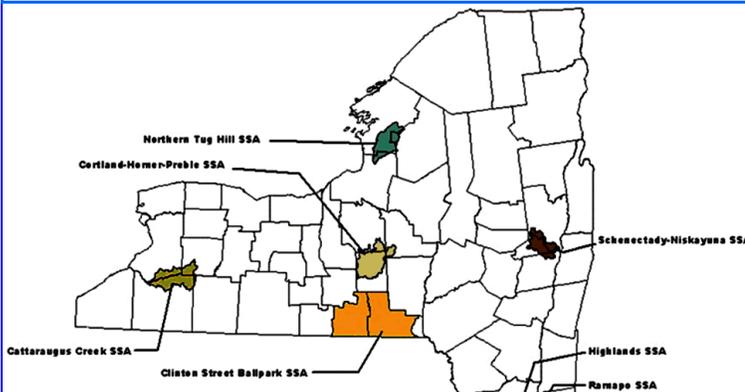


Our Song Lake Watershed

Volume 9

www.songlakewatershed.org



The Cortland-Homer-Preble Sole Source Aquifer

For those of us living around the lake, the water we drink each day comes from the **Cortland-Homer-Preble Aquifer**. An Aquifer is a layer of rock, sand or gravel that is porous enough for groundwater to flow through. Our aquifer is considered a sole source aquifer, which the EPA defines as, "one which supplies at least fifty percent (50%) of the drinking water consumed in the area overlying the aquifer. These areas can have no alternative drinking water source (s) which could physically, legally, and economically supply all those who depend upon the aquifer for drinking water... Sole Source Aquifer designation is one tool to protect drinking water supplies in areas with few or no alternative sources to the ground water resource, and where if contamination occurred, using an alternative source would be extremely expensive."

With regard to *The Cortland-Homer-Preble Aquifer System*, the EPA further states that it "...is highly vulnerable to contamination, due to highly soil permeability and shallow depth to ground water."

The high quality drinking water that we receive from this accessible aquifer is not guaranteed. Routine water testing is recommended for any private well, but never before has that been more important. There are a wide variety of inputs from upland sources, including, but not limited to, development and agriculture. While there are a number of reasons to monitor the water quality of your well, the possibility of slick water, high-volume hydraulic fracturing for shale gas appearing on the horizon, makes getting a baseline reading for certain chemicals a prudent decision. Drilling is not expected to begin until June, but testing should be done well in advance. Baseline testing for this purpose would include tests for iron, magnesium, sodium, barium, chloride, total dissolved solids, pH, turbidity, coliform bacteria and methane.

Water Testing Information

Peter Tague is organizing reduced rate testing for multiple homes. If you are interested, please contact : petertague@gmail.com before February 28th.

<http://www.epa.gov/region02/water/aquifer/cortland/>

NOW, MORE THAN EVER

Cortland County

CC Highway Department Recycling Center

137 South Pendleton Street

Cortland, New York

Monday—Friday 8:00 Am—4:00PM

Saturdays 9:00 Am to 1:00 PM

<http://www.cortland-co.org/sw/Default.htm>

Onondaga County

Onondaga County Resource Recovery Agency

5860 Rock Cut Road

Jamesville, New York 13078

Tuesday—Saturday 7:00 AM to 2:30 PM

Closed Sunday and Monday

<http://www.ocrra.org/>

Other recycling options are listed on the OCRRA website for electronic or "E-Waste." Companies like Best Buy, Radio Shack and Staples will accept e-waste, but if the device still works, also consider the Salvation Army and other charitable options.



Think Spring Now!

The DEC is offering its Annual Saratoga State Nursery Seedling Sale This would be a **shared endeavor**, dividing plants among those interested. The following native species are included: American Mt. Ash, Buttonbush, Pussy Willow, Red Oak, Red Maple, Red Osier Dogwood, Highbush Cranberry, Wetland Rose. For more information go to: <http://www.dec.ny.gov/animals/9395.html> We need to let the DEC know of our interest **as soon as possible**, so call! Tarki at 696-5262 or Deb at Deb at 696-5549



ICE FISHING CLINIC

Natural Resources Steward, Tom Hughes has offered to provide an **Ice Fishing Clinic on Song Lake. The Clinic will be designed for children and adults.**

*Saturday, February 26th at 1:00 PM
Where: Along the Heath Shoreline*



Tom works with the New York State Office of Parks, Recreation and Historic Preservation. He has worked throughout New York State as a biologist and an outdoor educator spending much of his life fishing and exploring the Finger Lakes region.

To fish, adults must have a NYS fishing license, but his is not necessary if you are there solely to chaperone a child.

You must register for this event
by calling Tarki at 315-696-5262

WE WOULD LIKE YOUR OPINIONS ~ WE NEED YOUR SUPPORT

The production of these newsletters has been possible through generous donations to the Song Lake Watershed Fund through the Song Lake Property Owners Association. To help sponsor our next issue, please contact Tarki Heath at 696-5262. Let us know what you think of our newsletter by emailing your comments to SongLakeIssues@aol.com or Songlakeassociation@gmail.com

Song Lake Watershed and Environment Committee:

Tony George -696-8045, Marjie Grillo -696-5963, Tarki Heath -696-5262,
Peter Tague - 696-5612, Gloria Wright -696-5524

This Publication made possible by donations to
The Song Lake Watershed Fund
January, 2011 All Rights Reserved

SUNY-ESF Practicum Student Projects on Song Lake

Many of the residents around Song Lake participated in projects, and enjoyed the communication, with several ESF students this fall. Thanks to everyone who helped make these projects a success for the students and for us. The knowledge they have gained and given to us is invaluable. As Joe Schafran stated after many Song Lake residents went to their poster sessions: "Thank you so much for coming in today, it was really nice to be able to do some research that actually meant something to someone other than ourselves!" This work is exciting for all of us!

Background:

The Song Lake Watershed Committee has been working with ESF limnology professor, Dr. Kimberly Schulz. This fall, she brought a large group of intern students to pursue a variety of studies on the lake. The students have had a remarkable experience discovering, what appear to be, some exceptional findings. As the information is confirmed, the watershed committee will make all these results available to the association. According to Dr. Schulz, what we can say is, that there is an interesting population of chubsuckers in the lake. Right now, it looks like they are potentially lake chubsuckers, a threatened fish species in New York State as well as other macrophytes especially *Neobeckia aquatica*, which is also a threatened NYS species.

Another exciting point to add is that, other than the intentionally introduced fish (e.g. walleye, bass, grass carp) the studies have not found any exotic species in the lake. Dr. Schulz has worked on many lakes in the state, and she stresses that this is rare. She adds, "... the more people are using the lake and especially moving boats into and out of the lake, the greater the risk to this rare refuge for native species."

The Projects with excerpts from conclusions:

What's Growing On? An in-depth analysis of the macrophyte community within Song Lake By: David Daly, Kara Jaenecke & Matt Coll

We found ten different macrophytes species, all of which were native to the area. The macrophytes community of Song Lake was comprised mostly of submersed macrophytes especially *Neobeckia aquatica*, a threatened species in New York state. After finding an entirely native community composition including a few threatened New York state species, we feel that it is necessary for future managers to protect the lake from invasive species.



Diversity of Benthic Macro Invertebrates in Song Lake, Tully NY By: Shawn Ruzzi & Chad Walz

We found 22 families of organisms, from 10 orders, most of which were various families of arthropods. The invertebrates were native and generally indicators of good water quality.

General Fish Diversity of Song Lake and Characteristics of *Erimyzon succetta* (lake chubsucker) By: Eric Bauer & Amanda Ranger

The lake chubsucker was caught but in far less numbers than in 1978. However the chubsuckers that were caught do not strictly adhere to the descriptions of the lake chubsucker and genetic analysis may be needed to determine if they are lakechubsuckers or an entirely different species of fish.



The Ups and Downs of Groundwater Exchange: Investigating the hydrology of Song Lake

By: Rachael Weiter

Subsurface flow travels almost directly south during the autumn, the time during which this project was completed, while in the spring it travels from the northeast to the southwest. The lack of an inlet or outlet to the lake made this an excellent site to study groundwater inputs and outputs to the lake.

Following the Flush: Are Nutrient Levels in Song Lake, NY a Concern? An assessment of phosphorus and *E.coli*, and their relationship in Song Lake By: Cassandra Ziemba & Elizabeth Keyser

We found that the west side average phosphorus levels were significantly higher than the east side averages. We believe that the increased development and thus more septic systems may be contributing to the higher phosphorus levels on west side of the lake. We also found that the south end of the lake had significantly higher phosphorus levels than the north end. It is possible that agricultural runoff from the nearby fields may contain fertilizer with high levels of phosphorus.

Comparative Analysis of Song Lake Water with Residence Wells By: Daniel Larkin, Dominick Mosca, & Stephen 'Pat' Rook
Results yielded higher levels of phosphorus in the surface water, which is to be expected in due to phosphorus loss to land vegetation and soil reactions.

Song Lake Bioassay: An Assessment of Phytoplankton Nutrient Limitations By: Joe Schafran & Kieran Siao

Algal growth was greatest in samples spiked with trace metals, silica, phosphorus, and nitrogen, versus those samples spiked with just one of these nutrients or a combination of nitrogen and phosphorus. Also, control samples showed little phytoplankton growth suggesting that these algal blooms are a result of recent increases in nutrient inputs to the lake system.

The students' abstracts, and some posters, are available on our website.

* *Neobeckia aquatica*, Image Source: <http://www.akvaryumforum.com/forum/akvaryum-bitkileri-171/sayfa10.htm>