

MKLPA EWM CONTROL STRATEGY COMMUNICATION

BACKGROUND: MKLPA has a desire to raise awareness of the challenges involved in battling Eurasian Watermilfoil (EWM), and would like to provide insight into the high-level strategies being considered to control the spread of this invasive species.

PURPOSE: To explain our goals, strategies, tactics, variables, and limitations relating to the control of EWM. The target audience for this document is our various lakes stakeholders (our chosen aquatic biologists, chemical providers and applicators, invasive species control experts, riparian owners, Town of Minocqua, local businesses, lake users) as we desire to document the challenges involved in battling EWM. This is intended to provide insight, at a high level, into the numerous variables involved and how the volunteers of MKLPA approach the decision making process.

GOAL: While it is not realistic to believe in eradication of EWM from our lakes, it *is* realistic to believe we can manage this invasive to a level that allows our stakeholders to enjoy our waters and keep EWM at a level that is tolerable for all of those that live on and enjoy our lakes. Over the course of a few years (3-5) we are striving to reduce current EWM populations to a level where we can eliminate the need for chemical treatment and contain it using manual methods only.

BRIEF HISTORY: EWM was discovered in our lakes in the early 2000s. An invasive species of aquatic vegetation, not native to our lakes or any of Wisconsin, EWM is highly competitive with native vegetation and has the potential to completely out compete and overwhelm all other species, resulting in dense growth and surface matting. Lakes that have been overtaken by EWM have experienced conditions making it impossible to enjoy most forms of recreation including boating, swimming and fishing, and have seen dramatic reductions in shoreline property values as well as a negative impact on local businesses.

EWM inhabits the littoral zone. In our lakes, this is water up to 16 - 20 feet in depth with a variety of bottom substrate. While preferring a muck bottom, EWM can be found in all different bottom types. Our fall 2019 survey of the entire lake system found EWM to be inhabiting virtually all viable shoreline, but in different levels of density from highly scattered to dense surface matting.

MKLPA has contracted with a highly experienced, very reputable, Wisconsin based company specializing in comprehensive lake management planning, aquatic plant inventories, water quality analysis and implementation plan development. Onterra is well known throughout Wisconsin and has formed relationships with several other lakes in Oneida and Vilas counties, plus is well respected by the Wisconsin DNR.

MKLPA began our battle with EWM in 2008 (check date) We began chemically treating relatively small, pioneering beds with 2-4D while at the same time employing a team of

snorkel divers to hand harvest plants wherever they were located. We also experimented with a biological control method of releasing native weevils, an insect that is known to feed on and thus kill EWM, but after several years proved to be impractical.

By 2016, the WDNR recommended we suspend chemical treatment with 2-4D and focus on hand harvesting and a new technique called Diver Assisted Suction Harvesting (DASH). We complied with their recommendations. For two years we removed tons of EWM from our lakes, but without the broader impact of chemicals. As a result we discovered we were fighting a losing battle. EWM simply spread beyond our ability to manually or biologically control its advance.

CURRENT STATE: MKLPA contracted with Onterra for an EWM inventory across our two lakes in the fall of 2019. That inventory produced detailed maps showing location and density of EWM. These maps became the basis of formulating a control strategy for 2020. Control methods to be utilized include chemical treatment with ProcellaCOR, DASH, and traditional hand harvesting (HH).

Working with Onterra, MKLPA completed a grant application that was submitted to the WDNR requesting a permit to chemically treat up to 95 acres of some of the densest EWM infestations. A grant was awarded for treatment of approximately 85 acres, and committed the WDNR to paying for 65% of the cost of treatment. In addition, MKLPA has contracted for 60 days of DASH and 14 days of HH. Aquatic Plant Management (APM) is a locally owned company chosen to provide DASH and HH services.

The MKLPA has committed to updating its website, allowing riparian owners and lake users to more easily access the data, reports, and educational materials generated as part of this project. In addition, the MKLPA has launched an online interactive web map to allow the public to have a unique opportunity to view these data and understand where management is being directed.

In addition to the work the MKLPA has contracted, APM has agreed to contract their services, at a deeply discounted rate, to shoreline owners who are not adjacent to planned 2020 control efforts. Together, all these control tactics will impact the largest % to date of the EWM in our system.

EWM TREATMENT OPTIONS: MKLPA will contract with Onterra to conduct another EWM survey in the fall of 2020. That survey will confirm the results of this summer's control efforts and will be reported to MKLPA and the WDNR, to add to their research database. In collaboration with Onterra, the WDNR and APM, the MKLPA will begin planning our 2021 control strategies and treatment options.

Chemical treatment is the most cost-effective control method we can employ, however, our long term objective is to get the EWM population down to a level where we no longer need to use chemicals and will only employ DASH and HH as needed. Several criteria must be considered when selecting areas of the lake to chemically treat. EWM density, the size of the infestation in acres, water depth and shoreline type (bay versus

open water) all must be evaluated. Plus, the WDNR intends to limit the total acres of chemical treatment allowed in our lakes in any given year.

Beyond the areas chosen for chemical treatment, DASH is the chosen method of control for larger colonies of fairly dense EWM. The divers can work for extended periods of time in an area and be more efficient than if they are constantly moving their equipment from one small colony to the next. Finally HH is the preferred method of control for highly scattered, small colonies, and single or small clumps of plants.

VARIABLES IMPACTING SUCCESS: As we consider our control options and tactics for a given year, we must take into account several variables that can impact the success of our overall efforts. We evaluate any new chemicals that have been certified in WI, what shoreline characteristics are most likely to result in most effective kill, water depth and temperature, EWM colony size, location and density, cost of various control tactics, WDNR grant availability, MKLPA funds available, other sources of funding, membership involvement, etc.

COLLABORATION, RESEARCH AND ACTION: An important component of our EWM control efforts is providing valuable data to our partner Onterra and the WDNR. MKLPA, along with other lake associations and lake districts, provide data to the DNR that allows all of us to benefit from our peers experience. In addition to providing information regarding treatment methods used, details and results, we are also funding DNA analysis of hundreds of individual EWM plants. This data will tell us if we are dealing with a known species of EWM or if we have plant hybrids that result from EWM crossing with our native Northern Water Milfoil, creating a plant that is even more difficult to chemically control or to visually identify and manually harvest. DNA analysis will also tell us if certain subspecies of EWM are more or less tolerant of specific chemicals, so we can make better informed decisions about chemical selection and dosage. We also share our data with SePRO, the company that manufactures the chemical ProcellaCOR. This data allows them to continually refine their solutions in order to maximize effectiveness.

EVOLVING STRATEGIES: Each fall we intend to complete a EWM inventory that will allow us to evaluate that season's control efforts and form the basis for planning the upcoming year's control tactics. By evaluating EWM locations and density, we document a plan for desired chemical treatment and which areas will be dealt with, with DASH and HH. Once this strategy is in place, we intend to share it with our membership and other riparian owners and the Town of Minocqua, seek their input and answer any questions. We will then apply for WDNR grant funding if available.

As spring turns to summer, situations may change and then so too will our tactics for control. We may have more dollars available to spend on control efforts based on higher membership numbers or more dollars being donated. Or, the WDNR may give us permits for more or less acreage available for chemical treatment. We intend to develop an annual plan and stay with that plan as long as it makes sense, while at the

same time, remaining nimble and willing to alter our tactics as variables and situations may change.

THREE YEAR PLAN: As stated above, our goal is to reduce current EWM populations to a level where we can eliminate the need for chemical treatment and contain it using manual methods only.

In the meantime, we will complete a EWM inventory in the fall of 2020, then document a detailed plan for control over a three year period of time. Maps will illustrate specific locations of EWM, how we intend to impact each location and in what year. This will enable interested shoreline owners to see if they have EWM on their shoreline, and if so how and when we intend to manage that location. This all comes with the understanding that changes to the plan may be made in real time based on the above stated variables. When we do make such changes, to the best of our ability, we will attempt to share these with our membership and other involved stake holders.

CALL TO ACTION: MKLPA is a group of volunteers who work diligently to make informed decisions that will positively impact the long term quality of our lakes. We are always looking for knowledgeable individuals who would like to be involved with our organization and assist in a host of important projects. Our decisions are science based, but our actions may be limited by available funds. We would like to see 100 percent of our shoreline owners be MKLPA members and donors, but currently only about 40% are. Lack of available funds for important projects such as EWM control can result in our lakes being a lower quality than any of us would expect. It is vital to get involved and encourage others to join MKLPA and provide their support as well.