

Today, Southwestern Pennsylvania's largest city—Pittsburgh—is known as “Steel City” because it exploded onto the map as the city whose steel empire built America. Today, the legacy of the city's industrial age is reflected in the city's many metal bridges and skyscrapers, as well as in the environmental scars—both physical and symbolic—left by the city's so-called “Golden Age.”

Pittsburgh has a long history of poor air quality. During the city's industrial boom, thick black smog choked its bustling streets. Today, although many of its factories and steel mills are disused, decommissioned, or demolished, the city's air is far from clean.

In 2020, the American Lung Association ranked Pittsburgh the ninth worst city in America in particle air pollution. According to Debra Smit, Director of Communications for the Breathe Project, particulate matter—or matter made up of microscopic particles—can cause respiratory disease and cancer.

“I suffer from asthma. I have allergies. On bad air days, I can't go outside,” she said. “Those of us who get sick because we can smell and feel the air in our lungs understand that this really is a problem.”

A 2018 study published by Environmental Health News shows that 22 percent of Allegheny County children live with asthma. This number is staggering, especially compared to the national average childhood asthma rate of just 8 percent.

As noted above, it isn't just Pittsburgh that faces air quality problems. The whole of Allegheny County is threatened by air pollution. Dirty air isn't limited by city or county limits.

“Pollution doesn't know any boundaries,” Smit said. “The airshed is the airshed.”

According to her, the risk of asthma is three times higher for children in the nearby Mon Valley, and local high school football teams can't practice on bad air days. She attributed these problems in part to local air pollution sources, like the United States Steel plant in Braddock. Facilities like these, she said, pollute above the limits established in the Clean Air Act.

She also blames the area's geography for its air quality problems. The same mountains whose resource richness drew heavy industry to the region in the first place act like a trap for bad air.

“It's like putting a jar over the city,” she said.

The air quality situation seems dire.

Fortunately, the Breathe Project is working to secure a clean air future for Allegheny County and beyond.

According to Smit, the organization focuses mostly on informing the local citizenry about the issues in their communities and what they can do to help.

“We try to educate people, we hire researchers to do scientific studies, and we work with a lot of media that writes stories about the problem, and we also go into the [affected] communities and help the residents with air filters, and teach them how to keep bad air out of their house,” she said. “It’s largely education.”

Additionally, the Breathe Project encourages people to take action and pressure their local governments to take action too. It also encourages people to innovate and think about creating a better world.

“It’s about imagining a clean energy future,” Smit said.

Unfortunately, Pittsburgh’s environmental problems aren’t limited to air pollution. Throughout Pittsburgh’s environmentally-troubled history, land pollution has also plagued its residents.

“There’s a physical legacy the area’s dealing with,” said Chris Gassman, Senior Associate Director of the University of Pittsburgh Center for Sustainable Business.

The Pitt Center for Sustainable Business is an on-campus organization that works with outside companies to promote sustainable business practices and work towards making the future brighter and the world a better place.

He described the variety of land pollution problems faced by the region, including lasting scars left by generations of unsustainable timber logging for construction and fuel, and mining for coal and geologic gas, among other things.

“All of the land around here is in some way contaminated,” he said. “That’s just from being around an industrial place for years and years.”

According to Gassmann, local soil tends to be polluted with concerning amounts of lead – amounts that the Environmental Protection Agency considers hazardous. He tried to buy a house before a soil lead test revealed concerning levels of the harmful metal in the dirt – levels that would be harmful to children or pets playing in the yard. He advises any prospective homeowners to test their soil, too.

And the problems don't end there.

“What about the thousands of orphaned and abandoned oil and gas wells that are still just leaching or belching methane gas into the atmosphere?” Gassmann asked.

These wells, he said, were simply abandoned by drilling companies that no longer considered them profitable.

“The community is left to deal with these wells that were never capped,” he said. “They were supposed to be—that was part of the obligation—but they never were.”

Most people, Gassmann said, don't even know about these abandoned wells, even though they're negatively affecting the environment and people's health.

“Some of them are under schools or under backyards,” he said.

Gassmann believes that the problem isn't just physical, however. There's also what he called a “mental legacy” at work—a symbolic legacy, not measurable by air quality monitors or lead tests.

“A lot of people,” he said, “when they think of Pittsburgh, they think of it as the rust belt city.”

The city's industrial legacy also means businesses seeking industrial opportunities are drawn to it, he said. When people think of heavy industry, they think of Pittsburgh. This means that many heavy industry businesses are attracted to Pittsburgh.

“There's nothing evil or wrong about them,” he said. “They're just like any other businesses. The processes have become a lot cleaner, they've become a lot safer, but each of these industrial industries is still a fairly dirty thing.”

According to Gassmann, this perception of Pittsburgh is dangerous. It leads to the normalization of environmental issues.

He said that local car dealerships try to sell customers protective car coatings to shield their vehicles from diluted acid rain, which is apparently a relatively regular local phenomenon. Previously mentioned issues, like leaded soil and uncapped gas wells, also usually go either unknown or uncared about.

In a city as eco-unfriendly as Pittsburgh has been for its entire existence, people don't seem to care much about environmental threats.

Gassmann also claims that the issue is political. He mentioned a recent change in local leadership. The previous administration, which took strides toward eco-friendliness, was replaced by one that cared much less about the environment.

“What often happens in those times [when a new administration takes over] is there’s a demarcation - a line in the sand - where they want to distinguish themselves from the last administration,” he said. “No matter how successful those initiatives were, everyone wants to put their own stamp on it. Stuff that had been in motion is turning over and stopping.”

Debra Smit echoed Gassmann’s government-skeptical sentiment. She said the county government isn’t working hard enough to curb environmental problems. Apparently, representatives of the Breathe Project attend local air quality department meetings and testify that not enough is being done, but to no avail.

“They sit there and listen and then they just do nothing,” she said. “The current county executive did nothing but bring in more industry.”

Breathe Project representatives also appealed to Pennsylvania Department of Environmental Protection officials in Harrisburg.

“They aren’t doing anything either,” said Smit.

She urges citizens to attend environmental events, such as those hosted by the Breathe Project, to broaden their understanding of current issues, and to also attend town halls and participate in public events like elections to ensure that community leaders are held accountable, and that people who are elected are people who care.

Clearly, there are many aspects to this problem. Thankfully, there are just as many solutions, and plenty of organizations working to secure a better future for the area and the world.

One such organization is a startup called Airviz, which is working to revolutionize air quality monitoring. The company’s devices are used to measure levels of atmospheric gasses, particles, and other potentially harmful substances.

Airviz’s CEO Ian Magazine said that the organization is in “stealth mode,” meaning that it is not yet ready to share its new initiatives and projects with the public. While unfortunate that more information is not available, it bodes well for the future, as presumably the startup is working on a significant project.

Airviz is just one significant startup. Other sustainability-inclined companies and non-profit organizations have their roots in Pittsburgh too.

Women for a Healthy Environment, for example, works to learn more about environmental issues and share that knowledge with the community, according to the organization's website. Its mission is also to empower people to learn more about these issues on their own and take up the mantle of environmental advocacy for themselves.

According to Inside Climate News, a startup called Ecotone Renewables, is leading the charge against food waste, and another called Roto Software has developed a program that informs community members when extra food is available for pickup rather than throwing it away.

Overall, there are many Pittsburgh-based organizations—from startups to non-profits—that are working to make not just the city, not just the county, but the world a better place.

In contrast to the statements of Debra Smit and Chris Gassmann, local governments are working to make a difference.

The city government released the Climate Action Plan 3.0, which covers all the issues the area faces and sets goals to fix them, or at least lessen them.

One such initiative is the goal to plant 780,000 trees by 2030. This would increase the city's total tree cover from an already sizable 40 percent to 60 percent, and would make a reasonable dent in local atmospheric carbon levels.

The University of Pittsburgh, the city's largest employer, has developed the Pitt Sustainability Plan and Pitt Climate Action Plan. Both of these are aimed at reducing the university's environmental impact and working toward sustainable practices both on the university's campuses and in the wider world.

Fortunately, initiatives like Pitt's are taking off.

According to Aurora Sharrard, Executive Director of Sustainability at the University of Pittsburgh, engagement and activity with environmental issues among students has risen dramatically since the institution's first steps toward sustainability in 1990.

University-organized environmental protection initiatives have succeeded in the past. Sharrard cited the example of Clutter for a Cause, which prevented 44,443 pounds of materials from ending up in landfills during dormitory move out processes from 2018 to 2022.

Additionally, Pitt publishes so-called “Pitt Green Guides,” which serve as reminders to members of the Pitt community of what the university itself is doing to help the earth and what individuals can do, such as recycling and limiting use of fossil fuels and electricity.

The aforementioned Pitt Climate Action Plan serves a similar purpose. It provides students in particular with guidelines on how to make environmentally-friendly choices, such as biking, walking, or commuting via public transport instead of driving personal motor vehicles,

All of Pitt’s environmental plans and initiatives aim to be reflective of Pitt’s eco-friendly “Blue and gold make green” policy.

The problem is huge, even huge enough as to seem insurmountable. Local governments are allegedly not doing their part, nor are the companies that are primarily responsible for the environmental issues the world faces today.

Fortunately, there are solutions. It seems extraordinarily hopeful that organizations like the Breathe Project, along with other organizations including small startups like Airviz and huge organizations like the University of Pittsburgh are taking action.

It is not just the duty of these large groups to do this, however. It is the responsibility of every single member of society to do their part to help the earth. It is up to everyone. Although the large corporations are mostly responsible for the problems that plague the environment, it is not just up to them, but up to ordinary citizens as well, to make the world a better place. For Pittsburghers, that begins here in Pittsburgh.