

NEWS RELEASE

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Water test shows high levels of PFAS in the Winooski River's Salmon Hole

The Vermont PFAS/Military Poisons Coalition is raising the alarm after it found per- and polyfluoroalkyl substances (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). Individual results for various PFAS contaminants follow:

- PFOA @ 1.0 ppt;
- PFOS @ 37.8 ppt;
- N-EtFOSAA @ 2.7 ppt;
- N-MeFOSAA @ 3.2 ppt;
- PFBA @ 2.0 ppt;
- PFDA @ 12.3 ppt;
- PFDoA @ 36.6 ppt;
- PFNA @ 1.7 ppt;
- PFTTrDA @ 4.4 ppt; and
- PFUnA @ 43.5 ppt.

In addition, two other PFAS analytes were also detected: specifically, FBSA – 1.7 ppt and PFDS – 1.6 ppt, bringing the total concentration for the 12 PFAS detected in the sample to 148.5 ppt.

Vermont regulates only five types of the thousands of PFAS compounds currently in circulation. These five are PFOS, PFOA, PFHpA, PFHxS, and PFNA and the state only regulates these in drinking water and groundwater by limiting their total concentration to no more than 20 ppt. Meanwhile, the contaminated Winooski River water sampled contained 37.8 ppt of the extremely toxic compound PFOS (*perfluoro octane sulfonic acid*) and 1.0 ppt of PFOA, another highly toxic PFAS contaminant.

The mouth of the Winooski River, a tributary of Lake Champlain, is located only a few miles from the intake of the City of Burlington's drinking water system. PFOS and other PFAS formulations are used in fire-fighting foams and other applications at the Vermont Air National Guard (VTANG) base, the latter of which is also the sole provider of firefighting services for the civilian operations conducted into and out of the Burlington International Airport. The historic burn pit located on the grounds of the existing VTANG base is situated less than a half mile from the river and only a mile and a half upstream from the Salmon Hole.

The Air Force which continues to rely on these dangerous chemicals has known of their destructive nature -- and has known of ways to treat the chemicals before they are released into

the environment and/or how to prevent their release into the environment -- [for nearly 50 years](#). As a direct result of this negligence, the groundwater beneath the VTANG base and the Burlington International Airport has been shown to contain concentrations of 179,000 ppt for PFOS and PFOA, according to [VT Digger](#). Moreover, this contamination has now spread beyond the boundaries of the airport, as reported by [Seven Days](#).

Why should residents of Chittenden County and neighboring regions be concerned? PFAS [chemicals have been linked to](#) several types of cancer, liver, kidney and thyroid damage, inflammatory bowel disease, low birth weight and reduced vaccine effectiveness, among other dire health impacts. Public health experts say chemicals in the PFAS family are a serious danger to public health. They also say that state and federal officials have failed the public by not adequately regulating these chemicals.

On a more practical level, several varieties of PFAS, especially PFOS, bioaccumulate in fish tissue over time, explaining why seemingly low concentrations in surface waters can and often do translate into very high levels in fish, threatening the health of people who consume those fish. The Winooski River provides a habitat for many fish varieties: landlocked Atlantic salmon, steelhead rainbow trout, walleye, smallmouth bass, rock bass, and white perch.

The Delaware River Basin Commission [published a study in 2021](#) that analyzed concentrations of PFOS in water and fish in multiple locations. Most of the river basin contains PFOS levels up to 13 parts per trillion while the fish fillets throughout the watershed averaged approximately 1,000 times that concentration.

To what extent have these carcinogens already bioaccumulated in Winooski River fish? If bioaccumulation factors are 1,000 times ambient water levels for PFOS as in the Delaware River Basin study, we may expect to find fish test at 40,000 ppt at the Salmon Hole. New Hampshire just set fish advisories for fish containing 7,400 ppt of PFOS. The Wisconsin Department of Natural Resources says that surface water levels throughout the Badger state that [exceed 2 ppt](#) of PFAS pose a threat to human health. The Europeans say levels [above .65 ppt](#) for PFOS are cause for alarm - and regulation.

Part of the argument for releasing these toxins into the environment is that water “dilutes” the harm. Our military, industry, municipalities, solid waste districts, private waste processors, landfill owners and operators, etc., have relied on this argument, based on the age-old fallacy that “dilution is the solution,” for over a century Dilution has never been a solution as it only sends the problem somewhere else. Dilution, when it comes to PFAS, is particularly ineffective given that, for all intents and purposes, these chemicals never degrade.

While the high levels of PFAS found in the waters sampled from the area known as the Salmon Hole may not be solely attributable to VTANG, the latter is no doubt a primary source. Other sources of PFAS found in surface and groundwater comes from leachate (a.k.a. “garbage juice”) that passes through municipal wastewater treatment plants and sewer sludge and septage dumping on open ground located adjacent to water bodies.

The Vermont PFAS/Military Poisons Coalition is conducting water testing at other sites located in Vermont and will publish those results as they are received.

In the meantime, the Vermont PFAS/Military Poisons Coalition is calling for the state to:

- Immediately begin regular testing of fish and water in Vermont rivers and in Lake Champlain for PFAS contamination.
- Ban the entire class of PFAS chemicals in Vermont, including the manufacture and inclusion of PFAS in all products sold in or imported into Vermont. Remediation of these chemicals from the environment is far too expensive and difficult a task (if not impossible). The far cheaper and far more effective alternative is to prevent their release into our air, water, and soil in the first place.
- Stop landfills, refineries, and other industries from dumping all forms of industrial leachate into public waterways.

- Stop municipalities and private waste processors from dumping sewage sludge and septage on land located in Vermont or neighboring states.
- Stop private waste processors from importing sewage sludge and septage and all other solid waste into Vermont.

Governor Scott can begin by following the lead of Governor Whitmer of Michigan by mandating that the state no longer purchase products that contain PFAS.

Water is sacred and we must adopt the precautionary principle to protect living beings and the environment for future generations.

Sources:

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