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Updated ‘Air Toxics at School’ Database from UMass Amherst Details Pollution Risks for Students Nationwide

Interactive screening tool from the Political Economy Research Institute tracks air pollution from 15,600 industrial sites at over 130,000 US schools

AMHERST, Mass. — Researchers at the University of Massachusetts Amherst [Political Economy Research Institute](#) (PERI) today published the updated [Air Toxics at School](#) database, a web-based platform that tracks toxic air pollution affecting K–12 and higher education institutions nationwide.

The tool provides toxicity-weighted concentrations of pollutants, highlighting the health risks students and staff may face due to industrial emissions. It uses data from the U.S. Environmental Protection Agency (EPA) and the Department of Education, matching 131,325 schools with pollution from nearby large industrial sources such as factories, refineries, petroleum depots, metal mining sites and toxic waste facilities. (The data do not include pollution from mobile sources, agriculture, fracking, forest fires, or other sources, all of which can contribute substantially to air pollution near schools.)

“Our aim is to facilitate access to public information and inform discussion among parents and students, staff and teachers, school administration, regulators, companies and the broader public,” says professor [Michael Ash](#), co-director of [PERI’s Corporate Toxics Information Project](#). “This tool builds on the achievements of the right-to-know movement, engenders public participation in environmental decision-making, and helps residents translate the right-to-know into an equitable right to clean air, clean water and a livable planet.”

Users can search for any school in the U.S. by name or location to receive a detailed pollution report, listing nearby industrial facilities and the toxic chemicals they release within a 31-mile radius. The report also provides a comparative ranking of the school’s exposure to industrial pollution relative to others in the state and across the country.

For instance, in Texas, where petroleum refining and chemical facilities are major contributors to industrial air pollution, the average toxic air hazard at schools is more than twice the national average.

While Air Toxics at School serves as a screening tool rather than a full risk assessment, its goal is to enhance public awareness and engagement. The database allows users to explore facility ownership, industrial activity and chemical toxicity.

The tool relies on data from the EPA’s Toxics Release Inventory. The agency recorded air emissions of approximately 500 toxic chemicals from 15,600 major industrial facilities nationwide in 2022, the latest year for which data have been published. The EPA’s

modeling system estimates pollutant concentrations in half-mile grids around these facilities, distinguishing chemical hazards on a per-pound basis. Full information about the data composition and sources is available in the project's [technical notes](#).

Air Toxics at School builds on the legacy of the 2008 USA Today investigative project, "The Smokestack Effect: Toxic Air and America's Schools," which exposed the impact of industrial pollution on students leading to better EPA monitoring of air toxics at school.

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