

Interview: Trump defunded his iconic acid rain study – what comes next?



We spoke to Dr. Gene Likens, co-discoverer of acid rain, about the threatened future of acid rain monitoring in the United States.

By Jed Thomas

For much of the 20th century, acid rain was one of the most visible symbols of environmental decline in the United States, scarring forests and sterilising lakes. Now, decades after that crisis was brought under control, the threat could be reemerging.

At the heart of this story is Dr. Gene Likens, the legendary ecologist who co-discovered acid rain in North America. Likens' groundbreaking work, launched in 1963 at the Hubbard Brook Experimental Forest in New Hampshire, was foundational in linking fossil fuel combustion to the increasing acidity of rainfall.

His long-term studies helped inspire the Clean Air Act Amendments of 1990, a rare bipartisan environmental success.

But in 2025, Likens' work faces a new threat: lack of funding.

In March, Likens confirmed that the Trump administration had cut federal funding for his long-running rainwater acidity monitoring program, one of the longest continuous datasets of its kind in the world.

Why acid rain could make a comeback in the United States

Rainfall ten times more acidic than normal was once common in parts of the U.S. northeast. Forests died. Lakes went silent. Whole ecosystems collapsed under the chemical assault.

The success of the Clean Air Act Amendments, signed into law by President George H.W. Bush, dramatically reduced these emissions. Rainwater pH returned toward normal.

But the recovery, particularly in forests and soils, has been slow and incomplete.

Even now, many lakes in the Adirondacks and White Mountains are missing key species. The calcium that acid rain stripped from their ecosystems hasn't fully returned. That fragility, experts warn, means these regions are more vulnerable than ever.

Trump's EPA Administrator Lee Zeldin has targeted dozens of air quality rules for rollback, including those that limit sulphur dioxide (SO₂) and nitrogen oxides (NO_x), the two primary culprits behind acid rain.

In combination with rising emissions from coal and oil, the risk of recurrence is growing. "Sulfur emissions in the US just increased for the first time in a long time," Likens told *EnvirotechOnline*.

The costs of cutting costs

Gene Likens' study at Hubbard Brook has tracked rainwater acidity continuously since 1976. That record is not just an archive, it's a warning system.

With its defunding, one of the country's most important environmental barometers has gone dark.

When speaking to *EnvirotechOnline*, Likens was blunt about the risks: "If the monitoring is disrupted or discontinued, we won't know what is changing." Already, other atmospheric deposition networks are facing similar threats as funding from NOAA and the EPA is withdrawn or frozen.

“Currently, the monitoring infrastructure for precipitation chemistry in the U.S. is well situated to detect any major changes,” Likens told us. “However, it is highly vulnerable to be shut down by the current administration.”

Without long-term data, trend detection becomes nearly impossible. Early warning signs, like subtle shifts in soil pH, increased aluminium in stream water, or changes in aquatic biodiversity, might be missed entirely, allowing polluters to get away with it.

What's next?

Environmental monitoring professionals are now at a crossroads.

The return of acid rain won't be announced with a headline. It will show up as gradual chemical changes in lakes, forests, and skies.

And without active surveillance, those changes will go unnoticed until damage is already being done.

So, what can be monitoring professionals, researchers and other interested parties do?

Firstly, they can attempt to keep the monitoring infrastructure online. Critical systems, like rainfall chemistry analysis, ambient air monitoring, and soil sampling, will need defending. The issue, as always, is getting your hands on stable funding: “New funding would need to be found,” warns Dr. Likens.

Secondly, focussing attention on areas that have been most degraded by acid rain and so are most vulnerable to further degradation. For the most part, that's the Adirondacks in New York state and the White Mountains in New Hampshire. Importantly, Dr. Likens suggest that any indicative “change in water quality”, like a drop in pH or a spike in aluminium, in these regions can serve as useful early signs of renewed acidification.

This brings us to our third priority: try to keep track of other cross-pollutant indicators, like agricultural ammonia and co-emitted mercury. Dr. Likens pointed out that “This is already being done”, so researchers with a stake in these topics may want to direct their energies towards supporting these efforts.