Connecticut River Conservancy: What We Know About PFAS

PFAS is short for *per- and polyfluoroalkyl substances* and refers to a group of over 4000 human-made chemicals found in everyday household products such as nonstick pans, food packaging, waterproof jackets, and carpets, as as well as personal care items such as shampoo and shaving cream, and even industrial materials such as aqueous film forming foam used to fight fires at military bases and commercial airports.

PFAS compounds are useful because they are designed to be resistant to breakdown and impart stain and water-resistant properties to products. Unfortunately, they continue to resist breakdown and become "f*orever chemicals*," persisting in the environment for decades. They can bioaccumulate (accumulate in tissues) and biomagnify (increase in concentration as you move up the food chain) in living organisms resulting in negative health effects, including cancer. For these reasons and more, they are a serious contaminant that is a global problem.

One thing that is important to understand about PFAS both locally and nationally is that this is an emerging area of science. There is, unfortunately, a lot that scientists don't fully know or understand yet about PFAS, how they move through the environment, and the full effects of chronic exposure on humans, wildlife, and the environment. Even analytical methods for accurately measuring the different PFAS compounds are still being developed and refined.

If you are concerned about PFAS, it will be important to keep up as new science emerges and puts what is understood currently into context. For example, there are no federally agreed upon standards in the US for exposure to PFAS through water, eating, or household use yet. The research needed to set these standards is still being done. Individual states have enacted drinking water standards and have issued fish consumption advisories where they feel it is appropriate, but these will likely be adjusted as our knowledge regarding the environmental health effects of PFAS increases.