

Higgins Lake Swimmer's Itch Control Program for 2018 and Beyond – April, 2018 Update

Background

In early 2017, the DNR decided to develop a new process for lake associations to obtain common merganser control program permits in Michigan. Representatives of the HLPOA and HLSIO boards, MISIP lake associations and members of the general public were invited to participate. The process was modeled after an existing state-wide Canada Goose trap and relocation program. The intent was to expand common merganser control permit availability by creating a standardized process for all lake associations in Michigan. It included specific requirements for such elements as approvals, eligibility and common merganser control options.

The three DNR-approved control options are trap and relocation of common merganser broods, harassment and egg and nest destruction out of natural cavities (at our first meeting on July 10, 2017 where MISIP representatives were invited to meet and provide input for the new process, the DNR made it clear that using artificial nest boxes to kill common merganser hens and destroy eggs would continue to be banned). The DNR, in its Policy and Procedures, decided not to include limited lethal take of common mergansers as a part of its permitting process. It did provide for a special process in deciding whether to grant such requests. However, the USFWS subsequently decided not to permit limited lethal take of common mergansers in Michigan for control. So no lethal permits will be granted. The HLSIO/HLPOA did not request limited lethal take for control or harassment so there is no impact on our program.

After a lengthy rulemaking process that included three public meetings by the Michigan Natural Resources Commission (which approved the new Policies and Procedures) we received the final Permit application documents by email on March 6, 2018. Our application was due three weeks later on March 31, 2018.

2018 Permit Application Approval Process

The first step in the new permit process involved deciding which of two DNR-sanctioned approval options to use to be able to apply for a permit. The options included a Petition approval, which required signatures of at least 70% of all lakefront property owners or a form Resolution by local governments (either Township or County.) With over 1000 lakefront property owners, three townships and two county governments around Higgins Lake, and limited time to submit our permit application, we decided to request a Resolution from the Roscommon County Commission to cover all of the lakes located in Roscommon County and obtain Petition signatures from the three property owners located in Crawford County, including the North State Park. Permits are valid for three years.

Control Program Options for 2018 and Beyond

HLSIO and HLPOA reviewed the three available control program options and decided to again focus our control program in 2018 and beyond on trap and relocation of common mergansers. Dr. Harvey Blankespoor previously used trap and relocation on Lake Leelanau and Glen Lake to significantly reduce SI infection. This control program has successfully removed all common merganser brood ducks from Higgins Lake in each of the past three years and kept the lake essentially clear of common mergansers during the critical summer months. Decades of research has shown that common merganser ducklings are the primary source of SI infection in a lake like Higgins. One of the first studies SICON conducted on Higgins Lake in 2015 was to rule out other bird and mammal sources as meaningful contributors to SI infection. The science confirmed common mergansers (and Stagnicola snails) were the target bird population on Higgins Lake. We also have requested a control option of egg and nest destruction out of natural cavities, although we are unsure whether we will use it.

We decided not to designate the control option of spring harassment or to request limited lethal take for control for at least two reasons. First, spring harassment with limited lethal take has been proven to be unnecessary and ineffective on both Higgins and other lakes. Second, harassment interferes with the proven effective option of trap and relocation and our effort to establish nest finding and sealing as an effective, sustainable and humane method of reducing common merganser broods.

We continue to believe that finding and sealing nests can be an effective, sustainable and humane way to reduce future broods. We continue to believe lethal take of common mergansers should only be used as part of scientific research or legal hunting. We would consider a fall harassment program which we believe could potentially have some effectiveness. We continue to be concerned that the low level of SI infection in Higgins Lake is due to fall fly-throughs when the lake waters are still relatively warm.

Compelling Data From Higgins Lake Show Spring Harassment With Limited Lethal Take Is Not Necessary or Effective In Reducing SI

Spring harassment is focused on adult fly-through ducks that are mostly uninfected or only lightly infected with the SI parasite as shown by nearly 50 necropsies of ducks lethally taken by Northpoint Fisheries on Higgins Lake over the past three years. In addition, very cold spring waters make larval SI parasites largely inactive, further reducing the risk that spring fly-throughs will significantly increase the snail infection level in the lake. We have additional, compelling data from the Higgins Lake experience. Lyon Township decided to prohibit spring harassment and limited lethal take from its portion of the lake beginning in 2015 (Lyon Township went on record to prohibit it in 2016, but Northpoint Fisheries didn't harass in Lyon Township in 2015 due to SICON's request to the DNR) to help aid in nest finding and sealing. As a result of stopping harassment with limited lethal take in Lyon Township, three natural nests were found in Lyon Township. However, common mergansers on the rest of Higgins Lake were driven into the Lyon Township portion of the lake by the Gerrish Township harassment with limited lethal take program. The Lyon Township portion of the lake was even designated by Northpoint Fisheries as "the refuge."

This actually provided an excellent opportunity to compare the two areas of the lake and objectively measure the effectiveness of reducing SI by harassment with lethal take of common merganser ducks on Higgins Lake. If spring harassment with lethal take was effective because it reduced spring common merganser hours on the lake, one would expect to see a measurable difference in the SI infection level between the Gerrish Township and Lyon Township portions of the lake. One would expect "the refuge" of Lyon Township to have a higher SI infection level since common mergansers were not purportedly harassed off that part of the lake and common mergansers were driven there in large numbers to spend extra hours on the lake. However, that did not happen. The objectively measured snail infection level, taken by collecting and analyzing thousands of snails from 10 locations around the lake at regular intervals, found that the Lyon Township SI infection level was actually slightly lower than the Gerrish Township level. And reports of SI, while still noted at a very low level around the lake, have been similar in both Townships. Lyon Township residents have reported a remarkable reduction in SI similar to residents of Gerrish Township beginning in 2016.

Finally, 88 common merganser brood ducks from 9 broods were left on Higgins Lake after the conclusion of the Northpoint Fisheries spring harassment with limited lethal take program in 2015. Without SICON to remove them, those 88 brood ducks would have spent a flightless summer on Higgins Lake and maintained the epidemic level of SI infection in 2016 and beyond. And all of the chicks from the 9 broods would have imprinted on Higgins Lake and would have continued to return to Higgins Lake to nest. A total of nearly 200 common mergansers from 19 broods were left on Higgins Lake by Northpoint Fisheries over the past three years. SICON removed them all. SICON still would have removed all common merganser brood ducks without a Northpoint Fisheries program on Higgins Lake.

Compelling Data From Other Lakes Demonstrate Spring Harassment With Limited Lethal Take is Not Effective in Preventing Common Merganser Nesting

Spring harassment reportedly also is intended to deter common merganser nesting on a lake. As demonstrated by recent experience on other Michigan lakes, nesting common mergansers are not deterred by harassment. Common merganser broods on Glen Lake increased from 3 to 9 from 2016 to 2017 despite a doubling of harassment efforts by experienced biologists on the smaller Glen Lake in 2016. Glen Lake obtained a trap and relocation permit in 2017. They elected to forgo their harassment program completely and have reinstated a trap and relocation program. All 9 broods, totaling approximately 97 common merganser ducks were successfully trapped and relocated on Glen Lake in 2017. Crystal Lake reported all 14 broods that hatched on their lake were successfully trapped and relocated in 2017. These 14 broods in 2017 still occurred

after a 2016 spring and fall volunteer pyrotechnic harassment program intended to limit nesting of common mergansers in 2017.

Higgins Lake Experience With Nest Finding and Sealing

SICON focused their nest finding efforts on Lyon Township where there was no harassment and found three natural nests in Lyon Township in 2015 using traditional flight pattern observation methods (which was made more difficult with an ongoing program of harassment on other parts of the lake.) Two trees found by SICON in 2015 to contain natural common merganser nests were removed/destroyed subsequent to their location (coincidentally, two hens banded by SICON in 2015 were reported captured and killed by Northpoint in their artificial nest boxes in 2016) and the third tree cavity that had been used by a nesting common merganser hen was successfully sealed this winter. Prior to sealing, that nest was studied and filmed and provided valuable information about common merganser nesting.

Exciting New Research Program to Find Nests in 2018 and 2019

HLPOA and HLSIO are pleased to announce a groundbreaking new research project using advanced technology to find and seal nests on all of Higgins Lake in 2018 and 2019. We believe all or most of the remaining natural nest sites being used by common mergansers on Higgins Lake are located in Gerrish Township where most broods have been captured. Advanced technology, miniature, rechargeable, custom-made transmitters using satellites will be fitted to captured hens and adult pairs over the next two years. These transmitters are accurate enough to closely track common merganser movements and find nests. This project, which is designed to support a humane, permanent and sustainable method of brood reduction, is jointly funded by HLPOA members, and strong HLSIO supporters, Bill Demmer and Bob Hoffman. The success of this program, especially the ability to capture adult pairs, depends on avoiding the interference of a spring harassment and limited lethal take program. Harassment will eliminate our ability to capture adult pairs. Killing common mergansers we want to fit with transmitters will eliminate our ability to find their nests. When nesting common mergansers are killed, their nest sites remain open for future use by other common mergansers that come to Higgins Lake. So simply killing a common merganser hen is not a permanent, sustainable method of reducing broods on Higgins Lake. Our goal is to eliminate common merganser nesting sites on Higgins Lake and not add them or keep them available. We also are considering other science-based, non-lethal methods of reducing common merganser broods on Higgins Lake such as sterilization of captured hens which will allow female common mergansers to continue to occupy existing natural nests on Higgins Lake without producing offspring.

The Roscommon County Resolution To Approve a Common Merganser Program For Roscommon County

On March 28, 2018, the Roscommon County Commission approved, by a unanimous vote, a HLPOA and HLSIO-sponsored request for a County Resolution as a necessary step for Higgins Lake to submit an application for a common merganser control permit. The vote followed a public meeting where members of the Higgins Lake Community and HLPOA and HLSIO board members testified in favor of the Resolution. Those testifying in favor included Herb Weatherly, Ken Dennings, Bill Case, and Jim Vondale. Herb Weatherly read into the record a Resolution of support by the HLPOA board. We want to thank the Commission members for their support.

We became aware of an effort by some to oppose our Roscommon County Resolution request. This followed an effort to attack MISIP common merganser control funding from the state legislature. We are thankful the Roscommon County Commissioners heard our message that Higgins Lake needs the opportunity to apply for a permit to continue a highly successful common merganser control program. It would have been extremely harmful to Higgins Lake if the Roscommon County Commission had failed to timely pass the Resolution and we would have been prevented from timely submitting a permit request to the DNR. Our SI reduction effort is supported by hundreds of people from the Higgins Lake community, it is managed by a dedicated volunteer board and it has been largely funded by voluntary donations from the local community. There is no cost to local or county governments for this program. We believed there was no valid justification for opposing our request for a County Resolution of support for a common merganser control program.

The 2018 and Beyond Common Merganser Control Program Permit Application For Higgins Lake Has Been Timely Submitted To The DNR

On March 29, the HLPOA and HLSIO Common Merganser Control Program Permit Application was emailed and Express Mailed to the DNR with a \$200 application fee. The HLPOA is the permit applicant as required by the new DNR rules. We are optimistic our application will be approved. We want to thank the HLPOA and HLSIO board's for their strong support for the lengthy application process. We also want to thank the MISIP, especially Rob Karner from Glen Lake, who led the lengthy rulemaking input effort. Finally, we want to thank the DNR for all of the work of Barb Avers and the entire team that developed the new common merganser control permit process. Until recently, common merganser control permits were very difficult to obtain through a Scientific Collection Permit process typically only available to Ph. D's and by other very limited means.

Prior to 2017, it had been more than a decade since any other lake in Michigan had obtained state and federal permits to control common mergansers. This new process, supported by MISIP, HLPOA and HLSIO, is designed to increase the availability and affordability of common merganser control programs to other lake associations around the state. We are committed to this principle. The MISIP is working to train additional new contractors in trap and relocation techniques and expanding the number of DNR-approved relocation sites.

The 2018 Higgins Lake Common Merganser Control Program

The 2018 Higgins Lake Common Merganser Control Program currently is under development. We expect to again hire Dr. Curt Blankespoor and his team to conduct the program. Program control costs will be significantly reduced again this year and we are in final negotiations. We will report details when the contract is finalized and begin fundraising shortly. We expect a little less than half of the costs will be covered by a \$22,000 state appropriation supplement which is part of the \$500,000 state appropriations in 2017 and 2018. As previously noted, there is an exciting, new, pre-funded research program in 2018 on Higgins Lake as well.

We believe the objectively measured 98% reduction in the SI infection level of SI is a great benefit to the entire Higgins Lake community. It has made visiting Higgins Lake fun again. Signs warning visitors about SI at the state parks have been taken down. The media have been reporting our success. And property sales are on the rise. Our short term goal is to continue to maintain or further reduce the already very low level of SI infection in Higgins Lake. Our long term goal, led by the 24 lakes of the MISIP, is eradication of SI. We will continue to have reports of SI on Higgins Lake since there is no science or technology currently available to eliminate it from a lake. A single infected snail can release up to a couple thousand SI-causing parasites each day. In the interim, a biologist on Lake Leelanau is getting closer to developing a more effective preventive cream that doesn't stain everything it touches. MISIP also is working to develop user friendly SI measuring and monitoring tools to help lake users know when SI parasites are present and at what level. We need to continue to support these and other medium and long term research efforts and help make effective common merganser trap and relocation programs more available and more affordable to even more Michigan lake associations.

A Proposed 2018 Canada Goose Control Program on Higgins Lake

Many on the lake have experienced problems with yearly Canada Goose broods. They are a nuisance because they leave extensive droppings on beaches and yards. They also are a source of e-coli in the water. To help address this problem, HLPOA and HLSIO also obtained, on March 28 from the County Commission, a county-wide Resolution allowing HLPOA to apply for a Canada Goose trap and relocation control permit in 2018 and beyond on Higgins Lake. We have until May 21, 2018 to submit a permit application for this summer. We have been in touch with a control contractor called Goosebusters. We will take necessary steps to prepare for the program. We will monitor the lake for Canada Goose broods this spring to determine if the program is warranted this summer. If we decide to move ahead and are successful in obtaining a permit, the Canada Goose will be removed and relocated during a four week period from early June to early July when adults molt, and along with goslings, are flightless. This effective and humane program, like the common merganser trap and relocation program, will also depend on our ability to raise the necessary funds.