations on the Comprehensive Lake Plan, the Action Plan, and a Discussion, Question and Answer Session. A short lunch break was to be taken between the first two presentations and the afternoon discussion period. He identified handouts: agenda, power point presentation and review questions. He encouraged attendees to provide responses to the 10 review questions. These could be left at end of the meeting or returned to him by Tuesday, August 20.

Jim provided an overview of the building facilities and asked us to respect the facility by primarily using the space on the lower level, which has been reserved for our use.

Comprehensive Lake Plan Review Presentation – Barb Gajewski, Many Waters LLC

Barb thanked Lew for his introduction and the steering committee for its countless hours of meeting and review time in this process. She hoped that her presentation would provide some additional flavor and some data to the materials already included in the lake management plan document.

She provided an overview of the topics to be covered: Lake Features, Aquatic Plants, AIS, Water Quality, Watershed, Shoreland Habitats, Stakeholder Survey, and a take-home message about conclusions. She requested questions at the end of the presentation.

Lake Features

Smoky Lake is categorized as a seepage lake. Seepage lakes are natural lakes fed by runoff from precipitation and ground water. These lakes do not have a stream inlet or outlet and may sit higher in the landscape. Seepage lakes water levels mirror climate in that water levels may be lower with drought years and higher with high precipitation years. Drainage lakes are quite different and are better able to flush pollutants than seepage lakes. In a seepage lake water retention rates can be very long, sometimes as long as 100 years. Human presence may have long-lasting impacts because pollutants entering the lake take a really long time to flush or leave the lake, due to lack of an outlet. A graph covering 2012-2017 showed annual level fluctuations over the season common to seepage lakes.

Smoky Lake is also a two-story lake. Only 1.3% of Wisconsin Lakes are two-story lakes. These lakes are relatively deep, will stratify into upper warmer layers and support lower cooler layers.

Acoustic mapping was updated as a part of the process. The new bathymetric map reports 587 acres. The greatest depth was reported at 70 feet in the northern bay, with an average depth of 29.47 in 2017. This depth is higher in 2019. Smoky's shoreland complexity value, 1.89, is computed from overall length and shoreland length. Barb noted that the greater the number of bays, the more types of habitats likely present on a lake. For comparison Long Lake has a shoreland complexity of 1.67 and Lake Vieux Desert is 4.27.

Aquatic Plants

Aquatic plants are essentially underwater forests that start in the littoral zone and go to deeper water zones able to sustain plants. Emergent plants are nearest to shore and are the most impacted by development. A bit further out floating leaved plants, such as water lilies, will help with wave mitigation and are good food sources.

Dave Ogilvie raised a question about how these plants in the littoral zone have been impacted by the recent changes in lake level. Barb responded that some species such as bulrushes are actually capable of adapting and return to life when water is again

restored to dry shores. These are important to the habitat and a good measure of ecosystem health.

The WDNR has developed a plant survey mapping GPS based grid. Using this grid, rake samples were taken at each grid point. The rake fullness depth of each sample was measured and assigned using a 1-3 scale. Each species on the lake was also identified and ranked.

A rake fullness map and a species richness map were developed from this data. Species richness and species diversity were explained. Species richness refers to the number of plants present in a sample collected, and species diversity refers to how even those species are in that environment. The maximum depth of colonization was found at 38 feet, but most vegetation was found in waters 5-31 feet in depth. Nitella, a micro alga, was found most frequently at 1000 points in the sampling process. Overall Smoky does not have a lot of vegetation.

Barb compared the frequency of occurrence of species from sampling in 2013 and 2017. There was not a great degree of variation and this is a good indication of lake health. Barb provided an explanation of the Simpson's Diversity, Floristic Quality Index and Species Richness, Conservatism Coefficients and the measurements reported for Smoky on these scales. Smoky was ranked better than other WI lakes on all scales. These measures should be updated every 5 years.

Wisconsin is broken down into various eco-regions. Smoky is part of the northern forest eco-region, and Smoky is ranked and assessed comparatively with other lakes in this area.

Aquatic Invasive Species.

Eurasian watermilfoil (EWM) was first confirmed in 2014. Other invasive species such as rusty crayfish, and smelt have been reported. These can affect the health of zooplankton and have other impacts in our lake.

EWM likely first arrived as aquatic hitchhikers on equipment coming into the lake. The WDNR through the Clean Boats Clean Waters program provides boater education regarding AIS boating practices and also documents lake user habits from interviews with boats coming onto the lake. A WDNR database exists that provides information on the prior lakes visited by boats entering Smoky.

Aquatic plant management for AIS is a required as a part of the lake planning process. This operates from some general guiding principles. It is important that we be mindful of balancing risks and the impact of management practices.

Water Quality

Smoky Lake has been collecting water quality as a part of the citizen data collection process for 12-14 years but records exist going back to 1979. This baseline data is collected and uploaded onto a WDNR website. It includes information on water

transparency, phosphorus, and chlorophyll a. This information is run through a series of equations to determine the trophic state of the lake. Lakes are categorized as oligotrophic, mesotrophic or eutrophic for each type of data. Overall Smoky ranks in the excellent spectrum for the categories studied.

Readings on dissolved oxygen and temperature are also collected at the 70-foot hole on the northern part of the lake. At the thermocline the waters do not mix between layers. Over time this information creates an understanding of what might be changing at the lake.

Water quality is sensitive to acid rain, but data readings indicate that Smoky Lake would buffer this well. Smoky also has a lower calcium and magnesium content which might create some resistance to an infestation of zebra mussels that depend on the calcium content of the water to thrive. Phosphorus is also limited, which limits the production of plants.

Watershed

Watershed identifies the water drainage patterns for a region. Water first collects in a location and then continues to move south to various basins depending on the watershed for that body of water. Watersheds are broken down by Smoky Lake Hydrological Unit Code (HUC) and Smoky Lake is part of the Upper Wisconsin Basin and the Deerskin River Watershed. The direct drainage to Smoky Lake is called the Thoroughfare Creek-Deerskin.

Barb showed several charts defining our lake as a part of the Deerskin Watershed. What runs through our landscape around Smoky does have an impact on the lake. Our landscape is mostly forested but land use and development changes are a consideration.

Shoreland

Barb provided an explanation of the shoreland zones: riparian (35 inland from the high water mark), bank (the high-water mark to where the water starts at the bank toe) and littoral (begins where the bank toe starts and continues into the water).

Each parcel of land was individually observed and assessed as a part of the study. The riparian coverage was evaluated considering tree canopy, shrubs, herbaceous plants, pervious surfaces, manicured lawn, agricultural, duff and other. Often the first thing to go when a property is developed is the herbaceous plants, which do serve to buffer erosion and filter drainage.

In some areas bank zone modifications were observed that included vertical sea walls, rip rap, other erosion control measures and artificial beach. These represent habitat transitions to the water. Barb asked us to consider the "turtle test" that considers if a turtle can get up to the shore as a means of assessing riparian impact. The bank zones were evaluated for length and observations were made on bank zone erosion.

Offshore conditions were observed as well, with some exposed lakebeds showing raking. Pier structures, swim rafts and other structures were noted.

On Smoky 75% of the parcels are developed with 25% in a natural state. Barb offered some comparative observations on canopy and aquatic plant presence for developed and undeveloped properties.

Coarse woody debris was counted and documented, with an average of 59 pieces found per kilometer of shoreline. This woody debris provides habitat and food sources for aquatic species.

Lake User Survey

A 70% return rate was reported for the lakeowner survey. The highest usage is during the summer season and on weekends. Ownership ranged from 1-100 years, with 25-35 being an average period for most. When asked about the usage the highest response rates were for spending time with family and friends, enjoying nature and swimming. The highest boat usage was for canoes, kayaks and small motorboats.

Most respondents ranked water quality in the good and excellent range. Changes in water quality were most noted by longer-term owners.

A strong interest was shown in continuing educational programs on topics such as: AIS, shoreland management and habitat improvements.

“Take-Aways” and Conclusions

Barb emphasized Smoky’s uniqueness as a two-story lake and how this works to support a population of Cisco. Continuing work to study and understand our lake and disturbances affecting it is important. Smoky is especially vulnerable to climate changes as a two-story lake. Assuring good habitat conditions can abate some of these impacts. The actions of lake owners play an important part in this.

Barb shared her overall conclusions. Smoky Lake is high quality. Its community shows a strong interest in protecting the lake and becoming better educated to accomplish this.

Smoky Lake being a seepage lake will see continued level fluctuations. The floristic quality ranking is above average and the conservatism coefficient ranks Smoky at a pristine level. Eurasian watermilfoil is at a low level, and has been controlled to 1% of the lake through good management. It has remained at the same level of first discovery. Water quality is meeting WDNR water use criteria. Watershed threats are low but climate will have an impact.

Questions:

Susan Hillman raised the question of the woody debris on her shore, especially after the recent water level increase. Barb advised that this be left in the lake.

Sue Rapp asked a question about the management of EWM noting a comparison with other lakes. Barb responded with information about the WDNR studies regarding long-term data on management. Aggressive treatment in many cases did not affect long-term trends. At some lakes EWM does not take off to overtake a water body. We can use small-scale gridding across the management areas, using the same WDNR evaluation tool for aquatic plants to better understand the effectiveness of management actions..

Sue Rapp asked about the relationship between our two-story lake and fish species. Barb reported that the success of species such as Lake Trout (originally planted), Cisco and Splake was intertwined with our two-story environment. If this two-story condition changes, these populations will be affected. (Fisheries)

Action Plan Presentation – Lydia Cooley

Lydia explained that the Action Plan really sets the stage to consider where do we go after the Lake Management Plan is approved and finalized. Her goal was to present a user-friendly overview. The Smoky Lake Action Plan is detailed, using a scientific format presenting Goals, Objectives and Actions. At its most fundamental level it provides a script that asks us to consider: “What steps we might take now to better assure that our lake remains healthy and in the near pristine state we have come to enjoy.”

Action Items

The Action Plan arose from a longer list of alternative strategic actions pulled from the plan data and from the lake user survey. The action plan items in the current draft were the result of both Steering Committee and Board deliberations. The items were considered carefully and prioritized. Some were eliminated, and some longer term and emerging concerns were identified for future updates.

Education is the overall focus. The action plan:

- Encourages continued data collection to learn about the lake
- Encourages the association to plan and organize work more effectively.
- Encourages the development of programs to inform lake owners about current conditions and factors that affect lake quality.
- Encourages continued remediation and monitoring efforts to learn more about the spread of EWM.
- Encourages all owners to learn more about steps they might take to keep Smoky healthy.
- Encourages and recommends actions for future plan updates.

The Action Items are more educational than directive. The action steps do not contain any specific prohibitions nor dictate behavior to be enforced by the lake association. Instead, the action plan engages lake owners and users as partners to understand our influence and identifies ways to work proactively to assure this body of water remains healthy in the years ahead. Smoky is a seepage lake, and our human presence on Smoky does affect and change this body of water over time.

The Action Plan identifies 5 goals:

1. Build lake community capacity to support project goals and objectives
2. Continue monitoring of water quality and ecosystem health
3. Promote conservation of native species and their habitat
4. Protect existing water quality
5. Maintain aesthetic and safe recreational opportunities

The action plan, by the numbers, operates on a 5-year timeframe, and describes 24 action items, including 11 existing programs, some with new tasks, and 13 new programs. It suggests 3 future actions beyond the 5-year timeframe. Each action item suggests a timeframe and is assigned to an area of responsibility.

Organizational Capacity

The board is challenged to consider the association's organizational capacity to determine how it can better plan and organize as an association in order to support the projects identified in the plan.

It asks the association to consider what committees will be needed. It builds on existing committees such as Conservation and its subcommittees including water quality, water level monitoring and aquatic invasive species (AIS). It also suggests new committees for education, membership and fisheries as well. The association will also consider what roles are needed and how to define these responsibilities. Enlisting volunteers will present some challenges in a community that smaller and largely seasonal. It will be important to draw on existing talents and interests.

Considering new communications tools to share information and that encourage dialog is also important. Suggestions include email, website, Facebook as well as the traditional mailings. Financial considerations will also be a factor that will ask the association to consider existing funds and additional funding from fundraising appeals and grants.

The action plan asks the association to do more outreach to expand relationships. This would include developing and continuing contacts with local, state and federal management agencies and other environmental groups. Continuing involvement with the Town of Phelps Lakes Committee, Iron County Lakes and Streams Partnership, Vilas County Land and Water Conservation, Western Peninsula Invasives Coalition (WePIC) will be important. For zoning and wetlands concerns the key will be to reach out to Vilas County and Town of Stambaugh for guidance.

The board will consider these organizational capacity issues and bring some recommendations to the membership in 2020.

New Committees

Three new committees, Education, Membership and Fisheries, are proposed but not yet hardwired into the association structure. It will be up to the board to consider how to integrate these key proposals.

The Education Committee is created to develop priorities, strategies and provide oversight to build awareness and inform the lake community. Four topics are suggested by the plan:

- To provide education on water quality impacts of fertilizers, impervious surfaces, run-off abatement and septic system maintenance,
- To review best management practices and policy on the use of pesticides in lakeshore environments,
- To provide education and resources regarding site design and near shore habitat improvements, and
- To provide information about Citizen Science activities for landward areas including native plantings, pollinator habitat and terrestrial invasive species.

The Membership Committee expands on some existing board roles. It will explore avenues and conduct outreach regarding current lake issues and lake management planning activities. It will seek to engage new lake owners with a “Welcome to the Lake” packet that would include information on association business, lake health and lake concerns and volunteer opportunities. It will expand educational opportunities by informing current and new owners about AIS species transport laws, AIS remediation management techniques and practices and riparian ownership issues for our border lakes where different legal standards apply in Wisconsin and Michigan. Information on Courtesy Rules for lake owners and users is emphasized. Promoting safe boating and etiquette will continue long association practices. Providing new signage at the landing will also inform lake users about expectations when using Smoky Lake.

The action plan asks the association to recreate the Fisheries Committee, once a standing committee and frequent contributor to association business for many years. The committee will be expected to provide updates regarding fish population concerns and to remain up-to-date on current issues by working with local, state and federal authorities.

Existing Committees

The action plan will also continue to build upon existing Conservation Committee efforts. The scientific studies and monitoring will continue for water quality through the citizen lake monitoring program which reports on water transparency,

total phosphorus, chlorophyll a, dissolved oxygen and temperature. Testing for sodium chloride will be added close to the boat landing. Lake level testing will continue and share information about how elevation changes affect the lake. The hope is to create a long-term record to gain some historic perspective.

Management of AIS species is an important part of the action plan. Lake monitoring through volunteer efforts will continue with the goal of uploading data to the WDNR and SWIMS databases. Quantitative database collection is suggested to increase awareness about what might be changing over time.

The control and management of Eurasian watermilfoil (EWM) is a continued focus. This will include seasonal surveys and evaluations of EWM remediation techniques but will also explore grant-funding sources to pay for the expenses. Prevention of the spread of AIS is also encouraged by recruitment and training of volunteers and through continued participation in the Clean Boats Clean Waters program that operates at the public boat landing.

Citizen science participation is encouraged. Annual placement of the loon nests and reporting will continue as will the wildlife observations that are a regular part of the annual meeting. Other citizen science projects might also be added over time.

Lake Stewardship

All of this builds on a long tradition of lake stewardship that grew from the very first meeting of the association. At this meeting lake owners stressed the importance of cooperation, education, information-sharing and courtesy in their association practices.

Volunteerism is also a long-standing Smoky tradition. Help will be needed as we look to expand existing structures and to introduce new roles and responsibilities. Likely some of these tasks will entail new expenses and look for more financial support from members.

Lydia asked each of us to consider how they could help. She asked members present to consider their interests, the time that works best in their schedules, whether there is a preference for a recurring or a one-time project and whether they preferred a leadership role or being a supporting player. The suggested benefits of participation to include learning more about Smoky and issues common to other lakes, getting to know other owners and making a difference in the life of Smoky Lake.

A break was taken for lunch at noon and the afternoon session began at 12:30 p.m.

Lake Management Plan Discussion and Questions – Jim Kuchenbecker

Jim opened the discussion sharing information about the questions distributed in advance of the session. He provided an overview of the format and encouraged all present to be respectful in their comments. We are all part of the same lake family.

Jim reported on the work done by the Steering Committee and Barb Gajewski to bring the document to this draft stage. Board input has also been provided. He asked for attendees to return questions and comments to him by Tuesday as the final changes to the Lake Management Plan were being compiled before submission to the Board at their Labor Day weekend meeting. Following board approval, the plan will be forwarded to the WDNR for final review. Once approved, the Lake Management Planning grant will be ready for closure and an application for reimbursement will be made once all grant expenses are paid.

Questions/Comments from Review Participants

(Action Item References Added)

Sue Rapp commented that she thought the “Welcome to the Lake” information would be a good protocol and would help assure that new owners get a new start on the lake. She and others presence expressed support for the Courtesy Rules. (Action Plan/Build Communication, Goal 1, Objective 2, Action 1 & Objective 3, Action 2)

Sue Rapp commented that on another lake where the 200 owners were requested to assist with funding for remediation efforts. The response was minimal and that lake resorted to the formation of a lake district that would tax all owners. She is amazed and pleased that we were able to avoid this option. Marilyn Norden reported on a Rhinelander area lake forming a tax district to fund a project that had limited owner support. Discussion considered the complexity of using a lake district on a border lake. Though options exist in Wisconsin and Michigan, the legal frameworks differ. Barb Gajewski commented that Michigan uses a special assessment system and observed that the Cisco Lake system has both Wisconsin and Michigan taxing systems established. (Action Plan/Financial Needs, Goal 1, Objective 2, Action 2)

Marilyn Norden commented that she was very pleased to see the Steering Committee vision statement and felt this harkened back to the original association vision statement formed under the leadership of Peter Werner, who owned the first cottage built in the Smoky Lake Estates. (Action Plan/Vision)

Kristin Hill liked the comprehensive ambitions of the lake plan document. She observed that in time the threats to the lake could become more extreme, and that activities directed at prevention and protection might mitigate against this. She is very committed to this plan and would like to see us continue to focus on data collection to build on our knowledge. This will help us see subtle changes in time to make positive change. (Action Plan/Build Communication, Goal 2, Objective 3, Action 1 Continue Monitoring, Goal 2, Objective 1, Action 1)

Jim Kuchenbecker noted that the DNR has made recent changes to testing for oxygen levels to five times per year, whereas our practice had been to do this three times per year. He wonders how this will affect the information process. (Action Plan/Continue Water Quality Monitoring, Goal 2, Objective 1, Action 1)

Susan Hillman asked if there is a place that homeowners could go to get advice about their individual properties so that they could consider positive changes to improve the habitat on her property. Barb Gajewski responded that the Education Committee would be developing and sharing some resources in the future, but at this point she suggested getting in contact with Vilas County Water and Conservation for recommendations. (Action Plan/Build Communication, Goal 1, Objective 2, Action 1)

Sandra Green recently explored an application for a burning permit. Though her property is in Michigan this was issued in Wisconsin. Discussion indicated that burning permits are not required in Michigan. Jim Kuchenbecker offered to share the website which would confirm this information. Barb Gajewski noted that question like this are indicative of the type of issues occurring on border lakes. (Action Plan, Build Communication, Goal 1, Objective 2, Action1)

Paul Wegehaupt commented that often we are provided with lists of things that are not good for shoreland environments but felt at it might be helpful to receive information that would help make things better. He felt providing an explanation of terms such as impervious surface, which includes a simple dirt pathway might increase understanding. (Action Plan/Shoreland, Goal 1, Objective 2, Action 1)

Marilyn Dixon joined the discussion as a new owner. She is still working to understand the “to do’s” for our lake community but was concerned about the activity at the boat landing, and particularly the frequency of fishing trips on our lake. She wondered if we might approach the Town of Phelps to limit the number of spots and hours of parking and encourage boating practices supporting lake etiquette. She expressed concern with the number of cars and trailers parking on the shoulder of this narrow road. This engendered some discussion. Several present commented on the boats with bright trolling lights very late at night. A suggestion was made that we approach this from a boating and road safety. Fishing regulations do govern the practices and the hours. (Action Plan/Build Collaboration through Outreach, Goal 1, Objective 4, Action 1 & Boating Safety, Goal 5, Objective 1, Action 2)

Sue Rapp indicated that she would appreciate more information on fertilizers and septic system maintenance. Lydia Cooley shared that this is something the Education Committee will work to develop. The general advice was to pump every 3 years and this practice is required in some counties in Wisconsin. Barb Gajewski commented that a first step would be to do a soil test to see if fertilization is necessary. If it is, fertilizers with herbicides and phosphorus should be avoided. Walt Tarmann noted the 75 feet-greenbelt zoning rules that restrict these products within 75 feet of the shore. (Action Plan/Information Sharing, Goal 1, Objective 2, Action 1, Zoning Goal 1, Objective 4, Action 2 & Habitat Improvements, Goal 4, Objective 1, Action 1))

Sue Rapp inquired about the funds in current association accounts. Explanation were offered by Dave Ogilvie, Andy Lechtenberg and Lydia Cooley. These funds are being held to assist in closing our two remaining grants for the Lake Management Planning and the Rapid Response remediation work. Funds must be advanced before reimbursement. With the conclusion of the third Rapid Response Grant Smoky will move also toward more competitive grant funding and the association might need to pay for remediation directly next year without grant support. Each year the board takes a careful look at the funding needs when considering donation requests from members. (Action Plan/ Financial Needs, Goal 1, Objective 2, Action 2 and EWM Management, Goal 3, Objective 1, Action 1)

Jeff Kangas raised the issue of rentals exceeding the capacity of existing septic systems and possibly overwhelming the system. At this point there is one rental on the lake at the Wisconsin end. All occupancy permits have been granted. In discussion it was suggested that opening communication channels between owners might actually assist them in understanding situations where occupancy might be an issue. As owners and as neighbors this might serve build relationships. (Zoning Goal 1, Objective 4, Action 2)

Sue Rapp asked about current fish stocking practices. Jim Kuchenbecker reported that stocking has not been done by either Michigan or Wisconsin since 2003. Dave Ogilvie reported that he was in contact with the Michigan DNR and has asked that we might be put back on the list. Lydia noted that this might be something for the Fisheries Committee to follow-up on. (Action Plan/Fisheries, Goal 3, Objective 4, Action 1)

Kristen Hill asked a watershed question about the interaction between wells and the groundwater supplies. She wondered if there was an interrelationship between groundwater and lake quality. Issues related to the presence of PFAS in well testing have been reported in the area. Barb Gajewski was candid in saying that this was not her specialty and that we will need to reach to other resources. (Action Plan/Watershed and Water Quality, Goal 2)

Larry Brown observed that in his history of coming to Smoky that is was not a great fishing lake. His concern was with the number of guides coming to the lake and wondered if all were following the fishing limitations. The discussion returned to the question of stocking. In the 1970s some individual stocking for muskies was done, but that this was not done by the DNR. (Action Plan/Fisheries, Goal 3, Objective 4, Action 1)

Paul Wegehaupt inquired whether there were ways we might be more proactive than by simply providing education. Susan Hillman joined him in this inquiry. She suggested that we might work with the Town of Phelps on improving signage at the boat landing. Lydia reminded the group that this is one of the action items in our plan. (Action Plan/Build Collaboration through Outreach, Goal 1, Objective 4, Action 1 & Boating Safety, Goal 5, Objective 1, Action 2)

Lydia asked the group about their greatest concern was about the implementation. Kristen Hill responded that she felt it was important to build engagement to reach to all owners for participation. Action Plan/Building Engagement, Goal 1, Objective 1, Action 1 and Objective 3, Action 1)

Andy Lechtenberg offered his thanks to the Steering Committee for the many spent hours working to coordinate this effort.

Closing Remarks - Leo Norden

Leo Norden closed the meeting by thanking all for their participation. He was happy with the information that was shared and to see the desire for more education. He asked all of us to think about how to approach our neighbors and to share enthusiasm for becoming better educated about our lake.

The meeting concluded at 1:30 p.m.

Meeting notes were respectfully submitted by
Lydia Cooley

Joint Meeting LMP Steering Committee and SLPOA/SLPA Board July 13, 2019

- Present: Leo Norden, Lydia Cooley, Andy Lechtenberg, Ted Tabbert, Kristin Hill, Susan Hillman, Lew Raker, Jim Kuchenbecker, and Barb Gajewski.
- Excused: Dave Ogilvie, Loris Damerow, Cheryl Sheehan, and Walt Tarrmann

Handouts:

Agenda, Action Plan, Action Plan Items by Organizational Assignment, and Steering Committee Timeline distributed in advance. Updated 2019 Smoky Lake Lake Owners Map, distributed at meeting.

Call to order, welcome and statement of purpose for meeting – Leo Norden

1. No minutes were reviewed and approved. The Steering Committee and Board were asked to consider these in at their next business meeting.
2. The purpose of this meeting is to consider the Lake Management Plan, with a view to providing guidance as we move forward to assure that we continue to preserve Smoky Lake.
3. The agenda includes an overview of the plan presented by Lew Raker. a discussion of the Action Plan by Lydia Cooley and a discussion on the distribution of the Plan to association and community stakeholders by Jim Kuchenbecker.
4. Additionally, the goal will be to consider how to lead the association in gaining support and approval for board action to ultimately approve the plan for submission to the DNR.

Lake Management Plan Overview – Lew Raker

Lew shared that the Lake Management Plan (LMP) was educational based and focused on disseminating information and educating lake owners and community members about Smoky Lake. In the earliest stages of lake planning discussion, We sought advice from Dan Anderson about the Long Lake Management Plan experience. Dan had shared that a key benefit was helping to produce a more informed lake community. He felt that, as a result, lake owners better understood their responsibilities as owners in preserving their lake.

Lew believes that Smoky Lake action items relating to education will allow us to build upon the work done in the plan. Leo added that a recent Northern Wisconsin Lakes and Streams meeting emphasized that with natural resources issues, more will be accomplished by education than by legislation.

As Lew approached the planning process he advocated a SWOT style analysis to identify strengths, weaknesses, opportunities and threats. This approach was emphasized in his early conversations with Barb Gajewski and Bill Artwich of Many Waters, our professional consultants for the project. Each part of the plan was considered within this prism. Smoky is fortunate to not have any huge threats to public health, but work will need to continue to assure we maintain the healthy, natural state of our lake. Much of this can be accomplished with more education.

One aspect of our plan that is special and distinct from others Lew has read is the chapter that provides historical and organization context. The historical piece largely

derives from the work of Janet Oatman. Lydia Cooley provided the background for the organizational history. Ann Hruska from Many Waters worked to integrate this information. This information shows a continuum in lake culture arising from the earliest association meeting of an interest in being proactive in addressing lake issues before they might become larger problems.

Steering Committee Introductions

Lew introduced and thanked Steering Committee members for their contributions. His goal was to utilize individual talents. Jim Kuchenbecker has overseen communication and worked to develop the LMP Vision Statement. Walt Tarmann offered considerable work regarding zoning, regulations and drainage issues. Leo Norden served as the association communicator. Lydia Cooley assisted with the organizational research. We also benefited from the professional work of Many Waters that provided the strong scientific foundations and the drafting necessary for the LMP. Lydia Cooley additionally reported on Lew's ongoing strong role in driving this project to conclusion, and that his efforts are to be congratulated.

Opening Comments and Discussion Regarding current LMP Draft

Steering committee and Board members were encouraged to continue reading the materials and to provide comments using the excel format provided. Jim will consolidate these and share with Barb Gajewski.

Lew identified joint meeting goals –

- To approve the current LMP draft for release to members and stakeholders, and
- To consider association member consent as related to further board action necessary to approve the plan for submission to the WDNR.

Lake Plan Release to Stakeholders and Approval by Membership and Board

A short overview SC committee timeline was shared with an emphasis on the remaining review and drafting steps anticipated before a final plan is ready for submission to the WDNR. WDNR approval will be needed to close out the grant and apply for funding reimbursement.

Andy Lechtenberg inquired about the process anticipated at the annual meeting with respect to plan approval. The final draft of the Lake Management Plan (LMP) will not be finalized until after the August 17 presentation where association members and community stakeholders will be afforded the opportunity to provide input and comments. These changes will be assimilated. It is anticipated that the plan would be presented to the Board for final approval at an early fall Board meeting. Once approved, the plan would move on to final review by the WDNR. After discussion, consensus was reached that a resolution would be presented at the annual meeting to ask members to provide the Board authority to approve the plan draft following the Lake Review Session and incorporation of suggested changes arising from that discussion.

Smoky Lake Parcel Map

Lew introduced the inclusion of the lake parcel map. A parcel map will be included in LMP. Barb Gajewski asked for board advice on the use of lake-owners names. The consensus was to use a map, without owner names, in order to better protecting privacy interests and to use the full-color parcel map provided by Many Waters.

General Remarks and Closing by LMP Chair

Andy Lechtenberg, joined by other board present, complimented the incredible accomplishment represented by this effort. Recommendation was made by several board members that a bullet point summary be prepared to assist the presentation to members at the general meeting and at the Lake Review Session in August.

Kristin Hill inquired whether the plan addressed the climate change and its possible effect on the lake. Barb responded that this was in part considered in the Fisheries Chapter discussion regarding Cisco. This species is present in only 2% of lakes in Wisconsin and is dependent on deep, two story lakes like Smoky where cold water is present. There is reason to consider this question, but it was not specifically addressed in the greater body of work. Barb felt that the discussion should involve good data and then consider how we might better buffer the impact of climate changes. There was some consensus from the group present that this topic might be strengthened in the document.

Lew concluded by noting that this is the first plan with other plan reviews and updates to follow at anticipated 5 year increments. Lake changes will continue to flow forward, but, because of this effort, we will be better informed by being able to look back to observe what has changed. From this, we can better plan for the future.

Review of the Action Plan - Lydia Cooley

Action Plan Process

Lydia introduced the process to date. Action Items were originally suggested and drafted by Barb Gajewski. They are organized with identified goals, objective and actions. There is a strong focus on education. Timelines and responsibilities are assigned for each item. At the most recent Steering Committee meeting, the committee went through each individual action item. The group used the "Action Plan Items by Organizational Assignment" document to better understand how the action items might fit within a proposed association framework. The action items include both existing and new projects, with new were highlighted in yellow and italicized in the outline. The Action Plan was updated as a result of these recommendations and condensed. The goal of this meeting is to continue evaluated Action Items an organizational perspective. The final Action Plan will be incorporated into the LMP and released to members.

Organizational Capacity

The organizational outline was again used as a tool to assist discussion at the joint meeting. The structure is primarily broken down along Board and Conservation Committee lines, with individual subcommittees supporting these individually identified action efforts. Lydia emphasized that this organizational outline presents a proposed structure. Board action is needed to develop and implement an organizational framework and included as the opening goal, objective and action item of the Action Plan.

The Action Plan draft under consideration by the joint group contained 30 action items, with 14 representing existing projects. Four of these existing projects add new tasks. The remaining 16 action items are entirely new. Lydia was candid with her concern that the number of individual items might be difficult for the association to realistically assimilate in the 5-year timeline of the plan. She asked the group to consider the volunteer and financial budget represented in this proposal. Others expressed concern for this as well. Kristin Hill made the observation that the DNR is likely going to be

looking for the inclusion of many of these topics. The combined board and steering committee discussion proceeded using the organizational outline format.

General Comments and Concerns

Several members present noted that committee involvement is the best way to build interest and organizational support for our lake. Some members expressed interest in holding an additional meeting each year where an educational topic might be explored in greater depth. Other suggestions included improving communication, particularly through the use of additional email exchanges and continuing to explore options such as a Smoky Lake website and Facebook. Privacy concerns were raised, as well as a concern for assuring manpower with skillsets able to manage these roles and the ongoing updates needed. It was recommended that the Board continue to consider these options, with the goal of bringing a recommendation back to the membership. It was agreed that a 5-year timeline seemed reasonable to both develop a proposal and begin implementation.

Educational Committee and Communication

One key feature of the Action Plan is the creation of a new Educational Committee, to inform and educate lake members on various topics. As drafted, the Action Plan had contained several individual action items, with the Educational Committee assigned responsibility. Lydia recommended that these individual items might be re-clustered under one action item, creating the Education Committee, and suggesting topics for the committee to evaluate as suggested topics for presentation. After discussion there was support for this recommendation and the committee suggested some prioritization of items. It also found consensus on the need to consider improved with communication tools as a part of this action item.

Some regrouping of action items was considered, and other items were recommended for future action or deletion from the plan. Lydia suggested moving the AIS education action item under the Membership/Board. Kristin Hill recommended that the zoning objective be moved under the Conservation. There was also discussion about the action item relating drainage between Smoky Lake and Big Sand. The decision was made to remove this from the plan as seemed one more pertinent to board business with concerns expressed regarding feasibility to correct, the complexity of the issue and the costs and volunteer commitment required within a 5-year timeframe. Barb Gajewski made note of the Action Plan recommendations and changes and agreed to evaluate these in her next update to the Action Plan.

(Comparative documents on the Action Plan version discussed and the version incorporating the recommended changes are appended for reference.)

Discussion of the Document Release to the General Membership – Jim Kuchenbecker

Jim reminded participants that he is be looking for comments and changes ASAP, so that these might be integrated into the document before release to members.

The LMP document, including the Action Plan and Appendices, would be shared by email using a Google Doc link with those in the association for whom we have email addressed. A preliminary test of the association email contact list has been done. Lydia plans to ask for updates at the annual meeting. For those experiencing problems with the link, flash drives, and a limited number of hard copies for review will be offered for review. The LMP and the accompanying appendices is a data intensive document,

containing many color pages and graphics and the cost of reproducing on a large scale is cost prohibitive. The electronic size of the document also presents issues for sharing in Word.

Use of the Town of Phelps Website

The option of releasing the LMP draft and appendices on the Town of Phelps website was considered, but this proposal was rejected by Board members present due to the draft status and some concerns about lake privacy. It was anticipated that this topic will be revisited when it is final. Barb reminded the group that this will be posted on the WDNR website as a public project and that there is need to reach beyond the association for comment.

The LMP will also be released to a larger group of stakeholders who interest reaches beyond the lake community. A list of contacts is being developed. Suggestions should be sent to Jim. The suggestion was made to post a notification on the Town Bulletin Board.

Postcard Notification

The membership has been provided a LMP update and informed about the upcoming release in its annual mailing. The WDNR has also recommended that a postcard mailing be sent which will invite lake owners and community stakeholders to participate in the Lake Review session and to inform recipients about the process to be able to review the document.

Leo thanked all participants for their comments.

A motion to adjourn, made by Andy Lechtenberg, with a second made by Ted Tabbert was unanimously approved.

Appendix K:
Lake Owner Survey

Smoky Lake Management Planning Project

Smoky Lake Property Survey. The following questions pertain to your property/properties on Smoky Lake. Please read each question carefully and answer the best you can. When responding, please respond with yourself and your household (those who frequent the lake with you) in mind. This is an anonymous survey.

Unique ID: _____

ABOUT YOUR PROPERTY

1. **How is your property utilized?** Please circle one answer.
 - a. Year round residence
 - b. Seasonal (summer only)
 - c. Undeveloped
 - d. Visited on weekends throughout the year
 - e. Other (please specify) _____

2. **Approximately how many days a year is your property used?** (refer to property identified in question 1. _____ days

3. **On average, when in use, how many persons are present?** _____

4. **How long have you owned property on Smoky Lake?** If less than 1 year please write 1. _____year(s).

5. **How many years ago did you first visit Smoky Lake?** If less than one year please write 1. _____year(s).

6. **Are you a member of the Lake Association?** Please circle one answer.
 - a. Yes, current member
 - b. No, but I was a former member
 - c. No, I've never been a member

7. **Do you attend Association meetings/events?** Please circle one answer.
 - a. Yes, I attend annually
 - b. Yes, but not every year
 - c. No, I don't attend at all

8. **What type of septic system does your property utilize?** Please circle all that apply.
 - a. Holding tank
 - b. Mound
 - c. Conventional
 - d. Drywells
 - e. Don't know
 - f. Other (please specify) _____

9. How often is your septic system pumped? Please circle one answer.

- a. Multiple times a year
- b. Once a year
- c. 2-4 years
- d. 5-10 years
- e. Don't know
- f. Other: (please specify)_____

10. Do you have an outhouse on your property? Please circle one answer.

- a. Yes, never used
- b. Yes, used less than 10 times a year
- c. Yes, used more than 10 times a year
- d. No

LAKE USE - FISHING

11. Have you personally fished on Smoky Lake in the past 3 years? Please circle one answer.

- a. Yes
- b. No – Go to Lake Use General Question 17

12. How many years have you fished Smoky Lake? If this is your first year, please write 1. ____year(s).

13. In a typical year, how often do you fish Smoky Lake during the open water and ice fishing seasons?

(Please circle one for each season)

Open Water Fishing

- a. Never
- b. Once or twice a year
- c. Once or twice a month
- d. Weekly

Ice Fishing

- a. Never
- b. Once or twice a year
- c. Once or twice a month
- d. Weekly

14. What species do you catch when fishing on Smoky Lake? Please circle all that apply.

- a. Bluegill/sunfish
- b. Northern pike
- c. Crappie
- d. Yellow perch
- e. Smallmouth bass
- f. All fish species
- g. Other:_____

15. How would you describe the current quality of fishing on Smoky Lake? Please circle one response on the scale below.

Very Poor	Poor	Fair	Good	Excellent	Unsure
1	2	3	4	5	U

16. How has the quality of fishing changed since you first started fishing Smoky Lake? Please circle one response on the scale below.

Much worse Somewhat worse Remained the same Somewhat better Much better Unsure
1 2 3 4 5 U

What other comments, if any, would you like to tell us about fishing Smoky Lake?

LAKE USE – GENERAL

17. What activities do you enjoy on or adjacent to Smoky Lake? Please circle all that apply.

- | | |
|--------------------------------------|-------------------------------------|
| a. Nature watching | j. Sailing |
| b. Boating | k. Snowshoeing/cross country skiing |
| c. Spending time with family/friends | l. Swimming |
| d. Fishing Open water | m. Hiking |
| e. Fishing – Ice | n. Hunting |
| f. Canoeing/Kayaking/Paddle Boarding | o. Biking |
| g. Waterskiing | p. Golfing |
| h. Jet skiing | q. Other: (please describe)_____ |
| i. Snowmobiling | |

18. Using the list from question 17 please rank the top three activities you enjoy on or adjacent to Smoky Lake.

1st _____ 2nd _____ 3rd _____

What other comments, if any, would you like to tell us about enjoyment activities on/adjacent to Smoky Lake?_____

WATERCRAFT USE

19. What types of watercraft do you use on Smoky Lake? Please circle all that apply. If you do not use any watercraft on Smoky Lake, please circle j.

- | | |
|----------------------------------|--|
| a. Pontoon Boat | h. Jet Ski |
| b. Motor Boat (less than 30 hp) | i. Sail Boat |
| c. Motor Boat (30 hp or greater) | j. I do not use any watercraft on Smoky lake |
| d. Ski Boat | k. Other: (please specify)_____ |
| e. Stand Up Paddle Board | |
| f. Kayak | |
| g. Canoe | |

20. Do you use your watercraft on other waters? Please circle one.

- a. Yes
- b. No – go to Question 22

21. If you use your watercraft on other waters, what is your typical cleaning routine after you visit another lake? Please circle all that apply.

- a) Remove all material from boat and trailer (plants, mud, and other organisms)
- b) Rinse boat with fresh water
- c) Drain bilge
- d) Drain live well
- e) Clean anchors
- f) Power wash
- g) Apply bleach
- h) Dry for five or more days
- i) Do not clean
- j) Other: (please specify) _____

What other comments, if any, would you like to tell us about watercraft use?

LAKE HEALTH- CURRENT AND HISTORICAL CONDITION

The questions in this section are intended to gauge your perspective on the current and past condition of Smoky Lake and what factors you believe are affecting lake health. Please answer all questions to the best of your knowledge.

22. How would you describe the current water quality of Smoky Lake? Please circle one.

Very Poor	Poor	Fair	Good	Excellent	Unsure
1	2	3	4	5	U

23. Do you feel the water quality of Smoky Lake has changed since you first started to visit Smoky Lake? Please circle one.

- a. Yes, it has improved
- b. No, it has remained the same
- c. Yes, it has gotten worse
- d. Unsure

Aquatic invasive species (AIS) are non-native plants and animals that are introduced into our lakes and streams and can potentially upset the natural balance of a lake ecosystem while decreasing recreational opportunities. Examples of AIS include animals such as carp, white perch, zebra mussels, rusty crayfish, round goby, and spiny water flea; and plants such as Eurasian water milfoil, purple loosestrife, and curlyleaf pondweed.

24. Before reading the statement above, had you ever heard of aquatic invasive species? Please circle one answer.

- a. Yes
- b. No– Go to Question 27

25. Do you believe aquatic invasive species are present in Smoky Lake? Please circle one.

- a. Yes
- b. I think so, but am not certain
- c. No – Go to question 27

26. Which aquatic invasive species do you believe are present in and adjacent to Smoky Lake? Please circle all that apply.

- a. Eurasian watermilfoil
- b. Curly-leaf pondweed
- c. Zebra mussels
- d. Rusty crayfish
- e. Spiny water flea
- f. Invasive cattails
- g. Purple loosestrife
- h. Rainbow smelt
- i. Pale yellow iris
- j. Fresh water jelly fish
- k. Heterosporis (Yellow perch parasite)
- l. Carp
- m. Round goby
- n. Flowering rush
- o. Starry stonewort
- p. Chinese mystery snails
- q. Other: (please specify) _____
- r. Unsure, but presume AIS to be present

27. During open water season how often does aquatic plant growth (excluding algae) negatively impact your enjoyment of Smoky Lake? Please circle one number on the scale below.

- | | | | | |
|-------|--------|-----------|-------|--------|
| Never | Rarely | Sometimes | Often | Always |
| 1 | 2 | 3 | 4 | 5 |

28. During open water season how often does aquatic algae, negatively impact your enjoyment of Smoky Lake? Please circle one number on the scale below.

- | | | | | |
|-------|--------|-----------|-------|--------|
| Never | Rarely | Sometimes | Often | Always |
| 1 | 2 | 3 | 4 | 5 |

29. Do you believe aquatic plant control of native plants is needed on Smoky Lake? Please circle one.

- Yes
- No
- Unsure

30. Do you believe aquatic plant control of invasive plants is needed on your lake? Please circle one.

- Yes
- No
- Unsure

31. Aquatic plants can be managed using many techniques. Please tell us if you oppose or support the responsible use of the following techniques on Smoky Lake. Please circle one number for each management technique. If you require more information to respond, circle "U" for Unsure.

	Strongly Oppose	Moderately Oppose	Neutral	Moderately Support	Strongly Support	Unsure- Need more info
Herbicide (chemical) control	1	2	3	4	5	U
Dredging of bottom sediments	1	2	3	4	5	U
Hand-removal by divers	1	2	3	4	5	U
Manual removal by property owners	1	2	3	4	5	U
Biological control (milfoil weevil, loosestrife beetles, etc)	1	2	3	4	5	U
Mechanical harvesting	1	2	3	4	5	U
Do nothing (no not manage plants)	1	2	3	4	5	U

32. Below is a list of possible impacts to Wisconsin lakes. To what level do you believe each of the following factors may currently be negatively impacting Smoky Lake. Please circle only one number for each impact description. Not present means that you believe the issues does not exist on Smoky Lake. No negative impact means that the issue may exist on Smoky Lake but is not negatively impacting the lake.

	Not Present	No Negative Impact	Small Negative Impact	Moderately Negative Impacts	Large Negative Impact	Very Large Negative Impact	Unsure - Need more info
Water quality degradation	1	2	3	4	5	6	U
Loss of aquatic habitat	1	2	3	4	5	6	U
Shoreline erosion	1	2	3	4	5	6	U
Shoreline development	1	2	3	4	5	6	U
Aquatic invasive species introductions	1	2	3	4	5	6	U
Excessive watercraft traffic	1	2	3	4	5	6	U
Unsafe watercraft practices	1	2	3	4	5	6	U
Excessive fishing pressure	1	2	3	4	5	6	U
Excessive aquatic plant growth (excluding algae)	1	2	3	4	5	6	U
Algae blooms	1	2	3	4	5	6	U
Septic system discharge	1	2	3	4	5	6	U
Noise/light pollution	1	2	3	4	5	6	U
Other (please specify) _____	1	2	3	4	5	6	U

What other comments, if any, would you like to tell us about the lake health – current/historical condition of Smoky Lake?

EDUCATION

33. Stakeholder education is an important component of every lake management planning effort.

Which of these topics would you like to learn more about? Please circle all that apply.

- a. Aquatic invasive species management
- b. Shore and land management practices and stewardship
- c. Water craft safety
- d. Social events on the lake
- e. Volunteer opportunities
- f. Fundraising needs
- g. How to improve aquatic habitat on your property
- h. How to maintain aquatic habitat on your property
- i. Not interested in learning more about any of the items above
- j. Other: (please specify) _____

Thank you for your participation!

Please mail this survey in the returned envelop by XX.

Appendix L:
Responses to WDNR
Comments on Plan Draft -
Educational Action Items

APPENDIX L: Responses to WDNR Comments on Plan Draft-Educational Action Items

From: Gauthier Sr, Kevin J - DNR <Kevin.GauthierSr@wisconsin.gov>
Sent: Tuesday, November 12, 2019 10:41 AM
To: Barb Gajewski <skih2o@hotmail.com>
Cc: Warden, Carol - DNR <warden@wisc.edu>; Nault, Michelle E - DNR <Michelle.Nault@wisconsin.gov>; Hein, Catherine L - DNR (Katie) <Catherine.Hein@wisconsin.gov>; Krajewski, Ty N - DNR <Ty.Krajewski@wisconsin.gov>; Gauthier Sr, Kevin J - DNR <Kevin.GauthierSr@wisconsin.gov>
Subject: FW: Smoky Lake LMP - DRAFT ready for WDNR review

Hi Barb,

Thanks for sending in the draft Smoky Lake Plan for review. Overall, the Plan was nicely done – thanks! Here are a few comments:

- Sounds like you and Carol have pre-reviewed and updated the draft plan on AIS/aquatic plant management data/recommendations and will assume all is good here.
- Smoky Lake is high quality, so protecting high quality areas and/or areas that could become high quality areas and making any improvements in habitat and storm water management should be the biggest, most important action item(s) in the plans. While these concepts are definitely recognized within the plan/summary/actions, it is a little hard to tell what actions may actually be taken to protect and improve. Seem educational at this point.
 - For protection – recommend providing the Northwoods Land Trust info as an option for landowners (not sure if there are land trusts in MI also?) looking to protect what they have and love forever.
 - Could also highlight “high” quality areas and how important stewardship of these areas is, so that current landowners in these areas are either recognized for their already good practices in place and/or are encouraged to take steps to keep and protect them. These could include large % of buffer area intact and/or the 3 layers of shoreland (grasses/shrubs/canopy), species diversity from point intercept (PI) surveys (check out the APM APP attached below that Ali created), lots of wood, others....?
 - For improving – just encourage everyone to keep promoting and finding folks to actually take on improvement projects. A lot of the maps from the shoreland surveys provide clues on where to start looking – i.e., active erosion, channelized flow, point source, impervious, lawn....Vilas County Land and Water is looking for folks to work with and will plan and potentially sponsor improvement projects. Not sure what might be available on the MI side? I also would encourage lake leaders from each lake to take a close look at their properties and sponsor projects where appropriate as demonstration projects (especially healthy lakes projects).
 - Could encourage a pledge of sorts by property owners to keep their shoreland areas healthy or start making their shoreland areas healthy also – i.e., no mow, weed whack, leaf blowing, picking up sticks, other? And in these areas, keep a record of plants and animals found over time (especially if there are pre/post info to be collected after starting the pledge).
 - Would be glad to discuss any or all of this with you if you would like.

APPENDIX L: Responses to WDNR Comments on Plan Draft-Educational Action Items

- Another potential educational action item could be to sponsor on-water lake ecology events/workshops. Perhaps led by active citizen volunteers (water quality/plants/frogs/bats/birds.....) that might be currently collecting data or might start collecting data in the future on Smoky. Could bring in a specialist also to lead an event. Other ideas? I just think getting folks on the water to learn about lake ecology is a great way to get folks to improve and protect the lake they love and live on and/or come to Smoky Lake to fish/recreate on.
- We need to get all of the point intercept (PI) and shoreland data.
 - Michelle will need to receive the PI data – let me know when this has been completed.
 - Katie will need to receive the shoreland and coarse woody habitat data - let me know when this is completed.
- APM APP from Ali
 - <http://34.223.230.186:3838/mikula/AquaticPlantDataExplorer/>
 - Once the PI data gets to Michelle/Ali – it is uploaded into this APP. Take a look at it – lots of good info/maps in it for all of the WI PI data that we have received.
- From Jordan - I recall this survey effort and that they achieved a high response rate. Very pleased with their effort. My quick scan of their reporting however, puzzles me. Many of the charts do not total 100%, not even close to 100%. It's not an issue where respondents can select more than one option; the responses SHOULD total 100%. So please ask the report authors to review and correct or offer an explanation.
- From Eric (Fisheries Biologist) - The fisheries section looks good to me but I would like to clarify the change in bass regulation for Smoky Lake on the top of page 70. The bass regulation will change ONLY in Wisconsin waters of Smoky Lake in 2020.

Let me know if you have any questions.

Thanks again.

Kevin

We are committed to service excellence.

Visit our survey at <http://dnr.wi.gov/customersurvey> to evaluate how I did.

Kevin Gauthier

Phone: (715) 356-5211 EXT 214

Email: Kevin.GauthierSr@wisconsin.gov

APPENDIX L: Responses to WDNR Comments on Plan Draft-Educational Action Items

From: Gauthier Sr, Kevin J - DNR <Kevin.GauthierSr@wisconsin.gov>
Sent: Tuesday, November 12, 2019 10:41 AM
To: Barb Gajewski <skih2o@hotmail.com>
Cc: Warden, Carol - DNR <warden@wisc.edu>; Nault, Michelle E - DNR <Michelle.Nault@wisconsin.gov>; Hein, Catherine L - DNR (Katie) <Catherine.Hein@wisconsin.gov>; Krajewski, Ty N - DNR <Ty.Krajewski@wisconsin.gov>; Gauthier Sr, Kevin J - DNR <Kevin.GauthierSr@wisconsin.gov>
Subject: FW: Smoky Lake LMP - DRAFT ready for WDNR review

- Michelle will need to receive the PI data – let me know when this has been completed. **Michelle received the data via email on 10/5/19.**
- Katie will need to receive the shoreland and coarse woody habitat data - let me know when this is completed. **Katie was cc'd in when I originally sent this data to Ben Kort on 4/7/19.**
- APM APP from Ali
 - <http://34.223.230.186:3838/mikula/AquaticPlantDataExplorer/>
 - Once the PI data gets to Michelle/Ali – it is uploaded into this APP. Take a look at it – lots of good info/maps in it for all of the WI PI data that we have received.

- From Jordan - I recall this survey effort and that they achieved a high response rate. Very pleased with their effort. My quick scan of their reporting however, puzzles me. Many of the charts do not total 100%, not even close to 100%. It's not an issue where respondents can select more than one option; the responses SHOULD total 100%. So please ask the report authors to review and correct or offer an explanation. **This has been corrected.**

- From Eric (Fisheries Biologist) - The fisheries section looks good to me but I would like to clarify the change in bass regulation for Smoky Lake on the top of page 70. The bass regulation will change ONLY in Wisconsin waters of Smoky Lake in 2020. **This has been updated.**

Let me know if you have any questions.

Thanks again.

Kevin

Kevin Gauthier
Phone: (715) 356-5211 EXT 214
Email: Kevin.GauthierSr@wisconsin.gov

APPENDIX L: Responses to WDNR Comments on Plan Draft-Educational Action Items

From: Barb Gajewski <skih2o@hotmail.com>
Sent: Thursday, December 12, 2019 4:30 PM
To: Gauthier Sr, Kevin J - DNR <Kevin.GauthierSr@wisconsin.gov>
Cc: Warden, Carol - DNR <warden@wisc.edu>; Nault, Michelle E - DNR <Michelle.Nault@wisconsin.gov>; Hein, Catherine L - DNR (Katie) <Catherine.Hein@wisconsin.gov>; Krajewski, Ty N - DNR <Ty.Krajewski@wisconsin.gov>; Lewis Raker <mlraker@alphacomm.net>; Lydia Cooley <cooley.lydiay@gmail.com>; ann.hruska@gmail.com
Subject: Re: Smoky Lake LMP - DRAFT ready for WDNR review

Hi Kevin,

Thanks for chatting with me (11/26/2019) on the review comments the WDNR has provided. I think we had a good discussion regarding moving this planning project forward with actions that serve to protect this high-quality lake.

One item the Association will be working on is a go to list of contacts and resources ranging from land management, shoreland restoration consultation to other like-minded environmental organizations (MI and WI). I am not sure about Land Trusts operating in MI, but I would presume there might be some options here. Properties within the Smoky Lake Estates are under covenants and restrictions such as limitations to subdivisions, minimum frontage requirements etc. So, there are some existing protection measures in place, in addition to current Stambaugh Township zoning, but agree having land trust information as an option for interested land- owners would be beneficial.

Point taken on moving forward with more actionable lake protection projects, such as those you mentioned in the bullets below. Right now, the Smoky Lake Board is working on their organizational structure to fit the pieces of the proposed action plan into the appropriate committees. These roles are being developed and a working draft is currently being circulated within the board. I believe the board will be meeting at the end of the month to continue these discussions. With the renewed organizational structure, lake education and protection projects will have a home, with committee oversight, a reporting process, and hopefully mechanisms for funding and collaboration. Continuing the discussion on lake protection is critical, and I think it would be fitting for you to sit down with the board in the future and revisit some of the suggestions in the review.

Using the new plant data app that Ali developed and maps with data from the shoreland surveys depicting high quality areas, and high priority restoration areas would benefit the discussions. I will look to the WDNR as a source of taking the shoreland data and generating the spatial information to create these maps. I did just receive an email

APPENDIX L: Responses to WDNR Comments on Plan Draft-Educational Action Items

(12/11/2019) from a Dennis Wiese that there has been a new WDNR GIS hire that will be working on the shoreland data and generating maps. Sounds like this might be reasonable objective in the next year to at least have some map drafts.

Please see additional comments in the underlined text below.

Again, thank you to the DNR team for the comprehensive review and comments. If there is anything else to follow up on, please feel free to contact me.

Regards,

Barb Gajewski, Many Waters LLC