



MAYOR AND COUNCIL COMMUNICATION

DATE: 2/2/16

REGULAR

ITEM #: 13

MOTION

AGENDA ITEM: Aquatic invasive Species Grant support

SUBMITTED BY: Clark Schroeder

THROUGH: Clark Schroeder

REVIEWED BY: Clark Schroeder

SUGGESTED ORDER OF BUSINESS:

- Introduction of Item.....Staff
- Report/PresentationStaff
- Questions from Council to Staff..... Mayor Facilitates
- Public Input, if Appropriate..... Mayor Facilitates
- Call for Motion..... Mayor & City Council
- Discussion Mayor & City Council
- Action on Motion Mayor Facilitates

PUBLIC POLICY STATEMENT Policy statement of support for Washington county grants for aquatic invasive species.

SUMMARY AND ACTION REQUESTED: The administrator recommends that the city council support the recommended treatment methods proposed in the grant applications for aquatic invasive species (AIS) in the City of Lake Elmo.

BACKGROUND AND STAFF REPORT: Washington County has received proposals (attached) for Aquatic Invasive Species (AIS) grant funds from the Lake Demontreville and Olson Lake Association, and the Lake Elmo Lake Association. Washington County welcomes Lake Elmo's review of these proposals, and humbly requests that the City provide the County with any comments or feedback on the proposals by February 3, 2016.

All AIS grant requests that meet the requirements of the Request for Proposals issued on December 14, 2015 will be shared with the Washington County Board of Commissioners in a workshop on February 16, 2016. Grant agreements will be finalized between that date and early to mid-March, when formal Board action will be taken to approve projects and grant funding.

RECOMMENDATION:

Motion:

“The City of Lake Elmo supports the Aquatic Invasive Species grants for Lake Demontreville and Olson Lake Association, and the Lake Elmo Lake Association for the 2016 grant period”

ATTACHMENT(S):

Lake Demontreville Olson Association_2016 grant proposal for Washington County AIS funding

Lake Elmo Lake Association_Washington County Grant Application - January 2016

Letter of support



To: Colin Kelly Senior Planner
Washington County

From: City of Lake Elmo

Date: February 2, 2016

The City Council of Lake Elmo do hereby fully support the suggested treatments for Aquatic Invasive Species (AIS) in the grant applications from the Lake Demontreville and Olson Lake Association, and the Lake Elmo Lake Association.

These Washington County grants and the proposed treatments by the above named lake associations are an important part of keeping AIS from spreading to other Washington County lakes in addition to maintaining lake health and recreation options for the proposed lakes.

The City of Lake Elmo encourages Washington County to approve these grants and move forward with these important projects.

On behalf of the whole Lake Elmo City Council.

Mayor Pearson _____

Proposal
for
Washington County AIS Grant funding
of
Lake Demontreville & Lake Olson EWM management project

January 13, 2016

The Lake Demontreville & Olson Association is pleased to submit the following proposal for a Washington County AIS Grant. This proposal requests a \$ 18,750 grant award to reduce Eurasian Water Milfoil (EWM) in Lake Demontreville and Olson using herbicide treatments applied by a licensed contractor in accordance with DNR regulations.

This is the second year of a multi-year program recommended by the Minnesota DNR. Their recommended approach is to manage the impact of EWM infestation by identifying and then treating the highest density EWM areas of each lake up to the maximum annual DNR limit.

Our 2015 project was partially funded by the Washington County AIS grant awarded last year through the Valley Branch Watershed District. Our Association is applying directly for this grant as the VBWD will not be coordinating the 2016 program.

We thank you for the funding Washington County AIS provided to us in 2015. Now, your consideration of this 2016 grant proposal to continue our EWM management program will be gratefully appreciated. If you have any questions or require additional information during the evaluation of this request, please let me know.

Thanks for your support

Roger Johnson, President
Lake Demontreville Olson Association
8048 Hill Trail North,
Lake Elmo, MN 55042

Email: rocan1@comcast.net
Tele: 651-777-7766
Cell: 651-402-8541

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Introduction to Lake Demontreville and Lake Olson:

Lake Demontreville and Olson are very popular east metro Bass fishing lakes which have special DNR "Catch and Release" restrictions. The lakes are also popular for all types of motorized and non-motorized boating activities.

Lake Demontreville is a 157 acre lake and Lake Olson has 89 surface acres. A navigable channel connects their waters. Nearly 90% of their combined 246 acres are "littoral" (under 15 ft deep). Eurasian Water Milfoil (EWM) typically prospers in 1-15 ft water... so EWM is prevalent in mid-lake as well as near shore.

Both lakes are typically less than 1000ft wide. Their shorelines are fully developed with homes on every lot with the exception of the east shore of Demontreville which is occupied by the Jesuit Retreat, Carmelite Convent, and Carmelite Hermitage.

The public access for these lakes is on Demontreville Road with easy access to highway 36. The access parking lot is often filled to capacity. There are 21 parking spots with overflow parking available in Oakdale. According to DNR and City of Lake Elmo studies, the number of launches per hour at the Demontreville boat ramp and the boat density per surface acre on these lakes is typically more than twice that of the other lakes within the City of Lake Elmo.

Profile:

The Lake Demontreville & Olson Association (LDO) is a voluntary organization of shoreline property owners. Its' chartered purpose is to preserve, protect, and improve the water and shoreline health of Lake Demontreville and Lake Olson which are linked via a navigable channel.

The Association originated in 1985 and has sponsored weed and algae control programs since 1991. From 1991 till present, the Association has managed annual shoreline/dockside chemical treatments for reducing Curly Leaf Pondweed infestations and periodic Lake-wide Algae reduction programs whenever Secchi Disc water clarity readings deteriorated below one meter.

The Association's focus expanded to Eurasian Water Milfoil (EWM) when it was first discovered near the Lake Demontreville public landing in 2005. With cooperation from the Minnesota DNR, the LDO association orchestrated a treatment of the public landing bay in 2009. That treatment was successful in reducing EWM for a few subsequent years. Then, in 2012 the EWM began to migrate through Lake Demontreville and in 2014 it moved into Lake Olson. By the spring of 2015 EWM was prevalent throughout both lakes.

In 2015, the Association partnered with the Valley Branch Watershed District (VBWD) on an aggressive multi-lake treatment program which slowed migration and provided excellent seasonal relief to the infestation in Lake Demontreville and Lake Olson. Unfortunately, many EWM plants re-grew through the season and by last fall were at or near the surface across both lakes.

Left unchecked, EWM is projected to be even more invasive during the summer of 2016. It will eventually form mats and entirely cover these small shallow lakes, making them unsuitable for swimming, fishing, or any watercraft activities (motorized or un-motorized). For that reason, LDO Association is seeking Washington County support for a 2016 treatment program similar to the Lake Demontreville and Lake Olson portion of the 2015 project managed by the VBWD. This project will be completed in compliance with all applicable MN DNR rules and regulations.

Project Team:

The Lake Demontreville & Olson Association will lead this 2016 project. The team which may provide support to complete the 2016 EWM reduction project for Lake Demontreville and Lake Olson includes the following entities.

Lake Demontreville Olson Association (LDO)... 8048 Hill Trail North, Lake Elmo, MN 55042

Tele: 651-777-7766 Email: rocan1@comcast.net

Contact: Roger Johnson

The Lake Demontreville & Olson Association (LDO) is a voluntary organization of shoreline property owners. Its' chartered purpose is to preserve, protect, and improve the water and shoreline health of Lake Demontreville and Lake Olson which are linked via a navigable channel.

The Association originated in 1985 and has sponsored weed and algae control programs since 1991. From 1991 till present, the Association has managed annual shoreline/dockside chemical treatments for reducing Curly Leaf Pondweed infestations and periodic Lake-wide Algae reduction programs whenever Secchi Disc water clarity readings deteriorated below one meter.

LDO member/volunteers have coordinated all DNR permitting, chemical spraying by qualified contractors, lake temperature, clarity, and water analysis sampling for its' treatment programs every year since 1991. Association member/volunteers will also lead and provide these services for the proposed 2016 project.

Valley Branch Watershed District... P.O. Box 838, Lake Elmo, 55042

Tele: 952-832-2622 Website: VBWD.org

Contact: David Bucheck

The VBWD is a special purpose unit of local government that manages water resources within an approximately 70 square mile watershed located on the eastern edge of the Minneapolis-St. Paul metropolitan area, in Washington and Ramsey counties. Since its inception, the VBWD has spent over four decades implementing projects, studies, programs, and education to address flooding, water quality, groundwater, and ecological issues within its jurisdiction.

A goal of the VBWD is to improve and protect water resources; to that end, the VBWD seeks to manage AIS in its water bodies. The district provides technical support to state agencies, cities, townships, lake associations, and others seeking to manage AIS within the VBWD's jurisdiction. Technical support provided from 2012 to 2015 included conducting point-intercept plant surveys, preparing lake vegetation management plans, completing AIS management permit applications, designing herbicide treatment programs, providing presentations for public meetings, coordinating with the Minnesota Department of Natural Resources (DNR), and conducting other technical analyses.

The VBWD was the lead for the 2015 multi-lake AIS project which was partially funded by last years' Washington County AIS grant program

Barr Engineering Company... 4700 77th St W, Edina, MN

Tele: (952) 832-2600 Website: barr.com

Contacts: John Hanson or Meg Rattei

Barr Engineering Co. provides engineering and environmental consulting services to clients across the Midwest, throughout the Americas, and around the world. Today, Barr has more than 750 employees located in Minnesota, North Dakota, Missouri, Michigan, and in Alberta, Canada. Working together, their engineers, scientists, and support specialists help clients develop, manage, and restore natural resources.

Barr has prepared aquatic plant management plans for more than 20 lakes and has implemented AIS management projects on seven lakes. These projects have reduced invasive species to low levels and protected native plants from harm. As a subcontractor to VBWD, Barr Engineering coordinated the 2015 multi-lake AIS project which was partially funded by last years' Washington County AIS grant program.

PLM Lake & Land Management Corp... PO box 328, Brainerd, MN 56401

Tele: (218) 568-5379 Website: plmcorp.net

Contact: Paul Selter

For over 30 years, PLM Lake & Land Management Corp has been protecting properties from the aesthetic and economic damage caused by invasive plant species. PLM is one of the largest aquatic herbicide and algaecide application companies in the U.S. Their state-of-the-art equipment uses GPS and computer processors to distribute precise rates of herbicide application regardless of boat speed or direction. PLM regularly performs herbicide applications on AIS-infested lakes and was the applicator which completed the successful 2015 project on Lake Demontreville and Lake Olson.

Lake Improvement Consulting LLC... 13787 40th Street North, Stillwater, Mn 55082

Tele: 952-944-2565 Website: lakeimprovementconsulting.com

Contact: Paul Kaari

Lake Improvement Consulting has provided annual shoreline and algae reduction treatment services to Lake Demontreville and Lake Olson more than a decade. They also were the applicator for the 2009 EWM treatment of the public landing bay of Lake Demontreville. Lake Improvement Consulting also provides lake vegetation management services to many other lakes and ponds in Washington County and throughout the state. Their new state of the art computer/GPS system assures precise herbicide placement to optimize treatment results.

Lake Restoration Inc... 12425 Ironwood Circle, Rogers, Minnesota 55374Tele: (763) 428-9777 Website: lakerestoration.com

Contact: Chad Hadler

Lake Restoration has managed aquatic vegetation in lakes and ponds since 1977. Their application technique uses a microprocessor for uniform application of the product. After the appropriate application rate is entered into the microprocessor, the valves adjust the flow of aquatic herbicide being applied based on the speed of the application boat. Adjustable height submerged trailing hoses are used for aquatic herbicide application placement within the biomass of the target plant species. GPS-enabled application equipment accurately places the aquatic herbicide within the approved treatment location. Lake Restoration performed the 2011 and 2013 applications on Long Lake.

Endangered Resources Services, LLC... 572 North Day Road, St Croix Falls, WI 54024

Tele: (715) 483-2847

Contact: Matthew Berg saintcroixdfly@gmail.com

Since 2002, Endangered Resources Services has provided biological surveys including baseline data, long-term monitoring, and habitat restoration projects. They specialize in conducting point-intercept plant surveys on lakes and rivers for clients such as the National Park Service, Department of Natural Resources, private engineering firms, and lake associations. Specialty areas also include aquatic and emergent plants, freshwater mussels, dragonflies, and breeding songbirds. Endangered Resources Services completed annual point-intercept surveys on Long Lake, Lake DeMontreville, Lake Olson, Lake Jane, and Lake Elmo during 2012 through 2015.

Freshwater Scientific Services, LLC... 18029 83rd Ave N, Maple Grove, MN 55311

Tele: (651) 336-8696

Contact: James Johnson

Freshwater Scientific Services has been in the business of aquatic plant monitoring & management planning since 2003. They have vast experience in evaluation of lake-wide, early season herbicide treatments for controlling invasive species in Minnesota lakes. And, they have evaluated the effects of repeated, early season, herbicide treatments on the native macrophyte assemblages.

Blue Water Science, LLC... 550 Snelling Ave, St. Paul, MN 55116

Tele: 651-690-9602

Contact: Steve McComas

Blue Water Science, has been working on lakes and streams for over 30 years and specializes in lake management and lake restoration projects with an emphasis on innovative approaches for lake protection and improvement. They have conducted hundreds of aquatic plant management surveys throughout the Midwest.

Project description:

2016 Lake Demontreville & Lake Olson EWM management project.

The proposed project is to reduce EWM density in Lake Demontreville and Lake Olson using herbicide treatments applied by a licensed contractor in accordance with DNR regulations.

This is the second year of a multi-year program recommended by the Minnesota DNR. The approach is to manage the impact of EWM by identifying and then treating the highest density EWM areas of each lake up to the maximum allowable DNR limit.

Project Goals:

The long term goal of this project is to reduce the EWM infestation of Lake Demontreville and Lake Olson. The 2016 goal is to knock down the EWM plants in the spring and to reduce the formation of EWM surface mats throughout the summer months. Accomplishment of this goal means less EWM plant fragmentation which reduces spread of the plant within the lake, less downstream migration, and fewer transfer of EWM to other lakes via contaminated boats and trailers.

Scope of work and timeline:

May –June 2016...timing is dependent on ice out date and water temperatures

1. Complete a spring EWM delineation survey to identify high density EWM areas for treatment.
2. Work with DNR Aquatic Invasive Species specialists to define appropriate EWM treatment areas.
3. Gain approval for DNR Aquatic Invasive Species permit to apply proper herbicide dosage to target EWM growth areas.
4. Contract with licensed applicator to treat permitted areas in accordance with DNR regulations.
5. Monitor lake water temperature gradient to determine optimum timing of treatments.
6. Coordinate timely application of DNR approved herbicide by the licensed applicator/contractor.
7. Collect water samples and coordinate lab analysis of herbicide concentrations 1 and 3 days after treatment if such is required by DNR permit.

July 2016

8. Complete a post treatment assessment of EWM plant kill/survival 30 days after treatment.

Implementation plan, Deliverables, and Performance Measurements:

1. Spring EWM delineation with GPS mapping of highest density EWM areas completed by LDO volunteers or contractor.
2. Approved DNR Aquatic Invasive Species permit for target treatment area.
3. Treatment report issued by licensed applicator/contractor after herbicide application.
4. Post treatment 30 day assessment report completed by LDO volunteers or contractor.

Budget:

Spring EWM delineation study	\$ 1,500
DNR Aquatic Invasive Species permit fee	\$ 0
Licensed applicator treatment and reporting expense*	\$ 15,000
Water sample analysis	\$ 750
Post treatment assessment study	\$ 1,500
<hr/>	
Total project	\$ 18,750

* Herbicide treatment cost is dependent upon depth and diversity of treatment areas. The cost is not finalized till a DNR permit is issued with the treatment area defined. The above \$15,000 estimate is based on last falls' assessment of high density EWM locations and the expectation of related treatment area/depth.

Project costs not funded by this Washington County grant will be paid by the Lake Demontreville & Olson Association, with possible additional funding assistance from the DNR, VBWD, and/or City of Lake Elmo.

Outreach/Collaborations:

LDO has established a great relationship with the DNR and VBWD. We have worked together to plot a course for appropriate and careful AIS management of the EWM infestation of Lake Demontreville and Lake Olson. The treatment plan presented in this grant request is the second year of the agreed upon program. Results from this year will be reviewed and used in our further efforts to control EWM in our lakes and others throughout the state.

LDO is an active participant on the VBWD Citizen Advisory Committee on invasive species. Representatives from all five Washington County lakes within the Valley Branch Watershed serve on the committee. The committee meets regularly to collaborate regarding invasive species issues, including management of current AIS infestations and prevention of additional AIS infestations.

LDO members have also participated in the Washington County Conservation District AIS meetings to share experiences with lake associations throughout the county.

Evidence Supporting Approach:

The herbicide approach we are employing to manage the EWM infestation of Lake Demontreville and Lake Olson is the most aggressive allowed by the MN DNR. As mentioned earlier, we are in the second year of this long range program...the final outcome of which will not be apparent for several more years.

Prior Washington County Work and potential conflicts:

This is the second year of a multi-year EWM reduction program recommended by the Minnesota DNR. The approach is to manage the impact of EWM by identifying and then treating the highest density EWM areas of each lake up to the maximum annual DNR limit.

The first year was partially funded by the 2015 Washington County AIS grant awarded last year through the Valley Branch Watershed District. Our Association is applying directly for this 2016 grant as the VBWD will not be coordinating this year's program.

No conflicts of interest are known to exist between Washington County, our association and/or any of our supporting team.



Lake Elmo Lake Association

PO Box 78

Lake Elmo, MN 55042

January 12, 2016

Mr. Colin Kelly, Senior Planner
Office of Administration, Room 5506
Washington County
14949 62nd Street N
Stillwater, MN 55082

colin.kelly@co.washington.mn.us
651-430-6011

Dear Mr. Kelly,

The Lake Elmo Lake Association (LELA) is applying for a grant of \$18,000.00 through Washington County as part of the State of Minnesota's Aquatic Invasive Species Prevention Aid specifically for Lake Elmo lake.

We appreciate the opportunity to apply for funds that help address the invasive species of Lake Elmo Lake on behalf of both the local community and the Lake Elmo Regional Park in Washington County.

Please don't hesitate to contact me if you have any questions or need additional information.

Sincerely,

Wendy Griffin, President
Lake Elmo Lake Association

Enclosed: Request for Proposal

cc: Lake Elmo Lake Association's Board of Directors



Proposal to

Prevent the Spread of Aquatic Invasive Species

Prepared for

Washington County

Submitted by

Lake Elmo Lake Association

January 12, 2016

ORGANIZATION/ENTITY

Lake Elmo Lake Association
PO Box 78
Lake Elmo, MN 55042

PRIMARY CONTACT

Wendy Griffin, President
Lake Elmo Lake Association
PO Box 78
Lake Elmo, MN 55042
Email: wlgriffin9@gmail.com
Phone: 651-249-9318 (cell)

SUPPORTING/PARTICIPATING ORGANIZATIONS

- City of Lake Elmo
- Lake Elmo Lake Association

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Exhibits (Reference Information): <ul style="list-style-type: none"> <i>Exhibit A: Map of Lake Elmo lake with identified Eurasian Watermilfoil (Source: Valley Branch Watershed District 2015 Plant Survey Results – Figure 45)</i> <i>Exhibit B: Results of Lake Monitoring (Source: Valley Branch Watershed District – pages 102 and 103)</i> <i>Exhibit C: 2012-2015 Lake Elmo Eurasian Watermilfoil Frequency of Occurrence at Sites Shallower than Maximum Depth of Plant Growth (Source: Valley Branch Watershed District 2015 Plant Survey Results – Figure 44)</i> <i>Exhibit D: 2012-2015 Lake Elmo Frequency of Occurrence in Plant Growth Area of the Lake (Source: Valley Branch Watershed District 2015 Plant Survey Results – Figure 47)</i> <i>Exhibit E: 2015 Commercial Mechanical Control Companies (Source: MN DNR)</i> 	Pages 8 – 13

PROPOSAL

Preventing the spread of invasive species

The Lake Elmo Lake Association (LELA) proposed project will help prevent further spread of Eurasian Watermilfoil in Lake Elmo lake and will also help protect further spread to other Washington County lakes and waterways. The LELA is proposing to harvest the invasive species when it reaches the water surface or to a depth that recreational activities will likely disturb and transport it to unaffected areas. By harvesting the Eurasian Watermilfoil near the surface of the water will help the weed from getting caught on recreational watercraft and sporting equipment, thus minimizing the opportunity for the invasive weed to be further spread around the lake as well as to other nearby lakes or recreational waterways. Our first option would be to use chemicals to eradicate it from the lake, however the LELA was informed that this was not an option for Lake Elmo. (See Exhibit A – map of Lake Elmo lake with identified Eurasian Watermilfoil)

Approximately 6,000 feet (almost 50%) of Lake Elmo's shoreline is a part of the Lake Elmo Park Reserve, a part of the Washington County Park system, which is visited by several hundred thousand visitors per year. The remaining lakeshore is privately owned by approximately 56 lakeshore landowners. We estimate that on a daily average 10-20 public boaters launch their boats through the Regional Park into Lake Elmo.

Lake Elmo lake was confirmed to have Eurasian Watermilfoil in 2005 and in 2007 it was listed by Minnesota DNR as infested with Eurasian Watermilfoil. It was only after LELA received a small grant in 2015 to hand harvest the invasive species that there had been an approved treatment plan put into practice to help address the growing problem.

Lake Elmo Lake Association (LELA) incorporated in late 2014 and is an active "hands on" Association with a mission of protecting, promoting and maintaining the environmental, safety, and recreational assets of the lake. LELA is committed to working in conjunction with federal, state, and local agencies, as well as public and private partnership to maintain the quality of the lake. LELA understands the value of providing educational resources to the visitors and our neighbors to assist in the protection and quality of the Lake area and its wildlife. Landowners have been active for over three years by monitoring the lakes quality once every two weeks between ice off to the middle of October. This data is submitted to Metropolitan Council as a method to provide continuous evaluation of the lake. (See Exhibit B – Results of Lake Monitoring)

In 2015 the Association worked collaboratively with the Valley Branch Watershed District and other local units of government and applied for and received our first grant for preventing the spread of invasive species (Eurasian Watermilfoil). The grant funds were used in September 2015 in a small harvesting process through the services of qualified divers to pull and dispose of Eurasian Watermilfoil focused on the north and eastside of the lake. The Association contributed over \$700.00 of their funds to extend the area the divers treated. The Association met all grant requirements and will be monitoring the areas treated through the 2015 grant during 2016.

Profile

Primary Contact: Wendy Griffin

- Wendy is a twenty-three year employee of Washington Conservation District. Wendy has seventeen years' experience monitoring the lakes of Washington County for Dissolved Oxygen, temperature, clarity of the water, water levels, total suspended solids, and chlorophyll A along with some identification of lake vegetation.
- Wendy is a lifelong resident of Lake Elmo and has been monitoring Lake Elmo lake for the past three years on behalf of the Valley Branch Watershed District for the Met Council CAMP program.
- Wendy is the President of the Lake Elmo Lake Association and was instrumental in getting the Association up and running. Wendy recruited board members, oversaw, the creation of the by-laws, obtained tax exempt status, facilitates annual membership and board meetings, oversees fundraising events, and works collaboratively with the board to seek solutions to the eradicating Eurasian Waterfoil in Lake Elmo lake and at the same time preserve the native plants.

Project Description

Eurasian Watermilfoil was discovered in Lake Elmo in fall 2005 and has spread throughout the vegetated areas of the lake during the past decade. Frequency of occurrence during 2012 through 2014 has ranged from 34 to 44 percent of sample points within the vegetated area of the lake, producing problematic conditions annually. Because the public boat landing and half of the lake's shoreline are located within the Lake Elmo Park Reserve, the lake is a popular attraction for park visitors. The problematic conditions caused by Eurasian Watermilfoil adversely impact the recreational experience of lake visitors and increase the risk that Eurasian Watermilfoil will spread to other Washington County lakes. A boat survey conducted by the City of Lake Elmo during a 10-day period in June 2013 indicated that, on average, approximately 10 boats per day were seen on Lake Elmo; 10 opportunities per day to spread Eurasian Watermilfoil to other Washington County lakes. (See Exhibit C-Figure 44 and Exhibit D-Figure 47)

LELA is seeking grant funds to hire a commercial harvesting company as a way to address the invasive species and enhance recreational value of the lake. Treatment of this lake is currently limited to non chemical/herbicide methods as the lake has been identified with a shore land classification as a natural environment lake. This vastly limits treatment options while at the same time treatment is an important component in order to manage invasive species, Eurasian Watermilfoil, and to reduce the spread of such in Lake Elmo lake and other lakes in the County. (See Exhibit E – 2015 Commercial Mechanical Control Companies)

The vendor services of a commercial harvesting company to harvest Eurasian Watermilfoil in for 20 acres, in the highest density areas as outlined on Exhibit E. This will provide the Association with a baseline, along with the initial manual harvesting conducted in late 2015, in order to monitor the growth and spreading of this invasive species. Based on 2015 quote we believe the cost will be \$1,000.00 per acre.

The lake has been experiencing an increase of the spread of Eurasian Watermilfoil and with the limitations to treatment options the Association is looking to work in collaboration with Washington County (as part of lakeshore ownership) and is seeking financial assistance from Washington County through this grant opportunity so the Association can continue to address the Eurasian Watermilfoil.

Project Goals:

The project goal for the commercial harvesting treatment of Lake Elmo lake in 2016 is to reduce the impact of Eurasian Watermilfoil after harvesting to decrease the amount of milfoil caught on boats, thus reducing the possible spreading to unaffected areas on the lake or to other lakes, and enhancing the recreational value of Lake Elmo and other Washington County water ways.

Implementation Plan, Deliverables, and Performance Measurement**Implementation Plan:**

Upon approval of the proposal the Lake Elmo Lake Association will contact the commercial vendor to schedule date(s) from which the milfoil harvesting will have the best outcome. We will consult with Minnesota DNR, and other experts to determine best time and method of harvesting to get the best possible outcome as described previously. LELA understands that communications is a critical aspect of this project and is prepared to establish an effective communication plan intended for the lakeshore owners. LELA is also aware that it needs to obtain a permit from Minnesota DNR and is prepared to apply and work with Minnesota DNR in obtaining a permit as soon as LELA receives an affirmative response to our proposal. If successful in receiving funding LELA will document pre and post harvesting data and is prepared to submit the findings to Washington County.

Deliverables:

Final report that encompasses all data document and monitoring of the lake completed by Association members.

Performance Measurement:

- Monitoring growth rate every two weeks (height).
- Monitoring acreage increasing in milfoil.
- Treatment locations will be documented through GPS

Timeline

Support of this grant provides LELA the ability to work towards a multi-year approach of preventing the spread of invasive species (Eurasian Watermilfoil). If the full grant amount is awarded, the Association will support the following timeline and plan. If only a portion of the funds is awarded the Association will put into place a plan that supports the grant funds received.

Full grant funds awarded:

Task	Estimated Completion Date*
1.0 Schedule vendor for commercial harvesting of up to 20 acres	March 2016
2.0 Send out notifications of harvesting plan to residents of Lake Elmo	April 2016
3.0 Document growth of Eurasian Watermilfoil in the areas planned to be harvested	March through October 2016
4.0 Obtain DNR permits for commercial harvesting	May 2016
5.0 Commercial harvesting to occur	(TBD based on expert advice) Summer of 2016

6.0	Post treatment documenting of areas where commercial harvesting occurred	Immediately following harvesting
7.0	Document and monitor growth of Eurasian Watermilfoil in treated areas throughout summer and fall of 2016	Summer/Fall 2016
8.0	Data summary and analysis	Fall 2016
9.0	Grant Report	December 31, 2016

*Actual completion dates of several activities are dependent on the date of ice-out and how quickly the lakes warm. It is estimated that the activities associated with treatment will occur in spring and/or fall, although an early xxx treatment is possible if a late ice-out occurs.

Outreach/Collaborations/Letters of Support

The City of Lake Elmo provides full support to the Lake Elmo Lake Association taking the lead in addressing invasive species (Eurasian Watermilfoil) in Lake Elmo lake. The Association plans to seek future funding from the City of Lake Elmo to assist with some of the future costs of implementing such plans.

A representative of the Lake Elmo Association is part of the Valley Branch Watershed Citizen Advisory Committee on invasive species. The committee meets regularly to collaborate regarding invasive species issues, including management of current AIS infestations and prevention of additional AIS infestations.

Evidence Supporting Approach

Due to the current limitations for treatment on Lake Elmo lake using a harvesting approach is the only option presented to LELA by Minnesota DNR. Lake Elmo lake has been monitored for over three years, by a Lake Elmo lake resident, and the Association will continue to monitor the lake and provide the results of the data/information obtained through monitoring to local units of government including Washington County and Minnesota DNR.

Budget

The budget request for this grant project is \$20,000.00. The Lake Elmo Lake Association is matching 10% of the requested amount (\$2,000.00) to support the project.

INCOME:	
Washington County Grant	\$18,000.00
Lake Elmo Lake Association (match)	\$2,000.00
TOTAL INCOME:	\$20,000.00
EXPENSES:	
Commercial Harvesting (Vendor)	\$20,000.00
TOTAL EXPENSES:	\$20,000.00

Budget Narrative:

- Harvesting Vendor: Harvesting 20 acres. LELA received an estimate in 2015 that was approximately \$1,000/per acre.

Prior Washington County Work and Potential Conflicts of Interest

To the best of our knowledge, no conflict of interest exists that would interfere with the Association's ability to complete work as identified in this proposal.

Acceptance of Grant Agreement

The Lake Elmo Lake Association accepts all general proposal requirements of the Request for Proposal to Prevent the Spread of Aquatic Invasive Species in Lake Elmo lake, located in Washington County and the grant agreement terms in Appendix B.

County Participation

The Lake Elmo Lake Association is requesting staff at the Lake Elmo Regional Park to distribute educational materials on the prevention of spreading invasive species from lake to lake.

Attachments

- Exhibit A: Map of Lake Elmo lake with identified Eurasian Watermilfoil (Source: Valley Branch Watershed District 2015 Plant Survey Results – Figure 45)
- Exhibit B: Results of Lake Monitoring (Source: Valley Branch Watershed District – pages 102 and 103)
- Exhibit C: 2012-2015 Lake Elmo Eurasian Watermilfoil Frequency of Occurrence at Sites Shallower than Maximum Depth of Plant Growth (Source: Valley Branch Watershed District 2015 Plant Survey Results – Figure 44)
- Exhibit D: 2012-2015 Lake Elmo Frequency of Occurrence in Plant Growth Area of the Lake (Source: Valley Branch Watershed District 2015 Plant Survey Results – Figure 47)
- Exhibit E: 2015 Commercial Mechanical Control Companies (Source: MN DNR)

Bar Foster ArcGIS 10.3.1 2015-10-02 10:29 File: I:\Client\VS\DD\OfficeWork - Orderville Lake Monitoring\Map\Report\2015\00 Data Summary Report\Figure 45 - Lake Elmo Eurasian Watermilfoil Extent - June 2015.mxd User: KAC2



- EWM Sample Locations (June 2015)
- Not Observed
 - Visual but not on rake
 - Density = 1
 - Density = 2
 - Density = 3
 - Density = 4
 - Additional Canopied EWM Beds
 - Maximum Depth of Plant Growth
 - Approximate Extent of EWM

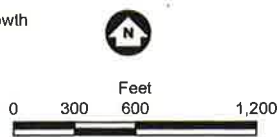


Figure 45
LAKE ELMO EURASIAN
WATERMILFOIL EXTENT,
JUNE 2015
Lake Elmo (82010600)
Washington County
Valley Branch Watershed District

Lake Elmo (82-0106) Valley Branch Watershed District

Volunteer: Wendy Griffin, Jeff Berg

Lake Elmo is located in Lake Elmo (Washington County). It is considered a Priority Lake by the Metropolitan Council for its high regional recreation value and exceptional water clarity (METC 2007). The 284-acre lake has a maximum depth of 41.7 m (137 ft) which is the deepest lake in the TCMA. The MN DNR has designated the lake as being infested with Eurasian water milfoil (*Myriophyllum spicatum*). The MPCA has listed the lake as impaired for perfluorooctane (PFO) content in fish.

On each sampling day the lake was monitored for total phosphorus (TP), chlorophyll-a (CLA), total Kjeldahl nitrogen (TKN), and secchi transparency, as well as the lake's perceived physical condition and recreational suitability. The resulting data are summarized in tables and figures on the following pages.

2013 summer (May - September) data summary

Parameter	Mean	Minimum	Maximum	Grade
TP (µg/l)	16	8	31	A
CLA (µg/l)	2.4	1.4	3.3	A
Secchi (m)	5.7	2.8	7.0	A
TKN (mg/l)	0.60	0.44	1.00	
			Lake Grade	A

The lake received a lake grade of A for 2013. The lake has typically received A lake grades since the late 1980s. Continued monitoring is suggested to continue to watch potential TP changes in the lake.

Throughout the monitoring period, the volunteer's opinions of the lake's physical condition and recreational suitability were ranked on a 1-to-5 scale. These user perception rankings are shown on the following page.

The Fisheries Section of the Minnesota Department of Natural Resources (MDNR) has conducted a fisheries survey on the lake. Information on the survey can be obtained through the MDNR Fisheries Section by calling (651) 259-5831 or by downloading the information off the Internet at <http://www.dnr.state.mn.us/lake-find/>.

If you notice any errors in the lake's data or physical information, or are aware of any additional or missing information, please contact Brian Johnson of the Metropolitan Council at (651) 602-8743 or brian.johnson@metc.state.mn.us.

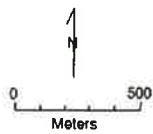
Exhibit B (1)

Exhibit B (a)

Lake Elmo Lake Elmo, Washington Co.

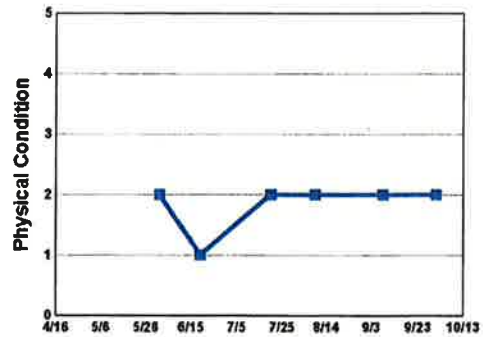
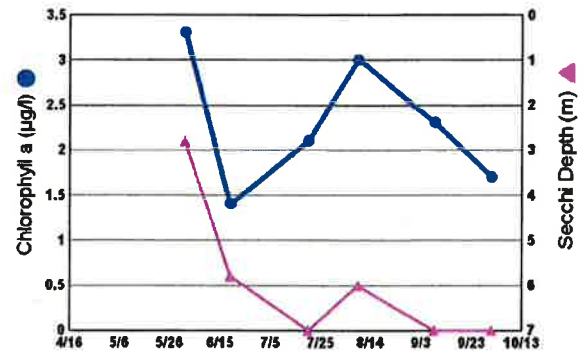
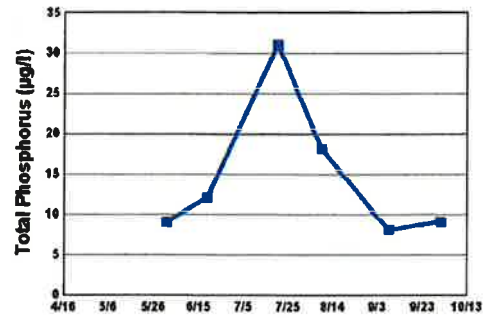
Lake ID: 820106-00

● Sampling site
Contours in meters

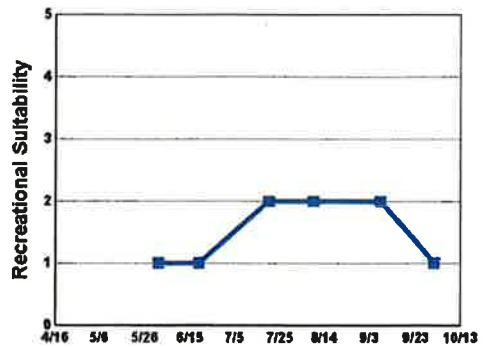


2013 Data

Date	SURF-TEMP (°C)	SURF DO (mg/L)	CLA (µg/L)	SURF TP (µg/L)	Secchi (m)	PC (1-5)	RS (1-5)
6/1	18.4		3.3	9	2.8	2	1
6/19	22.3		1.4	12	5.8	1	1
7/20	25.5		2.1	31	7.0	2	2
8/9	23.0		3.0	18	6.0	2	2
9/8	24.7		2.3	8	7.0	2	2
10/1	18.2		1.7	9	7.0	2	1



1 = Crystal Clear
2 = Some Algae Present
3 = Definite Algal Presence
4 = High Algal Color
5 = Severe Algal Bloom



1 = Beautiful
2 = Minor Aesthetic Problem
3 = Swimming Impaired
4 = No Swimming; Boating OK
5 = No Aesthetics Possible

Lake Water Quality Grades Based on Summertime Averages

Year	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
TP	B	A	B		B				B			A
CLA	B	A	B		A				A			A
Secchi	C	B	C		B	A	B	B	A	A	A	A
Lake Grade	B	A	B		B				A			A

Year	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
TP			A									
CLA			A									
Secchi	A	A	A									
Lake Grade			A									

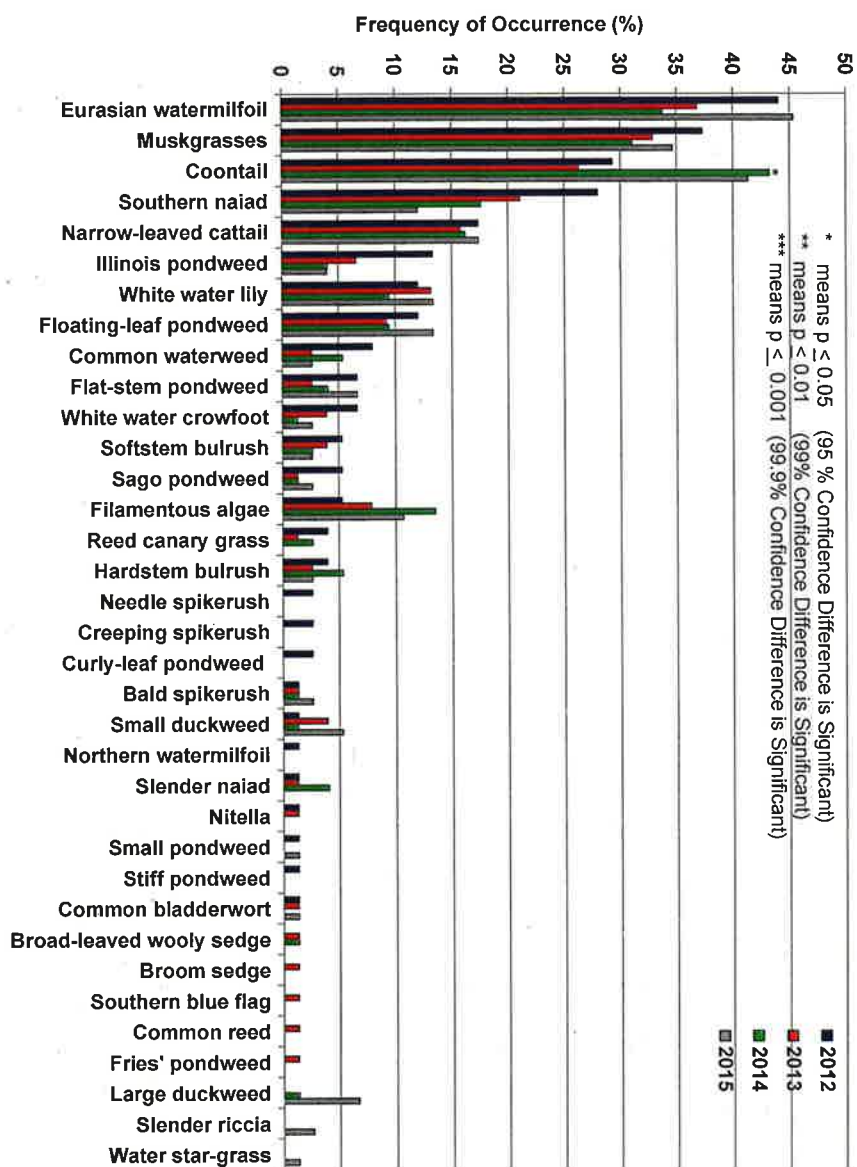
Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
TP		A	A	A	A	A	A	C	A	A
CLA		A	A	A	A	A	A	A	A	A
Secchi		A	A	A	A	A	A	A	A	A
Lake Grade		A	A	A	A	A	A	B	A	A

Source: Metropolitan Council and STORET data

Exhibit C

To: VBWD Managers
 From: Meg Rattei
 Subject: VBWD June 2014 Point-Intercept Macrophyte Surveys
 Date: October 1, 2015
 Page: 73
 Project: 23820405
 c: John Hanson, Susannah Toreth, Ray Roemmich, Melissa Inse

2012-2015 Lake Elmo: Frequency of Occurrence



Note: * indicates a significant change in frequency of occurrence between years

Figure 47 2012-2015 Lake Elmo Frequency of Occurrence in Plant Growth Area of the Lake

To: VBWD Managers
From: Meg Rattei
Subject: VBWD June 2014 Point-Intercept Macrophyte Surveys
Date: October 1, 2015
Page: 70
Project: 23820405
c: John Hanson, Susannah Torseth, Ray Roemmich, Melissa Imse

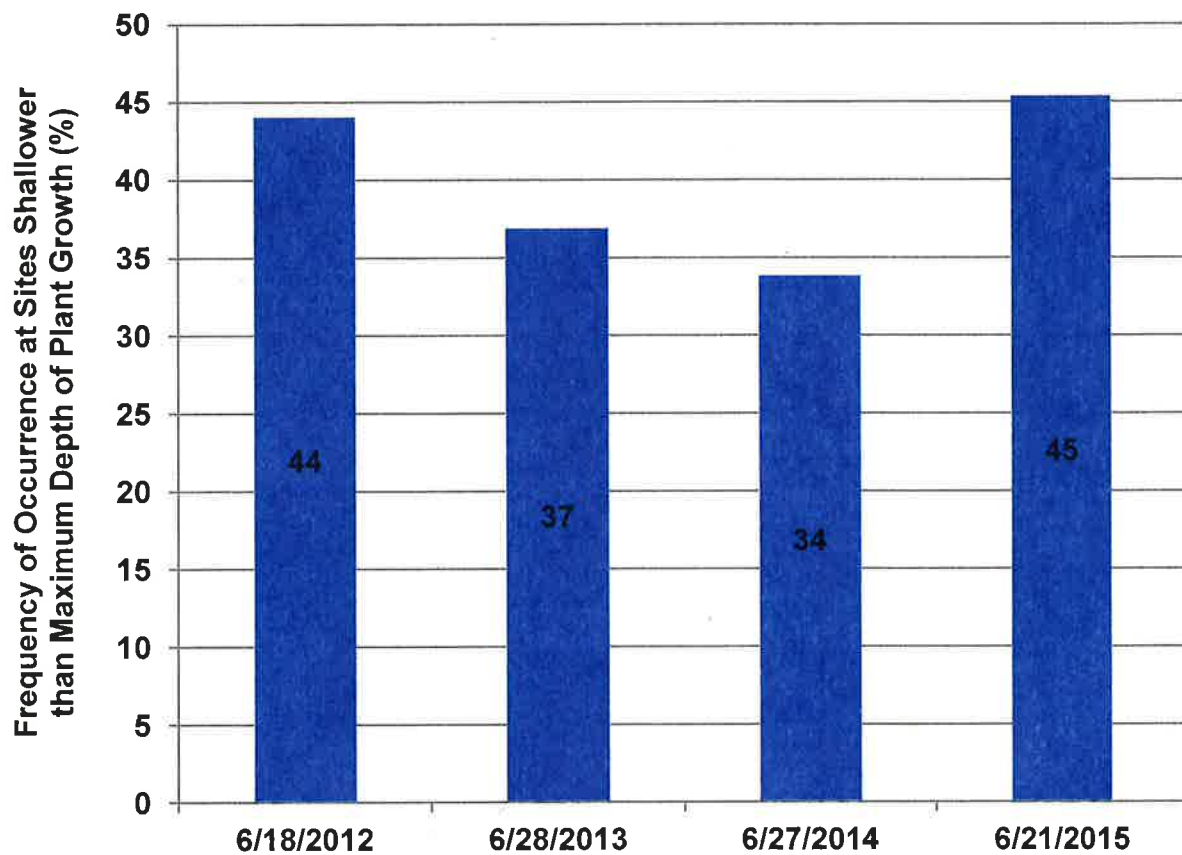


Figure 44 2012–2015 Lake Elmo Eurasian Watermilfoil Frequency of Occurrence at Sites Shallower than Maximum Depth of Plant Growth



Exhibit E (1)

2015 COMMERCIAL MECHANICAL CONTROL COMPANIES

Business Name	Key	Applicant Name	Address	City	State	Zip	Contact #	email
Alex's Lawn and Turf	3	Melvin Kuhens	641 Heinel Dr.	Roseville	MN	55113	(651) 247-1444	mel@alexslawnandturf.com
Aquatic Weed Harvesting	1	Keith Borg	29724 St. Hwy 108	Henning	MN	56551	(218) 583-3546	aquaticweedharvesting@yahoo.com
Bobby's Beaches	3	Robert (Bobby) Thibault	5392 Lexington Ave.	Shoreview	MN	55126	(651) 271-1148	bobbysbeaches@gmail.com
Clear Shores LLC	5	David Hogetvedt	3333 Jackson Ave. SW	Bemidji	MN	56601	(218) 308-7880	clearshoresllc@gmail.com
Creekside Services	3	Cody Essig	18121 Kelly Lake Rd.	Carver	MN	55315	(952) 292-0002	ctez400@hotmail.com
Dive Guys LLC	5	Matt Wilkie	817 Sibley Memorial Hwy	Lilydale	MN	55118	(651) 528-6600	mwilkie@diveguysmn.com
Hollenkamp's Waterfront Services	2	Amy Hollenkamp	9187 Apple Road	Pine City	MN	55063	(763) 267-8412	Amy.Hollenkamp@yahoo.com
J&N Weed Harvesting	5	Jeremy Ketterling	301 West 5th Street	Bottineau	ND	58318	Jeremy cell (701) 871-1388	Noel cell (701) 871-1035
Jacobson Environmental, PLLC	5	Wayne Jacobson	5821 Humboldt Avenue North	Brooklyn Center	MN	55430	(612) 802-6619	www.jacobsonenvironmental.com
JCK Services	2	Jeff Koski	3629 Hawkweed Ln.	Pine River	MN	56474	(218) 537-0264	jkoski52@gmail.com
Kamp Dels	4	Tobin Pope	14842 Sakatah Lake Rd.	Waterville	MN	56096	(507) 362-8616	tobinperry@iwon.com
King's Lakes Harvesting	5	Stephen L. King	1228 Lincoln Ave.	Detroit Lakes	MN	56501	(701) 799-7994	
Lakeland General Store	1	Robin Johnson	22438 Old 59 Road	Pelican Rapids	MN	56572	(218) 863-5703	LLTVDOCKS@yahoo.com
Lake Management /Clearwater Cutting	3	Mike O'Connell	10400 185 th Street N.	Marine on St. Croix	MN	55047	(651) 257-2451	mike@lakemanagementinc.com
Lake Region Aquatic Weed Harvesting	5	Steven S. Gordon	PO Box 972	Detroit Lakes	MN	56501	(218) 784- 8067	Sgordon2010@live.com
Lakescape LLC	3	Tom Lecy	20920 Oak Lane	Greenwood	MN	55331	(952) 607-8966	thomas.lecy@lakescapellc.com
Lakeshore Potential	4	Dan Sendle	18624 Shelby Ct.	Waterville	MN	56096	(507) 382-5067	dsendle@lakeshorepotential.com
Lakewood Removal	1	Darwin Stall	11846 U.S. HWY 59 S.	Detroit Lakes	MN	56501	(218) 849-4848	
Life's A Beach Shoreline Services	3	Josh Leddy	4309 Wilshire Blvd	Mound	MN	55364	(763) 458-0568	cleanbeaches@gmail.com
Nelson Lawn and Landscaping	3	Aaron Mehus	7308 Aspen Lane N. Suite B.	Brooklyn Park	MN	55428	(612) 888-6525	nelsonlawnandlandscaping@gmail.com

Exhibit E (a)

Business Name	Key	Applicant Name	Address	City	State	Zip	Contact #	email
Northern Shores Marine Services	5	Gregg Martinson	20528 Williams Road SE	Cass Lake	MIN	56633	(218) 407-0121	northernshores@hushmail.com
Pristine Shorelines	1,4	William Meyer	13444 Valley Road	Wilmot	SD	57279	(605) 949-0969	wmeyer@tnics.com
R.R. Handyman Aquatic Weed Harvesting	1,2	Randy W. Rider	PO BOX 116	Marrifield	MIN	56465	(218) 851-7383	rwpabr@msn.com
R&T Aquatic Weed Harvesting	5	Theresa Brown	3420 148 th St. West	Rosemount	MIN	55068	(952) 288-6910	rtaquaticweed@gmail.com
Tonka Freshwater Harvesting Services, Inc.	3	Brandon Weinzierl	12780 98TH St.	Cologne	MIN	55322	(952) 472-8700	weinzierlbrn@yahoo.com
Waterfront Restoration LLC	5	Thomas R. Suerth	P.O. Box 783	Long Lake	MIN	55356	(952) 356-0614	admin@waterfrontrestoration.com

Key: (1)= Northwest Region (2)= Northeast Region (3)= Central Region (4)= Southwest Region (5)= Statewide