



8/25/2017 Property 4400 "before"



8/6/2018 Property 4400 "after" 9/18/2017 spraying and then digging of several isolated YFI plants early in 2018. This site was restored in 2018 using a "double" Healthy Lakes Grant.

Property 2100



6/18/2015 Property 2100 “before” – this is a 40’-50’ stretch of mature YFI about 3’ deep. This was one of the largest sites on the lake as the project began.



6/12/2017 Property 2100 “after” spraying 9/8/2016. Spraying was about 65% effective.



6/12/2017 Property 2100 "after" spraying 9/8/2016 – closeup. YFI nearest the lake was eliminated but remains further shoreward.

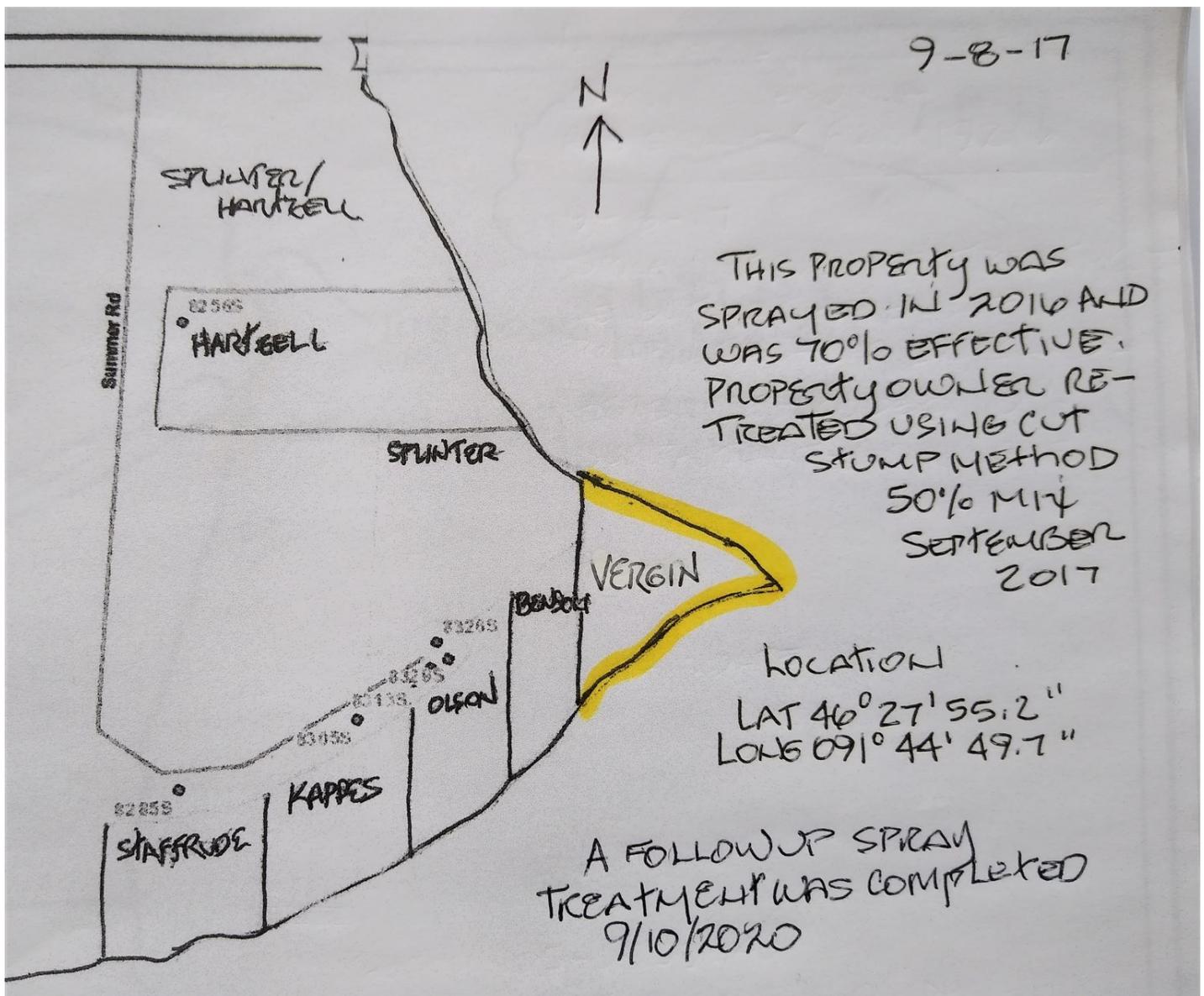


6/30/2019 Property 2100 "after" spraying 9/8/2016 and retreatment spray 9/8/2017. Most all YFI is gone and Joe Pye Weed has returned and sweet gale is thriving. 2 spray treatments have resulted in 80% effectiveness on an area that was extremely heavily infested.

Property 9300

During the 2015 annual assessment, the shoreline of this property was found to be almost completely infested with YFI. On our herbicide permit application for 2016, the NE facing shore was estimated to have a stand of YFI 55' long and about 3' deep and the SE shore 45' long and 3' deep.

As shown on the included map, the property is totally exposed to northeast, east, and southeast sun, wind, and waves. As the photos show, much of the natural shoreline vegetation had been removed and turf grass planted in the buffer zone. This left the exposed shore areas ripe for YFI infestation. Seeds, carried from pods opening elsewhere on or near the lake, lodged on the shore. The exposed sun conditions eventually resulted in a ripe crop of YFI.





6/18/2015 Property 9300 NE shore "before"



6/12/2017 Property 9300 NE shore "after" initial spraying 9/8/2016. Massive rhizome clods (i.e. 3' long and 18" to 20" in diameter) were left on the shore showing nothing green.



6/26/2019 Property 9300 NE shore “after” initial spraying 9/8/2016, property owner cut stump treatment in 2017 and spray retreatment in 2018. A follow up spray retreatment was completed 9/10/2020.



6/18/2015 Property 9300 SE shore “before”



6/12/2017 Property 9300 SE shore “after” initial spraying 9/8/2016. The 2016 spraying was about 70% effective at eliminating YFI



7/31/2018 Rhizome mass after spraying. This mass is approximately 4' long. Some YFI life remains.



6/26/2019 Property 9300 SE shore "after" initial spraying 9/8/2016, property owner cut stump treatment in 2017 and spray retreatment in 2018. Some small YFI plants remain. A follow up spray retreatment was completed 9/10/2020.



9/4/2020 YFI rhizome shown. Even after spraying multiple times over several years, some YFI can persist.

6. Next Steps

In the next couple of years the plan should be to keep the communication and education flowing to stakeholders and property owners with the goal of continuing to inspire lake shore property owners to maintain any YFI growing on their own and on public properties. “Maintenance” will include seed pod cutting and/or cutting of the entire plant.

An association organized seed pod cutting each summer would go a long way to continuing to contain YFI at its current level. Targeted cut stump herbicide treatment may be needed.

It’s likely another complete assessment and inventory will need to be made in the next 5 years. Pending the result, an appropriate action plan can be put in place.

7. Appendix

Sample volunteer signup sheet used at annual meetings

YELLOW FLAG IRIS VOLUNTEER SIGN UP

WEEK OF JULY 24th TO CUT & BAG
OR
EARLY SEPTEMBER TO WORK WITH
PROPERTY OWNERS ON HERBICIDE
APPLICATION

<u>NAME</u>	<u>PHONE</u>	<u>EMAIL</u>
JOAN CORDTS	715-468-5178	joan cordts@yahoo.com
Leslie Lerner	218 525 4398	LesLerner@aol.com
Bunny Faurll (any day that week except 24th)	850-394 4465	Bbier.ppla@gmail.com
Jerry Trochinski	920 216 5217	trochinskj@gmail.com
Jana Star	28 590 4060	
Paul Schneider	218 590 4841	

PG 1

7-23	7-24	7-25	7-26	7-27	7-28	7-29
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SAURDAY
		JIM-8 YOUNG 2 1/2 PAUL 2 1/2 MAY-2 MAY-5 KATHAN 8 2 KAY LETH KALL-5 JERRY 5 Kirstie 2	JIM 7.5 MARK 4.0 BRANT 7.5 JILL 2.5 KAY-2 LARA-3 JERRY 2 JERRY-0 KALL-0 KALL-0	JIM 3.5 MARK-ON KYLE-ON MARY-ON COLLOR 3.0	JIM DAN CN KASHAN MARY N JERRY N NOT NEEDED	JIM NALEY @ 9am
2017 YFI WORK DAYS					PAID -	31 13 1/02 31/372

Page 2 of sign up

Additional LakeLink Newsletter Articles



SPRING 2016

Lake Volunteers and Property Owners Attack YFI

2015 brought the beginning of our siege against the invasive plant Yellow Flag Iris. Most of us recognize it as that beautiful yellow flower, blooming on some of our shoreline, usually in late June. Yes, it is beautiful. It is however, quite invasive. Most of you now know that its habit is to find a foothold and then systematically begin to replace our natural habitat. If it did not have that “spreading” or “invasive” habit, most would welcome its beauty. As it spreads, it chokes out our natives, altering the lake’s ecology and negatively impacting the plants and animals all of us have come to consider part of our “home” or our “special place on the lake”.



Close-up of YFI flower which will develop into a seed pod, detach itself from the plant, and spread.

Discussions with many Lake Minnesuing property owners reveal that there are still some that believe “it has been just in this location for many years and has not gotten any bigger”. You may firmly believe this, however, that is simply not YFI behavior. YFI has an addiction which it is unable to rid itself of; it spreads. It spreads through its root system, its rhizomes if you will, and through seed pods. The rhizomes on your plants in particular may appear not to spread. However, YFI plants make seed pods and then distribute those seeds, thousands and thousands of them, with the winds and waves, all over our lake.

For a simple lesson in the ways of YFI, jump in your kayak or canoe this summer in late June and paddle over to the mouth of Minnesuing Creek, near the bridge at Hwy P. What do you see lining the lakeshore on either side of the mouth of the creek? In late June, when you walk, drive or ride your bicycle over that Hwy P bridge, stop and take a look at both

sides of the creek on the downstream side of the bridge. What do you see? You will see a solid mass of YFI thriving on each side for some distance downstream. The question is why do you see that vigilant growth of YFI in these locations? Think about it.

In 2015, Lake Minnesuing Sanitary District was awarded a significant 4-year grant from the State of Wisconsin to mitigate the effect of this invasive plant on our lake ecology. In partnership with the Lake Minnesuing Association, volunteers, paid employees, and many individual property owners made a first-year assault on YFI. Clumps of YFI including their entire root systems were dug from the shoreline. In other areas, YFI was completely cut off in its entirety, as close to the lake bottom or ground as possible. In addition, all seed pods were removed, before they were able to spread, from plants on 2.5 miles of our approximate 7 mile shoreline. Removed plant material was bagged and deposited at various locations for later pickup. These bags were taken to town or county garbage disposal sites. While bag numbers were not counted specifically, it is estimated well over 50 bags of plant material (each bag about 45-gallon size) were removed.



Photo 1: Example of one of 236 photos.



Jon and Ryan from Minnesuing Acres prepare to tackle YFI

During 2015, the entire Lake Minnesuing shoreline was mapped for YFI. A total of 236 photos were taken, each located with gps latitude/longitude coordinates, and logged. The lake shoreline was divided and printed on 24 sheets using Douglas County's GIS mapping system. Each of the 24 pages is simply a printed paper map onto which photo numbers, locations, and property owner names were noted. The purpose of this exercise was to establish a baseline of YFI population and density on the lake and to allow LMSD to speak with individual property owners from a position of knowledge when these individual discussion opportunities arose. This baseline will be used to evaluate the effectiveness of treatment techniques throughout the period of the grant (i.e. through year end 2018).

We will need your help in 2016. The 2016 plan includes another hard press, likely during the weeks of July 10 and or July 17. Specific dates will be determined by growing conditions. Weather also impacts this work as it is done in the water by

wading or working from kayaks and canoes. Why not volunteer to help during this time? We will have some paid employees and will need a support staff of volunteers to be most effective. We especially need someone from the south end of the lake as the YFI population there is strong and individual property owner action will be necessary there to curb its spread.

In working with Wisconsin's DNR on this issue, they have recommended we build some herbicide treatment into our 4 year mitigation plan. LMSD has done that and plans to work with a state certified applicator on YFI stands that are just too big to manage manually. If you have a large stand of YFI on your property and you would like LMSD to consider it for herbicide treatment, please contact Jim Giffin as indicated on page 1 of this LakeLink. A Wisconsin DNR permit is required for herbicide use below the ordinary high water mark and this will be secured prior to any LMSD/grant sponsored herbicide treatment.

Wisconsin DNR personnel have offered to train individual property owners in the use of manually applied herbicide to treat small stands on their own shoreline property. The technique avoids spraying and involves direct application which minimizes collateral damage and is extremely important in our lake environment. More to follow on this training.



FALL 2016

Precious Lakeshore Plants

... by **Laura Star**

Does your shoreline look like this?



Or like this?



If you chose the first one, you have a shoreline that is already dominated by Yellow Flag Iris! If you ignore it, it not only will *not* go away but it will continue to spread until it is the *only* plant that remains at water's edge.

The diversity of plant life on Lake Minnesuing's shores is precious! Take a look to see what else might still be on your shores. Do you have this plant?



Close-up shows the distinctive shape of the Sweet Gale leaves.

This is Sweet Gale, a bush whose leaves make a wonderful tea when steeped for 5 minutes in hot water. Another beautiful plant that many treasure is the Blue Flag Iris (cousin to the yellow one).



Blue Flag Iris is a bit smaller and has a deep blue/purple flower. This one is not invasive and does not seek to overtake your shore!

So, what to do if you have an abundance of Yellow Flag Iris? Eradication is the ultimate goal of course, but you do have several options toward this:

- 1) Easiest, minimal action – Cut the bulbous seed pods when they are full (late July) so that they do not spread! Burn or take to trash collection location.
- 2) Toxic solution, but necessary in difficult shoreline situations – Carefully apply “Rodeo” (aquatic version of “Roundup”) following specific directions for this plant (contact Jim Giffin for more info 715-718-1818 or sailjbg@gmail.com)
- 3) Best practice - Remove the entire plant, especially the roots!
- 4) The Lake Minnesuing Sanitary District has funds to bring in a licensed herbicide applicator to help you out! Take advantage of this!

The Lake Minnesuing Association has been working at controlling the spread of Yellow Flag Iris for several years, with only a handful of individuals. All property owners need to get involved if we want to preserve the diverse plant life that we enjoy on our lake! Contact Jim Giffin for more information call 715-718-1818 or sailjbg@gmail.com



2019

Lake Minnesuing “Pays It Forward”

As most of you know, Lake Minnesuing Sanitary District (LMSD) was awarded a DNR grant for control of the invasive Yellow Flag Iris (YFI). 2018 marked our fourth year using paid employees of LMSD and a tremendous work effort from the members of Lake Minnesuing Association (LMA) each of those years. Throughout, it has been a team effort by our two lake groups.

Our work has resulted in limiting the spread of new plants on the shore and reducing the largest stands of YFI on the lake to less than 50% of their size back in 2015. It's not all roses though as in some areas new plants have emerged in wetlands away from the lake shore itself. Nonetheless, results have been good.

Part of this grant includes an education component; working with our own property owners to understand the potential of YFI to “take over the lake” and to learn to take effective action on their own properties. Education also includes sharing our experiences and progress with other lake groups.

Last fall, the Hayward area Spider Chain of Lakes Association, with about 160 members, asked if we would be willing to share the results of our project with them as YFI was beginning to appear on their shores. Memorial Day weekend 2019 we travelled to Hayward to present our project to about 50 of their members. We reviewed our initial decisions to take action, our method of organization, the techniques and tools we've used and our successes and failures, all intended to help them get a leg up on their challenge. We emphasized how important our property owner volunteers have been in our effort. The presentation was well received and included a pontoon tour of the lakes to help form their plan of action.

Because of the efficient administration of our work efforts, our efficient spending in the first 4 years of our effort here on Lake Minnesuing, and our level of success, WDNR agreed to extend our grant through 2020.

Working with the Spider Chain will pay off. They have the invasive Curly Leaf Pondweed in their chain and their current plan includes monitoring it's spread very carefully. We will share their learning as unfortunately this invasive was found here on Lake Minnesuing last year. The Spider Chain has also established an Endowment Fund and an Emergency Fund for the expressed purposes of ecological matters regarding the lake and the education of stakeholders regarding managing the lake for the future. These funds have grown to significant levels through the generous donations of their stakeholders, insuring they will have what it takes when the time comes to help manage water quality and quality of life issues on their lakes in the future.

Please join us out on Lake Minnesuing during the week of July 29 – August 2, 2019. We will be cutting YFI seed pods and digging smaller clumps of YFI. Contact any LMA or LMSD board member or Project Manager Jim Giffin (sailjbg@gmail.com, 715 718 1818) for details. This week long effort makes it happen. Please plan to join.

Join us - YFI Days July 28 – August 2

JUNE 2020

Everything's Coming Up Yellow – No! Not Anymore Back in a 2015 Lake Link we titled an article “Everything’s Coming Up Yellow”. As most all of you have seen, our efforts to limit the spread and reduce the density of Yellow Flag Iris have been successful. Certainly there is still plenty of this invasive on our lakeshore, but most of the large and very dense stands have been thinned significantly.

Back in 2015, Lake Minnesuing Sanitary District secured a 4-year grant to help us treat YFI. We were able to extend it two more years due to efficient spending and great participation from Lake Minnesuing Association members. 2020 marks our final year to use this grant.



YFI is usually in full bloom by mid to late June. Once again in 2020 we will be surveying the entire lake shore to determine locations and density of YFI stands. Results of the survey will determine if spot herbicide treatment should be completed this year. We did not spot spray in 2019. Herbicide treatment would likely consist of very targeted cut stump treatment in August conducted by trained property owners and, in early September, use of a backpack sprayer (used by a Wisconsin licensed applicator) just after Labor Day.

Unlike its “cousin”, Blue Flag Iris which is a native to our area of Northern Wisconsin, Yellow Flag is extremely aggressive. All parts of the Yellow Flag Iris plant are, to a limited degree, poisonous. The problem is that YFI out competes other aquatic vegetation native to our lake.

In 2020, as we have in recent years, volunteers will cut seed pods off the plants on our shoreline. As most of you know, this plant spreads in a couple of ways. First, it develops pods on its stems which contain seeds and second, if pieces of the “rhizome or tuber like” root are left after digging, they will regenerate the plant. Timing of our seed pod cutting volunteer project depends on weather conditions but will likely occur in the final week of July or the first of August. We will definitely need volunteers and if you can help please email Jim Giffin (see end of article).

As the EDR grant ends in 2020 we will need to transition to individual property owner management. Here’s the bottom line: **If you have Yellow Flag Iris on your shoreline it is best to get rid of it.** Pull it or dig it out. Remember, touching this plant can cause an irritation for some people. Wear gloves until you know how you will react. Seed pods and rhizomes should be bagged and go in the trash.



Seed pods which form after the blooms fade

If you think your shoreline should be treated and/or are willing to learn to use the cut stump treatment method, email Jim. The volunteer seed pod project is one that can be done quite easily in these days of “social distancing”. Please think about participating. Jim Giffin Project Manager – YFI sailjbg@gmail.com 715 718 1818

Sample Property Owner Written Communications Regarding Annual Work Activity and Herbicide Treatment

Lake Minnesuing Sanitary District

PO Box 88
8-15-18

Lake Nebagamon, Wisconsin 54849

To: Lake Minnesuing Property Owners on YFI Affected Properties and Those Owners of Adjacent Properties,

Lake Minnesuing Sanitary District (LMSD) is in year 4 of a 4 year grant program to slow the spread of Yellow Flag Iris (YFI) on the lake. Because of our **steady progress**, our desire to **make a significant difference**, and our efficient spending, LMSD asked the Wisconsin DNR to spread our grant money over 2 additional years. That request has been granted. The purpose of this letter is to advise you of our 2018 herbicide treatment permit application.

As part of our effort, last week 15 individuals canoed, kayaked, and waded the entire 7 mile Lake Minnesuing shoreline, digging some small stands of YFI and cutting all YFI seed pods present. Thanks to the volunteers and the 3 members of the Wisconsin DNR who gave their time to Lake Minnesuing. The Wisconsin DNR classifies YFI as follows: *Restricted: Invasive species that cause or have the potential to cause significant environmental or economic harm or harm to human health.*

At the suggestion of the Wisconsin DNR, a licensed herbicide applicator will be employed to treat larger stands of YFI. We would anticipate treating about 10-12 properties by spraying. If your property was sprayed in previous years we may retreat any younger plants that re-emerged in 2018. Tentative timing on this treatment activity would be early September.

Attached to this letter is a copy of our application to the DNR for chemical treatment and a material safety data sheet on Rodeo, the herbicide to be used. In the next few weeks **LMSD will be contacting affected property owners directly**. If you receive this letter but are not contacted directly by LMSD, it is because you are an owner with property adjacent to a property to be treated. Information is provided for your information per Wisconsin DNR.

As demonstrated by Jeremy Bates of the Wisconsin DNR at our 2016 annual lake meeting, given sufficient volunteers, LMSD will also apply the aquatic herbicide Rodeo in selected areas using a “wipe on” technique. This technique works on smaller stands of YFI. Using the “wipe on” technique, Rodeo can be applied with minimum collateral damage.

Herbicide treatment is not 100% effective in eradicating YFI, however our experience has been very positive with 50%-60% success with hand application and 75%-80% spraying. No seed pods have formed on any plants that re-emerged from treated areas. Thanks in advance for your cooperation.

Jim Giffin, Treasurer
Lake Minnesuing Sanitary District
Member, Lake Minnesuing Association

sailjbg@gmail.com
715 718 1818

Typical Email Response to LMSD Property Owner Communications Regarding Annual Work Activity and Herbicide Treatment



Jim Giffin <sailjbg@gmail.com>

Re: Lake Minnesuing Yellow Flag Iris Work Days 2016

1 message

Michelle [REDACTED] Mon, Jul 18, 2016 at 8:35 PM
To: Jim Giffin <sailjbg@gmail.com>
Cc: "About The House Home Inspection Services, LLC" [REDACTED]

Jim -

Please accept this as our permission to treat the YFI on our property at 10774 E Minnesuing Acres Drive. Although we have cut the seed pods from the plants we have seen, we feel digging would further erode our shore. However, we are open to the Rodeo treatment. During the week, we are at our home and working in Duluth and unavailable to volunteer on the days suggested. If you need something further, please don't hesitate to contact us.

We would also like to have a conversation with you about the erosion issues we are having around our property and the possibility of applying for grants. Please let us know when you would have time. Thanks!

- M

Michelle [REDACTED] Dave [REDACTED]
[REDACTED]
[REDACTED]

On Mon, Jul 18, 2016 at 3:16 PM, Peter Pluwak <peterpluwak@gmail.com> wrote:

----- Forwarded message -----

From: Jim Giffin <sailjbg@gmail.com>
Date: Sun, Jul 17, 2016 at 2:38 PM
Subject: Lake Minnesuing Yellow Flag Iris Work Days 2016
To: Peter [REDACTED]

For Electronic Distribution to:
Lake Minnesuing Property Owners

As most of you know, Lake Minnesuing Sanitary District is in year 2 of a 4 year grant program intended to slow the spread of the plant called Yellow Flag Iris on our lakeshore. The purpose of this email is to: 1) solicit some volunteer help working the project and 2) receive property owner permission to treat YFI on your shore. If you are not sure if your shoreline contains the plant, I can tell you. LMSD just completed the 2016 YFI survey of our entire lakeshore.

Weather permitting we will have a crew of 2 or 3 paid employees (from our CBCW staff) and lake property owner volunteers working the shoreline of Lake Minnesuing. Dates will include a