

Philadelphia Inquirer

Fracking in Pennsylvania used toxic ‘forever chemicals’ as Pa. officials maintain willful ignorance | Editorial

The Inquirer's editorial board identified the use of PFAS in eight fracking wells. Only the Pennsylvania Department of Environmental Protection can shed light on the full scope.



The drill platform at the Cabot Oil & Gas Corp Flower drill site, outside of Dimock, Pa. An analysis by The Inquirer's editorial board of 280 chemicals used in fracking found that all but 48 had been assigned a safety warning. [Read more](#) MICHAEL BRYANT / Staff Photographer

by [The Editorial Board](#)

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When [Physicians for Social Responsibility published a bombshell report](#) last month about the use of toxic, so-called forever chemicals in fracking, many questions remained for Pennsylvania and the health risks for our state.

Through Freedom of Information Act requests, the health professionals' environmental advocacy group found that in 2011, the Environmental Protection Agency authorized the use of a group of chemicals known as PFAS in fracking. That's despite warnings from agency scientists that these chemicals pose health hazards — including the risk of cancer, liver problems, immune disorders, and adverse effects on fetuses and breastfeeding babies. The physicians group identified the use of the chemicals in at least 1,200 wells in six states, not including Pennsylvania.

» **[READ MORE: Fracking's use of EPA-approved toxic chemicals shows again that regulators prioritize industry over health | Editorial](#)**

An analysis of public data by this editorial board identified the use of one of these “forever chemicals” in at least eight Pennsylvania fracking wells between 2012 and 2014. Our findings should raise concerns for all Pennsylvanians.

What we found

Since 2012, [Pennsylvania law](#) and the [Department of Environmental Protection](#) require well operators to disclose chemicals used in the fracking process to the [FracFocus database](#).

Using information from the database, we matched 280 chemicals to the [PubChem library](#) of the [National Center for Biotechnology Information](#); the library includes safety information about each substance, including health and environmental warnings. A chemical can be assigned multiple warnings, and many are. This board identified 28 chemicals with an “acute toxicity” warning — the most serious safety label — and 106 with a health warning, an environmental warning, or both. Of the 280 chemicals on the list, 48 had no warning.

The “forever chemical” identified by the board is polytetrafluoroethylene, commonly known as Teflon — which [PubChem reports](#) is “reasonably anticipated to be a human carcinogen.” According to [David Andrews](#), a chemist and senior scientist at the Environmental Working Group, while polytetrafluoroethylene is a relatively stable compound and direct exposure is of low concern, “the real issue” is it “often has contaminants and byproducts in it.”

The compound could break down into fragments that, according to Andrews, are “incredibly persistent” and “known to cause toxic effects.” Biologist Maricel V. Maffini adds that this persistence “increases the likelihood of exposure and toxicity.”

[State environmental officials have been testing water](#) for perfluoroalkyl and polyfluoroalkyl substances, but not with fracking in mind when targeting water sources. Instead, the state tested water sources within half a mile of military bases, fire training sites, landfills, and manufacturing facilities because they are known sources of contamination.

Four of the wells in which polytetrafluoroethylene has been used are in Washington County, where state officials did not [test a single water source](#).

Steps needed

Now that the use of these chemicals in fracking is known, the commonwealth should test water near wells and waste ponds where “forever chemicals” were used.

Asked to comment on polytetrafluoroethylene being identified in at least eight wells, a Department of Environmental Protection spokesperson replied by email that the agency “is dedicated to ensuring that Pennsylvanians have safe drinking water, and in cases of water supply contamination, the supply must be replaced with water that meets or exceeds safe drinking water standards. Further, DEP understands that PFAS, an emerging environmental issue, is a serious concern that we are working to address.”

PFAS is an abbreviation for [perfluoroalkyl and polyfluoroalkyl substances](#), chemicals that were developed to prevent staining and corrosion; they are often contained in nonstick cookware and food packaging.

Other hazardous materials may have been used in Pennsylvania fracking. State officials maintain a list of about [430 chemicals protected from disclosure as trade secrets](#) and say they can identify each. Asked whether the state would audit the list for “forever chemicals” — not disclosing the name of the

substance or other details — a spokesperson wrote that such review is “possible” but time-consuming as “staff will need to review approximately 90 individual paper submissions” to identify the chemicals.

» **READ MORE:** [PFAS found in 72% of drinking-water samples in Philly’s suburbs](#)

Compared with Pennsylvania’s important efforts to test water for those substances, reviewing 90 paper submissions for critical information about potential risk seems a minor cost.

Why it matters

The use of a chemical in fracking doesn’t necessarily mean that chemical reached water sources. But [fracking waste water](#) has spilled, and [chemicals from fracking fluids have previously been found in Pennsylvania’s water](#).

Even if fracking fluids pollute water, the potential harm to people or the environment depends on the quantity of chemicals and their interaction with water. But the mere existence of a chemical in fracking fluid creates the risk of a harmful spill. Between [Attorney General Josh Shapiro’s report chastising state environmental officials](#) for failing to regulate fracking, and [industry’s rejection of the notion that fracking could contaminate water](#), Pennsylvanians can’t have much confidence that if something goes wrong it will be addressed promptly, thoroughly, and transparently.

There are tangible reasons to be concerned. A [cluster of rare cancer in children](#) prompted Gov. Tom Wolf to award [\\$2.5 million toward studying](#) the relationship of fracking and health. While waiting for the results — expected by the end of 2022 — a sensible step is for the Department of Environmental Protection to review the trade secret records to verify the extent to which toxic substances were injected into the commonwealth’s soil.

The only way to gain a full picture of those substances in Pennsylvania, and to prevent resulting harm, is for state environmental officials to answer: Are there “forever chemicals” on the list of substances used in fracking and registered as a trade secret? If more of those chemicals were used, and that information sat with environmental officials without disclosure or proper review, that would be a miscarriage of justice — and a violation of [Pennsylvanians’ constitutional right](#) to “pure water.”

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