Research

In 2014 CLWA joined with other regional lake associations to form the Michigan Swimmer's Itch Partnership (MISIP: www.misip.org). Now consisting of 31 partners, this collaboration has taken the lead in bringing together international expertise to study the causes and life cycle of swimmer's itch, motivate government leaders, regulators and businesses, and raise funds to support the research needed to find long term solutions to the problem.

MISIP efforts were instrumental in achieving appropriations from the State of Michigan in 2016 and 2017 that are going toward expanded research, training, and control efforts. Main focuses are improved analytical methods (qPCR) for measuring infection rates in water samples, and merganser migration patterns via bird banding. MISIP continues to test the efficacy of protective skin products.

For two years the CLWA helped support the research of biologists from Oakland University who studied the parasite's life cycle and environmental factors influencing swimmer's itch severity. The report on that research is posted on the CLWA website.

In 2016 the CLWA contracted with SICON LLC to carry out a snail infection assessment of Crystal Lake, data that will provide a baseline against which to measure the effectiveness of future control programs such as the current trap-and-relocate action. A limited snail infection assessment will be performed in 2018 in order to obtain metrics on progress to date.

Since 2013 the CLWA has collaborated with the waterfront staff at the Congregational Summer Assembly to record data on swimmer's itch occurrence, an invaluable resource for ongoing research.

A Serious Threat to Our Community

Crystal Lake is not unique – swimmer's itch affects lakes throughout the world.

In northern Michigan, it is more than just a persistent health problem:

Swimmer's itch discourages the recreational use of our precious water resources, diminishes the enjoyment of public beaches and valuable waterfront property, and threatens the regional economies that depend on water-based tourism.

The CLWA – working with its public and private partners – is seeking solutions. Its current multi-year control program has proven to be effective, but it is labor-intensive and costly.

YOUR HELP IS NEEDED

To support research and control of swimmer's itch, please send tax-deductible contributions to CLWA by using the enclosed envelope.

The CLWA is a 501 (c) 3 organization.

Crystal Lake &
Watershed Association®

P.O. Box 89
Beulah, MI 49617
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Please visit our website:
CrystalLakeWatershed.org which provides a wealth of information about the area.

SI-2018

COMBATING SWIMMER'S itch on Crystal Lake

What you can do to help:

- **Report swimmer's itch cases and merganser broods to the CLWA website www.CrystalLakeWatershed.org.**
- Do not feed any waterfowl.
- Remove unused docks, diving platforms or other structures that may become waterfowl perches.
- Encourage swimmers to use waterproof sunscreens that may provide a barrier or include an insect repellent.
- Volunteer for research projects and allow access to your lake front property for use in merganser control programs.

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Swimmer's Itch Facts

Swimmer's itch is a skin irritation (medically known as cercarial dermatitis) that may occur when a swimmer contacts a microscopic parasitic organism that normally cycles between snails and waterfowl. Various birds may host swimmer's itch causing cercaria. The common merganser is the primary host on Crystal Lake.

- If a cercaria encounters the skin of the proper species of waterfowl, it will attempt to burrow through the bird's skin to complete its life cycle. If instead the cercaria encounters a human in the water, it may attempt to enter the skin, where it soon dies.
- The human body's immune system responds at the site of penetration and forms a hardened red raised bump (called a "papule").
- This is not usually a serious reaction. The spots may be uncomfortable and itch for several days. However some people, especially children, may develop severe cases with fever and/or intense itching. Severity may increase with subsequent exposures.
- Some people (approximately 25% of the population) seem to be unaffected, even if they swim in cercaria-infested water.
- Swimmer's itch cannot be passed person to person, or from duck to person.

Preventing and Treating Swimmer's Itch

- Avoid swimming when there is, or recently has been, an onshore wind.
- Risk of acquiring swimmer's itch is greatest in the morning.
- Apply waterproof sunscreen or other products (see below) that may provide a barrier to the cercaria. Allow the product to dry before entering the water.
- If using sunscreen and also showering, reapply the product before re-entering the water.
- If swimming for a long period of time, reapply the product according to the manufacturer's directions.
- Swim in deeper water when possible, as wind and waves may concentrate the cercaria in the shallows or close to the shore.
- If you contract a severe case of swimmer's itch, ask a pharmacist about anti-itch creams or antihistamines.

At this time, there is no FDA approved product to prevent swimmer's itch. No products are endorsed by the CLWA.

The CLWA and its partners continue to provide the most current information to the public on ways to avoid the effects of swimmer's itch.

Swimmer's Itch Control

The Crystal Lake & Watershed Association has been leading a multi-year effort to attack swimmer's itch using state-of-the-art science. During the summers of 2017 and 2018 it has contracted with Swimmer's Itch Solutions LLC (SIS) to conduct large-scale swimmer's itch control activities on Crystal Lake.

The program is concentrating on trapping merganser broods and moving them to other waters where the swimmer's itch parasites are not present. By reducing one of the parasite hosts, the cycle that releases the parasites into Crystal is broken and swimmer's itch will be decreased. Glen and Higgins Lakes have already had positive results with these methods.

In 2018 SIS is training two local individuals in its trap-and-relocate methods, qualifying them to undertake such work in the future.

SIS is also testing the potential for eliminating merganser nesting spots (normally holes in trees).

Since 2014 the CLWA has experimented with pyrotechnic harassment to encourage mergansers to leave the lake. Volunteers have been essential to the implementation of this program. The CLWA continues to evaluate the effectiveness of this method of control.