Do You Live Near a Cancer Hot Spot? A New Tox Map Lets You Know

Carcinogenic air pollution is often concentrated in communities of color.

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What you don't know and can't see can cause serious harm. In certain areas of the United States, private industries have created cancer corridors, places where unsuspecting residents breathe air laced with carcinogens from nearby chemical plants and oil refineries, reveals a recent report by Pro Publica titled "Poison in the Air." The report documents how these emissions are concentrated in already disadvantaged areas.

To amass the data for the investigation, Pro Publica, a nonprofit newsroom specializing in investigative journalism, utilized software and modeling tools developed by the Environmental Protection Agency (EPA). Using data from 2014 through 2018, reporters charted the spread of harmful pollutants from chemical plants and oil refineries across the country via a so-called Tox Map.

Results from the mapping of these areas revealed how clouds of toxic air from these facilities reached communities close by, creating hot spots where residents face increased levels of cancer risk. Many people of color call these locations home. Air pollution has been shown to contribute to lung cancer deaths, for example, but these risks predominate in certain locations.

"Industries rely on having these sinks—these sacrifice zones—for polluting," observed Ana Baptista, an environmental policy professor at the New School in New York City, who spoke to Pro Publica. "That political calculus has kept in place a regulatory system that allows for the continued concentration of industry. We sacrifice these low-income, African-American, Indigenous communities for the economic benefit of the region or state or country."

However, people living elsewhere are also victimized by carcinogens unleashed by industrial manufacturers. In New Castle, Delaware, for example, ethylene oxide, a colorless, odorless gas that can lead to lymphoma and breast cancer, saturated the air over a playground at a daycare for years. The EPA classified ethylene oxide as a human carcinogen in 2016.

Many of these industrial facilities are based in Southern states known for their lax environmental regulations. Of the 20 hot spots identified as high-risk locations for carcinogenic air, one quarter were based in Texas and states in the South.

For example, areas near Greater Houston were shown to compose the third largest hot spot in the United States for air saturated with carcinogens, owing in large part to its proximity to “Cancer Alley,” an 85 mile stretch of the Mississippi River, near the Louisiana border. Many residents of areas that line riverways hosting oil refineries are unaware of the toxic emissions lurking in their backyards—that is, until health conditions associated with poisonous air begin to generate suspicion and concern.

“These fence-line communities are sacrifice zones,” commented Jane Williams, executive director of the nonprofit California Communities Against Toxics. “Before there was climate denial, there was cancer denial. We release millions of pounds of carcinogens into the air, water and food and act mystified when people start getting sick.”

Studies conducted by researchers from academic institutions, including the University of Texas School of Public Health and Texas A&M School of Public Health, as well as the Centers for Disease Control and Prevention have identified a higher incidence of acute lymphocytic leukemia, a type of progressive and aggressive cancer that targets the white blood cells and affects adults and children, among people living near the Houston Ship Channel. (Acute lymphocytic leukemia is the most common cancer occurring in children, representing almost 25% of cancer among kids.)

“The public is going to learn that the EPA allows a hell of a lot of pollution to occur that the public does not think is occurring,” Wayne Davis, an environmental scientist formerly with the EPA’s Office of Chemical and Safety Pollution Prevention, told Pro Publica.

One critic of the EPA, John Walke, an attorney who formerly worked for the Natural Resources Defense Council, a nonprofit advocacy organization, said the agency deliberately underestimates cancer hot spot risks to avoid addressing what’s called “cumulative risk,” an accumulation of cancer risks from single facilities or kinds of equipment, which can pose a severe threat to communities. By addressing each single source of air pollution in isolation, the agency ignores the combined carcinogenic effect of many pollution sources in the same area.

This menace has loomed for years in different areas. In 1998, an EPA inquiry found elevated levels of dioxins—highly toxic organic carcinogens—in the blood of people living in Mossville, Louisiana.

The new mapping project provides evidence that such cancer hot spots are far more common than previously known. Matthew Tejada, the director of the EPA’s Office of Environmental Justice, told Pro Publica that the problem necessitates “working back through 50 years of environmental regulation in the United States and unpacking and untying a whole series of knots.

“But there’s now a level of commitment to actually tangling with these issues in a really serious, substantive way,” he added.

To find a cancer hot spot near you—and for detailed information about it if you find one—simply type in your location or ZIP code into the Pro Publica Tox Map. You can access the map here.

For more information on cancer caused by pollution, read “Living Near An Oil Refinery May Be a

Cancer Risk Factor.”