

Archibald Lake Association



www.archibaldlake.com

To: 8/29/13

Gary Hanson Department of Natural Resources 2984 Shawano Ave Green Bay WI 54313

From:

Steve Fleming Archibald Lake Association W292 N6973 Dorn Rd Hartland, WI 53029

Dear Gary,

I believe the attached includes all the documentation that you have requested for the Rapid Response Eurasian Water Milfoil grant (AIRR-70). This summary includes expenses starting January 2013 and continuing through June of 2013. This submittal uses the final grant funds available on this grant. The donated labor portion is from labor that was donated in 2011/2012 and was not needed for the previous filing. We are getting a lot of membership participation.

This document contains the following over the cover letter:

- Pages 1-2: WDNR Payment request form
- Page 3-4: WDNR Grant Payment Worksheet
- Page 5-6: Summary of a spreadsheet that I keep for Donated Labor I have only included the donated labor needed to satisfy the grant to date. There are a few extra hours included just to make sure. We have more than we need.
- Pages 7-13: Contracts, invoices, and receipts from our expenses. I am only including the receipt for the survey and chemical treatment since that more than utilizes the remaining dollars
- Page 14 to the end I have included a final report of our experience as requested. I hope this satisfies your need. I tried to do it with respect to what we did and what we learned.

Please let me know if you have any questions regarding this information or if you need anything in addition.

Eurasian Water Milfoil Progress Report (AIRR-70)

Prepared by Steve Fleming, Project Leader

Background

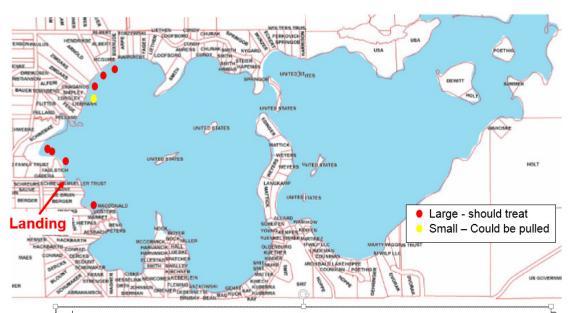
Eurasian Water Milfoil (EWM) was found in Archibald Lake on June 25th, 2009 during a routine plant survey conducted by Lakeland Biologists and paid for by the Archibald Lake Association. The survey found 18 separate locations/colonies. All locations were within 300 yards of the boat landing.

The Lake Association applied for and received a \$20,000 Rapid Response Grant from the Wisconsin DNR on August 10th, 2009. (AIRR-70). Because our yearly spending was lower than expected we applied for an extension in 2012 which allowed us to continue using grant funds through 2013.

The following is a summary of five year results starting in 8/9/2009. We will summarize each year's actions and results showing a map of the EWM locations

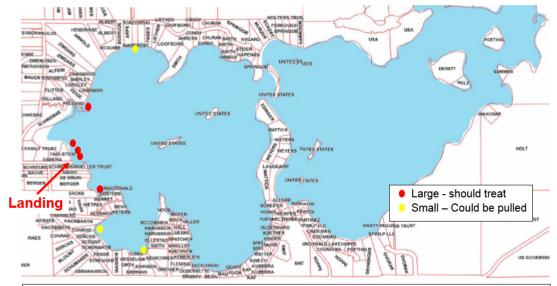
Results By Year

 As stated above, EWM was first identified in Archibald Lake during a plant survey in 2009. The survey found 18 locations near the boat landing. The 18 locations were marked with buoys and signs were placed to try and keep boaters away. We found that in many cases the buoys drew more attention and boat traffic increased more than would have been seen without the buoys so we stopped using them in future years. The following is a map of the original locations is below



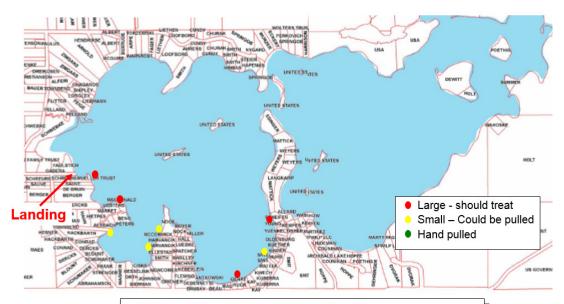
- 2009 EWM Identified in Archibald 18 Individual Locations
- · Rapid Response Grant Received

- In August of 2009 we applied for a received a great from the WDNR to chemically treat the 18 locations and that treatment was done in the fall of 2009 by Cason and Associates. We chose Cason based on their record and references from other lakes. All treatments in 2009 and subsequent years were done with granular 2,4-d.
- In parallel to this activity we began implementing our communications plan to the Association members regarding EWM and the proposed plan. Based on a special meeting held after EWM was found, the Association voted unanimously to go forward with the chemical treatment and grant application.
- In May 2010, Cason and Associates, with two Association members, completed a focused EWM plant survey of the lake to find new EWM infestations and document the affect of the previously completed chemical treatment. The map of the EWM infestations is attached. In summary, some of the 2009 treated areas were gone, some were sickly, a few remained healthy and we found a few new locations. Overall we made some improvement but we did not eliminate it.

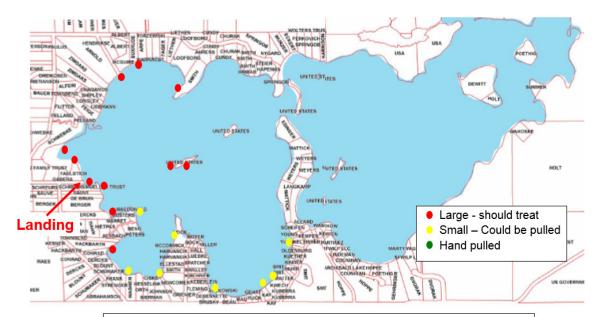


- 2010 After Fall/Spring 2,4-d Treatment
- Some Areas Gone...More Popping Up.
- While You Wait for Spring and Fall Treatment, Plants are Spreading!
- We also started our association Adopt-A-Shoreline program which has as one
 of its goals to find EWM infestations before they become large. This program
 helped us identify the locations to chemically treat in the fall of 2010.
- July 2010, two association members did a full Point Intercept survey of the lake. This data was sent to the WDNR and entered into their database for future reference.
- In May of 2011 another shoreline survey was completed by Cason and Associates and several Association members looking for EWM. The

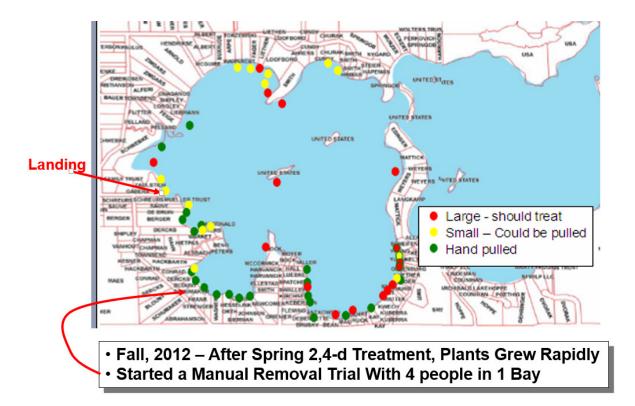
completed survey provided the input for the spring chemical treatment. The map of the plants found is below. The areas were greatly reduced through the past years treatment with mostly just new infestations being found. As it turns out, shortly after the first treatment was completed, our Adopt-A-Shoreline program started locating additional large plant beds and a second treatment was done in June of 2011. It is unknown why the initial plant survey missed these plants.



- 2011 After Fall/Spring 2,4-d treatment
- · More Areas Eliminated. More New
- Started Some "Uneducated" Manual Removal
- In May of 2012 we followed the same plan of doing surveys and treatment in the spring followed by Adopt-A-Shoreline surveys throughout the year. The 2012 map is shown below. As you can see, we are finding more plants that need treating.



- Spring, 2012 After Fall/Spring 2,4-d Treatment
- More Small Colonies Popping Up
- Cannot Treat All The Small Areas...and They Spread
- In September, 2012, with the help of Brenda Nordin, we made the decision to not do a fall chemical treatment. We decided to wait until spring and do another survey and treatment when the probability of treatment success was better.
- We also developed a procedure for manual EWM removal and will be expanding our manual removal efforts in 2013 in order to keep in front of developing colonies. We piloted the procedure in one bay in 2012 with very positive results.
- In May of 2013 another survey and treatment was completed. Because of the plants identified through our Adopt-A-Shoreline surveys in the fall of 2012 we decided to do a modified point intercept survey looking specifically for EWM. This survey was completed by Cason and Associates along with two Association members. The map of the locations is below. As you can see by the map EWM has greatly expanded in the lake. This map was nearly identical to the map the Association produced in the fall identifying the EWM locations.



- Based on this map we got very aggressive with both the chemical treatment and manual removal efforts. As is shown on the map, the green and most of the yellow dots were removed manually, the red dots plus the yellow dots that were close to red ones were chemically treated. The treatment areas were expanded, per Brenda Nordin's recommendation, to provide additional chemical concentrations.
- In the summer of 2013 a WDNR team lead by Brenda Nordin did a full Point Intercept survey in Archibald Lake. The following map shows the current state of EWM. As can be seen from the map, our efforts in 2013 significantly reduced the locations and densities of EWM in Archibald Lake. There is one location, shown as a red dot that is too deep to manually remove with our current methods and one location, marked by the yellow dot that has been manually removed. This survey was done to monitor the impact of the chemical treatment on the native plants. Those results are pending.

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August 2013 EWM Location Map

Our plan moving forward into 2014.

We have learned a lot over the years. As a result we have determined that there are four critical components to being successful managing EWM.

- Communications and Association Support Every year we get more people involved which means more people identifying plants early when manual removal can still be effective. We will continue to communicate our progress and actions at every possibly time and solicit volunteers as appropriate.
- Adopt-A-Shoreline and Complete Surveys We will continue to do our Adopt-A-Shoreline surveys. These provide an early warning system and feed the manual removal process. We will also continue to do consultant lead "targeted point intercept surveys" using the point intercept grind and rake dropping techniques to find colonies that may escape normal observation. We will also do full point intercept surveys in the summer to monitor the impact of chemical treatment on native plants.
- Manual Removal The manual removal effort has been very successful.
 We have completely removed plants in several bays which has completely avoided chemical treatment in those locations. We currently have 6 teams working the manual removal process. Our goal is to find and remove plants early before chemical treatment is needed. Based on one hear's results that strategy is working.
- Aggressive Chemical Treatment We have learned that being aggressive is critical for managing this invasive plant. The expanded treatment areas (buffers) used in 2013 have been very effective in eliminating the plants and we need to continue with this approach.

The following is a summary of our expenses and donated labor over the duration of the grant.

Archbald Lake - WDNR - EWM Grant Summary					
	Grant Expenses		Donated Labor \$'s		Donated Labor Hours
2009	All 2009 Expenses rolled into 2010				
2010	\$	7,097.06	\$	2,391.00	199.25
2011	\$	4,572.93	\$	1,530.00	127.50
2012	\$	3,642.04	\$	1,259.00	104.92
2013	\$	4,687.97	\$	1,568.49	130.71
Totals	\$	20,000.00	\$	6,748.49	562.37

Beyond this grant the Association incurred an additional \$11,415 of expenses in 2013 that were not covered by the grant. We also had an additional 250 hours of donated labor that was not applied to this grant. I believe that these two numbers show how committed the Association is to maintaining and improving this wonderful natural resource.

Overall, we believe the WDNR EWM grant provided SIGNIFICANT VALUE and we really want to thank the WDNR for the financial support and everyone involved, especially Brenda Nordin, for their willingness to share their time and knowledge as we worked our way through this process. We have learned a lot and believe we are in a very good position to move forward into 2014 and beyond.

If there are any questions please let me know.

Respectfully Submitted by:

Steve Fleming, Archibald Association Board of Directors (VP and APMP Committee Leader) Phone: 262.993.4228