

**With Foreverywhere Chemicals, Humanity Is Going Nowhere Fast**  
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Ever wonder what's in your water? I mean, it looks fine, smells OK, and everybody else drinks it... all good, no? Well, maybe not. You should probably get to know the world of PFAS toxins, hereafter referred to as the Foreverywheres, synthetic molecules of fluorinated carbon strung out in chains. The Foreverywheres have essentially blanketed our planet and will persist for thousands of years in the environment - strong chemical bonds that eat up a lot of energy in the making and require again massive energy inputs for the breaking. We humans created these compounds, and it is we who release them all over the planet, but the laboratory that is everyday nature did not evolve to dis-assemble these toxins. Tightly managed, constant laboratory conditions simply do not exist in the chaotic, shifting randomness of our dynamic landscapes, micro-habitats, waterways and jetstreams.

We are stuck with the Foreverywheres; they are profitable to industry and necessary to us, or so we've been told and sold. Regulation in a country with no Precautionary Principle is decades behind and frankly beset with conflict of interest. Corporations create new Foreverywheres with regularity and weave them into everyday products we know so well: cookware, dental floss, textiles. Some applications (waterproofing) are clearly justifiable or necessary (common medications), but do we not draw the line when these toxins show up in the maple syrup, in beverages and milk, in honey samples, fish, and vegetables? Several towns in Vermont (Craftsbury, Dover, Mount Holly) now face contaminated water issues in school buildings and child care facilities; isn't that enough? These are kids!

As dramatized in the 2019 film, Dark Waters, the ethic of greed over employee health and welfare at the DuPont chemical plant is a sad betrayal for the community of Parkersburg, WV. Teflon for all, a product that will change your life! Seventy thousand people around that factory provided years of medical data on what these compounds do in the human body, one of the largest case studies ever (beginning in 2005). Cancer is the big one, but hormonal (endocrine) impacts and genetic / developmental disruptions are equally disturbing. Lives were definitely changed, true to the claim.

I have PFAS in my well water, and have yet to determine the sources. I did, however, manage to determine the cost: almost \$1200 for lab testing and professional analysis, plus a couple hundred more now for filters until, oh right... until forever. With no documented contamination plumes nearby, I figured that testing my private well water would only happen if I took it upon myself. Be the scientist! I live in town but draw from a private well, like many Vermonters. Out of curiosity I also tested a separate sample of water from the same spigot but with a tablespoon of pesticide added. Want to know the brand name? You can email me; we can talk. Or send a subpoena. Or you can just ask the Agency of Agriculture about PFAS Foreverywheres in the million pounds of pesticide applied every year in Vermont. Ask 'em, go ahead, but sad to say, they too are not privy to details on PFAS ingredients in pesticides, per arrangements to protect corporate secrets.

If I seem to have some kind of perfluro-pesticide-foreverywhere-fascination here, I'll attribute that partly to the fact that I've asked for years about Foreverywheres in our planetary pesticide portfolio. No one will answer the question; rarely have I seen people avoid a topic so strenuously as when I bring up the "PFAS in pesticides" issue. You can put questions in writing to the utility companies, state agencies, federal agencies, but you'll receive only

meaningless boilerplate junk in return. I do wonder: is that silence purchased or enforced or both? Additionally, as insects and plants develop resistance to our constant stream of toxins, we create even more potent formulations. What could go wrong? No seriously, and now I have Foreverywhere hazards in the mix too? Anyone? Hello, can you hear me? Did you hear Rachel Carson?

So here are my results: even with a dilution of roughly 12 times, this little addition of synthetic product upped my level of Perfluorobutanoic acid by a factor of eight. PFBA, hmmm, interesting... that's included in the PFAS family, and it's really not so healthy. I do have Foreverywheres in my water, even without the pesticide, but wow that little spoonful really spiked my numbers upward. Let's think here: what better way to spread Foreverywheres all over the state than to hose down crops, unwanted bugs, utility corridors, and weeds in the driveway with dozens of pesticides? Let the wind blow them and water flow them to new, far-flung destinations. How is it a good thing that just any old fool can snag a jug of this poison at local hardware stores and soak their neighborhood with it? We have more regulation of high school mascots in Vermont than of Foreverywhere chemicals.

So be it; the legislature will take another ten years to figure out what Foreverywhere means and how to contact the EPA. I haven't gotten a response from EPA yet, so I get it; I'm sympathetic. In the meantime, if you want to take even the smallest step to protect yourself, put on Dark Waters, grab some popcorn (but not from a microwave bag), sit on a non-synthetic surface like maybe the hardwood floor, grab a beverage (hmm, gonna have to roll the dice on that, friend), and watch the story out of West Virginia. Then round up all your pesticide products (so subtle) and figure out whether to bring them to the Agency of Agriculture or return them to the manufacturer. Either way, you pay for that decision, because once the product is sold, all disposal

cost falls onto us, we the taxpayers. Manufacturers of Foreverywheres and pesticide companies pay nothing toward waste management, for picking up the empties; why support their profit margin, why send them another dime?

Foreverywhere chemicals are in your daily world, but hopefully you can break the toxicity chain before the medical bills kick in, because corporations usually avoid the front end of that mess, too. Carry on, and keep your chin up; you're a citizen scientist now! And your power boils down to a simple sense of urgency. Feel it and share that because sixty years have gone by, and we still need to smarten up. Whatever action you choose to take, get going, engage the neighbors! Your message needs to be everywhere all the time, forceful and true, literally foreverywhere just like PFAS itself.

You are most definitely not alone on this journey, not ever and forever.