



## **Cargill is selling the Cayuga Salt Mine —and New Yorkers should do something**

Cargill, Inc., one of the richest private companies in the U.S., reportedly plans to sell the Cayuga Salt Mine in Lansing, NY. There is a rumor that Compass Minerals has already begun due diligence. There is rumor that Cargill has asked the DEC for permission to mine their mineral rights under Lake Watch and other areas south of Gulf Creek.

### **Why is Cargill selling?**

It's not clear why Cargill recently invested about \$50 million in the Cayuga Salt Mine and now plans to sell it. However, some recent issues include:

- **A changing market.** Cayuga Salt Mine produces road salt for deicing roads. One report shows demand for deicing road salt flattening in New York over the next 10 years. The two road salt mines in New York produce about 7X the demand in New York State. In 2022, Stone Canyon Industries Holdings closed its Windsor Salt Mine in northeastern Alberta, Canada, “for financial reasons.”

Cargill is no longer in the top 10 list of rock salt suppliers in the country. Sonya Roberts, president of Cargill's salt business in 2021, described the decision to close the Avery Island salt mine (that the company had managed since 1997) as “...the right one as we considered the future economics of the mine's operation. Furthermore, COVID-19, with its impact on the workforce and supply chains, and climate change have likely pinched Cargill's revenues from the mining of road salt.

- **Dwindling reserves under the lake.** Without a state-approved expansion of permitted reserves, Cargill or a new owner will be tapping out salt reserves at the northern end of the mine under Cayuga Lake by 2030-32. In theory, Cargill could expand begin to mine under land near its newly-opened Shaft 4 or begin to mine under land from its East Mine under the Town of Lansing. The risk of flooding is smaller, but purchase of mineral permits is an issue.

And, regarding the East Mine—which Cargill stopped exploiting in about 1984—problems had been encountered mining east of Triphammer Road and on the south margin of the mine, where either the Fir Tree Point Syncline or “severe deformation [of salt beds] related to the domal structure located east of Portland Point” may have prevented mining further south.

Cargill began extending its six-level mine under Cayuga Lake in 1984 and has since enjoyed high extraction rates and the simplicity of dealing with only one owner: New York State.

● **Environmental concerns.** Although salt deposits under the lake extend north towards Syracuse (nicknamed “Salt City”), excavating those reserves is risky due to thinning, irregularities, and glacial gouging in the overlying bedrock. Blasting and digging too close to these anomalies could cause the mine to collapse and flood, creating a vast reservoir of saturated brine that could further salinize Cayuga Lake and harm the aquatic ecosystems. Cayuga Lake provides the daily drinking water for “nearly 100,000 people” according to the DEC. That number will only increase as sea-level rise begins to push coastal communities further inland.

Lake Peigneur in Louisiana is the only known case of a hydraulic connection being suddenly created between a salt mine and a freshwater lake above it. When a Texaco drilling rig on the lake in 1980 accidentally drilled into the mine, the ensuing vortex sucked in the drilling rig, 11 barges and 65 acres of nearby forested land. During the subsequent four decades, the water of Lake Peigneur has remained unsafe to drink.

A mine is a cavity into which overlying rock plus all of the land and water above it gradually sinks or subsides. One Cargill consultant estimated that the center of the lake will eventually sink a total of 5.5 feet (or about half the height of the mined out void).

Subsidence of mines that lie under land is more measurable. In a 2016 Cornell University Master’s thesis, Benjamin Valentino reported measuring land subsidence of up to 3.1 inches/year above the Hampton Corners Salt Mine, which is located under land about 62 miles west northwest of the Cayuga Salt Mine.

Over the past 35 years, subsidence for portions of Drake Road and East Shore Drive over the East Mine has been >1.3 feet.

Houses and other structures built over, or within roughly 0.3 horizontal miles of the mine footprint, are gradually sinking also. Over time, subsidence can crack foundations and cause vertical structures to tilt, and some neighbors are very concerned about the effect of subsidence on their property.

Groundwater continually enters the mine through shaft leakage. Rather than pump this water back to the surface, Cargill has opted for the cheaper but riskier option of storing leakage waters in abandoned portions of the mine. Such disposal ponds raise ambient

humidity and sometimes erode salt pillars. Once the mine is completely flooded—whether by accident or on purpose—on-going subsidence of overlying rock will cause the pressurized brine to squeeze out, potentially polluting freshwater aquifers or the lake.

Risks to the lake would not disappear if salt mining were to be limited to mining under land. Salt processing operations on the surface operations might continue to release into the lake brine that is often more concentrated than sea water. Additionally, the region would still be at risk from accidents such as the 2023 salt train derailment that spilled an estimated 300 gallons of diesel fuel within a mile of the drinking water intake for five municipalities.

• **Increasing liability.** In 2020 at the Avery Island salt mine in Louisiana, a section of roof collapsed, killing two workers. Cargill, which had managed that mine since 1997, closed it in 2022. Presently, Cargill’s miners have only one exit from the active mining area at the north end of the Cayuga Salt Mine. This tunnel, NW3, has rows of small salt pillars within it. Cargill and federal mine inspectors appear to agree that each of the “entryways” in the tunnel is an independent means of egress. However, NW3 is <400 feet wide and the two mine collapses at the Retsof Salt Mine in 1994 were about 750 and 950 feet wide. After Cargill failed to provide two exits at their Belle Isle Salt Mine in Louisiana—despite a warning from a Federal regulator six months earlier—, 21 Cargill miners died in 1968 when a fire broke out in or near the only shaft linking the mine to the surface.

Salt mining remains a dangerous activity for a relatively low-value commodity and threatens not only human life but above-ground real estate and invaluable water resources. Now that Cargill appears to agree that the future of Cayuga Salt Mine is not attractive, the only sensible solution is to close the mine and repurpose the Portland Point area.

## **What New York State could do**

New York State could do the following:

- Require Cargill to decommission the mine as soon as possible and subject it to an Environmental Impact Statement (EIS) that includes a publicly-vetted closure plan.
- Require Cargill to post a \$10B environmental bond with New York State that remains in escrow until the mined voids have completely closed and ejected all lake-threatening brine. Closure could take between 15 and 200 years.

For a more complicated, attenuated, and inferior alternative to a swift mine closure, the State of New York could:

- Clarify jurisdiction over the salt mine. Cargill has never recognized the state's authority to fully regulate its underground mining operations, which has led to a lack of both oversight and protection of state resources.
- Instruct the Office of General Services (to deny any request to sell the mine to a third party until *specific* criteria are met, such as posting the environmental bond and performing an EIS.
- So that New Yorkers can for the first time visualize the terms of trade, require Cargill to reveal all profit and loss data for the mine over the 53 years that Cargill has owned it, including wages paid to employees, fees paid for mineral rights purchases from landowners, royalties paid to NY State and charitable donations to local organizations.
- Prohibit the sale of certain components of the Cayuga Salt Mine, including the portion of the mine under Cayuga Lake.
- Ensure that the mine owner provides regular subsidence data to landowners near the mine.
- Approve legislation to protect communities from short- and long-term mining-related damages.
- Authorize the NYS Attorney General to monitor any course of action that's put in place, taking appropriate legal action to protect the environment and assure safe, clean air and water.

## What You Can Do

- Sign the petition to Governor Hochul at [CleanCayugaLake.org](https://CleanCayugaLake.org)
- Make a tax-deductible donation to CLEAN's fiscal sponsor, the Chris Dennis Environment Foundation, at [CleanCayugaLake.org](https://CleanCayugaLake.org) to support our campaign to protect Cayuga Lake.

## Sources

Absolute Reports. 2023. United States Road Salt Industry Market Research Report.

Terrarosa, Tom. Cargill to Offload Deicing Salt Businesses, The Deal, August 15, 2023. <https://www.thedeal.com/scoops-exclusives/cargill-to-offload-deicing-salt-businesses/#:~:text=The%20company%20is%20working%20with%20advisers%20on%20a,who%20have%20viewed%20marketing%20materials%20for%20the%20business.>

Forbes, December 16, 2020. "The Cargill-MacMillan family owns Cargill, one of America's largest private companies with revenues of \$114.6 billion." <https://www.forbes.com/profile/cargill-macmillan-1/?sh=736e9ae723b6>

Cargill announces end of salt production at Avery Island salt mine, KATC News, January 28, 2021. <https://www.katc.com/news/iberia-parish/cargill-announces-end-of-salt-production-at-avery-island-salt-mine>

"Cargill also operates a salt evaporation facility in Breaux Bridge, Louisiana, where the company is expanding capacity and increasing efficiency. Those facilities are not impacted by this announcement. Cargill also operates 22 other salt production locations

that produce, package and ship salt for road deicing, food, water softening, agricultural, industrial and packaged ice control products.”

New York State Department of Environmental Conservation Cayuga Salt Mine Permit ID 0-9999-00075. [https://www.dec.ny.gov/docs/permits\\_ej\\_operations\\_pdf/cayugasmppermit.pdf](https://www.dec.ny.gov/docs/permits_ej_operations_pdf/cayugasmppermit.pdf)

“mining activity affects... 13,307 underground acres on lands owned by Cargill Incorporated, the State of New York under Cayuga Lake and several private landowners.”

Dennis Kovtun, CBC News, July 7, 2022, This Salt Plant in Northeastern Alberta is Closing, Taking Jobs and Tax Revenue with it. <https://www.cbc.ca/news/canada/edmonton/this-salt-plant-in-northeastern-alberta-is-closing-taking-jobs-and-tax-revenue-with-it-1.6512549#:~:text=The%20Windsor%20salt%20plant%2C%20near,when%20the%20plant%20is%20shuttered.>

Winter Road Maintenance: Deicers. Cargill, 2023. <https://www.cargill.com/industrial/winter-road-maintenance/deicers>

The roadbed of Route 20A was fractured on the east side of the collapsed bridge over Beards Creek. This view is above the room 2-Yard South collapse area looking west, toward the former Hamilton farm house (subsequently purchased by ANSI).



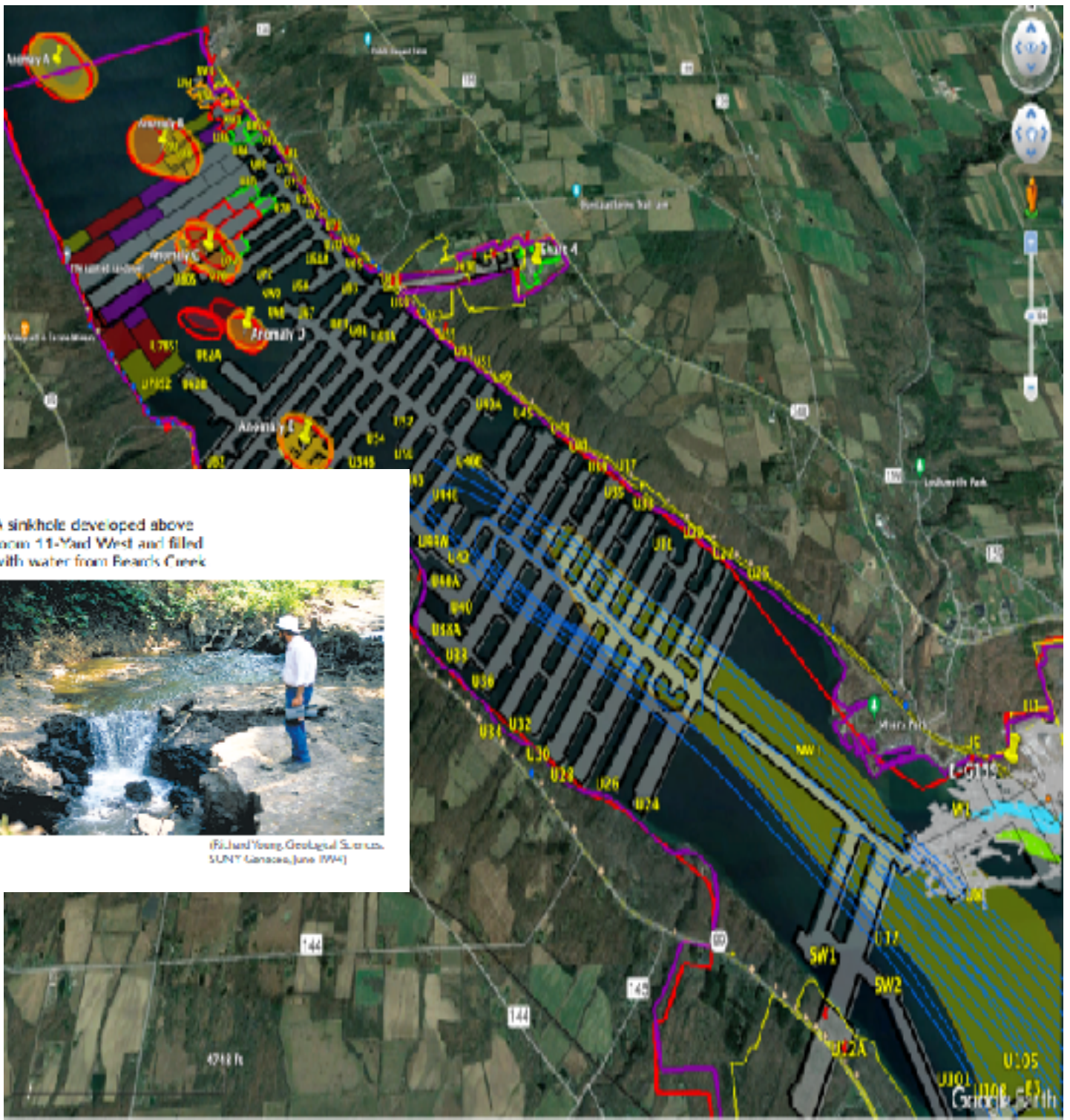
(Richard Young, Geological Sciences, SUNY Geneseo, April 12, 1994)



Top Salt Manufacturers and Suppliers in the USA. Thomas, 2023. <https://www.thomasnet.com/articles/top-suppliers/salt-companies-manufacturers/>

Tim Stelloh and Wilson Wong. 2 dead after roof collapses in Louisiana salt mine. December 17, 2020.

Valentino, Benjamin. 2016. Application of Insar to Salt Mine Subsidence. Cornell Master's Thesis Dissertation. <https://doi.org/10.7298/X4NP22D1>



Northern end of Cayuga Salt Mine showing 2022-2025 Mining Plan in purple, maroon, & olive and geological anomalies as red/yellow ovals, areas that cannot be safely mined under.

Subsidence from the Akzo-Retsof mine collapse in 1994.