Successful grant funding for Hybrid Milfoil from the Washington State Department of Ecology

By: Lee Evans Chairman Loon Lake LMD

A portion of each boating license fee Washington State Dept. of Licensing fee collects, annually, is allocated to the Washington State D.O.E. Aquatic Weed Management Fund. These dollars become available thru grant funding for many different types of water quality issues around the state.

Loon Lake LMD with the assistance of Stevens County and Aquatechnex completed the grant application and were successful in acquiring $75,000 to study and develop sound treatment methods to combat the newly discovered hybrid plant found in 2016.

Hybrid watermilfoil poses a greater threat than Eurasian Milfoil, a class B noxious weed in Washington State. As such, the program we have in place through our LMD at Loon Lake is not adapted to deliver the control necessary to protect Loon Lake from expansion of this threat. In addition, Loon Lake is the only known lake where Hybrid water milfoil is currently present in Eastern Washington. This poses a threat to all other lakes in the region. In addition, while we have funding available through our current LMD, we cannot alter or change our assessment and tax collection until this LMD sunsets and we vote to form a new district in the year 2018. We have a need to address this problem in Loon Lake as soon as possible to protect our water resource and to insure that Loon Lake does not become a seed source for Hybrid watermilfoils in other regional waterbodies.

Following is history of Loon Lake Invasive Aquatic Plant Management Program as explained in the DOE grant proposal.

The Loon Lake community has a long-standing commitment to combating invasive aquatic weeds. In the late 1990's, our citizens recognized the threat Eurasian Water Milfoil posed to our waters. We had noticed expanding populations of weedy growth in the lake. We worked with the Stevens County Noxious Weed Control Board to identify the problem and Eurasian Milfoil was the diagnosis.

The Community formed a committee to assess and deal with the threat this weed posed to our lake. The committee applied to the Washington Department of Ecology program in 1997 and received an early infestation grant to begin to attack the weed growth using diver hand pulling and bottom barriers. In 1998 and 2000, we received legislatively mandated funding from the Freshwater Aquatic Weed Fund to conduct treatments with 2,4-D formulations of aquatic herbicides. We also developed an Intergraded Aquatic Vegetation Management Plan in this time frame.

A paper published by Washington Department of Ecology staff Jenifer Parsons and co-authors in the Journal of Aquatic Plant Management titled *The Use of 2,4-D for Selective Control of and Early Infestation of Eurasian Milfoil in Loon Lake, WA* documented the success of our early work.

The community was extremely appreciative of the opportunity to ramp up and get seed money to start the fight against this invasive aquatic weed. The Eurasian Milfoil Steering Committee promoted the establishment of a Lake Management District (LMD) through the sponsorship of Stevens County.

Our LMD has collected and used funds from this special local tax to target Eurasian Milfoil in the decades since. We have gone through the LMD process four times with an affirmative vote. Our current LMD was established in 2013 and sunsets in 2017. Our LMD has successfully self-funded the control of this noxious aquatic weed for nearly two decade at this point.

In the past two years, our regular control program has shown some less than optimal results. In 2014 we put out an RFP (Request for Proposal) to renew selection of a qualified applicator to perform our treatment work. In 2015, the treatment results were not up to the level we anticipated. In 2016, we brought in a second applicator and asked them to implement the control program they put forward in their 2014 RFP submittal. This treatment approach was to map and target Eurasian Milfoil using a product called Renovate MAX G with is a combination of triclopyr and 2,4-D herbicides, both of which are extremely effective on Eurasian Milfoil.

During the summer of 2016, we followed the results of this application. While the target milfoil vegetation exhibited symptoms of herbicide injury, they did not respond as well as expected to this treatment approach.

As the summer progressed, we consulted with our applicator, Aquatechnex, LLC, and discuss conditions present in the lake. Aquatechnex thought the plants were exhibiting some of the traits of Hybrid milfoil plants. Aquatechnex collected nine samples from locations throughout the treatment zones and submitted them to GenPass, a Michigan company that specializes in the DNA analysis of problem milfoil species in late September. GenPass confirmed all samples by DNA analysis were a hybrid cross of *Myriophyllum spicatum* and *Myriophyllum sibericum. Eurasian and Northern Milfoil cross.*

Unfortunately this Hybrid strain has appeared in Hayden and Coeur D Alene Lakes, ID approximately 60 miles east of Loon Lake, and that control efforts against this Hybrid in these lakes has been extremely challenging. Research on the management and control of Hybrid milfoil species has been ongoing in the US Midwest where this phenomenon was discovered a few years ago. A paper published in 2013 concluded that Hybrid watermilfoil lineages are more invasive and less sensitive to a commonly used herbicide than their exotic parent (Eurasian watermilfoil). Hybrid biotypes display “vegetative vigor” and are commonly 2,4-D tolerant.