

Minong Flowage AIS Education Grant Application

One (1) Year Project

Washburn County, Wisconsin

SEH No. MINFA 124491

January 25, 2014

January 25, 2014

RE: One (1) Year Project
Minong Flowage AIS Education Grant
Application
SEH No. MINFA 124491

Ms. Pamela Toshner
Wisconsin Department of Natural Resources
810 W. Maple Street
Spooner, WI 54801

Dear Pamela:

Please accept this 1-Year Aquatic Invasive Species Established Population Control Grant application package on behalf of the Minong Flowage Association in Washburn/Douglas Counties for financial assistance in implementing monitoring and education actions in 2014 for the Minong Flowage.

Please notify me if you have any questions regarding this control grant application.

Sincerely,

A handwritten signature in blue ink that reads "Dave Blumer".

Dave Blumer
Lake Scientist

DLB

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Minong Flowage AIS Education Grant Application

One (1) Year Project

Prepared for:
Minong Flowage Association
Minong, WI 54859

Prepared by:
Short Elliott Hendrickson Inc.
1701 West Knapp Street, Suite B
Rice Lake, WI 54868-1350
715.236.4000

Dave Blumer

Dave Blumer
Lake Scientist

January 2014
Date

Distribution List

No. of Copies

Sent to

1

Pamela Toshner
Wisconsin Department of Natural Resources
810 W. Maple Street
Spooner, WI 54801

1

Doris Youngquist, Grant Coordinator
Minong Flowage Association
4542 Evergreen Drive
Vadnais Heights, MN 55127

Table of Contents

Letter of Transmittal
Certification Page
Distribution List
Table of Contents
Aquatic Invasive Species (AIS) Grant Control Application

List of Appendices

Appendix A	Authorizing Resolution
Appendix B	Letters of Support
Appendix C	Map of Project Location and Boundaries/Lake Map
Appendix D	Itemized Breakdown of Expenses
Appendix E	State Lab of Hygiene Spreadsheet
Appendix F	Project Scope/Description

Notice: Use of this form is required by the DNR for any application filed pursuant to ch. NR 198, Wis. Adm. Code. Personal information collected on this form, including such data as your name, address, phone number, etc., will be used for management and enforcement of DNR programs, and is not intended to be used for any other purpose. Information may be made accessible to requesters under Wisconsin's Open Records laws (s. 19.32-19.39, Wis. Stats.) and requirements.

Section I: Application Type

Check one:

- Education, Prevention & Planning Early Detection & Response Established Infestation Control

Legislative District Numbers		To determine your legislative district, go to http://165.189.139.210/WAML/ Type in complete address, next screen shows information.
Senate	Assembly	
25	73	

Section II: Applicant Information

Applicant Minong Flowage Association	Type of Eligible Applicants
Waterbody Name Minong Flowage	<input type="checkbox"/> County <input type="checkbox"/> Tribe <input type="checkbox"/> Other Gov't Unit <input type="checkbox"/> Federal
Project County/Township/Section/Range Washburn and Douglas/Minong and Wascott	<input type="checkbox"/> City <input type="checkbox"/> Sanitary Dist. <input type="checkbox"/> Nonprofit Org. <input type="checkbox"/> State
	<input type="checkbox"/> Village <input type="checkbox"/> Dist. <input type="checkbox"/> College, School, etc. <input type="checkbox"/> Other
	<input type="checkbox"/> Town <input checked="" type="checkbox"/> Assoc.

Authorized Representative Named by Resolution Doris Youngquist	Project Contact Name Steve Johnson
Authorized Representative Title Grant Coordinator	Project Contact Title President
Address 4542 Evergreen Drive	Address 7349 E. Flowage Road
City Vadnais Heights	City Minong
State MN	State WI
ZIP Code 55127	ZIP Code 54859
Daytime Phone (area code) (612) 940-1405	Daytime Phone (area code) (715) 828-3686
Evening Phone (area code)	Evening Phone (area code)
E-mail Address dmyoungquist@gmail.com	E-Mail Address sjj8549@charter.net

Mail Check to: (If different from applicant)

Name and Title	Address
Organization	City State ZIP Code

For DNR Use Only

Application Type	Date Received	Date Reviewed (AIS/LC/RC)	AIS/Lake /River Coordinator Approval /Date
Waterbody ID#	Adequate Public Access <input type="checkbox"/> Yes <input type="checkbox"/> No	Environmental Grants Specialist Approval / Date	
Eligible Project <input type="checkbox"/> Yes <input type="checkbox"/> No	Eligible Applicant <input type="checkbox"/> Yes <input type="checkbox"/> No	Project Priority Rank	Research / Demo Project <input type="checkbox"/> Yes <input type="checkbox"/> No
Prior Grant Award(s) <input type="checkbox"/> Yes <input type="checkbox"/> No	Fiscal Year(s)	Amount Received To Date \$	Project Awarded <input type="checkbox"/> Yes <input type="checkbox"/> No

**Aquatic Invasive Species (AIS) Control
Grant Application**
Form 8700-307 (12/11)

Section III: Project Information

Project Title 2014 Aquatic Plant Monitoring and AIS Education Project		Proposed Ending Date 08/31/15	
Other Management Units	Letter of Support	Other Management Units	Letter of Support
1. Washburn County	<input checked="" type="checkbox"/>	4. Town of Wascott	<input type="checkbox"/>
2. Town of Minong	<input checked="" type="checkbox"/>	5.	<input type="checkbox"/>
3. Douglas County	<input type="checkbox"/>	6.	<input type="checkbox"/>

Section IV: Public Access

Number of Public Vehicle Trailer Parking Spaces Available at Public Access Sites:	3
Number of Public Access Sites Including Boat Launches and Walk-ins:	50

Section V: Cost Estimate and Grant Request

Section V must be completed or application will be returned. Details in support of Section V are welcome.	Project Costs		
	Column 1 Cash Costs	Column 2 Donated Value	DNR Use Only
1. Salaries, wages and employee benefits	0.00	5,564.00	
2. Consulting services	4,090.00	0.00	
3. Purchased services--printing and mailing	400.00	0.00	
4. Other purchased services (specify): CIBiobase Company	1,850.00	0.00	
5. Plant material ERS Plant Survey Services	7,375.00	0.00	
6. Supplies (specify) Dye, AIS, & Pub.Event	7,620.00	0.00	
7. Depreciation on equipment	0.00	0.00	
8. Hourly equipment use charges Sonar Rent, Boat Use	850.00	2,200.00	
9. State Lab of Hygiene (SLOH) Costs	837.80	0.00	
10. Non-SLOH Lab Costs	0.00	0.00	
11. Other (specify)	0.00	0.00	
12. Subtotals (sum each column)	23,022.80	7,764.00	
13. Total Project Cost Estimate (sum of column 1 plus sum of column 2)	30,786.80		
14. State Share Requested (up to 75% of total costs may be requested)	23,022.80		

Subject to the following maximum grant amounts:

- Education, Prevention and Planning Projects--up to \$150,000
- Early Detection and Response Projects--up to \$20,000
- Established Infestation Control Projects--up to \$200,000

Use of Federal funding as match: (check box below if applicable)

We are using or planning to apply for Federal funds to be used as match.

If known, indicate source of funding:

Aquatic Invasive Species (AIS) Control Grant Application

Form 8700-307 (12/11)

Page 3 of 3

Section VI: Attachments (check all that are included)

A. For all applicants: (Refer to instructions for applicability.)

- 1. Authorizing resolution
- 2. Letters of support
- 3. Map of project location and boundaries
- 4. Lake map or river segment with public access sites identified (per Section IV of this application and page 20 of the guidelines)
- 5. Itemized breakdown of expenses
- 6. For projects that entail sending samples to the State Laboratory of Hygiene (SLOH) only: a completed SLOH Projected Cost Form
- 7. Project scope/description:
 - a. Description of project area
 - b. Description of problem to be addressed by project
 - c. Discussion of project goals and objectives
 - d. Description of methods and activities
 - e. Description of project products or deliverables
 - f. Description of data to be collected, if applicable
 - g. Description of existing and proposed partnerships
 - h. Discussion of role of project in planning and/or management of lake
 - i. Timetable for implementation of key activities
 - j. Plan for sharing project results
 - k. Other information in support of project not described above

B. For applicants that are Lake Management Organizations (LMOs), River Management Organizations (RMOs) or Qualified Non-profit Organizations:

- 1. For first time applicant LMOs/RMOs only: A completed Form 8700-226 (Lake Association Organizational Application) or 8700-287 (River Management Organization Application)
- 2. For first time applicant Qualified Nonprofit Organizations only: Copy of IRS 501(c)(3) determination letter and copies of your Articles of Incorporation and Bylaws
- 3. List of national and/or statewide organizations with which you are affiliated
- 4. List of board members' names, including municipality and county of residence. Designate officers
- 5. Documentation of current financial status
- 6. Brochures, newsletters, annual reports or other information about your organization

C. Education, Prevention and Planning Projects: (No additional attachments required.)

D. Early Detection and Response Projects:

- 1. APM Permit application

E. Established Infestation Control Projects:

- 1. Management Plan
- 2. APM Permit application

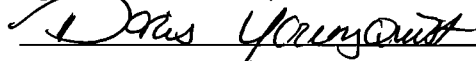
Section VII: Certification

I certify that information in this application and all its attachments are true and correct and in conformity with applicable Wis. Statutes.

Print/Type Name of Authorized Representative

Doris Youngquist

Signature of Authorized Representative



Title of Authorized Representative

Grant Coordinator

Date Signed

1/29/14

Appendix A

Authorizing Resolution

Aquatic Invasive Species Control Grant Resolution

RESOLUTION OF the **Minong Flowage Association**

Counties of Washburn and Douglas

WHEREAS, the Minong Flowage is an important resource used by the public for recreation and enjoyment of natural beauty; and

WHEREAS, public use and enjoyment of the Minong Flowage is best served by protection of the Minong Flowage from infestation of aquatic species; and

WHEREAS, we recognize the need to provide information or education about aquatic invasive species; and

WHEREAS, we are qualified to carry out the responsibilities of an aquatic invasive species control project.

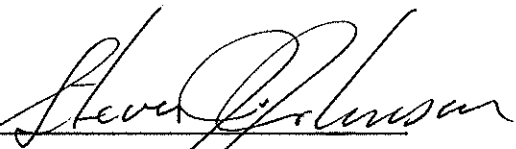
NOW, THEREFORE, BE IT RESOLVED THAT the Minong Flowage Association requests grant funding and assistance available from the Wisconsin Department of Natural Resources under the "Aquatic Invasive Species Control Grant Program" and hereby authorizes Doris Youngquist to act on behalf of the Minong Flowage Association to:

- Submit an application to the State of Wisconsin for financial aid for aquatic invasive species control purposes;
- Sign documents;
- Take necessary action to undertake, direct, and complete an approved aquatic invasive species control grant; and
- Submit reimbursement claims along with necessary supporting documentation within six months of project completion date.

BE IT FURTHER RESOLVED THAT the Minong Flowage Association will meet the obligations of the aquatic invasive species control project including timely publication of the results and meet the financial obligations of an aquatic invasive species grant, including the prompt payment of our 25% commitment to the aquatic invasive species control project costs.

Adopted this day 18th of January, 2014

By a vote of ALL in favor.

BY: 
Steve Johnson, President,
Minong Flowage Association

Appendix B

Letters of Support

January 28, 2014

To: Minong Flowage Association Board

The Minong Town Lakes Committee wishes to support the MFA application to the Wisconsin DNR for supplemental funding for lake quality reevaluation. This will be of particular importance after the significant impacts of the required lengthy 2013 water level drain of the Minong Flowage. This draw down was necessary for major repairs to the dam controlling the water level in the lake. Many of our residents use and enjoy this valuable natural resource and we are concerned about the management of invasive species, shoreline preservation, desirable lake plant and wildlife stabilization, and the effects of restoring water flow.

We advocate that a funding grant be approved to help the Minong Flowage Association and the surrounding community in reestablishment of a healthy lake. The mission of the MTLC is the preservation of the natural state of the 26 lakes in our township. To that end, we conduct a program to educate and raise awareness of the challenges facing our lakes and work to protect our lakes, their shorelines and watersheds from degradation. The MTLC reports directly to the Town of Minong Board of Supervisors.

Thank you for your support in developing this grant.

Sincerely,
Laurie Johnson
2013 MTLC Chair



WASHBURN COUNTY FOREST

FOREST ADMINISTRATOR

850 W. Beaver Brook Ave., Suite #4
SPOONER, WISCONSIN 54801
(715) 635-4490 Fax (715) 635-4493

January 30, 2014

To Whom It May Concern,

Please accept this as a letter of support for the Minong Flowage Association's efforts towards securing grants to control Eurasian Milfoil in the Minong Flowage. The Washburn County Forestry Department recognizes the efforts made by their association in controlling invasive species.

Washburn County has partnered with the Minong Flowage association since they began treating milfoil in 2008. We have fully supported their efforts and contributed by providing funds directly towards projects and allocating "up front" funds to assist with the grant reimbursement process. Washburn County operates a large campground on the flowage and has assisted wherever possible in order to reduce invasive species impacts on park visitors.

We also support all of their planning efforts and hope that not only will grant funding continue to be awarded, but also that all treatment options remain available to them. We have seen great declines in the amount of milfoil present in the flowage as a direct result of their hard work. Their approach to the difficult issue of aquatic invasive species is a model of professionalism and a great example of how non-profit groups and local units of government can partner effectively.

Please give them all due consideration as they continue to apply for grants in 2014 and the future.

Sincerely

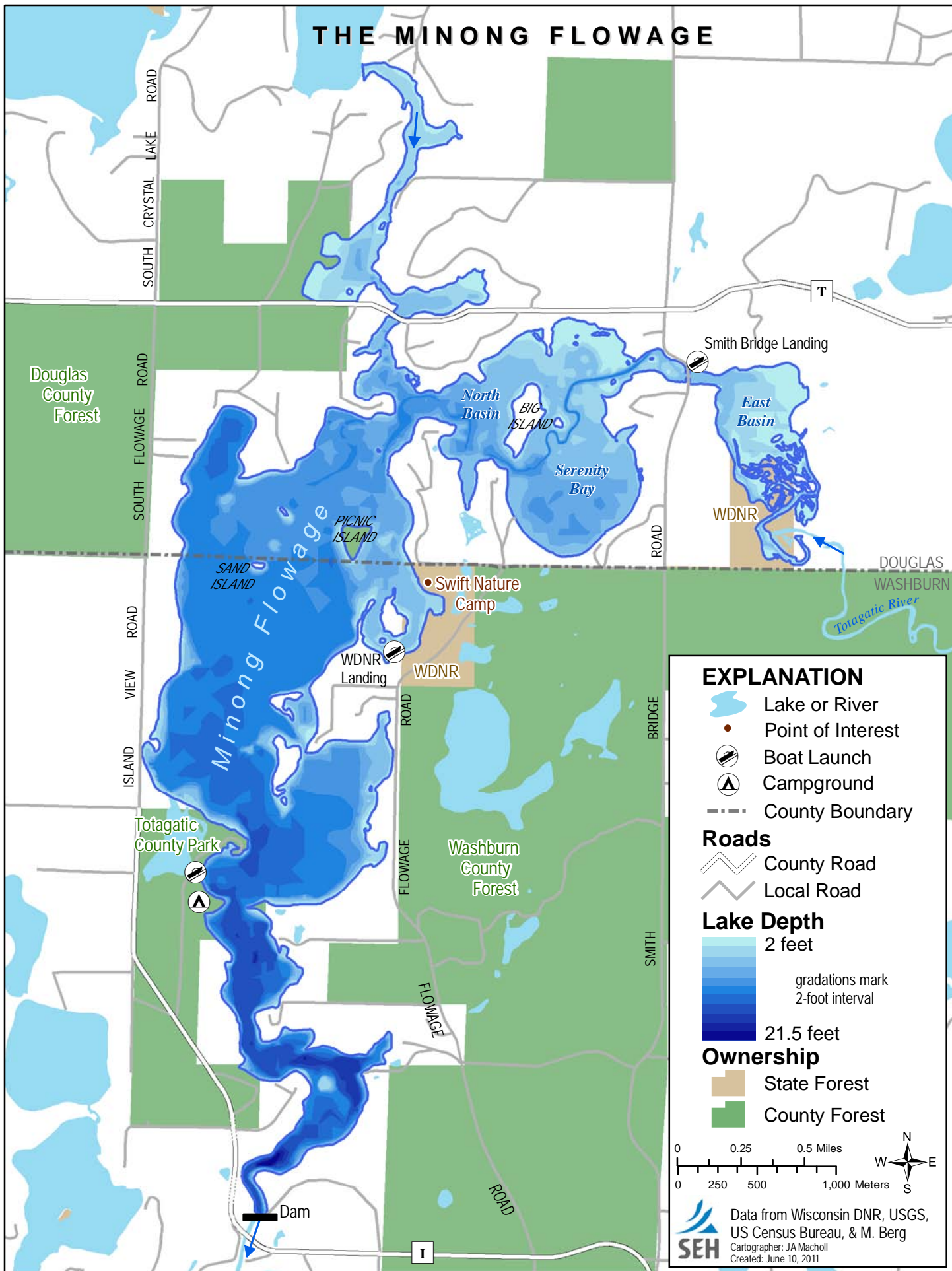
A handwritten signature in blue ink, appearing to read "Mike Peterson", with a long horizontal flourish extending to the right.

Mike Peterson
Washburn County Forest Administrator

Appendix C

Map of Project Location and Boundaries/Lake Map

THE MINONG FLOWAGE



EXPLANATION

- Lake or River
- Point of Interest
- Boat Launch
- Campground
- County Boundary

Roads

- County Road
- Local Road

Lake Depth

- 2 feet
- gradations mark 2-foot interval
- 21.5 feet

Ownership

- State Forest
- County Forest

0 0.25 0.5 Miles
0 250 500 1,000 Meters

SEH Data from Wisconsin DNR, USGS, US Census Bureau, & M. Berg
Cartographer: JA Macholl
Created: June 10, 2011

Appendix D

Itemized Breakdown of Expenses

Project Name: 2014 Minong Flowage Plant Management Action Plan (With Dye)				Reimbursible Expenses				Sponsor Match						
Project Years: 2014-2015				SEH		Equipment/Paid Services		Volunteer		Donated Services		Sub-Total	Comments	
Goal	Objective	Action	Task	Time	Dollars	Who/What	Dollars	Time	Dollars	Who	Dollars			
Aquatic Plant Survey	Repeat the Aquatic Plant Survey that was completed in 2012; Make comparisons to identify changes	May and August point-intercept survey and report	879 points in the river and millpond	2	\$160.00	ERS	\$6,000.00					\$6,160.00		
		CLP bed mapping in June and report	Incorporate GPS mapping and rakehead density ratings	1	\$80.00	ERS	\$500.00						\$580.00	
		EWM Bed Mapping in the Fall and report	Incorporate GPS mapping and rakehead density ratings	1	\$80.00	ERS	\$875.00						\$955.00	
		Wild Rice Mapping in August	Completed by Washburn County with assistance from St. Croix Tribal Resources								WashCo/Tribal Resources	\$500.00	\$500.00	
Lake Volume and Water Movement	Bathymetric Survey (optional)	Contract with CIBiobase to set up bathymetric survey program	Volunteers will boat around the Minong Flowage collecting sonar data for bathymetric mapping purposes			CI Biobase	\$1,850.00	80	\$960.00	Boat Use (40 hrs)	\$1,000.00	\$3,810.00		
		rental of two sonar units				Elite HD1 7	\$850.00					\$850.00		
	Dye Study to determine water movement	Determine water movement in Serenity Bay and the North Basin	Develop and implement a dye study in cooperation with the WDNR	4	\$320.00	Dye	\$7,000.00					\$7,320.00		
Watercraft Inspection	Clean Boats Clean Waters	WDNR Landing	Provide at least 200 hours annually at each of two landings							Wash Co.	\$1,000.00	\$1,000.00	Washburn County Donation to the Project based on launch fees collected at the County Park landing. County Park covered by Town of Minong. A one page CBCW Grant will be applied for by the MFA to cover the WDNR landing with paid inspectors. Volunteers will add time at Smith Bridge and Pogos landing	
Aquatic Invasive Species Education	AIS Monitoring	Participate in CLMN AIS monitoring program including shoreline monitoring for Japanese knotweed, purple loosestrife, and giant reed grass	Complete once a month June through October					40	\$480.00	Boat Use (20 hrs)	\$500.00	\$980.00	5 months x 2 people x 4 hrs	
		Materials					\$120.00					\$120.00		
	Public Event	Sponsor and/or host at least one public event in 2014	Participate in community events like the Minong Town Lake Fair, AIS Education Workshop, Lake Fair, Community Picnic House, Washburn County Fair, etc					24	\$288.00				\$288.00	
		Materials					\$500.00						\$500.00	
Minong Flowage Stakeholders Group	Form a stakeholders group with representatives from the MFA (2), WDNR, Washburn County (1), Tribal Resources and/or GLIFWC (2), and the Town of Minong (1)	Meet quarterly to discuss management action on the Minong Flowage					32	\$384.00	32 hrs for other participants (\$25.00/hr)	\$800.00	\$1,934.00	4 meetings, 2 hours each, 6 members plus the WDNR, MFA to act as Secretary to post agendas and minutes.		
Public Outreach and Education	prepare a newsletter and maintain a Minong Flowage Association web page	Distribute a newsletter multiple times during the year to update the status of AIS management and Stakeholders Group Minutes. Maintain a MFA webpage to distribute AIS information				Materials/Reproduction	\$400.00	48	\$576.00			\$976.00		
Water Quality and Quantity Monitoring	Nutrient Monitoring	Serenity Bay, Main Basin, and Deep Hole Near Dam	TP & TSS (May-Oct), ChlorA (June-Oct), water clarity (2-3 times a month)			SLOH	\$837.80	40	\$480.00	Boat Use (24 hrs)	\$700.00	\$2,017.80	6 times x 2 people x 4 hours to do three sites	
			Training and Support			Monthly Preparation	\$320.00						\$320.00	
Aquatic Plant Mangement Plan and General Project Support	End of year Summary Report	Prepare an end of year summary report for stakeholders and reimbursement purposes	Preparation	8	\$640.00	Reproduction	\$40.00					\$680.00		
	2015 AIS Management Planning	Prepare initial AIS (EWM) management proposal for 2015	AIS initial treatment proposal based on 2014 data	12	\$960.00			8	\$96.00			\$1,056.00		
	General Project Support	2 (2 hr) Meetings, mileage, general consultant support	Time and Travel	8	\$640.00	SEH mileage	\$100.00					\$740.00		
				44	\$3,520.00	0	\$19,502.80	264	\$3,264.00	0	\$4,500.00	\$30,786.80	\$30,786.80	

Project Funding	
Total Project Cost	\$30,786.80
State Share (75%)	\$23,090.10
Sponsor Match (25%)	\$7,696.70

Project Value Currently included in this budget		Percent (actual)
Total Project Cost	\$30,786.80	
Reimbursible Expenses	\$23,022.80	74.8
Sponsor Match	\$7,764.00	25.2

Appendix E

State Lab of Hygiene Spreadsheets

LAKE/RIVER PLANNING GRANTS PROJECTED LAB COSTS

Grand Total

Lake Name: Miong Flowage (3 sites)
 Waterbody ID#:
 County: Washburn
 Applicant Name: Minong Flowage Association

Review Period:
 Application Period: 2692900

Parameter	Analyses For Grant	Grant Cost For Parameter
NUTRIENTS		
DISSOLVED REACTIVE P (ORTHO)	0	\$0.00
TOTAL PHOSPHORUS	10	\$248.91
TOTAL DISS PHOSPHORUS (AS P), (EPA 365.1)	0	\$0.00
TOTAL KJELDAHL NITROGEN	0	\$0.00
NITRATE+NITRITE (AS N), DISS (EPA 353.2)	0	\$0.00
AMMONIA-N, DISSOLVED	0	\$0.00
OTHER WET CHEMISTRY		
AUTOMATED CONDUCTIVITY, PH & ALKALINITY	0	\$0.00
ALKALINITY, GRAN TECHNIQUE	0	\$0.00
CHLORIDE	0	\$0.00
CHLOROPHYLL A, FLUORESCENCE, FIELD FILTERED	0	\$0.00
CHLOROPHYLL A, FLUORESCENCE LAB FILTERED	9	\$233.36
COLOR, TRUE, PT-CO	0	\$0.00
HARDNESS, CALCULATION METHOD (When Metals Done)	0	\$0.00
HARDNESS, CALCULATION METHOD (When Metals not Done)	0	\$0.00
SULFATE (EPA 375.2)	0	\$0.00
SUSPENDED SOLIDS	18	\$355.52
TOTAL DISSOLVED SOLIDS, 180 C	0	\$0.00
TOTAL VOLATILE SOLIDS	0	\$0.00
TURBIDITY	0	\$0.00
FIELD TESTS (For each lab slip with Field Testing Recorded)	0	\$0.00
TOTAL METALS		
CALCIUM, TOTAL RECOVERABLE, ICP	0	\$0.00
IRON, TOTAL RECOVERABLE, ICP	0	\$0.00
MAGNESIUM, TOTAL RECOVERABLE, ICP	0	\$0.00
MANGANESE, TOTAL RECOVERABLE, ICP	0	\$0.00
POTASSIUM, TOTAL RECOVERABLE, ICP	0	\$0.00
SODIUM, TOTAL RECOVERABLE, ICP	0	\$0.00
DIGESTION, TOT. RECOV. LOW LEVEL, ICP + ICP SETUP	0	\$0.00
WATER BACTI		
E COLI ENZYMATIC SUBTRATE QUANTITRAY MPN	0	\$0.00
Fecal Coliform (MFCC)	0	\$0.00
Grand Total =		\$837.80

LAKE/RIVER PLANNING GRANTS PROJECTED LAB COSTS

Second Year FY 2014

Lake Name: Miong Flowage (3 sites)
 Waterbody ID#: 2692900
 County: Washburn
 Applicant Name: Minong Flowage Association
 Will the Lab be doing filtration for dissolved parameters? (Y/N) N
 Will field tests be recorded on the Lab Slip? N

Review Period: 2013
 Application Period: 2014

Parameter	Samples/Month												Analyses/ Fiscal Year	Price/ Analysis	Annual Cost For Parameter		
	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun					
NUTRIENTS																	
DISSOLVED REACTIVE P (ORTHO)															0	\$17.17	\$0.00
TOTAL PHOSPHORUS												1	1		2	\$24.31	\$48.62
TOTAL DISS PHOSPHORUS (AS P), (EPA 365.1)															0	\$24.31	\$0.00
TOTAL KJELDAHL NITROGEN															0	\$33.98	\$0.00
NITRATE+NITRITE (AS N), DISS (EPA 353.2)															0	\$27.81	\$0.00
AMMONIA-N, DISSOLVED															0	\$26.67	\$0.00
OTHER WET CHEMISTRY																	
AUTOMATED CONDUCTIVITY, PH & ALKALINITY															0	\$22.66	\$0.00
ALKALINITY, GRAN TECHNIQUE															0	\$55.62	\$0.00
CHLORIDE															0	\$20.60	\$0.00
CHLOROPHYLL A, FLUORESCENCE, FIELD FILTERED															0	\$23.98	\$0.00
CHLOROPHYLL A, FLUORESCENCE LAB FILTERED													1		1	\$25.26	\$25.26
COLOR, TRUE, PT-CO															0	\$25.75	\$0.00
HARDNESS, CALCULATION METHOD (When Metals Done)															0	\$5.53	\$0.00
HARDNESS, CALCULATION METHOD (When Metals not Done)															0	\$54.40	\$0.00
SULFATE (EPA 375.2)															0	\$26.78	\$0.00
SUSPENDED SOLIDS														3	3	\$19.38	\$116.18
TOTAL DISSOLVED SOLIDS, 180 C															0	\$17.64	\$0.00
TOTAL VOLATILE SOLIDS															0	\$10.33	\$0.00
TURBIDITY															0	\$10.30	\$0.00
FIELD TESTS (For each lab slip with Field Testing Recorded)															0	\$3.09	\$0.00
TOTAL METALS																	
CALCIUM, TOTAL RECOVERABLE, ICP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$13.39	\$0.00
IRON, TOTAL RECOVERABLE, ICP															0	\$13.39	\$0.00
MAGNESIUM, TOTAL RECOVERABLE, ICP															0	\$13.39	\$0.00
MANGANESE, TOTAL RECOVERABLE, ICP															0	\$13.39	\$0.00
POTASSIUM, TOTAL RECOVERABLE, ICP															0	\$13.39	\$0.00
SODIUM, TOTAL RECOVERABLE, ICP															0	\$13.39	\$0.00
DIGESTION, TOT. RECOV. LOW LEVEL, ICP + ICP SETUP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$22.09	\$0.00	
WATER BACTI																	
E COLI ENZYMATIC SUBTRATE QUANTITRAY MPN															0	\$38.11	\$0.00
Fecal Coliform (MFFCC)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$38.11	\$0.00	
														Grand Total =	\$190.06		

Number of Inorganic Lab Slips (Machine Determined) 6 = Total Inorganic Lab Slips for Fiscal Year
 Number of Bacti Lab Slips (Machine Determined) 0 = Total Bacti Lab Slips for Fiscal Year
 Number of Inorganic Lab Slips (from workplans)

LAKE/RIVER PLANNING GRANTS PROJECTED LAB COSTS

Thrid Year FY 2015

Lake Name: Miong Flowage (3 sites)
 Waterbody ID#: 2692900
 County: Washburn
 Applicant Name: Minong Flowage Association
 Will the Lab be doing filtration for dissolved parameters? (Y/N) N
 Will field tests be recorded on the Lab Slip? N

Review Period:
 Application Period:

2014 2015

Parameter	Samples/Month												Analyses/ Fiscal Year	Price/ Analysis	Annual Cost For Parameter	
	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun				
NUTRIENTS																
DISSOLVED REACTIVE P (ORTHO)														0	\$17.89	\$0.00
TOTAL PHOSPHORUS	1	1	3	3										8	\$25.04	\$200.30
TOTAL DISS PHOSPHORUS (AS P), (EPA 365.1)														0	\$25.04	\$0.00
TOTAL KJELDAHL NITROGEN														0	\$35.00	\$0.00
NITRATE+NITRITE (AS N), DISS (EPA 353.2)														0	\$28.64	\$0.00
AMMONIA-N, DISSOLVED														0	\$27.47	\$0.00
OTHER WET CHEMISTRY																
AUTOMATED CONDUCTIVITY, PH & ALKALINITY														0	\$23.34	\$0.00
ALKALINITY, GRAN TECHNIQUE														0	\$57.29	\$0.00
CHLORIDE														0	\$21.22	\$0.00
CHLOROPHYLL A, FLUORESCENCE, FIELD FILTERED														0	\$24.70	\$0.00
CHLOROPHYLL A, FLUORESCENCE LAB FILTERED	1	1	3	3										8	\$26.01	\$208.11
COLOR, TRUE, PT-CO														0	\$26.52	\$0.00
HARDNESS, CALCULATION METHOD (When Metals Done)														0	\$5.70	\$0.00
HARDNESS, CALCULATION METHOD (When Metals not Done)														0	\$56.04	\$0.00
SULFATE (EPA 375.2)														0	\$27.68	\$0.00
SUSPENDED SOLIDS	3	3	3	3										12	\$19.94	\$239.34
TOTAL DISSOLVED SOLIDS, 180 C														0	\$18.17	\$0.00
TOTAL VOLATILE SOLIDS														0	\$10.64	\$0.00
TURBIDITY														0	\$10.61	\$0.00
FIELD TESTS (For each labslip with Field Testing Recorded)														0	\$3.18	\$0.00
TOTAL METALS																
CALCIUM, TOTAL RECOVERABLE, ICP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$13.79	\$0.00
IRON, TOTAL RECOVERABLE, ICP														0	\$13.79	\$0.00
MAGNESIUM, TOTAL RECOVERABLE, ICP														0	\$13.79	\$0.00
MANGANESE, TOTAL RECOVERABLE, ICP														0	\$13.79	\$0.00
POTASSIUM, TOTAL RECOVERABLE, ICP														0	\$13.79	\$0.00
SODIUM, TOTAL RECOVERABLE, ICP														0	\$13.79	\$0.00
DIGESTION, TOT. RECOV. LOW LEVEL, ICP + ICP SETUP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$22.76	\$0.00
WATER BACTI																
E COLI ENZYMATIC SUBTRATE QUANTITRAY MPN														0	\$39.25	\$0.00
Fecal Coliform (MFFCC)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$39.25	\$0.00

Grand Total = \$647.74

Number of Inorganic Lab Slips (Machine Determined) 3 3 3 3 0 0 0 0 0 0 0 0 0 0 12 =Total Inorganic Lab Slips for Fiscal Year
 Number of Bacti Lab Slips (Machine Determined) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 =Total Bacti Lab Slips for Fiscal Year
 Number of Inorganic Lab Slips (from workplans)

Appendix F

Project Scope/Description

Table of Contents

	Page
1.0 Project Area	1
2.0 Public Access to the Minong Flowage	2
3.0 Problem Addressed by the Project	3
4.0 Wisconsin Department of Natural Resources Internal Grant Application	3
5.0 Aquatic Plant Management Plan Update/Revision	3
6.0 Project Goals and Objectives	4
7.0 Activities and Methods	5
7.1 Aquatic Plant Survey Work	5
7.1.1 Point Intercept (PI) Survey	5
7.1.2 Curly-leaf Pondweed Bed Mapping	5
7.1.3 EWM Fall Bed Mapping	5
7.1.4 Wild Rice Monitoring and Mapping	5
7.2 Lake Volume and Water Movement.....	6
7.2.1 Bathymetric Survey	6
7.2.2 Liquid Dye Study	7
7.3 Watercraft Inspection.....	7
7.4 Aquatic Invasive Species Education	7
7.4.1 AIS Monitoring	7
7.4.2 Public Involvement/AIS Education.....	8
7.4.3 Minong Flowage Stakeholders Group	8
7.5 Water Quality and Quantity Monitoring	8
7.6 End of Project Summary Reporting and General Project Support.....	8
8.0 Products and Deliverables	8
9.0 Proposed Partnerships	9
10.0 Project Role in Management Planning	9
11.0 Project Timetable	9
12.0 Sharing Results	9
13.0 Other Information	10

List of Figures

Figure 1 – Minong Flowage	1
Figure 2 – CI BioBase Automated Vegetation and Contour Mapping	6

1.0 Project Area

The Minong Flowage (Flowage) is a 1564 acre impoundment located in the Town of Minong in Washburn County and the Town of Wascott in Douglas County. It has a maximum depth of 21 ft. and a mean depth of 9 ft. 14.5% of the Flowage is less than 3 ft. deep (Figure 1). The Flowage was created in 1937 when a dam with an 18 ft. head was installed on the Totagatic River. The dam is currently operated by North American Hydro and generates hydroelectric power for the region. In 2013, a dam reconstruction project was begun that required a summer drawdown of the Minong Flowage. That drawdown began in May of 2013, and due to problems with the reconstruction project is still in place at the time of this grant submission.

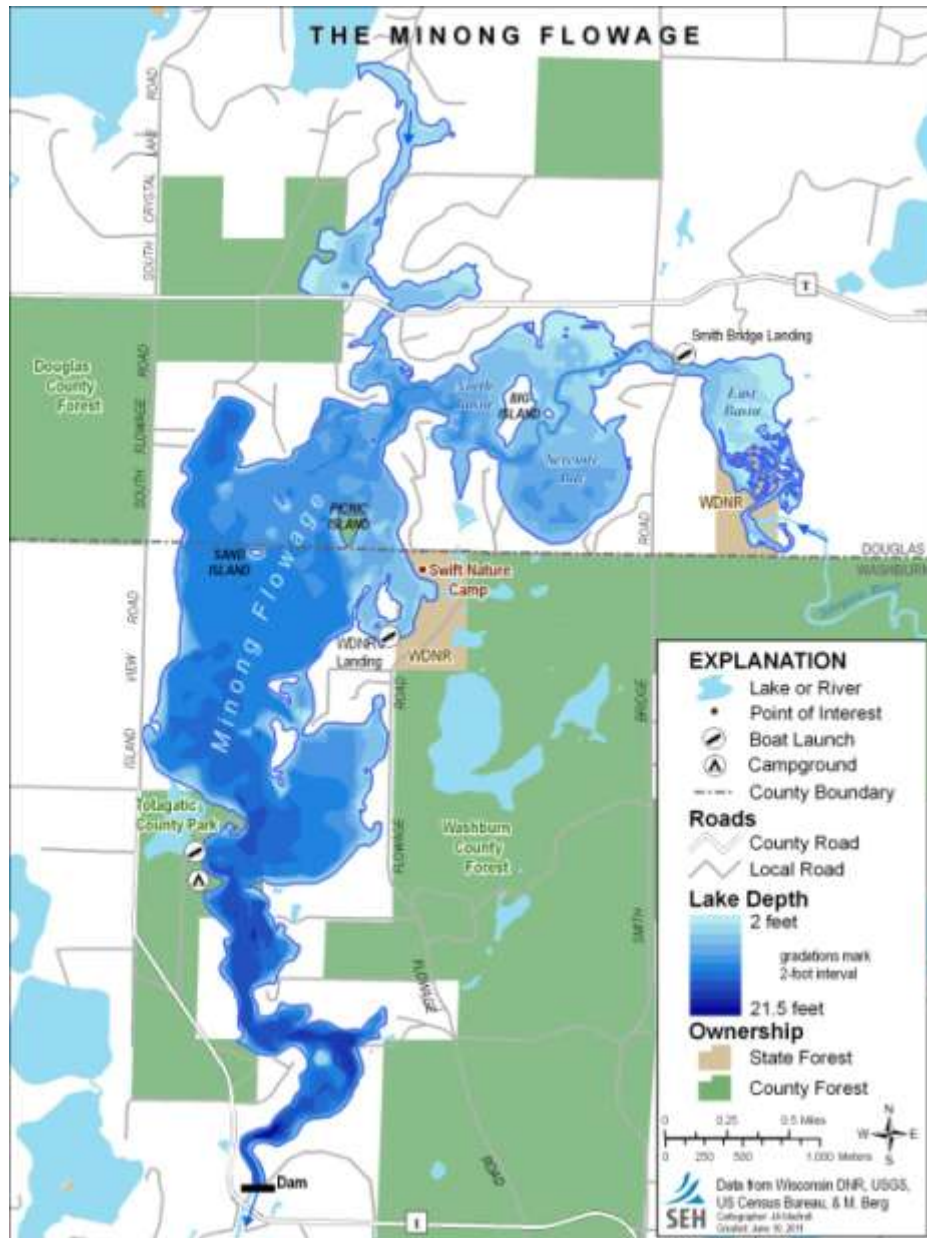


Figure 1 – Minong Flowage

For many years, the Flowage was considered a waterbody of special interest due to large beds of wild rice that were located in the East Basin and north end of Serenity Bay (Figure 1). These areas are now negatively impacted by several non-native invasive species including Eurasian watermilfoil (EWM), curly-leaf pondweed (CLP), and common carp. The main area of EWM dominance in the Flowage is in the North Basin, Serenity Bay, and East Basin (Figure 1), all places where wild rice used to be more dominant.

An Aquatic Plant Management Plan (APMP) was written for the Flowage in 2008, with the intent to guide EWM management over the course of five years ending in 2013. A great deal of planning was done to make sure wild rice beds were not negatively impacted by EWM management efforts. Aquatic plant surveys and mapping, herbicide concentration sampling, and wild rice mapping was completed on a regular basis as a part of the EWM management plan.

Management efforts focused on reducing the surface area of the Flowage impacted by EWM with the use of herbicides were begun in 2009 to manage about half of what was then, more than 260 acres of EWM growth with varying densities. Only about 140 acres of the EWM in the Flowage can be managed with herbicides. The remaining surface area of EWM is in places not accessible to applicator boats due to dense, emerged and submerged stumpage. Between 2009 and 2012, the amount of surface area of the lake treated for EWM was reduced from 140 to approximately 20 acres of proposed herbicide management. Native plants did not appear to be suffering, and efforts continued to protect wild rice and other native aquatic vegetation. Despite this, St. Croix Tribal resistance to the use of herbicides to control EWM in the Flowage prevented herbicide management from continuing.

In 2012, the decision was made to reconstruct the dam that holds back the Minong Flowage. The decision influenced a lot of things on the Flowage. A repeat of the point-intercept aquatic plant survey completed in 2008 was moved up a year to 2012 in order to assess the overall effects of EWM management in the Flowage to target and non-target plant species. No EWM management was completed in 2012 or 2013. EWM mapping was completed a several different times in 2013 to assess the impact of the summer long drawdown on it. Unfortunately, EWM was not entirely controlled as a result of the drawdown. EWM continued to hang on and even spread to new areas previously too deep to support its growth. Efforts were made to extend the drawdown into the winter months of 2013 and 14 because it was believed that a winter drawdown with freezing temperatures would have more impact on the EWM, particularly in those areas where management by use of herbicides was not possible. Initially this idea was scrapped due to costs and other assumed risk that made the action less desirable.

Regardless of this decision, the drawdown that began in May of 2013 has been continued into the winter months of 2013 and 2014 due to complications with the dam reconstruction project. It is unclear what impact the summer drawdown and an extended winter drawdown will have on EWM in the Flowage. Bigger questions center on what it will do to the CLP, and more desirable native vegetation, including wild rice.

2.0 Public Access to the Minong Flowage

The Flowage has approximately 300 property owners and is home to the Totagatic County Park, owned and operated by Washburn County, which is open to the public for camping, swimming, fishing, and boating. This is a 75 site campground with a designated swimming area, pavilion, numerous picnic areas, children's play area, fishing pier, fish cleaning house, nature trail, and public boat launch. There is a shower house, toilets, dump station, and

electric water stations located throughout the park for drinking water. The Flowage is also home to the Swift Nature Camp which is a summer camp for boys and girls ages 6-15 to learn about nature and the environment. There are two resorts on the lake, one seasonal with a bar area and one that is open annually with a restaurant/bar. There is one restaurant/bar with a campground, and one bar that also supplies lake users with bait, ice, and convenience items.

The Flowage can be accessed through several public and private boat landings. The WDNR owns a landing on the east side of the Flowage, and there is a county landing on the west side of the lake at the Totogatic County Park. There are two other access points, one located by Smith Bridge up in the East Basin, and the other at the north end by the bridge under Hwy T leading to the Cranberry Flowage and Cranberry Lake (Figure 1). There are numerous other unregulated, private access points at people's homes or cottages.

3.0 Problem Addressed by the Project

This project addresses several problems related to the current status of the Flowage. First it repeats point-intercept aquatic plant survey work that was completed in 2012. The purpose of this survey is to allow comparisons to be made related to aquatic vegetation, native and non-native a year prior to the dam repair and drawdown and the year after the dam repair and drawdown. This project also includes the creation of a new bathymetric map through new GIS applications and a liquid dye study in the East Basin, Serenity Bay, and possibly the North Basin to determine water movement in these areas. Tribal concerns are great as they relate to the use of chemical herbicides anywhere near the wild rice beds. Despite a vast and concerted effort already made to document herbicide residuals and possible ill effects to the wild rice, additional data is desired.

This project and projects related to it will continue aquatic invasive species (AIS) education and watercraft inspection to prevent the movement of AIS to and from the Minong Flowage. A webpage and newsletter are included in it to update the lake constituency about management and monitoring actions and results.

Crucial to the desire to keep all stakeholders informed as to what is currently happening on the Minong Flowage is the formation of a Minong Flowage Stakeholders Group expected to meet at least quarterly to discuss the Flowage.

This project continues water quality monitoring at two sites previously monitored and adds a new site in Serenity Bay. Certain water quality parameters will be collected on a monthly basis beginning in April and going through October of 2014.

4.0 Wisconsin Department of Natural Resources Internal Grant Application

The goals, objectives, and actions included in this project mirror many of those included in an internal Wisconsin Department of Natural Resource (WDNR) submitted by WDNR personnel to collect additional data on the Flowage in 2014. If the internal grant application is awarded, the dye study and possibly the aquatic plant survey work will be removed from the grant application reflecting the AIS Education, Prevention, and Planning project being described in this larger document. However, unless the internal project is officially awarded, all actions in this project description will be completed as planned.

5.0 Aquatic Plant Management Plan Update/Revision

The APMP written for the Flowage in 2008 will be updated at the end of 2014 and be ready for implementation in 2015. Although not included in this grant application, it needs to be noted that existing grant funding left over from a previous grant will be used.

6.0 Project Goals and Objectives

There are six main goals in this project: 1) complete point intercept aquatic plant survey including early and late season sampling periods, and complete CLP and wild rice bed mapping; 2) complete lake bathymetry and volume and water movement studies; 3) support a watercraft inspection program at multiple landings; 4) incorporate AIS monitoring, education, and public outreach, including the formation of a Minong Flowage Stakeholder Group, 5) continue and expand water quality and quantity monitoring at three sites; and 6) provide general project oversight, summary reporting, and initial plant management planning for 2015. These goals will be met over a two year period beginning with the award of this project. The following objectives are included in this project:

- Complete whole-lake, early and mid season point-intercept aquatic plant surveys
- Complete fall EWM bed mapping in 2014
- Complete spring CLP bed mapping in 2014
- Complete wild rice monitoring and mapping
- Complete bathymetric surveying of the Flowage by participating in a GIS based survey program sponsored by CIBioBase
- Purchase dye for and participate in a water movement study led by the WDNR
- Support watercraft inspection programs at the County Park, WDNR Landing, and Smiths Bridge In-lake AIS monitoring in both lakes
- Participate in AIS monitoring following WDNR Citizen Lake Monitoring Network (CLMN) guidelines and adding Giant Reed Grass and Japanese Knotweed
- Plan, sponsor, and implement (or become a part of) at least one public education event that seeks to inform, educate, and involve the local community in management efforts being implemented in the Flowage
- Develop and distribute at least one newsletter focused almost entirely on AIS
- Maintain and update a Minong Flowage Association webpage for the purpose of posting project related material for public review
- Facilitate (with the WDNR) a Minong Flowage Stakeholders Group to meet at least quarterly for the duration of this project and beyond
- Continue and expand nutrient monitoring at three sites: Deep Hole Near Dam, main Basin, and Serenity Bay
- Collect total phosphorus, chlorophyll a, and total suspended solids once a month May to October at all three sites.
- Complete a Project Activity and Summary Assessment Report
- Complete an initial aquatic plant management proposals for 2015
- Provide general consultant support including time and travel

7.0 Activities and Methods

The following section provides more detail related to the goals, objectives, and actions included in this project.

7.1 Aquatic Plant Survey Work

A variety of aquatic plant survey work will be completed in the Flowage in 2014. Survey results will be used to evaluate the impacts of the dam reconstruction drawdown on all aquatic plants, native and non-native. Survey results will be used to establish new aquatic plant management recommendations in a new APMP to be written in 2014-15.

7.1.1 Point Intercept (PI) Survey

The same PI aquatic plant surveys completed in 2008 and 2012 will be repeated in 2014. The PI survey will include both an early season, cold water survey focused on early growth AIS, and a mid season survey to document all vegetation in the Flowage. Survey results from 2014 will be compared to results in 2008 and in 2012. PI survey work in 2014 will be completed by the same consultant that did the previous surveys and supported by a consultant chosen by the MFA to provide general oversight and management of this project

7.1.2 Curly-leaf Pondweed Bed Mapping

Curly-leaf pondweed (CLP) may be the one plant that significantly benefits from conditions brought on by the summer and winter drawdown. As a plant that grows from a new seed or turion each year, freezing temperatures and extreme drying may have less effect on its growth. In the last couple of years the amount of CLP in the Flowage has expanded dramatically, particularly in areas on the north end of Serenity Bay and the East Basin. After the early season PI has been completed a full bed mapping survey of CLP will be completed.

Bed mapping methodology includes a boat survey to visually locate areas where a specific AIS is present. A “bed” is determined to be any area where it is estimated that the specific AIS makes up >50% of the area’s plants and is generally continuous with clearly defined borders. After a bed is located, the surveyor boats around the perimeter of the area, takes GPS coordinates at regular intervals, and estimates an average rake fullness rating of the specific AIS within the bed. Using the WDNR’s Forestry Tool’s Extension to ArcGIS 9.3.1, the coordinates collected are used to generate bed shapefiles and determine the acreage to the nearest hundredth of an acre.

7.1.3 EWM Fall Bed Mapping

Fall bed mapping of EWM provides the information need to propose treatment in the following year. Generally, areas of dense EWM growth identified in the fall are targeted for treatment in the spring. This has been the case on the Minong Flowage. More recent discussion has increased the possibility that a fall treatment of EWM be incorporated on the Minong Flowage as it is expected that this would have less impact on wild rice. Fall bed mapping data can be used to support both of these management options. Bed mapping methodology is explained in the previous section.

7.1.4 Wild Rice Monitoring and Mapping

Impacts to wild rice associated with the dam reconstruction drawdown, AIS, and AIS management on the Minong Flowage are of serious concern to Tribal Resources. In 2014, it is expected that Tribal Resources and the Great Lakes Indian Fish and Wildlife Commission (GLIFWC) will take over wild rice mapping and monitoring. Mapping and monitoring results will be incorporated in new aquatic plant management planning efforts.

7.2 Lake Volume and Water Movement

Two studies to collect data that will make aquatic plant management planning easier, more focused, and more efficient are included in this project. The first is the creation of a new bathymetric map for the Flowage. The second is the implementation of a liquid dye study to track water movement and help determine potential contact time for herbicides that may be used in the future.

7.2.1 Bathymetric Survey

One way to increase the efficiency of any aquatic plant management proposed is to have an accurate bathymetric or water depth and bottom contour map of the treatment area. Previously management actions on the Flowage have been based on bathymetric data collected when point intercept aquatic plant surveys are completed. The points surveyed in this method are generally very far apart. While the bathymetric data is better than that which previously existed, it can still be better and more complete.

This project includes participation by the Minong Flowage Association in the automated vegetation and contour mapping program sponsored by CI BioBase, a company specializing in GIS applications that can improve lake and aquatic plant management. With this data, more accurate estimates of volume and depth can be made, improving management planning efforts and implementation. This project covers the cost of a one year membership in the CI BioBase program and rents two sonar units to be installed on volunteers' boats and used to collect the bathymetric data. How this program works is explained in Figure 2, taken from the CI BioBase webpage at <https://www.cibiobase.com/Home/HowItWorks>. Rented units will be returned to the company at the completion of this project, or purchased by the user on the Minong Flowage.

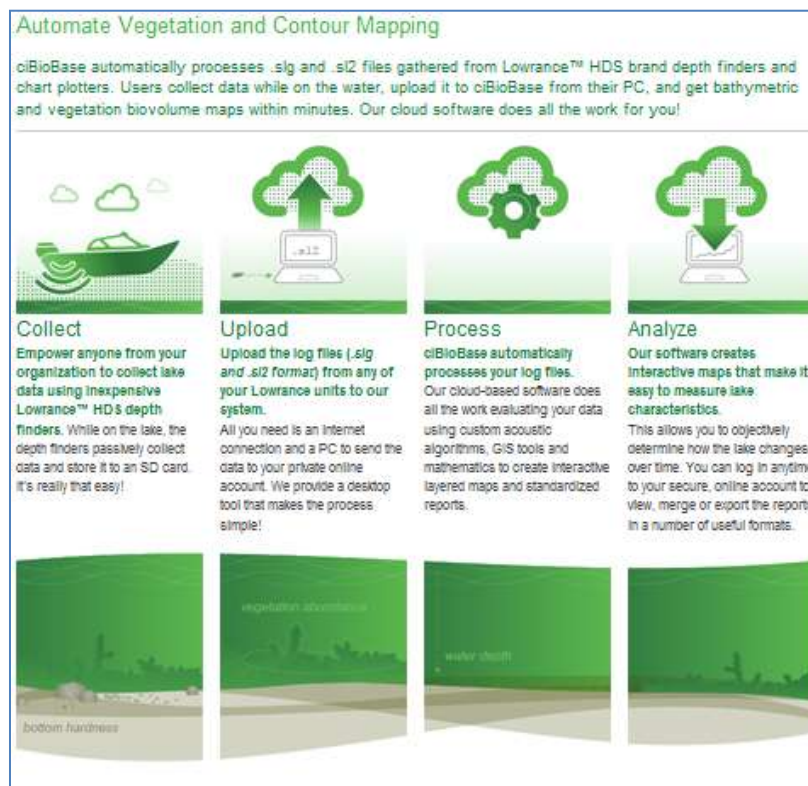


Figure 2 – CI BioBase Automated Vegetation and Contour Mapping

7.2.2 Liquid Dye Study

One of the keys to controlling noxious and invasive aquatic weed species with aquatic herbicides is understanding how water exchange within the treatment sites might affect performance of the product. In the mid to late 1980's US Army Corps of Engineers Aquatic Plant Management Researchers started to think about how these products update within target weeds, how much time the target weeds need to be exposed to the particular herbicide and how water exchange impacts efficacy. This research has lead to operational improvements in using these technologies to impact invasive aquatic species and to help operational aquatic plant managers plan treatments.

Once the federal scientists understood the requirements for the various aquatic herbicides, they turned their focus to learning in the field what was actually happening within these aquatic plant communities with respect to water exchange. The result was a predictive tool that uses Rhodamine WT dye in the role of an aquatic herbicide. This dye can be applied at a known concentration, and it can be measured with an instrument called a flurometer. Sampling grids can then be set up within the treatment plot to monitor how long the dye remains and at what concentrations. Sampling stations outside the plot can be set up to see where a potential herbicide might go and at what concentrations. Very useful tools when questions arise about the potential for contamination of resources not targeted for control.

This project is deploying this technology in the Minong Flowage in cooperation with the WDNR to help improve EWM control planning and minimize the amount of aquatic herbicide necessary to deliver effective control. This research will help plan future treatment programs to both deliver selective control of EWM and to minimize costs to the various agencies that require this work.

7.3 Watercraft Inspection

This project does not specifically include watercraft inspection in its funding request. However, watercraft inspection will be completed at all public access points on the Flowage. The Town of Minong received a \$36,000 grant to monitor nine different boat landings in the Town, including the boat landing at the Totogatic County Park owned and operated by Washburn County. The MFA submitted a grant application to provide watercraft inspection at the WDNR landing and the Smith Bridge landing. In both cases, at least 200 hours of watercraft inspection time following Clean Boats, Clean Waters guidelines will be completed.

7.4 Aquatic Invasive Species Education

Included in this project are AIS monitoring, education, and public outreach, including the formation of a Minong Flowage Stakeholder Group.

7.4.1 AIS Monitoring

A monitoring team consisting of two people will be recruited to complete AIS monitoring at least five times during the open water season of the Flowage. Volunteers will be trained or retrained in how to identify EWM, CLP, and other AIS included in the CLMNAIS Monitoring Program. The team will be provided with a plant sampling rake, lake map, zip lock baggies, identification cards, and a permanent marker. Data recording sheets will be provided for each month, and upon completion of that month's monitoring this recording sheet will be submitted to the MFA for confirmation.

AIS data recording records will be submitted to the WDNR SWIMS database prior to submitting for any reimbursement.

7.4.2 Public Involvement/AIS Education

The general public will be kept informed about activities related to this project through the MFA webpage at <http://minongflowage.org/>. The MFA will publish at least one newsletter focused on aquatic invasive species during this project that will be made available to all landowners and other interested parties.

The MFA will sponsor or co-sponsor at least one public event during this project. Example events could include a lake fair, invasive species removal day, a general AIS training session focused on identification and management techniques, special speaker, MFA member outing/fundraiser, etc. Topics and guests invited will vary depending on the interests of the group at the time, but will focus on AIS and the issues associated with them.

7.4.3 Minong Flowage Stakeholders Group

The MFA will facilitate (with the WDNR) a Minong Flowage Stakeholders Group that will meet at least quarterly for the duration of this project and beyond. The purpose of this group is to bring together all stakeholders at regular intervals to discuss management actions as they pertain to the Flowage. The formation of this group will likely improve communication, reduce the number of interruptions in management due to a lack of understanding and provide an opportunity for those most impacted by management to voice their support or opposition for management actions. It is expected that the MFA and their chosen lake consultant, WDNR, Tribal Resources, GLIFWC, and Washburn County will form the core of this group. Meetings will likely be held at the Minong Town Hall.

The WDNR will develop agendas for these meetings, and the MFA will record minutes and arrange meeting logistics.

7.5 Water Quality and Quantity Monitoring

Water quality monitoring in the Minong Flowage already includes CLMN expanded monitoring parameters at the Deep Hole Near the Dam and in the Main Basin. These efforts will be continued. In addition, a new site will be added to the water quality monitoring program in Serenity Bay. Water quality parameters to be collected included total phosphorus, chlorophyll a, total suspended solids, water clarity, and dissolved oxygen and temperature. In this project, these parameters will be collected once a month May through October at all three sites. Once this project is complete, regular CLMN expanded monitoring will be completed.

7.6 End of Project Summary Reporting and General Project Support

Assessment and evaluation of this project's activities is important to the success of future AIS management in the Minong Flowage. At the conclusion of this project, a summary of project activities and assessment report will be written and distributed to all members of the Stakeholders Group. A full report of the point intercept aquatic plant survey will be complete and distributed to the MFA and the WDNR. The report will include the results of both the early and mid-season PI surveys and CLP and EWM bed mapping.

This project also provides for general project support and travel time for the consultant chosen by the MFA to work on their behalf to help implement the activities included in this project. Consultant billing will be based on the activities completed.

8.0 Products and Deliverables

The following is a list of the deliverables accompanying this project.

- Aquatic Plant Survey Report

-
- GIS data collected and stored by CI BioBase
 - A Dye Study Report
 - SWIMS records for AIS monitoring, water quality monitoring, and watercraft inspection
 - Agendas and minutes from the Stakeholders Meetings EWM Management Initial and Final Treatment Proposals
 - CLP and EWM bed mapping reports and related materials including GIS applications
 - Workshop and public events agendas and attendance records
 - Copy of the newsletter
 - Wild rice monitoring report
 - Aquatic plant survey reports
 - Summary Reports

These items and others not identified will be shared with those entities that may have an interest including the WDNR, Barron County, Town of Cumberland, and others.

9.0 Proposed Partnerships

The Minong Flowage Association will continue to work with Washburn County, the Town of Minong, GLIFWC and Tribal Resources, and the WDNR to complete the actions included in this project. Washburn County will continue to provide monetary support by covering large expenditures for the MFA until reimbursements from the WDNR can be requested. The MFA will reach out to the Cranberry Lake Association and share its management experiences. It is expected that some of the launch fees collected at the County Park Boat Landing will be donated by Washburn County to the MFA for management and planning purposes.

10.0 Project Role in Management Planning

This project will reset activities previously undertaken by the MFA. A new era of management in the Minong Flowage has begun. EWM, while still expected to be a major focus of management planning, it may no longer be the only focus. Aquatic plant survey work and other actions in this project will serve as the basis for all future management recommendations. The outcome of this project will be enough technical data to form the framework for an approvable APMP that seeks to satisfy MFA, County, Tribal, and multiple WDNR interests. It is possible that this project will lead to an AIS Control Grant Application in early 2015 to support new management actions included in the new APMP.

11.0 Project Timetable

All tasks in this project will be completed by August 31, 2015.

12.0 Sharing Results

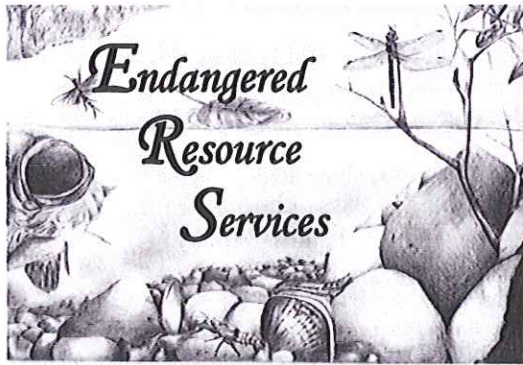
Documents created as a part of this project will be posted on the MFA website for public review. Paper versions will be available for review with MFA officers. Plant survey reports, summary documents, and the new APMPs will be distributed to the MFA, WDNR, GLIFWC,

and made available for Washburn County and Town of Minong for review upon request. Watercraft inspection, AIS monitoring, and water quality data will be loaded into the SWIMS database. Updates on the progress of this project will be posted on the MFA webpage. The MFA may choose to do multiple reimbursements over the course of this project. As such, project updates will be provided to accompany the reimbursements upon request.

13.0 Other Information

The following items are included with this grant application.

- Aquatic Plant Survey Bids
- CI BioBase Project Bid
- MFA CBCW One Year Watercraft Inspection Grant



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*Specializing in Aquatic Plant, Mussel, Dragonfly and Bird Surveys
 Habitat Assessment and Endangered Species Mitigation*

This document is to serve as an itemized contract proposal between the Minong Flowage Association (MFA) (in partnership with Short Elliott Hendrickson Inc. (SEH)), and Endangered Resource Services, LLC (ERS). At the request of SEH/MFA, we propose to complete an early season Curly-leaf pondweed (*Potamogeton crispus*) Density Survey, an optional CLP Bed Mapping Survey, a July full Point Intercept Aquatic Plant Survey, and a Eurasian water milfoil (*Myriophyllum spicatum*) fall bed mapping surveying using the methods outlined by the Wisconsin Department of Natural Resources on the Minong Flowage in May/Early June, July/August, September 2014.

Details of the contract are as follows:

- | | |
|--|----------|
| A. P/I Curly-leaf pondweed Survey (and early season EWM) in May/June | \$1,500 |
| B. (Optional if CLP is present in significant quantities)
CLP bed mapping using GPS/GIS
to map all significant beds on the flowage. 0.5 day at \$75/hr
(includes 2 person boat crew, mileage, and map generation) | (\$ 375) |
| C. (Optional per DNR opinion) Collection and Preparation of
2 sets of herbarium voucher specimens (1 mounted
set deposited with the WDNR and 1 mounted set
retained by the lake association/SEH):
2 person crew (collecting) for 5 hours @ \$50/hr
+ 1 person (preparation) for 10 hours @ \$25/hr. | (\$ 500) |
| D. Aquatic Plant Survey of 879 points on Minong Flowage in July/August | \$3,375 |
| E. September bed mapping survey of all EWM beds on the flowage
2 person crew for 1 day (10 hours at \$75/hr) | \$750 |
| F. Statistical Analysis of Data Including Plant Species Maps Generated in ArcView
1 person for 25 hours @ \$25/hr | \$ 625 |
| G. Final Report of Survey - 1 person for 30 hours @ \$25/hr | \$ 750 |

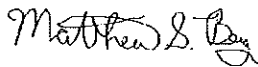
Total Cost	\$7,000
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Detailed Description of Cost Breakdown:

- A. A late May/early June survey will be performed to determine the level of Curly leaf Pondweed (*Potamogeton crispus*) (and early season EWM) present. A resulting map of locations and densities will be displayed in the final report, and an initial report will be presented to SEH at this time.
- B. If desired, we will also map CLP beds on the flowage, create shapefiles that show acreage to the nearest hundredth of an acre and perimeter of the beds to the nearest meter. We will also estimate the mean rake fullness within the beds. Whether this is necessary will be determined by SEH and/or WDNR.
- C. As we already completed a P/I survey of the flowage in 2008 and 2012, the DNR may waive their usual requirement concerning voucher collection (Pamela Toshner has done this in the past, but she should be contacted to determine how to proceed on this item). Regardless, if we find any new species not previously documented, we will collect and preserved specimens using the methods established by the WDNR. All specimens will be mounted on high grade herbarium paper. One set will go to the state herbarium in Madison while the other will be presented to the lake association/SEH along with the final report.
- D. We will use the points previously established by Jennifer Hauxwell, WDNR, and will conduct the survey on approximately the same dates (July 27 – August 1) as we did in 2008. Following completion of the survey, a comparison of the 2012 vs. the 2014 full lake plant community will also be completed to look for any significant changes.
- E. In September, GPS/GIS will be used to map all significant beds of Eurasian water milfoil on the flowage. A shapefile that includes total acreage as well as an estimate of abundance within the bed will be included in the final data/described in the report.
- F. All data collected in the field will be entered into an Excel spreadsheet, and uploaded into ArcView for the purpose of generating species distribution and habitat maps. All ArcView files will be burned to a cd and presented to SEH, the lake association, and the WDNR as part of the final report. This data may be used in any further planning as needed by SEH/the lake association now or in the future, or the WDNR to assist SEH/the lake association to that end. This data remains the intellectual property of ERS, and may not be sold, published or distributed by a party other than SEH or the WDNR without the expressed written consent of ERS.
- G. A final report that includes general background information about the watershed, a detailed explanation of the methods used, highlights of pertinent results, and suggestions for the lake association to consider as they move forward in the management of their resource will be included in the body of the paper. Appendices will include copies of data sheets, maps for all habitat variables measured, maps for all plant species found, supplemental information on exotic species and a copy of all raw data in spreadsheet form.

Payment in full is expected approximately 30 days following the delivery of the final report by ERS, and the satisfied acceptance of said report by SEH. It is understood by both parties that the acceptance of the final report by SEH may take time due to unavoidable 3rd party time constraints tied to availability of reviewing board members, grant funds, etc. Both parties further understand that a good faith effort will be made to bring the contract to completion as soon as possible. If payment will be later than 30 days past delivery/acceptance of the final report due to unexpected 3rd party constraints, it is requested that SEH notify ERS.

Signature below indicates that both parties understand the services to be rendered at the costs outlined and agree to all provisions as stated. No change to this contract shall be made without written approval and acceptance by both parties.



1/15/14

Matthew S. Berg
Endangered Resource Services, LLC

Date:

Doris Youngquist
Minong Flowage Association

Date:

CI BioBase Hardware Pricing



All Prices Subject to Change

The CI BioBase System was developed to provide automated cloud based mapping and historical trend tools for aquatic analysis. This is accomplished with powerful yet inexpensive data recording tools and dynamic centralized analytic and lake mapping tools. CI BioBase leverages .SLG or .SL2 log file formats recorded to SD cards using today's Lowrance™ brand depth finders and chart plotters.

Each subscriber to the BioBase System can collect acoustic data, upload it to a BioBase account, and automatically produce vegetation abundance and bathymetric maps.

Although some of our Subscription prices include HDS units, we do not require that your HDS unit is purchased from Contour Innovations. The following chart lists prices that we can extend to our customers:

Unit	Retail*	BioBase price**
HDS 5 Gen2	\$649	\$635
HDS 7 Gen2	\$999	\$970
HDS 10 Gen2	\$2,299	\$2,225
Elite HDI 7 (83/200/455/800 single transducer)	\$699	\$670
HDS 7 Touch Bundle (w/ Structure Scan™)	\$1,799	\$1,699
HDS 9 Gen2 Touch	\$2,499	\$2,425
Structure Scan™ (Add on to a non-touch)	\$599	\$589
Structure Scan™ LSS2 Transducer	\$299	\$225

*Retail pricing based on estimates and may change

** Prices do not include shipping and/or tax

The HDS and Elite HDI lines have a wide range of transducer options. Units above include the 83/200 KHz transom mount transducer. BioBase is compatible with multi beam sonar using Structure Scan™ (recorded as .SL2 files) as well as Gen1 unit files recorded as .SLG files. The HDS7 Gen2 Touchscreen bundle includes Structure Scan (w/out Structure Scan \$1525). All units are preprogrammed by our technical team for best outputs from ciBioBase.

Our ability to use powerful servers to process raw sonar data under custom parameters for geo statistical analysis and kriging techniques eliminates the need for technical background or manual data processing.



www.CIBioBase.com

Prices are subject to change at any time - We reserve the right to refuse service at any time. Prices are discounted for BioBase customers.

Questions can be directed to: Matt@ContourInnovations.com Last updated September 16, 2013



Per Lake Pricing
All Prices Subject to Change

Per Lake Pricing: based on the cost for single and unlimited uploads to a single water body as follows:

Lake Acreage	Single Upload	Unlimited Uploads
1-30	\$225	\$725
31-100	\$365	\$725
101-250	\$485	\$925
251-750	\$625	\$1,225
751-1500	\$825	\$1,525
1501-3000	\$1,175	\$1,850
3001-9999	\$1,425	\$2,375
10,000+	Call	Call

Single Uploads – Defined as a data file(s) with no more than 8 hours of data collection, in aggregate, in a 24 hour period on the same water body. Requires an annual membership of \$179/field tech or \$499/company with up to 6 techs.

Unlimited Uploads - Price includes 12 months of unlimited processing of data collected on a single water body. Data can be collected by an unlimited number of users from the organization including the organization’s service providers. Permission must be given by subscriber. All data uploaded to a single account at ciBioBase.com. *Great for home owner association collaborations and citizen science!*

Stormwater Pond Volume Discount: Please ask us about our Stormwater Pond Unlimited Mapping Plans. (\$1,500/municipality)

Subscription includes the following services:

- Processing of unlimited .SLG or .SL2 acoustic log files through the ciBioBase System during term of unlimited subscription
- Secure access to the processed data in an online account
- ciBioBase support services and shapefile adjustments to your water body
- Hosting of a historical database of trip uploads and full ciBioBase feature functionality during unlimited subscription
- Ability to export processed data for local archiving and viewing

The following services/costs are not included in an unlimited subscription:

- Custom feature development
- Processing of data collected outside the 12 month subscription period
- Uploads and processing of data collected on water outside of the designated lake
- Database hosting for years without an active subscription or membership –There is a \$295 data hosting charge per account for access to uploaded data without a current subscription or membership.

HDS units can be purchased through Contour Innovations with your subscription. Please inquire about our HDS hardware prices.



Prices are subject to change at any time - We reserve the right to refuse service at any time. Purchases cannot be made on behalf of any party without the written consent of Contour Innovations. Please contact Contour Innovations in advance of uploads to water bodies over 10,000 acres. Questions can be directed to: Matt@ContourInnovations.com

Updated: December 2013

Notice: Complete this form to request AIS grant funding for a Clean Boats Clean Waters grant under s. 23.22(2), Wis. Stats., and ch. NR 198, Wis. Adm. Code. Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Open Records Laws [ss.19.31-19.39 Wis. Stats.]

Clean Boats Clean Waters grants are available for a one-year term with a start date of April 1 and end date of December 31 of the same year. Multiple lakes may be included within one application; grant funding is limited to 75% of total project costs not to exceed \$4,000 for each boat landing with a CBCW inspection program.

Section 1. Required Applicant Data			
Sponsoring Management Unit Name Minong Flowage Association		County Washburn, Douglas	
Waterbody Name(s) Minong Flowage			
Authorized Representative Name Jean Johnson	Contact Phone Number (715) 829-4530	Contact Email mombo3646@charter.net	
Address 3646 134th Street	City Chippewa Falls	State WI	ZIP Code 54729

Section 2. Watercraft Inspection Project Detail	Section 3. Public Access															
<p><i>Instructions: Complete the checklist to identify project activities and determine if project is eligible for Clean Boats Clean Waters grant.</i></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Yes</th> <th style="width: 10%;">No</th> <th style="width: 80%;">Activity</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;"><input checked="" type="radio"/></td> <td style="text-align: center;"><input type="radio"/></td> <td>Attend CBCW training workshop</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="radio"/></td> <td style="text-align: center;"><input type="radio"/></td> <td>Conduct min. 200 hours watercraft inspection per landing</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="radio"/></td> <td style="text-align: center;"><input type="radio"/></td> <td>Enter inspection data into SWIMS database</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="radio"/></td> <td style="text-align: center;"><input type="radio"/></td> <td>Maintain financial records for 3 years after final payment</td> </tr> </tbody> </table>	Yes	No	Activity	<input checked="" type="radio"/>	<input type="radio"/>	Attend CBCW training workshop	<input checked="" type="radio"/>	<input type="radio"/>	Conduct min. 200 hours watercraft inspection per landing	<input checked="" type="radio"/>	<input type="radio"/>	Enter inspection data into SWIMS database	<input checked="" type="radio"/>	<input type="radio"/>	Maintain financial records for 3 years after final payment	<p><i>Instructions: Provide answers to both questions.</i></p> <p>No. of public access sites on waterbodies <u> 3 </u></p> <p>No. of boat landings to be included in the CBCW Program <u> 1 </u></p>
Yes	No	Activity														
<input checked="" type="radio"/>	<input type="radio"/>	Attend CBCW training workshop														
<input checked="" type="radio"/>	<input type="radio"/>	Conduct min. 200 hours watercraft inspection per landing														
<input checked="" type="radio"/>	<input type="radio"/>	Enter inspection data into SWIMS database														
<input checked="" type="radio"/>	<input type="radio"/>	Maintain financial records for 3 years after final payment														

Section 4. Estimated Budget	
Total Project Cost =	\$3,800.00
Grant Request Amount =	\$2,850.00
Local Share =	\$950.00
<i>Instructions: Select the option below that applies.</i> <input type="radio"/> Volunteer time provides all of local share <input checked="" type="radio"/> Volunteer time and cash expenses provide local share <input type="radio"/> Cash expenses are all of local share	

Section 5. Certification

The Minong Flowage Association requests grant funds under the Department of Natural Resources' Aquatic Invasive Species (AIS) Grant Program and hereby authorizes Jean Johnson to act on its behalf by signing and submitting an application for financial assistance; completing and submitting periodic reports, if needed; and taking necessary actions to direct and complete the Clean Boats Clean Waters project. The Minong Flowage Association will meet the financial obligations of the AIS program.

Adopted this day 18 of January, 2014 By: Steven J. Johnson (President) Secretary/Clerk of
Minong Flowage Association

Jean P Johnson 01/28/2014
 Signature of Authorized Representative Date Signed

Section 6. For DNR Use Only – Application Approved for Funding	
Signature of Lake/AIS Coordinator or Env Grants Specialist	Date Signed

Clean Boats Clean Waters (CBCW) Project Funding Request and Agreement

Aquatic Invasive Species (AIS) Control Grant Program
Form 8700-337 (R 1/13) Page 2 of 2

Clean Boats Clean Waters Project Number: CBCW-____ - ____

Sponsor

Minong Flowage Association

Period Covered By This Agreement

April 1, 20__ to December 31, 20__

Project Scope

The watercraft inspection program will include the following:

- 1) Inspectors attend a CBCW training workshop and use CBCW program materials;
- 2) Inspectors will deploy at the given boat landing(s) to conduct inspections, provide AIS information, collect and report data, and report suspect specimens;
- 3) The project will include a minimum of 200 inspection hours per landing per season;
- 4) Watercraft inspection data must be entered into the SWIMS (Surface Water Integrated Monitoring System) database. This data entry will serve as the grant final report/deliverable. Data entry into SWIMS must be completed by November 30 of the grant agreement year.

Grant Award Data - For DNR Use Only

1. Total Project Cost	\$3,800.00
2. Grant Amount [lesser of (line 1 x .75) or \$4,000/landing]	\$2,850.00
3. Local Share (line1 minus line 2)	\$950.00

The following documents are hereby incorporated into and made part of this agreement:

1. Ch. NR 198, Wis. Admin. Code
2. Clean Boats Clean Waters Funding Request

General Provisions

1. The Wisconsin Department of Natural Resources (hereafter "Department") and the Sponsor mutually agree to perform this agreement in accordance with the project application.
2. The Sponsor agrees to comply with all applicable Wisconsin Statutes and Wisconsin Administrative Codes in fulfilling terms of this agreement.
3. The Sponsor agrees to save, hold harmless, defend, and indemnify the State of Wisconsin, the Department and all its officers, employees and agents, against any and all liability, claims and costs of whatever kind and nature, for injury to or death of any person or persons, and for loss or damage to any property (state or other) occurring in connection with or in any way incident to or arising out of the occupancy, use, service, operation or performance of work in connection with this agreement or omissions of Sponsor's employees, or representatives.
4. In connection with the performance of work under this agreement, the Sponsor agrees not to discriminate against any employee or applicant for employment because of age, race, religion, color, disability, handicap, sex, physical condition, developmental disability as defined in s.51.01(5), Wis. Status, sexual orientation or national origin. This provision shall include, but not be limited to the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation; and selection for training, including apprenticeship. Except with respect to sexual orientation, the Sponsor further agrees to take affirmative action to ensure equal employment opportunities, as required by law. The Sponsor agrees to post in conspicuous places available, for employees and applicants for employment notices to be provided by the contracting officer setting forth the provisions of the nondiscrimination clause.
5. The Department reserves the right to inspect the job site or premises for the sole purpose of insuring that the performance is progressing or has been completed in compliance with this agreement.
6. The Department takes no responsibility for supervision or direction of the performance of the agreement by the Sponsor or the Sponsor's employees or agents. The Sponsor is an independent Contractor for all purposes, not an employee or agent of the Department. The Department further agrees that it will exercise no control over the selection or dismissal of the Sponsor's employees or agents.
7. The Sponsor may decline this offer of financial assistance in writing at any time prior to the starting of the project and before expending any funds. After the project has been started or funds expended, this agreement may be amended only by mutual agreement in writing prior to the end date of the agreement. Time extensions to the agreement may be granted to the Sponsor by the Department in writing without the requirement of the Sponsor's signature.
8. This agreement, together with the application and attachments, shall constitute the entire agreement. Any previous communication or agreements pertaining to the subject matter of this agreement are hereby superseded.
9. Final reimbursement claims must be submitted within six (6) months from the agreement end date. The Sponsor may request quarterly reimbursement for grant eligible costs. Progress with project implementation must be shown and coincide with each reimbursement request.

Additional CBCW grant information can be found at: <http://dnr.wi.gov/Aid/AIS.html>

Jean P Johnson

Signature

01/28/2014

Date

Wisconsin Department of Natural Resources
For the Secretary

By: _____

Mary Rose Teves, Director
Bureau of Community Financial Assistance

Coordinator, CBCW, Minong Flowage Association

Title

Date: _____

Wisconsin Department of Natural Resources SWIMS Project Summary

General Project Information

Project ID: NOR_01_CMP14

Name: Minong Flowage APM Evaluation/Implementation Monitoring - NOR_01_CMP14

Type: Competitive Projects

Subtype: Aquatic Plant Management

Status: PROPOSED

Start Date: 11/01/2013

End Date: 06/30/2015

Purpose: This project will evaluate aquatic plant management (APM) alternatives on the Minong Flowage, Washburn County (WBIC 2692900). DNR approved the Minong Flowage Association's APM Plan in 2009. From 2009-2011, the MFA reduced the Eurasian watermilfoil population from over 300 to 20 acres. Treatment did not occur in 2012 and 2013, however, because of tribal concerns and a dam reconstruction project. This project will fund monitoring that will enable the DNR, tribal, county and MFA partners to evaluate management alternatives for future APM.

Objective: The project will answer the following questions:

1. What effect did the 2013 drawdown that lasted into 2014 winter have on the aquatic plant community, including wild rice?
2. What effect will current drawdown conditions have on dissolved oxygen concentrations?
3. Is fall treatment, which is a preferred herbicide application time of tribal partners because of there is less risk to wild rice, a reasonable management option? Specifically, will dye acting as a surrogate to liquid 2,4-d maintain adequate contact times to control EWM?

Answers to the questions will guide an APM Plan update.

DNR fisheries staff have committed resources to monitoring winter dissolved oxygen concentrations, and Washburn County will monitor wild rice in partnership with GLIFWC. Funding is not being requested for either of these tasks.

Comments: This project is a continuation of the MFA's most recent grant ACEI-072-10 and efforts going back to 2005. The MFA has expressed concern that while they continue to monitor and follow through on grant and plan obligations, they are not allowed to actively manage the EWM in recent years. DNR is proposing to complete transitional monitoring in 2014 while also working closely with external partners to support a future APM plan update.

Outcome: The project outcome will be enough technical detail to form the framework for an approvable APM Plan that seeks to satisfy lake group, county, tribal, and multiple DNR program's interests.

Deliverables:

1. Aquatic plant survey results, summary statistics, and final report.
2. Wild rice monitoring maps and summary report.
3. Dissolved oxygen monitoring data/results.
2. Dye study methods, results, and final report.

People

Name	Role	Status	Start Date	End Date	Organization	Comments
HAGEN, CHERIE L	SUPERVISOR	ACTIVE	11/01/2013	06/30/2015	Wisconsin DNR	
Skogerboe, John	INVESTIGATOR	ACTIVE	11/01/2013	12/31/2014		Funded through Central Office
Sundeen, Mark R	OTHER	ACTIVE	11/01/2013	06/30/2015	Wisconsin DNR	
Toshner, Pamela J	PROJECT_LEAD	ACTIVE	11/01/2013	06/30/2015	Wisconsin DNR	

Project Statuses

Date	Reported By	Status	Comments
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Project Status Detail

Answer Set: DEFAULT

Question	Answer
1. Number of Sample Sites (Enter the station IDs if you know	

Wisconsin Department of Natural Resources SWIMS Project Summary

Question	Answer
them).	
2. Number of Sample Events (Indicate how many trips into the field you anticipate for this project).	
3. Proposed Dates for Sample Collection	
4. List applicable databases and who will enter data?	
5. Did you receive competitive projects funding in the previous year?	
6. If yes to question 5, did you complete the projects including data entry and reports as necessary? If not, why not?	
7. Reviewer Notes: Identify questions or issues with project (use during review period)	
8. Reviewer Decision: Is this project recommended for funding?	

Actions

Action	Detailed Description	Start	End Date	Status
Monitor to Evaluate Projects	Fisheries will monitor winter DO	*****	04/30/2014	PROPOSED
Aquatic Plants - Management Project		*****	12/31/2014	PROPOSED
Aquatic Plant Mgmt Survey		*****	08/30/2014	PROPOSED
Monitor to Evaluate Projects	WDNR with John Skogerboe to design and then monitor a fall dye study	*****	11/30/2014	PROPOSED

Monitoring Stations

Station ID	Name	Comments
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Assessment Units

WBIC	Segment	Local Name	Official Name
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Lab Account Codes

Account Code	Description	Start Date	End Date
WT943	Proposed Projects	11/01/2013	01/31/2014

Forms

Form Code	Form Name
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Methods

Method Code	Description
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Fieldwork Events

Start Date	Status	Field ID	Station ID	Station Name
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Documents

Title	Description	Author	Published	Comments
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Budget

Budget Description: Minong Flowage APM Evaluation	Start Date: 01/01/2014	End Date: 12/31/2014
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**Wisconsin Department of Natural Resources
SWIMS Project Summary**

Code	Description	Quantity	Units	Unit Cost	Total Cost	Comments
FTE	FTE Hours	80	Hours	\$0.00	\$0.00	Project planning, quarterly meetings, and plan input
LTE SAL	LTE Salary	60	Hours	\$0.00	\$0.00	John Skogerboe technical assistance, field monitoring dye concentrations, and plan input
LTE FR	LTE Fringe				\$0.00	
LTE IND	LTE Indirect				\$0.00	
LTE TOT	LTE Total Cost				\$0.00	
SUPPLY	Supplies	20		\$350.00	\$7,000.00	Dye
EQUIP	Equipment				\$0.00	
MILEAGE	Mileage	150	Miles	\$0.72	\$108.00	3 trips to Minong Flowage
MEAL	Meals	3	Meals	\$9.00	\$27.00	
LODGE	Lodging				\$0.00	
TRAVEL	Travel Total				\$135.00	
BUG	Bug Contracts				\$0.00	
OTHER	Other Contracts	2		\$5,000.00	\$10,000.00	Point-intercept survey and application of dye
USGS	USGS Costs				\$0.00	
TOTAL	Total Cost (excludes SLOH)				\$17,135.00	

Test Code	Description	Test Group	# Planned	Unit Cost	Total Cost
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Total SLOH Lab Costs: \$0.00

Combined Budgets: \$17,135.00

Combined SLOH: \$0.00

Funding

Organization	Source	Type	Amount	Start Date	End Date
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