Dear Friends of Cayuga Lake, **January 2020**

This month, several members of CLEAN attended the 2020 Finger Lakes Research Conference. The keynote presenter, Rick Relyea, described the deployment of networks of smart sensors on Lake George and the recent extension of the Jefferson Project to Skaneateles Lake. It was inspiring to CLEAN researchers who are working on a similar endeavor on Cayuga Lake. Please see the new page on the CLEAN website cleancayugalake.org labeled "Lake Station Initiative" to view the evolution of this project. This page--still under development--will include up-to-date water quality data collected on Cayuga Lake. Even as the lake freezes, CLEAN researchers continue to gather water quality data for many locations around Cayuga Lake. It has been unfeasible to gather data for spots in the center of the lake due to the winterization of the CLEAN research vessel. If any local residents have access to a boat and are interested in taking our researchers onto the lake to gather data this winter, please contact CLEAN

at CLEAN.CayugaLake@gmail.com.

One interesting result of the water quality data is a clear pattern of high chloride levels at the north end of the lake in areas that have been plagued with harmful algal blooms. Salt is being spread on roads, parking lots and sidewalks this time of year and can make runoff water as salty as seawater. It is important to consider ways that this practice is negatively affecting the aquatic ecosystem and methods that can be employed to minimize usage and run off of salt. Some municipalities are installing application regulators or using "smart" snowplows that prevent salt overuse by measuring pavement temperature, residual salt that's already been laid down, and the presence of ice on the road. Many cities now use a brine made by diluting the salt with a bit of water to stick to the road better or food processing waste such as beet juice, pickle brine, fermentation byproducts, desugared

molasses, and cheese brine which are biodegradable and less harmful to wildlife.

Cargill continues to build its $42M Shaft project in North Lansing ostensibly with its eyes on $10s of billions of dollars of salt under the Town east of the Cayuga Lake and some lesser amount of salt lying under the 8 miles of Cayuga Lake between Cayuga Power and Long Point. Cargill completed a 2425' deep pilot hole at the Shaft #4 site in January and is expected to up-ream an 18-foot diameter shaft hole in the coming months.

CLEAN researchers are monitoring water levels and water quality in several residential wells near Cargill's Shaft #4 project in North Lansing. Cargill's drilling of Corehole 18 in 2013, Power Feed Borehole 19 (Nov 2018-Feb 2019), and the power hole (Nov 2019-Jan 2020) all perforated the Marcellus Shale and other gas-bearing and radioactive strata all at the Shaft #4 site, with each drilling event posing risks to drinking water and other aquifers as contaminated drilling fluids or drilling mud moved from gas-bearing and radioactive strata to the surface.

The NYS DEC failed to require Cargill to conduct a baseline well study at Shaft #4 prior to the drilling of Corehole 18 in 2013. While Cargill is to be commended for monitoring water quality in some residential water wells near Shaft #4, there are some conspicuous gaps in their current research. Cargill has failed to release a list of chemicals that were added to drilling fluids and drilling muds in any of their three drilling events. Nor have they instructed their contract laboratory to analyze for any of the drilling-related chemicals used in any of the three drilling events to date.

Furthermore, their contract laboratory is not reporting on relevant analytes such as radon 222, gross alpha and gross beta radioactivity, hydrogen sulfide, bromide, sulfate, or silica. Cargill has also refused wellowner

requests for Cargill to pay for water level data loggers to be placed in their wells.

On-going testing is essential to determining whether Shaft #4-related drilling causes contamination or depletion of the aquifer. Current data indicate above-average levels of methane in several wells, chloride above EPA drinking water standards in two wells and high sodium levels in all but one well. Due to the lack of any Cargill pre-Corehole 18 well study, it is now difficult to know whether Cargill's mining and drilling account for current high sodium levels in water wells near Shaft #4. The wellowners must now wait to see whether their water quality changes for the better or for the worse going forward.

Gimme Coffee in Trumansburg has generously offered their walls in March and April for a fundraising art show. If you or another artist you know of would like to make a donation of an art piece to the art show please email CLEAN.CayugaLake@gmail.com. Artists will be given the option of donating a percentage or the full amount of the sale to CLEAN. Thank you in advance for your consideration.

Reminder: Please visit cleancayugalake.org/coal-ash-landfill and sign the petition to DEC Commissioner Seggos urging the DEC to require remediation of the Coal Ash Landfill at Cayuga Power Plant.

CLEAN needs your help! If you are interested in adding your energy into our campaigns to protect the lake, please contact us at CLEAN.CayugaLake@gmail.com and include information about yourself and what volunteer opportunities you are interested in committing to. Please consider becoming involved to help our organization grow.

We appreciate your continued support. Tax-deductible donations can be made to CLEAN here.

Thank you, Cayuga Lake Environmental Action Now

Clean the Lake.
Protect the Lake.