AQUATIC INVASIVE SPECIES ESTABLISHED POPULATION CONTROL GRANT

Tichigan Lake & the Fox River Impounded Waterways Integrated AIS Management Control Project

Waterford Waterway Management District

February 1, 2014

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K Established Infestation Control

Form 8700-307 (12/11)

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

Section I: Application Typ	
Check one:	9

Education, Prevention & Planning

Early Detection & Response

L enislative	District Numbers			То	determine your legisl	ative district	to
Senate	Assemb	lv.		10	http://165.189.139		
21	83	iy		Type in con	nplete address, next	screen shows in	nformation.
Section II: Applicant Infor							
Applicant	mation		Type	of Eligible Appli	cants		
Waterford Waterway Mana	gement District		Ë.			er Gov't Unit	Federal
Waterbody Name				. 8		-	1
Waterford Impoundment					. =	nprofit Org.	_ State
Project County/Township/Section	n/Range		l⊟ '	/illage 📉 🛛		lege,	Other
Racine			П	Town	Assoc.		
Authorized Representative Name	ed by Resolution			Project Contac	ct Name		
Stephanie Waghorn				Waterford W	Waterway Manageme	ent District	
Authorized Representative Title				Project Contac	ct Title		
Committee Member							
Address				Address			
5514 W Peninsula Rd				PO Box 146	5		
City	State	ZIP Code		City		State	ZIP Code
Waterford	WI	53185	5	Waterford		WI	53185
Daytime Phone (area code)	Evening Phone (area code)		Daytime Phon	e (area code)	Evening Phone ((area code)
(630) 306-9620							
E-mail Address				E-Mail Addres			
stephanie2003@ameritech.r	let			stephanie20	03@ameritech.net		
Mail Check to: (if different fro	m applicant)						
Name and Title				Address			
Organization				City		State	ZIP Code
		For	DNR	Use Only			•
Application Type	Date Received				AIS/Lake /River Coordi	nator Approval /Da	ite
Waterbody ID#	Adequate Public A	Access No	Envi	ronmental Gran	nts Specialist Approval /	Date	
Eligible Project	Eligible Applicant		Proje	ect Priority Ran	k R	esearch / Demo P	Project
Yes No	Yes	No				Yes	No
Prior Grant Award(s)	Fiscal Year(s)		Amo \$	ount Received T	o Date P	roject Awarded	ю

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

Page 2 of 3

Section III: Project Information							
Project Title					Proposed	Ending D	ate
Other Management Units	Letter of Support		Other Managen	nent Units			Letter o Suppo
1. Town of Waterford Police Department	\times	4.					
2. Docs on the Fox	\mathbf{X}	5.					
3. Town & Country RC & D	\mathbf{X}	6.					
Section IV: Public Access							
Number of Public Vehicle Trailer Parking Spaces Avail	able at Publi	c Access Site	es: 24				
Number of Public Access Sites Including Boat Launche	es and Walk-	ins:	2				
Section V: Cost Estimate and Grant Request						_	
Section V must be completed or application		irned.	Column 1	Project Colu			
Details in support of Section V are welcome.			Cash Costs	Donate		DNR U	se On
1. Salaries, wages and employee benefits				11,5	92.00		
2. Consulting services			110,833.00				
3. Purchased servicesprinting 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)			110,833.00		92.00		
13. Total Project Cost Estimate (sum of column 1 p	lus sum of c	olumn 2)		122,42	25_		
14. State Share Requested (up to 75% of total cost	s may be re	quested)		1,212	.50	- 50	2%
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:

Se	tion VI: Attachments (check all that are included)	
Α.	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 t	ne guidelines)
	$\sqrt{5}$. Itemized breakdown of expenses	
	6. For projects that entail sending samples to the State Laboratory of Hygiene (SLOH) only: a completed SLOH Pr	ojected Cost
	Form √ 7. Project scope/description:	-
	 ✓ A. Description of project area 	
	\checkmark 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	
В.	For applicants that are Lake Management Organizations (LMOs), River Management Organizations (RMOs) or Non-profit Organizations:	[.] Qualified
	1. For first time applicant LMOs/RMOs only: A completed Form 8700-226 (Lake Association Organizational App 8700-287 (River Management Organization Application)	lication) or
	2. For first time applicant Qualified Nonprofit Organizations only: Copy of IRS 501(c)(3) determination letter and Articles of Incorporation and Bylaws	copies of your
	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	
Se	tion Vit- Certification	
	rtify that information in this application and all its attachments are true and correct and in conformity with applicable W	is. Statutes.

Print/Type Name of Authorized Representative	Title of Authorized Representative
Stephanie Waghorn	Committee Member
Signature of Authorized Representative	Date Signed

7:03 PM 10/02/13 Accrual Basis

Waterford Waterway Management District **Balance Sheet**

As of September 30, 2013

	Sep 30, 13
ASSETS Current Assets Checking/Savings	
Equitable Bank - Checking Equitable Bank - MM	4,695.09 231,081.27
Total Checking/Savings	235,776.36
Total Current Assets	235,776.36
TOTAL ASSETS	235,776.36
LIABILITIES & EQUITY Equity	
Beginning Balance 01/01/2004	3,477.82
Unrestrict (retained earnings)	186,424.13
Net Income	45,874.41
Total Equity	235,776.36
TOTAL LIABILITIES & EQUITY	235,776.36

WWMD Board of Comissioners

		Residence		Contact	
Name	Title	Municipality	County	Phone	E-mail
Donald Baron	Racine County Board Appointed	Town of Waterford	Racine	(262) 662-2463	dbaron@agencypromogroup.com
Gary Bluemel		Town of Waterford	Racine	(262) 825-7601	gary.bluemel@outlook.com
Barbara Baron	Chairman	Town of Waterford	Racine	(262) 662-2463	bbaron@agencypromogroup.com
Andres Peekna		Town of Waterford	Racine	(262) 895-4790	<u>innmech@wi.rr.com</u>
Mike Waghorn	Vice-chairman	Town of Waterford	Racine	(312) 952-1959	mikewaghorn@yahoo.com
Ted Derse	Treasurer - Town of Waterford Appointed	Town of Waterford	Racine	(262) 514-2567	tderse@wi.rr.com
Paul Kling	Secretary	Town of Waterford	Racine	(414) 232-0963	pkling@wi.rr.com

State of Wisconsin Department of Natural Resources Water Permit Central Intake - WT/3 PO Box 7185, Madison, WI 53707-7185 dnr.wi.gov

Chemical Aquatic Plant Control Application and Permit Wisconsin Pollutant Discharge Elimination System (WPDES) Pesticide Pollutant Permit Application Form 3200-004 (R 11/11) Page 1 of 4

				F0IIII 3200-004	•	,			DMD			ge i ui 4
s. 2 ap	otice: Use of this form is required 281.17(2), Wis. Stats., and Chapt oplication is required to request co ersonally identifiable information o	ters NR 107, overage for po	200 and 2 ollutant dis	205, Wis. Adm. C scharge into wate	Code. 1 ers of 1	This permit the state.		ID Number Waterbody			ly hit Expirat	ion Date
rec	quired by Wisconsin's Open Reco	rds Law [ss.	19.31-19.	39, Wis. Stats.].		uno onte		Waterboar	*	1.00	Necenie	
Se	ection I – Applicant Informa	ation – Nar cor	me of Per nmunitie	mit Applicant. A s or town sanita	Also in ary dis		mes and a nsoring tr	addresses o reatment. A	of all individu ttach additioi	ials, ass nal shee	ociations ts if nece	, ssary.
ŝ	Name		8		۵	Name				25		
Ires	Waterford Waterway Manag Street Address	ement Dist	rict		isi	Waterfo Street Ac		way Mana	gement Dist	rict		
Home Address	415 N Milwaukee Street				Lake Add		dress Ailwauke	e Street				
Hor	City		State	ZIP Code	La	City				State	ZIP Cod	e
_	Waterford		WI	53185		Waterfo				WI	53	3185
Ph	hone Number (include area code)					Er	mail Addre	SS				
The second state	rimary: (312) 952-1959		ondary:		_	m	ikewagho	orn@yahoo	o.com			
	ection II – Aquatic Plant Co aterbody to be Treated (waterbody			a le located)	1	ake Surfac	o Area		Estimated Su	urface Ar	a that is	10 East of
		ly where use	aument si s	a is locatedy	1				Less in Dept			
	ichigan Lake	Section	Township	Range	N		32 plicator or	acres			900	acres
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Chemical Aquatic Plant Control Application and Permit

l l l l l l l l l l l l l l l l l l l	WPDES Pesticide Pollutant Pern	hit Application
	Form 3200-004 (R 11/11)	Page 2 of 4
Section III – Fees		
1. s. NR 107.11(1), Wis. Adm. Code, lists the conditions une	der which the permit fee is limited to the \$20 n	ninimum charge.
2. s. NR 107.11(4), Wis. Adm. Code, lists the uses that are	exempt from permit requirements.	
3. s. NR 107.04(2), Wis. Adm. Code, provides for a refund of	of acreage fees if the permit is denied or if no '	treatment occurs.
4. Fee calculations: Basic Permit Fee (non-refundable)	\$ 20.00	
If proposed treatment is over 0.25 a		
(round up to nearest whole acre, to	maximum of 50 acres.)	
50 acres X \$25 per acre	= \$ 1250	
If proposed treatment is ≤ 0.25 acre		
Enter Acreage Fee (from above)		
Total Fee Enclosed	\$ <u>1270</u>	
Site Map: Attach a sketch or a printed map of lake indic desired and flow of surface water outside treatment are treatment area. Attach a separate list of owners and co	a. Also show location of property owners ripar	rian to and adjacent to the
Section IV – Reasons for Aquatic Plant Control		
Is this permit being requested in accordance with	Treatment Type:	
an approved Aquatic Plant Management Plan? X Yes	No X Lake Pond V	Vetland 🗌 Marina 🗌 Other
Goal of Aquatic Plant Control:	Nuisance Caused By:	
Reduce nuisance algae accumulation		
X Maintain navigational channel for common use	Emergent water plants (majority of l	eaves and stems arowing
Maintain private access for boating	above water surface, e.g. cattails, b	ulrushes)
Maintain private access for fishing	Floating water plants (majority of lea	aves floating on water surface
	e.g., waterlilies, duckweed)	web housing on water bunabe,
Improve swimming	Submerged water plants (leaves and	d stems below water surface.
Control of purple loosestrife	flowering parts may be exposed, e.g	J., milfoil, coontail)
Control of invasive exotics		
Other:	_ Other:	
List Torget Plante		
List Target Plants	Note: Different plants require different o treatment. Do not purchase chem	

Eurasian water-milfoil, curly-leaf pondweed, and coontail, elodea, and water lilies for navigational access

Section V – Chemical Control			
Alternatives to Chemical Control:	Feasi	ble?	If No, Why Not?
1. Mechanical harvesting	Yes	X No	Spreads plant debris, too shallow
2. Hand pulling	Yes	X No	Too large of an area
3. Hand raking	Yes 🗌	X No	Too large of an area
4. Hand cutting	🗌 Yes	X No	Too large of an area
5. Sediment screens/covers	Yes	X No	Other potential ecological system damage
6. Dredging	Yes	X No	Too costly
7. Lake drawdown	Yes	X No	Not a control option wanted by the District or lake users
8. Nutrient controls in watershed	Yes	X No	Not a control option for immediate concerns
9. Other:	Yes	No No	

Note: If proposed treatment involves multiple properties, consider feasibility of EACH alternative for EACH property owner.

If you checked yes to any of the alternatives listed above, please explain your decision to use chemical controls:

Chemical Aquatic Plant Control Application and Permit

			Form 3200-004 (R 11/11)			Page 3 of 4
Tr E' C' Sı Sı Fl	ection V – Chemical Contro rade Name of Proposed Chem WM: DMA-4 (liquid 2,4-d) (LP: Aquathol K (liquid endot ubmergent Navigational: Mix ubmergent Navigational: Mix loating-leaf Navigational: Hal pre-treatment survey will take	ical(s)) 8.5 gal/acre hall) @ 3.75 gal/acre of Tribune/Reward/Re of Clipper @ 2.1 lbs/a pitat+surfactant @ 3pts	cre & Tribune 1 gal. and Caj /acre (~5 acres)	ptain 1 gal.	per/acre (as aj	pproved)
M	ethod of Application: Stantec	's liquid sub-surface lie	quid injection & surface spra	y for water	lilies	
W	/ill surface water outflow and/o	r overflow be controlled	to prevent chemical loss?	Yes	X No	
Ha	ave the proposed chemicals b	een permitted in a prior	year on the proposed site?		X Some	None
A	that were the results of the treat Il have been used in the past su avigational control verses mult	accessfully on Tichiga		per slurry n	nix was very s	uccessful in season long
N	OTE: This permit is for grant	purposes only. A form	al permit will be applied for	at a later da	te in Spring, 2	2014
	nto: Chamical fact chaote fo	r aquatia posticidas u	sod in Wisconsin are avail	able from t	bo Doportmo	nt of Natural
Se	ote: Chemical fact sheets fo Resources upon reques ection VI – Applicant Respo The applicant has prepared a	t. nsibilities and Certifi	cation			
Se 1.	Resources upon reques ection VI – Applicant Respo The applicant has prepared a rooted vegetation and the su	nsibilities and Certifi detailed map which sh face area in acres or s	cation nows the length, width and av quare feet for each proposed	verage depti I algae treat	h of each area ment.	a proposed for the control of
Se 1.	Resources upon reques ection VI – Applicant Respo The applicant has prepared a	t. nsibilities and Certifi detailed map which sh face area in acres or s at the Department of N . NR 107.07, Wis. Adm uipment before, during cipated treatment with	cation nows the length, width and av quare feet for each proposed latural Resources may requir n. Code, supervision may incl or after treatment. The appl the date, time, location and s	verage depti l algae treat re supervisio lude inspect icant is requ size of treatr	h of each area ment. on of any aqua ion of the prop lired to notify f nent unless th	a proposed for the control of atic plant management project posed treatment area, the regional office 4 working
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All portions of this permit, map and accompanying cover letter must be in possession of the chemical applicator at time of treatment. During treatment all provisions of Chapter NR 107, specifically ss. NR 107.07 and NR 107.08, Wis. Adm. Code, must be complied with, as well as the specific conditions contained in the permit cover letter.

Chemical Aquatic Plant Control Application and Permit WPDES Pesticide Pollutant Permit Application

Form 3200-004 (R 11/11) Page 4 of 4 Section VII – WPDES Permit Request Is WPDES coverage being requested? Refer to http://dnr.wi.gov/org/water/wm/ww/aquaticpesticides.htm for more information. If no, you do not need to complete this section. X No | Yes Select which permit you are requesting: WI-0064556-1 Aquatic Plants, Algae & Bacteria WI-0064564-1 Aquatic Animals WI-0064581-1 Mosquitoes & other Flying Insects Indicate WPDES permitee responsible for the pollutant discharge: X Applicator Sponsor Do you expect the pest control activity will result in a detectable pollutant discharge to waters of the state beyond □ No Yes the treatment area boundary or a pollutant residual in waters of the state after the treatment project is completed? If yes, identify the pollutant(s): Are you planning to incorporate integrated pest management principles, as specified in the WPDES permit, into your pest control activity to minimize any pollutant residual or pollutant discharge beyond the treatment area? Yes No Type of WPDES coverage being requested: One Treatment Site Statewide Coverage For informational purposes, select areas of WI for most of your aquatic treatments: **NW** NE NE □ sw □ SE Is WPDES coverage being requested for more than 1 year? X No If yes, the permittee will remain in "active" WPDES status until a Notice of Termination is submitted. Yes I hereby certify that I am the authorized representative (as specified in Ch. NR 205.07(1)(g), Wis. Adm. Code) of the pest treatment activity which is the subject of this permit application. I certify that the information contained in this form and attachments is, to the best of my knowledge, true, accurate and complete. Printed Name Date Signed Signature of Authorized Representative Section VIII -- Permit to Carry Out Chemical Treatment (Leave Blank -- DNR Use Only) The foregoing application is approved. Permission is hereby granted to the applicant to chemically treat the waters described in the application during the season of 20_ Application fee received? State of Wisconsin Department of Natural Resources Yes No For the Secretary By Advance notification of treatment required? Regional Director or Designee No Yes Date Mailed Date Signed Please Note: If you believe that you have a right to challenge this decision, you should know that Wisconsin statutes and administrative rules establish time periods within which requests to review Department decisions must be filed. For judicial review of a decision pursuant to ss. 227.52 and 227.53, Wis. Stats., you have 30 days after the decision is mailed or otherwise served by the Department, to file your petition with the appropriate circuit court and serve the petition on the Department. Such a petition for judicial review shall name the Department of Natural Resources as the respondent. This notice is provided pursuant to s. 227.48(2), Wis. Stats. To request a contested case hearing pursuant to s. 227.42, Wis. Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to serve a petition for hearing on the Secretary of the Department of Natural Resources. The filing of a request for a contested case hearing is not a prerequisite for judicial review and does not extend the 30-day period for filing a petition for judicial review.

Aquatic Invasive Species Control Grants Project Ranking for Subchapter IV – Established Population Control Projects 2013

A) The degree to which the project includes a prevention and control strategy. (6 points possible)

- The water being controlled has, or the project includes, a Clean Boats, Clean Waters watercraft inspection program per the requirements of s. NR 198.22 (1)(d) or an approved Alternative Equivalent (see guidance). 2 points (2 points)
 Page 7 & 11: The District has partnered with the Town and Country Resource Conservation and Development in the 2013and beyond boating seasons to complete 200 hours of CBCW at both landings
- 2) The project will conduct other complimentary source containment activities that go above and beyond minimum level of boat landing inspection e.g. boat washing or cleaning stations, augmented enforcement. 2 points (2 points) Page 7 & 11: WWMD has installed additional signage at each landing indicating locations of the nearest vehicle & trailer accessible car-washes & proper cleaning procedures & a cleaning brush/broom will be provided at the landings to aid in cleaning activities. All will be relocated with larger signage to be more visible to all boaters leaving the water. Trash receptacles to place removed plants/AIS from trailers and boats have been in place for 10 years and are emptied on a regular basis.
- 3) The water being controlled has, or the project will train, volunteers to identify AIS and conduct water body surveillance monitoring for early detection using accepted WDNR or citizen-based monitoring (CLMN/Project RED, etc) protocols where data is being entered into SWIMS. **2 points** (*2 points*)

Pages 8-11: Karen Stoll (WDNR) educated WWMD members on AIS identification in Oct. 2012 & all data collected during CB/CW monitoring was and will continue to be entered into SWIMS. A CLMN workshop/training is scheduled for March 22, 2014 for WWMD volunteers. Data will be collected and entered into SWIMS following CLMN protocol from 2014-2016

B) The degree to which the project will prevent the spread of aquatic invasive species. (7 points possible)

1a) The control activity will take place on a Statewide AIS Source Water listed on the following table.

5 points

or

1b) The control activity will take place on a major AIS source water with high public use (lakes greater than 500 acres and all boat-able rivers that meet or exceed the minimum boating access criteria in NR 1.91(4) or wetlands greater than 500 acres in public ownership) or the project includes a Statewide AIS Source Water where less than 50% of the activities are directed. 4 points (4 points)

Page 1 & attachment, Public Paved Boat Ramp/Landings with parking for up to 30 vehicle and trailers, numerous platted ROW access points, a public park, Tichigan Wildlife Area

1c) The control activity takes place on a significant AIS source water with high public use (lakes between 500 and 100 acres and all rivers that meet or exceed the minimum boating access criteria in NR 1.91(4); wade-able streams with public access or wetlands between 500 and 100 acres in public ownership. **3 points**

or

1d) The control activity takes place on an a minor AIS source water (lakes less than 100 acres that meet or exceed the minimum boating access criteria in NR 1.91(4); any river or stream with public access or wetlands less than 100 acres in public ownership).

2 points

And

2) The project will control a NR40 prohibited species; e.g Hydrilla, yellow floating heart, spiny water flea, red swamp crayfish, etc.

2 points

Statewide AIS Source Water Lakes List	07/01/2011	
LAKE	REG	COUNTY
Beaver Dam	SC	Dodge
Castle Rock	WC	Adams
Chippewa		
Flowage	NOR	Sawyer
Eagle Chain	NOR	Vilas
Geneva	SE	Walworth
Green	NE	Green Lake
Koshgonong	SCR	Rock
Madison		
Chain	SCR	Dane
Mendota	SC	Dane
Michigan	NE, SE	All counties
Minocqua		
Chain	NOR	Vilas
Onalaska	WC	La Crosse
Petenwell		
Lake	WC	Adams
Puckaway	NER	Marquette
Shawano		
Lake	NE	Shawano
Superior	NO	All counties
Winnebago &		
up river pools	NE	Calumet
Wisconsin	SC	Columbia
Wissota	WC	Chippewa

RIVERS St. Croix, Mississippi, Menominee WCR,SCR,NOR

Statewide AIS Source Water Criteria

- Great Lakes or Mississippi River tributaries up to first dam
- Great Lakes landings/shorelines, including Green Bay
- VHS waters (Lower Fox River, Lake Winnebago, upper pool lakes and rivers up to first dam)
- Waters involving "prohibited" species (as per NR40) that are established or at risk of becoming established (e.g Hydrilla pond, yellow floating heart, spiny water flea lakes, etc)
- Lakes or impoundments that meet <u>all</u> of the following criteria:*
 - o Greater than 5000 acres
 - Multiple boat landings (5 or more)
 - Contain two or more of the following species (EWM, CLP, zebra mussels)

*Regions may recommend other lakes for inclusion that meet the criteria, but do not show up on the list due to incomplete or new information.

C) The degree to which the project protects or improves the aquatic ecosystem's diversity, ecological stability or recreational uses.

(3 points possible)

- Project plan implementation includes stocking or planting to reintroduce native community species or implements other actions or changes in management strategies that will provide <u>added</u> protection to native species beyond herbicide treatments alone. 2 points 2 points *Pages 5 & 9: Duck nesting boxes will be constructed & placed along wooded portions of the shoreline within the waterway. Annual maintenance, including cleaning and any repairs, will be conducted in conjunction with local youth groups, of which the District has conducted lake fairs with in the past.*
- 2) Project area has a high degree of native biodiversity or is critical habitat, as expressed by:
 - an above eco-region average aquatic or wetland plant FQI
 - the presence of a listed aquatic species (NHI endangered, threatened or watch) (page 5)
 - is an ERW or ORW water
 - has a Sensitive Area or Critical Habitat designation
 - is within or adjacent to a State Natural Area, State Park, other publicly owned unique natural area or such an area owned/managed by a nonprofit conservation organization (e.g., Nature Conservancy). (*page 1*)

1 point (1 point)

Page 1 & 4: 2 *NHI endangered species present & adjacent to state natural area (Tichigan Wildlife Area)*

D) The stage of the infestation in the water body. (4 points possible)

- Project addresses a pioneer population (as defined by s.198.12 (8)), or was a past early response project.
 2 point
- 2) The target species is low in density and still at a controllable level as determined by being found in 25%, or less, of the <u>colonizable</u> area of the project water body (e.g. only the littoral zone of a lake can be colonized by EWM).

1 point (1 point)

Pages 2, 5 & 7: 184 acres of AIS infestation within 900 acres of littoral zone (20.43%)

3) It is well documented (P/I surveys or GIS mapping, verified) that the target species is a rapidly expanding population (doubling annual increase in areal coverage or FOO). Population is still under 25% threshold above.

1 point (1 point) Page 2: 300% increase from 2012 to 2013

- E) The degree to which the project will be likely to result in successful long-term control. (4 points possible)
 - As also included in the approved management plan, the project employs multiple strategies (for the same species) to achieve and maintain control objectives. [e.g. hand pulling in combination with chemical treatment and biocontrol, draw downs, etc.] 2 points (2 points)
 Pages 1 & 4: the project would utilize multiple approaches as outlined in the approved APM plan, large scale, targeted EWM & CLP herbicide application as well as mechanical harvesting of AIS in near-shore riparian areas. Hand harvesting will be completed in 2014-2016 by WWMD with partnership by Venture Crew (pages 1 & 9-11)
 - The sponsor has had a pre-application grant scoping consultation with the Department and the application is consistent with the results of those discussions. 1 point (1 point)
 Page 2, February 1, July 5 & November 29, 2013 with Heidi Bunk
 - There is a low risk of reestablishment and spread after control activity occurs. All of the following apply: the project site is not impounded; is not tributary to or connected to any other AIS populated water and; the entire AIS population is being targeted for control.
 1 point

F) The availability of public access to, and public use of, the water body.

- Any lake of 100 surface acres or greater and any boat-able river that has more than the minimum public boating access as defined in s. NR 1.91(4) or any wetland greater than 50 acres in public ownership. 1 point (1 point)
- 2) The water provides significant alternative public access and use opportunities that include two of the following at separate locations: public swimming beach; park or other public land with accessible frontage; public fishing pier or wildlife observation area; platted access sites and road rights-of-way reaching the water's edge; two or more private resorts, youth camps or sportsmen clubs; or where more than 50% of the lake or river shore in the project area is in public ownership as documented on the map provided with application. 1 point (1 point) Page 1 & 4 and attachment: Waterford Impoundment has two public improved boat landings that exceed NR1.91 requirements for vehicle/trailer parking the minimum requirements under Administrative Code would require parking for 29 units as well as other unimproved public ROW accesses, a public park and picnic/recreation located on its shores in the Village of Waterford, a private boat launch available for public use, private fishing pier for public use, two boat or canoe rental businesses, and access and recreation available within Tichigan Wildlife Area a designated State Wildlife Area.
- G) The degree to which the proposed project includes or is complemented by other management efforts including watershed pollution prevention and control, native

vegetation protection and restoration and other actions that help control aquatic invasive species or resist future colonization. (2 points possible)

- Applicant demonstrates that they have implemented, or been a significant participant in a shoreland restoration, habitat protection, sediment and nutrient control, water level management or other substantial lake stewardship activity (not including education or planning) that protects the lake ecosystem. (Score 1 point per action, provide documentation). 2 points (2 points)
 Pages 3, 11 & Attachment A, the District has been involved in numerous shoreland restoration projects, with the County, citizen lake monitoring, and soft sediment analysis and mapping activities.
- 2) The sponsor is a Green Tier Community Charter member. (City of Middleton, Bayfield,
- H) Community support and commitment, including past efforts to control aquatic invasive species. (2 points possible)

Fitchburg, Appleton, Weston, Monona, Eau Claire, La Crosse & the Village of Bayside)

1) This is demonstrated by requesting less than the maximum state share cost rate (cash costs) for the total project costs. No more than 25% of the project match can be in-kind or donated labor. The sponsor is requesting:

65% State share **1 point** OR 50% State share **2 points** (**2 points**) pages 1, 11, & 15- total cost breakdown

In order to get points for reducing state funds, any match over and above the standard 25% of total project cost, must be cash. Donated and volunteer labor is limited to 25% of the total project costs.

Project cash cost (75%)	\$33,000
Donated match (25%)	\$11,000
<u>Total project cost (100%)</u>	<u>\$44,000 (for ranking criteria evaluation)</u>
State share requested (50%)	\$22,000
Match	\$22,000
cash match (50%) donated match (50%)	\$11,000 <u>\$11,000</u> \$22,000

(The donated amount is 50% of the match but it is only 25% of the total project cost.)

2) The project has financial support from additional management units, interest groups or organizations committing > 10% of the hard cash local match.

1 point

3) The sponsor conducted AIS control, consistent with their Department-approved plan, in the previous season without financial assistance from the State. They may have begun implementation without a grant or received grants in past but did not receive a grant in the past season. 1 point (1 point)

Page 2: The District has solely funded, AIS herbicide treatments as well as all aquatic plant surveys since 2004

- **I**) Whether the sponsor has previously received a grant for a similar project for the same water **body.** (2 points)
 - There has not been an AIS Established Population Control grant for the same species in the same waterbody in the last five years. 2 point (2 points)
 Page 2, the District has not been awarded a grant for a similar project in the last 5 years
- J) The degree to which the project will advance the knowledge and understanding of the prevention and control of aquatic invasive species. (1 point possible)
 - 1) Project has an evaluation component that will be conducted by an objective outside entity to assess project outcomes or is a participant in a Department-sponsored research and demonstration project on the AIS research priority list. (The list projects is available from your AIS coordinator)

1 point

LAKE CHARACTERISTICS

Tichigan Lake*

County:RacineLake Type:FlowageSurface Area:1,132 acresMaximum Depth:63 feetMean Depth6.27 feetPublic Facilities:Two public, paved boat ramp/landings: one operated by the Village of
Waterford with parking for up to 10 vehicle and trailers and the other
operated by the Vinger (B1b).

* - For grant purposes, Tichigan Lake includes the impounded waterway from the Waterford dam upstream to North Bridge Road.

BACKGROUND INFORMATION

Tichigan Lake was created by damming up the Fox River in the City of Waterford. The lake is 1132 acres in size and is located in Racine County in T04N, R19E, S23. Tichigan Lake has two public improved boat landings that exceed NR1.91 requirements for vehicle/trailer parking (29 units (F1)) as well 3 other private accesses, a public swimming beach, two businesses providing boat and canoe rentals, privately operated fishing pier open to public use, and picnic/recreation located on its shores in Huening Park in the City of Waterford (B1b). Additionally, the Tichigan Wildlife Area is a State-owned 1500 acre natural area abutting the flowage on its north shore and provides exceptional recreational activities and access (C2 & F2). Being part of the Fox River watershed, the lake has a large agriculture watershed that contributes heavy loads of sediment and nutrients. This loading has created a eutrophic lake with excessive nutrient levels and overabundance of aquatic plants. The more troublesome plants are the aquatic invasive species (AIS) Eurasian water-milfoil (EWM) and, to a lesser degree, curly-leaf pondweed (CLP).

Excessive aquatic plant growth, primarily Eurasian water-milfoil (EWM) and to a lesser degree curly-leaf pondweed (CLP), have been a problem for Tichigan Lake for many years. The Waterford Waterway Management District (WWMD) formed in 2003 to protect and enhance the quality of the lake. An aquatic plant survey conducted in 2003 indicated the large portions of the waterway, especially shallow, soft bottom bays supported vegetation and EWM was listed as one of the most common species. In 2004, a lake management plan was initiated and completed in 2007 with help from the Southeastern Regional Planning Commission (SEWRPC) to lay the groundwork for future lake management; this plan was subsequently updated in 2013. Mechanical harvesting and selective aquatic herbicide control all funded solely by the District have been used in combination with very good success. Early season mechanical harvesting will again be used in 2014 and is scheduled to happen before June 15 to affect impact areas of CLP growth prior to turion production as recommended by the Wisconsin Department of Natural Resources (WDNR) as an alternative management strategy (E1).

Beginning in 2014, WWMD will partner with Venture Crew, a diving group, to begin selectively hand puling AIS in shallow areas. Volunteers from WWMD will be trained by Venture Crew and will snorkel and harvest areas of AIS growth with care to follow the disposal techniques outlined in the WDNR's EWM Manual Removal Brochure. Based on depth and access considerations hand pulling efforts will begin in

Island View Bay for 2014 with additional locations to be re-evaluated thereafter to be concentrated in areas that will receive greatest benefit (E1).

WWMD proposed to continue managing EWM using precise herbicide treatments tailored to each individual area's size and volume, which has proven to be successful on this lake. Control of the AIS primarily EWM is necessary to allow recreational use on the lake, improve fish and wildlife habitat, allow reestablishment of native vegetation and decrease the risk of spread of EWM to local lakes. The WWMD is seeking matching funds (**50% State and 50% District shares**) (H1) from the Wisconsin Department of Natural Resources (WDNR) Aquatic Invasive Species (AIS) Control Grant Program to continue to implement their APM Plan and manage EWM and CLP through selective herbicide treatment (H1). A pre-application telephone conference was held on February 1, 2013 with WWMD board members, Heidi Bunk (WDNR), Craig Helker (WDNR), and Jeffery Thornton (SEWRPC). Another meeting was conducted on July 5, 2013 between WWMD members & Heidi Bunk for an additional review of the grant with an on-the water meeting on September 20, 2013 to go over issues and conditions first hand. A final pre-application telephone conference was again held on November 29, 2013 with WWMD board members, Heidi Bunk (WDNR), and Stantec, Inc. (E2).

PROJECT SCOPE / DESCRIPTION

PREVIOUS GRANTS RECEIVED AND PROJECTS COMPLETED

The WWMD has received three previous grants as follows:

- Two large scale lake planning grants in 2003 for the Lake Management Plan for Waterford Impoundment
 - LPL-889-03 Phase 1
 - LPL-882-03 Phase 2
- AIS Education Grant for Exotic Species Information Distribution (ALPL-012-04) -2004

WWMD has not received a grant for a similar type AIS control project proposed within in the last 5 years. (I1) WWMD has completed a number of studies and projects funded through grants as well as funded by the District. The integrated approach to controlling aquatic vegetation including harvesting, chemical treatment, and new treatment strategy techniques has been solely funded by WWMD since 2004. Last season (2012) harvesting of vegetation, including EWM and CLP, was conducted on the lake in conjunction with current management practices within Starks Bay and Buena Lake. These areas will again be selectively harvested again starting in 2014 through 2016. Large scale selective AIS herbicide treatments were completed in 2010-2013 in varying locations throughout the impoundment as follows. All treatments were solely funded by the WWMD, endothall was used for CLP control and liquid 2,4-D was used for the EWM control. (H3)

Year	EWM Treated (ac)	CLP Treated (ac)
2010	48	11
2011	37.18	15.67
2012	34.36	11.06
2013	153.4	31.09

In an effort to more fully assess the status of AIS within the impoundment and to more comprehensively manage invasive plants in 2013, WWMD requested an expanded pre and post-treatment survey based off the full point-intercept survey completed in 2012. All littoral zone locations from the 2012 PI were included in the pre-treatment survey on April 30, 2013. This more intensive survey increased littoral zone points to be sampled by 81% from 288 points to 521 and focused on the entire waterway, allowing for a comprehensive plant community assessment during each forthcoming survey (D3).

However, with the more complete assessment, additional acreages of AIS were located and mapped for management in 2013, including 153.4 acres of EWM and 31.09 acres of CLP overall a 300% increase over 2012 AIS numbers. But, given the large littoral area on the impoundment (approximately 900 acres), it is still under 25% of the littoral area. (D2) These areas were managed on May 8 and 9, 2013 (respectively) to reduce the presence of AIS within the entire system to promote regrowth and increase of abundance of the native plant community. These additional acreages and intensive surveys have also been funded solely by WWMD. A 2013 post-treatment survey has been completed that repeated all pre-treatment point-intercept survey locations (D3).

An update to the 2007 lake management plan has been recently completed and approved by the Department in 2013. WWMD again partnered with the SEWRPC to complete this study to determine changes to the waterbody from historical data and management recommendations for the future. This project is very important to the health of the lake since it lays the ground rules water quality and lake improvement. The District is in the process of evaluating and implementing the recommendations within the report (G1).

In addition to aquatic plant management activities, the WWMD has played an active leadership role in lake issues and AIS education and water quality improvement through numerous projects. Last held in 2011, WWMD has sponsored a lake fair and completed an on the water class for local schools to teach the importance of lake stewardship and its role in maintain and improving the health of the lake and surrounding watershed. This program was again held in 2013 for waterway education (G1) and targeted local businesses and local and State politicians to show the importance of AIS control and management.

The District partnered with Town and Country RC&D to provide support for boat landing monitoring under the Clean Boats / Clean Waters campaign at all both public landings on the Waterway. A total of 265.5 hours of boat landing monitoring were completed in total by both groups as part of this joint effort for the summer, 2013 boating season. (A1)

A Citizen Lake Monitoring Network (CLMN) training workshop is scheduled for March 22, 2014 to have WDNR staff train a team of WWMD volunteers on AIS monitoring and surveillance. Trained volunteers will then follow CLMN throughout the year to survey AIS areas and identify new areas of growth with all data entered into SWIMS database (A3). Additionally, Karen Stoll (WDNR) attended the District's October, 2012 meeting to educate WWMD members on proper AIS identification and sampling with further education efforts from Christine Wolbers (WDNR) in April, 2013.

Recently, WWMD hosted a WDNR led training session and educational workshop on AIS and their impact on the waterway. The workshop was a catalyst in promoting the District's goal of AIS reduction and native plant restoration to the local community through a news story in the local paper, announcements to many active and local environmental and educational organizations (Waterford High School, Chamber of Commerce, CAUSE, local businesses, and more), and social media postings and interactions.

WWMD continues to protect the integrity of the waterway through storm water management and erosion control since its formation. Current and already completed projects by the group for lake and water quality improvement by erosion and/or storm water control into the impoundment include the following:

- 2007: Installation of rain gardens on properties up gradient of Tichigan Lake in the Town of Waterford to minimize runoff (G1)
- 2007: Redesign and implantation to slow the flow of water and minimize erosion potential within drainage ways of STH 164 (G1)
- 2007: Improvement of Island View Bay drainage through installation of rain-gardens, shoreline filtration plantings, multiple ditch checks, and extensive raving riprapping to reduce erosion.
- 2010: Repair of erosion control rip-rap to slow and reduce run off velocity and erosion into the Fox River along Grand Drive and Peninsula Road (G1)

- 2012: WWMD initiated a project to measure the depth of soft sediment in multiple bays along the Fox River to monitor increased sedimentation and initiate a potential dredging project in these areas (G1)
- ONGOING: WWMD continues to work in concert with Racine County Land Conservation Department to address current run off issues identified in their plan (G1)
- ONGOING: WWMD issues annual, out-of-pocket grants to riparian landowners to help with installation of rain-gardens and shoreline buffers. As of 2013, there have been 10 of these projects completed with one ongoing in 2013 (G1)
- ONGOING: WWMD actively monitors and inspects silt fence for construction projects on riparian properties (G1)
- ONGOING: Creation of an E-learning center to create easy access for anyone interested in further lake and AIS ecology information: http://wwmdelearning.pbworks.com/w/page/4395643/FrontPage (G1)
- ONGOING: Citizen Lake Monitoring for secchi, chlorophyll a, and phosphorus for nearly 30 years (G1)
- ONGOING: Clean Boats / Clean Waters monitoring 265.5 hours in 2013 (A1)
- For additional information on the above projects, additional projects, rain garden grant program, and more, please see Attachment A (G1)

DESCRIPTION OF PROJECT AREA

Tichigan Lake is an 1132-acre impoundment of the Fox River located in the Village and Town of Waterford in Racine County (maps are provided in the attachments). The lake provides numerous recreational opportunities for a wide spectrum of users including fishing, boating, swimming, bird watching, waterfowl hunting, and leisure activities. The lake is home to one private resort, a large State owned natural area and park, and Huening Park that includes a picnic area and public boat landing with parking for 10 units, and numerous unimproved platted ROW accesses around the lake. (F1, F2) Despite the issues with AIS in this lake, it is listed as an Area of Special Natural Resource Interest due to two NHI endangered species present; the pugnose and starhead top minnows (C2). Protection and enhancement of these water resources is essential to providing continued quality recreation within Racine County and the Village and Town of Waterford. Given this, the District funded a full point-intercept survey completed in August of 2012 by Stantec.

Tichigan Lake offers the following recreational opportunities for sportsman and extended benefits for visitors and local community:

- Recreational boating
- Waterskiing
- Fishing
- Wildlife viewing
- Non-motorized watercraft use
- Aesthetic beauty
- Important habitat for fish and wildlife
- Waterfowl Hunting
- Swimming
- Snowmobiling
- Revenue for local and surrounding communities including real estate taxes and tourism dollars

DESCRIPTION OF PROBLEM TO BE ADDRESSED BY PROJECT

Tichigan Lake has had a continuous problem with excessive nuisance aquatic plant growth. Both native and AIS (CLP and EWM) have impeded navigational and recreational uses on the lake. A majority of the lake and all bays off the Fox River support plant growth with EWM documented throughout much of the

lake at relatively high densities. In 2007 an APM Plan was completed and approved by DNR for the lake that outlined an integrated approach of several management techniques; this plan was updated in 2013. Using selective harvesting and herbicides in conjunction is recommended in the plan and has proven to be an effective management program for aquatic vegetation on this lake. The purpose of this project is to seek funding to continue the management outlined in the APM Plan through selective herbicide treatment, early season CLP mechanical harvesting, hand harvesting, and various outreach efforts (E1).

A full PI aquatic plant survey was completed in August of 2012 that documented wide spread distribution of EWM throughout the lake as well as substantial beds of CLP, the last full-impoundment survey that was performed was in 2004. Since 2004, AIS and native aquatic plants were managed using small scale selective herbicide treatments. This proved to have limited effect in controlling the AIS (in particular EWM) and increasing native vegetation abundance and frequency of occurrence. However, in 2011 a large-scale EWM treatment took place on Tichigan Lake proper (the natural lake joined to the impoundment). 36.03 acres were mapped and treated in 2011 with no re-treatment needed in 2012. This same approach was taken in Elm Island Bay in 2012 on 16.46 acres of EWM. The full PI survey in 2012 showed extremely limited regrowth of EWM in the bay with none treated in 2013. Since a vast majority of the lake is within the littoral zone (5' or less in depth ~ 900 acres or 80%), control of CLP and EWM is essential on this lake to maintain navigation and recreation, to allow native vegetation to compete and reestablish itself, improve fish and wildlife habitat and decrease risk of spread of EWM and CLP to other water bodies (D2).

Though the Waterford Waterway is a large waterway, native aquatic plant diversity within it has always been somewhat lagging as an impoundment due to substantial agriculturally dominated watershed, the accelerated natural aging (sedimentation) process of dammed river, water use, and AIS impacts. In light of this, planting of aquatic species may prove difficult with little results and may not be a viable management strategy to increase habitat diversity within the waterway (per Heidi Bunk's comments during November 29, 2013 meeting). However, habitat can be improved within the waterway through various other methods. The District has already initiated action by installing "fish sticks" and dropping downed trees in Island View Bay to improve fisheries habitat, especially for young of the year over the past two years. Additionally, the WWMD will construct duck nesting boxes beginning in 2014 and install them along wooded natural shorelines within the waterway to improve avian nesting habitat. After installation, all maintenance including yearly cleaning and necessary repairs will be conducted by District members with assistance from local youth outdoors groups, such as Boy Scouts (C1). Further habitat improvements will be assessed in the future and may include osprey nesting platforms, tree drops, additional fish sticks, turtle logs, and more as discussed during the November 29 meeting.

DISCUSSION OF PROJECT GOALS AND OBJECTIVES

The WWMD was formed to manage, protect, preserve and enhance the natural conditions of Tichigan Lake and has completed several projects to improve conditions on Tichigan Lake, which are discussed above. A major concern is the state of the aquatic plant community and the dense stands of AIS that make portions of the impoundment virtually unusable if not controlled. Preliminary project goals and objectives outlined in the plan and which have been discussed include the following action items:

- Effectively manage EWM and CLP through a combination management approach
- Maintain navigation and recreational boating opportunities throughout the lake
- Preserve and expand native aquatic plant communities
- Identify, protect and improve fish and wildlife habitat sensitive areas
- Educate lake users on AIS and native aquatic plant benefits
- Reduce risk of spread of AIS to other water bodies

Throughout this project, the goal is to decrease EWM acreages by 40% annually and CLP by 25% annually because of turion banks. This equates to a projected yearly total of each AIS as follows:

Year	EWM (ac)	CLP (ac)
2014	95	24
2015	57	18
2016	34	13

DESCRIPTION OF ACTIVITIES AND TIMELINE

The project will be completed through several project tasks. A structured program facilitates efficient project completion and limits overall cost. The project consists of the following major tasks and a timeline which are described in further detail below:

2013 Project Tasks (completed and funded by WWMD in 2013)

- Task 1.0 2013 Herbicide Treatment Permit Application & Educational Mailing (completed)
- Task 2.0 Pre-Treatment Aquatic Plant PI survey (completed)
- Task 3.0 Herbicide Treatment Targeting EWM & CLP (completed)
- Task 4.0 Post-Treatment Aquatic Plant Survey & Report (completed)
- Task 5.0 Train Citizen Volunteers and Implement CBCW (completed 256.5 hours)

Below are project Tasks not completed for which grant funding is sought

2014 Project Tasks

- Task 6.0 Herbicide Treatment Permit Application & Educational Mailing
- Task 7.0 Pre-Treatment Aquatic Plant PI Survey
- Task 8.0 Herbicide Treatment Targeting EWM & CLP
- Task 9.0 Post-Treatment Aquatic Plant PI Survey & Report
- Task 10.0 CBCW Boat Landing Staffing
- Task 11.0 CLMN AIS Surveillance and Monitoring
- Task 12.0 Update Boat Trailer Cleaning Equipment & Signage
- Task 13.0 Build & Install Duck Nest Boxes
- Task 14.0 AIS Hand Harvesting by Divers

2015 Project Tasks

- Task 15.0 Herbicide Treatment Permit Application & Educational Mailing
- Task 16.0 Pre-Treatment Aquatic Plant PI Survey
- Task 17.0 Herbicide Treatment Targeting EWM & CLP
- Task 18.0 Post-Treatment Aquatic Plant PI Survey & Report
- Task 19.0 CBCW Boat Landing Staffing
- Task 20.0 CLMN AIS Surveillance and Monitoring
- Task 21.0 AIS Hand Harvesting by Divers

2016 Project Tasks

- Task 22.0 Herbicide Treatment Permit Application & Educational Mailing
- Task 23.0 Pre-Treatment Aquatic Plant PI Survey
- Task 24.0 Herbicide Treatment Targeting EWM & CLP
- Task 25.0 Post-Treatment Aquatic Plant PI Survey & Report

- Task 26.0 CBCW Boat Landing Staffing
- Task 27.0 CLMN AIS Surveillance and Monitoring
- Task 28.0 AIS Hand Harvesting by Divers

Task 1.0 Spring 2013 Herbicide Treatment Permit Application and Educational Mailing *(completed)*

The WWMD applied for a chemical treatment permit for areas of EWM and CLP within the Lake. Total acreage for the permit application was obtained from the 2013 pre-treatment PI survey, which amounted to a total of 153.4 acres of EWM and 31.09 acres of CLP.

This task included an educational mailing associated with an approved, chemical treatment permit. This includes a copy of the permit, proposed treatment areas, letter of intent, and copy of associated chemical labels to each land owner along the lake shoreline. All action associated with this task will be consistent with NR107.04 (3) and was funded by WWMD in 2013.

Task 2.0 Pre-Treatment Aquatic Plant Survey (completed)

Under this task, the consultant completed a pre-treatment point-intercept (PI) aquatic plant survey on April 30, 2013 within the entire Waterford Impoundment. Only presence and density of EWM and CLP were assessed during the survey. Sample points and the sample grid resolution were determined and by the consultant and greatly expanded upon points sampled in 2012, at the request of WWMD. The survey conformed to the WDNR's Hauxwell Pre & Post-treatment protocols and be completed in accordance with WDNR guidance. This survey ensures that areas of the Lake experiencing growth of EWM and/or CLP will be targeted to control and eliminate aquatic invasive plant growth.

Task 3.0 Herbicide Treatment Targeting EWM & CLP (completed)

The consultant selectively treated the 2013 permitted application areas of the lake where EWM and CLP on May 8-9, 2013. To minimize impacts to more desirable, native aquatic plants selective aquatic herbicides will be applied for control of EWM and CLP. A liquid herbicide containing 2,4-D (DMA 4) will be applied to target EWM at a rate of 4.0 ppm while a liquid herbicide containing endothall (Aquathol K) will be applied to target CLP at a rate of 2.0 ppm. Both herbicides have been shown to selectively combat infestations of their target plants and are approved by the Environmental Protection Agency and the WDNR for use in aquatic ecosystems. Application of both herbicides will be completed in April/May, based on water temperatures, to minimize impacts to more desirable native aquatic plant communities. An early chemical treatment will occur before water temperatures reach 60°F. Timing of this application is critical to ensure project success and to minimize undesirable impacts to the native aquatic plants.

Task 4.0 Post-Treatment Aquatic Plant Survey & Report (completed)

Under this task, the consultant will conduct a post-treatment aquatic plant point intercept survey to determine treatment results and potential treatment areas for the following year. All data points established during the pre-treatment survey will be sampled with presence and density of all aquatic plant species recorded. Additionally, remaining areas of the lake will be surveyed for new growth of AIS and mapped, if found, to be included for future treatments.

The post-treatment survey will follow established WDNR protocols. The post-treatment survey will be scheduled at least 60 days after the AIS treatment, but no later than September 1st to ensure any aquatic plants present can be collected and identified.

Data collected at each sample point will include species presence and density, depth, GPS location, and bottom substrate and will be compiled in the WDNR provided Wisconsin Aquatic Plant Management Spreadsheet (WiAPMS.xl) and submitted to the district.

The consultant will provide a complete report documenting all activities and project specific data. The consultant would prepare an aquatic plant management report update that would describe the following topics:

- Introduction
- Project Summary
- Background Information
- Problem
- Management Objective
- Results
- GIS mapping
- Management Suggestions

The aquatic plant management report and recommendations will be distributed to the District and/or the WDNR for grant requirement purposes. The WDNR required treatment record documenting the proposed project would also be completed and submitted to the Water Resource Management Specialist.

This report will then analyze the pre-treatment surveys of previous years as available for any changes in the AIS presence and abundance, as well as native species, which will be completed on or before November 1, 2013.

Task 5.0 Clean Boats / Clean Waters (completed – 265.5 hours)

Under this task, the District will partner with Town and Country RC&D who will provide primary support for boat landing monitoring and the District is providing volunteer labor of approximately 50 hours per year as in-kind match. A minimum of 200 hours of boat landing monitoring will be completed in total by both groups as part of this joint effort each summer boating season. (A1)

Task 6.0 Spring 2014 Herbicide Treatment Permit Application and Educational Mailing

The WWMD will apply for a chemical treatment permit for areas of EWM and CLP within the Lake. Total acreage for the permit application will be obtained from the 2013 post-treatment survey. However, for grant cost estimation and based on the annual reduction goal, a total of 95 acres of EWM and 24 acres of CLP are expected to applied for within the permit (119 total acres - D2).

This task includes an educational mailing associated with an approved, chemical treatment permit. This includes a copy of the permit, proposed treatment areas, letter of intent, and copy of associated chemical labels to each land owner along the lake shoreline. All action associated with this task will be consistent with NR107.04 (3).

Task 7.0 2014 Pre-Treatment Aquatic Plant Survey

Under this task, the consultant will repeat the 2013 pre-treatment PI survey and include any new areas of AIS found during the 2013 post-treatment PI survey following all guidelines and actions as described in Task 2.0, 2013.

Task 8.0 2014 Herbicide Treatment Targeting EWM and CLP

The consultant will selectively treat the 2014 permitted application areas of the lake where EWM and/or CLP have been confirmed during the pre-treatment survey above. Herbicides to be used and the process of application may be the same as outlined in Task 3.0, 2013, however may change based on 2013 results.

Task 9.0 2014 Post-Treatment Aquatic Plant Survey & Report

Under this task, points sampled during the 2014 pre-treatment survey will be resampled with all aquatic plants present documented with their density and presence. Any new locations of EWM or CLP will be mapped for treatment in following years. At this time, effect of the treatment can be assessed by

examining the relative abundance and distribution of targeted AIS. Potential chemical treatment areas, if needed, for 2015 will be mapped under this task. The survey will conform to the WDNR post-treatment protocol and be completed in accordance with WDNR guidance.

The consultant will provide a complete report documenting all activities and project specific data completed in 2014, updating the previous year's report. Any new management activities will be reviewed and recommended, if necessary.

Task 10.0 Clean Boats / Clean Waters

Under this task, the District will continue to partner with Town and Country RC&D, who will provide primary support for boat landing monitoring while the District will provide volunteer labor to cover a portion of this commitment as in-kind match. A minimum of 200 hours of boat landing monitoring will be completed in total by both groups as part of this joint effort each summer boating season.

Task 11.0 CLMN AIS Surveillance and Monitoring

In the initial year of CLMN AIS monitoring, WWMD will host a WDNR training workshop for District members on March 22, 2014. Volunteers will be trained in proper CLMN monitoring, mapping, and reporting techniques and have for SWIMS reporting. Volunteers will spend a minimum of 40 hours per year (10 per month from May-August) recording AIS infestations and documenting new growth areas within the impoundment. All data will be recorded according to CLMN protocol and documented in SWIMS (A3).

Task 12.0 Update Boat Trailer Cleaning Equipment & Signage

Under this task, WWMD will move previously install aides to help boaters remove vegetation from under their trailer at both public boat landings and additional signage indicating the location of the nearest vehicle and trailer car-wash facilities. All will be relocated to one central location at each ramp, signs made larger and placed at eye level, and protected from the weather to be more visible to all boaters exiting the water (A2).

Task 13.0 Build and Install Duck Nest Boxes

Under this task, WWMD build cedar duck nesting boxes and install them along wooded portions of the river and waterway. Annual maintenance, including cleaning and any necessary repairs, will be carried out each year with assistance from a local outdoors youth organization and/or Boy Scout troop (C1).

Task 14.0 AIS Hand Pulling by Divers

Venture Crew, a diving group, along with WWMD volunteers will hand harvest areas of AIS growth within Island View Bay by snorkeling. All snorkelers will employ proper removal and disposal techniques as outlined in the DNR's EWM Manual Removal Brochure. The 2014 task is currently scheduled for June 7 and includes costs for harvesting equipment (nets, floats, etc.) (E1).

Task 15.0 Spring 2015 Herbicide Treatment Permit Application and Educational Mailing

The WWMD will apply for a chemical treatment permit for areas of EWM and CLP within the Lake. Total acreage for the permit application will be obtained from the 2014 post-treatment survey.

This task includes an educational mailing associated with an approved, chemical treatment permit. This includes a copy of the permit, proposed treatment areas, letter of intent, and copy of associated chemical labels to each land owner along the lake shoreline. All action associated with this task will be consistent with NR107.04 (3).

Task 16.0 2015 Pre-Treatment Aquatic Plant Survey

Under this task, the consultant will repeat the 2014 pre-treatment survey and include any new areas of AIS found during the 2014 post-treatment survey following all guidelines and actions as described in Task 2.0, 2013.

Task 17.0 2015 Herbicide Treatment Targeting EWM and CLP

The consultant will selectively treat the 2015 permitted application areas of the lake where EWM and/or CLP have been confirmed during the pre-treatment survey. Herbicides to be used and the process of application may be the same as outlined in Task 3.0, 2013, however may change based on 2014 results.

Task 18.0 2015 Post-Treatment Aquatic Plant Survey & Report

Under this task, points sampled during the 2015 pre-treatment survey will be resampled with all aquatic plants present documented with their density and presence. Any new locations of EWM or CLP will be mapped for treatment in following years. At this time, effect of the treatment can be assessed by examining the relative abundance and distribution of targeted AIS. Potential chemical treatment areas, if needed, for 2016 will be mapped under this task. The survey will conform to the WDNR post-treatment protocol and be completed in accordance with WDNR guidance.

The consultant will provide a complete report documenting all activities and project specific data completed in 2015, updating the previous year's report. Statistical comparison in the change of all aquatic plant species sampled during this project will be included to document the response of the macrophyte community. Any new management activities will be reviewed and recommended, if necessary.

Task 19.0 Clean Boats / Clean Waters

Under this task, the District will partner with Town and Country RC&D who will provide primary support for boat landing monitoring and the District will continue to provide volunteer labor to cover a portion of this commitment as in-kind match. A minimum of 200 hours of boat landing monitoring will be completed in total by both groups as part of this joint effort each summer boating season.

Task 20.0 CLMN AIS Surveillance and Monitoring

Volunteers will spend a minimum of 40 hours per year (10 per month from May-August) recording AIS infestations and documenting new growth areas within the impoundment. All data will be recorded according to CLMN protocol and documented in SWIMS (A3).

Task 21.0 AIS Hand Pulling by Divers

Venture Crew, a diving group, along with WWMD volunteers will hand harvest areas of AIS growth. All snorkelers will employ proper removal and disposal techniques as outlined in the DNR's EWM Manual Removal Brochure. Dates and locations for this task in 2015 are yet to be determined (E1).

Task 22.0 Spring 2016 Herbicide Treatment Permit Application and Educational Mailing

The WWMD will apply for a chemical treatment permit for areas of EWM and CLP within the Lake. Total acreage for the permit application will be obtained from the 2015 post-treatment survey.

This task includes an educational mailing associated with an approved, chemical treatment permit. This includes a copy of the permit, proposed treatment areas, letter of intent, and copy of associated chemical labels to each land owner along the lake shoreline. All action associated with this task will be consistent with NR107.04 (3).

Task 23.0 2016 Pre-Treatment Aquatic Plant Survey

Under this task, the consultant will repeat the 2014 pre-treatment survey and include any new areas of AIS found during the 2015 post-treatment survey following all guidelines and actions as described in Task 2.0, 2013.

Task 24.0 2016 Herbicide Treatment Targeting EWM and CLP

The consultant will selectively treat the 2015 permitted application areas of the lake where EWM and/or CLP have been confirmed during the pre-treatment survey. Herbicides to be used and the process of application may be the same as outlined in Task 3.0, 2013, however may change based on 2015 results.

Task 25.0 2016 Post-Treatment Aquatic Plant Survey & Report

Under this task, points sampled during the 2016 pre-treatment survey will be resampled with all aquatic plants present documented with their density and presence. Any new locations of EWM or CLP will be mapped for treatment in following years. At this time, effect of the treatment can be assessed by examining the relative abundance and distribution of targeted AIS. Potential chemical treatment areas, if needed, for 2017 will be mapped under this task. The survey will conform to the WDNR post-treatment protocol and be completed in accordance with WDNR guidance.

The consultant will provide a complete report documenting all activities and project specific data completed in 2016, updating the previous year's report. Statistical comparison in the change of all aquatic plant species sampled during this project will be included to document the response of the macrophyte community. Any new management activities will be reviewed and recommended, if necessary.

Task 26.0 Clean Boats / Clean Waters

Under this task, the District will partner with Town and Country RC&D who will provide primary support for boat landing monitoring and the District will continue to provide volunteer labor to cover a portion of this commitment as in-kind match. A minimum of 200 hours of boat landing monitoring will be completed in total by both groups as part of this joint effort each summer boating season.

Task 27.0 CLMN AIS Surveillance and Monitoring

Volunteers will spend a minimum of 40 hours per year (10 per month from May-August) recording AIS infestations and documenting new growth areas within the impoundment. All data will be recorded according to CLMN protocol and documented in SWIMS (A3).

Task 28.0 AIS Hand Pulling by Divers

Venture Crew, a diving group, along with WWMD volunteers will hand harvest areas of AIS growth. All snorkelers will employ proper removal and disposal techniques as outlined in the DNR's EWM Manual Removal Brochure. Dates and locations for this task in 2016 are yet to be determined (E1).

DESCRIPTION OF DATA TO BE COLLECTED

Response of the plant community to the integrated management using selective herbicide will be documented through various aquatic plant surveys. Pre-treatment surveys for the areas receiving herbicide will be conducted according to DNR protocol. These surveys will be used to document pretreatment conditions by collecting the following data:

- Water temperature
- AIS presence and density at sample points (pre-treatment survey)
- Calculations of AIS treatment area(s) by using GIS polygons
- Water depth within AIS beds

All aquatic plant survey data will be summarized and the data tabulated in the WiAPMS excel program.

Post-treatment surveys will be used to determine location and density of all aquatic vegetation throughout the lake. The aquatic plant survey will collect the following data:

- Geographic coordinates of sample point locations in WTM coordinate system
- Species present (native and exotic)
- Estimates of species abundance (frequency of occurrence, relative frequency of occurrence, rake fullness density ratings)
- Water depth

- Sediment composition (where observed)
- Aquatic plant distribution (emergent, floating, floating-leaved, and submergent aquatic plant types)
- Simpson Diversity Index of plant community
- Floristic Quality Index of plant community

The data collected during the post-treatment surveys will be used to determine the response of the plant community to the various methods of the treatment and to provide data on areas that may need herbicide treatment the following spring.

DESCRIPTION OF PROJECT PRODUCTS OR DELIVERABLES

The following is a list of project deliverables:

- Consultant attendance at one public kick-off meeting pertaining to the treatment timing and logistics in March 2014
- Maps and data sheets from pre and post treatment PI surveys
- Annual report summarizing treatment and vegetation response

The annual reports will include the results of all aquatic plant surveys. The report will include data tables summarizing the plant survey data and geographic locations of sampling points. The report will also include lake maps illustrating sampling points, distribution/abundance of aquatic plant species, and proposed management areas. A section will compare the distribution/abundance of the AIS species following the various treatments to determine effectiveness and longevity of treatments. Native vegetation distribution/abundance will also be tracked to determine if populations are expanding.

DISTRICT ACTIVITIES AND EDUCATION EFFORTS

WWMD is involved in a number of activities that help to educate the public, monitor and control AIS in the lake, stop the spread of AIS into and out of the lake, and care for the overall health of the Waterford Impoundment. Beginning, in 2013, they initiated an active Clean Boats, Clean Waters program in conjunction with Town and Country Resource Conservation and Development on the lake that monitors the public boat landings. WWMD runs and monitors the program by coordinating required training for inspectors, enrolling several volunteers to become monitors, running promotions, and overseeing the entire execution of the CB/CW program on the waterway. WWMD monitored the public boat landings for more than 200 hours during the 2013 boating season with at least 25% of this is volunteer labor from the District members. All data was entered into SWIMS (A1 & A3). The project partners plan on extending this CB/CW program through 2016 as part of this grant. This will continue to be a joint effort with Town and Country RC&D staff as well as trained citizen volunteers. The District has also installed informational signs and maps at the landing alerting boaters of AIS present in the lake to identify the species of concern and stop the spread of AIS by displaying the locations of the nearest vehicle and trailer accessible car-washes to help with AIS removal. There were also tools placed at each landing to aide boaters in cleaning off their boats. Two garbage cans have been present for plant disposal for the past 10 years which are emptied on a regular basis by the Village of Waterford (A2).

The District continues to show its commitment to AIS prevention, reduction, and education through numerous projects in 2013, including a substantial increase in monetary commitment to these activities. They have requested more in depth pre and post-treatment surveys than required by WDNR, providing an increased understanding of the entire impoundment and better monitoring of native plant community response. Their education and outreach program continues to expand and focus on not only AIS issues, but water quality as well through projects too numerous to list here (Attachment A – G1).

DESCRIPTION OF EXISTING AND PROPOSED PARTNERSHIPS

The WWMD is proposing a partnership with the WDNR to complete the above described project. The proposed partnership will include financial contributions from both the WWMD (50%) and WDNR (50%) (H1). The WWMD will complete volunteer tasks and will work with the consultant to complete technical components of the project and provide information to the public during the public informational meeting. When local community, governments and organizations learned of the proposed project, they reacted positively, and provided letters of support. The following organizations expressed support for the project:

- Fox River Citizens Against Underground Silt and Erosion
- Runzheimer International
- Doc's on the Fox
- Waterford Chamber of Commerce
- Town and Country Resource Conservations & Development

Evidence of support for the project is documented in the letters of support provided (see attachments). WWMD completed an intensive lake management study with SEWRPC and is partnering with them currently to update the plan for current issues. WWMD currently has active, established partnerships with the Fox River Citizens Against Underground Silt and Erosion, Town and Country Resource Conservation & Development, Waterford Chamber of Commerce, Association of State Floodplain Managers, SEWRPC and the Fox River Commission for multiple past and current projects.

DISCUSSION OF ROLE OF PROJECT IN PLANNING AND/OR MANAGEMENT OF LAKE

The project plays a valuable role in the overall planning and management of Tichigan Lake and in the implementation of the approved APM Plan and creation of the new APM plan. The APM Plan outlines an integrated management strategy combining selective timed harvesting and herbicide treatment to control AIS. The effectiveness of this combination approach will be evaluated through pre and post-treatment surveys. Comparisons of results to each herbicide treatment in this project and past projects will be made, dating back to 2010, and will be used to plan future AIS management and activities based on results achieved and goals set for the impoundment.

PLAN FOR SHARING PROJECT RESULTS

The consultant will provide the WWMD with a final paper and electronic copy (CD or media card format) of each annual project report. A hard copy and electronic copy of the report and data will also be filed at the appropriate WDNR Service Center. The electronic project report files can be used to duplicate the project report. Copies will be made available to the local library, SEWRPC, the WWMD website and any partners that provided letters of support, if they are requested. Project results will also be shared during a public informational meeting where a presentation will be provided by the consultant (see deliverables section). The WWMD will invite local media, project partners, and interest groups to the public informational meeting.

OTHER INFORMATION IN SUPPORT OF PROJECT NOT DESCRIBED ABOVE

Since forming in 2003, the Waterford Waterway Management District has been stewards for the Lake with several projects completed. Because of their commitment to the resource, an abundance of support for the proposed project exists from the local community, as discussed earlier. Additional support not previously described also exists such as local businesses, campgrounds, resorts, restaurants, fishing and wildlife guides, Ducks Unlimited and bait and sport shops all rely on tourism for their continued livelihood. These business owners most certainly support local efforts to improve recreational opportunities on area lakes and streams.

Additionally, local residents who chose the waterway as the location for their home or vacation property want protection of the quality water resources that provides the recreational opportunities and aesthetic enjoyment they desire in a community. Local residents are especially supportive of projects that are able to leverage their dollars for additional financial assistance, reducing out of pocket expenses.

ITEMIZED BREAKDOWN OF EXPENSES

The following provides a breakdown of the overall project expenses by each major project task. Donated labor and equipment costs (marked with *) under tasks 10, 11, 14, 19-21, and 26-28 are not included in each yearly cost and will be included separately under total project costs.

2013**

<u>2013**</u> Task 1.0 * Herbicide Treatment Permit Application & Educational Mailing	
 Prepare WDNR large scale Permit Application and Liaison with WDNR 	\$250.00
 WDNR Permit Fee 50 acres * \$25/acre + \$20 fee Base fee \$150 * \$1.50 each piece * 1,020 pieces 	\$1,270.00 \$1,680.00
Sign posting	\$500.00
Task 2.0* Pre-Treatment Aquatic Plant survey	\$3,250.00
Task 3.0* Herbicide Treatment Targeting EWM & CLP	
 Mobilization, equipment, vehicle/boat and per diem: 	\$600.00
EWM:	
 Liquid 2,4-D @ 8.0 gal/acre @ \$168/acre * 157 acres 	\$26,376.00
 Labor/equipment \$65/acre * 157 acres 	\$10,205.00
	\$0,000,70
Aquathol K 3.75 gal/acre @ \$299.70/acre * 31 acres Labor/equipment \$65/acre * 31 acres	\$9,290.70 \$2,015.00
Sub-total Task	\$48,486.70
Task 4.0* Post-Treatment Aquatic Plant Survey & Report	\$3,850.00
Task 5.0* Volunteer Labor CB/CW 50 hours @ \$12/hour in-kind	\$600.00
Total Costs Already Incurred by the District for 2013**	\$59,886.70

** Costs for these tasks were incurred and funded solely by WWMD in 2013 and are displayed to illustrate the substantial financial support taken on by the District. They are not included in the grant total below.

Funds Requested by the Distirct under this Grant Application for 2014-2016 by Year

<u>2014</u>	
 Task 6.0 Herbicide Treatment Permit Application & Educational Mailing Prepare WDNR large scale Permit Application and Liaison with WDNR WDNR Permit Fee 50 acres * \$25/acre + \$20 fee Base fee \$150 * \$1.50 each piece * 1,020 pieces Sign posting 	\$250.00 \$1,270.00 \$1,680.00 \$500.00
Task 7.0 Pre-Treatment Aquatic Plant survey	\$3,300.00
 Task 8.0 Herbicide Treatment Targeting EWM & CLP Mobilization, equipment, vehicle/boat and per diem: 	\$600.00

EWM:

 Prepare WDNR large scale Permit Application and Liaison with WDNR WDNR Permit Fee 50 acres * \$25/acre + \$20 fee Mailing: Base fee \$200 * \$1.50 each piece * 1,020 pieces Sign posting Task 16.0 Pre-Treatment Aquatic Plant survey Task 17.0 Herbicide Treatment Targeting EWM & CLP Mobilization, equipment, vehicle/boat and per diem: EWM: Liquid 2,4-D @ 8.5 gal/acre @ \$190/acre * 57 acres Labor/equipment \$75/acre * 57 acres Liquid endothall@ 4.0 gal/acre @ \$324/acre * 18 acres Labor/equipment \$75/acre * 18 acres 	\$1,270.00 \$1,730.00 \$550.00 \$3,350.00 \$650.00 \$10,830.00 \$4,275.00 \$5,832.00 \$1,350.00
 WDNR Permit Fee 50 acres * \$25/acre + \$20 fee Mailing: Base fee \$200 * \$1.50 each piece * 1,020 pieces Sign posting Task 16.0 Pre-Treatment Aquatic Plant survey Task 17.0 Herbicide Treatment Targeting EWM & CLP Mobilization, equipment, vehicle/boat and per diem: EWM: Liquid 2,4-D @ 8.5 gal/acre @ \$190/acre * 57 acres 	\$1,730.00 \$550.00 \$3,350.00 \$650.00 \$10,830.00
 WDNR Permit Fee 50 acres * \$25/acre + \$20 fee Mailing: Base fee \$200 * \$1.50 each piece * 1,020 pieces Sign posting Task 16.0 Pre-Treatment Aquatic Plant survey Task 17.0 Herbicide Treatment Targeting EWM & CLP 	\$1,730.00 \$550.00 \$3,350.00
 WDNR Permit Fee 50 acres * \$25/acre + \$20 fee Mailing: Base fee \$200 * \$1.50 each piece * 1,020 pieces Sign posting 	\$1,730.00 \$550.00
 WDNR Permit Fee 50 acres * \$25/acre + \$20 fee Mailing: Base fee \$200 * \$1.50 each piece * 1,020 pieces 	\$1,730.00
Task 15.0 2014 Herbicide Treatment Permit Application & Educational Mailing	\$250.00
<u>2015</u>	
Total Costs for 2014 Total Donated Labor for 2014	\$46,916.00 \$3,864.00
 Task 14.0 AIS Hand Harvesting by Divers Venture Crew Dive Team Four WWMD volunteers @ 8 hours each – 32 hrs * \$12/hr 1 day of donated boat use for 2 boats Harvesting equipment – nets, floats, and others 	\$1,200.00 \$384.00* \$200.00* \$250.00
Task 13.0 Build & Install Duck Nest Boxes	\$500.00
Task 12.0 Update Boat Trailer Cleaning Equipment & Signage	\$500.00
 Task 11.0 CLMN AIS Surveillance and Monitoring 40hrs * \$12/hr – Donated labor 4 days of donated boat use 	\$480.00* \$400.00*
Task 10.0 CB/CW staff person through Town & Country RC&D 200 hrs*\$12/hr	\$2,400.00*
Task 9.0 Post-Treatment Aquatic Plant Survey & Report	\$3,900.00
Sub-total Task	\$33,566.00
 Liquid endothall@ 4.0 gal/acre @ \$314/acre * 24 acres Labor/equipment \$70/acre * 24 acres 	\$7,536.00 \$1,680.00
CLP:	

Task 18.0 Post-Treatment Aquatic Plant Survey & Report	\$3,950.00
Task 19.0 CB/CW staff person through Town & Country RC&D 200 hrs*\$12/hr	\$2,400.00*
 Task 20.0 CLMN AIS Surveillance and Monitoring 40hrs * \$12/hr – Donated labor 4 days of donated boat use 	\$480.00* \$400.00*
 Task 21.0 AIS Hand Harvesting by Divers Venture Crew Dive Team Four WWMD volunteers @ 8 hours each – 32 hrs * \$12/hr 1 day of donated boat use for 2 boats 	\$1,200.00 \$384.00* \$200.00*
Total Costs for 2015 Total Donated Labor for 2015 <u>2016</u>	\$35,237.00 \$3,864.00
 Task 22.0 2015 Herbicide Treatment Permit Application & Educational Mailing Prepare WDNR large scale Permit Application and Liaison with WDNR WDNR Permit Fee 47 acres * \$25/acre + \$20 fee Mailing: Base fee \$200 * \$1.75 each piece * 1,020 pieces Sign posting 	\$250.00 \$1,195.00 \$1,985.00 \$600.00
Task 23.0 Pre-Treatment Aquatic Plant survey	\$3,400.00
 Task 24.0 Herbicide Treatment Targeting EWM & CLP Mobilization, equipment, vehicle/boat and per diem: 	\$700.00
EWM: Liquid 2,4-D @ 8.5 gal/acre @ \$200/acre * 34 acres Labor/equipment \$85/acre * 34 acres 	\$6,800.00 \$2,890.00
CLP: Liquid endothall@ 4.0 gal/acre @ \$335acre * 13 acres Labor/equipment \$85/acre * 13 acres 	\$4,355.00 \$1,105.00
Sub-total	\$15,850.00
Task 25.0 Final Post-Treatment Aquatic Plant Survey & Report	\$4,200.00
Task 26.0 CB/CW staff person through Town & Country RC&D 200 hrs*\$12/hr	\$2,400.00*
 Task 27.0 CLMN AIS Surveillance and Monitoring 40hrs * \$12/hr – Donated labor 4 days of donated boat use 	\$480.00* \$400.00*
 Task 28.0 AIS Hand Harvesting by Divers Venture Crew Dive Team Four WWMD volunteers @ 8 hours each – 32 hrs * \$12/hr 1 day of donated boat use for 2 boats 	\$1200.00 \$384.00* \$200.00*
Total Costs for 2016	\$28,680.00

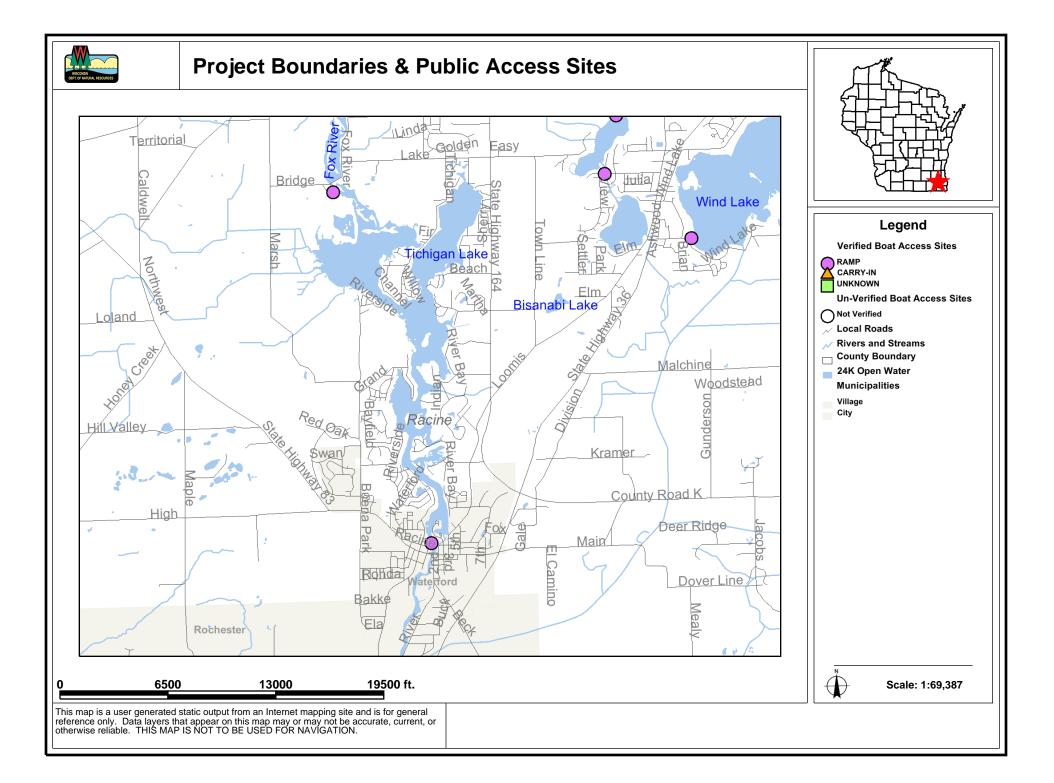
Total Donated Labor for 2016

Project cash costs 2014 - 2016 <u>Donated match costs</u> Total project costs		\$110,883.00 <u>\$11,592.00</u> \$122,425.00
	WDNR Grant Request 50% District Share - 50%	\$61,212.50
	Donated Labor Match Association Cash Match Total Match 2014-2016	\$11,592.00 \$49,620.50 \$61,212.50

These consulting service costs include labor, equipment, travel time, and direct costs to complete the field work, data collection, scheduled meetings, and reporting for the proposed scope of work.

Waterford Waterway 2014-2016 AIS Control: Donated Labor Breakdown						
Year	Task	Total Participants	Hours / Participant	Total Hours	Equipment	Total Donated Cost
	10	3-6+	varies	200		\$2,400
2014	11	4+	~10	40		\$480
	11	Boat Use	4 days		100	\$400
	14	4	8	32		\$384
	14	Boat Use	2 boats		100	\$200
	19	3-6+	varies	200		\$2,400
	20	4+	~10	40		\$480
2015		Boat Use	4 days		100	\$400
	21	4	8	32		\$384
	21	Boat Use	2 boats		100	\$200
	26	3-6+	varies	200		\$2,400
2016	27	4+	~10	40		\$480
		Boat Use	4 days		100	\$400
	28	4	8	32		\$384
		Boat Use	2 boats		100	\$200
Total Donated Cost				\$11,592		

FIGURES



RESOLUTION

Aquatic Invasive Species Control Grants

Resolution # _____

RESOLUTION OF <u>Waterford Waterway Management District (WWMD)</u> County of <u>Racine, WI</u>

species; and

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

NOW, THEREFORE, BE IT RESOLVED THAT the <u>Waterford Waterway Management District (WWMD)</u> requests grant funding and assistance available from the Wisconsin Department of Natural Resources under the "Aquatic Invasive Species Control Grant Program" and hereby authorizes <u>Stephanie Waghorn</u> to act on behalf of Waterford Waterway Management District (WWMD) to:

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

BE IT FURTHER RESOLVED THAT the <u>Waterford Waterway Management District (WWMD)</u> will meet the obligations of the aquatic invasive species control project including timely publication of the results and meet the financial obligations of an aquatic invasive species grant, including the prompt payment of our 50% commitment to aquatic invasive species control project costs.

Adopted this day 4 of DECEMBER, 2013	
By a vote of: 7 in favor O against O abstain BY: The Way May Styphanie Wag hom	VICE-CHAIRMAN Secretary/Clerk of

NOTE: Management Unit as defined in s. 281.68, Wisconsin Statutes, or defined in s. 281.70, Wisconsin Statutes, are counties, cities, towns, villages, town sanitary districts, public inland lake protection and rehabilitation districts, qualified lake associations, qualified river management organizations, nonprofit conservation organizations, or other local governmental units established for the purpose of lake management or river management.

The **management unit's representative** must be indicated by naming a position or a person who is either an official or employee of the management unit. By naming a position instead of a specific person, a new resolution does not have to be submitted to the DNR if there is turnover in the position. A contracted consultant to the sponsor cannot be the authorized representative. The resolution may not pass on grant responsibility to another group or organization.

LETTERS OF SUPPORT



July 12, 2013

Waterford Waterway Management District Aquatic Plant Control Committee PO Box 416 Waterford, WI, 53185

To Whom It May Concern:

Doc's on the Fox, Inc. would like to support the Waterford Waterway Management District in seeking a grant for Established Population Aquatic Invasive Species Control. We appreciate and understand the importance of controlling the invasive species of aquatic vegetation in our local lakes and waterways to maintain a more environmentally balanced water system for the residents in our area to enjoy. We truly appreciate your efforts in pursuing this grant and offer all our support.

Sincerely,

David Allesee

Doc's on the Fox -Owner

Doc's on the Fox: 232 North Milwaukee St. Waterford, WI 53185 Phone: 262-514-3627

Board of Directors

James D. Gage, James D. Gage Consulting

Earlene Ronk, Retired Administrator, Countryside Home

Greg David, Jefferson County Board

Lisa Conley, Environmental Advocacy

Ruth Johnson, Retired, DNR Water Resources

Will Green, Mentoring Positives

Chris Gutschenritter, CSA Farmer, Atty

Ray Ellenberger, Farm Service Agency

Anna Healy, DATCP

Dwayne Sperber, Wudeward Products, Inc.

Town and Country RC&D First Principles

When development and change are in harmony with the natural systems that sustain us, imagination, creativity and ingenuity are limitless.

Strong partnerships built upon the social values of fairness, honesty, responsibility, compassion and respect build strong community and shared prosperity.

When community and local food systems are integrated, the economic, environmental, social and spiritual healthy and vitality of communities are enhanced.

Stewardship of social and ecological resources is necessary to enhance the quality of life for subsequent generations.

Ecopreneurs supported and educated in these principles will develop businesses that prosper and provide the region with innovative and essential products and services.



www.tacrcd.com 920-541-3208 admin@tacrcd.com PO Box 333, Jefferson, WI 53549

July 29, 2013

Waterford Waterway Management District

PO Box 416

Waterford, Wisconsin 53185

To Whom This Concerns,

Town and Country RC&D writes in support of the Waterford Waterway Management District's (WWMD) grant for Established Population Aquatic Invasive Species Control.

We have had the opportunity to partner with WWMD to participate in the Clean Boats, Clean Water (CBCW) program, and we have found the group to be communicative, easy to work with, and excellent stewards of CBCW funds. Stephanie Boutsikakis has been a great on-site supervisor for our intern, Karissa Chinault, and the program is leveraging volunteer and paid time getting education to boaters, as intended.

Town and Country RC&D is concerned about aquatic invasive species in southeastern Wisconsin waters and urges the DNR to continue with effective control programs for the sake of habitat protection, biota integrity, and the social and economic benefits of healthy surface waters.

Sincerely,

James D Gage

James D. Gage President



Town of Waterford Police Department

415 North Milwaukee St., Waterford, WI 53185 Phone: 262-534-2119 Fax: 262-534-7789

December 9, 2013

Waterford Waterway Management District Aquatic Plant Control Committee Post Office Box 416 Waterford, WI. 53185

To Whom It May Concern:

We would like to express our support for the Waterford Waterway Management District's (WWMD) application for a grant seeking funding for Established Population Aquatic Invasive Species Control.

We have a continuing partnership with the WWMD in all areas of concern and we know the importance of controlling invasive species. The WWMD has been very active in the Clean Boats, Clean Water program and they have spent many hours training volunteers and our personnel to help enforce the changes in the Aquatic Invasive species laws.

The WWMD is a true asset to the TWPD and our community in areas of water resource management and education. The TWPD strongly supports WWMD in their continued efforts to care and maintain our water resources and we hope they will be successful in obtaining the funding necessary to continue their programs in our community.

Sincerely,

Thomas A. Ditscheit Chief of Police

ATTACHMENT A



Waterford Waterway Management District Activities, Accomplishments and Future Plans 2003 through 2013

The petition to form the Waterford Waterway Management District (WWMD) was approved by the Racine County Board of Supervisors in January 2003. The entire process of approval took a scant four months to accomplish and the District has been on a fast track from the very beginning. Representing approximately 1100 riparian owners residing along 1200 acres of waterway, the WWMD remains one of the largest Districts in the State of Wisconsin. Over the past 10 years the WWMD has established a record of many accomplishments:

Riparian Survey

Shortly after the formation of the WWMD the Board of Commissioners commissioned a Riparian Survey. The intent was to gather as much information regarding riparian thoughts and concerns about the condition of the impoundment at that time. What had started as a fairly modest endeavor turned into a gargantuan project. The riparian owners returned more than 55% of the mailed surveys. The number of returns in itself told the Board that there was, indeed, a keen interest in bettering and preserving the impoundment making it better for all to use and enjoy.

• Lake Management Plan

At its very first meeting the WWMD applied to the Wisconsin Department of Natural Resources (WDNR) for, and ultimately received, two \$10,000.00 grants for the preparation of a Lake Management Plan. The Southeastern Wisconsin Regional Planning Commission (SEWRPC) was contracted to develop this comprehensive plan to guide in the restoration of our beautiful waterway, and to update the plan in 2013. During their initial survey of existing conditions SEWRPC personnel described our Waterway as a "desert of muck", stating that the huge amount of muck build up inhibits the growth of desirable aquatic plants and destroys habitats for desirable fish species to thrive. In developing the plan, every effort was made to be proactive in correcting drainage and erosion problems in order to expedite the process of restoration of the Waterway. The ultimate goal of removing the huge volumes of muck was always in sight. Contact was made with the U.S. Army Corps of Engineers to encourage their participation in the restoration operation. An application for a Section 206, Aquatic Ecosystem Restoration Project Feasibility Study 75%-25% split on \$100,000.00 grant, was filed in 2003 and the project remains on their active project list pending the appropriation of funds.

• Storm Water Run-Off

WWMD recommended the pre & post construction run-off ordinances that the town of Waterford Wisconsin implemented.

Phosphorous Fertilizer Ordinance

The District approached the Town and Village of Waterford in the early spring of 2004 to enact a ban on the use of fertilizers containing phosphorus for residential lawns and landscaping. The natural content of phosphorus within the soils found in our District is extremely high, in a range of 6 or 8 times the requirement for healthy plant growth. The importance of this ban can be summarized in the statement: "One pound of phosphorus generates five hundred pounds of green algae in the water." As a result, the Town of Waterford adopted an anti-phosphorous ordinance which was the first in Racine County and even preceded the newly adopted Wisconsin State statute.

Controlling Purple Loosestrife

The onslaught of these invasive plants along the shorelines of the Fox River and Tichigan Lake prompted the District to take action to curb its spread throughout the Waterway. A \$12,500.00 grant from the WDNR funded this effort. Volunteers removed plants, cut off seedpods, and sprayed the plant remains with Rodeo®. Additionally, colonies of beetles were purchased to feed on the plants and help limit their spread.

• Storm Water Abatement and Erosion Control

Shortly after the formation of the District, twelve prominent sites of storm water inflow were identified. A primary contributor of unwanted pollutants and soils deposited into the Waterway, these ravines and gullies drain into the water from the high ground surrounding the Waterway. Plumes of brown water and debris flood the lake and river after every large rainfall, contributing to the rich beds of muck that promote excessive growths of (especially) non-native aquatic plants. Thanks to cooperative funding from the Southeastern Wisconsin Fox River Commission (SEWFRC), private grants from Runzheimer International, and budgeted WWMD funding, major projects have been undertaken to curb this run off:

• State Highway 164 Storm Water Abatement Project 2007

The project provided control of drainage from 50 acres of upland through the use of a filtration basin, filter strip plantings, ditch dams, culvert-rip rapping, a settling basin in the ravine, and outflow channel improvements. In addition, approximately 150 feet of shoreline filtration plantings were installed in the drainage area.

• Island View Bay Drainage Improvement Project 2008

The project is similar to the STH 164 project with the work involving multiple ditch dams, major ravine rip rapping, and the installation of stilling basins. Shoreline filtration plantings were accomplished through the District's Rain Garden Grant Program.

Idlewood Drive Storm Water Abatement Project 2009

This was bid and was completed in late 2009. The work remediated upland flooding in a drainage easement and reduced the velocity of out flow through a steeply-sloping ravine. Five natural rock check dams and stilling basins where installed in a wooded conservation area.

• Grand Avenue Erosion Control Project 2011

This was bid and was completed in 2011. Plans were made up by Dick Kosut and presented to SEWFRC, and a 90% grant was received for the rip rapping at the road and shoreline. This project eliminated 85% of the run-off from E. Peninsula Road to the Fox River.

• Fox River Island Bay View Project 2012

Contracted a landscaper to move boulders, rocks and logs to the shore line for fish beds and created safer navigation in the bend in Fox River.

Eco-System Restoration Project

In 2012, the WWMD secured a grant from SEWFRC in the amount of \$59,000 for Phase 2 of the Eco-System Restoration Project. The WWMD secured an additional grant in the amount of \$20,000 from Racine County for a down payment to Graef Engineering to start Phase 3 of the Eco-System Project. In 2013 the WWMD secured a public outreach grant in the amount of \$5,000 from SEWFRC for Phase 2 of the Eco-System Restoration Project.

In addition to these milestones, the WWMD maintains numerous ongoing events and programs to fulfill our mission of undertaking a program of lake protection and rehabilitation of a lake or parts thereof within the district:

Pontoon Classroom

Beginning in the fall of 2009, the WWMD has conducted pontoon classroom programs to educate the youth of our community about their waterway. The program provides a flotilla of pontoon boats along with host drivers and educators that enable students to tour the river and lake and learn about its

history, its existing condition, and its possible future. Termed an "open sewer" by many of the teens, some of whom have never been on the Waterway previously, the students visit a number of sites where they are instructed by experts on water biology, fish and wild life, aquatic plant growth, erosion control, and the environmental health of this community asset.

Aquatic Plant Control

Riparian Owners and all users of the Waterway are plagued by the excessive growths of aquatic plants, dominated by nonnative species. Initial actions targeted the spread of Eurasian water milfoil as well as curly-leaf pondweed. 2013 saw our largest areas surveyed and treated. Coontail, elodea and Lily Pads have prospered in the rich layers of muck that exist on our lake and river bottoms, continuing to limit navigation by all types of watercraft. With much of the river/lake not easily navigable, boat traffic is concentrated into much smaller areas, resulting in "rush hour" traffic conditions that create risks to boats and property, and limit the enjoyment of recreational users. It remains as one of the key issues facing the District and, annually, requires more funds than any other single budget item. For several years the WWMD has operated a program of Aquatic Plant Control in an effort to alleviate this environmental hazard.

Clean Boats, Clean Waters Program

In 2013 the WWMD began its first year of a CBCW program. We partnered with Town and Country Research Conservation and Development to hire an intern and supplemented this with volunteer hours. Over 200 boat inspections at the Library and DNR Launch have been completed, reducing the transportation aquatic plants into and out of our waters.

• Rain Garden Program

The WWMD Education Committee, in cooperation with the Fox River Committee Against Underwater Silt and Erosion (CAUSE), sponsored a seminar promoting the planting and development of rain gardens throughout the District. Melinda Myers, host of PBS's Great Lakes Gardener, was the featured speaker. Plants and brochures were available to those in attendance, along with a sign up for WWMD grant funds for purchasing plants and installing rain gardens in qualified locations. Riparian owners participated, selecting a variety of native plants appropriate garden shapes. Down spout drainage from the residence was piped into each garden. Starting in 20## the WWMD has budgeted every year a single rain garden grant of \$500.

• Water Safety

The District, working with the Town of Waterford budget committee, reviewed budget allocations for the Town's Water Patrol in an effort to insure that boating safety and control ordinances were enforced at all times. Based on that review, and subsequent committee recommendations, the Town increased its budget in this area of concern. The WWMD sponsored and funded the installation of solar powered, lighted buoys throughout the waterway.

• Bend in the River Project

Starting in 2003, the WWMD has supported the efforts of the SEWFRC to improve navigation through the "bend in the river"—the narrowest spot on the Waterway—at the foot of Grand Drive. Boat traffic at this location is funneled through a series of obstacles. Near misses, boat damage, and congestion are among the issues that need to be resolved. Users of the Waterway know that this area represents an accident waiting to happen. Hundreds of volunteer hours, countless meetings, and thousands of dollars have been spent by the SEWFRC in an effort to relocate rocks and remove tree stumps, in a manner that will satisfy WDNR requirements and improve public safety and navigability.

Ongoing Community Outreach

The District continues to be active on many fronts within the greater Waterford community. Since its inception, the WWMD has:

- Maintained interaction with SEWFRC, SEWRPC, the Town and Village of Waterford, and the Racine County Planning Committee.
- Conducted Open Houses at local schools to keep the public informed of activities, progress, and plans for the Eco-System Restoration Project.

- Interacted with the Waterford Chamber of Commerce by conducting tours of the waterway and also operating a booth at a major Chamber public event.
- Issuance of a newsletter on a regular, quarterly basis.
- Publication and dissemination of a comprehensive Waterway map showing depths, obstacles, and buoy locations.
- Maintenance of a comprehensive website (<u>www.waterfordwwmd.com</u>)
- Participation and sponsorship of seminars on environmental issues.
- Conducting monthly public meetings.

The WWMD has sought to expand its knowledge of the issues and the solutions facing waterways throughout the State of Wisconsin and in the immediate Waterford area by maintaining associations and partnerships with the following:

- Regular meetings with the WDNR.
- Membership of the Wisconsin Association of Lakes, and participation in meetings and seminars.
- Partnership with the SEWFRC and CAUSE on projects to improve the Waterway.
- Partnership with Town and Country Research Conservation and Development
- Membership of the Fox River Basin Partnership.
- Membership of the Racine County Lakes Association.
- Attendance at Town and Village of Waterford meetings.
- Participation in and sponsorship of community events.
- Cooperation with the Kenosha/Racine Land Trust.



Clean Boats, Clean Waters Volunteer Training Event

When: On Saturday, April 27, 2013, 1:30 – 4:30 pm

Where: Waterford Town Hall

415 North Milwaukee Street

Free training session to anyone interested in participating in our new Clean Boats Clean Waters (CBCW) program. Christina Wolbers, Aquatic Invasive Plant Specialist with the Wisconsin Department of Natural Resources (WDNR) will lead the activity. This session will prepare volunteers to conduct Clean Boats Clean Waters watercraft inspections at our boat launch sites.

The WWMD is collaborating with Town and Country Resource Conservation and Development (TCRCD) to provide this proactive approach to preventing unwanted Aquatic Invasive Species from entering our waterway. All individuals who complete the workshop can then volunteer to serve as watercraft inspectors this season. Students who would like to complete their community service hours are encouraged to attend.

Refreshments will be served. Questions call 630-306-9620



