

## Research

In 2014, CLWA joined with other regional lake associations to form the Michigan Swimmer's Itch Partnership (MISIP: [www.misip.org](http://www.misip.org)). Now consisting of 24 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 that will go toward expanded research, training, and control efforts in summer of 2017. Main focus will be on improved analytical methods (qPCR) for measuring infection rates in water samples, with additional studies of merganser migration patterns via bird banding and use of drone survey to detect merganser nests. MISIP will also continue to test the efficacy of protective skin products.

For the past 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.

In 2016 the CLWA contracted with SICON LLC to carry out a snail infection assessment of the lake, data that will provide a baseline against which to measure the effectiveness of future control programs. In recent years the CLWA has also experimented with spring pyrotechnic harassment to discourage merganser nesting, and lakebed raking to disrupt the snail population.

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

Swimmer's itch is an allergic reaction that occurs when humans come in contact with a microscopic water-borne parasite that normally cycles between snails and waterfowl.

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

In northern Michigan's inland lakes, infestations of the parasite that causes cercarial dermatitis are now being recognized as more than a persistent health problem. Swimmer's itch discourages the recreational use of these precious water resources, diminishes the enjoyment of public beaches and valuable waterfront property, and threatens the regional economies that depend on water-based tourism.

**Action is necessary.** The CLWA is working with its public and private partners in a multifaceted research and control program that – with your help – is seeking solutions.

To support research and control of swimmer's itch, tax-deductible contributions may be directed to CLWA or by using the enclosed CLWA enrollment form:



Crystal Lake &  
Watershed Association

P.O. Box 89  
Beulah, MI 49617  
231.882.4001  
[info@CrystalLakeWatershed.org](mailto:info@CrystalLakeWatershed.org)

Please visit our website:  
**[CrystalLakeWatershed.org](http://CrystalLakeWatershed.org)** which provides a wealth of information about the area.



# COMBATING SWIMMER'S

# itch

## on Crystal Lake

### What you can do to help:

- Report swimmer's itch cases and merganser sightings to the CLWA website [www.CrystalLakeWatershed.org](http://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.



Crystal Lake &  
Watershed Association

## 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 red spots of swimmer's itch are caused by an allergic or immune reaction as the swimmer's body attacks the foreign protein of cercaria.
- 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 seem to be unaffected, even if they swim in cercaria-infested water.
- Swimmer's itch cannot be passed person to person.

## Preventing and Treating Swimmer's Itch

- 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.
- Avoid swimming when there is, or recently has been, an onshore wind.
- 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 for swimmer's itch. Experience has suggested that waterproof sunscreen containing DEET or other insect repellent is most effective. No products are endorsed by the CLWA. Here are some that have been tried locally:

- Bullfrog Waterproof Sunscreen
- Sawyer Ultra 30 with DEET
- 3M Ultrathon with DEET
- Rocky Mountain Sunscreen

Not Recommended:

- **Swimmer's Itch Guard**

The CLWA conducted a study of this product in the summer of 2012, concluding that it did not perform at the level claimed by the manufacturer.

## 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. For the summer of 2017 it has contracted with Swimmer's Itch Solutions LLC (SIS) to conduct large-scale swimmer's itch control activities on Crystal Lake.

The program will concentrate 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 will be broken and swimmer's itch will be decreased. Glen and Higgins Lakes have already had positive results with these methods.

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

CLWA will continue its established program of pyrotechnic harassment (begun in 2014) in the fall to encourage mergansers to leave the lake. Volunteers situated around the entire perimeter of Crystal Lake are essential to the success of this program.

CLWA encourages the public to hunt common mergansers during the legal hunting season.

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, such as preventive lotions.