

W.L.P.O.A.



Whitefish Lake Property Owners Association

P.O. Box 135, Stone Lake WI 54876

June 24, 2017

TO: Wisconsin DNR
FROM: Whitefish Lake Property Owners Assn.
SUBJECT: Project No. AIRR-162-14 Final Report

In accordance with the Project Scope and Description of Deliverables of the Aquatic Invasive Species Grant Project Number AIRR-162-14, the following report is being submitted.

1) Pre/post treatment of aquatic plant monitoring

Eurasian Watermilfoil (EWM) was initially discovered by the Great Lakes Indian Fish and Wildlife Commission (GLIFWC) in the spring of 2007. Once EWM was confirmed the Whitefish Lake Property Owners Association (WLPOA) developed a plan to eradicate or control the EWM. Over the next several years we learned from the DNR and other sources that the best we could expect was to control, not to eradicate, the EWM. That prediction has proven to be true.

The first step that WLPOA took was to try to isolate Schoolhouse Bay from motorized traffic to avoid the potential spread of EWM to other parts of the lake. Through a series of town board meetings and a public hearing, the town board approved an ordinance restricting motorized traffic in Schoolhouse Bay except for the three residents on the bay who were updated on the exact locations of the EWM and asked to avoid those locations.

Buoys were placed at the entrance to Schoolhouse Bay to advise boaters that motorized traffic was prohibited in the bay. The Sawyer County Board approved our request to allow the Sawyer County Sheriff's Office to enforce the ordinance. Most boaters respected the restriction; however a small number of boaters, mostly fishermen, ignored the buoys and boated into Schoolhouse Bay in spite of the restriction. The ordinance as passed restricted motorized traffic until either no EWM was observed in Schoolhouse Bay or until December 31 of 2013, whichever came first. Because there were always a few isolated EWM patches that needed to be treated, the ordinance expired on December 31, 2013.

We believe that because of the few boaters that ignored the restriction that EWM was transmitted to other areas of the lake. It's unfortunate that a very few disrespectful boaters have endangered the rest of a great natural resource.

Through the support and cooperation of the Sawyer County Land and Water Conservation Department and the Wisconsin DNR, WLPOA received a series of grants to develop a baseline of native aquatic plants in Whitefish Lake and grants to combat invasive species. The grants have been a major factor in our ability to understand the makeup of vegetation in Whitefish Lake and to develop plans to control the EWM.

The lake association established volunteer launch ramp monitors to check boats and trailers entering and leaving the lake for invasive species. We also began an aggressive educational program to inform lake residents of the existence of EWM and how to recognize it.

Because the decision to use a licensed herbicide applicator involved applying for a DNR permit, it required us to survey the shoreline and identify EWM locations. Those locations were then identified on maps attached to the permit application. Following the application of the herbicide, the applicator reported the results to the DNR within 30 days as required. Survey maps for the years 2012 through 2016 are included in this report.

2) Herbicide Treatment

2012 was the first year that herbicide was used to systemically kill patches of EWM. We employed Stantec Consulting Services, Inc. from St. Paul as a licensed herbicide applicator to treat EWM in Schoolhouse Bay and three 0.5 acre locations close to Schoolhouse Bay. A total of 4.5 acres of water area was treated. We found that the disadvantage of using Stantec resources was the cost and timing. Once Stantec had selected a date for herbicide application, that date was locked in regardless of weather conditions. If the weather was not ideal, i.e. windy, the application couldn't be as effective as if it were applied on a calm day.

In 2013 we utilized SCUBA divers to hand-pull EWM (see Section 3 SCUBA Removal). Our survey maps showed that only 1.1 acre of EWM was to be hand-pulled in Schoolhouse Bay and a small patch in Moe's Bay.

After utilizing SCUBA divers in 2013 to eradicate or control EWM, we decided to utilize alternative methods of EWM control. Research and discussions with DNR personnel and other knowledgeable resources suggested that perhaps a better method would be the use of herbicide on an ongoing basis.

In 2014 our survey showed that the EWM had spread to 4.5 acres. We used SCUBA divers in early June, and then contracted with Tom Connell (NEC, Inc.) as a licensed herbicide applicator to work with us both as a consultant and an applicator as permits were approved. We found that herbicide application was more effective in controlling EWM than the use of SCUBA divers to hand-pull the EWM. Because Tom is locally based he was able to survey the lake when weather conditions were optimal. He was also able to apply herbicide on days when there was little wind, maximizing the effectiveness of the application.

We found that this approach was much more effective both in terms of the amount of EWM that was destroyed and the significant reduction in the number of volunteer hours required. We relied on the heavy use of small number of volunteers to continually monitor the shoreline looking for new EWM outbreaks together with the majority of property owners who were encouraged to monitor the water areas in front of their property on an on-going basis and to report any suspected outbreaks to members of the WLPOA Board.

Our spring 2015 survey showed that EWM remained at 4.5 acres, but in different locations. We continued to employ NEC, Inc. to help with the surveys and the herbicide application. Late summer and fall surveys reported that the amount of EWM had been significantly reduced.

Spring 2016 surveys indicated that only about 1.0 acre of EWM was left to be treated. No EWM was found in Schoolhouse Bay at that time. Those areas where EWM remained were areas that existed previously and had been treated, but some stragglers survived the herbicide and had spread to a few small patches. Those patches were treated in the late spring of 2016, and surveys were done throughout the rest of the summer and fall by NEC, Inc. and volunteers. NEC, Inc. reported in the fall that it appeared that the EWM had been successfully treated and that only small patches of EWM remained.

Our conclusion when evaluating the various approaches to controlling EWM was that the selective use of herbicide, applied under favorable weather conditions, was by far the most effective method and resulted in little to no damage of native vegetation.

3) SCUBA Removal

In the initial phases of the project WLPOA believed that the best approach to controlling Eurasian Watermilfoil (EWM) was to employ SCUBA divers to hand-pull growths of EWM. The logic was that hand-pulling wouldn't destroy native Northern Milfoil in the same proximity. Therefore, in 2013 and 2014 WLPOA hired divers to extract EWM using mesh nylon bags which would be periodically emptied on shore when sufficient amounts of EWM was collected. The resulting deposits of EWM were then taken to a proper disposal site.

Although significant amounts of EWM were collected, we discovered that after the divers had worked a given area for a relatively brief period of time that the water became quite cloudy making it difficult to continue working the same area. Also, the divers pulled a relatively large amount of Northern Milfoil due to their inability to differentiate between the two varieties. Another problem that resulted from hand-pulling was that small fragments of the EWM plants escaped, which could result in a new growth of the plant. We used volunteers in kayaks with small, hand-held nets to retrieve the EWM fragments that were visible. Even so, we knew that we hadn't collected all of them.

We also learned that the use of divers was a slow process, which only allowed us to process a relatively small segment of the shoreline, perhaps in the range of a quarter to a half mile. We also needed one or two pontoons to support the dive team and several volunteers in kayaks to retrieve floating fragments. The combination of volunteers to provide pontoon support together with the volunteers in kayaks led to a relatively labor intensive operation.

4) Volunteer AIS Monitoring

Because EWM emerges prior to native vegetation in the spring it is much easier to identify EWM growths during May and early June, depending on the weather conditions. This allowed us to more accurately map EWM locations in preparation for the application of herbicide.

Volunteers continued to monitor the shoreline through September in order to plan for the application of herbicide in the following spring. NEC, Inc. also surveyed the shoreline in the fall to both assess the success of the herbicide applications and to provide a map to be used in the spring for the permit application and subsequent treatment.

We had a core group of four to six volunteers who monitored on an ongoing basis throughout the season. Many or most property owners assisted in the monitoring process, but not nearly as active nor as accurate as our core group. Tom Connell, our consultant and licensed herbicide applicator, was invaluable for his survey work and flexibility to survey and to apply herbicide when the conditions were right, as even a mild breeze makes it more difficult to identify plants under water.

5) AIS Education

The lake association maintained contact with and educated members of the lake association by newsletters, an AIS training workshop and through three general membership meetings held in June, July and August annually. We also had samples of EWM and Northern Milfoil at our annual picnic in August of each year. We stressed the importance of shoreline monitoring and distributed handouts provided by the DNR showing the difference between EWM and Northern Milfoil. A website was also developed which included pictures of native water plants and invasive species, and how to distinguish the difference.

We instructed property owners to contact board members of any suspected new EWM sighting, and reinforced that board members would rather visit a site and find that the suspect was in fact Northern Milfoil rather than miss a new infestation of EWM. This also gave us the opportunity to explain how to identify the difference between EWM and Northern Milfoil to the property owner.

At each general meeting in June through August we answered questions about the EWM and reinforced the means of distinguishing between Northern Milfoil and EWM. Locations of EWM were also shared with participants so that they could avoid boating in those areas.

MANAGEMENT RESULTS

Over the course of the project two different approaches to controlling EWM in Whitefish Lake were tried. We found the use of herbicide to be the most effective for destroying EWM while having a minimal to no impact on surrounding native vegetation. It also proved to be the most effective approach in terms of labor intensity, both paid and volunteer. We are fortunate to have NEC, Inc. working with us from the standpoint of professionalism and the close proximity to Whitefish Lake. Working with an organization that was a considerable distance away would significantly lower the effectiveness of a herbicide approach.

The use of SCUBA divers probably destroyed as much or more native vegetation than the use of herbicides. This was due to the cloudy conditions that materialized after a short period of hand-pulling vegetation together with the inability of divers to distinguish between EWM and Northern Milfoil. At one point we read about a suction device that would suction in a pulled EWM plant and its associated fragments to prevent pieces from floating away and forming another plant. We purchased equipment to build the device and spent time building and testing it, but weren't able to move it to a production operation.

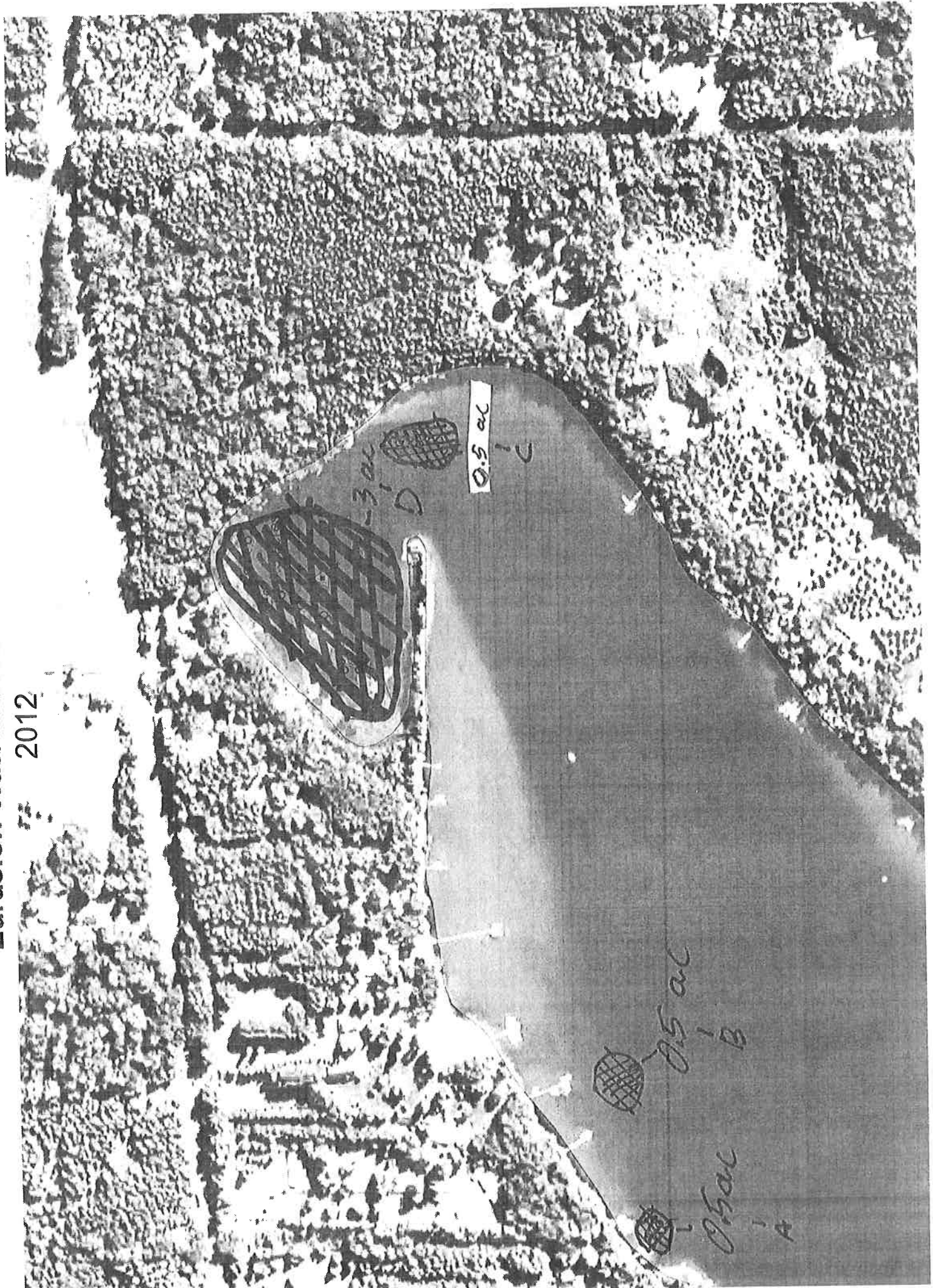
A significant problem we found was the involvement of lake property owners. Although information about EWM was covered extensively in our newsletters, covered in detail in each of three general membership meetings annually, covered in the WLPOA website, and covered in numerous emails to lake association members, we still found members that didn't understand we had a problem with EWM.

Four to six volunteers were responsible for the greatest contributions in surveying the lake on a continual basis and reporting the results so that a consolidated EWM map could be used when applying for a herbicide permit and the subsequent application. The typical property owner was asked to monitor the water area in front of their property and report any suspected outbreaks of EWM to a board member. Some property owners did this, but not as frequently as we had hoped. That left the burden of monitoring the shoreline to the handful of dedicated volunteers. We're not sure how to increase the involvement of typical property owners, but having a small group of volunteers that carry on the survey work on a continuing basis is critical.

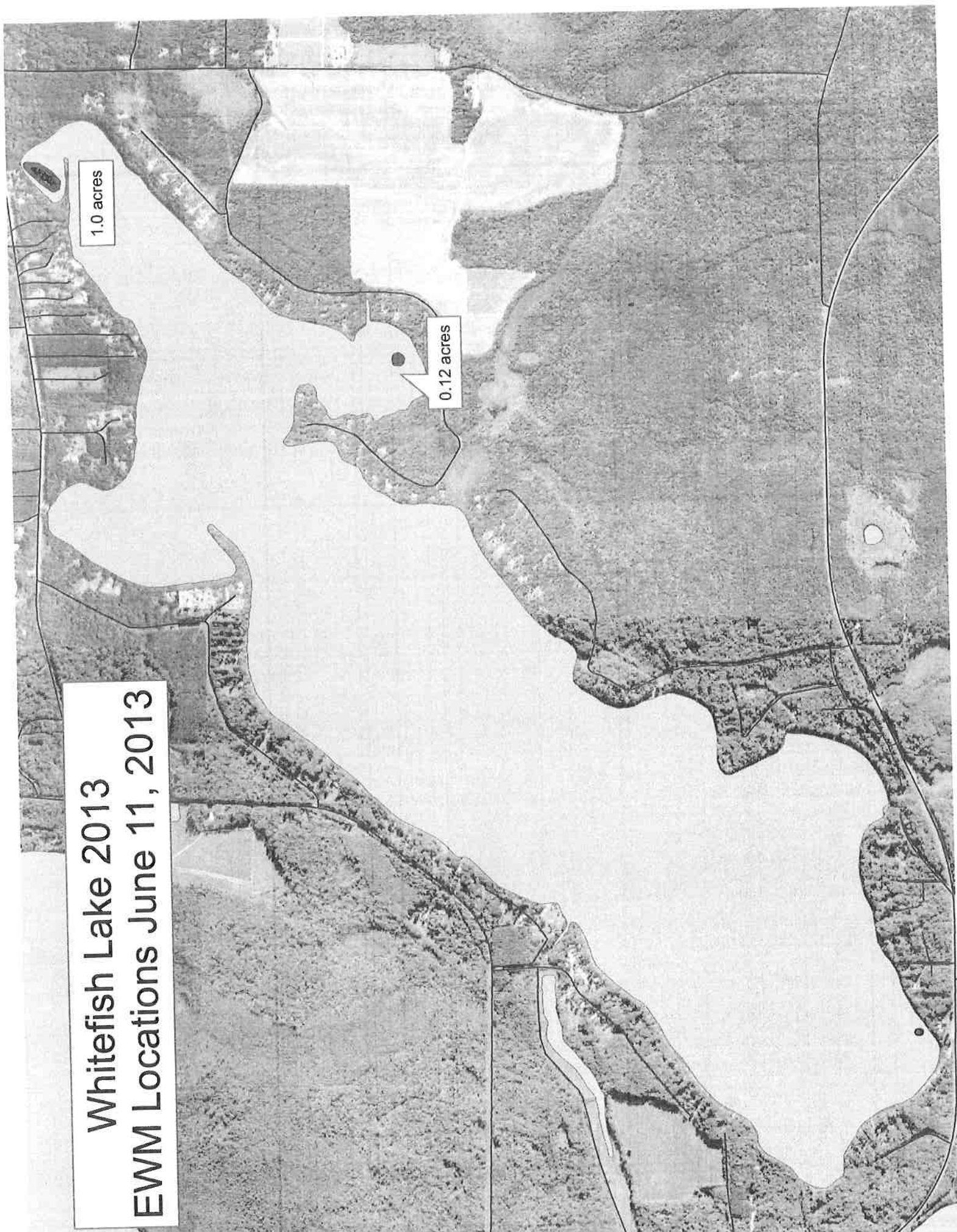
We appreciate the support received from the DNR, both in terms of financial support and willingness to share information on the control of EWM. DNR staff was always available to answer questions and share information relative to experiences of other lake associations.

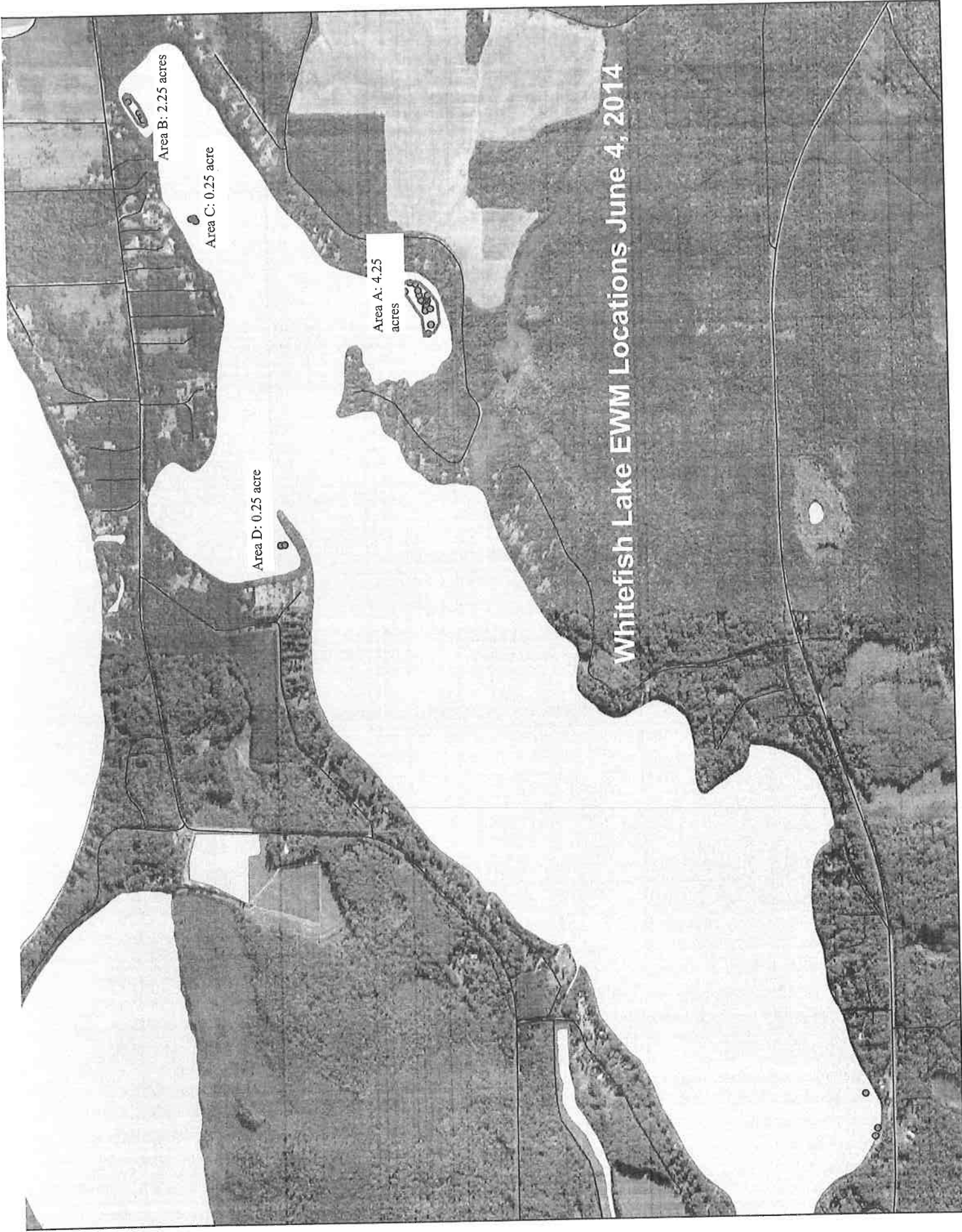
Eurasian Watermilfoil on Whitefish Lake

2012



**Whitefish Lake 2013
EWM Locations June 11, 2013**





Area B: 2.25 acres

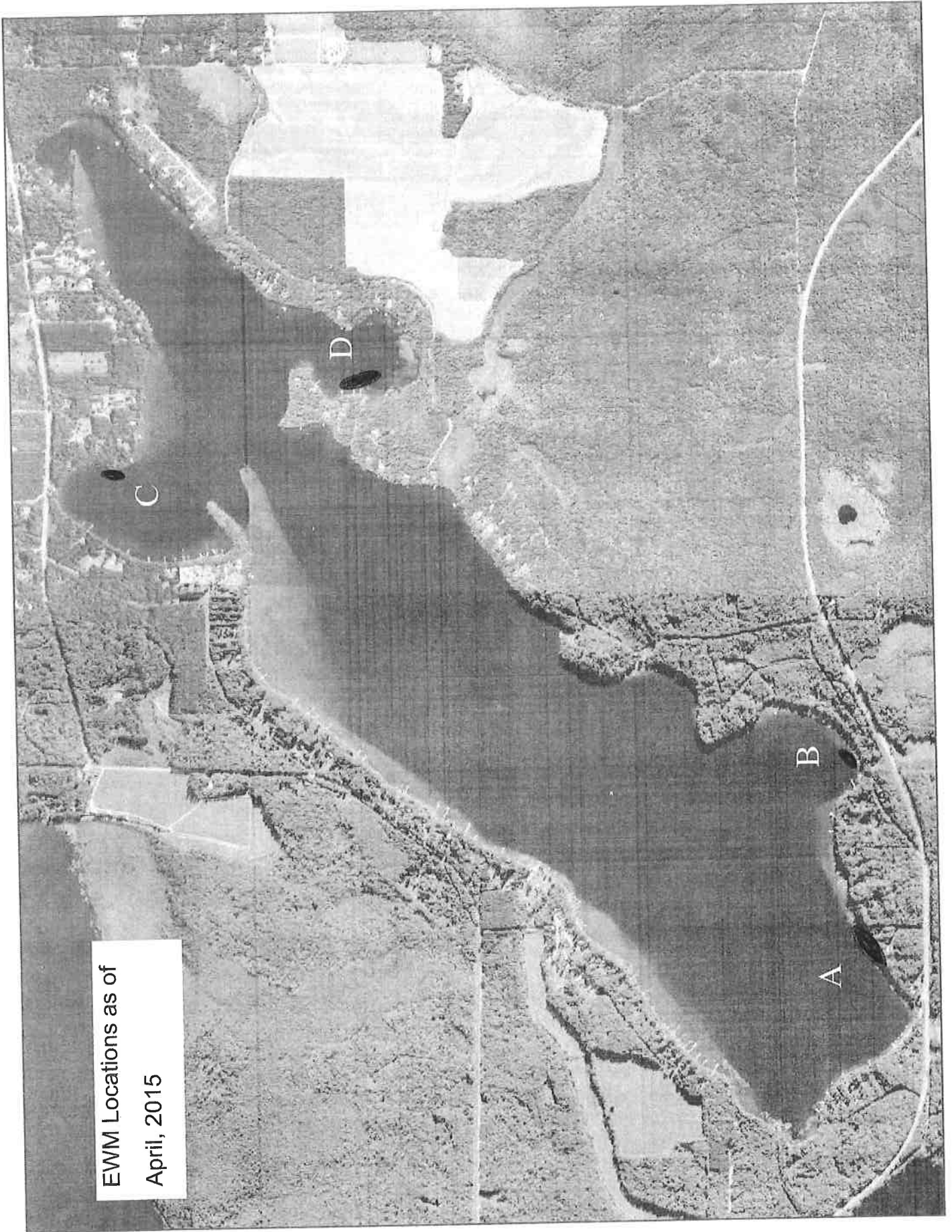
Area C: 0.25 acre

Area A: 4.25 acres

Area D: 0.25 acre

Whitefish Lake EWM Locations June 4, 2014

EWM Locations as of
April, 2015



EWM Locations as of
May, 2016

