WISCONSIN DEPARTMENT OF NATURAL RESOURCES
AQUATIC INVASIVE SPECIES GRANT PROGRAM

Application Materials

Pike Chain of Lakes AIS Control & Strategy Development Project: 2014-2018

Prepared for the

Iron River Pike Chain of Lakes Association

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Lake Management Planning

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INTRODUCTION

The Pike Chain of Lakes, Bayfield County comprises six lakes with a surface area of over 900 acres (Map 1). This headwater drainage system leads to the White River which flows through the Bad River Indian Reservation on its way to Lake Superior. The White River is a well known trout stream and popular tourist destination. Like other lakes in northern Wisconsin, invasive species establishment threatens the health and beauty of this ecosystem. The Pike Chain of Lakes is known to harbor rusty crayfish, Chinese mystery snail, Eurasian water milfoil (EWM) and on its shores, purple loosestrife.

The Pike Chain of Lakes is a highly sought lake system by recreationists and anglers. The system contains three public boat landings, two public beaches, a 48-site campground operated by Bayfield County, and three operating resorts. As defined by NR 1.91(5b), the Pike Chain of Lakes exceeds maximum public boating access standards by having more than one access site with a total of more than 35 car-trailer parking spaces (one per 25 open water acres). In addition, anglers flock to the system's annual fishing tournament (Battle Axe Saloon Muskie Tournament) held each October. These intense public use opportunities most likely contributed to the Pike Chain of Lakes becoming infested with EWM, especially since the system's closest waterbody containing EWM is over 12 miles away (Sandbar and Tomahawk Lakes). Further threats, including curly-leaf pondweed in Upper Eau Claire Lake and many invasive species in Lake Superior are not too much farther away, at 13.5 miles and 20 miles distance, respectively.

EWM was first discovered in the Pike Chain during the late summer of 2004 and later confirmed by the WDNR during May of 2005. That year, the IRPCLA received an Aquatic Invasive Species Early Detection and Response (AIS-EDR – AIRR-009-05) grant to combat the pioneering invasive plant. That same year, the first herbicide treatment (approximately 16 acres) was completed on the chain. The 2005 treatment has since been followed by treatments each year from 2006 to 2013. After purple loosestrife infestations in Lake Millicent and Buskey Bay were discovered in 2005, Miles Falck, Wildlife Biologist at Great Lakes Indian & Wildlife Commission (GLIFWC) was contacted and a management strategy was devised involving the removal of the plant's seed heads and the application of the herbicide Rodeo. In 2006, IRALA volunteers accompanied GLIFWC staff to collect over 2,500 *Galerucella* spp. beetles from an established population in Bayfield County and distributed them to purple loosestrife infested areas on Buskey Bay and Lake Millicent. These control methods would continue to occur in the years to come, greatly reducing the occurrence of purple loosestrife along the shorelines of the Pike Chain of Lakes..

The Iron River Pike Chain of Lakes Association (IRPCLA) has rallied to confront the threat of AIS though volunteer-based control methods, collaborations with industry partners such as the Wisconsin Department of Natural Resources (WDNR), GLIFWC, Bayfield County AIS Coordinator Jeremy Bates and private consultants. In 2007, the IRPCLA contracted with Onterra, LLC to initiate a management planning project. The aim of this project was to assess EWM throughout the chain, as well as create management plans for all six of the lakes in the chain. This was accomplished in 2009. That same year, the IRPCLA applied for funding through the WDNR's AIS Established Infestation Control Projects grant program in hopes of financing five years of EWM monitoring and control. This project was awarded funding and began in April of 2009, proceeding through 2013. The project was largely successful in keeping

EWM from reaching even moderate densities throughout the chain. Further, monitoring of the native aquatic plant community found no undesired impacts upon this component of the ecosystem. Despite meeting many project success criterion, an unofficial goal of preventing EWM from spreading to new areas within the chain was not met. A 2013 summary report previously submitted to the IRPCLA and WDNR (*2009 Controlling Established Infestations Grant Summary Report, January 2014*) describes the studies occurring through 2009-2013 as well as project highlights from this five year effort.

The IRPCLA has continued to be proactive and diligent in their management of the Pike Chain of Lakes over the years. The group maintains a website which is updated often with management related reports, volunteer opportunities, photos and stories about life on the chain lakes, etc. The IRPCLA also maintains cleanliness along three miles of Highway H through the "Adopt-A-Highway" program. Volunteers collect valuable water quality data through the WDNR's Citizen Lake Monitoring Network (CLMN). As a result of the 2009 Lake Management Planning Project, the IRPLCA developed an educational campaign to deliver an environmental message on six topics related to lake health. In cooperation with graphic design students at Duluth Business University, six posters were created and were distributed for display at area resorts, restaurants, sports shops, campgrounds, etc. The posters are quite attractive, and may be viewed at the IRPCLA's website (http://www.pikechain.org/Posters/index.html).

In the past, Clean Boats Clean Waters (CBCW) volunteers have monitored the landings on the Pike Chain of Lakes through grants obtained by the IRPCLA or through a cooperative work program with Northland College. In 2014, CBCW inspections will be conducted through a grant awarded to the Bayfield County AIS Coordinator, Jeremy Bates. 200 hours per landing will be conducted at Hyde's Landing on Buskey Bay, the Town landing between Buskey Bay and Lake Millicent, and the Twin Bear County Park on Twin Bear Lake.

The entire Pike Chain of Lakes is considered an Outstanding Resource Waterway (ORW) by the WDNR. Further, the 2009 Pike Chain of Lakes Management Plan describes the chain lakes as having exceptional water quality and watershed characteristics. The lastest studies concerning the aquatic plant community within the chain lakes point to high quality in this respect as well. This is evidenced through the lakes' high species richness and Floristic Quality Index (FQI) value (Table 1), as well as the presence of a rare species, Vasey's Pondweed (*Potamogeton Vaseyi*). According to Wisconsin's National Heritage Inventory, this species is threatened in Wiscosnin due to its rarity and vulnerability to disturbance. In summary,

The IRPCLA and this proposed project's sponsors realize that the Pike Chain of Lakes is an exceptional resource and an important economic driver for the Iron River area. Knowing this, the IRPCLA would like to complete the proposed project for three main reasons: 1) to identify a level in which EWM may be managed in a sustainable, long-term manner, 2) to ensure that monitoring of the native aquatic plant community is completed during management and 3) to further engage and educate lake stakeholders in the EWM and general lake management process. The proposed project outline that follows addresses these three areas as well as outlining a methodology to critique the components for signs of success.

PROBLEM IDENTIFICATION

EWM is known to exist in five of the six lakes included within the project area (Table 1). During the aforementioned five-year study, the locations and densities of EWM was mapped annually in an effort to track its extent within the chain lakes and prioritize areas for control through herbicide use or volunteer based hand-removal methods. The January 2014 Summary Report describes the level of effort (acres of treatment, volunteer hours spent) produced each year in terms of these control strategies.

Table 1. Pike Chain of Lakes morphometric and select native and non-native aquatic plant characteristics. Lake areas derived from WDNR Hydroshiad GIS data layer.

Lake	Acreage	2013 Native Species Richness	2013 FQI Value	EWM present?
Buskey Bay	100	46	37.6	Yes
Lake Millicent	183	40	38.7	Yes
Hart Lake	259	41	40.1	Yes
Twin Bear	172	29	34.3	Yes
Eagle Lake	170	50	44.2	Yes
Flynn Lake	29	38	38.5	No

Upon discovery of EWM in Hart Lake and Twin Bear Lakes in 2004 the IRPCLA initiated an aggressive plan of attack each year from 2005-2013 in an attempt to primarily keep the invasive plant under control, but also with the hope of possible eradication and limiting spread to other lakes in the Pike Chain. Over the course of annual monitoring during this time, EWM was rarely found in large, continuous colonies. It is believed that the aggressive strategy was very effective at maintaining a minimally dense EWM population within the chain.

Within the 2009 project grant application, specific project success criteria were defined under which the project would be guided towards. Reducing all EWM qualitative descriptions to be a *Scattered* or less density was one of these success criteria. This was achieved with great success, as determined by qualitative mapping conducted in August of 2013 (Map 2). Another success criteria was to keep EWM below a predetermined frequency of occurrence, as determined by the results of lake-wide point-intercep surveys. The results of 2013 point-intercept surveys found that EWM occurrence was below each of the predetermined benchmarks specified in the 2009 grant application, meaning that success was met in this quantitative criterion (Table 2).

Table 2. Pike Chain of Lakes EWM control program success criteria and results. FOO refers to frequency of occurrence on a lake-wide basis, as determined through whole-lake point-intercept surveys.

Project Lake	Success criteria (2013 EWM FOO)	2013 EWM FOO	Success?
Buskey Bay	<1%	0.5	✓
Lake Millicent	<1%	0.5	✓
Hart Lake	<10%	0.9	✓
Twin Bear Lake	<10%	0.2	✓
Eagle Lake	<1%	0.0	✓
Flynn Lake	<1%	0.0	✓

Through the past five year project, the IRPCLA has come to realize two things. First, that EWM eradication is an inappropriate goal to be working towards, and secondly that an aggressive strategy for EWM control may not be the most sustainable means of maintaining a low frequency but non-harmful populations. Therefore, the IRPCLA wishes to fine-tune a strategy which will allow for a moderate and sustainable level of control commitment (measured in time, finances, etc.) while maintaining the ecological integrity of the lakes and maintaining navigational and recreational activity. Essentially, the IRPCLA wishes to target EWM occurrences for herbicide treatment only when they reach a critical, pre-determined level that warrants treatment. This strategy was first outlined within the January 2014 Summary Report and is specified in the Project Goals section below.

PROJECT SCOPE

Monitoring Strategy

The IRPCLA will initiate both herbicide and manual control methods to manage EWM. Monitoring control actions and defining their success can be completed through qualitative and quantitative methods. Qualitative monitoring will be completed during this project by comparing observational data such as EWM colony acreages and density ratings before and after the treatments. Quantitative monitoring methodologies were attempted in 2009-2013 using a modified point-intercept methodology consistent with the Appendix D of the WDNR Guidance Document, *Aquatic Plant Management in Wisconsin* (WDNR 2010). However, with the aggressive treatment strategy that was followed during that time period there were few treatments that were greater than an acre in size. This resulted in treatment areas that had very few sampling locations, making pre and post analysis difficult. It is anticipated that with a moderate approach, larger treatment sites would develop making this quantitative monitoring more applicable. Should adequately sized treatment areas be delineated (at least 10 acres) monitoring would include quantitative methods using a modified point-intercept methodology as previously eluded to. In general, a sub-sample point-intercept grid would be placed over the larger treatment areas to yield approximately four points per acre.

A qualitative monitoring would be completed by comparing pretreatment (summer before the treatment) with post treatment (summer immediately following the treatment) EWM peak-biomass surveys. The surveys would occur annually during mid to late summer when this plant is at its peak-biomass (growth stage). Large colonies over 40 feet in diameter would be mapped using polygons (areas), while small colonies, clumps of plants, and single plants would be mapped using points. Colonies marked with polygons would also be designated using a 5-tiered density scale from *Highly Scattered* to *Surface Matting*. The results of the EWM Peak-biomass Survey will be used to develop the following year's control strategy.

Project Goals

Fine-tune a working strategy to manage EWM at a sustainable level in the Pike Chain of Lakes. It is known that in order to carry out a control strategy in the long-term, an aggressive approach to manaing EWM would not be a wise decision. Using herbicide to control EWM, while effective, is expensive and not without potential risk to the native aquatic plant community. If efforts in this capacity are reduced, some tolerance to EWM presence will have to be learned. The IRPCLA wishes to maintain a low frequency of EWM within the Chain, one that does not impair the ecology or recreational opportunity but will be manageable through hand removal methods and minimal herbicide treatments.

The level of tolerance the IRPCLA will exhibit towards EWM in the chain may be described as the threshold level for which herbicide treatment may occur. This treatment threshold is described in detail below:

1. Areas targeted for treatment will consist of EWM in a scattered density or greater, mapped through polygon-based methodologies. It is believed that ecological impairment of a native aquatic plant community begins when and invasive reaches a dominant (roughly 50% aerial coverage) density. Therefore, this is a moderately aggressive threshold which should reduce colonies of EWM from reaching excessive density.
2. Areas targeted for herbicide treatment will consist of at least 0.5 acres in size. Small treatment areas are often less successful due to rapid dissipation and dilution of the herbicide. In a larger treatment area, it is generally believed that the core of the location retains herbicide concentrations for a longer period of time, thus increasing herbicide effectiveness on the targeted plant community. The IRPCLA may elect to treat concerning EWM colonies with treatment areas less than 0.5 acres in isolated, shallow areas of the chain where good success is anticipated based upon hydrologic and morphological features of the given area which provide for an effective dose of herbicide.

This strategy would result in about 9.3 acres to be targeted for treatment in 2014 (Map 3). As previously mentioned, it is vital that the IRPCLA be able to maintain a low level of EWM in the Pike Chain of Lakes. Therefore, the aforementioned thresholds for herbicide treatment may be modified in the future. This fine-tuning of the strategy will ensure that adequate success and efficient allocation of resources is met. As discussed below, incorporating a hand-harvesting program within the proposed project will allow lake managers to understand the potential ability and limitations of this technique.

The objective of this management action is not to eradicate EWM from the Pike Chain of Lakes, as that would be impossible. The objective is to bring EWM down to more easily controlled levels. To meet this objective efficiently, a cyclic series of steps is used to plan and implement the treatment strategies. The series includes:

1. A lakewide assessment of EWM completed while the plant is at peak biomass (late summer).
2. Creation of treatment strategy for the following spring building upon success and failures documented from previous treatments (winter).
3. Verification and refinement of treatment plan immediately before treatments are implemented (early spring)
4. Completion of control actions (spring)
5. Assessment of results (summer after treatment).

Once Step 5 is completed, the process would begin again that same summer with the completion of a peak biomass survey. The survey results would then be used to create the next spring's treatment strategy.

Educate Pike Chain of Lakes stakeholders regarding the realistic management of EWM and other aquatic invasive species. There are many misconceptions among Pike Chain stakeholders concerning EWM and other AIS. These misconceptions span a gamut including correct identification of native and non-native species, a realistic understanding of what levels of EWM require treatment, and a factual understanding of the risks and benefits associated with herbicide use in the aquatic environment. It is believed that through the educational and

stakeholder participation opportunities offered in this project (all phases), many of the misconceptions that have held fast over the past years will be overcome. Many of these stakeholder opportunities have already begun, such as the Clean Boats/ Clean Waters program, AIS surveillance monitoring, EWM hand-pulling and purple loosestrife monitoring and control. Throughout this project, all of these opportunities would be refreshed, expanded, and enhanced.

Success Criteria

Herbicide applications targeting colonized EWM be conducted by a third party licences aquatic herbicide applicator of the IRPCLA's choosing. Hand-removal actions would be conducted by IRPCLA volunteers and a paid hand harvesting entity. This would leave strategic planning of management actions and determination of treatment efficacy to be directed/evaluated by ecologists at Onterra (an objective outside entity).

A successful treatment (herbicide or hand-removal methods) on a given mapped colony would include a reduction of EWM density as demonstrated by a decrease in one density rating on a 5-tiered density rating scale. In other words, *Dominant* colonies would be reduced to *Scattered, Scattered* to *Highly Scattered*, etc. In terms of a treatment as a whole (lake-wide and chain-wide), at least 75% of the acreage treated that year would decrease by one level of density for an individual site.

As mentioned previously, quantitative monitoring was often impossible within the 2009-2013 control project due to the small treatment areas that were targeted. Should adequately sized treatment areas be delineated (at least 10 acres) monitoring would include quantitative methods using a modified point-intercept methodology consistent with the Appendix D of the WDNR Guidance Document, *Aquatic Plant Management in Wisconsin* (WDNR 2010). As discussed, a sub-sample point-intercept grid would be placed over the larger treatment areas to yield approximately four points per acre. Success would be determined through a statistically significant result per a Chi-square distribution analysis.

Native Aquatic Plant Monitoring

Quantitative monitoring of the Pike Chain of Lakes would also occur on a lake-wide basis, with comprehensive whole-lake point-intercept surveys occurring at the end of a five year period (2018). Comparisons may be made between 2013 and 2018 datasets, and success criteria evaluated based upon five year of EWM control. To characterize spatial distribution, *littoral frequency of occurrence* and *relative frequency of occurrence* would be calculated for each species found within each lake. In addition, the plant communities of the lake would be compared to those of other lakes in the ecoregion and the state using the Floristic Quality Assessment (FQA) procedures described in Nichols (1998). In general, the FQA evaluates the species found in a lake with those found in a natural, undisturbed system; indicating the health of the current plant community in the lake. Other attributes will be discussed as applicable including, but not limited to, species diversity, maximum rooting depth, total rake fullness, etc.

A community mapping survey would also be conducted in the final year of the project (2018). The map represents a snapshot of the plant communities in the lake as they existed during the survey. By comparing this survey with the 2013 survey, changes in mapped communities can be understood. A mapped community can consist of floating-leaf and/or emergent plants.

Examples of emergents include cattails, bulrushes, and arrowheads, and floating-leaf species include white and yellow pond lilies. Emergent and floating-leaf communities lend themselves well to mapping because there are distinct boundaries between communities. Submergent species are often mixed throughout large areas of the lake and are seldom completely visible from the surface; therefore, mapping of submergent communities is more difficult and often impossible.

By the end of this five year period, it would be expected that EWM would be present in the Pike Chain of Lakes in a low abundance, yet likely slightly greater than what it was found to be in 2013. Qualitatively, all EWM locations in the Pike Chain of Lakes would have a scattered or lighter occurrence in 2018. Quantitatively, success of the project for the Pike Chain of Lakes would be indicated by EWM frequency being observed at 2% or less of the littoral point-intercept locations within a whole-lake survey. This benchmark would be held for Buskey Bay, Millicent, Hart, Twin Bear and Eagle Lakes. At this time, it is not believed that Flynn Lake holds EWM. Should EWM be introduced to Flynn Lake, aggressive actions may be warranted to reduce the population as much as realistically possible. If an introduction occurs, it is expected that this population will be held at 1% frequency of occurrence or less in 2018.

AIS Surveys and Control Actions

AIS Pretreatment and Refinement Survey

Completed just prior to the implementation of the control strategy, a site visit would be completed in early spring to verify treatment area extents and to inspect the condition of the EWM colonies targeted for treatment. Depending on weather and lake conditions, proposed treatment extents would be verified through the use of a combination of surface surveys, rake tows, and submersible video monitoring. Upon completion of the inspections, Onterra would electronically provide an update to the IRPCLA and WDNR describing the results of the assessment and any recommended changes to that year's treatment strategy. This update would describe areas to be targeted with herbicides and areas to be targeted by volunteer and paid hand removal personnel. If changes are suggested to the proposed herbicide treatment areas, Onterra would provide the updates to the herbicide applicator once the updated strategy is approved by the IRPCLA and WDNR.

Chemical Applications

It would be the responsibility of the IRPCLA to contract with a commercial aquatic pesticide applicator, certified with the Wisconsin Department of Agriculture and Consumer Protection and licensed by the WDNR to perform the *early season* treatments of EWM. The treatments would occur each year before water temperatures exceed 60°F. Onterra would create the treatment areas in the form of polygons within their Geographic Information System (GIS) and then transmit them to the applicator in native shapefile format or similar format recognized by the applicator's GPS technology. The applicators treatment paths would be included in the annual and final reports.

Map 3 displays the proposed 2014 control strategy where approximately 9.3 acres of the lake would be spot treated with granular 2,4-D. For budgeting purposes, the proposed project allows for additional areas that might require treatment following the spring 2014 AIS Pretreatment and

Refinement Survey. The budget also assumes a similar acreage being treated each year at a similar cost per acre, though adjusted by 3% each year to account for inflation.

EWM Peak Biomass Survey

Much like our native plants, EWM reaches its peak growth in late summer (August/September); therefore, this is the best time to assess this species. Armed with data collected through the IRPCLA volunteer's surveys, Onterra ecologists would visit known EWM locations in the Pike Chain to refine these areas into polygon or point based colonies/occurrences. Additionally, full littoral zone surveys would be conducted to map areas undetected by the volunteers. These data would be crucial in creation of treatment strategies for the following spring, both herbicide and hand-removal treatment strategies, that is.

Partnerships

Clean Boats Clean Waters

Wisconsin's Clean Boats Clean Waters program has considered by many to be largely successful in combating the spread of AIS throughout the state. The intent of the boat inspections is not only to prevent additional invasives from entering the Pike Chain through its several public access points, but also to prevent the infestation of other waterways with invasives that originated in the chain. This is done through trained inspectors, which monitor the watercraft entering and leaving the public access point and educate the owners of the watercrafts on AIS.

The Bayfield County Land & Water Conservation Department AIS Coordinator, Jeremy Bates, has secured a grant funding CBCW inspections in the Iron River area in 2014. Through this grant, funds will provide CBCW inspectors for five boat landings, three of which are located on the Pike Chain of Lakes. The funding is such that over 200 hours will be completed at each landing in 2014.

Watercraft Wash Vouchers

CBCW inspectors work diligently to educate watercraft owners on how AIS are spread, and also visually inspect watercraft themselves for signs of "aquatic hitchhikers". Decontamination of watercraft, however, is important even if visual inspections yield no animals or plant fragments as many AIS are small and not easily visible. The IRPCLA and AIS Coordinator Jeremy Bates have partnered with a local car washing facility in Iron River to provide vouchers to watercraft users, free of charge, for watercraft washing purposes. The vouchers would be handed out to watercraft at the discretion of CBCW inspectors. Vouchers would be taken to the wash facility and exchanged for six minutes worth of time in the manual washing station. This effort would encourage physical decontamination of watercraft while further educating watercraft operators on proper decontamination methods.

The IRPCLA and wash station operator have agreed to a two year pilot study, coinciding with the first two years of this proposed project. Each year, 250 vouchers would be distributed. Following the open water boating season, an IRPCLA volunteer would collect the vouchers and discuss the season's activities with the store owner, creating a short report on the data collected and any successes/failures identified. At the end of two years, the success of this program would be determined by the entities involved (store operator, IRPCLA, AIS Coordinator, Onterra and

WDNR). At this time, if the program appears to be successful and all entities are on board, the IRPCLA would seek additional funding to continue these activities for the remaining years of the project. The owner of the Iron River store has offered to donate the cost of these vouchers to the proposed project. Each voucher is a $3.50 value; therefore, at two years of 250 vouchers the total value donated to the project would be $1,750.

Paid Hand-Removal of EWM

Within the proposed project, IRPCLA volunteers would donate 75 hours per year to hand-remove EWM from within the Pike Chain of Lakes. As the IRPCLA is now proposing a moderate approach to using herbicides in the chain, it is anticipated that greater efforts will be required for that of hand removal in order to reach population goals. The IRPCLA is currently negotiating to contract with a professor, Dr. Randy Lehr from the Sigurd Olson Environmental Institute at Northland College, to provide a student hand-harvesting crew on the Pike Chain of Lakes. The Northland College students would complete 80 dive hours worth of EWM removal on the Pike Chain, greatly contributing towards the goals of this proposed project but also solidifying a relationship between the college and the IRPCLA. It is anticipated that this relationship would continue during the course of the project. Otherwise, the IRPCLA has identified other entities to contract with should it be necessary to do so.

Stakeholder Participation

Project Kickoff Meeting

During the first year of the proposed project, a Kick-off Meeting would be held to introduce the project to the IRPCLA membership as well as the general public. The project's components, EWM control strategy and native aquatic plant monitoring methodology would be presented and discussed with the attendees. This meeting would be critical in two ways. First, the IRPCLA has recently decided to lessen their aggressive stance on herbicide treatments within the chain of lakes. This action means that a certain level of tolerance must be extended towards EWM colonies within the chain. Discussions of this management strategy will be provided in detail to the general public by Onterra staff. Second, the importance of volunteer efforts on the chain will be highlighted. With a less aggressive stance on the use of herbicides, hand-removal of EWM in the chain will be of greater importance. This point would be stressed to meeting attendees as well.

Project Planning & Evaluation Meeting I

This meeting would be held halfway through the project's duration (2016) and include IRPCLA members as well as the general public. The project's results at that point in time would be presented and discussed, along with discussion on strategy refinement or affirmation. This meeting would be an important event in raising stakeholder awareness as described in the project goals; therefore, the IRPCLA would enhance the advertising of this meeting over its normal protocol regarding meeting announcements. The IRPCLA would also strive to have local media attend the meeting in hopes of producing factual articles that will benefit the project and the chain stakeholders.

Project Planning & Evaluation Meeting II

Unlike the first Project Planning & Evaluation Meeting, this second meeting, held in fall of 2018, would include only the IRPCLA Board of Directors along with Onterra staff. As with the first meeting, data analysis and the project's results would be presented to the board, along with the successes and failures of the project as a whole. However, the most important part of this meeting would be a discussion of the strategy(s) enacted during the five-year project and how the IRPCLA should proceed with EWM management moving forward.

Project Wrap-Up Meeting

At the conclusion of the project, a project wrap-up meeting would be held to deliver the final five-year results to the IRPCLA and general public. The meeting would occur during summer of 2019 to ensure high turnout by IRPCLA members. The successes and failures of the project would be thoroughly discussed, as well as a summary of the strategy the IRPCLA will follow in moving forward with EWM management, as determined through the second Project Planning & Evaluation Meeting.

Volunteer-Based EWM Surveillance Monitoring

Pike Chain riparians have been conducting volunteer-based AIS surveillance monitoring on the chain for several years. These resulting survey maps have pinpointed the location of EWM colonies, which professional ecologists have visited during late summer to map with advanced technology. The time and cost savings achieved through this well-established and fluid methodology have been great, and have led to an efficient method of identifying and mapping EWM on six large waterbodies.

Following Onterra's late summer EWM Peak-Biomass survey, data would be loaded onto IRPCLA GPS units indicating the location of EWM colonies for volunteer and paid hand-removal personnel to target. During the open water season the following year, IRPCLA representatives would lead hand-removal crews (paid and volunteer) to specified EWM locations. Hand-removal personnel would remove plants only in these specified areas – not in unmarked areas or within treatment areas from the previous spring. This would allow for an assessment of the amount of effort and work completed through hand-removal operations. For example, hand-harvesters may note that 15 lbs of EWM were removed from location A, and 25 lbs from location B, etc. Volunteers would scour the area and remove all plants found. The entire plant would be removed and discarded on shore well away from the water's edge. The site would be monitored in the same manner as the chemical treatment sites with the results being used to determine the success and practicality of using hand-removal as a treatment technique on the Pike Chain of Lakes.

During the mid-summer, IRPCLA volunteers would use their GPS to mark additional areas of EWM through their volunteer surveillance monitoring. These may be newly developed plants/colonies, or smaller plants/colonies that escaped detection from the EWM Peak-Biomass Survey conducted the previous summer. Surveillance monitoring crews would document their findings with the GPS unit, and direct Onterra staff to the locations for professional mapping during the late summer EWM Peak-Biomass Survey. During the first year of the project,

IRPCLA volunteers would meet with Onterra ecologists to go over survey and GPS data collection techniques.

Volunteer Hand-Removal of EWM

As eluded to above, in addition to contracted hand-removal occurring on the Pike Chain, hand-removal of EWM would occur through IRPCLA volunteers. Volunteers have committed to 75 hours of hand-removal per year on the Pike Chain for the duration of the proposed project. These efforts would be directed by IRPCLA surveillance monitoring crews, who will have documentation of EWM colonies on GPS units as described in the text above.

Volunteer Herbicide Concentration Monitoring

Volunteers from the IRPCLA participated in the WDNR/US Army Corps of Engineers (USACE) herbicide concentration monitoring project in the past. If invited to participate again, herbicide samples would be collected surrounding the 2014 & 2015 treatments following protocols developed by the USACE. Members of the ULERCLC would collect samples at various locations within the lake at different time periods following the treatment. Properly preserved samples would be sent to the USACE for laboratory analysis.

Volunteer Purple Loosestrife Monitoring & Control

For the past decade or more, volunteers have monitored purple loosestrife populations on the chain and worked with several other management entities on control methods, such as herbicide application and beetle release as well as manual removal. These efforts have been largely successful – larger populations have been reduced to now roughly 25 plants occurring along the shorelands of the Pike Chain of Lakes. Two volunteers spend roughly 20 hours each year monitoring and controlling purple loosestrife. Within the proposed project, purple loosestrife would continue at this level of effort each year. With continued action against purple loosestrife, it is hoped that the remaining plants can be reduced even further and possibly removed entirely from the chain.

Project Deliverables

Annual Monitoring & Treatment Reports

During the winter following each growing season, a report would be provided to the IRPCLA and WDNR that would include an assessment of the prior spring's treatment, detailed accounts of the EWM Peak-Biomass Survey and guidance for the following year's control program. All maps depicting the spring's herbicide treatment, the summer's hand-harvesting efforts, the late summer Peak-Biomass Survey results and recommended treatment areas for the following open water season would be included within the report. Those remedial actions may include further monitoring, manual harvesting (hand removal), herbicide treatments, or a combination of all three. All reports would be presented in electronic format via email.

Project Update for Newsletter

Interaction between Onterra staff and the general IRPCLA membership would occur in 2014 (Kick-off Meeting), 2016 (Project Planning & Evaluation Meeting) and 2018 (Project Wrap-Up Meeting). In the years between, 2015 and 2017, a general project update would be provided to

the IRPCLA to document updates from the monitoring and control efforts. These updates would be formatted to be usable in the Association's newsletter, which is widely distributed amongst lake residents and IRPCLA members.

Five-year Summary Report

In 2018, following the comprehensive studies that would take place on the Pike Chain of Lakes (whole-lake point-intercept surveys, community mapping survey and last annual Peak-Biomass Survey), a five-year summary report would be drafted. In addition to including an assessment of that year's EWM monitoring, the report would include the following:

- An overview of EWM treatments and population changes during the extent of the proposed project (2014 through 2018) as well as comparison to previous years in which similar studies were done (2009-2013).
- A complete assessment of the comprehensive native plant surveys discussed above, including changes between 2007 and 2013 and those observed in 2018.
- A reflection upon the successes and failures learned during the timeframe of the proposed project.
- An examination of 2009-2013 and 2014-2018 management strategies with regards to future actions the IRPCLA should take in protecting the Pike Chain of Lakes from AIS.

Stakeholder Participation

Unless specifically indicated otherwise, the IRPCLA would be responsible for providing the necessary deliverables to the WDNR for those components listed within the Stakeholder Participation Section (Volunteer & In-kind Match Opportunities). The deliverables for these activities would include a report of monitoring and hand-removal activities in an end-of-year report and brief narrative of the voucher watercraft decontamination program.

Project timeline

Table 3 provides an approximate timeline for completion of the tasks. The schedule needs to be flexible to accommodate for weather, scheduling conflicts, etc., but it provides a general indication of the dates for completing the proposed components. The meeting times would be very flexible.

Table 3. Approximate Project Schedule for the Proposed Project.

Task	Each Project Year											
	J	F	M	A	M	J	J	A	S	O	N	D
AIS Pre-treatment and Refinement Survey												
Herbicide Treatment												
Volunteer & Paid EWM Hand-Removal												
Purple Loosestrife Monitoring & Control												
EWM Peak-Biomass Survey												
Annual Monitoring & Treatment Report												
GPS Data Transfer												

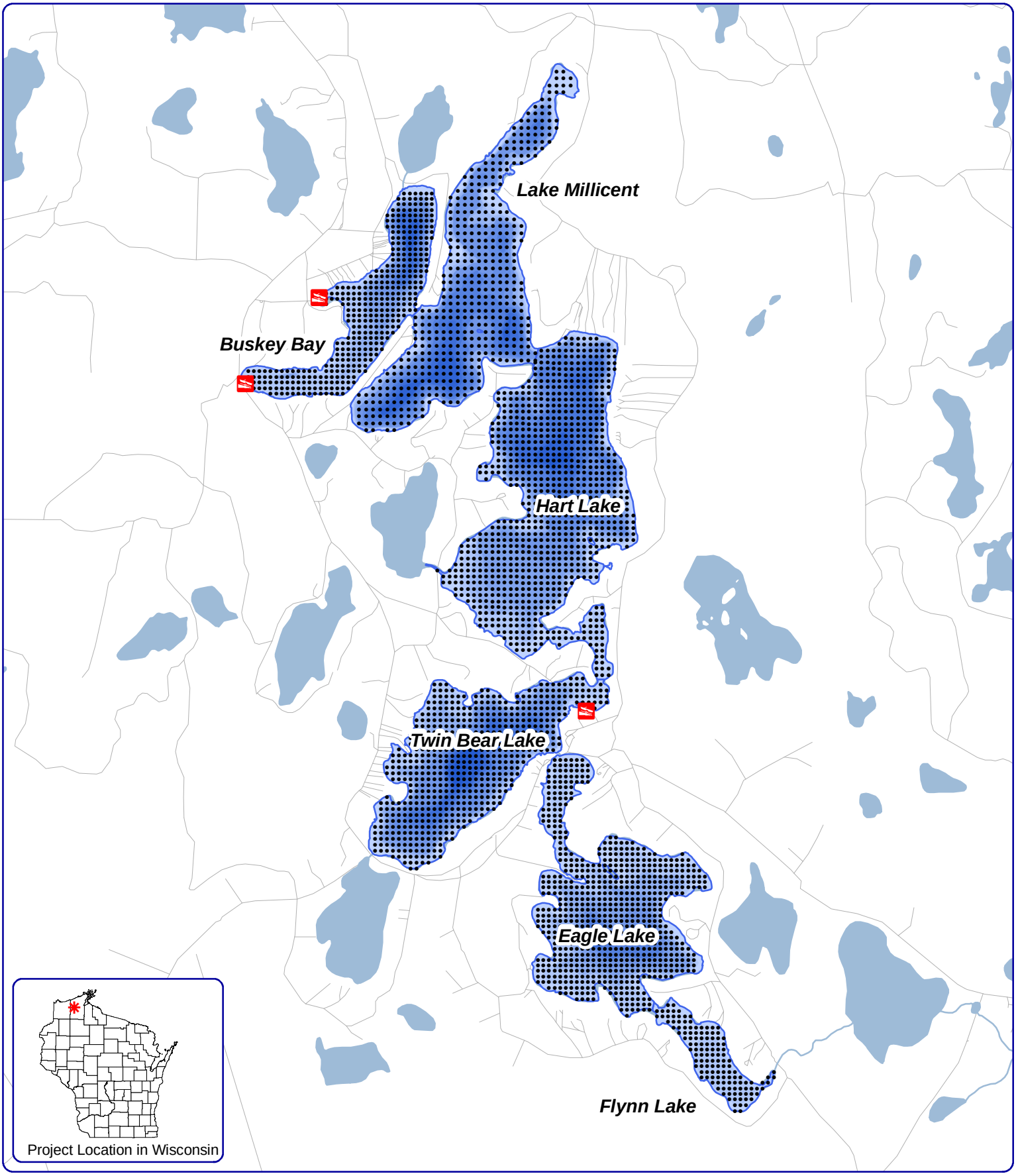
Task	*Single Year Component/Tasks*											
	J	F	M	A	M	J	J	A	S	O	N	D
Project Kick-Off Meeting												
Project Update for Newsletter												
Project Planning & Evaluation Meeting I												
Project Update for Newsletter												
Project Planning & Evaluation Meeting II												
5-year Summary Report - First Draft												
5-year Summary Report - Final Draft												
Project Wrap-up Meeting												

2014 Component/Task
2015 Component/Task
2016 Component/Task
2017 Component/Task
2018 Component/Task
2019 Component/Task

Project Cost Breakdown

Pike Chain of Lakes EWM Monitoring and Control Strategy Development: 2014-2018	Cash Cost	Donated Value
Onterra Fees		
Project Administration & Communication	$3,525.00	
Stakeholder Participation	$3,620.00	
2014 Monitoring & Strategy Development	$6,095.00	
2015 Monitoring & Strategy Development	$6,095.00	
2016 Monitoring & Strategy Development	$6,095.00	
2017 Monitoring & Strategy Development	$6,095.00	
2018 Monitoring & Strategy Development	$6,095.00	
2018 Whole Lake Point-Intercept Survey	$9,490.00	
Aquatic Plant Community Mapping	$6,275.00	
Data Analysis and Report/Plan Creation	$2,275.00	
Printing, Shipping, & Plant Vouchering Materials	$150.00	
Travel Costs (mileage at $0.58/mi) (Reduced by 33%)	$4,740.00	
Subtotal	***$60,550.00***	***$0.00***
Herbicide Application and Related Fees		
T2013 EWM Treatment (15 acres)	$15,000.00	
Applicator Mobilization	$700.00	
WDNR Permit Fees (15 acres)	$395.00	
T2015 EWM Treatment (15 acres)	$15,450.00	
Applicator Mobilization	$700.00	
WDNR Permit Fees (15 acres)	$395.00	
T2016 EWM Treatment (15 acres)	$15,913.50	
Applicator Mobilization	$700.00	
WDNR Permit Fees (15 acres)	$395.00	
T2017 EWM Treatment (15 acres)	$16,390.91	
Applicator Mobilization	$700.00	
WDNR Permit Fees (15 acres)	$395.00	
T2018 EWM Treatment (15 acres)	$16,882.63	
Applicator Mobilization	$700.00	
WDNR Permit Fees (15 acres)	$395.00	
Subtotal	***$85,112.04***	***$0.00***
Other Cash Costs		
Purple Loosestrife Monitoring/Control Supplies ($50 per year, 5 years)	$250.00	
Paid EWM Hand-Removal (80 dive hours, $60/hr for 2 peop., 5 years)	$24,000.00	
Subtotal	***$24,250.00***	***$0.00***
Volunteer & In-kind Match Opportunities		
AIS Surveillance Monitoring & Hand Removal		
IRPCLA Monitoring (10 peop. x 10 hours = 100 hrs, 5 years)		$6,000.00
IRPCLA Volunteer Hand-removal (10 peop. x 7.5 hours = 75 hrs, 5 years)		$4,500.00
Volunteer Watercraft Use (10 days/year, 5 years)		$3,500.00
Watercraft decontamination vouchers for O'Brien's Spur C-store (250 @ $3.50, 2 years)		$1,750.00
IRPCLA Purple Loosestrife Monitoring/Control (2 peop. x 20 hours = 40 hrs, 5 years)		$2,400.00
Administrative & Reporting		
Volunteer End-of-Year AIS Report (1 peop. x 8 hours = 8 hrs, 5 years)		$480.00
IRPCLA Watercraft Decontamination End-of-Year Documentation & Reporting (1 peop. x 4 hours = 4 hrs, 2 years)		$96.00
General Project Administration & Communications (1 peop. x 40 hours = 40 hrs, 5 years)		$2,400.00
Volunteer Time		
Kick-Off Meeting Attendance (2014) (40 peop. x 1 hours = 40 hrs, 1 meeting)		$480.00
Project Planning & Evaluation Meeting I (2016) (40 peop. x 1 hours = 40 hrs, 1 meeting)		$480.00
Project Planning & Evaluation Meeting II (2018) (12 peop. x 3 hours = 36 hrs, 1 meeting)		$432.00
Wrap-Up Meeting (2019) (40 peop. x 1.5 hours = 60 hrs, 1 meeting)		$720.00
Subtotal	***$0.00***	***$23,238.00***
Project Subtotal	***$169,912.04***	***$23,238.00***
Project Total	**$193,150.04**	
State Share Requested (65% - Cannot exceed Cash Costs)	**$125,547.52**	

Grant Specifics - 65% Match	
WDNR Portion (65%)	$125,547.52
Local Match	$67,602.51
Actual Cash Cost to IRPCLA	***$44,364.51***



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2,250
Feet

Onterra LLC
Lake Management Planning
815 Prosper Road
De Pere, WI 54115
920.338.8860
www.onterra-eco.com

Sources:
Roads and Hydro: WDNR
Bathymetry: WDNR; digitized by Onterra
Map Date: January 23, 2014
Filename: Map1_PikeChain_Location.mxd

Legend

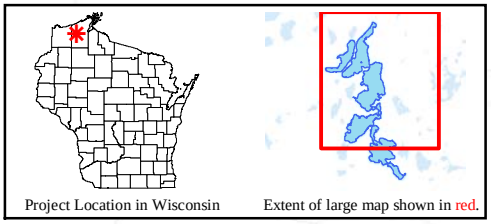
- Project Lake
- Point-Intercept Survey Location
- Public Access

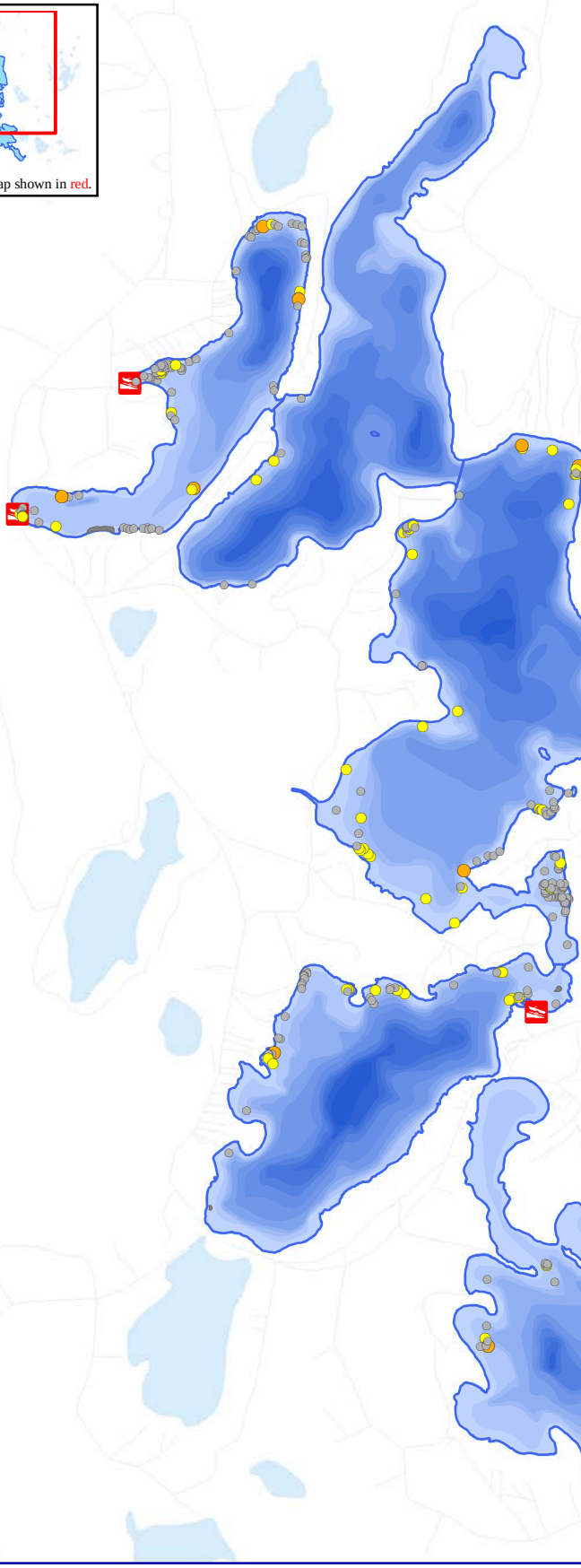
Map 1

Pike Chain of Lakes

Bayfield County, Wisconsin

Project Location & Lake Boundaries





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Feet

Onterra LLC
Lake Management Planning
815 Propser Road
De Pere, WI 54115
920.338.8860
www.onterra-eco.com

Sources:
Roads & Hydro: WDNR
Aquatic Plants: Onterra, 2012
Map Date: January 23, 2014
File Name: Map2_PkChn_EWM_PB_Aug13.mxd

Legend

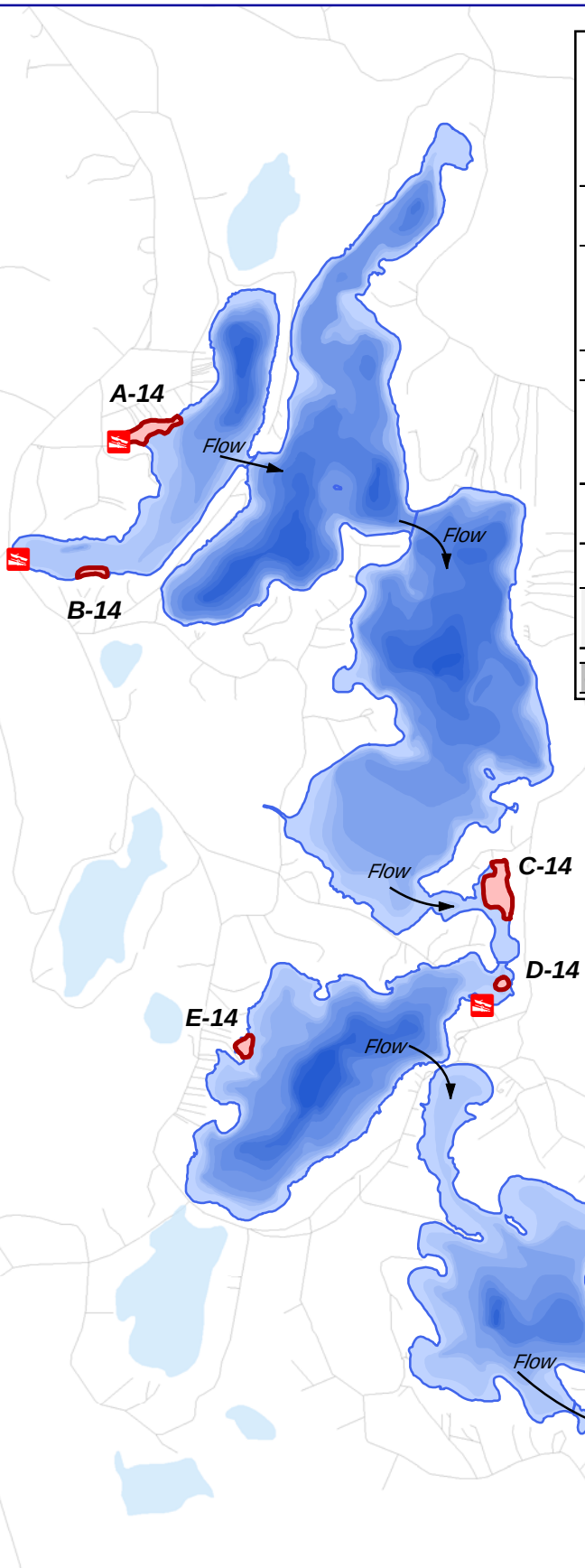
- Highly Scattered
- Scattered
- Dominant
- Highly Dominant
- Surface Matting
- Single or Few Plants
- Clump of Plants
- Small Plant Colony

Map 2

Pike Chain of Lakes

Bayfield County, Wisconsin

2013 EWM Survey Results



2014 Proposed EWM Treatment Areas

Granular 2,4-D

Site	Lake	Proposed Acres	Final Acres	Ave. Depth (feet)	Volume (ac-ft)	PPM a.e. 2,4-D
A-14	Buskey Bay	2.8	-	4.0	11.2	4.0
B-14	Buskey Bay	0.8	-	4.0	3.2	4.0
Subtotal		***3.6***	**-**		***14.4***	

Site	Lake	Proposed Acres	Final Acres	Ave. Depth (feet)	Volume (ac-ft)	PPM a.e. 2,4-D
C-14	Hart	4.2	-	4.0	16.8	3.0
Subtotal		***4.2***	**-**		***16.8***	

Site	Lake	Proposed Acres	Final Acres	Ave. Depth (feet)	Volume (ac-ft)	PPM a.e. 2,4-D
D-14	Twin Bear	0.5	-	5.0	2.5	4.0
E-14	Twin Bear	1.0	-	5.5	5.5	4.0
Subtotal		***1.5***	**-**		***8.0***	
Total at 3.0 ppm a.e.		***4.2***	**-**		***16.8***	
Total at 4.0 ppm a.e.		***5.1***	**-**		***22.4***	
Grand Total		**9.3**	**-**		**39.2**	

Please Note:
1. Entire area of lake used for fishing.
2. Proposed treatment areas are used for all boating activities.
3. Drainage lakes - flow direction indicated with arrows.

N W E S

2,250

Feet

Onterra LLC
Lake Management Planning
815 Propser Road
De Pere, WI 54115
920.338.8860
www.onterra-eco.com

Sources:
Roads & Hydro: WDNR
Aquatic Plants: Onterra, 2013
Map Date: January 8, 2014
File Name: PkChn_T2014_EWM_Cond1.mxd

Project Location in Wisconsin

Legend

- Public Access
- 2014 Proposed Treatment Area

Map 3

Pike Chain of Lakes

Bayfield County, Wisconsin

2014 Preliminary EWM Control Strategy

State of Wisconsin
Department of Natural Resources

Aquatic Invasive Species (AIS) Control Grant Application

Form 8700-307 (12/11)

Notice: Use of this form is required by the DNR for any application filed pursuant to ch. NR 198, Wis. Adm. Code. Personal information collected on this form, including such data as your name, address, phone number, etc., will be used for management and enforcement of DNR programs, and is not intended to be used for any other purpose. Information will be made accessible to requesters under Wisconsin's Open Records laws (s. 19.32-19.39, Wis. Stats.) and requirements.

Section I: Application Type

Check one:

☐ Education, Prevention & Planning ☐ Early Detection & Response ☒ Established Population Control

Legislative District Numbers	
Senate	Assembly
25	74

To determine your legislative district, go to http://165.189.139.210/WAML// Type in complete address, next screen shows information

Section II: Applicant Information

Applicant: Pike Chain of Lakes Association

Waterbody Name: Pike Chain of Lakes - See Table 1 in Project Scope

Project County/Township/Section/Range: Bayfield T46N/R08W/S28, 03, 34, 27

Type of Eligible Lake or River Applicants

☐ County ☐ Tribe ☐ Other Gov't Unit ☐ Federal
☐ City ☐ Sanitary Dist. ☐ Nonprofit Org. ☐ State
☐ Village ☐ Dist. ☐ College, School, etc. ☐ Other _____
☐ Town ☒ Assoc.

Authorized Representative Named by Resolution	Project Contact Name
Al Bochler	Tim Hoyman
Authorized Representative Title	**Project Contact Title**
President	Aquatic Ecologist; Onterra, LLC
Address	**Address**
3203 City Heights Road	815 Prosper Road
City / State / ZIP Code	**City / State / ZIP Code**
Ashland / WI / 54806	De Pere / WI / 54115
Daytime Phone (area code)	**Evening Phone (area code)**
(715-682-6372)	(715-682-6372)
920.338.8860	
E-Mail Address	**E-Mail Address**
bochofa@centurytel.net	thoyman@onterra-eco.com

Mail Check to: (if different from applicant)

Name and Title	Address
Organization	City / State / ZIP Code

For DNR Use Only

Application Type	Date Received	Date Reviewed (AIS/LC/RC)	AIS/Lake/River Coordinator Approval/Date
Waterbody ID #	Adequate Public Access ☐ Yes ☐ No	Environmental Grants Specialist Approval / Date	
Eligible Project ☐ Yes ☐ No	Eligible Applicant ☐ Yes ☐ No	Project Priority Rank	Research / Demo Project ☐ Yes ☐ No
Prior Grant Award(s) ☐ Yes ☐ No	Fiscal Year(s)	Amount Received to Date $	Project Awarded ☐ Yes ☐ No

Section III: Project Information

State of Wisconsin
Department of Natural Resources

Aquatic Invasive Species (AIS) Control Grant Application

Form 8700-307 (12/11)

Project Title	Proposed Ending Date
Pike Chain of Lakes AIS Control & Strategy Development: 2014-2018	December 31, 2019

Other Management Units	Letter of Support	Other Management Units	Letter of Support
1. Bayfield County LWCD	☒	4. Anthony Cross, Obrien's Spur C-Store (LOS emailed to Pamela Toshner 1/29/2014)	☒
2. Town of Iron River	☒	5.	☐
3. Town of Delta	☒	6.	☐

Section IV: Public Access

Number of Public Vehicle Trailer Parking Spaces Available at Public Access Sites: 25

Number of Public Access Sites Including Boat Launches and Walk-ins: 3

Section V: Cost Estimate and Grant Request

Section V must be completed or application will be returned. Details in support of Section V are welcome.	**Project Costs**		
	Column 1 Cash Costs	**Column 2 Donated Value**	***DNR Use Only***
1. Salaries, wages and employee benefits	$24,000.00		
2. Consulting services (Onterra)	$60,550.00		
3. Purchased services: (Herbicide Application & Paid Hand-Harvesting Costs)	$83,137.04		
4. Other purchased services (specify) : (WDNR Permit Fees)	$1,975.00		
5. Plant material			
6. Supplies (specify): (Purple loosestrife supplies, wash vouchers)	$250.00	$1,750.00	
7. Depreciation on equipment			
8. Hourly equipment use charges			
9. State Lab of Hygiene (SLOH) Costs			
10. Non-SLOH Lab Costs			
11. Other (specify): (Volunteer In-kind Labor)		$21,488.00	
12. **Subtotals** (Sum each column)	*$169,912.04*	*$23,238.00*	
13. **Total Project Cost Estimate** (sum of **column 1** plus sum of **column 2)**	**$193,150.04**		
14. **State Share Requested (up to 75% of total costs may be requested) – 65% requested**	**$125,547.52**		

Subject to the following maximum grant amounts:

- Education, Prevention and Planning Projects—up to $150,000
- Early Detection and Response Projects—up to $20,000
- Established Infestation Control Projects—up to $200,000

Use of Federal funding as match: (check box below if applicable)

☐ We are using or planning to apply for Federal funds to be used as match.

If known, indicate source of funding:

Aquatic Invasive Species (AIS) Control Grant Application

Section VI: Attachments (check all that are included)

A. For all applicants: *(Refer to instructions for applicability.)*

- ☒ 1. Authorizing resolution
- ☒ 2. Letters of support
- ☒ 3. Map of project location and boundaries
- ☒ 4. Lake map with public access sites identified (per Section VI of this application and page 20 of the guidelines)
- ☒ 5. Itemized breakdown of expenses
- ☐ 6. For projects that entail sending samples to the State Laboratory of Hygiene (SLOH) only: a completed SLOH Projected Cost Form
- ☒ 7. Project scope/description:
  - ☒ a. Description of project area
  - ☒ b. Description of problem to be addressed by project
  - ☒ c. Discussion of project goal and objectives
  - ☒ d. Description of methods and activities
  - ☒ e. Description of project products or deliverables
  - ☒ f. Description of data to be collected, if applicable
  - ☒ g. Description of existing and proposed partnerships
  - ☒ h. Discussion of role of project in planning and/or management of lake
  - ☒ i. Timetable for implementation of key activities
  - ☒ j. Plan for sharing project results
  - ☒ k. Other information in support of project no described above

B. For applicants that are Lake Management Organizations (LMOs), River Management Organizations (RMOs) or Qualified Non-profit Organizations:

- ☐ 1. For first time applicant LMOs/RMOs only: A completed Form 8700-226 (Lake Association Organizational Application) or 8700-287 (River Management Organization Application)
- ☐ 2. For first time applicant Qualified Nonprofit Organizations only: Copy of IRS 501(c)(3) determination letter and copies of your Articles of Incorporation and Bylaws
- ☐ 3. List of national and/or statewide organizations with which you are affiliated
- ☐ 4. List of board members' names, including municipality and county of residence. Designate officers
- ☐ 5. Documentation of current financial status
- ☐ 6. Brochures, newsletters, annual reports or other information about your organization

C. Education, Prevention and Planning Projects: *(No additional attachments required.)*

D. Early Detection and Response Projects:

- ☐ 1. APM Permit

E. Established Infestation Control Projects:

- ☒ 1. Management Plan
- ☐ 2. APM Permit

Section VII: Certification

I certify that information on this application and all its attachments are true and correct and in conformity with applicable Wis. Statutes

Print/Type Name of Authorized Representative	Title of Authorized Representative
Al Bochler	President
Signature of Authorized Representative	**Date Signed**

Aquatic Invasive Species Control Grants **Established Population Control Ranking Questions** **36** Maximum Points	**Ranking Points**	**Projected Feb14 Score**	**Notes**
A. The degree to which the project includes a prevention and control strategy.			
1) The water being controlled has, or the project includes, a Clean Boats, Clean Waters watercraft inspection program per the requirements of s. NR 198.22 (1)(d) or an approved Alternative Equivalent (see guidance).	2 points	2	Over 200 hours @ 3 boat landings paid through Bayfield County's program
2) The project will conduct other complimentary source containment activities that go above and beyond minimum level of inspection and signage e.g. boat washing or cleaning stations, augmented enforcement.	2 points	2	Watercraft wash program with CBCW inspectors and Iron River C-Store.
3) The water being controlled has, or the project will train, volunteers to identify AIS and conduct water body surveillance monitoring for early detection using accepted WDNR or citizen-based monitoring (CLMN/Project RED, etc) protocols where data is being entered into SWIMS.	2 points	2	Volunteers will monitor EWM colonies for hand-removal by both volunteers and contracted laborers.
B. The degree to which the project will prevent the spread of aquatic invasive species.			
1a) The control activity will take place on a Statewide AIS Source Water listed on the following table.	5 points	got 1b	
OR			
1b) The control activity will take place on a major AIS source water with high public use (lakes greater than 500 acres and all boat-able rivers that meet or exceed the minimum boating access criteria in NR 1.91(4) or wetlands greater than 500 acres in public ownership) or the project includes a Statewide AIS Source Water where less than 50% of the activities are directed.	4 points	4	Is greater than 500 acres (900+ acres) and exceeds public access requirements.
OR			
1c) The control activity takes place on a significant AIS source water with high public use (lakes between 500 and 100 acres and all rivers that meet or exceed the minimum boating access criteria in NR 1.91(4); wade-able streams with public access or wetlands between 500 and 100 acres in public ownership.	3 points	got 1b	
OR			
1d) The control activity takes place on an a minor AIS source water (lakes less than 100 acres that meet or exceed the minimum boating access criteria in NR 1.91(4); any river or stream with public access or wetlands less than 100 acres in public ownership).	2 points	got 1b	
2) The project will control a NR40 prohibited species e.g Hydrilla, yellow floating heart, spiny water flea, red swamp crayfish, etc.	2 points	0	EWM is a restricted species, not a prohibited species
C. The degree to which the project protects or improves the aquatic ecosystem's diversity, ecological			
1) Project plan implementation includes stocking or planting to reintroduce native (plant) community species or implements other actions or changes in management strategies that will provide added protection to native species beyond herbicide treatments alone.	2 points	0	
2) Project area has a high degree of native biodiversity or is critical habitat, as expressed by: ● an above eco-region average aquatic or wetland plant FQI ● the presence of a listed aquatic species (NHI endangered, threatened or watch) ● is an ERW or ORW water ● has a Sensitive Area or Critical Habitat designation ● is within or adjacent to a State Natural Area, State Park, other publicly owned unique natural area or such an area owned/managed by a nonprofit conservation organization (e.g., Nature Conservancy).	1 point	1	Has a high FQI & number of native species, has *P. vaseyi* - a NHI threatened species, entire chain is classified as ORW water.
D. The stage of the infestation in the water body.			
1) Project addresses a pioneer population (as defined by s.198.12 (8)), or was a past early response project.	2 points	2	Past Early Detection and Response grant (AIRR-009-05) awarded to group in 2005.
2) The target species is low in density and still at a controllable level as determined by being found in 25%, or less, of the colonizable area of the project water body (e.g. only the littoral zone of a lake can be colonized by EWM).	1 point	1	EWM exists as 0.4% chain-wide frequency of occurrence (2013 PI surveys)
3) It is well documented (P/I surveys or GIS mapping, verified) that the target species is a rapidly expanding population (doubling annual increase in areal coverage or FOO). Population is still under 25% threshold above.	1 point	0	
E. The degree to which the project will be likely to result in successful long-term control.			
1) As also included in the approved management plan, the project employs multiple strategies (for the same species) to achieve and maintain control objectives. [e.g. hand pulling in combination with chemical treatment and biocontrol, draw downs, etc.]	2 points	2	Project includes contracted and volunteer hand-removal along with herbicide treatments when necessary.
2) The sponsor has had a pre-application grant scoping consultation with the Department and the application is consistent with the results of those discussions.	1 point	1	Have corresponded with Pamela on project rationale and strategy.
3) There is a low risk of reestablishment and spread after control activity occurs. All of the following apply: the project site is not impounded; is not tributary to or connected to any other AIS populated water and; the entire AIS population is being targeted for control.	1 point	0	

Aquatic Invasive Species Control Grants **Established Population Control Ranking Questions** **36** Maximum Points	**Ranking Points**	**Projected Feb14 Score**	**Notes**
F. The availability of public access to, and public use of, the water body.			
1) Any lake of 100 surface acres or greater and any boat-able river that has more than the minimum public boating access as defined in s. NR 1.91(4) or any wetland greater than 50 acres in public ownership.	1 point	1	Chain has four public access points, two public beaches, several resorts and a 48-site campground. Exceeds minimum public boating access.
2) The water provides significant alternative public access and use opportunities that include **two** of the following at separate locations: public swimming beach; park or other public land with accessible frontage; public fishing pier or wildlife observation area; platted access sites and road rights-of-way reaching the water's edge; two or more private resorts, youth camps or sportsmen clubs; or where more than 50% of the lake or river shore in the project area is in public ownership as documented on the map provided with application.	1 point	1	Satisfies two requirements: contains two beaches, three private resorts, 48-site campground
G. The degree to which the proposed project includes or is complemented by other management efforts			
Applicant demonstrates that they have implemented, or been a significant participant in, or the project proposes, a shoreland restoration, habitat protection, sediment and nutrient control, water level management or other substantial lake stewardship activity (not including education or planning) that protects the lake ecosystem. (Score 1point per action, provide documentation).			
1a) Activity 1	1 point	1	IRPLCA would work in conjuction with Bayfield AIS Coordinator to mark and control purple loosestife on chain shorelands.
1b) Activity 2	1 point	1	IRPCLA has worked with County and WDNR on a large "Fish sticks" habitat enhancement program on Twin Bear Lake Lake Association was involved with a shoreland restoration at the Twin Bear public access location. Lake Association sponsors and participates in an adopt-a-highway program, working on a 3-mile strech within the watershed that ends at Twin Bear park.
2) The sponsor is a Green Tier Community Charter Member. (City of Middleton, Bayfield, Fitchburg, Appleton, Weston, Monona, Eau Claire, La Crosse, & the Village of Bayside)	1 point	0	
H. Community support and commitment, including past efforts to control aquatic invasive species.			
1) This is demonstrated by requesting less than the maximum state share cost rate (cash costs) for the total project costs. No more than 25% of the project match can be in-kind or donated labor. The sponsor is requesting:			
65% State Share	1 point	1	Will accept 65% share
OR			
50% State Share	2 or 3 point	0	
2) The project has financial support from additional management units, interest groups or organizations committing > 10% of the **hard cash local match**.	1 point	0	
3) The sponsor conducted AIS control, consistent with their Department-approved plan, in the previous season ***without*** financial assistance from the State. They may have begun implementation without a grant or received grants in past but not the past season.	1 point	0	2013 herbicide treatment was under an AIS Grant
I. Whether the sponsor has previously received a grant for a similar project for the same water body.			
1) There has not been an AIS Established Population Control grant for the same species in the same waterbody in the last five years.	2 points	0	This project is a continuation of a previously funded AIS Grant
J. The degree to which the project will advance the knowledge and understanding of the prevention and			
1) Project has an evaluation component that will be conducted by an objective outside entity to assess project outcomes or is a participant in a Department-sponsored research and demonstration project on the AIS research priority list.	1 point	1	Has third-party evaluation component for EWM herbicide applications and hand-removal operations. Project sponsor would participate in herbicide concentration monitoring with WDNR if offered the opportunity.
		23	

	Overview	
	Category	**Points**
The degree to which the project includes a prevention and control strategy.	A	6 / 6
The degree to which the project will prevent the spread of aquatic invasive species.	B	4 / 7
The degree to which the project protects or improves the aquatic ecosystem's diversity, ecological stability or recreational uses.	C	1 / 3
The stage of the infestation in the water body.	D	3 / 4
The degree to which the project will be likely to result in successful long-term control.	E	3 / 4
The availability of public access to, and public use of, the water body.	F	2 / 2
The degree to which the proposed project includes or is complemented by other management efforts including watershed pollution prevention and control, native vegetation protection and restoration and other actions that help control aquatic invasive species or resist future colonization.	G	2 / 3
Community support and commitment, including past efforts to control aquatic invasive species.	H	1 / 5
Whether the sponsor has previously received a grant for a similar project for the same water body.	I	0 / 2
The degree to which the project will advance the knowledge and understanding of the prevention and control of aquatic invasive species.	J	1 / 1
		23 / 37