

Higgins Lake Comprehensive Swimmer's Itch Control Program

Year 3, Update 1: July 8, 2017

Year 3 of our Swimmer's Itch Control Program began April 10

Originally, we were scheduled to begin Year 3 of our program on April 15. But, thanks to a relatively early ice-out date, the action on Higgins Lake started earlier this spring as populations of common mergansers and other migrating waterfowl species showed up in late March.

The more things change...

This year we have added three highly qualified Ph.D. scientists to our team. Dr. Dave Jude (University of Michigan) is an aquatic biologist/limnologist/fish expert. Dr. Randy DeJong (Calvin College) is a molecular parasitologist, who has worked with snails and bird parasites his entire career. Dr. Ren Tubergen (Calvin College), a mechanical engineer, is constantly thinking of innovative and more effective ways of trapping common mergansers. We also changed our company's name from SICON to Swimmer's Itch Solutions, a name we believe more clearly describes who we are and what services we offer.

...the more they stay the same.

In the swimmer's itch parasite world, the Blankespoor name is unrivaled. This is the third year that Drs. Curt and Harvey Blankespoor, the principals of Swimmer's Itch Solutions, are providing Higgins Lake and the surrounding community with the best possible swimmer's itch control program available. With the significant reduction in swimmer's itch cases we've achieved with our work the first two years, we are able to honor our promise and commitment to transition to a more affordable and sustainable maintenance swimmer's itch control program in 2017.



The Swimmer's Itch Solutions Team holding common merganser ducklings

Dr. Dave Jude

Dr. Curt Blankespoor

Dr. Harvey Blankespoor

Dr. Randy DeJong

(missing: Dr. Ren Tubergen)

Two new weapons in our search for nesting sites



Discovering the locations of active common merganser nests is both a time-intensive and difficult endeavor. To help us in that search, we used two new research tools: a 25' modified borescope camera (see picture on left) and a Phantom 4 drone (see picture below). Early morning monitoring from our boat yielded several observations of a common merganser female repeatedly circling an area just above the tree canopy. On four different occasions this spring, we observed a common merganser hen flying into a specific tree cavity. With Ric Blamer's excellent drone piloting skills, we identified several possible

candidate nesting sites on Treasure Island. Using our newly constructed camera-on-a-pole, we took a "look" inside those cavities to determine if they were active nests.

While we didn't find any evidence (e.g., eggs or feathers) to suggest the cavities were being used this year, it is quite possible, since common mergansers are nest prospectors, they will be used in the future. We have the GPS locations of each cavity and are willing to assist landowners in plugging those holes. We did find two common merganser eggs this spring, both in very unusual places: one in 6 inches of water west of Stoney Point and one on the ground at the base of a tree on the west side of Treasure Island.



Fewer common mergansers this spring translates into fewer broods this summer.

As we've done the past two years, we conducted frequent, entire-lake bird surveys (8 surveys between April 15-May 30). From ice-out to mid-May, when waterfowl species are still actively migrating, it's not uncommon to see 50-75 adult common mergansers on Higgins Lake. By the middle of May the only individuals that remain are the current year's resident birds. Last year, we observed a daily average of 11 resident common mergansers on Higgins Lake between May 15-May 31. This year the daily average was 6 individuals over the same two-week period. Not surprisingly, there are fewer broods appearing on Higgins Lake this year. As of June 28, we have trapped and relocated all 4 broods (including two from the unsealed nest boxes located on Treasure Island) that have appeared on Higgins Lake. These results are consistent with our claim that common merganser ducklings trapped here and relocated to Lake Huron do not return to Higgins Lake the following year. (To provide even more evidence to support this assertion we are marking all the ducklings we trap this year with web tags).

As part of a pilot research study, we have also permanently removed 5 females from the resident Higgins Lake common merganser population, including 4 hens that were active breeders this year. Using a procedure called stable isotope analyses, we are comparing the molecular fingerprints of the brain tissue of these 5 birds to the molecular fingerprint of the water in Higgins Lake. The results should be able to tell us how many of these 5 females hatched as ducklings on Higgins Lake.

The early (snail) returns are in....

On July 2, 2015 Higgins Lake had a snail infection level of 2.6% (3604 snails collected). On June 29, 2016 Higgins Lake had a snail infection level of 0.25% (5897 snails collected). Through June 28, 2017 we have analyzed 4120 snails and have yet to find a single swimmer's itch parasite! Please understand that we are not claiming that swimmer's itch is gone from Higgins Lake this year. What these data are telling us is that there are even fewer infected snails compared to last year at this time in the summer. That's very encouraging and exciting news!

A huge shout out, and a heartfelt thank you, to many of you who have help us provide Higgins Lake with the best possible swimmer's itch control program.

First, thanks to all of you who have been our extended "eyes and ears" looking for common merganser nests and broods. By using our website (www.swimmersitchsolutions.com/higginslake) to report what you are seeing and hearing on the lake, we are better empowered to reduce the number of "merganser hours" on Higgins Lake.

We also want to specifically acknowledge a few folks who have gone above and beyond in their support of us as a team:

Ric Blamer—for his expert drone piloting and photography/videography skills

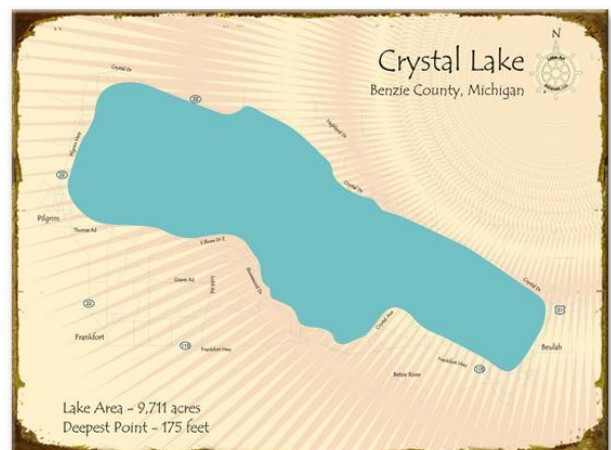
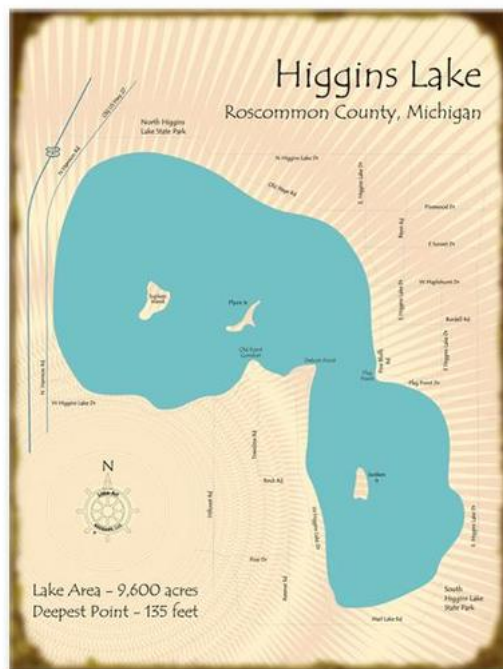
Chuck Brick—for his help with the design and construction of our pole camera

Bob and Dianne Wagner—for their encouragement, logistical support, and unmatched hospitality

Ron Wiltse (NuCraft Metal Products)—for his generous donation of duck trapping equipment

THIS YEAR'S COMMON MERGANSER TRAPPING COUNTS

(as of July 8)



10 Broods/94 Ducklings

(in Year 1 of our SI Control Program)

4 Broods/55 Ducklings

(in Year 3 of our SI Control Program)