

Mission:

Enhance and preserve the quality of Seneca Lake.

Seneca Lake Pure Waters Association (SLPWA) provides factual, up-to-date information to its members and the public. SLPWA leads efforts to maintain and enhance the quality of Seneca Lake as a source for drinking water and recreation.

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Stream and Shoreline Monitoring

by Dan Corbett and Ed Przybylowicz

Seneca Lake Pure Waters Association (SLPWA) began its stream monitoring efforts in the spring of 2014. The intent of this program is to provide certified laboratory data on pollutants entering Seneca Lake via the streams, and to communicate that information in a manner that results in remedial actions over time. To achieve this purpose a partnership with the Community Science Institute (CSI) of Ithaca, NY was created since they maintain a state-certified laboratory and have a long history of stream monitoring efforts in the Cayuga Lake watershed. In collaboration with CSI, over 80 volunteers have been trained in site selection and sampling techniques.

The program began with the monitoring of Catherine Creek, Big Stream, and Reeder Creek. In 2015 and 2016 Keuka Outlet and Kashong Creek were added. SLPWA volunteers conduct sampling on 3-6 sites on each of these streams several times each season. Sites have been added to some streams to better identify the sources of high pollutant levels. Sampling high flow storm events is difficult, but very important due to the high levels of pollutants that occur during these times. High pollutant levels, coupled with high flow into the lake, make these events a key contributor to the pollution of Seneca Lake. Some SLPWA volunteers also aid in the data analysis, drawing of conclusions, and presentation of the information. The Finger Lakes Institute, in Geneva, NY, is another critical partner in assuring sound science in the design and interpretations of results from SLPWA's efforts.



SLPWA volunteers, Laurie Corbett and Mimi Gridley, sampling outflow from Dundee's Waste Water Treatment pond in March of 2017.

What have we learned from 3 years of collecting data?

The certified lab data generally confirms the pollutant trends reported over time by the Finger Lakes Institute, except more so. The streams SLPWA has sampled are contributing a high level of nutrients (forms of phosphorus and nitrogen) and bacteria (E.coli and coliform) into Seneca Lake.

The incoming levels of nutrients will continue to increase the present problems the lake has been experiencing with excessive weed and algae growth that plague much of our shoreline in the summer months.

The “algae blooms”, both cyanobacterial (toxic) and filamentous (cladophora) that we’ve confirmed along Seneca Lake shorelines in the last two years will continue and perhaps get worse. The Harmful Algae Blooms (HABs), or Blue-Green Algae (BGA), are actually a cyanobacteria that can replicate rapidly and produce toxins harmful to animals and humans. Such toxin levels have been confirmed in samples collected over the past two summers.

The northeast shoreline near the water intake for the Waterloo drinking water has had confirmed HABs blooms in both years. Seneca Lake is the drinking water source for approximately 100,000 people, through both public and private water systems, and the impact of HABs is of great concern.

The ever increasing nutrient levels coming into our lake, coupled with warmer summer temperatures and more erratic weather patterns, will increase this problem and it is a clear call to action for those who care about this lake. The bacteria levels found in our streams point to potential health concerns with human contact.

Have any mitigation actions been prompted by this information yet? Not as much as SLWPA would like. While this all takes time, some positive steps have been taken.

- Using recent data showing very high phosphorous levels, SLPWA has been successful in petitioning the New York State Department of Environmental Conservation (DEC) to add Reeder Creek to the list of “impaired water bodies” in New York State. That list is now being reviewed by EPA for final classification. Successful EPA classification will require that remediation actions be taken.
- SLPWA data confirms the need for the new regional Watkins Glen and Montour Falls waste water treatment plant that is scheduled to go on line within the next two years, to deal with high nutrient and bacteria levels entering the lake via Catharine Creek.
- The village of Dundee is progressing on an engineering evaluation of possible treatment plant upgrades, at least partially instigated by SLPWA water quality information of Big Stream.
- SLPWA recently responded to the U.S. Army closure plan to transfer responsibility for the former Seneca Army Depot to Seneca County by pointing out the need for the Army to identify and mitigate the high levels of phosphorus and coliform that are entering Reeder Creek within the present boundaries of the Depot. A suspected source of this contamination is the “burning grounds” where phosphorus and nitrogen containing ordnance was burned/exploded as a disposal method for many years. Other possible sources of contamination are two aging waste water treatment facilities (WWTP).
- Discussions in Seneca County about consolidating the two waste water treatment plants in the Seneca Depot, with those of the Willard Drug Treatment facility, into an upgraded single facility are encouraging and supported by the SLPWA data from stream and lake monitoring.
- Seneca Lake Pure Water Association is launching a water quality improvement initiative targeting key sources of nutrient inflow, as indicated by our work. More detailed plans of this broad effort will be available later in the year.

SLPWA is busy with detailed planning of our 2017 stream and lake monitoring efforts, and will continue to expand our reach to other important streams. Work will continue to isolate sources of pollutants on each stream, and we’ll be working hard to capture storm events. Lake monitoring efforts to address the increasing problems with algae on the shoreline of our lake are being planned based not only on the experience on Seneca Lake, but from the experience of other monitoring activities across the Finger Lakes. SLPWA is always looking for interested volunteers to help with this work to improve the quality of our lake, either with feet in the water or doing some of the desk work that’s needed to distill and communicate the information.

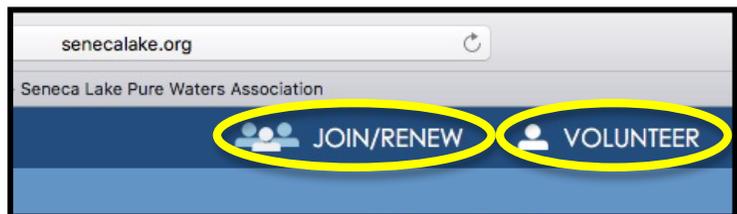
Thanks go out to over 120 volunteers have been part of this effort and contributed their time and energy! Seneca Lake is the largest of the Finger Lakes and we need more volunteers and financial support for these efforts. Please join in these efforts.

Volunteers Needed to Aggressively Tackle HABs this Summer

Seneca Lake Pure Waters Association (SLPWA) in collaboration with the Finger Lakes Institute (FLI) and the New York State Department of Environmental Conservation (DEC) plans to continue collecting data about Seneca Lake shorelines this summer. Volunteers are needed to report conditions on portions of the shoreline around the entire lake. Last summer we had 45 volunteers doing this work, this summer we hope to recruit 60 volunteers in order to include parts of the lake, which were not surveyed last year.

Volunteers will need to attend a training session in early summer and should be comfortable with using and have access to a digital camera or a smart phone camera to capture shoreline images. Shoreline Monitoring will take place from July 30th and will continue for 9 weeks concluding the first week of October, the "prime time" for Seneca Lake algae blooms.

To sign up, please visit the SLPWA website and click on the "Volunteer" at the top of the home page.



2017 SLPWA Membership Renewal

by Tom Burrall

This is an exciting time for the Seneca Lake Pure Waters Association! We are growing our membership, in fact it is our goal to double the number of SLPWA numbers by this time next year. The more members we maintain and acquire, the more we can expand the depth and scope of our programs such as stream and shoreline monitoring.

The membership cycle begins June 1, 2017 and ends May 31, 2018. Membership renewal letters will be sent out before the end of May. Memberships may also be renewed:

- online via our website, simply click "Join/Renew" at the top of the home page.
- by completing the form below. Mail completed form along with a check for membership dues to:

SLPWA
PO Box 247
Geneva, NY 14456

Seneca Lake Pure Waters Association Annual Membership Dues: **Student \$10** **General \$ 30** **Business \$ 50**

Name(s): _____

Business Name: _____

Dues: _____

Mailing Address: _____

City, State and Zip: _____

Additional Gift: _____

Email Address: _____

Phone Number: _____

Total Enclosed: _____

- Please deliver the newsletter electronically. Mail the newsletter to the address above.

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Save the date...

August 23, 2017

26th Annual
Dinner Meeting
Harbor Hotel
Watkins Glen

