

Drinking Water Contamination from the Eastern OH Train Crash

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News about the [environmental disaster](#) unfolding in eastern Ohio due to the recent train derailment continues to trickle out with each passing day. The latest: utilities in parts of Ohio, Kentucky, and Indiana have stepped up their monitoring to watch for contaminants in their water supplies and some have even proactively switched over to [alternative](#) drinking water sources as a result of the chemical release in the Ohio River Valley following the accident.

The incident in East Palestine has brought new awareness about the [very real dangers](#) of vinyl chloride, which is used in manufacturing polyvinyl chloride (PVC) pipes. The Norfolk Southern train that [derailed on February 3, 2023](#) was carrying approximately 20,000 gallons of this chemical, which is classified as a [human carcinogen](#), along with several other hazardous substances in 20 rail cars. A decision was made to vent the chemicals to prevent five of the train cars carrying vinyl chloride from potentially exploding.

[Photos](#) and [videos](#) from the site show a large black cloud from the resulting fire. As concerning as the immediate fire was, a number of environmental and public health groups have noted concerns with the images that arose following the fire. For example, [this video posted to USA Today](#), which [notes](#):

“Videos appear to show shimmering chemical contamination on creeks near the site of the East Palestine, Ohio, train derailment and chemical leak.

“Experts tell USA TODAY the rainbow-colored material is likely vinyl chloride, a heavier-than-water chemical that both leaked and burned following the Feb. 3 derailment of a Norfolk Southern freight train. The videos mark yet another example of heightened health and environmental concerns in the wake of the disaster.

“Authorities say about 3,500 small fish were killed in the creeks surrounding the derailment site shortly after the crash, leak and burn, but they have not reported significant subsequent deaths. Meanwhile, a new federal lawsuit claims fish and wild animals are dying as far as 20 miles away from the site of the derailment.”

Last month, in a timeline coincidence, the [US Environmental Protection Agency tentatively](#) denied a petition from the Center for Biological Diversity to regulate an end product from vinyl chloride, PVC, as “hazardous waste” under the Resource Conservation and Recovery Act. Public comments on that pending decision closed just recently, but we can imagine the impassioned pleas that would be flooding the EPA’s inbox if the comment period were still open. We hope the EPA will take into serious consideration this latest incident to understand the cradle to grave dangers of PVC and how it is produced before finding its way into plastics like water pipes.

Vinyl chloride is one of the building blocks of PVC, and we know from [research](#) that's been led by Purdue University Professor Andrew J. Whelton that the toxic stew that comprises PVC pipes can seep into the ground after the pipes are damaged during wildfires. Vinyl chloride itself is a danger. The East Palestine Fire Department had to throw away some of their gear because it was [exposed](#) to toxic chemicals during their initial response to the train derailment.

Unfortunately, the health risk to residents living in the immediate vicinity of the crash and even those miles away may not surface until later. In addition to the fish killed in Ohio, residents have reported their pets and livestock [exhibiting](#) signs of illness. [site](#).

One of the biggest questions now is how monitoring will be done in the coming months to ensure the safety of drinking water. The US EPA just exercised its authority under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) to declare the area a "Superfund" site, which requires all measures to clean up the site and ensure the ["long-term health of the community"](#) in what could be an issue the region deals with for years to come.

We will continue to update and provide additional information on this accident as it relates to the world of safe drinking water, but in the meantime here is some additional reading on the dangers of vinyl chloride and the "myth of safe plastics":

How Vinyl Chloride, The Chemical In The Ohio Train Derailment And Used To Make PVC Plastics, Can Damage Your Liver ([The Conversation](#))

The Myth Of Safe Plastics Persists, Despite Risk Of Disasters Like East Palestine ([The Intercept](#))

'Environmental Disaster' Worries Remain ([The Chronicle-Tribune](#))