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How The Safe Drinking Water Act & The Comprehensive Environmental Response, Compensation, and Liability Act Fail Emerging Contaminants: A Per- and Polyfluoralkyl Substances (PFAS) Case Study

Carly Johnson

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HOW THE SAFE DRINKING WATER ACT & THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT FAIL EMERGING CONTAMINANTS: A PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS) CASE STUDY

Carly Johnson

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1 J.D. Candidate 2021 at Mitchell Hamline School of Law. This author would like to thank Prof. Mehmet Konar-Steenberg and Prof. Thad Lightfoot for their guidance and for teaching me everything I know about environmental law.
I. INTRODUCTION

This paper uses the current per- and polyfluoroalkyl substances (PFAS) crisis to argue that shifts must occur in the area of environmental law to address the increasing number of emerging contaminants and the hazards they pose to health and safety. Two statutes that, if amended, would improve the government’s ability to respond to environmental contamination are the Safe Drinking Water Act (SDWA)\(^2\) and Comprehensive Environmental Response, Compensation, and Liability (CERCLA).\(^3\) This paper explains how these current statutes are failing and what can be done to improve the nation’s response to emerging contaminants, like PFAS.

PFAS are a group of chemicals that have been in use since the 1950s.\(^4\) PFAS is a broad, umbrella term that encompasses chemicals including perfluorooctanoic acid (PFOA), perfluorinated compounds (PFC), and perfluorooctane sulfonate (PFOS).\(^5\) The chemicals were

\(^3\) 42 U.S.C § 9601 et seq. (2019).
\(^4\) Robert C. Buck et al., Perfluoroalkyl and Polyfluoroalkyl Substances in the Environment: Terminology, Classification, and Origins, 7 SOC’Y ENV’T TOXICOLOGY & CHEMISTRY (2011), https://setac.onlinelibrary.wiley.com/doi/full/10.1002/ieam.258\; PFAS; Justin Worland, People are Still Exposed to the Teflon Chemical at Unsafe Levels, Group Says, TIME MAG. (Sept. 2, 2015), https://time.com/4005378/teflon-investigation-pfc/ (This report notes that while PFAS may be unlike lead or asbestos where there are no safe level of exposure, it is very close with even small levels having a harmful health effect on humans.).
\(^5\) PFAS include the following groups of chemicals: perfluoroalkyl carboxylic acids (PFCAs), perfluoroalkyl carboxylates (PFCAs), perfluoroalkane sulfonic acids (PFSAs), perfluoroalkane sulfonates (PFSAs), perfluoroalkane sulfonamides, fluorotelomer alcohols (n:2 FTOHs), fluorotelomer sulfonic acids (FTSAs), fluorotelomer carboxylic acids (FTCAs), and perfluoroalkane sulfonamide substances. Naming Conventions and Physical and Chemical Properties of Per- and Polyfluoroalkyl Substances (PFAS), INTERSTATE TECH. REGUL. COUNCIL (Apr. 2020), https://pfas-1.itrcweb.org/fact_sheets_page/PFAS_Fact_Sheet_Naming_Conventions_April2020.pdf. Some of which may be a subject of litigation not focused on in this paper.
produced for decades for use in firefighting foam, stain and soil repellents, greaseproof, food contact paper, and cookware.⁶

Over time, the commercially useful chemicals began to seep into lakes, rivers, and the drinking water supply—becoming a human health risk and the subject of litigation across the country.⁷ States, wanting to protect their residents from contaminated drinking water, have largely been left to their own devices, having only state and common law claims for legal justification in courtrooms.⁸ Some states started to institute their own drinking water contaminant levels for PFAS.⁹

The lack of federal statutes and regulations around PFAS significantly impacts the effectiveness of litigation and how quickly courts offer resolutions for victims across the nation.¹⁰ While Congress has made some attempts to pass legislation that would offer a solution to thousands of communities,¹¹ not all of the legislation would offer a legal cause of action. Nor would congressional action on a single group of contaminants fix the root of the issue, the speed

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⁶ Buck, supra note 3.
⁸ See infra Part VII, discussing the vulnerabilities in stating other legal claims and states that have alleged other legal claims.
¹⁰ See infra Part IX and X (discussing how changes in SDWA and CERCLA could improve the effectiveness of legal remedies for legislative bodies and other parties).
¹¹ See infra Part VIII, discussing Congress’s response to the widespread prevalence of PFAS-contaminated sites.
of chemical production and subsequent drinking water contamination, which requires larger, systemic reform to prevent and remedy.\textsuperscript{12}

Originally, SDWA and CERCLA were meant to solve this problem. SDWA was passed in 1974 to protect the quality of drinking water by authorizing the Environmental Protection Agency (EPA) to establish minimum standards for drinking water.\textsuperscript{13} Delegating the power of chemical regulation and determining what level of said chemicals are safe for humans to the EPA initially allowed for a quicker response to new chemicals. Unfortunately, amendments to SDWA in 1996, meant to increase regulatory flexibility and encourage the agency to focus resources on chemicals posing the greatest health risks, created a risk-based approach for selecting contaminants for regulation.\textsuperscript{14} The new approach slowed down the EPA’s process and ability to respond to emerging chemicals, like PFAs, and compromised human health as a result.

CERCLA was meant to complement environmental regulations in place at the time of its passage, like SDWA, and expedite responses to environmental contaminants. As a result, CERCLA extends strict liability to releases of hazardous substances. The EPA, in carrying out CERLA, lists contaminated sites and then can take steps to remediate sites, while using CERCLA to hold those responsible for the release liable.\textsuperscript{15} Fortunately, even though hazardous substance is defined broadly, the statute has yet to be extended to PFAS.\textsuperscript{16}


\textsuperscript{15} 42 U.S.C. § 9601 (2019).

highlighting a concern with CERLA’s ability to respond to emerging contaminants with long-term health and environmental risks.

While this paper specifically examines instances of PFAS contamination, the prevalence of PFAS-contaminated sites offers a glimpse of a larger problem when reviewing emerging contaminants that may pose a risk to human health. Federal agencies are not empowered to the level necessary to review all chemicals that are in our communities and that are being produced. Until change occurs in how the federal government handles emerging contaminants, there will likely be further discoveries of widespread, prevalent chemicals in our communities and concerns over their long-term implications on human health and the environment.

This paper will first examine why PFAS are a health and environmental concern, then it will focus on the 1996 amendments to the SDWA and the passage of CERCLA. After examining the concern and historical background, this paper will discuss current avenues of litigation used by states and private parties, how current avenues of litigation fall short at delivering justice, and will discuss proposed PFAS-specific legislative action. Finally, the paper will examine how amending SDWA to its pre-1996 condition and amending CERCLA would not only assist parties in seeking a legal remedy but could prevent the next emerging chemical—the next PFAS—from risking public health and safety. This would offer a stronger solution to the underlying concern than any lawsuit or proposed piece of legislation on PFAS.

II. **THE PRESENCE OF PFAS IN THE ENVIRONMENT**
PFAS are unique because they have become known as “forever chemicals.” They received the title of “forever chemicals” because they do not break down in the environment. PFAS have found their way into bodies of water, drinking water supplies, plants, and animals—including humans—that live in exposed areas. Since the contaminant does not break down in nature and is almost omnipresence in exposed areas, there is an increased risk to human and environmental health given increased concentrations.

The omnipresence of a chemical also makes it harder to regulate and cleanups more expensive. For instance, in exposed areas, PFAS can be found in both soil and groundwater. If only the groundwater or soil is treated, there is a risk of re-contamination. Re-contamination means further treatment and likely a longer, more ineffective treatment process. A chemical that presents itself in a wide variety of forms is harder to regulate because, in order to effectively account for re-contamination, site review must be largely holistic.

To manage the human health impacts of contaminant exposure in a cost-effective manner, review must be largely holistic.
manner, the chemical must be located in the environment to determine the likelihood of exposure and then studied to see how the chemical is being processed in the human body by that type of exposure. An epidemiologist may also review who is exposed to determine if groups of people are impacted differently, like if children or pregnant individuals are likely to experience greater health risks as a result of exposure. It may also be useful to determine what other chemicals are present in the environment and other factors that could impact exposure and the chemical’s toxicity. This is largely the process outlined in SDWA as what should be considered by the EPA when determining if a chemical should be regulated.

III. THE HUMAN HEALTH IMPACTS OF PFAS CONTAMINATION

One of the challenges when it comes to emerging contaminants, like PFAS, is determining the toxicity of the chemical and the level at which the chemical becomes dangerous to the environment, animals, and humans. After all, innocuous things like coffee or even pure water can cause harm to the body, even resulting in death, at the right dosage. Since the dose makes the poison, the impact of PFAS on the body can vary.

25 Tina Kold Jensen et al., Association Between Perfluorinated Compound Exposure and Miscarriage in Danish Pregnant Women, 10(4) PLOS ONE 1 (Apr. 7, 2015).
Most people in the United States and other industrial countries have measurable levels of PFAS in their blood. In the United States it is estimated that PFAS can be found in 98% of Americans, so the impacts of the exposure are of high concern.29

Levels of exposure can be even harder to determine from environmental studies when the contaminant, like PFAS, is presented to the human body in many different forms. PFAS can enter the body through respiratory pathways (e.g. PFAS-containing dust and soils), dermal exposure (e.g. cosmetics and clothing), and ingestion (e.g. contaminated drinking water, cooking food in PFAS-containing cookware, food packaging materials, and eating exposed plants and meats).30 Fetuses can be exposed through the placenta.31 PFAS, as a group, are still largely understudied because they are an emerging contaminant and the health concerns have been discovered fairly recently. Furthermore, because they often occur together in contaminated soil and water, the effects of the chemicals on humans can be even more unpredictable, making it possibly harder to study.32

30 Nat’l Ctr. for Env’t Health, supra note 19 (noting that low level exposure sources include breathing air containing PFAS from soil, clothing, furniture, carpet, and dermal exposure, while also noting the main sources of PFAS exposure are drinking contaminated water and ingesting food contaminated by PFAS); Agency for Toxic Substances & Disease Registry, Perfluoroalkyl and Polyfluoroalkly Substances (PFAS) Frequently Asked Questions, CTR. FOR DISEASE CONTROL & PREVENTION (Aug. 22, 2017), https://www.atsdr.cdc.gov/pfas/docs/pfas_fact_sheet.pdf (noting that nonstick cookware, food packaging materials, cleaning products, and some cosmetics may be potential modes of exposure—even though some types of PFAS are no longer being used).
31 Nat’l Ctr. for Env’t Health, supra note 19, at 2.
32 ZEILMAKER, supra note 25.
PFAS remain in the human body for a significant period of time.\textsuperscript{33} PFAS are long carbon chains, so they have an estimated half-life ranging between two to nine years in the body, with PFOA being on the low end (3–4 years) and PFHxS being on the higher end (8–9 years).\textsuperscript{34}

Current scientific findings have found that PFAS are linked to negative human health conditions. Some studies have found that PFAS exposure increases the risk of cancer, affects growth, learning, and behavior of infants and children, interferes with a body’s natural hormones, decreases a body’s immune system, and can decrease a person’s odds of getting pregnant and increases the risk of miscarrying.\textsuperscript{35} There is also an increased risk of pregnancy-induced hypertension, liver damage, thyroid disease, and asthma.\textsuperscript{36} There may be a drop-in vaccine responses, most recently this is a concern with the COVID-19 vaccine; thus PFAS exposure increases an individual’s risk of getting sick and increases the likelihood they get sicker for longer because of a decrease in the body’s immune system—not ideal given current

\footnotesize
\begin{itemize}
\item \textsuperscript{33} Nat’l Ctr. for Env’t Health, supra note 19.
\item \textsuperscript{34} Id. at 2.
\item \textsuperscript{35} Agency for Toxic Substances & Disease Registry, Per- and Polyfluoroalkyl Substances (PFAS) and Your Health: What are the Health Effects?, CTR. FOR DISEASE CONTROL & PREVENTION (Jan. 10, 2018), https://www.atsdr.cdc.gov/pfas/health-effects.html [hereinafter CDC, Health Effects]; Jensen et al., supra note 24.
\item \textsuperscript{36} Rong Huang et al., Prenatal Exposure of Perfluoroalkyl and Polyfluoroalkyl Substances and the Risk of Hypertensive Disorders of Pregnancy, 18 ENV’T HEALTH (Jan. 9, 2019); John Bassler et al., Environmental Perfluoroalkyl Acid Exposures are Associated with Liver Disease Characterized by Apoptosis and Altered Serum Adipocytokines, 247 ENV’T POLLUTION 1055–63 (2019); Maria Averina et al., Serum Perfluoroalkyl Substances (PFAS) and Risk of Asthma and Various Allergies in Adolescents. The Tromso Study Fit Futures in Northern Norway, 169 ENV’T RSCH. 114–21 (2019).
\end{itemize}
circumstances. Communities that have filed lawsuits have exhibited similar characteristics of cancer and negative health conditions.

IV. THE ENVIRONMENTAL IMPACTS OF PFAS CONTAMINATION

PFAS are not just impacting the human ecosystem but may have long-lasting impacts on the flora and fauna. While PFAS are a broad overarching category of chemicals and the type of PFAS can determine how much is taken up by plants and animals, the evidence suggests that there is some level of uptake by plants and animals.

PFAS are making their way into the plant population in exposed areas. The plants are not only being ingested by the animals in the habitat but can also be ingested by humans as well. There is a high amount of variability between how much PFAS are taken up by plants, depending on the type of plant, level of exposure, and other natural conditions. The uptake can cause visible abnormalities in the plants and, in some instances, can lead to changes in development and plant death. Changes in plant growth in exposed areas not only means that individuals who are eating the plants and living in the area are likely exposed, but their crops

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39 Scher, supra note 18; Buck, supra note 3.
42 Laura Gobelius et al., Plant Uptake of Per- and Polyfluoroalkyl Substances at a Contaminated Fire Training Facility to Evaluate the Phytoremediation Potential of Various Plant Species, 51 ENV’T SCI. TECH. 12602 (2017).
43 Id.
may be less valuable as a result, hurting their economic livelihood. Research is still being done and is being encouraged by governing bodies to determine the full ramifications of PFAS exposure on crops and other plants in the environment.44

Animal tests have illustrated that they have a similar physiological response to PFAS exposure and, similar to humans, PFAS can remain in the body through bioaccumulation. Animals in laboratory testing were found to have negative immunological, development, and reproductive effects, as well as an increased rate of cancer and increased cholesterol levels.45 These health effects can negatively impact the animal population as a whole and can be especially concerning for vulnerable animal populations.

Animal exposure to PFAS are concerning for the health and wellness of the species and a concern to the humans that ingest exposed animals. Humans unknowingly hunt, farm, and fish PFAS-contaminated wild animals because there generally are no visible signs of exposure warning consumers.46 As a result, some states now monitor PFAS levels in key animals that are hunted and fished in their state.47

Farm animals exposed to PFAS are similar to wild animals in regard to concerns over PFAS contamination. The Food and Drug Administration conducted a study focusing on agricultural products produced in PFAS-contaminated areas. The study found that some milk samples posed a potential health concern, so they halted milk production from the exposed

45 Basic Information on PFAS, ENV’T PROT. AGENCY, https://www.epa.gov/pfas/basic-information-pfas#:~:text=Per%2D%20and%20polyfluoroalkyl%20substances%20(PFAS)%20are%20a%20group%20of,United %20States%20since%20the%201940s (last visited Jan. 1, 2021).
47 Id.
cattle. Not only is there potential for negative health impacts as a result of PFAS contamination for both the cattle and humans, but it also has ramifications for the farmers that depend on their herd and their byproducts for their livelihood and the overall food production system.

The dual exposure of both drinking water and dietary ingestion of PFAS-contaminated substances are not unique to PFAS but can compound health impacts because it increases the probability of higher exposure and higher concentrations of the chemicals once in the human body.

V. THE SAFE DRINKING WATER ACT: IDENTIFYING EMERGING CONTAMINANTS & THE 1996 AMENDMENTS

The Safe Drinking Water Act (SDWA), enacted in 1974, was signed into law by President Gerald Ford. SDWA was enacted based on a culmination of increased interest in water quality and scientific evidence that the aesthetic problems, pathogens, and chemicals identified by the Public Health Service were not the only drinking water concerns. Evidence that agricultural and industrial chemicals were finding their way into the water supply, and some


49 2 FRANK P. GRAD, TREATISE ON ENVIRONMENTAL LAW § 3.05 (2019).

50 The U.S. Public Health Service had been setting standards for bacteriological quality of drinking water since 1914, but the agency had a limited role, only regulating contaminants capable of causing contagious diseases in some settings. In 1962, the Public Health Service began regulating 28 substances in addition to bacteria, becoming the most comprehensive federal drinking water standards before SDWA. All 50 states, with some modifications, adopted the Public Health Service standards, with some modifications, as regulation or guidelines for their public water systems.

51 25 Years of the Safe Drinking Water Act: History and Trends, U.S. ENV’T PROT. AGENCY 6 (1999), https://nepis.epa.gov/Exe/ZyNET.exe/200027R1.txt?ZyActionD=ZyDocument&TimeZone=&EPA&Index=1995%20Thru%201999&Docs=&Query=&EndTime=&&SearchMethod=1&DocRestrict=n&Time=&&ToRecEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&&UseQField=&&ExtQFieldOp=0&ExtQFieldOp=0&XnsQuery=&&File=D%3A%5CZYFILES%5CINDEX%20DATA%5C95THRU99%5CTXT%5CUS%5C00000015%5C200027R1.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h%7C&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=hpfr&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=y=5.
were suspected of causing health problems, spurred the federal government’s investment in drinking water studies. One of the most shocking was a 1969 survey that found only about 60 percent of the systems studied delivered water that met all of the Public Health Service standards.\(^\text{52}\) In response to scientific studies that were conducted in the late 1960s and early 1970s that noted that chemicals were detected in treated water from treatment plants, several federal environmental and health statutes were passed, including SDWA, which aimed to ensure that all public water supplies met national standards and were safe for humans.\(^\text{53}\)

The SDWA applies to every public water system in the United States—it should be noted that private wells are not regulated under SDWA—and set national health-based standards for maximum contaminant levels for each contaminant found in drinking water.\(^\text{54}\) The public water systems must be tested and, if necessary, treated until the contaminant levels meet the federal requirement.\(^\text{55}\)

Since being enacted, it has been amended four times in 1977, 1986, 1996, and 2018.\(^\text{56}\) The most significant change to the overall effectiveness of SDWA was the 1996 Amendment, which required the EPA to show that there is a “meaningful opportunity for health risk reductions” by regulating the contaminant and to use cost-benefit analysis to justify the cost of treatment.\(^\text{57}\) Twenty years since the 1996 Amendment, not a single new contaminant has been

\(^{52}\) Id.

\(^{53}\) Id.


\(^{55}\) Id.

\(^{56}\) Id.

regulated under the law by the EPA. Instead, the EPA has relied on authority granted in the 1996 amendments to publish health advisories, which are non-enforceable, to help states address new contaminants.

In order for a contaminant to be listed as either a contaminant with specific maximum contaminant levels or for the EPA to issue a health advisory on the chemical, the EPA must go through a process of reviewing the chemical. First, the EPA must identify the contaminant for listing, which means the EPA must find that:

the contaminant may have an adverse effect on the health of persons; the contaminant is known to occur or there is a substantial likelihood that the contaminant will occur in public water systems with a frequency and at levels of public health concern; and . . . regulation of such contaminant presents a meaningful opportunity for health risk reduction for persons served by public water systems.

Unregulated contaminants to be considered under this standard must be added to a list of contaminants that are being considered by the EPA. The list is published every five years after there is an opportunity for notice and public comment and is intended to include chemicals that are known or anticipated to be in a public water system and may require regulation under SDWA. The list was also designed to automatically list registered pesticides as well as “hazardous substances,” as defined by section 9601(14) of the title. From this list, every five years, the EPA Administrator must decide whether or not to regulate at least five listed contaminants based on the above criteria. A determination not to regulate a contaminant is

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58 Id.
59 2 GRAD, supra note 48, § 3.05.
61 Id. § 300g-1(b)(1)(A).
62 Id. § 300g-1(b)(1)(B)(i).
63 Id.
64 Id. § 300g-1(b)(1)(B)(ii)(I).
65 Id. § 300g-1(b)(1)(B)(ii)(I).
considered final agency action that is subject to judicial review.66 The Act instructs the Administrator to review priorities when choosing to regulate, like which chemicals pose the greatest public health concern or if there is a part of the population at risk for adverse health effects.67 There are exceptions to this process if it is an urgent threat to public health.68

While the EPA is not required to wait five years to propose a contaminant for the Unregulated Contaminant Monitoring Rule per se, the EPA has generally waited that long before determining if a standard is needed.69

The SDWA provides for the EPA Administrator to commence civil litigation if a state having primary enforcement responsibility has not commenced appropriate enforcement action after the Administrator notifies the state under 42 U.S.C. section 330g-3(a).70 The Administrator must, as an alternative to litigation, issue an order requiring the public water system to comply with the requirements.71

The SDWA also has a citizen suit provision that would allow an individual to commence an action on their own behalf against the Administrator for failure to perform a nondiscretionary act or duty; a person, state, or other governmental instrumentality or agency who is in violation of any prescribed requirements; or for the collection of a penalty by the United States Government against any federal agency that fails a final order to pay an assessed penalty under

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66 Id. § 300g-1(b)(1)(B)(ii)(IV).
67 Id. § 300g-1(b)(1)(C).
68 Id. § 300g-1(b)(1)(D).
70 42 U.S.C. § 330g-3(a).
71 Id.
Fortunately, SDWA also includes an express waiver of federal sovereign immunity, so federal agencies must comply with all national primary drinking water regulations and underground injection control programs that are applicable and may be sued by a citizen. Unfortunately, citizen suits are only intended to promote compliance and prevent toxic harm—not provide private redress, even if a citizen bringing the claim exhibits some level of personal and concrete injury.

VI. THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT

CERCLA (also known as the Superfund law) was enacted to create broad federal authority to regulate releases or threatened releases of hazardous substances that may endanger public health and the environment on December 11, 1980. CERCLA was passed in response to waste management practices in the 1970s that were substandard and a risk to human health. Because of the startling trends and in response to the Love Canal disaster, CERCLA was enacted and extended abnormally dangerous activities to the usage of hazardous substances. The Act allows the EPA to seek out responsible parties that release hazardous substances into the environment and impose what has been deemed by some to be retroactive liability, but has

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been described by the courts as “prospective obligations for the post-enactment environmental consequences of the defendant’s past acts.” 79 CERCLA can hold a party liable for acts that happened before CERCLA enactment. 80 This is significant in PFAS cases where the conduct occurred before PFAS were designated to be hazardous substances and in some cases were used prior to CERCLA’s enactment. 81

CERCLA was designed to speed up the legal process for cases involving hazardous substances, enabling exposed communities to have a quick cleanup process. One method of speeding up the legal process was imposing a strict liability standard and joint and several liability in CERCLA claims. 82 This standard would be helpful in PFAS cases because instead of the injured party having to prove the chemical was dangerous or that a specific party caused the damage, which can be challenging given the widespread use of PFAS, CERCLA would remove that burden. Then, so long as they contributed to it, a party could be held liable for all of the contamination even if they did not create all of it, while also allowing the liable party to sue other alleged contaminators for recovery to ensure the process is fair.

Prior to the discovery of a contaminated site, the chemical that was released must be designated a hazardous substance. Hazardous substance classification includes hazardous wastes subject to regulation under subtitle C of Resource Conservation and Recovery Act (RCRA), toxic water pollutants under section 307 of the Clean Water Act, hazardous air pollutants listed

79 PERCIVAL ET AL., supra note 76, at 414 (stating a district court found that CERCLA does not create retroactive liability).
81 Buck, supra note 3.
under section 112 of the Clean Air Act, imminently hazardous substances under section 7 of the Toxic Substance Control Act, and additional substances designated by EPA. The additional substances designated by EPA can include pollutants or contaminants which may present an imminent and substantial danger to the public health or welfare. However, even though hazardous substance is defined broadly, it is not exhaustive and does not cover PFAS. There has been some congressional and EPA action attempting to declare PFAS, or types of PFAS, hazardous substances so CERCLA mechanisms could be applied, yet there has not been any official progress in this process.

The next step in CERCLA is the designation of a location to the list of Superfund sites. When a contaminated site is identified, it is added to the National Priority List, if it presents a great danger to the health, safety, or the environment. So far, under the current laws, it is unlikely that the EPA will identify Superfund sites based solely on PFAS contamination. The EPA announced its intention to propose a site that has PFAS contamination on October 30, 2019; however, the site also has metals and hexavalent chromium in drinking water and the announcement will not be official until it is published in the Federal Register. Thus, it appears

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84 PERCIVAL ET AL., supra note 76, at 413.
89 Id.
that PFAS sites may be considered for Superfund site listing if PFAS are part of a larger contamination soup.90

Once there is an identified site, CERCLA casts a broad net when holding parties responsible for environmental contamination. Potentially responsible parties, including current owners/operators, past owners/operators, arrangers, transporters, and the generators of the waste, can all be held responsible for the release of the hazardous substances either in whole or in part.91 The potentially responsible parties, when there is a release92 of a hazardous substance, can be held liable for “all costs of removal or remedial actions incurred by the federal government [or by a State or Indian tribe] not inconsistent with the [National Contingency Plan], any other necessary costs of response incurred by any person consistent with [National Contingency Plan], damages for injury to natural resources, and costs of health assessments.”93 Natural resources under CERCLA cover “land, fish, wildlife, biota, air, water, ground water, drinking water supplies, and other such resources.”94

CERCLA also encourages quick settlements by protecting parties that settle from being liable for contribution claims that are addressed in the settlement.95 Parties that do not settle, or settle later than others, may be left paying more of the cleanup costs than parties that settled

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90 See, e.g., Paula Gardner, Closed Factory May Become Michigan’s Newest Superfund Site, MLIVE (Sept. 17, 2019), https://www.mlive.com/news/2019/09/closed-factory-may-become-michigans-newest-superfund-site.html (Jackson County officials voted on a resolution asking for a property to be placed on the National Priority List when it shows PFAS, trichloroethylene, cyanide, zinc cyanide, nickel chloride, chromic acid, hydrogen peroxide, sulfuric acid, ignitable wastes, and reactive wastes present at the site and surrounding areas). 91 42 U.S.C. § 9607 (2018); EPA: Summary, supra note 77. 92 Release is defined as “any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment.” 42 U.S.C. § 9601(22). Hence, CERCLA could likely cover the cost of remediating all damages alleged in state cases, like Minnesota’s case against 3M which was a result of a “dumping or disposing” and some impact of the dumped PFAS leaching into groundwater and into the drinking water, soil, and lakes. 93 PERCIVAL ET AL., supra note 76, at 412; see also 42 U.S.C. §9607(a)(4) (2018). 94 42 U.S.C. § 9601(16) (2018). 95 Id. § 9613(f)(2).
earlier, given that CERCLA imposes joint and several liability.\textsuperscript{96} Precedent is less important for CERCLA claims because of the strict liability standard, so settlement is less concerning for other parties interested in bringing a suit, compared to common law claims where precedent can be helpful to future parties.

\textbf{VII. VULNERABILITIES IN STATING OTHER LEGAL CLAIMS}

Since injured parties and states are unable to state a claim under CERCLA, many groups and States Attorneys General have initiated lawsuits under state statute or common law claims. This state-by-state approach is inefficient—burdening states with the cost and time demands of putting together a case to establish that PFAS are dangerous and that there was the requisite level of intent for the claim. This approach is also difficult because common law doctrines are ill-equipped doctrinally to deal with the particular threat of environmental contamination compared to CERCLA claims.

New Hampshire, New Jersey, Minnesota, Ohio, New York, New Mexico, North Carolina, West Virginia, and Vermont are among states that have filed suits or have settled with PFAS manufacturers.\textsuperscript{97} While some have used a combination of common law and specific state laws, like Minnesota’s lawsuit against 3M,\textsuperscript{98} other states have strictly relied upon the common law, like New Hampshire.\textsuperscript{99} Overall, the common law approach, while a great legal solution in


\textsuperscript{97} Ellen M. Gilmer & Ariana Figueroa, \textit{States Take up PFAS Fight: “Is this the Next Asbestos?”}, E&E NEWS (June 3, 2019), https://www.eenews.net/stories/1060469135.

\textsuperscript{98} Amended Complaint, Minnesota v. 3M Co., No. 27-CV-10-28862 (Minn. Dist. Ct. 2011), available at https://www.ag.state.mn.us/Office/Cases/3M/docs/Complaint.pdf [hereinafter Amended Complaint].

\textsuperscript{99} Ropeik, \textit{supra} note 6 (outlining lawsuits brought by the State of New Hampshire against PFAS manufacturers under negligence, defective design, failure to warn, trespass, and the public trust doctrine, along with other causes of action).
some cases, fails to adequately address drinking water contamination because it is inefficient—
forcing litigation to go state-by-state and post-injury—and the elements place a larger burden on
State Attorneys General’s offices than claims under CERCLA would.

The Environmental Working Group estimates that up to 110 million Americans could
have PFAS in their water.100 The contamination is also not limited to a single state or even a
single region—every single state has had a contaminated site.101 Given the nation-wide nature of
the problem, state-by-state action on state law claims are inefficient.

The main concern about state-by-state action is that there is no federal common law, so
the court is forced to apply state law.102 While the basic elements of a common law claim are
consistent across states, each state has a unique history of interpretation and legal precedent that
create the nuances of that state’s law. Therefore, while a legal decision in one state may help
other states reach a settlement or persuade a court, there is no legal applicability to another
state’s case.103 In order for the common law to fill in the gaps of federal policy, there would need
to be at least fifty individual state actions against parties related to PFAS contaminated sites. The
expense of at least fifty individual state actions, even if they settle, could cost taxpayers millions
of dollars. Although, just because something is slow, expensive, or not the best option does not
mean that it is not a good option. Common law claims are the backstop of environmental law and
are helpful at filling in the gaps, but it should not be the only mechanism for states to protect the

100 David Andrews, Report: Up to 110 Million Americans Could Have PFAS-Contaminated Drinking Water, ENV’T
WORKING GRP. (May 22, 2018), https://www.ewg.org/research/report-110-million-americans-could-have-pfas-
contaminated-drinking-water.
101 PFAS Contamination in the U.S., ENV’T WORKING GRP., https://www.ewg.org/interactive-
102 Erie R. Co. v. Tompkins, 304 U.S. 64 (1938).
103 Josh Nathan-Kazis, How the Johnson & Johnson Ruling Could Affect the Opioid Cases, BARRON’S (Aug. 30,
opioid-cases-51567195785 (illustrating how a common law claim of public nuisance may impact other state’s
claims against a company).
health, safety, and environment of its residents. Unfortunately, using the common law is not just slow and expensive, but a legally challenging case for states to make.

A. Negligence as a Potential Claim

Take, for example, the claim of negligence, which is frequently used in PFAS litigation. The basic elements to negligence are: “(1) a duty of care owed by the defendant to the plaintiff; (2) a breach of that duty; (3) an actual causal connection between defendant’s conduct and the resulting harm; (4) proximate cause . . . and (5) damages resulting from the defendant’s conduct.” Many of these elements are hard and costly for a state to prove.

1. The Difficulty Proving Breach

For the court to find that a PFAS manufacturer, or user, was negligent, the state needs to prove that there was a breach of a duty. A common standard to determine if there was a breach is the reasonable person standard. Unfortunately, for a state to prove that a reasonable person would have acted differently, states have typically ended up arguing that the company knew that PFAS were dangerous. If that was not a hard enough claim, in some cases, the state may even have to argue that the chemical is so dangerous that it should not have even been sold, which is hard to do when the end-product has a legitimate purpose, like stopping fires in situations where water would be ineffective. In either case, determining what a reasonable person or company

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104 Ropeik, supra note 6; Amended Complaint, supra note 97.
would have known or done in the past can be difficult for a state to argue and requires a significant investment in research and analysis.

2. The Difficulty Proving Causation and Injury

Causation and damages do not prove any easier for a state to establish. Since the chemicals have a wide-range of applications and are useful, determining the source of the contamination can be challenging.\textsuperscript{108} Outside of litigation, when the City of Cottage Grove, MN, requested 3M help fund a water filtration system to remove PFAS from the City’s drinking water, a chemical 3M made “in bulk” in Cottage Grove, 3M initially refused—insisting that a plastic fire, and firefighting foam used to fight it, caused the contamination.\textsuperscript{109} This illustrates a larger point that determining the source of the PFAS contamination can prove challenging and defendants arguing a negligence claim can easily argue that it was not their contamination.

Furthermore, manufacturers have also argued that even if it was their contamination, their chemicals did not cause the injuries experienced by the plaintiffs or the state. Even though companies, like 3M, have settled PFAS cases, the company maintained that the scientific data linking PFAS, and specifically PFCs, to assorted human ailments was weak and that the level of ingestion needed for negative health effects may be higher than current studies maintain.\textsuperscript{110} The company has noted that the science is inconsistent or conflicting, and does not show causation.\textsuperscript{111} The company even argued that the evidence that does exist does not show that PFAS cause harm to people at current or historic levels.\textsuperscript{112}

\textsuperscript{108} Kary & Cannon, \textit{supra} note 37.  
\textsuperscript{109} \textit{Id.}  
\textsuperscript{111} \textit{Id.}  
\textsuperscript{112} \textit{Id.}
Science is rarely absolute. Often studies are uncertain or too aware of its own shortcomings to state broad generalization, nor, as some polluters are quick to point out, do lab conditions always translate to real-life. States deciding to bring a case, must wrestle with the uncertainty of science and causation, often against companies that have had decades of scientific work and familiarity with the chemical. This puts states and private parties at a disadvantage, making negligence a possible, but challenging legal claim for emerging contaminants, like PFAS.

B. Trespass as a Potential Claim

Another common law claim that states have been using to resolve the impacts of PFAS contamination is trespass.\(^{113}\) The distinction between trespass and nuisance law is amorphous in many respects, since while one deals with an intentional intrusion that interferes with the use and enjoyment of real property, the other deals with the interest in the real property. Environmental tort cases, like those brought against PFAS polluters, typically include both trespass and nuisance to get a response to both claims because of the subtle distinction and to get the court and defendants to respond under each theory of liability.\(^{114}\)

The Restatement (Second) of Torts defines “intentional intrusions on land” as:

One is subject to liability to another for trespass, irrespective of whether he thereby causes harm to any legally protected interest of the other, if he intentionally (a) enters land in the possession of the other, or causes a thing or a third person to do so, or (b) remains on the land, or (c) fails to remove from the land a thing which he is under a duty to remove.\(^{115}\)

\(^{113}\) Amended Complaint, \textit{supra} note 97; Ropeik, \textit{supra} note 6.

\(^{114}\) 5 \textsc{Susan M. Cooke}, \textsc{Law of Hazardous Waste} § 17.01 (2019).

\(^{115}\) \textsc{Restatement (Second) of Torts} § 158 (Am. L. Inst. 1965).
For a plaintiff to establish a trespass claim, again a state-specific claim, the plaintiff generally must establish two elements: an actual interference with the right of exclusive possession, and intent or negligence. However, pollution cases generally require a showing of damages and generally turn on whether a defendant has invaded or interfered with a plaintiff’s interest in the land.\textsuperscript{116} If the court does not require a showing of harm for liability, then the plaintiff is at an advantage and trespass can be a strong legal claim for drinking water contamination claims, especially in instances where there is still debate on if PFAS, and other emerging chemicals, are hazardous at the levels found in the environment.\textsuperscript{117}

1. Determining Liability

Unfortunately, while trespass can be a strong legal claim—if it does not require a showing of harm and in instances where a person gets their water from a private well on their property—in other situations, where the chemical was legally dumped in an area where it was allowed to be and there is no visible interference with the property rights, it may be a harder claim. Even under the best circumstances, the claim requires a showing that the defendant specifically caused the contamination on a person’s land, which is flawed in similar ways that establishing causation under a negligence theory is flawed—it requires showing that this commonly used chemical was a specific polluter’s commonly used chemical and that their commonly used chemical is the chemical on the plaintiff’s land.

In instances where disposal or use of the pollutant was allowed on a piece of property, like landfills, chemicals are intermixed, making it even harder to determine the specific

\textsuperscript{116} 5 COOKE, supra note 113, § 17.01.
\textsuperscript{117} Borland v. Sanders Lead Co., 369 So.2d 523, 529 (Ala. 1979) (states that damage must not be \textit{de minimis} invasion of the interest of possession for it to be a trespass); 5 COOKE, supra note 113, § 17.01.
contributor of the pollutant. Furthermore, it is generally not surface water that is reaching a plaintiff’s property, but largely groundwater contaminated with PFAS that presents the greatest risk to human health.\textsuperscript{118} The chemical had consent to be placed in a landfill, so a group that was allowed to deposit the chemical on the land may also argue that they were no longer in control of the chemical and the disposal site is responsible for any damage that occurs while the chemical is in their control. If PFAS were designated as hazardous substances under CERCLA, the argument that “it was legal when we dumped it” would be voided.\textsuperscript{119} This may assist local governing bodies that allowed PFAS manufacturers and users to dump their waste in a landfill, unaware that the chemical may pose a risk to the community.

2. Establishing an Interference with a Property Interest

A showing of harm is likely necessary in any legal claim for PFAS because PFAS are not like other types of pollution that may have a distinct smell or taste, PFAS-tainted water and non-PFAS-tainted water are indistinguishable.\textsuperscript{120} A minute level of a pollutant at a safe level is likely not going to interfere with the interest in the property and may depend heavily on how the property is being used. Also, since PFAS are often concerning as underground plumes, a court would need to find that an individual has an interest in that part of the ground.\textsuperscript{121}

While trespass law seems like a great fit to handle water pollution cases about emerging contaminants like PFAS, plaintiffs may struggle to establish that the pollutant interferes with the

\begin{thebibliography}{99}
\bibitem{118} See Sunburst Sch. Dist. No. 2 v. Texaco, Inc., 165 P.3d 1079 (Mont. 2007).
\bibitem{119} See United States v. Monsanto Co., 858 F.2d 160 (4th Cir. 1988) (holding that retroactive liability under CERCLA comports with due process); Benesh, \textit{supra} note 84.
\bibitem{121} See Sunburst, 165 P.3d (the Montana Supreme Court found that Texaco’s liability for trespass extended to all plaintiffs that owned land above the contaminated plume, however, plaintiffs also experienced visible damage to their property, like one plaintiff’s house exploding due to the contamination).
\end{thebibliography}
interest in the property because the party would likely still need to establish harm and that the chemicals on the property can be attributed to the specific actions of the defendant and not others.

3. The Waiting Game of Trespass Claims

Furthermore, trespass only works for claimants whose land is currently exposed to the chemical, so individuals may need to wait to file a claim even when there is a high probability that their land will be exposed—causing unnecessary delays for a plaintiff. 122 This delay could come at a cost to potential plaintiffs.

C. Nuisance Law as a Potential Claim

Another common law claim is nuisance law, primarily public nuisance. 123 Public nuisance has been one of the most useful claims in environmental law, being used by governing bodies that have a polluted lake or a desire to combat climate change. 124 While nuisance law is a helpful tool for governing bodies that lack a specific law to seek a remedy, nuisance law still is not a perfect fit to handle issues like water contamination, especially when it is an emerging contaminant.

States vary on what they require to establish a public nuisance claim, but under Restatement (Second) of Torts, public nuisance is: “an unreasonable interference with a right common to the general public.” 125 Generally, in order for there to be a public nuisance, the

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122 Adams v. Star Enter., 51 F.3d 417 (4th Cir. 1995) (property owners cannot recover for the diminution in the value of their property because of a reasonable fear of negative health effects resulting from the proximity to an environmental hazard).
123 Amended Complaint, supra note 97.
125 RESTATEMENT (SECOND) OF TORTS § 821B(1).
offending conduct must: (1) substantially interfere with a right held in common by the public; (2) be unreasonable; (3) be within the polluter’s ability to control and abate; and (4) be the proximate cause of the injury in question.\textsuperscript{126} Most states recognize public health as a public right. For similar reasons that are stated above, proximate cause of injuries to public health is equally difficult to establish under public nuisance as it is under negligence. Public nuisance offers unique defenses to the polluter.

1. Is Pollution Reasonable?

Most useful products and man-made chemicals, in their creation, create pollution. Most pollution is a result of making useful products. If the product was not useful, then it would not be produced. PFAS, arguably, are very useful, justifying how they are still in use today. For instance, in 2019, military bases still used firefighting foam containing PFAS even though the Pentagon promised to phase out the use of the foam in 2016.\textsuperscript{127} Yet, some companies stopped the production of PFAS, even though it is still useful, long before the concerns of detrimental impacts became apparent to the general public.\textsuperscript{128}

In order for a state to prove an action unreasonable under the Restatement (Second) of Torts analysis, generally, they must find the conduct was illegal, or the conduct must have a long-lasting effect that the actor knew, or had reason to know, would have a significant impact

\textsuperscript{128} Press Release, 3M, 3M Announces PFAS Initiatives & Actions (Sept. 9, 2019), https://news.3m.com/press-release/company-english/3m-announces-pfas-initiatives-actions (noting that 3M voluntarily ceased production of PFOS and PFOA in 2000 as a proactive and precautionary measure, but also notes that “the weight of scientific evidence does not establish that PFAS cause any adverse human health effects at current or past levels typically found in the environment.”).
on the public right to health and safety. Given, the release of the chemical, largely due to a lack of federal regulation, was not illegal, states must prove polluters had knowledge of the potential injury. Even polluters who have settled do not acknowledge the pollutant as dangerous at current or historic levels found in the environment, let alone acknowledge they had reason to know the PFAS could cause injury. Therefore, establishing the polluter knew, or had reason to know, PFAS were dangerous at the time of pollution may be difficult and it puts plaintiffs in a similar position with similar pitfalls and costs.

Similar to the negligence standard, a reasonable person may determine, PFAS-containing firefighting foam is the most effective way to stop a fire. In some instances, PFAS-containing firefighting foam is the best method to prevent significant property damage; it is possibly the best way to get a fire under control to prevent the spread and risk of loss of life. One could find that it is reasonable to use firefighting foam knowing the risk it may pose to the drinking water supply. The determination is subjective and could cause decisions that vary state-by-state, polluters are likely incentivized to use and produce these chemicals in states with narrower interpretations of public nuisance.

D. Other Common Law Claims: Battery and Product Liability Claims

Some plaintiffs, including both individuals and governing bodies, have also included claims of battery and product liability in lawsuits against PFAS polluters. Yet, these claims

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129 Ileto v. Glock, Inc., 565 F.3d 1126 (9th Cir. 2009).
130 Press Release, supra note 127.
131 See, e.g., Lerner, supra note 105 (illustrating how Minnesota used internal 3M documents to demonstrate that 3M officials to “command the science” as a defensive barrier to litigation); Marcotty & Bjorhus, supra note 105.
132 See Denton et al., supra note 8; see also Cloud et al., supra note 126.
133 See Denton et al., supra note 8; see also Cloud et al., supra note 126.
134 Denton et al., supra note 8.
135 Ropeik, supra note 6; Hardwick v. 3M Co., No. 2:18-cv-1185, 2019 WL 4757134 (S.D. Ohio Sept. 30, 2019) (denying the defendant’s Motion to Dismiss a battery and product liability class-action claim).
still pose the same vulnerabilities as the above common-law claims. Defendants may argue the chemicals the plaintiffs were exposed to were not their chemicals, rather chemicals of another polluter. Even given the vulnerabilities of these and the other above claims, the common-law claims can be a strong key for private parties and governing bodies in the area of environmental law and especially in pollution cases where regulatory bodies have delayed regulating.

E. Settlement: It is not the Golden Ticket for States, Tribes, Counties, and Cities

Even if the parties settle, as was the case in Minnesota, the cost of getting a case ready can eat away at the overall settlement.\(^{136}\) When 3M settled with Minnesota for PFAS contamination in Washington County, the lawsuit alleging $5 billion in damages, settled for $850 million with expenses totaling $130 million, $720 million remained.\(^{137}\) While a significant amount of money, clean-up costs for each city can cost tens of millions of dollars for filtration systems, cleaning up wells, and other remediation measures.\(^{138}\)

Beyond settlement amount or the cost of taking a case to trial, the claim itself can dictate how cost and time-efficient the case may be. Negligence claims, for example, are not efficient. If the case rests on federal or state statutory claims that are more precise or lay the foundation for stricter liability in instances of likely hazardous or toxic substances or general contamination,

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\(^{136}\) Minnesota’s claim was unique because the first claim was a violation of the Minnesota Environmental Response and Liability Act (MERLA), which has a strict liability standard for any person, or company, who is responsible for a release of a hazardous substance (poses a substantial present or potential hazard to human health or the environment when improperly stored, disposed of, or otherwise manages) from a facility. The second count of the case was also under a Minnesota-specific statute, the Minnesota Water Pollution Control Act. See Complaint, Minnesota v. 3M Co., No. 27 CV 10 28862, 2010 WL 5395085 (Minn. Dist. Ct. Dec. 30, 2010) [hereinafter Complaint]; Minn. Stat. Ch. 115B (2019); Minn. Stat. §§ 115.01–.09 (2019).

\(^{137}\) Shaw, supra note 119.

\(^{138}\) Id.
then the defendant may be quicker to settle with the plaintiffs and the plaintiffs will be able to use the settlement agreement to protect their safety and remedy the situation.

Settlements can offer a benefit to all parties involved—a quick resolution and lowered expenses, and for polluters, the avoidance of precedent—preventing the creation of persuasive authority.\(^{139}\) Wide-spread emerging contaminant litigation demands a large-scale response that takes the burden off of states, tribes, and local governments. While there is nationwide litigation against PFAS polluters and there is widespread discussion, the settlements do little to offer persuasive authority when parties do not admit fault in the settlement. In general, common law claims only offer persuasive authority to another court, but findings of harm in one jurisdiction can be very persuasive to another court trying to determine if there is enough evidence to deem a pollutant hazardous or that it causes harm in the local community. Therefore, while non-settled cases cost more for the initial litigant, they help the greater community long-term.

Again, there are benefits to settling a case. Impacted communities that wait years or decades for financial relief can obtain necessary funds to upgrade their infrastructure to prevent further damage or to remedy polluted ecosystems.\(^{140}\) Yet, settlements still take time and some communities that cleanup the PFAS pre-settlement and have already made that financial investment, if a part of a larger settlement agreement, may be passed over to help other communities cover the costs of cleanup when there is not enough money to go around.\(^{141}\)

**VIII. HOW CONGRESS IS RESPONDING TO PFAS CONCERNS: A BAND-AID ON A LARGER PROBLEM**


\(^{140}\) Shaw, *supra* note 119.

\(^{141}\) Id.
Given that EPA action on PFAS has been slow to address the rising concerns, congressional leaders have pushed for action. In the 116th Congress, members introduced more than thirty-five bills to address PFAS using a variety of means. While a number of bills would direct the EPA to take regulatory or other actions, under environmental statutes like SDWA, many do not target the underlying problem that allowed for PFAS to become such a concern across the United States. They also face political challenges that EPA action alone would be less likely to face. If the trend of congressional and political action continues, environmental policy will likely continue to be delayed and the role of the EPA will continue to shrink. Relying on congressional response also subjects environmental policy to the whims of political pressures

142 ELENA H. HUMPHREYS & MARY TIEMANN, CONG. RSCH. SERV., R45793, PFAS AND DRINKING WATER: SELECTED EPA AND CONGRESSIONAL ACTIONS 1 (2019), https://fas.org/sgp/crs/misc/R45793.pdf; National Defense Authorization Act for Fiscal Year 2020, S. 1790, 116th Cong., CONGRESS.GOV, https://www.congress.gov/bill/116th-congress/senate-bill/1790/text?q=%7B%22search%22%3A%5B%22s%22%5D%7D&D$r=1&s=1 (last visited Oct. 21, 2019) (a bill that would require the Administrator of the EPA to add per- and polyfluoroalkyl substances to the list of toxic pollutants without taking into account the factors listed in paragraph 33 U.S.C. § 1317(a) which is for toxic and pretreatment effluent standards); Protect Drinking Water from PFAS Act of 2019, H.R. 2377, 116th Cong., CONGRESS.GOV, https://www.congress.gov/bill/116th-congress/house-bill/2377 (last visited Oct. 21, 2019) (H.R. 2377 would amend the SDWA to require the EPA to publish maximum contaminant level goals and national primary drinking water regulations for total per- and polyfluoroalkyl substances by adding a section to 42 U.S.C. § 300g-1(b)(12) that would require it to add the maximum level no later than two years after enactment). It should be noted that two years after enactment would likely be at the same time equivalent or after the EPA is expected to release maximum PFAS levels. See also Clean Water Standards for PFAS Act of 2019, H.R. 3616, 116th Cong., CONGRESS.GOV, https://www.congress.gov/bill/116th-congress/house-bill/3616 (last visited Oct. 21, 2019) (the bill would require that per- and polyfluoroalkyl substances to be designated as pollutants under the Federal Water Pollution Control Act and for other purposes) [Hereinafter collectively referred to as Bills.].

143 HUMPHREYS & TIEMANN, supra note 141; Bills, supra note 140.

144 Emily Moon, Trump Promises to Veto a Bill Banning the Military from Using Toxic Products with PFAS, PAC. STANDARD MAG. (July 11, 2019), https://psmag.com/environment/trump-promises-to-veto-a-bill-banning-the-military-from-using-toxic-products-with-pfas (noting that President Trump threatened to veto a defense spending bill that would restrict the use of PFAS arguing it would impact the DOD’s mission); Daniel C. Vock, Cities Confront the “Forever Chemicals” Contaminating Drinking Water, GOVERNING (July 2019), https://www.governing.com/topics/transportation-infrastructure/gov-pfas-chemicals-regulations-epa-ann-arbor-congress.html (noting that when federal health researchers warned that the EPA’s recommended thresholds of PFAS may be seven to ten times too high that the Trump administration initially tried to block the release of the draft report afraid of public relations concerns).
and news—not research-backed health concerns—and will turn the United States’ regulatory
process into a large game of contaminant whack-a-mole.

IX. **How the Safe Drinking Water Act Can Offer A Solution: The Future of PFAS**

Prior to the 1996 Amendments, the United States saw a spike of new drinking water standards for community water systems between 1989 and 1993, with over fifty regulated chemicals. This was a result of the 1986 SDWA Amendments which were made because Congress was frustrated by EPA’s slow pace for developing new regulations, with only twenty-three contaminants being regulated between 1975 and 1985. The 1986 Amendments required the EPA to set maximum contaminant levels and maximum contaminant level goals for eighty-three named contaminants, and by 1992, the EPA had issued regulations for seventy-six.

By contrast, in the twenty-three years since the 1996 Amendment, not a single new drinking water standard has been adopted except those that were mandated by Congress. It seems likely that congressional action—rather than EPA action—is how PFAS regulations will be established. This calls into question the effectiveness of SDWA system, which was designed so that an agency using scientific expertise would establish maximum contaminant standards—not Congress—yet as a practical matter the current system relies on Congress to mandate standards in the post-1996 Amendment era.

For over a decade, the EPA has used SDWA authority to evaluate several types of PFAS, primarily PFOA and PFOS, to determine if regulations would be warranted, but the EPA has yet

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145 2 GRAD, *supra* note 48, § 3.05.
147 *Id.*
148 Snider, *supra* note 56.
149 Olson, *supra* note 68.

The current system for establishing maximum contaminant levels for drinking water stalls actual regulation. In 2009, PFOA and PFOS were listed as a contaminant that was known or anticipated to occur in public water systems and may require regulations under SDWA, along with 116 other contaminants out of over 7,500 chemicals and microbial contaminants that were considered by the EPA.\footnote{151}{HUMPHREYS & TIEMANN, supra note 141.} At the time, companies had already begun phasing out production and use of PFAS and the chemicals had been in use for over fifty years.\footnote{152}{Press Release, supra note 127.}

Five years later, many contaminants were carried over, including PFOAS and PFOS.\footnote{153}{Id.} During this time, lawsuits were being filed against manufacturers for PFAS contamination arguing that they had made their way into the public water system and were causing negative health impacts on the community.\footnote{154}{Complaint, supra note 135.}

It was not until November 2016, when cases were in the process of settling, that the EPA included PFOA and PFOS on the agency’s list of unregulated contaminants where there is sufficient health effect and occurrence data available to make a regulatory decision.\footnote{155}{HUMPHREYS & TIEMANN, supra note 141.} It was not until February 2020 that the EPA included just those two types of PFAS, PFOA and PFOS, on its Contaminant Candidate List—which is still not a regulation.\footnote{156}{John Gardella, PFAS Under Biden Administration—Change is Coming, NAT’L L. REV. (Dec. 18, 2020), https://www.natlawreview.com/article/pfas-under-biden-administration-change-coming.}
At the time of writing this, regulations could still be a year off, as we wait with bated breath for PFAS chemicals to be regulated. Years after lawsuits have been filed and settled for PFAS contaminations and states have begun enacting their own maximum contaminant standard.157 Thus, by the time PFOA and PFOS, just two sub-categories of PFAS, are regulated, they have been on the EPA’s radar for over ten years.

While regulatory haste can be problematic, SDWA’s five-year cycle unnecessarily hinder the regulatory process and risk human health and safety. The five-year cycle was designed to manage the cost of compliance for public water systems that are paid by municipalities, tribes, and other groups, but are ultimately costs to residents and consumers.158 The notice and delay provides public water system managers some time to budget for adjustments and certainty within fiscal years, which is beneficial especially to smaller municipalities with less flexible budgets.159 The 1996 Amendments also push the EPA to justify the cost, especially when the cost of removing contaminants or switching water supplies cost millions.160 The current system is problematic because ultimately residents, are burdened with the cost of removing contaminants left by polluters who profited from their creation and use. The longer a chemical is allowed to be

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157 Id.; Annie Ropeik, Strict New Limits on PFAS Chemicals in N.H. Water Supplies Take Effect, N.H. PUB. RADIO (Sept. 30, 2019), https://www.nhpr.org/post/strict-new-limits-pfas-chemicals-nh-water-supplies-take-effect#stream/0; Kirsti Marohn, Minnesota Tightens Rules on “Forever” Chemical in Drinking Water, MINN. PUB. RADIO (Apr. 3, 2019, 10:26 PM), https://www.mprnews.org/story/2019/04/03/minnesota-tightens-rules-on-forever-chemical-in-drinking-water; Bergquist, supra note 8 (noting that the Wisconsin process for proposing a rule for PFOA and PFOS could take thirty months and the Governor’s Administration could speed up the process by proposing a temporary emergency rule. The rule would also be significantly stricter, twenty parts per trillion, than the current EPA health advisory level of seventy parts per trillion).


159 Walton, supra note 21 (noting that a city of 41,000 may need between five-million dollars and sixty-million dollars in PFAS cleanup and water treatment; Vock, supra note 143 (explaining that the Ann Arbor replacing water filters when they discovered PFAS to be, at one point forty-three parts-per-trillion (below EPA recommendation of 70 ppt) cost $850,000, a tenth of its operating budget. It also notes that the city plans on complying with the most stringent regulations on PFAS in the country—whether they are legally obligated to or not).

160 Walton, supra note 21.
present in the environment the greater the risk; so many governing bodies are left taking quick action, using their budgets to pay for costly removal projects to protect residents.

Thus, while designed to maintain human health and balance implementation needs, the EPA’s resulting delays hurt communities in multiple ways. First, the EPA reviews safe levels of contaminants in the public water supply, so local and state governments do not conduct, or conduct minimal, research on chemicals and their risks to determine if regulation is necessary. While some states have begun to regulate PFAS levels, the SDWA should be comprehensive to allow for national standards, greater consistency, and to close potential production loopholes. Furthermore, since the EPA is tasked with such regulation and review, contaminants not recognized by the EPA as potential hazards are not always screened for, or if they are, they may not be viewed as a concern. Delay can be crucial when the chemical, like PFAS, bioaccumulates in the body, so research and regulation should be done as soon as possible so local, tribal, and state governments can respond accordingly. State and local leaders are asking the federal government to address PFAS contamination because public health is at risk due to contamination and safer alternatives exist.161

The federal government should decrease or remove the five-year cycle in SDWA in order to allow the agency greater flexibility in regulating water contaminants. Even without the five-year cycle, there are many other mechanisms available to decrease the burden on public water systems. For example, the 1996 Amendments would still require the EPA to review that there is

161 CDC, Health Effects, supra note 34; Jensen et al., supra note 24; Carolyn Berndt, 14 Local Leaders are Taking Action on Contaminated Drinking Water, NAT’L LEAGUE CITIES (May 21, 2019), https://citiesspeak.org/2019/05/21/14-local-leaders-are-taking-action-on-contaminated-drinking-water/ (noting that the National League of Cities’s Energy, Environment, and Natural Resources Committee has formed a subcommittee to form recommendations that the League of Cities will advocate for at the federal level on behalf of U.S. cities); Carolyn Berndt, A Growing Number of Cities are Concerned About Contaminated Drinking Water, NAT’L LEAGUE CITIES (Mar. 1, 2019), https://citiesspeak.org/2019/03/01/a-growing-number-of-cities-are-concerned-about-contaminated-drinking-water/.
a potential for “meaningful opportunity for health risk reduction,”\footnote{42 U.S.C. § 300g-1(b)(1)(A)(iii) (2018).} so the agency would carefully review if the cost-benefit analysis of the rule is reasonable for managers of public water supplies. Furthermore, there would still be a requirement that the agency provides notice and a reasonable opportunity for public comments which would provide public water managers the opportunity to voice concerns about their ability to remove the contaminant.\footnote{Id. § 300g-1(b)(1)(B)(i)(I).}

Furthermore, the five-year cycle’s goal of less regulation, is shifting who is regulating and how quickly, but is not causing less regulation. EPA inaction does not prevent state-level regulation on contaminants. Currently, many states regulate contaminants, like PFAS, independently and some enforce more protective rules than the EPA’s health advisory.\footnote{See Bergquist, supra note 8. See also Marohn, supra note 156 (outlining notification requirements for PFOA and PFOS levels and notes that West Virginia requires alternative drinking water for residents when PFOA levels exceed seventy ng/L); Vock, supra note 143.} Removing the five-year cycle from SDWA would allow the EPA to address other emerging contaminants better and combat increasing rates of chemicals with unknown health impacts.

The federal government should also reinstitute the requirement that the EPA regulate a specified number of contaminants during a specified time range. The 1996 Amendments removed the requirements that the EPA regulate twenty-five new contaminants every three years starting in 1991, which was instituted under the 1986 Amendments.\footnote{U.S. Env’t Prot. Agency, supra note 50.} The explicit standard and expectation that the EPA will regulate a specific number of chemicals during a given period incentivizes and encourages the EPA to review new chemicals as they reach the market and ultimately—our water system. The requirement was removed in 1996 because drinking water utilities could not keep up with the new regulations, and Congress took an extra step to make the

\footnote{42 U.S.C. § 300g-1(b)(1)(A)(iii) (2018).}  
\footnote{Id. § 300g-1(b)(1)(B)(i)(I).}  
\footnote{See Bergquist, supra note 8. See also Marohn, supra note 156 (outlining notification requirements for PFOA and PFOS levels and notes that West Virginia requires alternative drinking water for residents when PFOA levels exceed seventy ng/L); Vock, supra note 143.}  
\footnote{U.S. Env’t Prot. Agency, supra note 50.}
EPA consider the cost when setting a standard.166 However, Congress did not need to take both steps. Congress could have loosened the requirement—for instance making it twenty-five contaminants every ten years—or requiring the EPA to institute a cost-benefit analysis and notification requirement that could allow water utilities to plan for upcoming expenses or more affordable advancements. When 2,000 new chemicals are introduced every year,167 the EPA should have regulated at least one chemical in a twenty-year span, but under the 1996 Amendments, that is not the case. Because the EPA is not regulating chemicals, our water systems are underprepared for the risk some chemicals may pose.

This requirement would be different than the current standard that requires the EPA to determine whether or not to regulate five contaminants every five years because it would require a set number of specified regulations. While there have been some proposed bills that would strengthen the process by increasing the number of contaminants, the EPA has to decide whether or not to act upon and decrease the time frame the EPA has to do it,168 the current process has too many steps. It does not allow the EPA the flexibility that striking the listing for consideration and then instituting a specified number of chemicals that need regulation each year would offer.

Requiring the EPA to test and set standards for a specified number of chemicals in a given time frame is not unprecedented. Beyond the 1986 Amendments that instituted this requirement, the Frank R. Lautenberg Chemical Safety for the 21st Century Act, Congress passed in 2016, requires the EPA to review a minimum of twenty chemicals at a time, each with

166 Ariel Wittenberg, “EPA was Always Bad on Drinking Water”, E&E NEWS (Feb. 5, 2019), https://www.eenews.net/stories/1060119665.
168 H.R. 1068, 115th Cong. (2017) (changing the SDWA process for regulating a contaminant by decreasing the time frame the EPA has to make an action and by increasing the number of contaminants the EPA must consider in that period).
a seven-year deadline.\textsuperscript{169} Then individuals that use the chemicals would have five years to comply with the new rules.\textsuperscript{170} Adopting a similar standard that is lofty, but obtainable, for the EPA and a time frame for water utilities to prepare for the expense would be one method to strengthen the drinking water supply.

Not every water utility would be impacted in the same way, some water utilities may not need many updates, but some might. To ease the strain on the water utilities, the federal government could provide financial support or it could get creative with the time a water utility has to comply with the requirements (i.e., the water utility would have ten years to comply or a water utility may need to monitor a chemical’s level in the system starting at seven years, but would not need to improve the system for a few years later). Nationwide support to affected areas provides the additional benefit of limiting the sale of contaminated crops and meats that, unlike drinking water, could have nationwide ramifications. Requiring the EPA to act on a specified number of chemicals in a given period would encourage higher drinking water standards.

Another action that the federal government could take that would increase the strength of SDWA would be to strike the 1996 amendment that instituted a cost-benefit analysis when considering regulating a new contaminant. The current requirement “creates a Herculean set of tasks that EPA [has] to go through before they [can] adopt any new standards.”\textsuperscript{171} The shift in 1996 was partly in response to the complaint from local water officials that they were

\begin{flushleft} \textsuperscript{169} Scialla, {	extit{supra}} note 166 (noting that the bill received bipartisan support, with the House passing the bill 403 to 12 and without a single senator voting against the bill, and there was also industry support on the bill. The article also notes that public health and environmental advocates protested that the Toxic Substance Control Act passed in 1976 was too old and weak to shield Americans from toxic chemicals). \textsuperscript{170} Id. \textsuperscript{171} Brady Dennis, {	extit{In U.S. Drinking Water, Many Chemicals Are Regulated—But Many Aren’t}}, WASH. POST (June 10, 2016), https://www.washingtonpost.com/national/health-science/in-us-drinking-water-many-chemicals-are-regulated--but-many-arent/2016/06/09/e48683bc-21b9-11e6-aa84-42391ba52c91_story.html. \end{flushleft}
experiencing increasing costs for a growing list of contaminants in which some only appeared in certain parts of the country.\textsuperscript{172} Reinstating the health-based standard used prior to 1996 and taking steps to lessen the burden on water utilities, either by providing funding, increasing the time to comply or, since many complained that contaminants only appeared in certain parts of the country, allowing water utilities to opt-out of monitoring non-present chemicals and have a less frequent testing requirement for chemicals that are not present in their system over a period of time or in areas where there is no known exposure may provide a similar benefit. The flexible monitoring standards would allow utilities to avoid the additional cost of monitoring for chemicals that are unlikely to impact their system, thus reducing the overall cost. It would also merge the benefits of federalism, national standards, and a singular cost, with the benefits of state and local government, a tailored approach that only impacts those that it needs to.

One concern with requiring the EPA to regulate a specified number of chemicals during a given period is the burden it places on the EPA and the cost associated with the requisite level of chemical testing.\textsuperscript{173} While a valid concern, requiring the EPA to test a number of chemicals during a given period may be a more cost-efficient method of drinking water regulation than a state-by-state process where states, local governments, tribal nations, and private parties are testing chemicals and establishing evidence for their claims. Furthermore, the proactive federal testing approach also would protect human health which is priceless. Other environmental statutes do not compromise on the health of a species,\textsuperscript{174} so the United States should not compromise when it comes to human health and drinking water.

\textsuperscript{172} Id.
\textsuperscript{173} Id. (stating there was a concern with the cost associated with requiring the EPA to test a specified number of chemicals each year).
The EPA’s inability to quickly respond to emerging contaminants leaves individuals with fewer and less effective judicial remedies. The concentration of the chemical could decrease over time, so it may be harder to identify what the level of exposure was or if people were exposed, the corresponding risk, or the source. Once a chemical’s presence is identified, governmental bodies may not have evidence that the levels were high enough to appear dangerous under federal law, so it may seem less dangerous than it is. Furthermore, the longer a chemical is in the environment, the more people could have been exposed and the greater the risk that the exposure has caused health impacts, thereby increasing potential damages. Delay may also leave governmental bodies with only common law or state-specific claims. Thus, SDWA’s current process for regulating chemicals hinders the judicial branch and hinders local government action.

The SDWA would not, nor should it, replace common law and state law claims of action, but rather compliment the claims. Nor will SDWA solve all drinking water contaminant concerns, especially when SDWA does not cover private water supplies, like wells. That is exactly why common law claims remain important in environmental law. Yet, SDWA remains a more effective tool to disseminate information and issue regulations than alternatives, like state-specific regulations.

The state-specific regulations approach is also not perfect because it lacks the benefits of a federal approach. A state-by-state approach could back-fire if there is increased pressure to lower PFAS standards and no state wants to have the highest PFAS standard. PFAS represent

175 42 U.S.C. § 300f(4) (2018) (noting that a public water system must have at least fifteen service connections or regularly services twenty-five individuals it is generally a public water system); Understanding the Safe Drinking Water Act, ENV’T PROT. AGENCY (June 2004), https://www.epa.gov/sites/production/files/2015-04/documents/epa816f04030.pdf (noting the SDWA does not regulate private wells which serve fewer than twenty-five individuals).
176 Vock, supra note 143 (noting in addition to federal regulations, state and local governments must create safe regulations while balancing criticism of enforcing the highest thresholds amongst other states).
177 Id.
a larger problem with SDWA. As more chemicals and compounds enter the marketplace, there will be a greater risk that those chemicals may also be making their way into the water supply. The federal government is unprepared to address these growing health concerns promptly—putting human health on the line.

X. HOW AMENDING THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT (CERCLA) COULD BETTER RESPOND TO EMERGING CHEMICALS, LIKE PFAS

Amendments to the SDWA should be done in conjunction with other environmental statutes. CERCLA should be amended to address additional water contaminants.

Under CERCLA, states, tribal nations, and local governments should be given greater control over clean-up sites. The current problem with CERCLA is that “the number of sites added to the [National Priorities List] continues to grow faster than the number [of] cleaned up and removed from the list.” The idea of increasing the role of state and local communities in cleanup decisions is nothing new; it was proposed in a 1994 “consensus” Superfund Reform Bill. However, it did not ultimately become law. The 1994 bill would have required creating a state registry, which would include facilities that the state believes in presenting a current or potential hazard to human health and the environment. A provision in the bill permitted the EPA to conduct a feasibility study to determine whether states should be delegated

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178 See Victoria L. Peters, Delegation of EPA’s CERCLA Enforcement Authorities to Qualified States Would Not Violate the U.S. Constitution, 29 ENV’T L. REP. 10018 (1999) (discussing Congress routinely delegates federal enforcement authorities to nonfederal officers, thus likely no constitutional violation in delegations of CERCLA responsibilities to states).
179 1 Environmental Law in Real Est. & Bus. Transactions § 1.01 (2019).
180 Id.
181 Id.
the authority to use state law to carryout CERCLA provisions.\textsuperscript{183} However, given the 1994 bill’s failure, the current process only allows local jurisdictions to ask the EPA to consider listing a contaminated site. Allowing states to have greater control over the cleanup process would mirror the current situation with PFAS contaminated communities, where state and local governments are bearing the cost\textsuperscript{184}—and suing PFAS generators for reimbursement—and more adequately reflect the current situation with environmental policy.

The federal government should also require the EPA to promulgate cleanup standards. While the current cleanup standards vary based on the kind of site and how much contamination is present, and the current system allows for flexibility that can be beneficial, if states are to have greater authority over the designation of contaminated sites and cleanup, cleanup standards would allow for some level of national uniformity. However, if CERCLA is amended along with SDWA, the SDWA standards could suffice because while CERCLA generally does not list specific standards that apply to the cleanup of an individual site, remedial actions must achieve a level of cleanup to acquire the maximum contaminant levels established under SDWA.\textsuperscript{185}

Unlike changes to SDWA, CERCLA puts the expense of remediation on the parties that created the exposure. Therefore, unlike SDWA, where water utilities and local governments, thus taxpayers, would pay for changes to water systems, CERCLA would require companies that used, benefitted, and profited from PFAS to pay to fix the situation. It would also require federal agencies, like the Department of Defense—a significant user of PFAS—to pay for the cleanup efforts.\textsuperscript{186} The fact that CERCLA would apply to the Department of Defense would be

\textsuperscript{183} \textit{Id.} § 207 (1994).
\textsuperscript{184} Shaw, \textit{supra} note 119.
\textsuperscript{186} Benesh, \textit{supra} note 84.
significant given that the Department of Defense, while taking steps to clean up contamination in some areas, has been hesitant in others, and according to the Air Force, “the federal government is immune . . . from a state enforcing its laws for the release of anything other than CERCLA hazardous substances.”187 Another benefit to CERCLA changes would be the fact that CERCLA does not just cover drinking water or public water systems, but any release of a hazardous substance, which would allow for the removal of contaminants from other areas. One concern with expanding CERCLA is that the cost of remediation for the hundreds of PFAS contaminated sites may outlast the contaminators.188 By no means is this paper meant to suggest that companies who used the chemicals should be forced into bankruptcy as a result of cleanup costs, especially since it is likely that many used PFAS before they knew the full ramifications of the health impacts and, for some, it is now decades after they stopped using PFAS. However, the current system, of local governments and states—taxpayers, who are likely exposed to the chemical—covering the cost of an industry that benefited from PFAS is also not a form of justice.

While there is some discussion to list PFAS as a hazardous substance under CERCLA,189 which would provide the benefit of requiring polluters to clean up hundreds of contaminated sites and could provide states a strong legal claim when suing PFAS generators, PFAS are just a


188 Riley Beggin et al., PFAS Clean-Up Costs Are Increasing. Michigan Taxpayers May Have to Foot the Bill, MICH. RADIO (Nov. 18, 2019), https://www.michiganradio.org/post/pfas-clean-costs-are-increasing-michigan-taxpayers-may-have-foot-bill (exemplifying Velsicol Chemical bankruptcy after DDT and PBB contamination in St. Louis, Michigan, required ongoing cleanup costing an estimated $500 million in remediation plus $5 million each year after remediation to maintain, which Velsicol paid ten percent of remediation).

189 See Benesh, supra note 84.
symbol of a larger problem with the CERCLA system. PFAS are “forever chemicals,” and communities will continually be re-exposed unless they are removed.\(^{190}\) Still, there is no evidence to suggest that PFAS are unique or will continue to be unique as more new chemicals hit the market every year. The United States needs to institute broad, large-scale reform that goes beyond one specific chemical or group of chemicals—the United States needs to move beyond chemical whack-a-mole. Even then, the proposed changes likely will not reduce all risks of contaminant exposure, nor would it act as a “de facto ban” on chemicals.\(^{191}\) It would require individuals that do choose to use PFAS or other novel chemicals—because they do serve some utility—to do so cautiously, considering the cost of protecting the health and safety of the surrounding environment.

Amendments to CERCLA should not supersede or displace the valuable role of common law and state law claims in environmental law. Instead, the amendments should operate as a strong and more efficient claim given its strict and joint and several liability. Under the current system, CERCLA does not live up to the promise of efficiency when dealing with contaminated sites. Strengthening CERCLA would allow states, local governments, and tribal communities exactly what it was intended to provide. To change, more power must be delegated to state and local authorities, there must be guidance on cleanup standards and large, systemic change rather than action on solely PFAS.


\(^{191}\) Melanie Benesh, *For PFAS, Hazardous Designation is Not a Ban*, ENV’T WORKING GRP. (Oct. 15, 2019), https://www.ewg.org/news-and-analysis/2019/10/pfas-hazardous-designation-not-ban (detailing that while some believe that designating PFAS as a hazardous substance under CERCLA would be a de facto ban, the evidence is to the contrary, with 761 substances currently on the CERCLA hazardous substance list with approximately seventy-nine percent still in active commercial use today even though almost 700 of the listed substances have been on the list since 1980).
XI. Conclusion

Until changes are made to federal statutes that grant the EPA a greater ability to regulate and issue guidance on emerging chemicals as they present themselves, stories about drinking water contamination or communities suffering from negative health impacts resulting from chemical mismanagement will continue to occur. While PFAS may be unique in their severity and prevalence, PFAS are not outliers. There are concerns that alternatives to PFAS may turn out to be just as dangerous, becoming the new generation of PFAS. As science advances and chemicals can become more complex and potentially dangerous, there is greater risk for the next contaminant crisis, which is why there must be a systemic change in how the EPA regulates emerging chemicals under SDWA and CERCLA.

While states have a useful tool with the common law and state and local regulation, it should not be the only tools in a party’s toolbox to seek legal action on drinking water contamination and protect human health. Not only does reliance on state-specific common law or statutory claims result in a patchwork of legal frameworks, but it could result in a patchwork of legal protection that incentivizes polluters to continue polluting states that lack the economic power or political will to say no to the industry. It is exactly why we have a federal system designed to protect states from making these types of decisions and encourage standardized regulations in the protection of human health.

Amending SDWA and CERCLA is a solution to help communities in areas that house industries that requires innovation and chemical discovery. Otherwise, novel chemicals may be

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deemed useful, and thus mass produced, before all of the health and safety ramifications are fully considered and evaluated. Even considerations of how it will impact drinking water in the community may be a far-off thought. Further changes could allow for quicker legal solutions, and ideally, preventative strategies that the court cannot provide.

Drinking water contamination is not inherently controversial but requiring the legislative branch to swoop in to cover for the EPA or for the court to jump in is not a sustainable, long-term solution. While the courts are absolutely empowered to hear cases on emerging contaminants and should when federal regulation lags behind, the delay between chemical discovery and federal regulation still should not be a few decades. The broad legal claims of trespass, nuisance, and negligence offer a layer of support in an ever-evolving world where the next legal issue cannot always be predicted. However, while emerging contaminants are different and pose different risks, the emerging contaminant’s existence is nothing new and will continue to present problems as more chemicals hit the marketplace. As a result, more specific legal protections should be put in place to address scientific uncertainty when public health is potentially at risk.

In times where new chemicals, isomers, and polymers are identified at ever-increasing rates and with a greater scientific ability to determine potential uses for the chemicals, the EPA must be equipped with the ability to monitor and regulate chemical developments so that governing bodies watching their community struggle with a new toxic chemical are not combatting it with only old legal doctrines.