

# Comments to Lansing Village Board

Monday, October 16, 2017

Thank you for taking the question of suing the DEC seriously and providing an opportunity for public comment.

My name is Larry Cathles, I am a Cornell Professor in Geology with an interest in Mineral and Energy Resources, have taught hydrology for over 30 years, and am a resident of the Town of Lansing.

I have followed the CLEAN initiative closely, spoken extensively with CLEAN and Cargill, and have summarized my analysis in two letters to Governor Cuomo that are posted with additional comments on [blogs.cornell.edu.cayugalakesaltmining](http://blogs.cornell.edu.cayugalakesaltmining).

- CLEAN suggests that the Cargill Mine risks salinifying Lake Cayuga because the mine could flood and squeeze salt-saturated water into the lake as it collapses, BUT salt mines collapse slowly and the lake is continually flushed with fresh water. When calculated, under the worst case scenario the chlorinity of the lake could increase by 12 ppm over its current level of 40 ppm.
- CLEAN suggests that the standing water level in the Shaft #4 test well, being 30 m below lake level, suggests a connection to the mine 4 miles distant, BUT the water in the well has a salinity of 130,000 ppm and thus a density 13% greater than fresh water. It's fresh-water-equivalent standing is at lake level, and suggests no connection to the mine.
- CLEAN suggests that the horizontal compressive stress in valleys makes mining under the lake riskier, BUT this stress closes vertical fractures and makes leakage into the mine less likely, the lower-than-rock-density of the deep lake reduces the vertical load on the mine making mining safer under the lake than under the adjacent land, and there are no human infrastructures under the lake that could be impacted if there were ever significant mine-related subsidence.
- CLEAN asserts that Cargill is operating without proper review because it has never prepared an Environmental Impact Statement, BUT an EIS review is normally prepared in advance of an activity to foresee potential impacts, and the mine has been operating for 95 years. We know its impacts. Cargill prepared the equivalent of an EIS when it successfully petitioned for mine expansion several years ago. That Expanded Environmental Assessment was superior to the normal EIS because it evaluated underground issues on the basis of decades of experience, rather than on inferences from other mines. The DEC receives a yearly mining report from Cargill and has a licensed, legally responsible engineering firm review them. For an ongoing operation this is a better oversight procedure than the requirement of periodic EIS statements would be.

CLEAN is an activist organization, and the concerns it or others raise need to be evaluated and resolved following transparent and established procedures. Time-tested procedures are being followed. CLEAN's suite lacks scientific substance and is polarizing because it accuses multiple parties of incompetence, misfeasance, or worse. The Cargill mine will be best overseen if the various levels of government work together and community discussion is non-threatening, inclusive, fair, balanced, and respectful. No good can come from suing the NYSDEC.