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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	

Section II: Applicant Information

Applicant Waterbody Name Project County/Township/Section/Range	Type of Eligible Applicants <input type="checkbox"/> County <input type="checkbox"/> Tribe <input type="checkbox"/> Other Gov't Unit <input type="checkbox"/> Federal <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 type="checkbox"/> Assoc.
Authorized Representative Named by Resolution	Project Contact Name
Authorized Representative Title	Project Contact Title
Address	Address
City State ZIP Code	City State ZIP Code
Daytime Phone (area code) Evening Phone (area code)	Daytime Phone (area code) Evening Phone (area code)
E-mail Address	E-Mail Address

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 Yes No		Environmental Grants Specialist Approval / Date
Eligible Project Yes No	Eligible Applicant Yes No	Project Priority Rank	Research / Demo Project Yes No
Prior Grant Award(s) Yes No	Fiscal Year(s)	Amount Received To Date \$	Project Awarded Yes No

Aquatic Invasive Species (AIS) Control Grant Application

Form 8700-307 (12/11)

Page 2 of 3

Section III: Project Information

Project Title		Proposed Ending Date	
Other Management Units	Letter of Support	Other Management Units	Letter of Support
1.	<input type="checkbox"/>	4.	<input type="checkbox"/>
2.	<input type="checkbox"/>	5.	<input type="checkbox"/>
3.	<input type="checkbox"/>	6.	<input type="checkbox"/>

Section IV: Public Access

Number of Public Vehicle Trailer Parking Spaces Available at Public Access Sites:

Number of Public Access Sites Including Boat Launches and Walk-ins:

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			
2. Consulting services			
3. Purchased services--printing and mailing			
4. Other purchased services (specify):			
5. Plant material			
6. Supplies (specify)			
7. Depreciation on equipment			
8. Hourly equipment use charges			
9. State Lab of Hygiene (SLOH) Costs			
10. Non-SLOH Lab Costs			
11. Other (specify)			
12. Subtotals (sum each column)			
13. Total Project Cost Estimate (sum of column 1 plus sum of column 2)			
14. State Share Requested (up to 75% of total costs may be requested)			

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:

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:

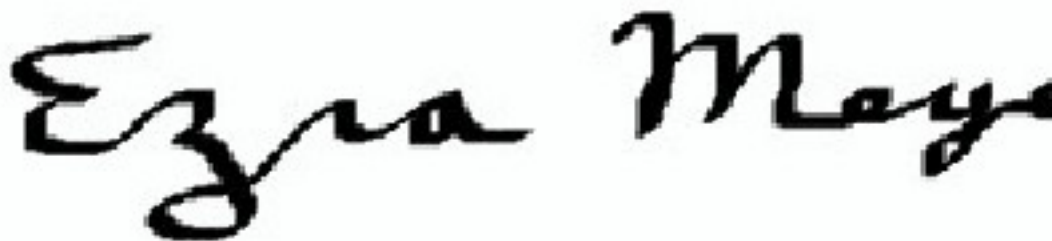
- 1. Management Plan
- 2. APM Permit application

Section VII: Certification

I certify that information in this application is true and correct.

Print/Type Name of Authorized Representative

Signature of Authorized Representative





P.O. Box 21, Eagle WI 53119

Aquatic Invasive Species Control Grant Application

February 1, 2014

B.3. Affiliations:

Mukwonago River Watershed Initiative

River Network

River Alliance of Wisconsin

B.4. Board Members:

Ezra Meyer, President, Madison WI Dane County

Dick Jenks, Secretary, Mukwonago, WI Waukesha County

Pamela Meyer, Treasurer, Eagle, WI Waukesha County

Gina Howden, Eagle, WI Waukesha County

David Swanson, East Troy, WI Walworth County

Ed Olson, Emeritus, Mukwonago, WI Waukesha County

Submitted by:

Ezra Meyer, President

Eric Howden, Watershed Coordinator

The mission of the Friends of the Mukwonago River is to protect the Mukwonago River and its associated watershed ecosystems by way of education, advocacy, and promotion of sound land use throughout the watershed. We are a 501(c) (3) non-profit organization and your donations are tax deductible to the extent allowable by law.



P.O. Box 21, Eagle WI 53119

**Mukwonago River Watershed
Aquatic Invasive Species, Education, Prevention & Planning Project Grant
Friends of the Mukwonago River
February 1, 2014**

Background/Introduction

Friends of the Mukwonago River (FoMR), a 501 c 3 organization with 15 years of active protection and restoration efforts on behalf of the Mukwonago River watershed, a system with some of the highest quality water in Southeastern Wisconsin, is submitting this application and if funded will be the administrator. The purpose of this grant will be to implement monitoring efforts throughout the watershed focused on Asian Clams (*Corbicula fluminea*) in conjunction with delivering extensive aquatic and terrestrial invasive species education throughout the watershed and a *Corbicula fluminea* removal project.

In early summer of 2013, staff from The Nature Conservancy office in East Troy, Wisconsin and Wisconsin Department of Natural Resources (WDNR) staff undertook an aquatic invasive species survey of Lulu Lake. To their dismay, *Corbicula fluminea*, a NR40 prohibited species according to the WDNR, were found. This invasive species, first found in Lake Michigan in 2001 and in a single location along the Mukwonago River in 2008 had not been found up river from the original location in the Mukwonago River watershed until this discovery, raising concerns of full watershed infestation (D1).

In addition to concerns of negative impacts on native clam and mussel species in the watershed, evidence of Zebra Mussels utilizing the *Corbicula* shells to establish themselves in Lulu Lake has compounded worries of an expanding threat to the Mukwonago River watershed. Given the discovery of *Corbicula* in what appears to be a relatively early stage of penetration, the limited knowledge that exists as to the full extent of damage that can result from the clams, and the limited knowledge of how they are transported and establish themselves in new areas, Friends of the Mukwonago River believe that work must be undertaken immediately to address this threat to the Mukwonago River watershed.

Through monitoring efforts, FoMR and its established grant partners (WDNR, the Lake Management Districts of Phantom Lakes, Eagle Springs (supporting grant with \$500 contribution), and Lake Beulah (anticipated), the environmental education programs from YMCA Camp Edwards, Nature's Classroom, Inc., and Timber-Lee, The Nature Conservancy, the University of Wisconsin Whitewater, Carroll University and the University of Wisconsin Waukesha) are seeking to compile reliable data pertaining to the extent of *Corbicula* populations up and down stream from the original identified location in order to improve understanding of the movement and life cycle patterns of *Corbicula* in this and other watersheds. FoMR will simultaneously undertake community education efforts relating to aquatic and terrestrial invasive species with a primary focus on improving the understanding of residents, recreational users, governmental officials, students/educators and business owners on this substantial environmental threat. Lastly, FoMR is partnering with Carroll University and the University of Wisconsin-Waukesha to undertake a *Corbicula* removal demonstration project in order to expand understanding of how to best counteract the establishment of *Corbicula* populations.

Additionally, this grant represents an opportunity for FoMR to utilize its 15 years of experience as the sole organization focused exclusively on the Mukwonago River watershed and will allow it to meaningfully build its watershed protection and restoration efforts. Having recently completed a Wisconsin Environmental Education Board and a WDNR River Protection Planning grant (E1), FoMR has in recent years greatly expanded its internal structures, public outreach and collaborative efforts with regional entities. Public awareness of the Mukwonago River as the heart of a unique and dynamic watershed has been on the rise in recent years due to the efforts of FoMR and its partners in the region.

Project Area

All monitoring and invasive species removal activities will take place within the Mukwonago River watershed (see accompanying map for boundary details). This watershed is located in Southwestern Waukesha County (primarily in the communities of Mukwonago and Eagle but also extending into North Prairie), North-central Walworth County (communities of East Troy and Troy Center) and a small segment of Southeastern Jefferson County. Certain education events will take place at locations such as public libraries situated just outside of the watershed boundaries in order to ensure broad public contact. These events will serve residents of the watershed and those who live in areas that border the watershed and/or those who work and recreate within the watershed.

The Mukwonago River system includes seven major lakes, seven smaller lakes and numerous tributaries, supports a variety of fishes, mussels, and other aquatic organisms, including nearly 80 state-listed threatened and endangered species and species of special concern. The Mukwonago River is sustained by ground-water recharge, seepage from wetlands and moraines, and precipitation runoff from about a 74-square-mile watershed (SEWRPC, 2010). The river has unique ecological, aesthetic and, recreational values and is one of the most diverse aquatic ecosystems within the Southeastern Wisconsin Region and

is recognized through Chapter NR 102 designations of the Mukwonago River and Lulu Lake as Outstanding and Exceptional water resources (C2).

The Mukwonago River is one of the most biologically rich mussel habitats in the state, with 16 mussel species having been found, including the only remaining viable population of the State endangered rainbow shell (*Villosa iris*) in Wisconsin. Half of Wisconsin's 51 mussel species are endangered, threatened, or are species of special concern due to over harvesting, stream degradation and displacement by invasive species such as Zebra and Quagga mussels and now the *Corbicula fluminea*.

The Wisconsin Chapter of The Nature Conservancy has designated the Mukwonago River watershed one of its four "Last Great Places" in Wisconsin. Because of its high quality waters, the Mukwonago River watershed was selected in the early 2000's as one of three focal sites globally to be reviewed by the international Nature Conservancy Wetlands Network. The other two sites are the Amazon River and the Great Salt Lake Marsh.

Major lakes in the Mukwonago river watershed include: Upper and Lower Phantom, Beulah, Eagle Springs, Lulu, Army and Booth. Smaller lakes include, Rainbow Springs, Pickerel and Swan. Lakes with Management Districts include Upper/Lower Phantom, Beulah and Eagle Springs. The Nature Conservancy manages more than 1,800 acres within the watershed, including lands at several of the Mukwonago River headwaters and along segments of the river. The WDNR, through its Mukwonago River Unit of the Southern Kettle Moraine State Forest (which encompasses Lulu Lake State Natural Area) owns more than 1,200 acres adjacent to/in close proximity to the Nature Conservancy lands. This property includes more than 70 acres of open wetlands according to *the Mukwonago River Unit/Lulu Lake Regional and Property Analysis*, from July 2013 (F1).

Public lake access is available by boat ramp at Eagle Springs (279 acres), Beulah (812 acres and the location of YMCA Camp Edwards that owns significant lake frontage) and Lower Phantom lake (373 acres), and by walk-in trail at Army lake (B1c). Public river access is available to the Mukwonago River at several road crossings, at an access road crossing close to the primary parking area of the Mukwonago River Unit and at the Mukwonago village, Indianhead Park which also offers a public beach and fishing pier (F2). High quality fishing is available throughout the lakes within the watershed and the Mukwonago River is a class I/II trout stream and also supports populations of large mouth bass, northern pike and pan fish. Jericho Creek, a significant tributary to the Mukwonago River is a class II trout stream. Approximately 10% (4,526 acres) of the watershed is wetlands.

Problem to be Addressed by Project

The Mukwonago River watershed is unique in terms of its level of intact wetlands, groundwater recharge rates, high water quality and the significant numbers/species of fish, mussels, invertebrates, insects, reptiles, amphibians and aquatic plants; a significant number of which are endangered or threatened species. Given the levels of development within and close to the watershed, including waterfront development, it is pleasantly

surprising that the quality of the river, streams, lakes and wetlands that comprise this system remain relatively healthy.

Significant threats that are capable of negatively altering this watershed do exist however and high among these is the continuing introduction of invasive species, both terrestrial and aquatic, and the establishment/spread of these species throughout the watershed. The existence of an active boating culture in the watershed, primarily consisting of motorized crafts but including paddle crafts, and active lake and river fishing, seem to account for a high percentage of the introduction of aquatic invasive species. The transition over the past few decades, which is projected to continue for decades to come, of lands within the watershed from agricultural to housing and other urbanization is also seen as contributing to the introduction of invasive species (terrestrial) due to the opening of formerly wooded areas.

Certain invasive species present in the Mukwonago River watershed are well documented (Purple Loosestrife, Buckthorn, Zebra Mussels, Rusty Crayfish, Eurasian water-milfoil, Curly-leaf Pondweed, Phragmites, etc.) and are associated with significant, detrimental affects on the watershed and native species. *Corbicula fluminea*, having been more recently introduced, is at a pioneer population level in the Mukwonago River watershed and are not yet documented in terms of their dispersion throughout the watershed (D1). The negative effects of *Corbicula*, according to WDNR Invasive Species documents include:

- Alteration of ecosystem composition, structure and function: Can alter benthic substrates.
- Damage to ecosystem resilience/sustainability: Potential to reduce species diversity.
- Loss of biological diversity: Can reach thousands per square meter, dominating benthic community, displacing native species.
- Biotic effects on other species (loss of cover, nesting sites, forage, changing competitive relationships: Compete with native mussels for food and space; compete with juvenile fish (filter feeders) for food.

Source: WDNR Invasive Species classification documentation

The purpose of the FoMR AIS grant is to undertake a multi-year *Corbicula fluminea* monitoring program within the Mukwonago River watershed, to implement broad invasive species community education efforts that will inform residents and users of the watershed of the damaging effects of invasive species, how invasive species are spread and options for removal of existing invasive species and to initiate a *Corbicula fluminea* removal demonstration project.

- Monitoring will utilize and expand upon existing water quality and invasive species monitoring. Monitoring will be completed by recruiting and training existing Water Action Volunteers (WAV) and Citizen Lake Monitoring Network (CLMN) monitors and by recruiting and training new citizen monitors to utilize protocols currently being developed by Project Riverine Early Detectors (Project RED) and CLMN staff – Laura MacFarland and Laura Herman respectively (A2). Volunteers will be trained to follow proper decontamination procedures for all equipment in order to prevent the

spread of *Corbicula* and other invasive species. Over the period of the grant, monitoring data (full extent of monitoring data to be collected will be determined in collaboration with WDNR staff once monitoring protocols are completed) will be compiled and entered into the Surface Water Integrated Monitoring System (SWIMS) and *Corbicula* population mapping will be completed in order to provide the WDNR and others with an understanding of the extent of the spread of the *Corbicula* in the Mukwonago River watershed.

- Additionally, Dr. Rex Hanger of the University of Wisconsin-Whitewater has agreed to include monitoring of *Corbicula fluminea* as part of his on-going monitoring projects within the Mukwonago River watershed.
- Invasive species education efforts covering both aquatic and terrestrial species will utilize multiple outreach methodologies in order to connect with a broad swath of residents, businesses, municipal government officials and teachers/students to provide information on the existence of, negative effects of, and ways to help reduce existing populations of invasive species, control their spread, and stop the introduction of new ones.
- A *Corbicula fluminea* removal project, in collaboration with Dr. Jason Freund of Carroll University and Dr. Michael Pauers of the University of Wisconsin-Waukesha and their students, will be undertaken to assess the feasibility of future, large-scale removal actions as a counter measure to established *Corbicula* populations (B2).

Project Goals & Objectives

Monitoring

- Goal – Implement a monitoring program for *Corbicula fluminea* in the Mukwonago River watershed using protocols designed by Project RED & CLMN
 - Objectives
 - Recruit existing and new/additional citizen monitors to take part in *Corbicula* monitoring in 2014 & 2015
 - Train monitors in *Corbicula* monitoring and data collection protocols
 - Follow proper decontamination procedures (e.g. dry for 5 days or soak in dilute bleach solution (1 tbsp. bleach to 1 gallon water) for 10 minutes) for all equipment in order to prevent the spread of *Corbicula* and other invasive species.
 - Submit monitoring data through SWIMS database
 - Provide the DNR with professional level reporting and mapping of monitoring sites
 - Reduce *Corbicula* populations by having monitors destroy clams found during monitoring (along with zebra mussels) – in year two of monitoring if it is established that monitors are correctly identifying *Corbicula*

In year 2 of the grant – expand the scope of monitoring to include additional aquatic invasive species such as the recently discovered Faucet snails (*Bithynia tentaculata*) in Lower Phantom Lake.

Invasive Species Community Education

- Goal 1 – Compile invasive species education resources most relevant to the Mukwonago River watershed and the targeted education audiences
 - Objectives
 - Compile list of aquatic/terrestrial invasive species in watershed
 - Determine species to be included in education efforts and key areas of emphasis for educational messaging
 - Review existing invasive species outreach/educational resources available through WDNR, UW Extension, the Invasive Plants Association of Wisconsin (IPAW) and the Southeastern Wisconsin Invasive Species Consortium (SEWISC) & determine need for development of new resources
 - As needed, develop new resources
- Goal 2 - Implement invasive species community education events
 - Objectives
 - Deliver community education events within the watershed utilizing outdoor spaces along the Mukwonago River and area lakes
 - Deliver education events at schools within or in close proximity to the watershed
 - Deliver community education events within/in close proximity to the watershed utilizing public indoor spaces, i.e. library meeting rooms and FoMR public events and for Lake Management District residents
 - Deliver presentations to municipal Town/Village elected boards and staff
 - Deliver presentations for business leaders at business association meetings
- Goal 3 – Implement community education outreach through print/electronic media
 - Objectives
 - Produce and mail information/education multi-page mailer to all watershed residences
 - Provide broad public access to invasive species information/education materials through a FoMR website (www.mukwonagoriver.org) page containing information, resources and the data collected by *Corbicula* monitors
 - Provide invasive species education through articles in Lake Management District newsletters, regional print media (with an emphasis on utilizing the WDNR “Protect Wisconsin Waters/It’s the Law” (A1), articles in member newsletters for organizations in region whose members utilize watershed, etc.
 - Produce and distribute a “Invasive Species of the Mukwonago River Watershed” brochure
- Goal 4 – Provide waterway user education
 - Objective

- Install WDNR AIS informational signs and information kiosk write-ups at boat ramps and river access points (A1)
- Provide educational materials to Clean Boats, Clean Waters program in the watershed

Corbicula Removal Demonstration Projects

- Goal 1 - Produce data on the effectiveness/feasibility of *Corbicula* removal for the purposes of reducing the volume of *Corbicula* through future, broad removal efforts
 - Objectives
 - Contract with Carroll University and UW - Waukesha to lead project deliverables
 - Develop a protocol for *Corbicula* removal from an area within the Mukwonago River watershed with an established population
 - Implement a removal process in 2014 & 2015
 - Compare results of removal to a control site at the end of the first test season (2014), the beginning and at the end of the second season (2015) and the beginning of the third season (2016)

Methods and Activities

FoMR Watershed Coordinator

The AIS grant will partially fund the FoMR Watershed Coordinator, a 20-hour per week, contractor position. The Watershed Coordinator, working in collaboration with the FoMR Board of Directors, will coordinate all AIS grant activities.

Monitoring and Reporting

Monitoring will be undertaken in collaboration with Project RED, WAV and CLMN (staff from each program have been contacted as part of the grant planning process and have agreed to be active in this AIS grant). Existing citizen monitors within the watershed will be invited to participate in *Corbicula* monitoring as part of their on-going efforts. Sources of potential new/additional monitors include Lake Management Districts (FoMR has board members who are residents of two of the districts within the Mukwonago watershed and has close connections with residents of the other), Environmental Education programs that FoMR has existing working relationships with, watershed residents and FoMR and other like-minded organization members/engaged individuals. A final number of monitoring sites/monitors will be determined in spring 2014 in collaboration with Christina Wolbers and other WDNR staff.

Existing and new monitors will be trained in *Corbicula fluminea* monitoring protocols that are currently being developed by Laura MacFarland of the River Alliance/Project RED and Laura Herman of UW-Extension/CLMN. Monitors will be asked to photograph any *Corbicula* collected during monitoring and to submit their photos for final identification by Lisie Kitchel (who has agreed to provide guidance on training monitors on how to best photograph samples and has agreed to review such photographs) for at least the first year of monitoring. Those monitors who demonstrate a high degree of ability to correctly

identify *Corbicula* will be asked in year two of the monitoring effort to destroy all *Corbicula* that they find in order to avoid having monitors return an invasive species to the watershed. Specifics on the data to be collected and entered into SWIMS will be determined once Laura MacFarland and Laura Herman develop the monitoring protocols. Professional level reporting along with full monitoring site mapping will be performed by FoMR to compile and deliver grant data to the WDNR (A3).

In the second year of the monitoring, additional training will be provided and volunteers will be asked to include other aquatic invasive species into their monitoring. A need for robust monitoring is becoming ever more clear as illustrated by the recently confirmed findings of Faucet snails in Lower Phantom Lake and other species such as Mudsnails (*Potamopyrgus antipodarum*) being found in other in-land lakes in Wisconsin. The expanded level of monitoring being developed through this grant should provide a long-term resource for the WDNR and others engaged in AIS monitoring.

Invasive Species Community Education

FoMR and its environmental education partner organizations (Nature's Classroom, Inc., Timber-Lee and YMCA Camp Edwards), utilizing WDNR, UW-Extension, IPAW and SEWISC invasive species education resources, will determine which resources are most relevant to the Mukwonago River watershed and the individual education outreach audiences targeted for this grant. FoMR and its education partners will then compile a list of aquatic/terrestrial invasive species known to be in or that have a high likelihood for being introduced into the Mukwonago River watershed. These lists will be cross-referenced in order to determine if there are species for which no education resources currently exist. As much as possible, FoMR and its partners will then develop new or adapt existing education resources (utilizing WDNR templates) to fill any need(s).

A final list of invasive aquatic and terrestrial species to be focused upon will be developed and refined by relevance to each target audience. Education events will then be delivered in the following areas:

- Utilizing local Environmental Education program staff, FoMR will offer community education events within the watershed that utilize outdoor spaces along the Mukwonago River and/or lakes in the watershed and include activities such as nature hikes. The combination of educational content and active outdoor activities will be utilized to engage attendees and broaden the appeal of these offerings.
- Local Environmental Education program staff and/or WDNR AIS Specialist staff will offer education events at schools within the watershed/at schools in close proximity to the watershed.
- Utilizing regional invasive species experts such as DNR staff, FoMR will deliver community education events within/near the watershed utilizing public indoor spaces, such as library meeting rooms. FoMR will also incorporate invasive species education offerings into its current schedule of annual public events such as its spring pancake breakfast and fall Watershed Awareness Weekend. Additionally,

FoMR will seek to offer invasive species education at Lake Management District resident meetings in order to directly reach lake residents.

- Utilizing regional invasive species experts, FoMR will deliver presentations to municipal Town/Village elected boards and staff responsible for local public policy and implementation of zoning regulations.
- Utilizing regional invasive species experts, FoMR will deliver presentations for business owners/leaders at business associations meetings (Chambers of Commerce, Rotary, Kiwanis) within and near the watershed in order to encourage engagement by businesses in protecting the watershed.

Broad community education outreach will be undertaken through print media in order to provide all watershed resident households with information on the negative effects of invasive species, methods for removing invasive species and how to reduce the risk of spreading/introducing new invasive species. FoMR will mail an all-watershed resident mailer in the fall of 2014 and again in the fall of 2015. The mailer will be a multi-page newsletter style document (FoMR initiated this type of mailer in 2013 in order to raise awareness of the watershed among residents by explaining its unique characteristics and the threats to its continued high quality) with a significant emphasis on invasive species education. A specific invitation to become engaged in Mukwonago River watershed protection and restoration will be included in the mailer in order to provide an outlet for watershed residents and users to take action. Additionally, a print brochure that addresses the threats and possible responses to invasive species in the watershed will be developed, printed and distributed.

Other print media outreach will include the submission of articles relating to *Corbicula* and other invasive species to Lake Management Districts for use in their newsletters, and press releases to regional newspapers. FoMR has been quite successful over the past few years with generating interest from print media on stories relating to our activities within the watershed and it can be expected that such specific actions as the *Corbicula* monitoring and removal projects and the FoMR education events proposed under this grant, will be equally successful in attracting attention from regional media outlets. FoMR will place an emphasis on highlighting the WDNR "Protect Wisconsin Waters/It's the Law" messaging program during contact with print media. Additionally, newsletter articles will be offered to organizations operating in the region that promote conservation for use with their members/supporters.

Electronic education outreach will include the creation of a unique page on the FoMR website dedicated to invasive species information. This page will be used to provide updates on *Corbicula* monitoring efforts within the watershed and will display the data produced by the *Corbicula* monitors. FoMR will also include information on its monitoring, removal and education events in its monthly email based newsletter that goes out to more than 500 individuals.

Lastly, an education effort specific to boaters will be undertaken to ensure that WDNR signage such as the "Prevent the Spread of Invasive Species: It's the Law" landing signs are

in all appropriate location in the watershed. Where there are opportunities for the posting of a *Corbicula* informational write-up at boat ramps, such as those with kiosks, one will be added to the kiosk in order to provide more detail than what is possible through signage alone. Less formal water access locations such as road crossings used by canoeists accessing the Mukwonago River will be explored as possible locations for new informational kiosks and such kiosks will be installed in collaboration with the appropriate management agencies (WDNR, Lake Management Districts, Townships). Clean Boats, Clean Waters grant recipients/inspectors in the watershed will be provided with informational handouts that can be provided to boats.

***Corbicula* Removal Demonstration Project**

In partnership with Carroll University (Dr. Jason Freund) and the University of Wisconsin-Waukesha (Michael Pauers), and with input from WDNR staff specialists, FoMR will undertake a demonstration project to remove *Corbicula* from a portion of the Mukwonago River watershed using methods that are non-detrimental to native aquatic species. Data exists on removal techniques used in other locations but the unique qualities of the Mukwonago River with its overall shallow depth and warm water make these techniques either impractical or untested in similar environmental conditions. Therefore, FoMR will test processes for removal that can be undertaken safely within this watershed.

By partnering with multiple universities FoMR is seeking to ensure a continuity of effort throughout the duration of the grant period. During the Summer 2014 academic term a UW-Waukesha student will undertake this project as the corner stone of an independent study course. During the Fall 2014 academic term the project will be included in a Carroll University course (ENV455-Watershed Management). This will provide the opportunity necessary to recruit students from Carroll University who will be available to undertake the project in 2015 and 2016. Additionally, by expanding the partnerships in this grant to two universities, FoMR will double the number of students, faculty, staff, alumni, etc., exposed to information relating to the presence of *Corbicula fluminea* in the region and maximize the attention that this grant can place on the problem of aquatic invasive species among this audience.

Project Products or Deliverables

- Monitoring for *Corbicula fluminea* will be undertaken throughout Mukwonago River watershed based on a schedule to be developed with WDNR specialists.
 - Monitors currently active within the watershed will be invited to expand their efforts
 - New water monitors will be recruited & will hopefully continue their monitoring efforts beyond the timeline for this grant, thereby expanding the number of active monitors in the watershed
- Monitors will be trained in *Corbicula* monitoring protocols (new monitors will receive full AIS monitoring training through Project RED or CLMN)
- Monitor sites throughout watershed lakes and rivers will be mapped to ensure continuity of data

- Data collected by monitors will be entered into SWIMS database
- Monitor collected samples will be photographed and photos will be submitted to Lisie Kitchel for confirmation of monitor's initial identification
- In year 2 of monitoring, those monitors who have demonstrated a reliable ability to correctly identify *Corbicula* will destroy samples found during monitoring
- A compilation of aquatic and terrestrial invasive species most relevant to the protection of the Mukwonago River watershed will be developed
- Education resources will be developed (using WDNR templates) for invasive species not currently covered by WDNR and/or UW Extension materials
- Invasive species education events/presentation to be offered include:
 - Field-based events in 2014 and 2015
 - School-based events in 2014 and 2015
 - Events offered in the evening or on a weekend day at a publicly accessible space (library, etc.) in 2014 and 2015
 - At each of the annual FoMR community events – pancake breakfast and Watershed Awareness Weekend in 2014 and 2015
 - At Lake Management District monthly and annual meetings
 - For municipal elected officials/staff from the Townships, Villages of Mukwonago, Eagle, East Troy, Troy Center, etc.
 - For business leaders from Mukwonago, Eagle, East Troy, etc., at business association meetings, i.e. Rotary, Kiwanis, Chambers of Commerce in 2014 and 2015
- Residents and users of the watershed will be informed of invasive species threats, and remediation through:
 - Annual all-watershed residence mailers in 2014 and 2015
 - A new FoMR website page dedicated to invasive species awareness
 - Lake Management District and conservation organization newsletters
 - Press releases and articles in regional print media
 - A watershed specific brochure addressing invasive species
- Invasive species informational write-ups will be developed and installed at boat ramp kiosks and river put-in locations (as allowed by the institution responsible for the boat ramps, put-in/take-out locations in the watershed)
- A *Corbicula* removal demonstration project will be undertaken in partnership with a Carroll University and the University of Wisconsin-Waukesha
 - Results of removal efforts will be shared with the WDNR, UW Extension, etc., in order to further understanding of options for combating infestations of inland waters

Data to be collected

Monitoring

- *Corbicula fluminea* existence at river and lake locations throughout the Mukwonago River watershed (data to be collected in accordance with protocols currently being developed for Project RED by Laura MacFarland and for CLMN by Laura Herman)

- Professional level reporting of monitoring data
- Mapping of monitoring locations throughout watershed

Existing and Proposed Partnerships

Wisconsin Department of Natural Resources

- Tina Wolbers*, Leisi Kitchel*, Rachel Sabre

UW Extension, Laura Herman – Citizen Lake Monitoring Network*

Waukesha County Parks and Land Use, Jayne Jenks – Water Action Volunteers program*

Walworth County, Audrey Green – Lakes Specialist

River Alliance, Laura MacFarland – Project RED*

The Nature Conservancy – Mukwonago River Priority Area

Kettle Moraine Land Trust

Natures Classroom, Inc.

YMCA Camp Edwards (Environmental Education program)

Timber-Lee Camp (Environmental Education program)

Village of Mukwonago

Lake Management Districts of Eagle Springs*, Upper/Lower Phantom and Beulah lakes

University of Wisconsin-Waukesha

Carroll University

*These entities have agreed in writing to provide grant project support without receiving any grant funds (H3). At its January 21, 2014 meeting the Eagle Springs Lake Management District board approved \$500 in support funding to be paid to FoMR. At its January 23, 2014 meeting the Phantom Lakes Management District board President agreed to sign a letter of support for the FoMR grant application but due to a lack of quorum the board was unable to vote on providing funding to support the grant. The issue will be discussed at the board's February 27, 2014 meeting. Previously this board has agreed to provide financial support to FoMR based upon the identification of a specific project to be undertaken by FoMR so approval for funding at the February meeting appears likely.

Role of Project in Planning and/or Management of Lake

This grant includes efforts in conjunction with several Lake Management Districts (Eagle Springs, Upper/Lower Phantom and Lake Beulah) and land trusts engaged in lake management efforts (The Nature Conservancy, Kettle Moraine Land Trust). Within the proposed monitoring and education efforts, lake residents will become better informed about aquatic and terrestrial invasive species that affect the watershed within which they reside and how they can play a role in managing these species. Municipal and business leaders who make decisions that directly affect the health of the Mukwonago River watershed will be educated about beneficial actions they can take and watershed residents and users will be invited to participate in events that take place at natural areas within the

watershed, increasing their connection to the waterways that make up the watershed and increasing their understanding of how they can take actions to protect it.

Timetable for Implementation

See accompanying document

Plan for Sharing of Project Results

Project results will be shared through the following outlets,

- SWIMS database
- Mapping of monitoring sites submitted to WDNR
- FoMR website – dedicated invasive species information page

Other Information on Project

Representatives from Friends of the Mukwonago River (Eric Howden – Watershed Coordinator, Pam Meyer – BOD Treasurer), along with Jerry Ziegler of The Nature Conservancy had a pre-application grant scoping consultation on December 5th, 2013 with Heidi Bunk, Christina Wolbers, Rachel Sabre, Lisie Kitchel and Walter Ebersohl of the WDNR (E2).

Yes! I want to join the Friends of the Mukwonago River!

Enclosed is my membership:

- \$10 Senior/Student \$25 Friend
 \$40 Organization \$50 Corporate

Enclosed is my donation of:

- \$35 Defender \$50 Guardian
 \$100 Protector \$500 Steward
 Other \$ _____

Does your employer provide matching funds?
Please check with them to determine what is required.

Please make checks payable to
Friends of the Mukwonago River.

Your name

Street address

City, State, ZIP

Phone

E-mail address (The Friends will not share your information)

- Please indicate here if you'd prefer our newsletter and notifications by email. This saves energy, postage, trees and reduces our carbon footprint!

Mail this completed form with a check to:
Friends of the Mukwonago River
P.O. Box 21
Eagle, WI 53119

Thank you!

Our mission...

to protect the Mukwonago River and its associated watershed ecosystems by way of education, advocacy, and promotion of sound land use throughout the watershed.



www.mukwonagoriver.org

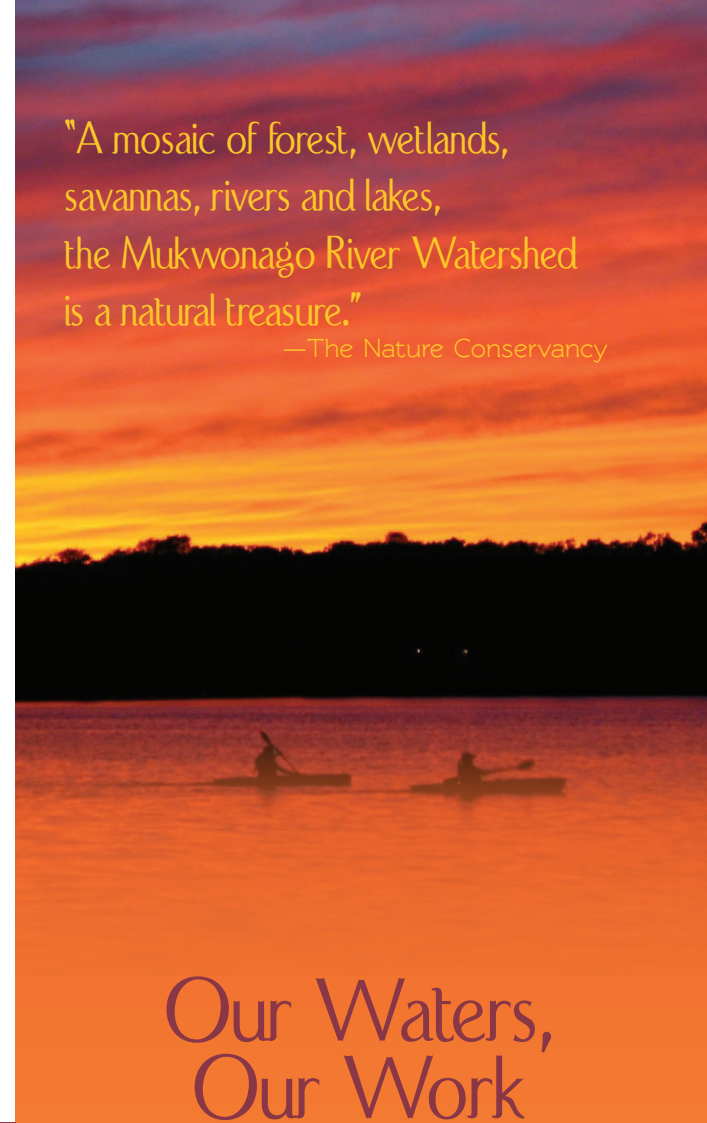


Find us
on Facebook

The Friends of the Mukwonago River, Inc. is
a 501(c)(3) nonprofit organization.

"A mosaic of forest, wetlands,
savannas, rivers and lakes,
the Mukwonago River Watershed
is a natural treasure."

—The Nature Conservancy



Our Waters,
Our Work

Friends of the
Mukwonago River

Friends of the Mukwonago River

The Mukwonago River is one of Wisconsin's "Last Great Places"

Together, we can keep it that way.

Considered one of the cleanest streams in Southeastern Wisconsin, the Mukwonago River and its surrounding watershed is home to threatened fish and mussels, has high-quality wetlands and offers superb drinking water.

Together, we've made improvements in water quality, fisheries, wildlife habitat, and overall quality of life.

But it faces constant threats.

With your help, we can meet the challenges of protecting the Mukwonago River and preserve these waters for future generations.



What is a watershed? It's an area of land that drains water to a shared destination. Everyone lives within a watershed.



Join **Get Involved**

As a member of the Friends of the Mukwonago River, you:

- Receive our newsletter and updates on activities, such as work parties and projects
- Are a voice for the river in the planning and decision-making processes
- Provide support for our work to protect the watershed

Volunteer

Our members and volunteers are engaged in activities that impact the watershed. As a volunteer, you:

- Participate in outdoor, educational, and social activities
- Work with others who share your love for this watershed
- Educate people about this gem

Donate

Your tax-deductible donation helps support our educational and advocacy programs.

8:33 AM

01/29/14

Accrual Basis

Friends of the Mukwonago River, Inc

Balance Sheet

As of December 31, 2013

	<u>Dec 31, 13</u>
ASSETS	
Current Assets	
Checking/Savings	
1000 · Friends Checking	14,060.69
Total Checking/Savings	<u>14,060.69</u>
Accounts Receivable	
1100 · Accounts Receivable	8,260.00
Total Accounts Receivable	<u>8,260.00</u>
Other Current Assets	
4940 · Board Funds	
4942 · Patrick and Anna Cudahy Foundat	-10,000.00
Total 4940 · Board Funds	<u>-10,000.00</u>
Total Other Current Assets	<u>-10,000.00</u>
Total Current Assets	<u>12,320.69</u>
TOTAL ASSETS	<u>12,320.69</u>
LIABILITIES & EQUITY	
Equity	
3200 · Retained Earnings	3,949.84
Net Income	8,370.85
Total Equity	<u>12,320.69</u>
TOTAL LIABILITIES & EQUITY	<u>12,320.69</u>



Friends of the Mukwonago River Newsletter | 2012

President's Letter

Dear Friends,

You might say we had a watershed year in 2012: we held our first watershed event (thanks to all who attended and to our hosts, the Lake Beulah Yacht Club), we mailed our brochure to over 2000 watershed residents (gaining many new members as a result), we held our first volunteer appreciation event, and we added four new people to our Board of Directors (see article on page 8). I hope you attended one of our events or a paddle this past year—if not, there will be many more chances this year. Please join us!

We have good news on the fundraising front again this year, which means we can continue to coordinate terrific educational opportunities for youth and adults alike in partnership with the watershed's school teachers, youth camps, land trusts, lake districts, and other partners. Thanks to the good work of our Watershed Coordinator, Cynthia Holt, we landed a \$10,000 grant from the Wisconsin Environmental Education Board last summer. We are excited about the watershed educational consortium this grant has helped us build, and we look forward to the educational opportunities the group will create this year, from water quality testing to service learning opportunities, watershed models, and much more. More details on page 3.

As always, the newsletter can hardly contain all of the amazing work our volunteers, Board, and Watershed Coordinator, as well as our great partners, accomplished this past year. Please read on for all the details.

We need your help to be able to keep up the good work. Please contact us if you'd like to donate your time—our committees can always use new blood. (We are particularly in need of interested people to join our PR & Communications Committee.) And please donate if you can, or renew your membership if it is time. We appreciate all of your help and support and look forward to a great 2013. See you out in the watershed!

Ezra Meyer, President

Our Mission

The mission of the Friends of the Mukwonago River is to protect the Mukwonago River and its associated watershed ecosystems by way of education, advocacy, and promotion of sound land use throughout the watershed.

*Now entering
our 14th year!*

(Thanks to you!)



Friends' Environmental Education Grant Supports Watershed-wide Educational Partnership

The Friends received a grant for just under \$10,000 effective July 1, 2012, from the Wisconsin Environmental Education Board. The grant supports a Mukwonago River Watershed educational consortium that we envisioned would help us accomplish water management service projects as prioritized in SEWRPCs Mukwonago River Watershed Protection Plan. Indeed the group that we have been able to organize behind this project has already accomplished great things.

The project will target three audiences whose coordinated watershed education and cooperation are critical to the health of the watershed. The primary audience includes local camps and environmental education centers (Edwards YMCA Camp, Phantom Lake YMCA Camp, Camp Timberlee, the B'Nai B'rith Beber Camp, Nature's Classroom Institute of Wisconsin, Camp Alice Chester, and Eagleville School). The second target audience is youth ages 8 to 18 living within the watershed. The third comprises those adults—including parents, staff, administrators and board members—who are leaders within the community.

The overall project goal is to engage youth organizations within the watershed and build a network of environmentally literate organizations and youth who are fully engaged in the watershed and able to join us in our work toward long-term goals to improve watershed health. Planned activities include implementation of consistent water testing programs;

watershed service learning projects with schools and camps; regularly scheduled community education and training opportunities; and community events to celebrate the watershed and all of its treasures.

Our Education Committee has become the forum where the terrific consortium partners behind this project meet. We really appreciate all of the effort put forth by consortium partners to make it all a reality!

Membership and Donations Double Thanks to Our Efforts under Our 2011 DNR River Protection Planning Grant

The Friends have now completed most of the deliverables under our 2011 DNR River Protection Planning Grant, which supports the second phase of our multi-year organizational capacity-building effort. The best accomplishment to come of this work so far is that it has helped us to double our membership and donations!

A key component of this phase of this work is to implement the strategic plan you helped us create in 2011. Through the work of our committees, Board, volunteers, and staff, our goal is to continue to grow the Friends to be the strong, effective organization we all want it to be with visible accomplishments in all six areas we identified as strategic plan priorities.

Some goals of this grant that are now complete or well underway:

- Volunteer Recognition Program: last December, for the first time, we held a volunteer recognition celebration featuring Watershed Champion Awards
- Water Quality Testing/Monitoring Program: in progress with consortium partners
- Annual Friends/Watershed Activity Calendar: currently being filled with this year's events
- Watershed Educational Consortium: As detailed in our WEEB grant update, this group is up and running and working with our Education Committee to pull together a great list of educational opportunities this year and beyond.
- Annual Giving Campaign & Fundraising Event: Last June, we held our first annual watershed event in the form of a pancake breakfast at Lake Beulah Yacht Club. We invited over 2000 watershed residents, and well over 100 attended.

Turtle Signs Vandalized: They've Vanished!



Four turtle crossing signs placed along Highway LO in 2009, in a wetlands area close to the Mukwonago Village, disappeared this spring. Jean Weedman, a longtime Friend, volunteer, and past Board member, was shocked and dismayed as she drove her daily turtle assessment run and discovered the signs gone. We had lost one in the same area the prior year, which the Friends had replaced.

Waukesha County installed the turtle crossing signs at the request of the Friends to help increase driver awareness about the female turtles that cross the roads from nearby waterways in their annual trek to make nests and lay their eggs.

The turtles' annual nesting movements occur primarily in June and July. The Mukwonago River watershed is home to most of Wisconsin's 11 turtle species, six of which are listed as endangered, threatened or species of special concern by the DNR. One such threatened turtle, the Blanding's turtle, can be found throughout the watershed.

Our goal with the highway signs (along with articles, presentations, and web information) has been to raise awareness of the turtles and their habitats and habits in the Mukwonago River watershed and to ensure they can continue to safely coexist with us humans in this most amazing place we all call home.

The signs have been a great tool to help our local turtles survive with just a little human help in a world that moves a little too fast for them.

For now, we seek to replace the signs at the high cost of over \$800, and we are also looking into alternative methods to raise turtle awareness that are not so susceptible to vandalism and not as costly. Any thoughts are welcome. Email us at friendsofthemukwonagoriver@yahoo.com.

Volunteer Recognition Dinner 2012

The Friends held our first annual volunteer recognition event on December 1st at the home of longtime Friends, Barb and Andy Holtz. Over forty people attended. It was a wonderful evening. We honored all of our fantastic volunteers for their contributions to the Friends and the river and watershed, and we specifically acknowledged this year's designated Watershed Champions in the following four categories:

Stewardship (Organization):

Wisconsin Department of Natural

Resources: for streambank restoration efforts on the former Rainbow Springs property, now the Mukwonago River Unit of the Southern Kettle Moraine State Forest

Stewardship (Individual/family):

The Tarman-Ramcheck family: for their land stewardship efforts in the area around Lake Beulah and the Beulah Bog State Natural Area

Education:

Eagleville School PTO and Jean Weedman:

for their collaboration on the Eagleville School prairie garden

Community partners:

Lake Beulah Yacht Club: for their assistance in connecting Lake Beulah and the rest of the watershed through our first annual watershed event last June

Thank you to all our volunteers and kudos to our 2012 Watershed Champion award winners.

We really appreciate the work you do in support of the Friends and the amazing Mukwonago River and her watershed. Each and every volunteer is the lifeblood of this organization. We love you, we need you, and we support and appreciate you. (See our website for a full list of this year's honored volunteers in all categories.)

Committee Updates

In late 2011, the Friends' Board of Directors formed committees to directly support the key priorities identified in our strategic plan. If you are interested in participating, please join a committee. Contact us at friendsofthemukwonagoriver@yahoo.com.

Education Committee supports the educational portion of the Friends' mission. The group is helping us implement our two current grants by partnering with area camps, schools, and other partners in environmental education to engage youth and adults in the wonders of the outdoors and specifically our incredibly special river watershed. Work under the two grants has centered on establishing a calendar of events, service learning projects, and building models of a river/watershed system for use in the classroom. The Educational Consortium intends to add water quality monitoring activities to the list this year.

*** **

The **PR / Communications Committee**, charged with shaping the Friends' organizational messaging and outreach, oversees the annual newsletter, monthly e-newsletters, press releases, invitations and displays, and our Facebook page and website postings. We continue to review those communication tools, along with our "Glacial Refuge" video, brochure, and more, to ensure they engage current and potential members and effectively communicate the importance of the Mukwonago River and its watershed and the critical role the Friends play in its protection and restoration.

We held a successful Watershed Awareness event in June at the Lake Beulah Yacht Club and offered educational activities and display space to partners. This past December, we participated in Mukwonago's Midnight Magic Parade and hosted a Volunteer Recognition event.

This committee seeks creative individuals with communications, PR, writing, event planning, photography, and other related skills to join us.

The **Protection and Restoration Committee** met several times last year and will have a busy 2013. This committee's charge includes educating, advocating, and partnering to promote sound land use and water management decision-making. It encompasses a very broad scope.

Our work includes supporting and promoting land protection efforts by land trusts and others, educating landowners on options to preserve and protect their shorelines and natural lands, and helping watershed landowners and recreational water users to prevent and manage invasive species.

This year, we will help to implement SEWRPC's Mukwonago River Watershed Protection Plan in coordination with our partners. The master planning process for the Mukwonago River Unit of the Kettle Moraine State Forest will be a key focus.

As in the past, with support from other committees and help from our Friends, we will react to issues that need attention and work with our local officials, and we will take proactive stances on issues relevant to our mission. We will continue to advocate for the protection and preservation of the Mukwonago River and, with your help, keep it in its pristine condition.

*** **

The **Fundraising Committee** worked diligently this past year to engage more watershed residents, businesses, and organizations as members and donors. We met or exceeded our fundraising goals to raise \$5,000 through individual donations and memberships and \$3,000 in corporate sponsorships for our pancake breakfast. We mailed our brochure and a "welcome to the watershed" letter to over 2,000 watershed residents, and we expanded our membership by nearly 50 through that mailing and the watershed event. We have also nearly doubled the number of contacts in our lists to almost 400.

This group is excited to pick up this year's fundraising goals and to make them a reality with expanded business outreach and another watershed event.

Friends 2012 Events

We held a wonderfully attended Watershed Event on June 3rd, featuring a pancake breakfast with our Lake Beulah partners and paddling thanks to on-water boat demos provided by Clear Water Outdoor from Lake Geneva. Several watershed partner organizations displayed their work, including an educational interactive display on how watersheds work. It was a beautiful day and a great time. Many great volunteers worked to make this event a huge success. We intend to make this an annual event: this year, it's on the calendar for Sunday, June 2, 2013.



A rainy day awakened the group of Friends attending our August 26 paddling trip from Eagle Spring Lake up to Lulu Lake. Regardless of the weather, several stalwarts in canoes and kayaks had a great paddle. Participants included Cynthia Holt, Kitty Welch, Beth Gehred, Pamela Meyer, Martha Welch, Ed Olson, and Donna McElwee, Cathy Felske and her sister-in-law, all from Booth Lake.



In early December, the Friends participated in the Mukwonago's annual Midnight Magic Parade for a second year. Wearing one of our very unique and sought-after fish hats Tim Roebke carried our banner with Chris-Ann Lauria. We had a great turnout with over ten adults and kids parading, including several board members Gina Howden and Ed Olson (from left), Dick Jenks, Ezra Meyer, Pamela Meyer, and David Swanson (not pictured) and their families.

Our Volunteer Recognition Event, also held in early December, was a huge success. We acknowledged our Watershed Champions and thanked everyone for their (your) volunteer efforts. The picture at right shows a few of the over 40 attendees in the living room of the Holtz home. We intend to make this an annual event in honor of the fact that volunteers are so critical for our success. Thank you for your contributions to our mission.



Volunteers, including Friends, Survey for Invasive Plants

The Southeastern Wisconsin Invasive Species Consortium (SEWISC) is processing the tremendous amount of data submitted by 122 volunteers, half a dozen of which are also active Friends members, who participated in a roadside survey for invasive plant populations this past year. These citizen scientists collected location and population size data for several selected plant species. The survey was among 18 projects selected for assistance through the Wisconsin Department of Natural Resources 2012-13 Citizen-based Monitoring Partnership Program. Additional funding was provided by the U.S. Forest Service.

Due to the short flowering period of wild parsnip, this year's prime target species, survey teams only had a few weeks to conduct their searches this year which conflicted with the vacation plans of many volunteers. As a result, several 2011 teams recruited friends, colleagues, and family members to conduct the 2012 surveys and 47% of our volunteers were new recruits!

Many thanks go to the 181 volunteers who donated more than 2,500 hours and drove, hiked, and biked nearly 26,000 miles through their neighborhoods over the past two years to identify and map these problematic species. Thanks are also due to our County GIS departments and the Southeastern Wisconsin Regional Planning Commission, who eagerly supplied the volunteers with maps. *Adapted from SEWISC's Winter 2012 e-newsletter.*

SEWISC is a broad-based coalition that promotes efficient and effective management of invasive species throughout an 8-county region (Sheboygan, Washington, Ozaukee, Waukesha, Milwaukee, Walworth, Racine, and Kenosha).

The Friends of the Mukwonago River volunteers who participated in this effort were: John and Julie Mann, Jean Weedman, Barb Holtz, Pam Meyer, and Jacki Lewis.

The Friends would like to engage willing volunteers and our watershed organizational partners to organize similar efforts designed to inventory and map populations of *aquatic* invasive species along the shores of the river and the watershed's lakes. Please stay tuned to our monthly email newsletters and our website for details on those opportunities.

The key with invasive plants, be they on land or in the water, is to prevent their spread in the first place as much as possible. Beyond that, the key is to find them early so that there is some hope of responding rapidly and controlling them before they get a foothold and begin to outcompete valued native species.



The Friends of the Mukwonago River Board of Directors—June 2012



Ezra Meyer—President A founding member of the Friends, Ezra grew up in the watershed on Eagle Spring Lake, fourth generation. He has a Bachelor's degree in Economics and Master's degrees in Water Resources Management and Urban & Regional Planning from UW Madison. He's been the Water Resources Specialist at Clean Wisconsin for almost 5 years. Ezra is passionate about building on the watershed's long history of people and nature coexisting in a mutually beneficial way.

Ed Olson—Vice President Ed has resided near and kayaked and waded in the Mukwonago River for over thirty-five years. Retired as of last February, for thirty years he served in executive capacities with Waukesha Memorial Hospital (WMH) and ProHealth Care, including eight years as President/CEO of WMH. Ed has a Bachelor's degree in Political Science from Carroll University, and his graduate work at UW-Milwaukee was in Urban Studies. His extensive volunteer activities have included board directorships with United Way, the Women's Center, Mukwonago YMCA, Interfaith Senior Programs, American Heart Association, Wisconsin Hospital Association, Waukesha County Business Alliance and more. Ed and his wife, Linda, have two grown daughters and one amazing grandson.

Pamela Meyer—Treasurer Pamela grew up on Eagle Spring Lake, raised three children, and lives there today. In 2003, she worked with The Nature Conservancy to permanently protect her roughly 60-acre Christmas tree farm featuring 1,500 feet of Mukwonago River frontage through a conservation easement. She has served 3

terms on the Waukesha County board, currently serving on the Finance and Land Use, Parks, and Environmental Committees. She is passionate about water issues, land use planning, and the critical connection between the two for the Friends' watershed protection mission.

Dick Jenks—Secretary Dick grew up on a dairy farm in central Wisconsin. He is now retired after a 30-year management career in telecommunications. Dick has a Bachelor's degree in Mechanical Engineering from UW Madison and an MBA from UW Whitewater. He is a licensed real estate appraiser. Dick and his wife Mary have lived on Upper Phantom Lake since 1985. They enjoy travel, hiking, and canoeing. Dick served several terms on the Phantom Lakes Management District and is a member of the Friends of Vernon Marsh. Dick is excited to be a part of the Friends' continued growth, helping with the environmental challenges just outside his back door.

Gina Howden Gina lives in Eagle with her husband, Eric, and their two children. She grew up on Lake Keesus in Waukesha County and went to UW Whitewater. She has always been passionate about protecting our local water resources for current and future generations. Gina works at Standard Process, which owns a farm on Jericho Creek. Gina and her family enjoy exploring local waterways as often as possible in their canoe, affectionately named "Bella." As an active Eagleville Elementary parent, Gina is excited about the continuing relationship between the Friends and Eagleville to educate the next generation of watershed protectors.

David Swanson David became a friend of the Mukwonago River when he moved here to take a teaching position at Nature's Classroom Institute of Wisconsin in the heart of the watershed near Lake Beulah. David grew up in Chicago and attended Northland College in Ashland, WI on beautiful Lake Superior, where he obtained degrees in both Mathematics and Biology. Presently, David teaches at Milwaukee Montessori School and raises his daughter on the shores of Honey Creek in East Troy.

Kettle Moraine State Forest, Mukwonago River Unit: Open to the public, river restoration begun—it's Master Planning time.

The Mukwonago River Unit of the Kettle Moraine State Forest, formerly Rainbow Springs, saw some major changes in 2012. Wisconsin DNR staff were active on many aspects of the property this past year. "Demolition of the Lake Lodge, pool house, convention center, kitchen building, irrigation pump house, the sewage disposal plant, and some large holding tanks was completed in 2012," said Paul Sandgren, Forest Superintendent of the Southern Unit of the Kettle Moraine State Forest. "The Pro-shop and ice skating warming cabin remain, with replaced roofs and underground electric installed to them. Foundations and the concrete rubble pile for the convention center have been covered with topsoil and seeded to a cover crop. The overhead electric lines, poles and transformers, including the substation have been removed," reports Jim Jackley, DNR real estate specialist.

The Waukesha County portion of the property opened to the public on November 10, 2012. A parking lot at the entrance on County Highway LO and a gate to control access at that point were installed for use by hikers, hunters and fishermen, and others entering by foot. Horses, bicycles and motor vehicles are not permitted on the property. The entrance road and the bridge and culvert remain at this time (though they are limited to pedestrians only). The removal of the covered bridge due to its poor condition opened up a view of the river, a view improved thanks to brush-removal work by the Southeastern Wisconsin Chapter of Trout Unlimited.

Some interesting notes from Paul Sandgren: "Some of the lumber in the hotel was salvaged by the demolition company for use in their Beloit offices. Many tons of steel were recycled from the hotel. The lowest level of the kitchen building, originally planned to house a restaurant, turns out to have been built below the groundwater table and was flooded until this past summer's drought lowered the water table."

A project sponsored by the Kettle Moraine Natural History Association and funded by the Southeastern Wisconsin Fox River Commission allowed work to begin on culvert removal to restore the portion of the Mukwonago River that was heavily modified to create the golf course in the 1960's. Benjamin Heussner, DNR fisheries biologist, reports, "A cooperative effort to improve habitat and navigability is well on its way with two culverts removed in fall of 2012. A habitat evaluation was completed in summer 2012 that helped inform the culvert removal plan. A mussel survey was also completed, and native mussels were transplanted upstream out of harm's way. An electro-fishing survey allowed documentation of species diversity and abundance prior to restoration efforts. Brush bundles, stream mapping, garbage clean-up, water quality monitoring, and invasive plant removal were performed through cooperation between Nature's Classroom Institute, Trout Unlimited, and DNR. This is the beginning of a large-scale restoration effort to include the removal of five more culverts in 2013."

Four areas of the property, totaling around 240 acres, whose purchase was specifically funded by the North American Wetlands Conservation Act, will be managed for wetland habitat per that program's requirements.

Having spent 2012 laying groundwork for the effort with guidance from Endangered Resources staff, the Mukwonago River Watershed Protection Plan, and others, the DNR has begun the master planning process, which will run for roughly the next eighteen months with stakeholder and public input beginning this spring (2013). This comprehensive process will define a collective vision for the lands and waters of the Mukwonago River Unit and Lulu Lake Natural Area. The DNR has a strategy for public involvement which will begin in the first quarter of 2013. "There will be opportunities for all entities and individuals to weigh in on the use and restoration of the property," noted Sandgren.

The Friends plan to take an active role in this process as it unfolds. We hope you will participate and provide input. Please watch for updates from the DNR and from the Friends. If you are not signed up for our email service, please do so at www.mukwonagoriver.org.

Eagle Spring Lake Weather Project

By Pete Jensen, Eagle Spring Lake Resident

In 2008, a weather monitoring system was installed on Eagle Spring Lake. That basic system has now grown into one of the most significant data collection systems monitoring weather and lake temperatures in Wisconsin.

In addition to collecting normal weather data—air temperature, wind speed / direction, relative humidity, precipitation and precipitation rates, solar and UV radiation—the system collects water temperatures from around the lake throughout the year. This data, archived every minute, produces over 21 million data points a year. The data is transmitted into the Meteorological Assimilation Data Information System (MADIS) where it can be used and tracked by government agencies, such as the National Weather Service and U.S. Geological Survey, and users.

On June 21, 2010, the Eagle Spring Lake Weather Station recorded the passage of the Eagle Tornado, which traveled from West to East approximately 1.4 miles from the recording station. The barometric pressure drop of a tornado can be easily seen on the graph in Figure 1, below at left.

A primary purpose of the weather collection system is to monitor lake temperatures for use in scientific research. This information can be used to study the stresses on aquatic life due to high or low temperatures or extreme temperature shifts. Figure 2, below right, shows one example of the rapid temperature shifts that can occur in the lake, stressing the aquatic environment—the shift shown there occurred in less than a week.

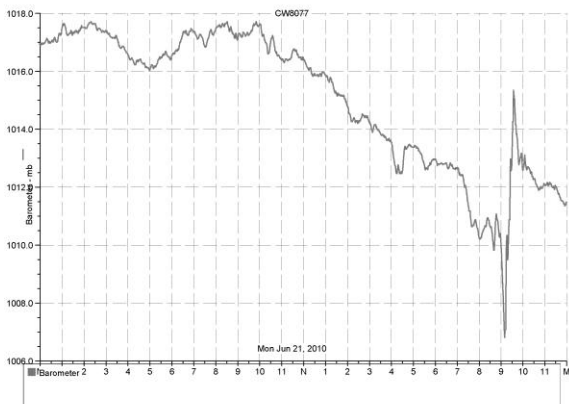


Figure 1.

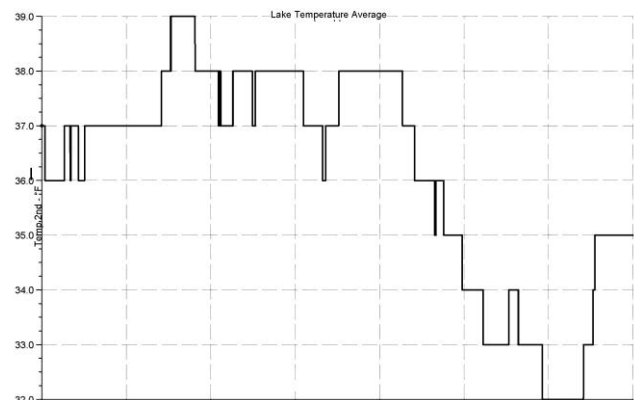


Figure 2.

As more data is collected and analyzed, a better understanding of the weather and temperature dynamics of this unique shallow lake along the Mukwonago River will be gained. This weather information is available to the public through a website maintained by the Eagle Spring Lake Management District (at www.eagleweather.com).

This spring, the UW-Parkside is providing 20 computer science students to improve and update the weather website and data collection systems. These improvements are provided to the district at no charge as part of the UW's outreach programming. While everyone complains about the weather, little can be done to change it. But much can come from a better understanding of how changing weather patterns affect our local environment. This project of the Eagle Spring Lake Management District aims to gain a better understanding of these relationships and how to employ better management techniques to work with the weather rather than just complaining about it.

Editor's note: The Friends thank Pete Jensen for contributing this article and for his volunteer contributions to the watershed, and we thank Eagle Spring Lake Management District for sponsoring this incredible effort.

Land Trusts, Waukesha County Preserve Watershed Lands

Waukesha County Land Conservancy

In 2012, Waukesha County Land Conservancy purchased 51.6 acres on the Mukwonago River adjacent to the Kettle Moraine State Forest's Mukwonago River Unit and a 128-acre conservation easement along Jericho Creek, bringing their total for environmentally significant lands protected in Waukesha County to 2,660 acres. Through these important agreements with landowners, WCLC preserved primary environmental corridor, undisturbed shoreline, pristine floating bog, uplands, woodlands and wetlands for generations to come. We applaud the effort.



Waukesha County Greenway on the Mukwonago River

In 2012, Waukesha County purchased a 61-acre parcel adjacent to the Kettle Moraine State Forest's Mukwonago River Unit and with frontage along the Mukwonago River as part of the greenway plan designated in the County's Park and Open Space Plan. The land, lying just south of County Highway LO several miles west of Mukwonago, includes an oak forest with deep kettles and high ridges and a low-lying area featuring a small lake.

Greenways protect high quality natural resource-based elements, connect major state, county and local parkland, as well as other community social and cultural amenities, and provide recreational and educational opportunities for the use and enjoyment by present and future generations.

The property was purchased using the County's Walter Tarmann Fund. The County will also apply for Knowles-Nelson Stewardship Program funds through the Wisconsin Department of Natural Resources.

The Friends is always happy to write letters in support of land purchases or easement acquisitions that will protect land in the watershed, typically pieces that add habitat corridors or preserve natural areas and environmental corridors. These parcels serve to connect conservation land owned by many organizational partners—The Nature Conservancy, the DNR, and local land trusts—as well as private landowners.



Award-winning private land steward, Barb Holtz of Holtz Farms (third from right, a longtime Friend), and DNR staff along with staff from The Nature Conservancy and Kettle Moraine Land Trust. The group was in attendance at the Oak Savannah Alliance's first annual workshop last spring.

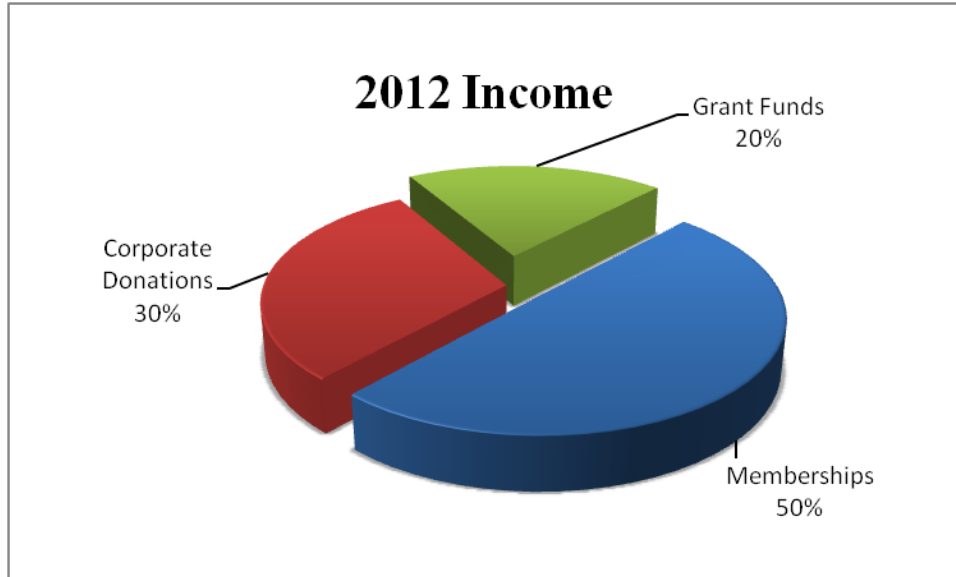
Kettle Moraine Land Trust Awarded Accreditation, Protects Beulah Bluff Preserve

The Kettle Moraine Land Trust has been awarded the national seal of land trust excellence by an independent commission—the Land Trust Accreditation Commission. Accredited land trusts have met national standards for excellence, uphold the public trust, and ensure that conservation efforts are permanent. In Wisconsin, only one out of forty land trusts is accredited.

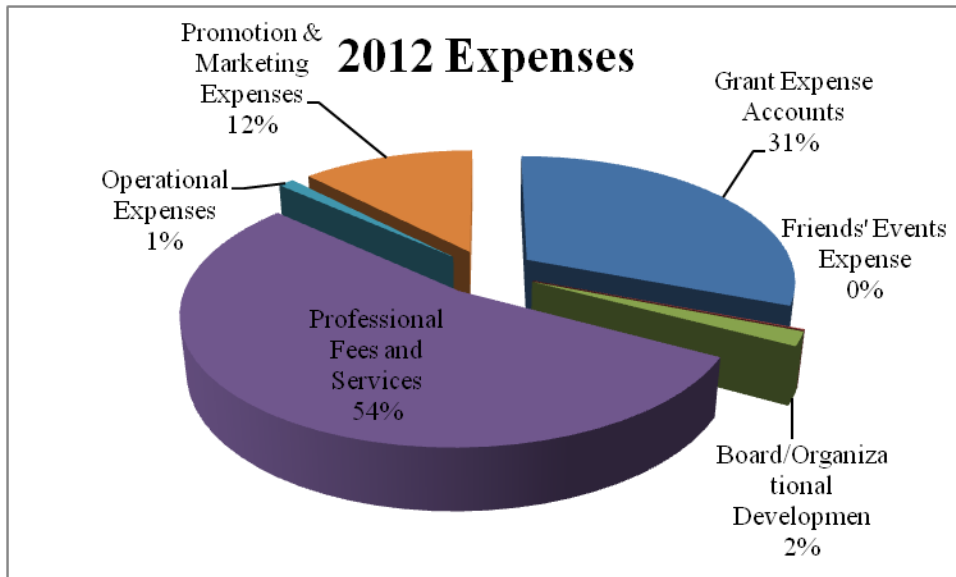
After nearly three years of negotiations, the Kettle Moraine Land Trust completed the purchase of a property in the Mukwonago River watershed at the top of a bluff near the western shore of Lake Beulah. The new 8-acre preserve, named Beulah Bluff, hosts both native prairie and woodland habitats and permanently protects a scenic vista and important groundwater recharge area for the lake. Beulah Bluff will have limited access to the public until the fall of 2015. At that time, all buildings will have been removed and the entire preserve will be open for public enjoyment.

In 2013, Kettle Moraine Land Trust will be the recipient of grants from the Gaylord and Dorothy Donnelley Foundation and Wisconsin Energies Foundation. Support from these foundations helps the Trust build local partnerships with landowners and others for the protection of natural habitats and ecosystems in Walworth County. The Friends are proud of the Kettle Moraine Land Trust for all of its accomplishments and appreciate very much having them as a partner in the watershed.

Friends of the Mukwonago River 2012 Financials



Total income \$12,358 *



Total expense \$14,146 **

* Membership donations in 2012 almost doubled over the previous year due to our outreach activities.

** Thirty percent of accumulated expenses shown here will be covered by our two grants.

The Friends of the Mukwonago River is recognized by the IRS as a 501(c)(3) tax-exempt charitable organization.



Join the Friends of the Mukwonago River

As a member:

- You will receive our newsletter and other updates on activities, such as work parties and joint projects.
- You support us in our efforts to limit harmful impacts to the river from the pressures of development and activities throughout the watershed.
- You increase awareness of the importance of this river and its watershed, unique for its incredible fish and wildlife diversity and unparalleled quality.
- You provide a voice for the river in the planning and decision-making processes within local communities.

You may now donate online at www.mukwonagoriver.org!

[Donate](#)

Memberships: Senior/student **\$10** Friend **\$25** Organization **\$40** Corporate **\$50**

Donations: Defender **\$35** Guardian **\$50** Protector **\$100** Steward **\$500**

Other: _____

Does your employer provide matching funds? Please check with them to determine what may be required.

Name: _____

Address: _____

City, State, Zip Code: _____

Phone Number: _____ **Email:** _____

Please note here if you prefer your newsletter and other notifications by email to save energy, postage, and trees.

To donate, join, or renew your membership, please mail this completed form with a check to:

Friends of the Mukwonago River, P.O. Box 21 Eagle, WI 53119

Thank You!

THANK YOU!

Thank you to all of our members, donors, volunteers, and partners who made this past year a success. You helped preserve the health of the Mukwonago River watershed and educate others about its importance. We appreciate all you do and thank you for your support of what we do.

INDIVIDUALS

Scott Anderson
Julie Archibald
Tony Ayala
Jeff & Deb Bacon
Julie Bender
Larry Benner
Susan & Paul Bergmann
Geoffrey Bishop
Bridgette Bonifield
Susan Brown
Rob & Mary Bunzel
Trish & Jerry Burstein
Linda Caldart-Olson
Daniel Collins
Mary (Polly) Cramer
Jason Dare
John & Judy Day
Tom Day
Natalie Dorrlor
Richard Dow
Daniel & Sue Doyle
Gerald Emmerich
Eric Epstein
Fred Gier
Jo Ann Gilbert
Nancy Gloe
Mike & Susan Graczyk
Gan and Milton Haeger
Dr. Rex Hanger
Randy Hackbarth
Kristie Hansen
Warren Hansen
Warren Hansen, Jr.
Delene Hanson
Paula & Ron Harris
Gerry Hedlund
Ron Hedlund
Jody Heimos
Tracy Hein
James Heinrich
Chris Heinz
Ben Heussner
Ronald Heuver
Dr. Christopher Hibner

Cynthia Holt
Barb & Andy Holtz
Jean Holtz
Gina & Eric Howden
Eric Howe
DG Jager
Richard Jenks
Jayne Jenks
Marlin Johnson
Barbara Johnson
Lee Ann Kingston
Carol Kinney
Rob Klussendorf
Joseph Koch
Jan Kodner
Pete Kumlien
John & Mary Kay Lammers
ChrisAnn Lauria/Tim Roebke
Laurie & Jack Lawlor
Jacki Lewis/Dick Adduci
David Linton
Timothy Lizotte
Neil Locke
Ed & Susanne Mack
John Macy/Sandi Brand
Christopher Mann
John & Julie Mann
Jim Marrari/Barb Carstens
Patrick McAdams
Tom McAdams
Peter & Mary K McCanna
Greg & Donna McElwee
John Mesching
Ezra Meyer
Hans Meyer
Pamela Meyer
Robert & Charlotte Miller
Julie Miller
Patricia Morton
Carol Mullen
Maya Murphy
William Murphy
David Nahrwold
Ed Olson
James Pasterski
Daniel & Marcia Pedriana

Thomas Pfeiffer
Barb Pinekenstein
Mary Pires
Jamie Pratt
Lynn Preston
Allen Queenen
Katherine Radewahn
Alexandra Ramsey
Frank Rappold
Lauren Richter
Paul Riedl
Chuck & Irene Roberts
Kathi Robinson
David Rohde
Bridget Rowan
Brian Rudy
Carolyn and Charlie Russell
Bill Ryan
Christina Rye
Glenn Schlender
Karen & Mark Schneider
Carol Smart
Dick Smith
John Sonderegger
Anne Spaltholz
Jeff Spang
Kristin Spencer
Emily Stahl
David Swanson
Bill & Kathy Tarman-Ramcheck
Eric Tarman-Ramcheck
Barbara Thorrington
Kathleen Wambold
Monica Waszak
Tom & Jean Weedman
Satchel Welch
Alison Werner
Welody Wilson
Maggie Zoellner

BUSINESSES & ORGANIZATIONS

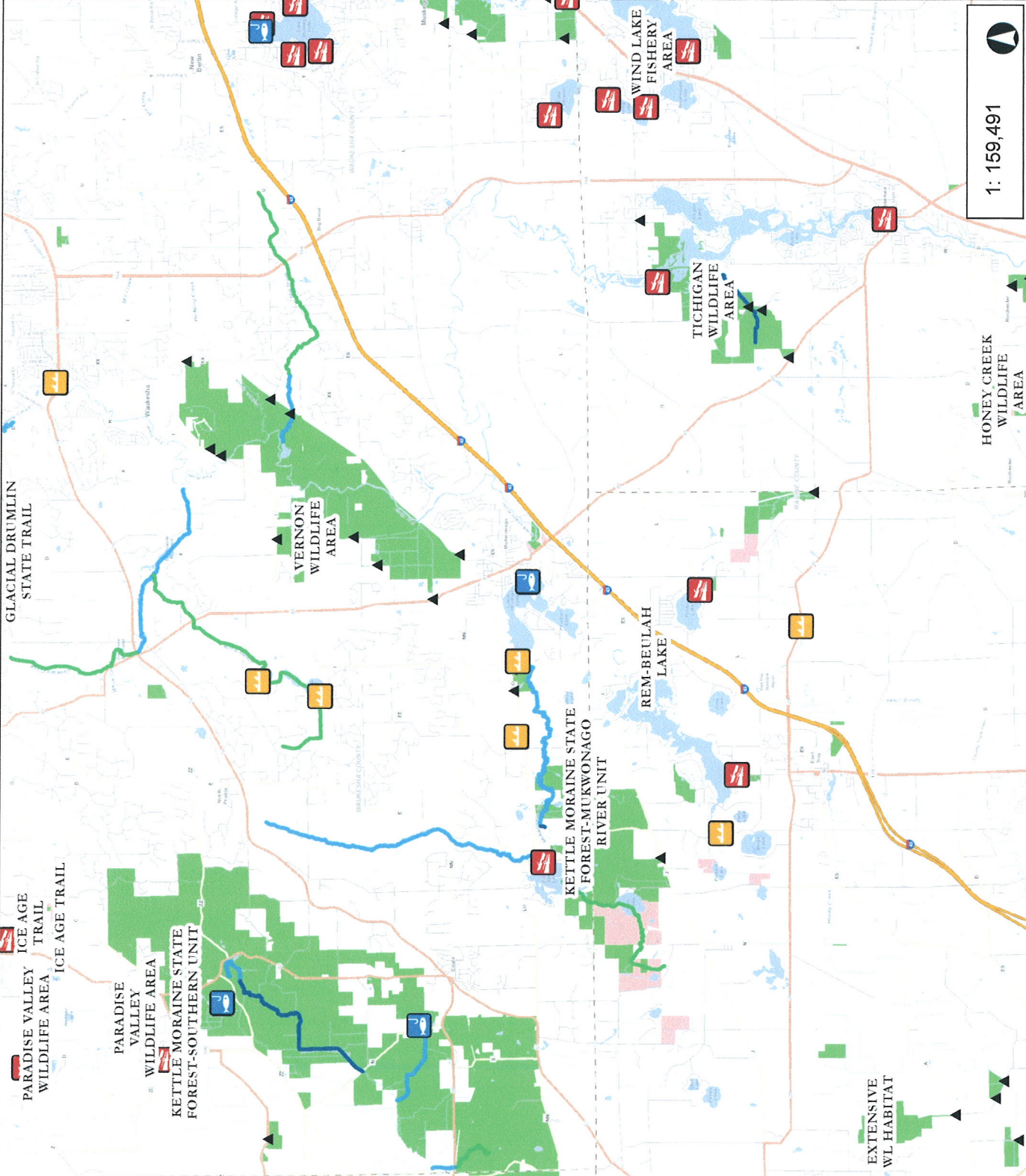
American Transmission Company
Alice Baker Library—Eagle
Bret Achtenhagen Seasonal Services
Camp Edwards YMCA
Citizens Bank of Mukwonago
Clear Water Outdoors
Eagle Lake Yacht Club
Eagle Spring Pub
Eagleville Elementary School PTO
Farris, Hansen, and Associates, Inc
Kettle Moraine Land Trust
Mukwonago Community Library
Mukwonago Family Dentistry
Mukwonago Rotary Club
Nature's Classroom Institute of WI
Parkview Middle Sch. Science Class
Phantom Lake YMCA
Pro Health Care, Inc.
River Alliance of Wisconsin
Spring Lake Association
Standard Process, Inc.
The Nature Conservancy
Timber-Lee Camp & Retreat Center
United Unitarian Universalists
Waldheim Park
Waukesha Land Conservancy
Waukesha County Parks & Land Use
WI Dept. of Natural Resources
WI Environmental Education Board

(Our volunteers work hard to maintain our membership/donation database. Please inform us if any entry here is misspelled or if you are not on the list but ought to be. Thank you for helping us keep accurate information!)

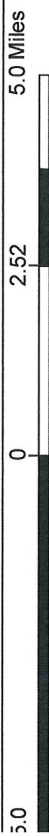
Please donate, join us, or renew your membership at www.mukwonagoriver.org or at P.O. Box 21 Eagle, WI 53119. **Thank you!**

Map Legend

- Federal Property Labels**
- Shorefishing Site**
- Boat Access Site**
 - CARRY-IN
 - RAMP
 - UNKNOWN
- DNR Parking Areas -100 - 500**
- Trout Streams**
 - CLASS I
 - CLASS II
 - CLASS III
- Major Roads**
 - Interstates
 - US Highways
 - State Highways
- County**
- Management Type 100K and ε**
 - Fee
 - Easement
 - Lease
- US Fish & Wildlife Service**
- US Forest Service**
- National Park Service**
- County Forest**
- City, Town & Village**
- County Boundary**
- Open Water**
- Rivers and Streams**



1: 159,491



DISCLAIMER: The information shown on these maps has been obtained from various sources, and are of varying age, reliability and resolution. These maps are not intended to be used for navigation, nor are these maps an authoritative source of information about legal land ownership or public access. No warranty, expressed or implied, is made regarding accuracy, applicability for a particular use, completeness, or legality of the information depicted on this map. For more information, see the DNR Legal Notices web page: <http://dnr.wi.gov/org/legal/>



Friends of the Mukwonago River



Longear Sunfish
(*Lepomis megalotis*)

P.O. Box 21
Eagle, WI 53119

Authorizing resolution of the Board of Directors (2014-01) **February 1, 2014 WDNR AIS Grant Application**

Aquatic Invasive Species Control Grant-Monitoring and Education

WHEREAS the Mukwonago River watershed is an extremely high quality freshwater resource in the Counties of Waukesha and Walworth, which is valued for its natural beauty, diversity of species, communities, and landscapes, and outdoor recreational opportunities; and

WHEREAS Friends of the Mukwonago River have worked for 15 years to foster watershed protection, conservation, and restoration and desire to achieve further progress toward those ends; and

WHEREAS Friends of the Mukwonago River, Inc. meets the requirements of a qualified river management organization and is thus eligible to seek Aquatic Invasive Species Control Grant funding assistance through the Wisconsin Department of Natural Resources, has available funds and/or capacity to raise such funds as may be necessary to match up to one-third of a \$49,900 State cost-share grant, and has sufficient current organizational capacity as to be able to conduct the proposed project and manage the proposed budget in a timely, professional manner.

BE IT HEREBY RESOLVED THAT:

Friends of the Mukwonago River, Inc. requests the funds and assistance available from the Wisconsin Department of Natural Resources under the Aquatic Invasive Species Control Grant program; and

HEREBY AUTHORIZES Ezra Meyer (and/or the organization's Treasurer) to act on behalf of the organization to: submit an application for funding assistance from the Wisconsin Department of Natural Resources, through its Aquatic Invasive Species Control Grant program, for a monitoring and education project and to sign documents, file reports and reimbursement requests, and otherwise take necessary action on behalf of the organization so as to undertake, direct, and complete an approved Aquatic Invasive Species Grant-funded project.

BE IT FUTHER RESOLVED THAT Friends of the Mukwonago River, Inc. will meet the obligations of an approved grant, including timely sharing of results, and meet the financial obligations of such a grant, including prompt payment of our 25% commitment to project costs.

Adopted January 20, 2014 by a unanimous vote of the Board of Directors.

ATTEST: Ezra Meyer, President, Friends of the Mukwonago River, Inc.

*The Mukwonago River watershed is home to over 50 species of fish including the threatened Longear Sunfish (*Lepomis megalotis*), several species of rare freshwater mussels, an incredible diversity of wetlands, and some of the highest water quality in Southeastern Wisconsin. The mission of the Friends of the Mukwonago River is to protect the Mukwonago River and its associated watershed ecosystems by way of education, advocacy, and promotion of sound land use throughout the watershed.



Jason G. Freund, Ph. D.
Assistant Professor of Environmental Science
100 N. East Avenue
Waukesha, WI 53186

RE: Letter in support of Friends of the Mukwonago River Grant

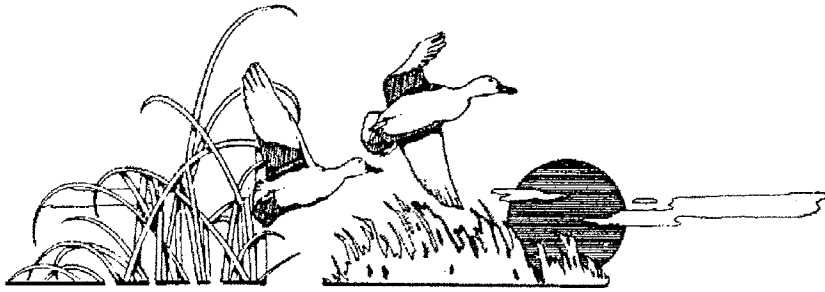
I am writing in support of the Friends of the Mukwonago River's submission for the Aquatic Invasive Species, Education, Prevention & Planning Project Grant. The grant submission has gone through the university process and has been vetted by a Dean and Associate Dean, Director of the Grants Program, and Provost who are all in support of our collaboration with The Friends of the Mukwonago River and the University of Wisconsin – Waukesha. We will oversee the hiring and payments to a student worker associated with the project in the fall of 2015 through the spring of 2016. The student will work with me and Eric Howden with the Friends of the Mukwonago River.

We are committed to supporting the project through a service learning component in ENV455 – Watershed Management. In the past, service learning projects have been conducted in association with the Kickapoo Valley Reserve, City of Campbellsport, The Nature Conservancy, Southeast Wisconsin Regional Planning Commission, Wisconsin Department of Natural Resources, and Wisconsin State Council of Trout Unlimited, among other groups. The class has been taught for approximately 6 years with student groups completing service learning projects that are delivered to their constituents. This effort will then assist in finding a student who will be paid to work with the Friends of the Mukwonago River on completing the field work and report by the spring of 2016.

I am happy to be able assist the Friends of the Mukwonago River with the project and it will be a benefit to our students to have the opportunity to assist with an invasive species issue of great concern in their backyard. The *Corbicula* project presents a unique opportunity to work on a “real-world” problem and for at least one student, the project offers the opportunity to earn extra money while getting this experience.

Sincerely,

Jason G. Freund, Ph. D.
100 N. EAST AVENUE • WAUKESHA, WI 53186 • 1.800.CARROLL • WWW.CARROLLU.EDU



**Eagle Spring Lake
Management District**
P.O. Box 196
Eagle, WI 53119

January 21, 2014

To: Wisconsin Dept. of Natural Resources
Aquatic Invasive Species (AIS) Control Grant Program

Re: Friends of the Mukwonago River's Grant Application for Control of AIS in the Mukwonago River

Dear Sir or Madam:

We are writing this letter to voice our organization's support of the Friends of Mukwonago River's above-mentioned grant application.

The grant application rather comprehensively addresses this challenging undertaking. I would like to touch on a few points, which I believe highlight the importance of funding this proposal.

- The Mukwonago River and its associated wetland and upland ecosystems contain numerous threatened and endangered species. These species will likely be negatively impacted by loss of habitat due to the uncontrolled spread of aggressive invasive species that have recently been identified in the area.
- There are only a few areas in Southeast Wisconsin that maintain a high degree of native species diversity, free from human alterations and widespread invasive species infestations. The Mukwonago River is one of those areas. Several of the invasive species that are targeted for control are very difficult to eradicate once they are established, so it is important to address this problem as soon as possible.

The Mukwonago River watershed is a high quality natural area. If we do not address invasive species issues as soon as possible, the quality of this important area could ultimately be compromised. I therefore urge you to fund this grant. Further, to underscore the importance of this project to the watershed, our organization will commit to providing financial support if the grant is funded.

Thank you for your consideration. If you have any question please contact me as indicated below.

Sincerely,

Thomas A. Day
Chairperson
Eagle Spring Lake Management District
(262) 594-3231



Wisconsin Dept. of Natural Resources
Aquatic Invasive Species (AIS) Grant Program
141 NW Barstow
Waukesha WI 53188

Jan 20th 2014

Re: The Friends of the Mukwonago River, Aquatic Invasive Species - Education, Prevention & Planning grant application

Mrs. Bunk:

I am writing to express Nature's Classroom Institutes and Montessori School support of The Friends of the Mukwonago River (FoMR), AIS-Education, Prevention & Planning grant that will undertake monitoring for *Corbicula fluminea* throughout the Mukwonago River watershed, provide broad community education on aquatic and terrestrial invasive species and initiate a *Corbicula* removal project.

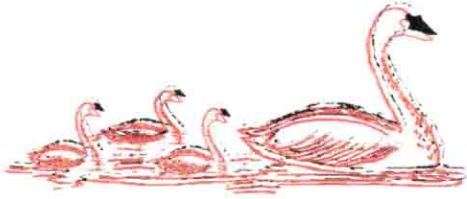
The Mukwonago River Watershed is a uniquely high quality ecosystem in Southern Wisconsin that offers extensive public access to lakes, rivers and woodlands. The Mukwonago River and its associated lakes, wetlands and uplands contain a high number of threatened and endangered species yet the ecosystem as a whole, with its extensive protected areas are able to support the recovery of these species if well managed. Of significant concern are the negative impacts on native species due to the loss and alteration of habitat due to the uncontrolled spread of aggressive invasive species that have been identified in the area, including *Corbicula fluminea*.

At this time *Corbicula* is in a pioneer phase of infestation of the watershed and thus it is especially important that information is collected in order to develop an understanding of where their populations are located and to further the understanding of how these clams are spreading and exactly what their affects are on native species. Looking forward, removal of *Corbicula fluminea* from the watershed in an effort to slow or eliminate their spread holds the potential to be an important step towards restoration of the watershed. Therefore, FoMR is proposing a *Corbicula* removal effort as part of its grant, an action Nature's Classroom Institute and Montessori School fully supports.

Finally, the invasive species education efforts proposed by FoMR offer a wonderful opportunity for the residents of the communities within and around this watershed to learn more about the tremendous natural resource they have literally in their backyards yet all too often overlook. By undertaking a multi-faceted approach to educating residents and users of the watershed, FoMR is providing a service that is valuable and necessary for the long-term protection of the Mukwonago River Watershed.

Sincerely,

Geoffrey E. Bishop
Executive Director
Nature's Classroom Institute and Montessori School



Phantom Lakes Management District
PO Box 391
Mukwonago, WI 53149-0391
January 24, 2014

Wisconsin Dept. of Natural Resources
Aquatic Invasive Species (AIS) Grant Program
141 NW Barstow
Waukesha WI 53188

Re: The Friends of the Mukwonago River, Aquatic Invasive Species - Education, Prevention & Planning grant application

Dear Ms. Heidi Bunk:

I am writing to express the Phantom Lakes Management District's support for The Friends of the Mukwonago River (FoMR), AIS-Education, Prevention & Planning grant that will undertake monitoring for *Corbicula fluminea* throughout the Mukwonago River watershed, provide broad community education on aquatic and terrestrial invasive species and initiate a *Corbicula* removal project.

The Mukwonago River Watershed is a uniquely high quality ecosystem in Southern Wisconsin that offers extensive public access to lakes, rivers and woodlands. The Mukwonago River and its associated lakes, wetlands and uplands contain a high number of threatened and endangered species yet the ecosystem as a whole, with its extensive protected areas, are able to support the recovery of these species if well managed. Of significant concern are the negative impacts on native species due to the loss and alteration of habitat due to the uncontrolled spread of aggressive invasive species that have been identified in the area, including *Corbicula fluminea*.

At this time *Corbicula* is in a pioneer phase of infestation of the watershed and thus it is especially important that information is collected in order to develop an understanding of where their populations are located and to further the understanding of how these clams are spreading and exactly what their effects are on native species. Looking forward, removal of *Corbicula fluminea* from the watershed, in an effort to slow or eliminate their spread, holds the potential to be an important step towards restoration of the watershed. Therefore, FoMR is proposing a *Corbicula* removal effort as part of its grant, an action we fully support.

Finally, the invasive species education efforts proposed by FoMR offer a wonderful opportunity for the residents of the communities within and around this watershed to learn more about the tremendous natural resource they have literally in their backyards yet all too often overlooked. By undertaking a multi-faceted approach to educating residents and users of the watershed, FoMR is providing a service that is valuable and necessary for the long-term protection of the Mukwonago River Watershed.

Sincerely,

A handwritten signature in black ink, appearing to read 'Mark Carlson', written over a horizontal line.

Mark Carlson
Chairman
Phantom Lakes Management District
(262) 565-8000 or crash.carlson@yahoo.com



The Nature Conservancy in Wisconsin
Mukwonago Office
N8957 Pickerel Jay Road
East Troy, WI 53120-1806

tel 262/642-7276
fax 262/642-7287
nature.org/wisconsin

January 22, 2014

Heidi Bunk
Wisconsin Dept. of Natural Resources
Aquatic Invasive Species (AIS) Grant Program
141 NW Barstow
Waukesha WI 53188

Re: The Friends of the Mukwonago River, Aquatic Invasive Species Grant Application -
Education, Prevention & Planning

Dear Ms. Bunk:

I am writing to express The Nature Conservancy's support of The Friends of the Mukwonago River (FoMR), Aquatic Invasive Species grant proposal that will undertake monitoring for the Asian clam, *Corbicula fluminea*, throughout the Mukwonago River Watershed and provide broad community education and outreach about aquatic invasive species. The proposal also includes a *Corbicula* removal feasibility project.

The Mukwonago River Watershed is home to a unique and high quality small river system in Southern Wisconsin and offers extensive public access to lakes, rivers and wetlands. The Mukwonago River and its associated aquatic and terrestrial habitats contain a high number of threatened and endangered species. The watershed as a whole, with its extensive public and private protected areas, is able to support the recovery of these species if well managed. Of significant concern are the negative impacts on native species due to the loss and alteration of habitat due to the uncontrolled spread of aggressive invasive species that have been identified in the Southeast Wisconsin, including *Corbicula fluminea*.

At this time *Corbicula* is in a pioneer phase of infestation in the watershed and thus it is especially important that survey information be compiled now in order to develop an understanding of where populations are located and identify pathways as to how these clams are spreading and what are their potential effects on native mussels. Looking forward, removal of *Corbicula fluminea* from the watershed in an effort to slow or eliminate their spread holds the potential to be an important step towards restoration of the watershed. Therefore, FoMR is proposing a *Corbicula* removal effort as part of its grant, an action we fully support.

Finally, the invasive species education efforts proposed by FoMR offer a wonderful opportunity for the residents of the communities within and around this watershed to learn more about the tremendous natural resources and protected lands they have literally in their backyards yet all too often overlook. By undertaking a multi-faceted approach to educating residents of and visitors to

the watershed, FoMR is providing a service that is valuable and necessary for the long-term appreciation and protection of the Mukwonago River system.

TNC has worked with the FoMR for the past ten years and we are pleased with their growth and recognition in the watershed as a strong and effective conservation partner. This proposal to increase our knowledge and awareness of aquatic invasives in general and *Corbicula* in particular couldn't come at a better time. If awarded the grant the TNC Mukwonago project staff will assist where possible with the implementation of the proposed activities.

Sincerely,



Patricia A. Morton
Mukwonago River Watershed Project Director
pmorton@tnc.org



Town of Mukwonago Waukesha County

W320 S8315 Beulah Road • Mukwonago, WI 53149
Phone: (262) 363-4555 • Fax: (262) 363-8377

To: Wisconsin Dept. of Natural Resources
Aquatic Invasive Species (AIS) Control Grant Program

Re: Friends of the Mukwonago River's Grant Application for Control of AIS in the Mukwonago River

Dear Sir or Madam:

I am writing this letter in support of the Friends of Mukwonago River's above-mentioned grant application. The Town Board discussed this project, and voted to support it at our regular Town Board meeting on January 15, 2014.

The grant application comprehensively addresses this challenging undertaking. Below are a few points which highlight the importance of funding this proposal.

- The Mukwonago River and its associated wetland and upland ecosystems contain numerous threatened and endangered species. These species will likely be negatively impacted by loss of habitat due to the uncontrolled spread of aggressive invasive species that have recently been identified in the area.
- There are only a few areas in Southeast Wisconsin that maintain a high degree of native species diversity, free from human alterations and widespread invasive species infestations. The Mukwonago River is one of those areas. Several of the invasive species that are targeted for control are very difficult to eradicate once they are established, so it is important to address this problem as soon as possible.

The Mukwonago River watershed is a high quality natural area. If we do not address invasive species issues as soon as possible, the quality of this important area could ultimately be compromised. We therefore urge you to fund this grant.

Thank you for your consideration. If you have any question please contact me.

Sincerely,

David Dubey
Town Chairman
Town of Mukwonago
Phone: 262-363-5456



A Campus of the University of Wisconsin Colleges

29 January 2014

To: Eric Howden
Watershed Coordinator
Friends of the Mukwonago River
P.O. Box 21
Eagle, WI 53119

From: Harry Muir, Ph.D.
Dean
UW – Waukesha

Re: Aquatic Invasive Species Grant Partnership

Dear Eric,

We at UW-Waukesha are pleased to accept your offer of a partnership for the 2014 portion of your proposed Aquatic Invasive Species grant activities. Your proposal is well-written, and we certainly hope it is funded!

Michael Pauers, Ph.D., of our Biological Sciences Department, has agreed to be your primary contact at UW-Waukesha, and will assist your field activities if you receive funding. He will help you evaluate *Corbicula* clam removal protocols, perform *in situ* surveys for *Corbicula*, and begin a removal pilot study, as well as oversee the efforts of student Matthew Schneider, who will assist Dr. Pauers with this project.

We wish you the best of luck with your efforts!

Sincerely,

A handwritten signature in black ink, appearing to read 'Harry Muir'.

Harry Muir
Dean UW-Waukesha



Village of Mukwonago

Office of the Village Administrator

P.O. Box 206, 440 River Crest Court, Mukwonago, Wisconsin 53149
(262) 363-6420 Fax: (262)363-6425

www.villageofmukwonago.com

1/3/2014

To: Wisconsin Dept. of Natural Resources Aquatic Invasive Species (AIS) Control Grant Program

Re: Friends of the Mukwonago River's Grant Application for Control of AIS in the Mukwonago River

Dear Sir or Madam:

I am writing this letter to voice the Village's support of the Friends of the Mukwonago River's (herein "Friends") above-mentioned grant application.

While the Friend's grant application addresses the numerous benefits of this challenging undertaking, I would like to touch on a few points which I believe highlight the importance of funding the Friend's proposal.

- The Mukwonago River and its associated wetland and upland ecosystems contain numerous threatened and endangered species. These species will likely be negatively impacted by loss of habitat due to the uncontrolled spread of aggressive invasive species that have recently been identified in the area.
- There are only a few areas in Southeast Wisconsin that maintain a high degree of native species diversity, free from human alterations and widespread invasive species infestations. The Mukwonago River is one of those areas. Several of the invasive species that are targeted for control are very difficult to eradicate once they are established, so it is important to address this problem as soon as possible.

The Mukwonago River watershed is a high-quality natural area. If we do not address invasive species issues as soon as possible, the quality of this important area could ultimately be compromised. I therefore urge you to fund this grant. Further, to underscore the importance of this project to the watershed and the Village's commitment to supporting its regional partners, we will commit to providing financial support if the grant is funded.

Thank you for your consideration. If you have any question please contact me as indicated below.

Warmest Regards, - JSW

John S. Weidl, Village Administrator