Testimony for House Committee on Natural Resources, Fish, and Wildlife

PFAS Information Day

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About the VT PFAS/Military Poisons Coalition:

I want to thank the House Committee on Natural Resources, Fish, and Wildlife for inviting the Vermont PFAS/Military Poisons Coalition (www.militarypoisons.org) to testify today at your PFAS Information Session. Our statewide Coalition, which is supported by the Women's International League for Peace and Freedom (WILPF) and is made up of volunteer environmental activists, has been working for over two years to educate the public about PFAS, to advocate for more laws to regulate PFAS contamination in our state, and to protect living beings and the environment. Because PFAS is in so many products–as well as in our water, air, and soil–we have expanded our focus to include a range of contaminants that also contain PFAS, including pesticides and herbicides, biosludge and compost, and landfills and leachates. How all of these toxins interact together and with living beings must be considered in entirety. We are all connected.

Our Coalition has purposefully placed an emphasis on PFAS use in the military since the Department of Defense is one of the big contributors to PFAS contamination both nationally and internationally and is not easily held accountable for the consequences of its actions on service members or individuals living in or around military sites. Currently, there are 703 DOD military sites with known or suspected PFAS contamination. It is estimated that the DoD will have to spend more than $2.1 billion to clean up PFAS contamination at its military sites.

PFAS Dangers Known for Years:

PFAS is currently one of the hottest topics in the news. Ironically, the dangers of PFAS have been known by both industry and the military for over 50 years. The Environmental Working Group (www.ewg.org) has recorded a timeline of what both the military and industry knew about the dangers of PFAS. As far back as the 1970s, studies conducted by the Department of Defense showed that the firefighting foam used on military bases and ships, known as AFFF, contained PFAS and was toxic. As far back as the 1960s, the FDA conducted animal studies that showed the chemicals caused harm even months after

exposure ended, and industry studies showed that PFAS could migrate from paper and paperboard food packaging into food. By the 1980s, studies showed PFAS chemicals could pose health risks under a range of circumstances, but the agency continued to approve expanded uses of the chemicals, in addition to new types of PFAS.

PFAS is now a class of more than 9,000+ man-made chemicals, known as "forever chemicals." It is criminal to realize that the past studies done by the FDA, DoD, and industry are just coming to light. And many states, including Vermont, are now conducting their own studies which are happening too slowly and with too few samples, and are scheduled to take far too long before any real or necessary steps will be taken. Soon it will be too late and too expensive (to taxpayers) to remediate our soil, air, and water. Action needs to be taken NOW.

The Situation in Vermont:

According to our research (https://www.militarypoisons.org/vermont-military) and the PFAS Contamination Site Tracker (https://docs.google.com/spreadsheets/d/10y4u1KG6gegnw3zoTUTbXxQiEqitU1ufPlGvGiETtcg/edit#gid=1603040341), Vermont has 65 known PFAS contaminated sites. This is not a complete list, nor is the research on some of these sites comprehensive.

- Two Superfund Sites
- Seven Military Sites
- Thirty-six landfills of which only Coventry is still in operation
- Five Wastewater Treatment Plants
- Thirteen Industry Sites (all sites are probably not known yet)
- One Fire Department site
- One Airport site

Soil Studies in Vermont:

In 2017- 2018, Dr. Raju Badireddy at UVM conducted a study for the Vermont Department of Environmental Conservation (https://anrweb.vt.gov/PubDocs/DEC/PFOA/Soil-Background/PFAS-Background-Vermont-Shallow-Soils-03-24-19.pdf) Soil samples were collected from 66 Vermont locations near no known sources of PFAS – e.g., town greens and state parks. PFAS were detected in every sample. The widespread detection of PFAS in VT soils has important implications. PFAS detection, even at low levels in VT soils, implies that air transport distributes PFAS throughout the environment. The saying "what goes up, must come down" is especially true for PFAS since current data indicate that these compounds do not degrade. Reliable models for predicting PFAS leaching from soil are lacking at present, but there appears to be a tendency for long-chain PFAS to stick to soil, making it a long-term reservoir for potential groundwater contamination. Based on a simple mass balance, a concentration of 1 part per billion (ppb)

in soil (equal to sum of the median levels of PFOA and PFOS found in VT soils) is sufficient to supply a concentration of 20 parts per trillion (ppt) to an equivalent depth of groundwater 75 times. (https://www.sanbornhead.com/pfas-background-concentration-in-vermont-soils/)

Testing near 2 Vermont Military Sites and 1 New York Military Site:
Camp Johnson: The Vermont PFAS/Military Poisons Coalition found high levels of PFAS toxins in the pond located in the popular Gilbrook Nature Area of Winooski, Vermont. The pond is about a half mile southwest of the Camp Johnson Army National Guard Base. The water test at the Gilbrook Pond revealed 84.3 parts per trillion (ppt) of 17 PFAS contaminants with concentrations totaling 37.8 ppt for the five Vermont state-regulated compounds. Vermont regulates these five compounds at 20 ppt in drinking water and groundwater. This is a popular recreation site and many children and others learn to fish at the Gilbrook Pond.

Salmon Hole: The Coalition found PFAS levels in the Salmon Hole, a popular fishing spot on the Winooski River, at 148.5 part per trillion (ppt). In a result that will make anglers and those otherwise concerned with water quality sit up and take notice, the testing detected 10 of the 17 PFAS chemicals in the water drawn from the Winooski River in the area known as the "Salmon Hole," with a total concentration of 145.2 ppt (parts per trillion). In addition, two other PFAS analytes were also detected, bringing the total up to 148.5 ppt. A recent test conducted within a block of the airport on Airport Parkway and Kirby Road found PFAS at 123.7 parts per trillion. This is the side of the airport that the military did not include in its PFAS testing studies.

Lake Champlain: Currently PFAS is not tested in Lake Champlain. Volunteers from the Coalition made the trek to the western shore of Lake Champlain to test the waters at the mouth of the Salmon River which flows south from the decommissioned Plattsburgh Air Force Base into Lake Champlain. The water sampled found elevated levels for 9 PFAS variants, with a total concentration of 8,206.2 ppt. The testing also found nine (9) other PFAS analytes with a total concentration of 198.5 ppt, bringing the total concentration for the 18 PFAS detected to 8,404.7 ppt. Neither New York nor Vermont which share Lake Champlain have included PFAS in their testing of Lake Champlain, nor have they tested the fish for PFAS.

PFAS in Water in Vermont:
According to the American Water Works Association, "The best way to keep drinking water safe is to protect it at its source." More than 40% of U.S. drinking water is sourced from groundwater. The rest is derived from surface water, which can become contaminated by mixing with PFAS-contaminated groundwater. Therefore, identifying the

sources of PFAS-impacted groundwater and remediating these sources is critical to maintaining safe drinking water.

The earliest regulatory attention has focused on PFAS sources at Department of Defense (DOD) facilities and airports where AFFF foams were used for routine fire suppression testing and training activities. Overall, however, the PFAS source identification process has only just begun. This means that we don't know the full extent of the contamination nor have we identified all the sources of the contamination.

Sadly, Vermont ranks 45 out of 50 states for water quality; nothing to be proud of for a state that hypes its environmental focus. (https://vermontbiz.com/news/2022/january/27/vermont-considered-fifth-%E2%80%98greenest-state%E2%80%99-us%E2%80%AF?ct=t(EENEWS_1_27_2022)

58 Vermont Town Public Water Systems: A Vermont State Report shows PFAS in selected public water systems in 58 cities, often at multiple sites in those cities. The results demonstrate which cities have PFAS levels above the 20 ppt of the 5 PFAS chemicals regulated by the state, as well as those with levels below 20 parts per trillion (ppt). In addition, other forms of PFAS that are not included in Vermont's law are also included in the study, making actual PFAS contamination levels much higher for many of the affected communities.

There are 9 communities with select sites where public drinking water tested above state regulations of 20 ppt of the 5 regulated types of PFAS: Dover, Craftsbury, Fayston, Killington, Leicester, Milton, Morgan, Mt. Holly, and Thetford.

These 34 communities tested below 20 ppt of the 5 regulated PFAS, but above 2 ppt: Barre Town, Barton, Bennington, Berkshire, Berlin, Brattleboro, Bridgewater, Brookfield, Castleton, Charlotte, Chittenden, Derby, Eden, Jericho, Ludlow, Newfane, Newport City, Norwich, Pownal, Randolph, Reading, Richmond, Rockingham, Rutland Town, Shaftsbury, Shrewsbury, Stockbridge, Stowe, Sunderland, Vernon, Westminster, Williston, Windsor, and Woodbury.

And these 15 communities have other types of PFAS that are not part of the 5 regulated forms: Alburgh, Braintree, Cabot, Cambridge, East Montpelier, Fair Haven, Marlboro, Orwell, Peacham, Ripton, Springfield, Waitsfield, Waterbury, West Rutland, and Vershire.

This report highlights how rampant PFAS contamination is in Vermont. Other states have adopted standards as low as 13 and 14 ppt, and a recent federal report suggests standards as low as 7 ppt and 11 ppt. A study by Harvard University suggests a PFAS drinking water standard closer to 1 ppt. In addition, all forms of PFAS appear to have

dangers that have not yet been fully recognized. Regulating only 5 forms of PFAS forces citizens to play a game of "whack a mole." Industry keeps changing the PFAS formulation slightly, forcing legislators to keep enacting new laws and government agencies to keep doing new studies.

Dr. Philippe Grandjean**,** Professor of Environmental Health at Harvard University, states that "The existing research on PFOS and PFOA clearly shows that, with time, these chemicals are much more toxic than we originally thought. Our research shows that the EPA's unenforceable recommendation of 70 parts per trillion is about 100-fold too high to protect us from adverse health impacts. We must protect communities from the dangers of PFAS exposure by phasing out the use of PFAS chemicals and by establishing a strong drinking water standard that is based on science."

What's shocking about the Vermont state report is that many of these places with PFAS in the public drinking water are rural communities where some people have private wells, and those wells are not being tested for PFAS. No one seems to have taken responsibility for informing the general public in these areas that they may want to test their wells for these highly toxic chemicals.

Why should we care? Many of these testing sites in towns are at schools; children are especially vulnerable to PFAS toxins. This VT study only started in fall 2019 so how long have children and adults been drinking PFAS contaminated water? Shouldn't the state be urging those with private well water in these areas to test for PFAS? Shouldn't we be trying to identify the source of these contaminants? Why does the taxpayer or the system operator have to pay for PFAS contamination caused by manufacturers, industry, the military, landfills, wastewater treatment facilities, and others? How much PFAS is in the rivers and streams and fish and wildlife around these cities? Shouldn't we be banning the whole class of PFAS chemicals?