

2012 Minong Flowage Task Update

Minong Flowage AIS Management Implementation

MINFA 110887 & 120706

September 2012

2012 Minong Flowage Task Update

Minong Flowage AIS Management Implementation
MINFA 110887 & 120706

Prepared for:
Minong Flowage Association
Minong, WI

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

Dave Blumer, Lake Scientist

Table of Contents

Title Page
Table of Contents

	Page
1.0 2010-2012 AIS Management Implementation Project	1
1.1 Eurasian Water Milfoil Management	1
1.1.1 Spring Treatment	2
1.1.2 Landowner Treatment	2
1.1.3 Pre-treatment Survey	3
1.1.4 Post-treatment Survey	3
1.1.5 Fall EWM Bed Mapping	3
1.1.6 Residual Testing	3
1.1.7 Landowner Physical Removal	4
1.1.8 Tribal and WDNR Tours of the Minong Flowage	4
1.2 Weevil Monitoring	4
1.2.1 Weevil Rearing.....	6
1.3 Other Monitoring.....	7
1.3.1 AIS.....	7
1.3.2 CBCW.....	7
1.3.3 Wild Rice.....	7
1.3.4 Water Quality	7
1.4 Lake Education.....	7
2.0 2012 AIS Education Project (120706).....	8
2.1 Point-intercept Aquatic Plant Survey.....	8
2.1.1 Early-season Cold-water Survey	8
2.1.2 CLP Bed Mapping.....	9
2.1.3 Mid-season Whole Lake Survey.....	11
2.1.4 Final Report	11
2.2 Weevil Rearing Support.....	11
2.3 Residual Testing.....	11
2.4 2013 AIS Management Planning	12
2.4.1 Herbicide Application	12
2.4.2 Drawdown.....	13
2.4.3 Herbicide.....	13
2.4.4 Weevils	13
3.0 Summary	14

List of Tables

Table 1	Weevil Monitoring Results from July 9 and 30th, 2012.....	5
---------	---	---

Table of Contents (Continued)

List of Figures

Figure 1 – July 30, 2012 Weevil Monitoring Day at Swift Nature Camp	6
Figure 2 – Spring 2012 Survey Points with CLP	9
Figure 3 – 2012 CLP Beds in the Minong Flowage.....	10
Figure 4 – May and July 2012 Survey Points with EWM.....	11
Figure 5 – POCIS devices (discs with white centers) shown mounted in a deployment canister. Note: In the figure, three POCIS are mounted, whereas this study would have deployed one POCIS per canister. (Source: www.est-lab.com/pocis.php)	12

2012 Minong Flowage Task Update

Minong Flowage AIS Management Implementation

Prepared for Minong Flowage Association

1.0 2010-2012 AIS Management Implementation Project (MINFA 110887)

2012 originally represents the last full year of the 3-yr AIS Management Implementation Project on the Minong Flowage. It also represents the last year of management under the current APM Plan. The APM Plan is being shortened by one year due to a required dam repair project scheduled for the summer of 2013. Originally, 2013 would have been the last year of the APM Plan. The second project mentioned in this report is a single year project for 2012 and early 2013 set up to gather the necessary information related to native and non-native invasive aquatic plants and our management impact on them from 2009 through 2012. Once the drawdown occurs in the summer of 2013, we can no longer isolate our treatment effects from the effects of the drawdown. Through 2013 and into 2014 a new APM Plan for the Minong Flowage will be written, based on conditions that exist after the dam project is completed.

The following sections update management results on the Minong Flowage in 2012. These impacts are limited, as the Minong Flowage Association was not permitted to chemically treat EWM in the system in 2012. Other than weevils added to the Flowage from a 2nd year weevil rearing project in early August, and EWM or CLP physically removed by landowners, no management was completed in 2012.

1.1 Eurasian Water Milfoil Management

As mentioned above, no chemical management of EWM or CLP was completed in 2012. In 2012, Tribal Resources and the Voigt Task Force repeated their concerns related to the chemical management program for EWM in the Minong Flowage and its perceived impacts on wild rice in the same waterbody. Their concern was very similar to the concern they voiced in 2011, when the WDNR considered their input, but allowed large-scale chemical application to occur on the Minong Flowage anyway. In 2012, the entire Tribal Council passed a unanimous resolution not to support the use of any aquatic herbicides in the Minong Flowage. As a result of this much greater pronouncement, the WDNR did not approve a permit for treatment. The WDNR has stated that they will continue to work with Tribal Resources to address the concerns voiced by the Tribal Council and Voigt Task Force as they pertain to the use of herbicides to control invasive species when wild rice is also in the same waterbody.

It is unknown if the Minong Flowage Association will be allowed to use herbicides to manage EWM and/or CLP in 2013. Complicating matters is an extended summer drawdown in 2013 necessary to complete dam repair and reconstruction.

1.1.1 Spring Treatment

Based on fall bed mapping completed in 2011, only about 20 acres of EWM was proposed for treatment in the spring of 2012. This was less than half of what was projected to be treated when the APM Plan was first approved back in 2009. The reduced treatment plan followed a year (2011) when approximately 80 acres were chemically treated with tremendous results. Despite the reduced treatment area, Tribal Resources, GLIWFC, and the Voigt Task Force questioned the need for any management given the success rate and an eminent drawing down of the lake level in 2013 due to a dam repair project. Complicating matters and confusing the issue was a change in the labeling for the herbicide that had been used (Navigate) from a surface acre based formula to a volume based formula. This change in labeling created the opportunity to use a greater concentration of herbicide than had been previously used.

The 20 acres being proposed for chemical treatment in 2012 were made up of many small (less than a half acre) treatment areas and one larger area of approximately 8 acres. Discussion with the applicator suggested that these smaller areas would require a slightly higher concentration in order to account for greater dilution in these smaller sites. In 2011, the smallest treatment area was just shy of one acre, with the bulk of the 80 acres accounted for in three areas of 11, 12, and 43 acres. These larger areas are less impacted by dilution and therefore a lower concentration was effective. This higher concentration in the initial treatment proposal created greater concern with Tribal Resources, requiring greater justification for doing so. After failing to convince Tribal Resources that the higher concentrations were needed and that a wild rice protection plan would not be compromised, the initial treatment plan was modified.

At this point WDNR resource personnel including Frank Koshere and Mark Sundeen intervened in the discussion and worked with SEH and the Minong Flowage Association to come up with an alternative chemical treatment plan and propose this to the Voigt Task Force. This plan used a lesser concentration of herbicide (levels consistent with the three previous treatment years 2009-2011) but was still opposed by the Voigt Task Force. In support of this opposition, the Tribal Council, made up of representatives from all the Ojibwe Nations in the Ceded Territories, passed a unanimous resolution in opposition to the use of any herbicides, anywhere in the Minong Flowage. At this point the WDNR decided not to award a permit to the Minong Flowage Association for completing a chemical treatment in 2012. Efforts are underway to address the concerns voiced by the Voigt Task Force and Tribal Council, but no solutions have as of yet been proposed.

At the present time it is not known if any herbicide application for control of EWM and other AIS will be approved in 2013. The Minong Flowage will undergo a 5-ft drawdown in 2013, likely beginning in the spring, and extending through most of the summer. In general, the level of EWM in the Flowage in 2012 is down, mostly limited to a growing zone that extends to only 5-ft due to water clarity issues in the Flowage in 2012. The concentration in this area, though still relatively low, could become a much greater problem in 2013, as EWM and other AIS get established in areas of the Flowage, that previously were in too deep of water to support aquatic plant growth.

1.1.2 Landowner Treatment

Landowner requests for EWM management are allowed under the current APM Plan for the Minong Flowage. Nearly 20 property owners in 2011 made official requests to the Minong Flowage Association to have their property evaluated for the possible use of chemical

treatment above and beyond the already planned, larger chemical application supported by the Association. Each site was visited in 2011, but none were permitted as they did not meet the appropriate conditions: the presence of EWM; located away from an already planned treatment; and the presence of native plants that would be negatively impacted by the herbicide. In 2012, only six property owners requested an evaluation for potential chemical treatment. Of these, two were going to be allowed, until the WDNR denied the larger Lake Association permit application. Because of the Voigt Task Force and Tribal Council decision, no chemical treatment of EWM was allowed in 2012.

These landowners were not sent an approval or denial letter as is customarily completed. Letters were not sent as the denial of the treatment permit was quite widely known throughout the community. It is hoped that these people did not feel slighted in 2012. And if landowner request for treatment are authorized in the future, the Minong Flowage Association and SEH will go back to it normal evaluation and contact program.

1.1.3 Pre-treatment Survey

The final decision to not allow chemical treatment in 2012 was not made until the middle of June. As such, all management planning activities continued during the process. A pre-treatment survey of the areas originally proposed for management was completed by Endangered Resources Services, LLC in early May. Documentation of that survey is on file, and results used to modify the original proposed treatment area. A final report of results has not been completed by ERS or SEH at this time, but is expected by early October.

1.1.4 Post-treatment Survey

A post treatment survey was not completed in 2012 because no treatment occurred.

1.1.5 Fall EWM Bed Mapping

Endangered Resource Services completed fall EWM bed mapping on September 8, 2012. General comments were such that EWM was still somewhat suppressed in the Flowage, except in the east basin past Smith Bridge where it appeared to be expanding its range substantially, extending far up the river channel where it had not been before. Wild rice east of Smith Bridge was doing well, what there was of it, however, the beds in the north end of Stump Bay (Serenity Bay) all but disappeared.

1.1.6 Residual Testing

Like the pre-treatment survey, planning for residual testing continued during the entire discussion period with the WDNR, Tribal Resources, and the Voigt Task Force. It was never clear what the final decision regarding chemical treatment in 2012 would be. It was expected that the original treatment proposal would be modified and that more accountability would be required. Residual testing was planned to address this likelihood. Under normal treatment conditions, 10-20 sites within treatment areas and in other parts of the Flowage (including rice beds) that could potentially be effected by the proposed chemical treatment were completed prior to treatment, and 1, 3, 5, 7, 14, and 21 days after treatment. The plan in 2012 was to test more than 20 sites, and to do it at the regularly scheduled times and on an hourly basis throughout the first couple of days of treatment. The hourly samples were to be analyzed by the Army Corp of Engineers through John Skogerboe, and the regular samples through the Wisconsin State Lab of Hygiene. Contracts had to be established, bottles and other sampling materials gathered, and lab slips and other recording papers prepared. Since it was unknown if the treatment would or would not be supported, these efforts had to continue as if the treatment would be approved, in order to be ready if it was.

Residual testing procedures were set-up and approved with assistance from John Skogerboe of the Army Corp of Engineers and the WDNR. Unfortunately, since no chemical treatment was permitted on the Minong Flowage, no residual testing was done either. Interestingly, a chemical treatment was completed in Cranberry Lake and in the Cranberry Flowage between Cranberry Lake and the Minong Flowage. It is possible that chemical residual from this treatment made its way into the Minong Flowage, but since no residual testing was completed, there is no way to support or deny this.

1.1.7 Landowner Physical Removal

Other than releasing weevils raised in captivity (next section) the only management for EWM that was completed in the Minong Flowage was landowner removal. It is not known at this time, how much physical removal was completed by landowners. If the number of hours used to physically remove EWM from the Flowage could be quantified, that value could be used as match for the 3-yr project.

1.1.8 Tribal and WDNR Tours of the Minong Flowage

If an effort to garner and increase support of the EWM and other AIS management program for the Minong Flowage, two tours of the Flowage were completed in 2012. First, on June 13, Tony Hvraneck and a member of the Tribal Council met with SEH and Frank Koshere (WDNR) at the Minong Flowage Smith Bridge Landing and took a tour of the Flowage to map wild rice, and see first-hand the impacts of EWM and CLP on the wild rice. Originally, it was hoped that more council members or Tribal Elders would join us, but only one did. Lake Association personnel provided and piloted the pontoon boat for use in this tour.

A second tour of the Minong Flowage was completed on July 11 and included a multitude of WDNR resource people with a role in aquatic plant management across the state. Lake Association members provided and piloted 4 different pontoon boats to accommodate all the DNR personnel that went along. Tribal resource personnel were also invited, but none attended. Matt Berg, the lead aquatic plant survey person since this project began in 2009 also accompanied, as did Dale Dressel of Northern Aquatic Services, the chief herbicide applicator on this project. Stops were made at many different points of interest on the Flowage, including the Swift Nature Camp where an experimental milfoil weevil rearing station was set up and operating.

1.2 Weevil Monitoring

In 2012, weevil monitoring, in cooperation with Swift Nature Camp Directors, Counselors, and Campers, was completed on two different dates; July 9th, and July 30th. In each of these events, SEH collected EWM fragments from locations in the North Basin near the big island and the northern half of Serenity Bay. In these areas, herbicides are not and have not been used because of concerns related to the wild rice, difficulty of application due to a large amount of submerged stumps, and because there is not a lot of developed property. It is in these areas that we hope to maintain and possibly enhance existing weevil activity.

The procedures used to monitor for the presence of weevils does not follow official weevil monitoring guidelines as established by the Citizen Lake Monitoring Network. There are several reasons for this. First, the activity, done in cooperation with the Nature Camp is intended to be an education experience for the entire camp to be involved in. When fragments are brought into the camp on the day of the count, time is taken in front of the entire camp: directors, counselors, and campers (often 40-80 people) to explain what the issue is, talk about the invasive plant, discuss management on the Flowage, and to lay out the

reasons why this kind of monitoring is beneficial, and how the individual person and the larger group can take part.

Once this is done, the goal is for campers to find adult weevils, and identify secondary life stages and stem damage if possible. Hundreds of fragments are examined in a short period of time. The counting is led by SEH (typically one person), and by those counselors and students that have participated in the monitoring project in the past.

This educational practice has been happening for 4 years, and many of the returning camp counselors and a few of the returning campers have experienced it for several years.

Data recording is completed during these events. Each set of campers is given a record sheet where they are to use hash marks to keep track of the number of fragments they look at, the number of each life stage they identify, and the amount of stem damage they encounter. These sheets are then collected at the end of the event and numbers tallied. When working with 40-80 students ranging in age from 10-20 years, it is difficult to make sure they all record their data appropriately, so the recording sheets are at best a representative sample of what was actually found. It is assumed that more of each category recorded actually occurs, but the sheets are used for generating the numbers.

After the events, all campers, counselors, and other adults were again addressed and asked about their experience.

Results from the two monitoring/collecting events were combined to generate the following numbers.

Table 1 - Weevil Monitoring Results from July 9 and 30th, 2012

	# of Fragments Inspected	Stem Damage	Adult Weevils	Eggs	Larva	Pupa
July 9 th	690	140	30	103	21	5
July 30 th	803	248	119	78	65	17
Total	1493	388	149	181	86	22

The number of recorded campers, counselors, and other adults for each event was 72, making a total of 144 people. Each event covered a two hour time period, not including the time it took to collect the fragments.



Figure 1 – July 30, 2012 Weevil Monitoring Day at Swift Nature Camp

While the data collected is not scientifically credible, the anecdotal information collected serves as a measure of weevil activity in the Flowage. For future weevil monitoring, a more scientifically based approach will be taken in addition to the existing procedure, to better assess the total weevil activity in the Flowage. Under the current scenario where use of herbicides and even winter drawdown as management tools are questionable, the establishment of the weevil population becomes a more important management tool.

1.2.1 Weevil Rearing

In addition to the two weevil counts, the Swift Nature Camp set up and managed a weevil rearing project in cooperation with Dr. Amy Thorstenson of the Golden Sands RC&D. This is the second year that the camp has been involved in this rearing project. In 2011, 10 100-gallon stock tanks were set up. This proved to be a somewhat overwhelming task given the reduced amount of EWM in the Flowage in 2011 and the required bundling and feeding schedule of the weevils. The 2012 project only set up 5 tanks, and was much easier to manage.

The 2012 station was set up on June 19 under the guidance of Dr. Thorstenson, and with assistance from SEH. An SEH employee collected the large amount of EWM needed to complete the initial station set-up, and aided in the “EWM bundling” procedure. Throughout the summer season, several camp counselors took responsibility for keeping the rearing tanks full of water, taking temperature measurements, and completing additional bundling when

necessary. The weevils reared, were released into the North Basin in early August. Dr. Thorstenson collected samples from several of the tanks to take back to her lab and do an official count. The results of that count have not been reported on to date, so we do not yet know if the rearing station was a success in 2012 or not. In 2011, the weevil rearing project had about half of the expected results, rearing only about 3000 weevils. If the station produces that many weevils in 2012, the results will be what was expected.

1.3 Other Monitoring

1.3.1 AIS

In-lake monitoring for aquatic invasive species including curly-leaf pondweed, Eurasian water milfoil, and purple loosestrife continues on the Minong Flowage. In 2012, additional aquatic plant survey work in preparation for rewriting the existing APM Plan was completed. The extent of curly-leaf pondweed was mapped, and management recommendations will be made in the next APM Plan. In addition, two individual purple loosestrife plants were identified and removed on the Minong Flowage. Fortunately, this invasive species has not been an issue for the Minong Flowage to date. Both CLP and EWM continue to invade and dominate areas of the Serenity Bay and the East Basin where wild rice at one time was dominant. Currently, in these areas, wild rice is being negatively impacted, struggling to maintain a presence.

1.3.2 CBCW

The SWIMS database currently has records for 236.5 hours of boat landing monitoring time at landings on the Minong Flowage in 2012, through August. More than 900 people have been contacted in 2012.

1.3.3 Wild Rice

In the APM Plan and 3-yr grant that the MFA is currently working under, it was assumed that in 2012, Tribal Resources would take over wild rice monitoring duties. To some degree this was completed. During the first tour of the Minong Flowage attended by Tony Hvraneck and a Tribal Council member, mapping of the existing wild rice beds was completed. In addition to this, the fall bed mapping of EWM completed by ERS, also identified points with wild rice.

1.3.4 Water Quality

Two sites in the Minong Flowage, the Center Main Basin and the Deep Hole Near Dam were monitored for water chemistry parameters including Total Phosphorus, Dissolved Phosphorus, Total Kjeldahl Nitrogen, Nitrites & Nitrates, Ammonia, and Chlorophyll a. Secchi, temperature, and oxygen data was also collected. Materials for this sampling were assembled by the WDNR and then distributed by SEH. Actual sampling was completed by MFA volunteers.

Chemical parameter results for April, June, and July are currently in the SWIMS database. No other water quality is currently in the database for 2012.

1.4 Lake Education

A great deal of Lake Association time in 2012 went toward learning about and sharing data with the membership about the pending summer drawdown for dam repair in 2013. Several newsletters were written and distributed (January and August), a breakfast social was held in August, and the Minong Flowage Association webpage was updated with EWM management

and drawdown information. The Annual meeting held in June also focused on the drawdown and the issues facing the planned application of herbicides.

2.0 2012 AIS Education Project (120706)

In February of 2012, an AIS Education, Prevention, and Planning grant in the less than \$10,000 state share category was submitted on behalf of the Minong Flowage Association. The purpose of this grant was to cover the costs of aquatic plant point-intercept survey work associated with the development of a new APM Plan and as a precursory step to the planned summer drawdown in 2013. In addition, grant support was requested to provide assistance for the Swift Nature Camp weevil rearing project, fund the installation of additional residual testing devices, and to provide 2013 EWM and possibly CLP management planning.

When this grant was submitted, it was expected that management of EWM would occur in 2012. As was previously indicated, all expected EWM management by chemical application was suspended in 2012. As such, a few of the actions included in this new grant were rendered null.

2.1 Point-intercept Aquatic Plant Survey

Endangered Resource Services, LLC owned and operated by Matt Berg, was contracted in 2012 to provide an early season cold-water plant survey, curly-leaf pondweed bed mapping, and a mid-season whole-lake point-intercept survey. This survey work was originally scheduled to be completed in 2013, but with the pending drawdown, the data generated by this survey work was needed a year earlier to make comparisons of impacts to target and non-target plant species since we began management in 2009. This survey work was in addition to the regularly scheduled pre treatment survey, post treatment survey, and fall bed mapping. As mentioned previously, a post treatment survey was not completed in 2012, due to no active management being completed.

2.1.1 Early-season Cold-water Survey

The cold water survey was completed on May 27, 2012. Figure two shows the points where CLP was found during this survey.

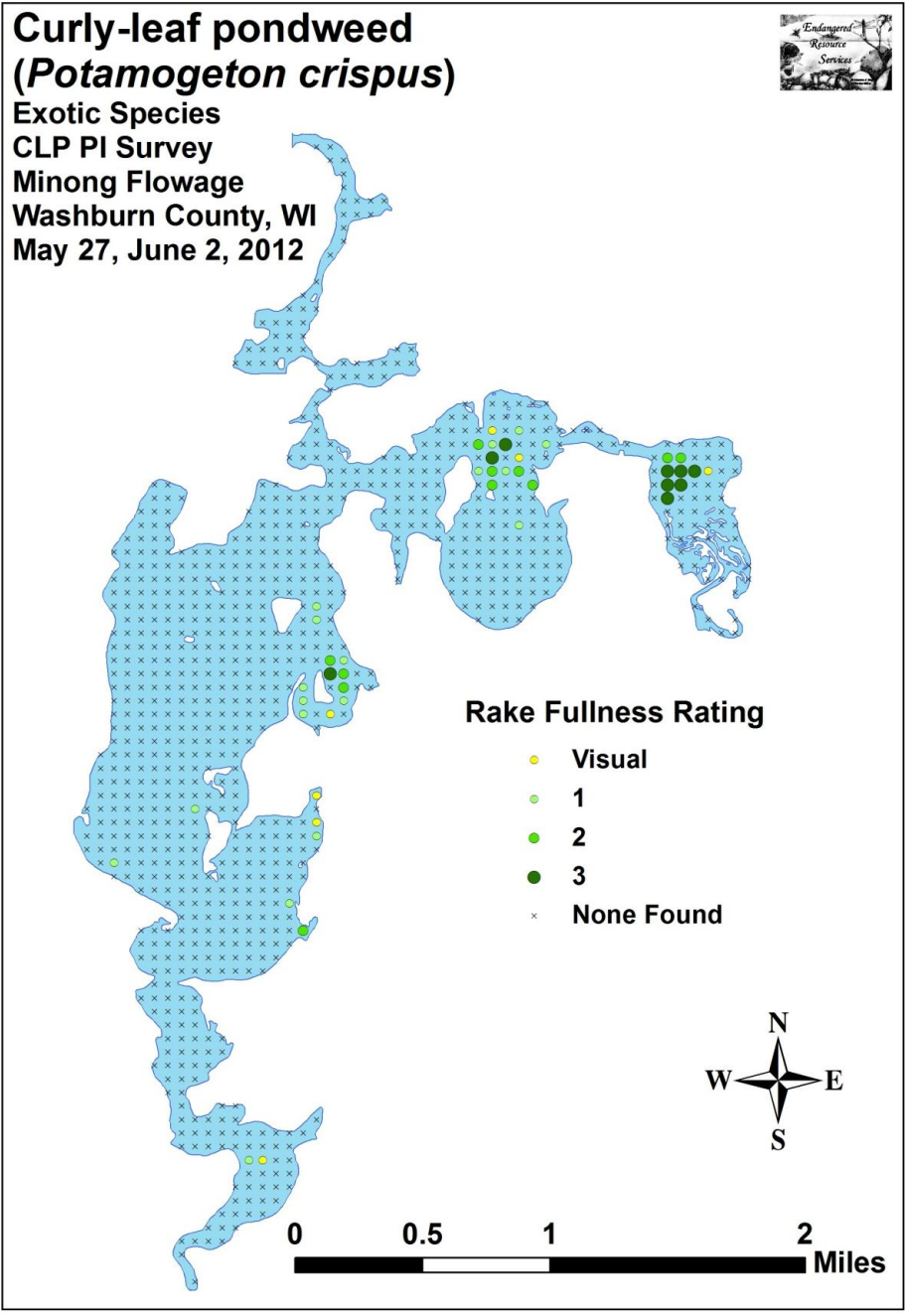


Figure 2 – Spring 2012 Survey Points with CLP

2.1.2 CLP Bed Mapping

Bed mapping adds a bit more detail to the overall picture as it pertains to the extent of CLP in the system. The point-intercept data places the CLP at established monitoring sites. These sites will remain the same for any future monitoring work. The bed mapping actually determines the total surface area of dense growth CLP that may or may not need to be considered for management. Figure 3 shows the extent of CLP beds in the Minong Flowage. Fifteen CLP beds totaling just over 27 acres were identified in the spring bed mapping.

A third parameter, CLP turion density monitoring can be added to the survey regime to add more data to be used for effective and efficient management. The surface area of CLP will

vary from year to year, as will points with identified plant growth due to changing atmospheric and in-lake conditions. Quantifying the number of turions present under given points can reflect the presence of CLP whether visible growth can be identified or not. Turion density in treated areas may also decline in the face of treatment, as new turions are prevented from being produced. This action is not planned as a part of the existing grant funded project.

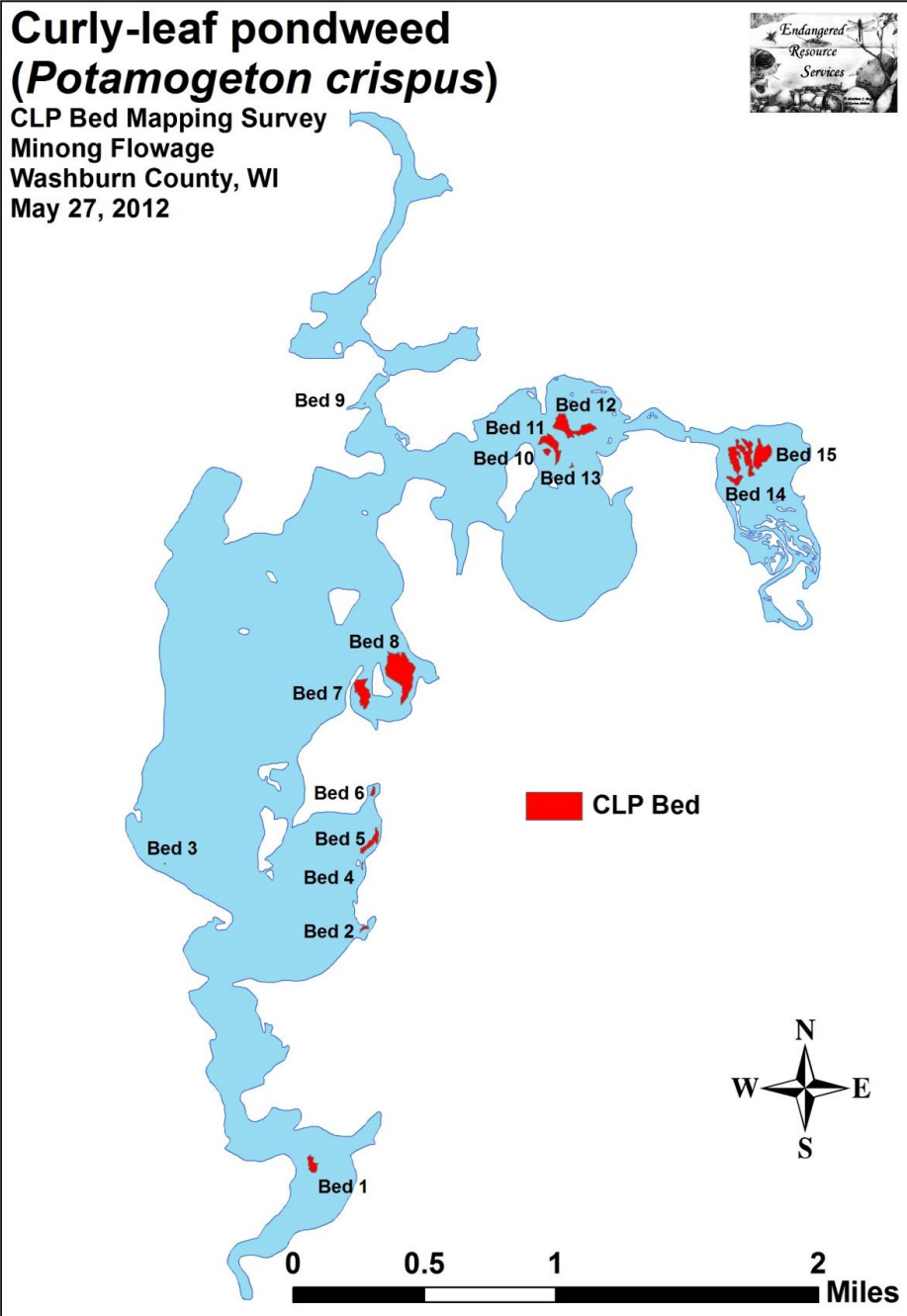


Figure 3 – 2012 CLP Beds in the Minong Flowage

2.1.3 Mid-season Whole Lake Survey

A mid season plant survey was completed by ERS on July 21. Along with all other native plants, points with EWM were documented. Figure 3 shows a comparison of EWM in late May and again in late July. Since no management was completed, EWM continued to spread. Verbal reports by ERS suggest that EWM is still not as bad as it has been in past years, but there are some new areas where it is beginning to take over.

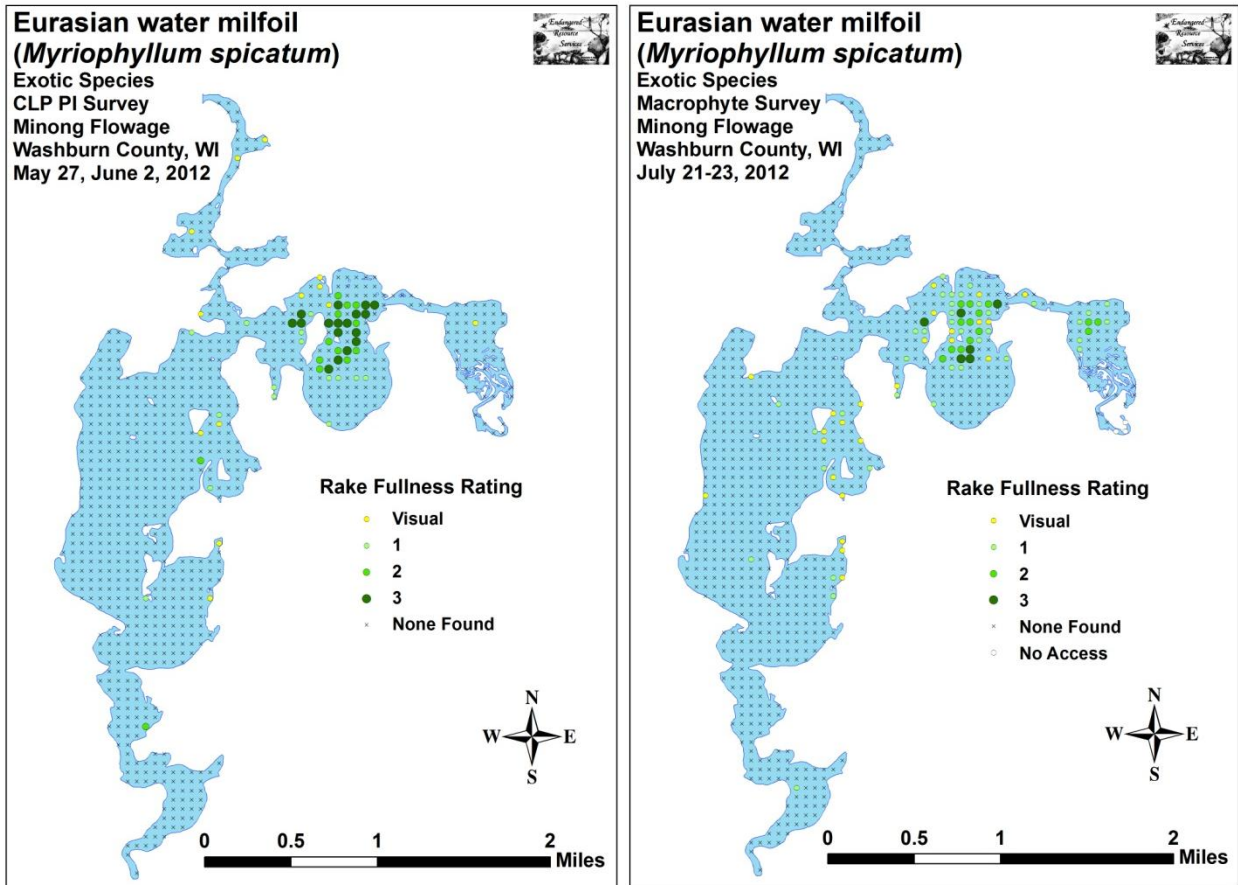


Figure 4 – May and July 2012 Survey Points with EWM

2.1.4 Final Report

Final reports from ERS for the pre-treatment survey, early-season point-intercept survey, CLP bed mapping, mid-season point intercept survey, and fall EWM bed mapping have not been completed yet.

2.2 Weevil Rearing Support

SEH provided support in the form of EWM fragment collection to support the 2012 weevil rearing project. Fragments were collected at three separate times, and assistance was provided in distributing the weevils reared into the Flowage.

2.3 Residual Testing

Had the proposed chemical treatment been allowed, SEH was going to install 3-4 new residual sampling devices to improve upon results. Polar Organic Chemical Integrative Sampler (POCIS) devices were going to be deployed to monitor pesticide concentrations in the waters near the wild rice beds during the 2012 field season (Figure 5). POCIS devices

were selected because they can accumulate water soluble compounds in low concentrations, provide qualitative and quantitative measurements of compounds, and are more logistically sound than grab samples. POCIS devices can remain in-lake for extended periods of time, generally one month, which provides time-weighted average concentrations of compounds. This extended sampling period also captures low concentrations and episodic events that could otherwise be missed in grab samples and can provide an exposure assessment of aquatic organisms.

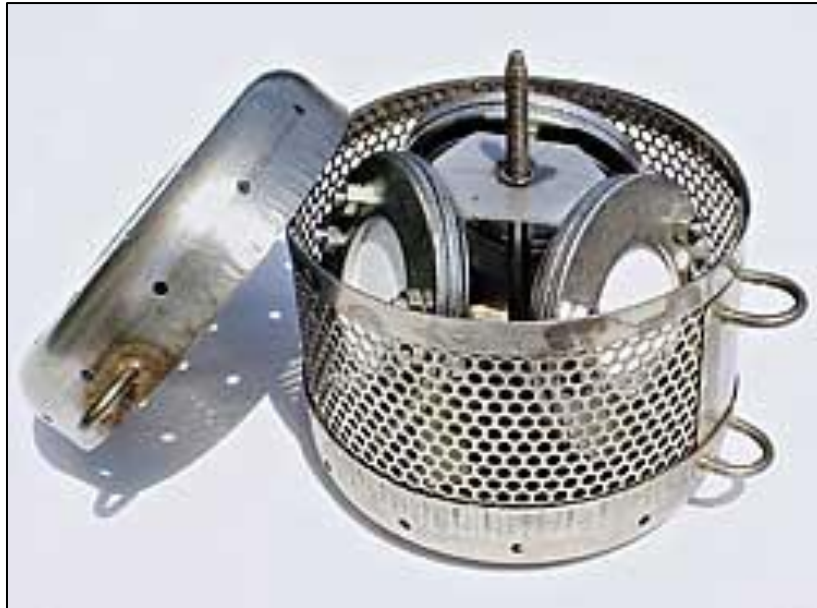


Figure 5 – POCIS devices (discs with white centers) shown mounted in a deployment canister. Note: In the figure, three POCIS are mounted, whereas this study would have deployed one POCIS per canister. (Source: www.est-lab.com/pocis.php)

Since chemical treatment was not permitted in 2012, these devices were not purchased or installed by SEH.

2.4 2013 AIS Management Planning

EWM and CLP management planning in 2013 will be problematic at best. Currently not enough information is known about what will or will not be allowed for management in 2013. We know that a 5-ft drawdown will occur early in the open water season and extend through most of the summer. This drawdown will undoubtedly impact the non-native and native vegetation in the system. It is not expected to have much impact in reducing levels of EWM in the system. In fact it is feared that the drawdown will create a great deal more habitat appropriate for EWM growth by exposing a great deal more of the submerged bottom sediments where aquatic plant growth was prevented due to deep water and inadequate light penetration.

2.4.1 Herbicide Application

It is expected that we will again have to go through a full tribal consultation to be able to complete EWM management through chemical means. Early season treatment will not likely be completed due to the drawdown process. It is expected that a mid season treatment of new EWM growth will be proposed.

2.4.2 Drawdown

The summer drawdown is not expected to have much negative impact on the EWM, but it may reduce the amount of CLP in the system. Early CLP growth in water less than 5-ft will be exposed to dry lake bed when the drawdown is complete. This should reduce the overall CLP density in the system. In order to provide greater impacts to the EWM, the Minong Flowage Association wanted to pursue a winter drawdown either prior to or immediately following the summer drawdown.

Conversations earlier in the summer held between the WDNR, GLIFWC, and the Minong Flowage Association were leading towards continuing the drawdown into the winter following the summer drawdown, but concerns raised within the WDNR and shared with GLIFWC in mid-July essentially stating that the winter drawdown after the summer one was not feasible were not shared with the Association or this consultant. This reluctance to support a winter drawdown after the summer drawdown was finally shared by GLIFWC in early September. After hearing this, the Minong Flowage Association and this consultant hoped that a winter drawdown prior to the summer drawdown could be considered.

In order for this to happen, Tribal, WDNR, County, and lake residents had to support the idea. While GLIFWC did support this idea of a 2-3 ft drawdown, WDNR fisheries did not. WDNR wildlife did support the idea of a winter drawdown, but require that it be completed prior to October 15. In general Minong Flowage residents support the idea however there are concerns about impacts to the fishery and private wells. These concerns would be valid whether a winter drawdown was completed or not, simply because of the extended time period expected of the summer drawdown for dam repair. The Minong Flowage Association did express their support for a possible drawdown or 2-3 ft (also supported by GLIFWC) in mid September, provided enough time still existed to alert property owners on the entire system so boats and docks could be removed.

Other parties including the Cranberry Lake and Flowage Association and the power company operating the dam also needed to support the idea. Conversations had with the Secretary of the Cranberry Lake Association on Sept 18 also indicated their support for a 2-3 ft winter drawdown prior to the summer drawdown, but also had concerns about timing.

Regardless of this support, a decision was made by GLIFWC that completing all the necessary support work for the winter drawdown would be too difficult based on timing, particularly given that the entire process including drawing down of the water was to be completed by October 15. Without the support of GLIFWC, the idea of a winter drawdown prior to the summer drawdown has been stayed.

2.4.3 Herbicide

It is expected that no early season herbicide application for control of EWM or CLP will occur in the Minong Flowage in 2013. Based on concerns of EWM becoming an issue in newly created areas of the Flowage, it is anticipated that the Minong Flowage Association will request a treatment permit in the mid summer. It is also expected that the Cranberry Lake Association will request a permit for either early season or mid season herbicide application. The extent of the surface area to be treated will of course be based on conditions that exist at that time, and not be based on fall bed mapping in 2012.

2.4.4 Weevils

It is not known if the weevil rearing project at the Swift Nature Camp will continue in 2013. The Nature Camp will undoubtedly be negatively impacted by the loss of much of their

waterfront due to the summer drawdown. This may lessen their ability to participate in the rearing project. It is also unknown if Dr. Thorstenson will be supportive a weevil rearing project on the Minong Flowage in 2013, due to the impacts of the summer drawdown. It is anticipated that weevil monitoring will continue, although it may include a much more rigorous and scientifically credible process, along with a general count as has been done in the past.

3.0 Summary

Planning for 2013 continues, but many questions and concerns remain unanswered at this time. It is the intention of the Minong Flowage Association and this consultant to continue working with the stakeholders to determine an approach to 2013 that meets the needs of all concerned. At very least, a plan for documenting and analyzing the impacts of the extended summer drawdown on wild rice, EWM, CLP, and other resources will be developed. A report will be completed that compares the impacts on target and non-target aquatic plants that 3 years (2009-11) of active management of EWM using herbicides has brought about. This information, along with the determined impacts of the summer drawdown, a new investigation of other invasive species management options, and stakeholder input will be used to develop a new APM Plan for the Minong Flowage, to be implemented in part in 2014.

DLB