



October 27, 2023

Dear Legislator,

I would like to start by expressing my gratitude for considering House Bill 170 and the issue of extending protective buffers from the homes and water supplies of Pennsylvanians from oil and gas extraction operations. My name is Matt Kelso, and I am the Manager of Data and Technology at FracTracker Alliance, an environmental nonprofit that studies the impacts of fracking and related industries. I reside in Plum Borough in Allegheny County, a suburban area with hundreds of conventional wells along with unconventional drilling, gas storage wells, and recently wastewater injection wells. My own water well has been fouled by hydrocarbons, and it isn't even clear what the source of this contamination is.

I have significant concerns about the oil and gas industry's ability to prevent the migration of harmful gasses and fluids associated with the extraction process. Allowing this scenario to unfold in close proximity to homes exposes Pennsylvanians to unnecessary risk. FracTracker Alliance believes that this risk can and should be mitigated by enforcing a strict protective buffer between water supplies and homes and oil and gas operations. The passage of House Bill 170 will go a long way towards making our state a safer place to live by extending these protections to 2,500 feet.

Petroleum liquids and gasses move around underground to a considerable degree. This statement is not remotely controversial—in fact, the extraction industry depends on it to be true. In a conventional formation, high bottom hole pressure moves these liquids and gasses to the surface. For unconventional drilling, the rock is blasted under pressure in order to free the hydrocarbons from a larger volume of rock. For waste disposal injection wells, fluids are injected into one spot under pressure with the expectation that they will move to other pore space within the target formation, allowing room for the next round of injection. For enhanced oil recovery wells, fluids or gasses are injected into a producing formation with the hopes that an appreciable quantity of oil will be pushed toward a production well. Indeed, because oil and gas serves no real purpose *in situ*, it could be argued without much hyperbole that the movement of gasses and liquids is fundamental to the oil and gas extraction industry.

In this context, we can see that it is not particularly surprising when these substances migrate to places where they can be harmful to Pennsylvanians, and there are plenty of examples of this taking place. For example, records from the Pennsylvania Department of Environmental Protection (DEP) show that there have been 4,552 complaints from residents living near oil and gas operations about adversely impacted water supplies from this type of activity. Of these, 397 cases have been determined by DEP to have caused such an impact. Most frequently, this



determination is based on the time and distance of the impact, with a 2,500 foot distance of “presumed liability” baked into the law as a part of Act 13 of 2012.

These known impacts to aquifers are reason enough to enact a protective buffer from homes and water supplies, and yet we can expect additional impacts in the coming decades. Aquifers in producing areas are protected with layers of steel and concrete, both of which are subject to failure over the time, particularly given the highly pressurized and saline conditions of oil and gas wells. Some forms of contamination may not be noticed right away, especially if the changes in water chemistry is gradual.

There are also other documented cases of migration beyond the fouling of Pennsylvania’s groundwater sources. In 2011, for example, a house in Bradford Township, McKean County, exploded. Investigators think that nearby fracking repressurized unknown abandoned wells, filling his house with a dangerous level of methane. In 2019, the casing for the Shaw 1G Well, next to Beaver Run Reservoir in Westmoreland County failed, repressurizing wells more than a mile away in multiple directions. Last year, the fracking of an unconventional well in New Freeport, Greene County communicated with an abandoned well and impacted the water supply of multiple homes.

In 2022, DEP issued over 7,900 violations to the oil and gas industry, many of which were very serious in nature. While it won’t solve all of these documented problems, it’s clear that extending the protective buffer to 2,500 feet— matching the presumed liability distance outlined in Act 13 of 2012 — will help to protect millions of Pennsylvanians who live in oil and gas producing portions of the state.

Sincerely,

A handwritten signature in blue ink, appearing to read "MK", is written below the word "Sincerely,".

Matthew Kelso
Manager of Data and Technology
FracTracker Alliance
Resident of Plum Borough, Allegheny County