

Dear Friends of Cayuga Lake, November 2019

We have so much to be grateful for here in the Finger Lakes with our abundance of beautiful landscapes and vibrant community. Thanks to the engagement of our local residents, CLEAN is able to work on the protection of Cayuga Lake. As we move into the season of enjoying our cozy homesteads, residents in north Lansing have been dealing with a disturbance in their neighborhood. Cargill began drilling the pilot hole for Shaft #4 in mid-November causing concern over possible damage to both the supply and quality of the groundwater, which many residents rely on for their drinking water.



Several households living near the shaft project are participating in a well study to document any contamination or depletion of the aquifer caused by drilling, the construction of Shaft 4 or on-going leakage of the aquifer into the completed shaft. The study involves regular sampling of well water for salinity, metals, radioactivity, methane, total coliform, and other parameters. Radon 222 has a half-life of only 3.82 days, so samples must be over-nighted to the lab. Counting the number of colony forming units is more

informative than asking a lab to simply determine whether or not coliform and E. coli are present. Some well owners are also opting to install long-term submersible dataloggers that measure water depth in the well and monitor for signs of contamination. If you live in the area surrounding Shaft #4 and are interested in being a part of this well study, please contact us at <http://cleancayugalake.org/> to learn more.

Cargill, Inc., mines salt about 2,000 feet below Cayuga Lake. The permitted area covers nearly a quarter of the Lake's footprint, but in 50 years of owning the mine, Cargill has never been required to prepare an Environmental Impact Statement (EIS). Although the salt that they mine is publicly-owned, Cargill claims that the most relevant information (that might assist non-Cargill scientists in assessing the risk of this operation) is a trade secret. Earlier this year Judge John Rowley ruled against our Article 78 lawsuit against Cargill and the Dept of Environmental (DEC) that sought to have an EIS ordered by the Court prior to Cargill being allowed to build Shaft #4. CLEAN's legal team has filed an appeal with the Third Appellate Division asking for both an injunction to stop the construction of Shaft #4 and for an EIS of the \$42M shaft project. The owners of the much newer Hampton Corners Salt Mine 65 miles to the northwest have already carried out two EISes and say that these costly studies make their miners safer and improve their relations with their neighbors.

This past week, CLEAN's legal team finalized the record on appeal to provide the appellate court everything it needs to understand the potential for significant environmental impacts from the installation of the shaft that will allow continued mining under thinning bedrock between the bottom of the Lake and the mine itself. This 3,500-page record shows that the DEC should have issued a declaration of positive significance and required the preparation of an EIS.

We need your help to demand that the NYS Office of General Services (OGS) better protect our Lake. OGS has been "consenting" to mining beneath the Lake at 10-year intervals without an environmental review since 1938. The OGS, as the steward of our public lands, is mandated to regulate Cayuga

Lake for its highest and best use. Currently, there are insufficient financial and environmental protections for this valuable community drinking water resource.

Please:

- a) E-mail or call Bradley Allen: Bradley.Allen@ogs.ny.gov (518) 474-5988
- b) E-mail or call Sean Carroll: Sean.Carroll@ogs.ny.gov (518) 473-5294

Urge them both to:

- 1) Schedule a public statement hearing in Ithaca prior to the issuance of a new permit; and
- 2) End Cargill's right to mine under or near Cayuga Lake when the current permit expires on December 31, 2019.

Please consider enrolling your property near the mine in the Cayuga Salt Mine Subsidence Study. The Chris Dennis Environment Foundation (CDEF) has received seed money from the Park Foundation to help launch a long-term project to monitor and publicize land surface deformation as a result of salt mining beneath Cayuga Lake and the towns of Lansing and Ulysses. Data from this project may better enable landowners to seek damages in the event their properties are damaged by mine-related subsidence. One Cargill consultant has maintained that mining-related subsidence is a process that slowly takes place over 200 years, but admits that subsidence at the middle of the lake could total 5.5 feet. We know that at the not-so-distant Hampton Corners Mine, room closure--which means when the ceiling and floor of a mining panel have met--can take place in as little as a decade. CLEAN's geology team is concerned that subsidence occurs under the lake bedrock fractures may be enlarged such that saline artesian aquifer located beneath the lake could begin venting into the lake, further salinizing the lake water.

CLEAN's geology team is of the view that, as mining under the lake progresses northward, the risks of mine collapse grow increasingly

greater. A catastrophic flooding of the mine would put the lives of Cargill's miners at risk, but could also put >\$1B worth of buildings and infrastructure at risk of subsidence damage in the City of Ithaca.

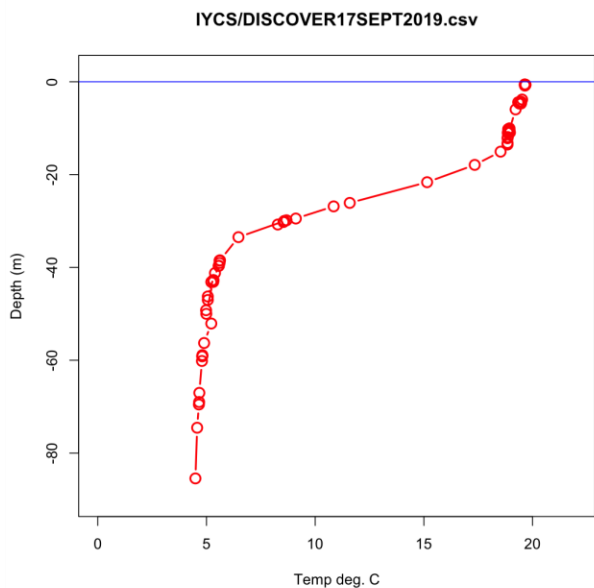
The DEC requires Cargill to monitor subsidence along the east and west shores of Cayuga Lake but in the past 40 years, about 25% of Cargill's subsidence monuments along the west shore are no longer producing data. Explanations are usually limited to terse phrases as as "missing", "lost", or "in error." DEC does not appear to require that missing Cargill monuments be replaced. Presumably, Cargill's liability for future subsidence damage may be less if the time-series data on subsidence are fragmented and incomplete.

As Climate Change accelerates sea-level rise and destroys the 95% of the planet's freshwater located in Antarctica, the 9.5 cubic kilometers of freshwater in Cayuga Lake will become increasingly valuable as millions of coastal residents begin moving inland. If the mine were to flood today, it is estimated that more than 15B gallons of saturated brine--as much as seven times the salinity of seawater--could begin venting into lake. At >40ppm sodium, Cayuga Lake water is already--courtesy of salt mining--more than twice it's pre-mining salinity and more than twice the 20 ppm sodium in drinking water for people with hypertension. If Cargill obtains a permit to expand its mining operations north of Cayuga Power up to Long Point, a future flooded Cayuga Salt Mine could pose more than double the risk to the lake that's already in place.

If you own property in the affected area and are interested in participating in the subsidence study, please email CLEAN.CayugaLake@gmail.com for more information.

Reminder: Please visit the CLEAN website at <http://cleancayugalake.org/> and sign the petition to DEC Commissioner Seggos urging them to demand remediation of the Coal Ash Landfill at Cayuga Power Plant. The 42-year-old coal ash landfill at Cayuga Power Plant, up-slope of Cayuga Lake, contains more than 2 million tons of coal ash and industrial waste in a partially

unlined landfill that monitoring wells show is contaminating groundwater. EPA Coal Combustion Residue rules require that owners of an active coal ash landfill have their own web sites displaying information to the public. You can see the website for Cayuga Power's active coal ash landfill [here](#). Start reading through the documentation and if you have any questions, you might want to e-mail or call John Marabella, the environmental director at Cayuga Power (Marabella@HeorotPower.com; [607-533-7913](tel:607-533-7913)) to ask your questions. The weird thing about this landfill's reporting is that there are rarely any violations. One key question: why does DEC Region 8 require the Lockwood Landfill at Seneca Lake to send its coal ash leachate to a wastewater treatment plant, where DEC Region 7 allows up to 30 million gallons of virtually untreated coal ash leachate to be discharged into Cayuga Lake annually.



The 2019 CLEAN/CSI collaboration to record lake water quality in the north end of Cayuga Lake wrapped up with a final meeting in mid-November to exchange data and make plans for 2020. The Manta+35 used by CLEAN researchers measures pH, temperature, conductivity, depth, dissolved oxygen, turbidity, sodium, chloride, chlorophyll a, and cyanobacteria. Community Science Institute provided lab analysis of nutrients and plankton

populations. The data collected may have been the first of its kind for the north end of Cayuga Lake. This collaboration enables researchers to develop a map of water quality conditions and begin to strategize mitigation efforts. We have begun a fundraising campaign for next year's research program. If you are looking to give back this #GivingTuesday, please consider making a tax-deductible donation to CLEAN [here](#). You can add a note "2020LakeStudy" if you would like your donation to be directed to support this joint project.

We appreciate your continued support.

Thank you,

Cayuga Lake Environmental Action Now

Clean the Lake.
Protect the Lake.