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PFAS: Why the hysteria?

Consider this: as recently as a year ago, the term “PFAS” was relatively unknown to many lawyers, engineers and other environmental professionals. So, what is PFAS? PFAS is the acronym for **p**er- and **p**oly**f**luoro**a**lky**l** **s**ubstances, a family of more than 5,000 man-made chemicals. Based on their persistence in the environment, PFAS are often referred to as forever chemicals. Few recent environmental issues have caught the attention of industry, regulators, environmental professionals and the media like PFAS. In fact, [some have even questioned](#) whether the frenzy to address PFAS impacts is outpacing the toxicological understanding of these substances.

Why the hysteria?

The following are seven reasons, as well as many points of reference, that help explain the current PFAS landscape in the U.S.:

1. PFAS are still new

In the last several years, and for some states, in the last 12 to 18 months, regulators have turned their attention to PFAS. States are now beginning to identify PFAS sources and areas of contamination within their borders. As a part of the process, they are developing screening criteria or standards for safe concentrations of PFAS in groundwater, drinking water and surface water. They are also identifying qualified laboratories to test for PFAS.

[Though first formulated nearly 75 years ago](#) and broadly used in commercial applications since the 1950s, environmental professionals only began looking in earnest for PFAS contamination in the last decade. And, with more than 5,000 PFAS compounds in existence, understanding the toxicity, occurrence, fate and transport of these chemicals is challenging. This limits current [understanding of optimal cleanup approaches](#).

2. PFAS contamination is alarming

While further toxicological studies are needed to understand the [human health risks posed by PFAS](#), the rush to regulation is now pronounced. For example, the State of Wisconsin is considering [a recommendation from the Wisconsin Department of Health Services](#) to regulate PFAS in groundwater at 20 ng/L. Few precedents exist where hazardous substances have been regulated at nanograms per liter (ng/L) or parts per trillion (ppt) levels. What does 20 ng/L actually mean? [One analogy](#) is that 20 ng/L is the equivalent of waiting 32,000 years for 20 seconds to pass.

Don't look for the alarm to subside. Later this year, major motion picture and psychological thriller, Dark Waters, starring Mark Ruffalo and Anne Hathaway, is set for release. Dark Waters is based on a lawsuit filed by Rob Bilott on behalf of a class of plaintiffs against DuPont relating to PFAS contamination in drinking water. In 2017, DuPont agreed to pay more than \$600 million to settle about 3,500 personal injury claims related to that action.

3. PFAS are already in our blood

[According to the National Groundwater Association](#), studies have estimated that 95

percent of the U.S. population has been exposed to PFAS and has measureable concentrations in their bloodstream. In addition to the [exposure of plant workers](#) who produced and directly applied PFAS in products, Americans are exposed to PFAS regularly. For example, [waterproofing](#) in clothing and leather goods, [food packaging](#), [cosmetic and hygienic products](#), [dental hygiene products](#), nonstick [pots and pans](#), [carpet](#) and furniture [textiles](#), and [fire suppressant foams](#) often contain PFAS. Efforts are underway to identify the essentiality of PFAS in these and other products as well as potential [PFAS alternatives](#).

One essential use may be Aqueous Film Forming Foam (AFFF), a fire suppressant agent. AFFF is applied in massive quantities to control dangerous fires at airports and military installations and PFAS are [required to be used by military specifications](#). Sadly, application often lacks the foresight to where the excess PFAS containing products will end up, like groundwater. [Groundwater is relied on by 38 percent of the U.S. population](#) for drinking water and is often [the greatest pathway of human PFAS exposure](#).

4. PFAS are functioning as designed

When [3M first formulated](#) the chemical substances that became part of the PFAS family, their chemists modified the fluorine and carbon bonds to make a markedly strong and lasting product to resist water, oil and other liquids. The market responded positively due to the remarkable conveniences PFAS created and the pervasive application of PFAS in commercial products ensued. These desirable characteristics also make PFAS extremely difficult to manage in the environment. It is persistent, [does not naturally degrade](#), and its physical and chemical properties make it highly mobile, allowing it to [migrate quickly](#) through groundwater. These combined attributes make [PFAS a challenge to remediate](#) and, unfortunately, chemists did not anticipate [the potential toxicity of PFAS to human health](#).

5. The federal government is not leading

The rise of PFAS as an environmental concern generally coincided with the new U.S. Environmental Protection Agency (EPA) administration of Scott Pruitt under President Donald Trump. One of President Trump's objectives was to [eliminate federal regulations, including environmental rules](#). As of September 2019, the Trump administration rolled back or started the rescission of 85 environmental regulations. In this landscape, and in spite of some bipartisan support for federal PFAS standards, the EPA has only articulated non-enforceable [drinking water health advisories of 70 ppt](#).

By and large, the EPA has left the task of developing standards for acceptable concentrations of and exposure to PFAS [to the states](#). Under the mantle of [cooperative federalism](#), the federal government's most significant accomplishment was generating the February 2019 [PFAS Action Plan](#). However, two key action items are stuck in neutral, with the development of a federal Maximum Contaminant Level (MCL) [several years off](#). What's more, current EPA Administrator Andrew Wheeler stated in September that establishing PFAS as a [Superfund hazardous substance could be impossible](#). The EPA is also [delaying](#) its assessment of five PFAS compounds that reportedly contaminate drinking water across the U.S. until next year. The delay was reported on the EPA's Integrated Risk Information System (IRIS) on Oct. 8, 2019 and was due to the report on toxicity values not being available until the first quarter of 2020.

Without federal leadership, states have scrambled to regulate PFAS, which has led to a patchwork of standards nationwide. Still some states, like Wisconsin, are hindered in developing rules to protect human health and the environment by recent legislation to [rein in unchecked regulations](#). Unfortunately, this type of legislation could not have anticipated every urgent concern like PFAS.

6. PFAS litigation has produced breathtaking settlements

Most of the PFAS litigation to date has focused primarily on damages to natural resources. For example, in [Minnesota v. 3M Co.](#), No. 27-CV-10-28862 (Minn. Dist. Ct. Dec. 30, 2010), 3M settled with the State of Minnesota for \$850 million after seeking \$5 billion in damages. In another case involving workers and persons exposed to PFAS in the vicinity of PFAS production activities, [Freeman v. E.I. du Pont de Nemours & Co.](#), No. 2:13-cv-01103 (S.D. Ohio Nov. 5, 2013), DuPont settled for \$670 million.

More litigation is now underway. Here are highlights on a few of the cases:

- A multi-district litigation proceeding is in motion with approximately 100 cases claiming that PFAS and AFFFs have impacted groundwater near various military bases, airports and industrial sites where AFFFs helped extinguish liquid fuel fires. The plaintiffs in this case allege personal injury, a need for medical monitoring, property damage or other economic losses ([Aqueous Film-Forming Foams Products Liability Litigation](#) (MDL No. 2873)).
- A class action suit on behalf of those exposed to PFAS is in progress against PFAS manufacturers ([Hardwick v. 3M Co.](#), No. 2:18-cv-1185 (S.D. Ohio, Oct. 4, 2018) (recently surviving a motion to dismiss)).
- An action by New Mexico is ongoing against the federal government for PFAS exposure at Air Force fields where firefighting foam was used ([New Mexico v. U.S.A.F.](#), No. 6:19-CV-00178 (D.N.M. Mar. 5, 2019)).
- [An action by a PFAS manufacturer](#) challenges the authority of a state to implement PFAS standards that “violate the state’s [New Hampshire’s] constitutional and statutory prohibitions against legislative and agency imposed mandates on political subdivisions.”
- Shareholders in [Elec. Workers Pension Fund, Local 103, I.B.E.W. v. The Chemours Co.](#), (D. Del., No. 19-cv-01911, complaint filed 10/8/19) assert that the 2015 spinoff company from DuPont concealed the true extent of potential PFAS liability from shareholders. [Chemours now estimates its potential PFAS liability at \\$2.5 billion](#). The credit rating agency Moody’s Investors Service [downgraded its outlook for Chemours](#) from stable to negative as a direct result of Moody’s concern over Chemours’ ability to manage the damages from its PFAS exposure.

7. No easy solution for PFAS contamination

Products and wastes with PFAS are tied to consumer consumption, waste generation and waste management. Fixing the PFAS problem will require creativity and change.

Consider this hypothetical, but entirely plausible scenario:

PFAS treated carpet is removed during remodeling at a major hotel in the Milwaukee, Wisconsin metro area. Naturally, this carpet is [disposed of in a landfill](#), where it [releases PFAS](#). The PFAS are then collected as leachate from the landfill. [The leachate is transported to a wastewater treatment plant \(WWTP\)](#), which treats the leachate to separate and manage certain hazardous substances and constituents. The treatment method was not commonly designed to address PFAS. As a result, PFAS left the WWTP in the wastewater effluent discharged to a receiving water, in this case Lake Michigan. Lake Michigan happens to [serve as a source of drinking water](#) for nearly one million people. Additionally, PFAS left the WWTP [in the form of sludge, or biosolids](#), which are used as fertilizer on farm fields throughout the region.

Recognizing the problems in this cycle, any effort to stop landfill leachate from flowing to WWTPs or limiting the landspreading of biosolids on farm fields, will help reduce PFAS exposure. [The State of Maine](#) recently announced such a plan, which requires testing of all biosolids licensed for land application within its borders.

What the future holds

Time will tell whether the current, urgent, state-led efforts to regulate PFAS and the hysteria regarding PFAS are justified. For now, the uncertain and incomplete understanding of PFAS’ actual health impacts are leading to conservative regulatory standards and rulemaking efforts. While enough is not presently known, PFAS has existed in commercial products, our waste streams, our drinking water systems and our blood for decades. Implementing changes to address and reduce the presence of and risk from PFAS will take bold thinking and confidently developed regulations, possibly state by state, should the federal government fail to act.

For more information on this topic, or to learn how Godfrey & Kahn can help, contact our Environmental Strategies Practice Group.