

CURRENT TRENDS IN TOXICS LITIGATION

March 2026



What are some of the key contaminants driving litigation

What legal trends are shaping toxics litigation

What are some of the impacts and future emerging trends

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While toxic pollution is not a new problem, we have reached a flashpoint where scientific evidence and public awareness of its associated human health and environmental impacts are again driving efforts for meaningful change. ELI's Toxics Litigation Project develops resources that track and analyze litigation, legal risk, and regulation in this space, with the goal of identifying opportunities for progress toward making the world a healthier place.

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EXECUTIVE SUMMARY

Toxics litigation is a rapidly evolving field, driven by scientific evidence, heightened public awareness, changing regulatory frameworks, and multiple, sometimes overlapping, theories of liability. Over the past several years, litigation strategies have broadened beyond traditional tort law to combine personal injury allegations, environmental contamination theories, consumer protection laws, public nuisance claims, and more, reshaping the legal landscape. Emerging contaminants and industrial chemicals are the focus of much of this litigation, setting the stage for future contaminants or chemicals of concern to follow suit.

This report focuses on areas of litigation concerning pesticides (such as glyphosate and paraquat), per- and polyfluoroalkyl substances (PFAS), petrochemicals, and plastics (namely microplastics and associated chemicals) as some of the major and emerging drivers of current toxics litigation in the United States. Through this analysis, we aim to illuminate the current landscape of toxics litigation and how scientific advancement and uncertainty, state and federal law, and judicial doctrine intersect in the ongoing effort to address the risks and consequences of toxic exposures in the United States and abroad.

KEY AREAS AND CURRENT TRENDS



Pesticides

In recent years, there has been a significant rise in pesticides litigation, driven largely by growing concerns over the health and environmental impacts of widely used chemical products. High-profile cases, such as lawsuits involving glyphosate (the most widely used herbicide in the world, including in Roundup™ products) and paraquat dichloride (growing in use due to crop resistance to other herbicides), have brought increased scrutiny to the industry, with plaintiffs alleging links to cancer, Parkinson’s disease, and other serious health conditions.



PFAS

The rise in PFAS litigation has accelerated in recent years, as awareness grows of the environmental and health risks posed by these so-called “forever chemicals.” Found in a wide range of consumer products and industrial applications, PFAS have now been linked to cancer, immune system disorders, and other serious health issues. As contamination is detected in water supplies, soil, and human tissues across the United States and globally, communities, municipalities, and individuals are suing manufacturers for damages and cleanup costs. Major chemical companies are facing billions of dollars in potential liability, signaling a shift toward greater accountability and stricter regulation of PFAS production and use.



Petrochemicals

Petrochemical litigation reflects growing concerns over the health, environmental, and climate impacts associated with production and use of chemicals derived from fossil fuels. Communities living near petrochemical plants have filed lawsuits citing elevated rates of cancer, respiratory illnesses, and other health issues linked to toxic emissions. Meanwhile, environmental groups and state governments are pursuing legal action against petrochemical companies for contributing to pollution, violating clean air and water standards, and exacerbating climate change. As regulatory scrutiny intensifies and public pressure mounts, the industry faces a wave of legal challenges that could reshape how these chemicals are produced and regulated.



Plastics

Litigation related to plastics—especially microplastics—is on the rise as scientific evidence mounts linking plastic pollution to environmental harm and potential human health risks. Microplastics, tiny plastic particles found in the oceans, food, water, and even the human body, have become a focal point in lawsuits targeting manufacturers and consumer goods producers. Plaintiffs argue companies failed to warn about the dangers or contributed to widespread contamination through negligent production and disposal. As public concern and regulatory scrutiny increase, legal actions are expanding to include not only environmental damage, but also potential long-term health effects, signaling a new frontier in environmental and product liability litigation.

TAKEAWAYS

Regulatory “Backstop” Role

Due to weak or changing federal regulations, litigation has become a *de facto* tool for public health and environmental advocacy.

Rise in Class Actions

Class-action lawsuits can expedite proceedings and provide a unified front for plaintiffs, often leading to more efficient resolution and higher damages due to cumulative impacts.

Proof of Causation Hurdle

Demonstrating a causal link between harm and exposure to a product or substance remains a significant hurdle for many reasons, including the potential latency period between exposure to the substance and the manifestation of health issues and the advanced science and medical knowledge necessary to link them.

Failure-to-Warn Dominance

"Failure-to-warn" claims have become the central, almost universal, argument in chemical and emerging contaminants lawsuits, with plaintiffs alleging that manufacturers did not disclose health risks despite knowing them.

Federal Preemption Battle

A major legal battle over preemption is brewing, with the U.S. Supreme Court preparing to decide if federal law preempts state-level lawsuits over pesticides. A ruling in favor of manufacturers could end thousands of pending cases, and have implications for microplastics and other substances.

Major Verdicts and Settlements

Despite some high-profile reversals and reductions on appeal, plaintiffs have achieved multibillion-dollar verdicts and settlements.

Industry Legislative Pushback

In response to litigation, the chemical industry is actively lobbying for state-law liability shields, with the goal of making federally approved labels the final word on safety.

The Court of Public Opinion

Toxics litigation often draws attention from the media, consumers, investors, regulators, etc., impacting defendants' reputations beyond the courtroom.



IMPACTS AND FUTURE TRENDS



Impacts

- Toxics litigation can provide **access to justice and compensation** for both individuals and communities.
- Such litigation can be a powerful **tool for addressing environmental injustice**.
- **Rise of third-party litigation funding** may both increase access to justice and raise new logistical and legal questions.
- Litigation comes with **financial risk and potential reputational damage for companies**.
- Litigation may lead to **changes in consumer and investor behavior**.

[Press conference on PFAS legislation in New York.](#)

Looking Forward

- As the health effects become clearer, **litigation involving emerging contaminants is expected to rise**. In addition to novel PFAS, other emerging contaminants that may see increasing litigation include microplastics, formaldehyde, phthalates, and more.
- **Advances in scientific research and technology will continue to spur collection of evidence, methods of proving causation, and litigation.**
- **New laws and regulations and stricter enforcement at the state level may serve as a basis for tort litigation**, by requiring the listing of toxic substances and uncovering violations.
- **Toxics litigation and climate litigation will likely continue to reinforce each other**, due to their interconnected issues and shared corporate actors and sites.
- **Climate disasters are increasing toxic exposures** as they grow in scale, frequency, and intensity, leading to new avenues of litigation.

INTRODUCTION

Human exposure to toxic substances has been a defining feature of the industrial age. Since the late nineteenth and early twentieth centuries, rapid industrialization, urbanization, and the expansion of chemical manufacturing have introduced thousands of synthetic compounds into commerce, workplaces, homes, air, water, and soil. In the United States, the growth of industries such as petroleum refining, metals production, plastics, pesticides, and pharmaceuticals have dramatically increased the volume and diversity of chemicals in everyday life. While many of these substances have delivered substantial economic and societal benefits, they have also created pathways for chronic, low-dose, and sometimes devastating human exposures.

Public awareness of the health and environmental consequences of toxic substances grew significantly in the mid-twentieth century. High-profile contamination events and emerging scientific research revealed links between chemical exposure and cancer, reproductive harm, neurological injury, and other chronic diseases. The 1962 publication of *Silent Spring*¹ by Rachel Carson marked a turning point, catalyzing public concern about pesticides and laying the groundwork for modern environmental regulation. In response to growing public awareness, Congress enacted sweeping statutes, including the Clean Air Act, the Clean Water Act, the Comprehensive Environmental Response, Compensation, and Liability Act, and the Toxic Substances Control Act. These laws established federal authority to regulate emissions, manage hazardous waste sites, and assess chemical risks, fundamentally reshaping the legal landscape governing toxic substances.

Despite this regulatory framework, litigation has remained a central mechanism for addressing alleged harms from toxic exposures. Plaintiffs have turned to courts to seek compensation for personal injuries, property damage, and medical monitoring, as well as to compel cleanup and disclosure. Toxic tort litigation has evolved alongside scientific advances in epidemiology and toxicology, confronting complex questions of causation, attribution, and the admissibility of expert testimony. Landmark judicial decisions—most notably *Daubert v. Merrell Dow Pharmaceuticals*²—have significantly shaped the standards for scientific evidence in federal courts, influencing the trajectory and viability of toxic tort claims.

In recent decades, trends in U.S. toxics litigation have reflected shifting patterns of exposure and regulatory focus. Traditional industrial contamination cases involving asbestos, lead, etc. have been joined—and in some instances supplanted—by litigation over emerging contaminants such as per- and polyfluoroalkyl substances (PFAS), other petrochemicals, pesticides, and more. Claims increasingly involve complex supply chains, multinational corporate defendants, and overlapping state and federal regulatory regimes and case law. At the same time, procedural developments, including multidistrict litigation (MDL) consolidation and evolving preemption doctrines, have reshaped how toxic exposure claims are litigated and resolved.

This report examines current trends in the evolving landscape of U.S. toxics litigation. In it, toxics litigation is defined as cases brought before judicial bodies that involve material issues related to a variety of toxic substances. Toxic substances are broadly defined as chemicals or materials capable of causing harm—health effects, illness, injury, or death—to humans (or animals) through exposure. Information and cases for this report were compiled through consultations with

practitioners and experts, desk research, publicly available and subscription-based litigation databases, and court electronic records databases.

Part I of this report begins by providing a brief overview of the history of toxics litigation. Part II discusses current trends, focusing on four key substance-driven areas of litigation: pesticides, PFAS, petrochemicals, and microplastics. Part III provides a view into the actions of other countries for some comparative context and to illuminate areas of contrast or innovation. Part IV of the report concludes with a discussion of impacts and identified future trends. Through this analysis, we aim to illuminate the current landscape of toxics litigation and how scientific advancement and uncertainty, state and federal law, and judicial doctrine intersect in the ongoing effort to address the risks and consequences of toxic exposures in the United States.

PART I. HISTORICAL CONTEXT

This section gives a brief overview of toxics litigation in the United States to provide historical and legal context for this report's focus on current trends. It then provides additional context of precursors to these trends, to provide an informational basis and set the stage for the current landscape of toxics litigation discussed throughout.

History of Toxics Litigation

Litigation over toxic pollutants has a nearly century-long history in the United States, with the earliest cases grounded in tort and common law. The first documented asbestos lawsuit was filed against the Johns-Manville Corporation in 1929.³ It foreshadowed numerous cases a half-century later against the same defendant, which led to creation of the first bankruptcy trust to ensure the compensation of future asbestos victims.⁴ Though asbestos cases remain one of the most prevalent types of toxic tort actions and represent the most expensive mass tort in history,⁵ the United States still has not completely banned asbestos use.⁶ This story mirrors much of the current landscape for toxics litigation: a sometimes limited, evolving regulatory system for specific substances being supplemented, or even overtaken, by a retrospective tort system that attempts to fill gaps by allowing injured individuals and communities to directly seek redress.

Advocacy and litigation on toxic pollutants led to passage of several key regulatory statutes, such as the Toxic Substances Control Act (TSCA); the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA); Comprehensive Environmental Response, Compensation and Liability Act (CERCLA); and Resource Conservation and Recovery Act (RCRA). Toxics litigation based on these federal statutes was (and still is) primarily aimed at actions by the Environmental Protection Agency (EPA), but also has included cases against the Food & Drug Administration (FDA), Occupational Safety & Health Administration (OSHA), Army Corps of Engineers, and other federal agencies or bodies. Citizen suit provisions in statutes including TSCA, the Clean Water Act (CWA), and Clean Air Act (CAA) have also allowed plaintiffs to bring suits against manufacturers and polluters for statutory violations.

TSCA, enacted in 1976, started by regulating six substances: asbestos, lead, radon, polychlorinated biphenyls (PCBs), formaldehyde, and mercury.⁷ It was significantly amended in 2016 to include new provisions related to risk evaluations of existing chemicals, pre-market reviews of new chemicals, confidentiality of business information, sources of sustained funding, preservation and preemption of state laws, and mercury export and disposal.⁸ This comprehensive overhaul has had issues with implementation, namely with EPA regulation of existing chemicals. In 2017, the Agency issued a rule to clarify that it had discretion to evaluate the risk for any condition of use of a chemical,⁹ essentially, to determine a substance's risk by taking into consideration any of the circumstances of its use.¹⁰ In 2024, EPA updated the rule to require assessing all conditions of use together in a single risk determination, with the goal of understanding the health outcomes of exposures from multiple pollutants; this rule has been challenged by industry plaintiffs, and EPA has announced it will reconsider the rule and reissue it by May 2026.¹¹ With 16 chemicals still named in the 2024 rule, it is clear that the recent overhaul of TSCA is both controversial and significantly impacts toxics regulation.

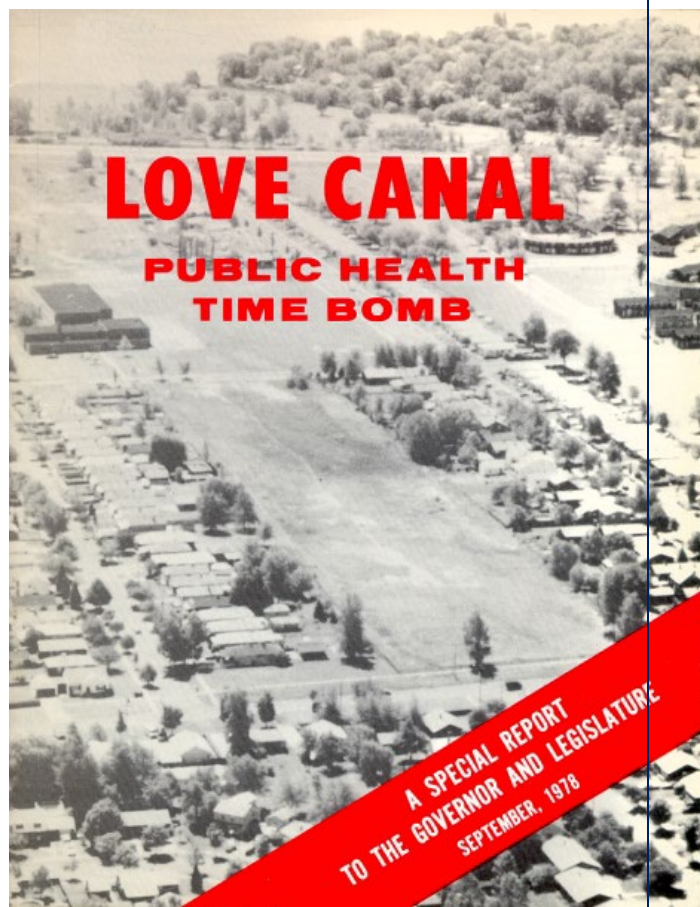
FIFRA, enacted in 1947 and substantially amended in the 1970s in part due to campaigns for banning DDT, is another tool for EPA review of toxic chemicals.¹² However, both TSCA and FIFRA provide limited regulatory and enforcement capability. For example, under TSCA, EPA bans only certain uses of asbestos, and its regulations do not consider or reach pre-TSCA uses.¹³ Meanwhile, EPA's FIFRA ban on DDT and proposed ban on some uses of chlorpyrifos¹⁴ stand in stark contrast to the Agency's typical struggle to monitor the sheer volume of other chemicals under both statutes.¹⁵

The statutory landscape surrounding toxics evolved further with enactment of CERCLA and RCRA, which were designed to address the growing problem of unregulated and unmanaged waste, including toxic waste. Though this report does not address CERCLA or RCRA cases, the history of these statutes informs both the avenues and potential for current toxics litigation. CERCLA, enacted in 1980, established the Superfund program, which imposes a unique retroactive tort-like strict liability framework and funding mechanism for cleanup costs of hazardous waste sites by responsible parties.¹⁶ RCRA, first enacted in 1976 and strengthened in 1984, regulates hazardous waste handling and disposal in a forward-looking "cradle to grave" framework.¹⁷

The need for both statutes was demonstrated and motivated by the Love Canal disaster, the subject of *United States v. Occidental Chemical Corp.*, and Love Canal was made one of the first Superfund sites.¹⁸ Families in the neighborhood in Upstate New York had been exposed to chemical waste, particularly dioxin,¹⁹ that the defendant had disposed of in Love Canal in the 1940s and 1950s, resulting in contamination of soil and water in the nearby residential neighborhoods. Outrage over this contamination drove a range of tort- and contract-based litigation, as well as state and federal government action (including enactment of the new federal environmental laws). A 1997 CERCLA lawsuit from the federal government ended with a \$129 million settlement to cover cleanup costs.²⁰

The Love Canal case thus created two more avenues for plaintiffs and showed the potential impact of successful toxics litigation. Legislative action also resulted from the Camp Lejeune litigation, where personnel stationed at the military base in North Carolina between the 1950s and 1980s had been exposed to water contaminated with industrial solvents. Several decades of tort litigation by individual victims led to passage of the Camp Lejeune Justice Act, both to establish the federal government's liability and to provide a specific pathway for victims to claim compensation.²¹

Still, the federal statutes represent a somewhat patchwork approach to regulating toxics that has led to limited causes of action or direct relief for injured plaintiffs through the regulatory system. Only recently have plaintiffs begun to sue EPA for stronger protections after decades of ongoing litigation over toxic contamination; for example, multiple states in 2019 sued the Agency over its



denial of a petition to expand reporting requirements related to its asbestos risk evaluation.²² Since the history of toxics litigation predates establishment of EPA in 1970 and enactment of some of the statutes needed for regulating toxic pollution, this return to litigation is unsurprising, and demonstrates that the Agency's approach to regulating toxic pollutants has not provided a strong avenue for injured parties.

EPA's administration of these statutory authorities also demonstrates practical issues of enforcement. Generally, criminal enforcement of environmental statutes has historically been weak,²³ and civil environmental enforcement has declined significantly under the recent Trump Administration.²⁴ Between January 2025 and February 2026, only 16 complaints have been filed by the U.S. Department of Justice for civil violations of environmental statutes – a historic low representing a 76% drop in cases compared to the first year of the Biden Administration and 87% drop compared to the second Obama Administration's first year.²⁵

Given the regulatory limitations, plaintiffs have increasingly turned back to the tort system. The development of mass torts and addressing the ensuing concern of overcrowding of courts with such lawsuits began in the 1940s with asbestos,²⁶ in part because that proved to be the best method for asbestos victims to gain compensation.²⁷ Such multi-party and multi-forum cases proliferated in the 1980s because of several instances of mass exposure and resulting tort claims for substances beyond asbestos.

Mass toxic torts, in particular the rise of the toxics class action suit, were heralded by claims regarding exposure of Vietnam veterans to the chemical defoliant Agent Orange. These cases changed history when, in 1984, Judge Jack Weinstein applied class action procedures to address personal injury claims of thousands of Agent Orange victims who were suffering from symptoms of cancer and children's birth defects.²⁸ This opened the door for more mass tort cases to be funneled into class actions that resulted in private claims processing systems administered by defendants.²⁹ Mass tort claims as a means for securing relief for toxics exposure continued to increase at the turn of the 21st century, with well-known cases like Rob Bilott's PFOA suit against DuPont³⁰ or Erin Brockovich's hexavalent chromium suit against PG&E³¹ leading to significant settlements and Hollywood attention.

Precursors to Current Trends

The above history helps illustrate two main pathways for toxics litigation—regulatory claims, generally against the government when a substance is first being approved or when information about its harms come to light and lead to calls for regulation; and tort-based claims to redress specific harms that have occurred or foreseeably will occur. While these legal pathways have not shifted much since the initial boom of mass tort cases, litigation has continued to grow as a result of scientific advancement, health disclosures, and increased public awareness. As chemical manufacturing has expanded and led to creation of new compounds, so too has litigation increased as the effects of exposure to new compounds became known.³² Toxic tort litigation in particular has been enabled by advances in scientific research, including the improvement of testing methods like genetic testing and epidemiological studies, which subsequently helped plaintiffs better link their symptoms and other health outcomes to toxic exposure and environmental contamination.³³

Scientific improvements have also led to new regulations at the federal and state levels. Recently, for example, “forever chemicals” like perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS) were designated as hazardous substances under CERCLA, EPA and states have set drinking water standards to address various PFAS, and California is the first state to propose listing microplastics as candidate chemicals that could require product regulation.³⁴ Similarly, scientific studies have led to increase in public awareness about the pervasiveness of chemicals and other contaminants of emerging concern (CECs) like PFAS, pesticides, and microplastics, as well as PBDEs, pharmaceuticals, other nanomaterials.³⁵ Additionally, frontline communities (those located adjacent to polluting facilities), particularly environmental justice communities (often lower-income and/or predominantly made up of minorities, and that suffer disproportionately from environmental hazards) are utilizing improvements in monitoring and testing to lead “citizen science” initiatives, where both scientists and non-scientists are able to measure pollution and monitor air quality themselves—as in Louisiana’s Cancer Alley.³⁶

Scientific advancements, corporate disclosures, the rise of citizen science, and growing public awareness all have contributed to the increase in toxics litigation and brought to light the substances that make up the recent trends: pesticides (agrochemicals), PFAS, petrochemicals, and emerging plastic contaminants. Each of these categories are rooted in earlier precursor litigation, which is outlined here to help understand how and why these substances came to be targets for the current cases focused on in this report.

Pesticides. Harm from exposure to chemicals and other substances used for agricultural purposes dates back as far as lead-based pesticides (e.g., lead arsenate) in the late 1800s and asbestos used in farm equipment in the 1940s.³⁷ But the first agrochemical to gain widespread attention was dichloro-diphenyl-trichloroethane (DDT), a pesticide first regulated by the USDA in the 1950s that became a public concern upon the 1962 publication of Rachel Carson’s *Silent Spring*.³⁸ Following public outcry and litigation pressure from the Environmental Defense Fund in the late 1960s,³⁹ one of the EPA’s first acts as a new agency was to ban DDT use in 1972.⁴⁰ Despite this strong start to pesticide regulation, few outright bans have been enacted since, leading to the United States falling behind other agricultural nations in banning harmful pesticides.⁴¹

Examples of the United States lagging include agrochemicals like chlorpyrifos and dicamba, also in use since the 1960s. Both have received recent, renewed attention due to EPA proposed rules for registered uses. For chlorpyrifos, environmental groups petitioned for a rule banning its use in food in 2007, leading to the EPA prohibiting use of the pesticide in 2021; however, this rule was vacated by the Eighth Circuit in 2023.⁴² In response to regulatory attention from EPA and states like California, several class action complaints were filed, claiming that agribusinesses’ negligence and failure to warn led to plaintiffs’ children being exposed to chlorpyrifos, resulting in developmental disabilities.⁴³ For dicamba, EPA in 2025 announced a proposed rule to register three products for direct use on cotton seeds and dicamba-tolerant soybeans, despite a 2024 court decision to overturn registered labels for dicamba pesticides.⁴⁴ Both chemicals are increasingly becoming subjects of litigation as controversies over agency regulations, or lack thereof, arise.

Other currently litigated pesticides are also not new. Paraquat and glyphosate have been prominent herbicides on the market since 1962⁴⁵ and 1974,⁴⁶ respectively. Yet cases are on the rise, with the paraquat multidistrict litigation (MDL) rising to 6,159 active cases as of June 2025,⁴⁷ and 4,437 active claims in the Roundup glyphosate MDL as of August 2025.⁴⁸ Farmworkers, public health, and environmental groups have also sued EPA for reapproving paraquat.⁴⁹ With new science leading to

increased awareness and stronger evidence for plaintiffs to show causation, pesticide cases, particularly class-action MDLs and state-based tort claims, will continue to grow and are a key focus of this report.

PFAS. Advances in science have also revealed the ubiquity of “forever chemicals” like PFAS. These likewise are not new, having been used since the 1950s in various consumer products like clothing and cookware and in firefighting foams.⁵⁰ Litigation to address the impacts of exposure began in 1999 when the first PFAS lawsuit was filed in West Virginia against DuPont. The case was later depicted in the 2019 film *Dark Waters*, around the time public awareness of PFAS was growing.⁵¹ While the West Virginia case dealt with water contamination issues that arise with PFAS manufacture, PFAS also raise exposure issues of every kind: occupational health, food and water contamination, environmental pollution, consumer product liability, and more.

As in the Agent Orange class-action litigation and asbestos MDLs, PFAS firefighting foams were applied on the job (primarily military bases and commercial airports), and have been the subject of over 10,000 associated cases in the Aqueous Film Forming Foam (AFFF) MDL, where many of the cases were only filed after 2022.⁵² PFAS water contamination cases are also on the rise, with thousands of cases already filed by the start of 2026.⁵³ State governments have joined the trend, with 30 state attorneys general initiating lawsuits against PFAS manufacturers—some concerning AFFF and others concerning various consumer products.⁵⁴

Petrochemicals. Although improvements in science have led to greater public awareness and increases in pesticide and PFAS litigation, the opposite is true for petrochemical pollution, where science is still catching up to what fence-line communities have already known about the health impacts of petrochemical plant emissions. New studies, especially citizen science, are affirming what communities have been saying for decades.⁵⁵ Lawsuits to prevent siting of petrochemical facilities in vulnerable communities go back to the 1970s.⁵⁶ In the decade prior, benzene, one of the most common petrochemicals, was also the subject of litigation, which did not yield results until after EPA’s 1986 designation of it as a carcinogen, leading to an increase in cases and a stronger likelihood for success.⁵⁷

Since then, potent carcinogens such as ethylene oxide, vinyl chloride, and neoprene have increasingly become the subject of both regulatory and tort litigation due to the toxic air emissions and water discharges associated with facilities’ activities.⁵⁸ In terms of numbers, petrochemical cases are generally hard to track, given the sheer number of chemicals produced or released, their myriad uses, and the variety of regulatory versus tort claims. Instead, litigation trends can be tracked in changes and challenges to regulations and developments in tort claims.

One example of legal challenges to petrochemical regulations is the Trump Administration’s 2025 proposed exemption to EPA’s Hazardous Organic National Emission Standards for Hazardous Air Pollutants (HON Rule), which would exempt fifty of the country’s most toxic chemical plants, including emitters of ethylene oxide and chloroprene, from following the HON Rule in their operations.⁵⁹ As for tort claims, one current trend to watch is an increase in medical monitoring cases, due to recent traction in the Fourth Circuit over claims about ethylene oxide emissions. In 2025, that court ruled in *Sommerville v. Union Carbide Corp.* that the district court’s dismissal of a medical monitoring claim due to lack of “manifest” physical injury was “off course,” stating that exposure itself was enough to recover damages related to medical monitoring from ethylene oxide exposure.⁶⁰

Plastics (Microplastics and Associated Chemicals). Plastics have been used since the mid-1800s, and their quantity, variety, and uses have grown exponentially since. While the associated pollution and waste is not new, litigation about such pollution and related health impacts is much more recent. The earliest case related to plastic products centered on a tax on non-reusable plastic containers in 1971, but even this type of litigation has only recently, in the last decade, gained significant traction.⁶¹ The rise in plastics-related litigation has mirrored growing concern over widespread plastic pollution, its decay into microplastics, and scientific research illuminating the health impacts of plastics. There is also concern about the role plastic production (and plastics in general) plays in climate change.⁶²

Plastics litigation includes challenges to state and local governments' restrictions, but is growing to concern pervasive plastic pollution and emerging contaminants like microplastics. Plastics are increasingly being recognized and framed as toxic substances due to the wide array of hazardous chemicals (like bisphenol A (BPA), PFAS, and phthalates) they contain, which leach out and accumulate in our bodies and the environment, causing harm to health (cancers, reproductive issues, organ damage), and with evidence showing microplastics in human tissues and organs. This new understanding highlights that plastics' danger extends from production to disposal, affecting people, ecosystems, and the climate.

Within the legal landscape, both regulation and litigation concerning the toxicity of plastics is on the rise. Beginning in 2007, consumer protection lawsuits were brought against baby bottle and bottled water companies for the leaching of BPA from plastic products.⁶³ Litigation concerning microplastics is now taking the same approach. States and municipalities are using approaches similar to climate change litigation by suing major plastic producers to address the widespread pollution from their products.⁶⁴

PART II. KEY AREAS AND CURRENT TRENDS IN TOXICS LITIGATION

Introduction

The sections that follow are the heart of this report, diving into the issues, parties, claims, defenses, and remedies seen in the surge of litigation around four illustrative categories of toxic substances: pesticides, PFAS, petrochemicals, and plastics (microplastics and associated chemicals). This Part examines litigation in each of these key areas in the United States, at both the federal and state levels. It wraps up by highlighting key takeaways and trends in the field of toxics litigation.

Each section focuses on select chemicals that are particularly prominent or widespread and that offer indications of trends in that area of toxics litigation. For example, there are thousands of pesticides registered with the U.S. EPA, many of which with time and exposure may cause harm or prompt litigation. We chose to focus on two commonly used substances, glyphosate and paraquat dichloride, that are the subject of vast numbers of court cases where plaintiffs allege they cause cancer or other serious disease. Litigation over exposure to these presents a window into issues, claims, and defenses that would likely be applicable for other pesticides. In the realm of petrochemicals, we focus on the primary petrochemicals ethylene, propylene, benzene, butadiene, xylene, and toluene, as well as some of their secondaries like ethylene oxide and polyvinyl chloride. For PFAS, of which there are 1.8 million known compounds in the American Chemical Society's Chemical Abstracts Service (CAS) Content that meet the EPA's definition,⁶⁵ we focus on the entire chemical family. In the section on plastics, we focus on microplastics exposure and leaching from plastic products, mirroring the focus of current litigation.

Each of these sections explore a distinct category of toxic substances and toxics litigation, yet common questions, policies, procedures, and legal issues are visible throughout. Key issues range from factual determinations of exposure to causation, data collection, which legal theory applies, and which jurisdiction's law controls. In each case or set of cases, these issues are playing out against the backdrop of the U.S. legal system, including doctrines addressing the applicable forum, choice of law, federal preemption, and management of complex litigation. (Part III provides a look at some relevant international examples and trends).

Together, these sections provide a solid foundation for identifying some key commonalities, understanding points of shared legal reasoning, and also establishing critical differences across the cases' arguments and findings. They inform our consideration of trends in toxics litigation and point toward potential future developments that may help litigators and policymakers understand the broader implications of toxics in our world.



Pesticides

A. Introduction

Pesticides litigation has surged in recent years, reflecting (as with many areas of toxics litigation) heightened scrutiny of chemical safety and a growing body of scientific research linking common chemicals to serious illness. Current litigation is dominated by mass tort actions against the manufacturers of glyphosate and paraquat, alleging that their herbicide products caused plaintiffs to develop cancer, neurodegenerative disorders, and more. Such tort claims, advanced as state-law claims, have led to significant jury verdicts for plaintiffs, but the trending type of claim, failure-to-warn causes of action, is currently the centerpiece of a circuit court split on federal preemption.

The Supreme Court granted certiorari in January 2026 to resolve the issue of whether state-law failure-to-warn cases are preempted by federal statute (FIFRA), and advocates ranging from environmental groups⁶⁶ to the “Make America Healthy Again” movement⁶⁷ have expressed concern over this potential foreclosure of a litigation pathway. Other related trends include defendants seeking legislative relief at the state level, where some legislatures are enacting liability shields for manufacturers. Other notable chemicals at issue, though not the subject of this report, include chlorpyrifos, for which litigation is reemerging after EPA’s ban was overturned in 2023,⁶⁸ and dacthal (dimethyl tetrachloroterephthalate, or DCPA), with recent lawsuits linking exposure during pregnancy to health risks and leading to EPA action.⁶⁹

FIFRA defines pesticides as, with certain exceptions, “(1) any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest, (2) any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant, and (3) any nitrogen stabilizer.”⁷⁰ Federal oversight of pesticides lies primarily with the EPA, and FIFRA authorizes the Agency to regulate their distribution, sale, and use.⁷¹ With few exceptions, all pesticides distributed or sold in the United States must be registered by EPA.⁷² Manufacturers apply to register pesticides for use for specific pests and under specific circumstances, and EPA then may include restrictions on who may apply a pesticide or where the pesticide may be used.⁷³

Before EPA may register a pesticide under FIFRA, the applicant must show, among other requirements, that using it in accordance with the specifications will not generally cause unreasonable adverse effects to humans or the environment.⁷⁴ The Agency’s review weighs the economic, social, and environmental costs against the benefits of the pesticide use, as well as any dietary risks from residues on food. EPA must conduct a reregistration review for each pesticide

every fifteen years after initial registration.⁷⁵ FIFRA also imposes labeling requirements⁷⁶ and authorizes EPA to cancel a registration if the agency determines that the pesticide or its labelling is inconsistent with FIFRA or causes unreasonable adverse effects.⁷⁷

Pesticides must also be used in a manner consistent with state laws and regulations, which vary from state to state.⁷⁸ While FIFRA generally does not preempt state or local regulation of pesticides, FIFRA does preempt some state and local regulation of the content of pesticide labels.⁷⁹ And because of these labelling provisions, federal circuit courts have disagreed on whether FIFRA also preempts state failure-to-warn or similar tort claims arising from pesticide sale or use.⁸⁰

Pesticides litigation generally arises after people exposed to pesticides, directly or indirectly, develop serious illnesses caused by the exposure. This section focuses on current litigation trends regarding two common pesticides: glyphosate, the most widely used herbicide in the world, which may be linked to non-Hodgkin's lymphoma and other health concerns;⁸¹ and paraquat dichloride, a widely used herbicide in the United States that may be linked to Parkinson's disease.⁸²

i. Glyphosate

Glyphosate was first registered under FIFRA and sold commercially in 1974 by U.S.-based chemical manufacturer Monsanto, in the form of the product Roundup.⁸³ Roundup products have been sold in more than 160 countries and are widely used in the United States.⁸⁴ Farmers and ranchers in the United States applied an estimated 0.8 million pounds per year of glyphosate in 1974, which rose to 250 million pounds per year in 2014.⁸⁵ German multinational Bayer acquired Monsanto in 2018, also acquiring its potential liability.⁸⁶ Bayer discontinued the home-garden version of Roundup in 2023, but continues to manufacture and sell the commercial version.⁸⁷

In a 2022 study, more than 80% of urine samples drawn from children and adults in the United States contained glyphosate.⁸⁸ Glyphosate has long been regarded by some as among the least chronically toxic pesticides for mammals.⁸⁹ However, in 2015, the World Health Organization's International Agency for Research on Cancer (IARC) classified it as "probably carcinogenic to humans,"⁹⁰ and in 2017 California added glyphosate to the list of chemicals known to the state to cause cancer under its Proposition 65.⁹¹

A two-year study released in the journal *Environmental Health* in July 2025 also found that glyphosate increased the incidence of multiple benign and malignant tumors in rats, as well as observed early-life onset of tumors and mortality, which the authors concluded constitutes "robust evidence supporting IARC's conclusion that there is 'sufficient evidence of carcinogenicity [of glyphosate] in experimental animals.'"⁹² U.S. EPA, in contrast, has maintained that the chemical is "not likely" to be carcinogenic.⁹³ EPA's FIFRA reregistration review for glyphosate, initiated in 2009, has yet to be finalized.⁹⁴

Since 2016, tens of thousands of lawsuits have been filed against both Monsanto and Bayer.⁹⁵ These suits allege that glyphosate-based herbicide products caused the plaintiffs to develop cancer, often non-Hodgkin's lymphoma.⁹⁶ While Bayer has reached settlement agreements in nearly 100,000 Roundup lawsuits, there are still an estimated 61,000 active cases.⁹⁷ Most recently, in February 2026, Monsanto proposed a \$7.25 billion settlement for nationwide class action claims of current and future plaintiffs with non-Hodgkin's lymphoma symptoms from exposure dating before February 17, 2026.⁹⁸

ii. Paraquat

Paraquat was first registered under FIFRA in 1964, and its first reregistration was completed in 1997.⁹⁹ Its use has become more widespread in recent years, partly due to crops becoming resistant to Roundup.¹⁰⁰

In the United States, paraquat products are registered as Restricted Use Pesticides, which may only be used by trained certified applicators, rather than for homeowner or residential use.¹⁰¹ This limitation is due to the fact that paraquat is severely toxic and can be fatal with just one sip, as no antidote exists for paraquat poisoning.¹⁰² The Occupational Safety and Health Administration (OSHA) has also set guidelines requiring that employers provide personal protective equipment to workers who use paraquat and training to minimize exposure risks.¹⁰³ Many jurisdictions around the world, including the EU and China, have banned the herbicide entirely.¹⁰⁴

EPA initiated reregistration review for paraquat again in 2011¹⁰⁵ and issued an interim decision in July 2021, reregistering the pesticide with new, stronger protections to reduce exposure.¹⁰⁶ In September of that same year, a group of NGOs¹⁰⁷ represented by Earthjustice filed a petition for review of the interim decision under section 16(b) of FIFRA, which allows for judicial review of certain final EPA actions, including reregistration; such 16(b) FIFRA reviews go directly to the U.S. Courts of Appeals,¹⁰⁸ with the paraquat case landing in the Ninth Circuit.¹⁰⁹ A year later, that court granted EPA's unopposed motion to hold the case in abeyance to allow the Agency to further consider substantive issues raised by the petitioners.¹¹⁰

EPA promised to publish documents summarizing its further consideration of the issues and to seek public comment by January 2024, with a final document on those issues to be delivered by January 17, 2025.¹¹¹ In late 2024, 52 members of the U.S. Congress sent letters to EPA urging the Agency to ban paraquat, like several other countries, due to the chemical's highly toxic nature and subsequent effects on humans and the environment.¹¹² Rather than deliver a document in 2025, however, EPA moved to remand the case and allow it more time to examine the potential health effects,¹¹³ noting that it had received additional information and had concerns over paraquat's potential to volatilize,¹¹⁴ which could require a change to the underlying health risk assessment.¹¹⁵ Plaintiffs in the case expressed their disappointment and frustration at what they perceived as on-going delay tactics on the part of EPA in favor of industry.¹¹⁶

As of February 2026, EPA has not issued a final registration review decision for paraquat.¹¹⁷ Meanwhile, Syngenta's own reporting indicates that in the period from 2017 through 2023, over 7,300 cases were filed in the United States alleging that use or exposure to paraquat has caused plaintiffs to develop Parkinson's disease or kidney disease.¹¹⁸ While dealing with that onslaught of cases, Syngenta has also employed constitutional legal theories in an attempt to limit product liability, such as in their recently denied Supreme Court petition for certiorari to address personal jurisdiction in Pennsylvania and the scope of the dormant Commerce Clause.¹¹⁹

B. Pesticides Litigation Overview and Trends

Pesticides litigation includes the aforementioned thousands of lawsuits on use of and exposure to glyphosate or paraquat and the procedural and administrative claims challenging EPA registration of such chemicals. But state-law tort claims, particularly failure-to-warn claims, have been the most prominent trend and are the focus of the analysis here. The trending legal issues with failure-

to-warn claims can be divided into a few key areas: FIFRA preemption of state-law tort claims, the awarding and amount of punitive damages, and legislative efforts to limit liability.

i. Failure-to-warn cases and preemption defenses

Failure-to-warn claims have become the central, almost universal, argument in pesticide injury lawsuits, with plaintiffs alleging that manufacturers did not disclose the health risks despite knowing about them. These claims, often accompanied by other tort claims such as defective product design or negligence, are based on state tort laws. Failure-to-warn claims focus on the need for health warnings on the label of consumer products, particularly Monsanto's weedkiller Roundup, where the lack of such a warning could lead to tort liability under state law.¹²⁰ State-law tort suits are, however, brushing up against FIFRA and potential issues of federal preemption.

Defendants such as Monsanto argue that failure-to-warn claims based on state tort laws are either expressly or impliedly preempted by FIFRA. In *Bates v. Dow Agrosciences*, the U.S. Supreme Court established a two-step framework for applying FIFRA's preemption provision: FIFRA section 136v(b) preempts a state common-law rule or requirement if it is a "requirement 'for labeling or packaging'" and "impose[s] a labeling or packaging requirement that is 'in addition to or different from' what has been required under FIFRA."¹²¹ State or common-law requirements that are "equivalent to" and "fully consistent with" FIFRA's, and thus "parallel requirements," are not preempted.¹²²

In subsequent cases, courts have agreed that a failure-to-warn tort claim presents a labeling requirement as described in step one of the *Bates* test. The unresolved question is whether a state warning requirement, e.g. for a cancer warning on Roundup labels, is a "parallel" requirement or instead "different from" FIFRA's labeling requirements. This issue has led to a federal circuit split that is soon to be addressed by the Supreme Court. In January 2026, the Court granted Monsanto's petition to review a case from Missouri, where the state appellate court found that FIFRA did not expressly preempt the plaintiff's failure-to-warn claim.¹²³

In *Durnell v. Monsanto*, the Missouri court found that there was no express or implied FIFRA preemption of the failure-to-warn claim because both the federal statute and Missouri's failure-to-warn rule state a prohibition on misbranding and therefore are "parallel" requirements.¹²⁴ The *Durnell* court pointed to similar holdings in both the Ninth and Eleventh Circuits, where federal courts likewise found (in 2021 and 2024,



respectively) that a state cause of action was not preempted by FIFRA.¹²⁵ However, the Third Circuit, in 2024, held the opposite, that FIFRA preempts the state failure-to-warn claim through its regulatory process requiring health warnings on product labels. Monsanto's approved registration label was not required to include a cancer warning; therefore, Pennsylvania's "duty to warn" of Roundup's carcinogenic effects would impose a requirement different from FIFRA, and thus is expressly preempted.¹²⁶

This circuit split on preemption, and how the Supreme Court rules on it, will have significant effects on pesticide litigation. Indeed, Bayer has told investors that its future liability for Roundup depends on the outcome of its pending appeal.¹²⁷ Failure-to-warn theories are a key avenue for plaintiffs to seek relief, since FIFRA does not have a citizen suit provision like many other environmental laws, and FIFRA section 16(b) challenges to EPA's reregistration decisions, even when successful, do not provide immediate relief to plaintiffs. Should the Supreme Court rule in Bayer's favor, many pending lawsuits against pesticide manufacturers would likely be dismissed and have limited alternatives for seeking redress.

ii. Damages and settlements

Pesticides manufacturers have faced immense litigation costs, leading to costly settlements and threats to stop product sales outright absent stronger legal protections. In addition to compensatory damages to cover medical or care bills, loss of income, and pain, suffering or emotional distress,¹²⁸ plaintiffs in pesticide cases may also be awarded punitive damages to punish defendants for gross negligence or willful misconduct.¹²⁹ Punitive damages have been awarded in glyphosate cases against Monsanto/Bayer, often due to Monsanto/Bayer's efforts to downplay the risks of glyphosate and manipulate scientific research.¹³⁰

For example, in *Anderson v. Monsanto Co.*, the court upheld an award of \$500 million in punitive damages to each of three plaintiffs, along with over \$60.5 million in compensatory damages across the three.¹³¹ The evidence at trial established Monsanto was aware of studies demonstrating the possibility of a causal relationship between glyphosate and cancer, particularly non-Hodgkin's lymphoma. Instead of reformulating the product, removing it from the marketplace, or providing a warning label regarding the risks it posed, the company adopted an affirmative strategy of continuing to defend Roundup regardless of the evidence.¹³² The court found that this amounted to "reckless disregard for the health or safety of others," justifying the award of punitive damages.¹³³ There is some evidence that Syngenta, maker of paraquat, has engaged in similar efforts.¹³⁴

While punitive damages awards can be quite large, the U.S. Supreme Court has held that their amount is limited by the Fourteenth Amendment.¹³⁵ Punitive damages found to exceed the ceiling of what due process allows must be reduced.¹³⁶ When evaluating this due process limit, courts often look to the ratio of punitive to compensatory damages. In particular, "[w]hen compensatory damages are substantial, then a lesser ratio, perhaps only equal to compensatory damages, can reach the outermost limit of the due process guarantee."¹³⁷ Courts look to other factors as well, such as whether the compensatory damages themselves serve the deterrent effect of punitive damages.¹³⁸ In the specific context of pesticides, courts have often reduced punitive damages to accord with due process.¹³⁹

Nonetheless, the financial risk for these companies is enormous. Early glyphosate cases included a number of very large jury awards for plaintiffs,¹⁴⁰ though some have been reduced or reversed by

the trial judges or on appeal.¹⁴¹ In 2020, Bayer agreed to pay more than \$10 billion to settle tens of thousands of claims.¹⁴² More recently, while some suits have not gone for plaintiffs,¹⁴³ others continue to produce sizable recoveries against Bayer and have largely been upheld on appeal.¹⁴⁴ Bayer has set aside \$7.25 billion for future Roundup settlements; the company has already paid more than \$10 billion in prior claims and still faces over 67,000 active lawsuits.¹⁴⁵ With this mounting financial pressure, Bayer is seeking a new settlement with tort plaintiffs and exploring filing for Chapter 11 bankruptcy for its Monsanto subsidiary if that settlement fails.¹⁴⁶

iii. Legislative efforts to limit liability

Defendants have also sought legislative action on both the federal and state levels to limit pesticide liability and rely instead on the sufficiency of EPA labeling requirements. On the federal level, Bayer has led a push in Congress to create liability shields for the company by mandating that EPA-approved product labels are sufficient and cannot be the subject of failure-to-warn litigation.¹⁴⁷

Similar lobbying is occurring at the state level. At Bayer's behest, a number of states have proposed or enacted laws expressly providing that EPA registration of a pesticide product is also sufficient to satisfy any warning or labeling requirements at the state level.¹⁴⁸ For example, North Dakota's law provides that any registered pesticide that complies with FIFRA's labelling requirements also satisfies any requirement for warning or labeling regarding health or safety under state pesticide laws, any doctrine of North Dakota law concerning the duty to warn or label, or any other common-law duty to warn.¹⁴⁹ Similarly, Georgia's law provides that any pesticide that displays an EPA-approved, or is consistent with the most recent human health risk assessment performed under FIFRA, is sufficient to satisfy any duty to warn or label under Georgia law or any other common law duty to warn.¹⁵⁰ Bills failed in some states during the 2025 legislative sessions, but Bayer has noted its satisfaction with the progress relative to 2024, in which no bills on the issue passed.¹⁵¹

C. Conclusion

Pesticides litigation is experiencing a period of intense, high-stakes activity, characterized by a sharp rise in personal injury lawsuits, significant jury verdicts, and a growing conflict over whether federal law preempts state-level failure-to-warn tort claims. Litigation over agricultural pesticides is likely to continue, but its future shape depends heavily on whether the U.S. Supreme Court upholds or rejects the preemption argument, which would either shield manufacturers or open them up to further massive liability.



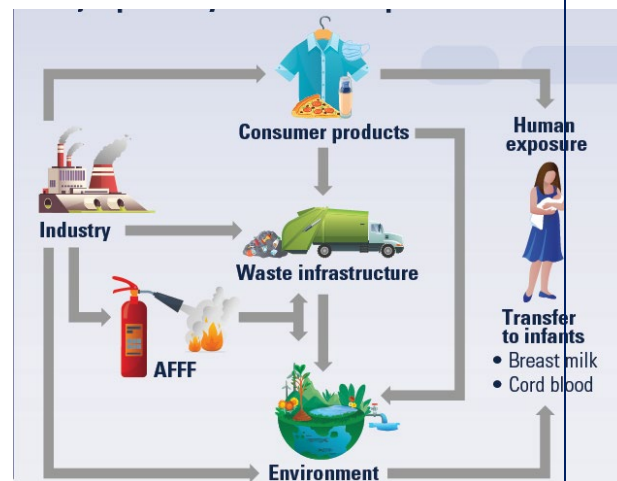
PFAS

A. Introduction

It is likely of little surprise that litigation concerning PFAS is one of the trends identified in this report. Though the first lawsuit involving PFAS contamination (specifically PFOA) was filed by a West Virginia farmer against DuPont in 1999,¹⁵² PFAS litigation has grown significantly in scale and complexity in recent years, and is predicted to surpass other major areas of toxics litigation (even asbestos) in both scope and cost.¹⁵³

Per- and polyfluoroalkyl substances (PFAS) are a family of thousands of synthetic chemicals widely used in industry and consumer products. They are commonly known as “forever chemicals” because they do not break down easily and are extremely difficult to remove, persisting and accumulating in the environment and living organisms. People encounter PFAS in a myriad of ways in everyday life.

Sources of exposure include drinking water contaminated by industrial discharges or agricultural runoff; food contaminated by PFAS; food packaging with grease-resistant coatings; household products such as nonstick cookware, waterproof clothing, cosmetics, personal care products, and stain-resistant textiles; and contact with firefighting foam (aqueous film-forming foam, or AFFF), which is widely used at military bases and airports.¹⁵⁴ Local governments have also issued advisories against consuming fish caught in certain rivers and game wildlife killed in certain regions due to the presence of PFAS in the animal tissue.¹⁵⁵ PFAS have been linked to serious health risks in humans, including cancer, thyroid and kidney problems, reproductive issues, developmental delays, immune system damage, and hormone interference.¹⁵⁶



Major pathways of human exposure to PFAS.

An analysis of recent regulatory and litigation efforts to address per- and polyfluoroalkyl (PFAS) contamination can fill an entire book—and has done so.¹⁵⁷ Investigation and regulation of PFAS has only become a priority for policymakers within the last decade, as deeper public understanding of health risks associated with PFAS has led to calls to create or strengthen regulations and to address

PFAS contamination. While a patchwork of existing federal environmental laws are being mobilized (to varying degrees) to regulate PFAS, litigants are attempting to address their impacts through state law and common law.

B. PFAS Litigation Overview and Trends

Current PFAS litigation can be broadly categorized into suits over whether and how to regulate the chemical family to protect humans and the environment, and suits against producers and others who facilitated exposure of individuals or communities to specific substances. Though PFAS have existed and been used since the 1930s, PFAS-related litigation ramped up in the 1990s as research and public awareness regarding their toxicity ramped up. Even with improvements in science and increased awareness, PFAS have existed in a grey area for the majority of their existence, avoiding stringent regulatory oversight and existing within a thicket of guidelines and recommendations.

i. Regulatory cases

The Biden Administration took steps to regulate PFAS, extending application of several federal environmental statutes to enact regulations addressing a number of substances. Several of these actions have provoked litigation in opposition. Biden's EPA promulgated the following regulations, among others: (1) under the Safe Drinking Water Act (SDWA), the final National Primary Drinking Water Regulation (NPDWR);¹⁵⁸ (2) under CERCLA, the designation of two widely used PFAS chemicals (perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS)) as hazardous substances;¹⁵⁹ and (3) under the Toxic Substances Control Act (TSCA), reporting and recordkeeping requirements for PFAS.¹⁶⁰ It also proposed other measures under the Resource Conservation and Recovery Act (RCRA) and other authorities to address PFAS.¹⁶¹

Each of these developments is examined briefly below. Some have spawned ongoing litigation. The exact fate of these efforts to address PFAS under the second Trump Administration is not yet clear, but EPA in the spring of 2025 indicated its intent to jettison or limit them significantly.¹⁶²

Safe Drinking Water Act. Enacted in 2024, the NPDWR set legal limits (SDWA maximum contaminant levels, or MCLs) for concentrations of six types of PFAS and required utilities to remove the chemicals from drinking water supplies starting in 2029. The rule was immediately challenged by chemical manufacturers, who argue that the rule exceeded EPA's authority under the SDWA and is arbitrary, capricious, an abuse of discretion, and improperly promulgated under the Administrative Procedure Act;¹⁶³ and by water utilities, who argue that EPA failed to follow the proper rulemaking process, used an untested regulatory approach, and was selective in its analysis of health data.¹⁶⁴

Environmental NGOs have intervened in the manufacturers' case to defend the rule, but it seems unlikely that the Trump EPA will fight for the rule in its current form, having announced in May 2025 that it would "roll back" the rule and issue new rules in the fall of 2025.¹⁶⁵ The Administration may find it difficult to change the PFAS rule to less protective, however, since the SDWA includes an "anti-backsliding" provision that only allows regulation in a way that "maintain[s], or provide[s] for greater, protection" of human health.¹⁶⁶ Because of this, some say the Agency would do better to allow the rule to be defeated in court and then comply.¹⁶⁷

The *American Water Works* case has been held in abeyance for much of 2025 while EPA considered options,¹⁶⁸ indicating that it intended to maintain the limits set in the 2024 rule for PFOA and PFOS (4 ppt, individually) while granting an additional two years for regulated entities to comply, and that it would rescind the regulations related to four other PFAS.¹⁶⁹ On September 11, 2025, EPA moved for partial vacatur of the NPDWR rule, citing its own procedural errors regarding public comment for portions of the rule addressing the four PFAS other than PFOA and PFOS.¹⁷⁰ On January 21, 2026, the court denied EPA's motion but allowed EPA to notify the court of what parts of the rule the Agency intends to rescind.¹⁷¹

Superfund. By designating PFOA and PFOS as hazardous substances under the federal Superfund (CERCLA) law in 2024, EPA under the Biden Administration facilitated regulators' ability to require cleanups of contaminated sites, allowed for cost recovery by EPA for cleanup costs, and opened the door to suits for private citizens to recover costs for the substances' environmental impacts.¹⁷² Prior to CERCLA designation, polluters—including the U.S. military—had refused to clean up PFOA and PFOS contamination and had lawsuits dismissed, successfully arguing that the pollutants were not officially designated “hazardous.”¹⁷³

Like the MCL rule, the CERCLA designation has been challenged by a coalition of industry groups, including the U.S. Chamber of Commerce and the National Waste and Recycling Association.¹⁷⁴ Oral arguments were held in January 2026 for the case, with the federal appellate court panel questioning industry arguments that EPA's cost-benefit analysis underlying the designation was incorrect.¹⁷⁵ If kept in regulations by the Trump Administration,¹⁷⁶ the designation may subject entities that manufactured or used PFAS to legal liability for the cost of removing or remediating contamination, loss of natural resources, or the cost of health assessments or studies.¹⁷⁷ In August 2025, it was reported that Steven Cook, who represented interests opposed to this rule prior to becoming Principal Deputy Assistant Administrator for EPA's Office of Land and Emergency Management, has proposed repealing it, a move that would shift the costs of cleanup away from polluters and onto taxpayers.¹⁷⁸

The Trump Administration has voiced concern for “passive receivers”—entities such as landfills, water utilities, and farms that may incur liability for PFAS contamination they did not create—and indicated interest in creating exemptions from CERCLA liability for those groups.¹⁷⁹ Among those pushing for exemptions are the drinking water and wastewater treatment sectors and brownfield redevelopers.¹⁸⁰ The “PFAS Enforcement Discretion and Settlement Policy” released by EPA concurrently with the rule in 2024 sets out a focus on parties that caused significant PFAS releases, such as manufacturers or other industrial users.¹⁸¹ That policy remains on the EPA website.

The enforcement policy did not, however, exempt water or wastewater facilities from lawsuits filed by parties such as citizens or state governments. The Water Systems PFAS Liability Protection Act was introduced in both the last and current Congress to prevent CERCLA citizen suits over PFAS against these utilities.¹⁸² If passed in its current form, that bill would still leave parties open to liability under state laws, as it does not explicitly preempt state law or negligence claims.¹⁸³ Litigation is anticipated to resolve uncertainty, in particular for those seeking to dispose of biosolids containing PFAS and for parties involved in real estate transactions at disposal sites.¹⁸⁴

Toxic Substances Control Act. The Biden EPA also promulgated reporting and recordkeeping requirements for PFAS under TSCA.¹⁸⁵ The rule requires a person who manufactures, imports, or has manufactured PFAS or PFAS-containing articles for a commercial purpose since January 1,

2011 to submit to EPA information on the uses, production volumes, byproducts, disposal, exposures, and existing information on the environmental or health effects of the product.¹⁸⁶ In 2025, EPA again delayed the reporting period for companies to submit information about their PFAS uses until late 2026; the purported reason for the delay is for EPA to have time to ready its Central Data Exchange reporting system.¹⁸⁷

Resource Conservation and Recovery Act. EPA under the Biden Administration had also proposed two rules adding nine PFAS to the list of hazardous constituents under RCRA¹⁸⁸ and modifying the meaning of “hazardous waste” for purposes of RCRA’s corrective action program.¹⁸⁹ RCRA grants EPA authority to control hazardous wastes across the substances’ entire lifecycle.¹⁹⁰ The proposed rules would authorize corrective action to address emerging contaminants like PFAS, and enable future efforts to regulate PFAS as listed hazardous wastes.¹⁹¹

Whatever the fate of Biden-era regulations addressing PFAS, the Trump Administration’s broad efforts to weaken federal science and research capacity will have a detrimental impact on the ability of governments, federal or state, to protect residents from harms caused by PFAS and other chemicals.¹⁹² Though state legislatures and environmental agencies have begun to consider how to address the threat that PFAS present, they cannot match the scientific and human resources of the federal government. Science, personnel, and equipment provided by EPA’s Office of Research and Development have been critical to supporting state responses to PFAS contamination.¹⁹³

ii. Liability cases

In addition to the legal and policy questions PFAS pose, they have become a prolific area for tort litigation in the United States. Nearly all Americans have had some level of exposure to PFAS,¹⁹⁴ and growing public awareness of the substances and their potential health impacts has led to an uptick in litigation. PFAS releases from a variety of sources triggered more than 6,400 lawsuits between 2005 and 2022, including at least 1,235 filed in 2021 alone.¹⁹⁵ These suits continue to proliferate. In 2024, at least another 4,678 PFAS-related suits were filed in federal courts.¹⁹⁶

For analytical purposes, we divide PFAS lawsuits into two categories: (1) suits against polluters for damages to the environment and people, with key subsets being (a) suits by governments, utilities, or property owners against polluters for environmental contamination, and (b) personal injury suits; as well as (2) product-related suits. Some litigation clusters span the categories and subcategories, such as the multi-district litigation currently pending in the District of South Carolina, which includes both suits over human injuries caused by PFAS exposure and suits by state and local governments over natural resource damages.¹⁹⁷

1. Cases against polluters for damages to the environment and people

a. Cases by governments and utilities for contamination of the environment or drinking water systems

Government agencies at various levels have brought lawsuits to address PFAS issues in their jurisdictions. These actions encompass a variety of claims against PFAS manufacturers and users based on statutory and common law, often seeking compensation for natural resource damages (NRD) and health monitoring for residents. As of December 2024, 31 state attorneys general had

filed suits against PFAS manufacturers seeking monetary damages for environmental cleanup, healthcare costs, and injunctive relief.¹⁹⁸

Suits by state governments have succeeded in securing significant settlements from companies linked to contamination from PFAS.¹⁹⁹ One high-profile and potentially precedent-setting case—a lawsuit by the state of New Jersey against manufacturers DuPont and Chemours²⁰⁰ regarding PFAS contamination from the Chambers Works Facility in Deepwater, New Jersey—went to trial in May 2025. For over 50 years, the Facility purchased PFOA from 3M Co. and used it to manufacture Teflon, discharging contaminated wastewater into New Jersey’s soil and waters.²⁰¹

Suing under three state laws (the Spill Compensation and Control Act (SCCA), Water Pollution Control Act (WPCA), and Industrial Site Recovery Act (ISRA)),²⁰² New Jersey alleged that DuPont’s pollution controls at the facility failed, that the company understood the scope of the problem but failed to act to address it, and that DuPont was aware of the health and environmental threats PFAS presented but had tried to keep that information from the public.²⁰³ The state sought to recover cleanup costs and natural resources damages related to contamination over decades at the site. The state also alleged that DuPont tried to skirt laws on cleanup through corporate reorganizations that resulted in the business segments with PFAS liabilities being spun off into successor corporations like Chemours.²⁰⁴

New Jersey had also sued 3M, which settled with the state prior to trial for \$450 million.²⁰⁵ The proposed 3M settlement includes over \$60 million for cleanup and natural resource damages²⁰⁶ starting in 2026, with payments stretching to 2050.²⁰⁷ However, Monmouth County (a county in New Jersey) moved to intervene in the proposed Judicial Consent Order that would finalize the settlement in December 2025, stating that the settlement would not be enough to cover the actual cost of PFAS remediation.²⁰⁸

In August 2025, New Jersey also announced a settlement in which DuPont and its codefendants agreed to provide the state with more than \$2 billion to clean up pollution, pay for environmental damages, and settle a number of lawsuits with the state.²⁰⁹ More specifically, the DuPont companies agreed to set aside up to \$1.2 billion for cleanup at four New Jersey industrial sites, establish a separate “backstop fund” (capped at \$475 million) in case companies try to renege on those obligations, and to pay, over 25 years, \$875 million in PFAS-related damages.

In announcing the news to shareholders, DuPont described the settlement differently than did New Jersey officials, using the same numbers for the PFAS-related damage payment and the backstop (or “reserve”) fund but declining to specify the cleanup costs of the four industrial sites.²¹⁰ DuPont instead focused on the settlement’s “process for determining the amount of the Remediation Funding Source (‘RFS’) at the four current and former operating sites and the initial range for each, as well as other mechanisms to secure future remediation at the sites.”²¹¹

Municipalities and other smaller political subdivisions (and their water utilities) have also sued manufacturers or users of PFAS over contamination of local water supplies, which requires them to invest in expensive treatment technologies. In 2023, 3M agreed to pay \$12.5 billion and Dupont \$1.3 billion to settle collective claims against both manufacturers related to PFAS contamination in public drinking water systems.²¹² Though neither conceded liability, the companies agreed to fund testing and PFAS contamination treatment for cities, towns, and other public water systems for a

period of 13 years. Nearly 90 percent of eligible public utilities nationwide (over 11,000 systems) were included in the settlement.²¹³

It is estimated that the settlement, though sizable, will cover only a small portion of the costs that the nation's public water systems will bear for the design, installation, and maintenance of water treatment systems for PFAS. The 2023 settlement did not include future potential claims from wastewater treatment facilities, fire training areas, and local airports. A recent settlement with DuPont brought total awards to over \$90 million for just one village, Hoosick Falls, New York, which was forced to find a new source of water after PFAS contaminated its municipal system and led to high rates of cancer among its approximately 3,600 residents.²¹⁴

b. Personal injury cases

One strand of PFAS litigation concerns exposure to or pollution from PFAS-containing aqueous film-forming foam ("AFFF"). AFFF is used to fight fires, particularly burning jet fuel and other fast-burning chemical fires. It is frequently deployed by the U.S. military and at commercial airports and aircraft hangars. Litigation over AFFF (over 10,000 associated cases) has been consolidated into multi-district litigation proceedings in the U.S. District Court for the District of South Carolina.²¹⁵ A global settlement of individuals' claims has proven elusive, but plaintiffs' attorneys expect that bellwether proceedings, set to resume in 2026, will shift the dynamic.²¹⁶

Plaintiffs in the MDL, including firefighters, military veterans, and their dependents, generally allege that AFFF-containing PFOA and/or PFOS contaminated the groundwater near various military bases, airports, and other industrial sites where AFFFs were used to extinguish fires, causing them injury.²¹⁷ The Plaintiffs Executive Committee has narrowed the list of conditions for which plaintiffs seek recovery to six: kidney cancer, testicular cancer, liver cancer, thyroid cancer, thyroid disease, and ulcerative colitis.²¹⁸

The first bellwether trial in the MDL, originally scheduled for October 2025 and still awaiting a 2026 rescheduling as of writing, will focus on kidney and testicular cancer claims.²¹⁹ The court convened a Science Day on June 20, 2025, at which the court heard presentations regarding the alleged causal relationships between AFFF and the plaintiffs' diseases.²²⁰ The court has also chosen 12 sites to serve as test cases for tracing PFAS contamination back to specific manufacturers.²²¹ Expert testimony, witness examination, and argument on causation will occur in the trial itself.

Plaintiffs are seeking compensation for injury, medical monitoring, property damage, or other economic losses.²²² Medical monitoring damages are compensation sought by individuals exposed to PFAS who are currently healthy, but argue their present exposure puts them at increased risk of developing certain diseases in the future, and that the defendants should pay for monitoring (usually in the form of specific medical exams) of their health for some period of time.

State laws vary widely on medical monitoring damages, with jurisdictions differing on issues such as: (i) whether medical monitoring is recognized; (ii) whether medical monitoring can be sought without a present personal injury (some states allow the claim without proof of present injury, some reject the claim, and the remaining states are either divided or have not yet addressed the issue); (iii) whether medical monitoring is itself a cause of action or a measure of damages accompanying a separate cause of action, and (iv) what elements a plaintiff must prove to obtain medical

monitoring.²²³ The lack of consensus in how the claim is addressed across the states may have implications for certification of class action suits.²²⁴

2. Product-related cases

To quote one defense firm, “[f]irefighting foam is just the tip of the PFAS iceberg.”²²⁵ Human exposure to PFAS can occur in many ways, and plaintiffs have sued defendants all along the product chain from manufacturers to retailers. A second major category of PFAS litigation is product-related litigation, which has the potential to evolve rapidly. Products ranging from toothpaste to baby wipes and band-aids have been the subject of PFAS lawsuits. Lawsuits were filed in 2025 against a growing number of companies, including Apple (for wristbands containing high levels of PFAS) and outdoor-apparel maker W.L. Gore & Associates (for Gore-Tex water repellent).²²⁶ Packaging for food, including fast food wrappers, is also a common subject of litigation.²²⁷

Despite the flood of product-related litigation, few suits have gotten much traction. One law firm’s analysis of 100 recent cases filed found that only 22 of those remained active, with just eight having proceeded beyond the motion-to-dismiss stage.²²⁸ The majority of cases have been dismissed or withdrawn.²²⁹ Plaintiffs in product-related cases tend to argue three theories of liability: (1) fraud/breach-of-warranty and/or consumer-protection statutes, (2) nuisance, and (3) medical monitoring. However, cases are having difficulty clearing legal hurdles such as lack of standing, lack of product-specific testing, heightened pleading requirements for fraud and consumer-protection statutes, or the inability to bring medical monitoring claims without a present physical injury.²³⁰

Product-related litigation also encompasses suits for false or deceptive advertising practices related to PFAS in consumer products. Plaintiffs in these cases seek damages on a theory of economic loss, claiming they were misled about the safety or environmental friendliness of, or the presence of PFAS in, the purchased product.²³¹ In these suits, consumers argue that they would not have purchased the product or would have paid a reduced price if they had been aware of PFAS in the product, and they often include allegations of fraud, negligence, breach of warranties, and unjust gain.

As noted above, federal law has typically failed to address PFAS, including in consumer products. Some efforts have been made, however, to begin to understand and collect data on the chemical family. In December 2022, Congress passed the Modernization of Cosmetics Regulation Act of 2022 (MoCRA), placing with the Food and Drug Administration new authorities and responsibilities regarding the regulation of cosmetics.²³² Among those, the law requires FDA to assess the use and safety of PFAS in cosmetic products and to publish a report on its findings by December 29, 2025.²³³

In 2023, U.S. Representative Debbie Dingell filed the “No PFAS in Cosmetics Act,” which—if passed by Congress—would prohibit the sale of cosmetics with intentionally-added PFAS as “adulterated cosmetics.”²³⁴ PFAS are intentionally added to cosmetic products to improve the texture or to add conditioning properties, and they also occur unintentionally due to raw material impurities or the breakdown of other ingredients.²³⁵ FDA’s website notes that additional research is needed to determine the toxicological profiles for PFAS in cosmetics, the extent to which various PFAS in

cosmetics can be absorbed through the skin; and the potential for human health risks from exposure to PFAS in cosmetics.²³⁶

Depending on the ultimate content and scope of rules enacted by FDA under MoCRA or whether the No PFAS in Cosmetics Act passes, cosmetics companies may be able to rely on the primary jurisdiction doctrine as a defense. This doctrine would allow them to argue for the dismissal of lawsuits on the presence of PFAS in cosmetics on the basis that the FDA, rather than the courts, is the proper authority to determine whether the presence of PFAS in cosmetics is unsafe. This is essentially a form of displacement or preemption defense, somewhat parallel to the role of FIFRA regulation and labeling in the pesticide tort cases.

Some states have enacted laws that ban or restrict the use of all or specific PFAS in cosmetics and other personal care products or more broadly. In general, the new laws ban the manufacture, sale, distribution for sale or offering for sale of products to which PFAS have been *intentionally added* in order to provide a specific characteristic or perform a specific function. Minnesota's PFAS law, which took effect in 2025, currently bans the sale or distribution of various groups of consumer products with "intentionally added" PFAS²³⁷ and, beginning in 2032, will ban intentionally added PFAS in all products.²³⁸

Maine has also implemented a ban on intentionally added PFAS in all products to take effect in 2032, pending a feasibility analysis.²³⁹ Cookware industry representatives had requested that the state exempt nonstick cookware under a "currently unavoidable use" designation, but the Maine Board of Environmental Protection rejected the exception.²⁴⁰ California, Colorado, and New Mexico, among others, have also recently passed laws banning the sale or distribution of certain consumer products with intentionally added PFAS.

C. Conclusion

PFAS have become—and will remain for the foreseeable future—a source of litigation seeking to resolve questions about the fate of Biden Administration efforts to regulate them, the scope of state efforts, and liability for contamination and exposure across the country. The Trump Administration, while professing to consider PFAS as a serious concern, has sought to rescind prior federal regulatory efforts, and to remove PFAS from lists of regulated substances and extend timelines for compliance.

Courts have begun to wrestle with PFAS exposure cases, and defendant companies have agreed to very large settlements. Despite this, however, the financial costs of addressing PFAS contamination across the country will be enormous, and settlements are unlikely to cover all needs. Scientific studies furthering our knowledge of where PFAS are located,²⁴¹ how they affect the human body and the environment, and the prospects for improvements to drinking water quality brought about by installation of advanced filtration technologies²⁴² are also advancing, which may aid lawyers in demonstrating causation and establishing legal liability.



Petrochemicals

A. Introduction

Toxics litigation involving petrochemicals is a growing area, largely driven by lawsuits against companies in the fossil fuel industry for alleged harm caused by toxic chemicals released from their operations. These lawsuits focus on environmental contamination, personal injuries, and public health concerns.

Petrochemicals are derived from fossil fuels, often a byproduct used to make synthetic materials.²⁴³ The petroleum refining process begins with raw materials, natural gas and crude oil, that are refined into three categories: fuel products, non-fuel products, and petrochemicals and petrochemical feedstocks.²⁴⁴ Feedstocks are the raw hydrocarbons, or primary petrochemicals—naphtha, ethane, propane, butane, benzene, toluene, and xylene—that are the building blocks of most petrochemical substances (where the last three are byproducts of petrochemical refining).²⁴⁵

These primary petrochemicals go through a thermal cracking process to become gases, which react with other chemicals to produce second-generation, or secondary, petrochemicals like ethylene, propylene, butylene, and butadiene.²⁴⁶ Secondary petrochemicals then become components of compounds like ethylene oxide, vinyl chloride, and neoprene, used in plastics, fertilizers and pesticides, and other synthetic materials.²⁴⁷

Petrochemical pollution occurs at every stage of this process, with fenceline communities facing harmful impacts from the volatile organic compounds (VOCs) released from oil wells and drilling rigs, spills from pipelines, air pollution from petroleum refineries and crackers, water pollution from disposal of the chemicals, and leaching from the finished products for which the chemicals are used.²⁴⁸ The universe of petrochemical pollution thus includes the raw materials, byproducts of the refining process, the chemical products themselves, and their uses.

While the process of refining petrochemicals involves many pollutants, this report focuses on major petrochemicals, including but not limited to ethylene, propylene, butadiene, xylene, toluene, and methanol.²⁴⁹ As this section will show, these chemicals are the most commonly used and thus are the focus of current litigation. This analysis does not consider greenhouse gas emissions related to petrochemical refineries, as such emissions are more often the direct focus of climate litigation.²⁵⁰

The section will outline how petrochemicals are regulated under several federal statutory regimes. These statutes and corresponding regulations provide the foundation for understanding how some fenceline communities' legal claims may be either administrative or procedural in nature, or if common law tort-based claims are often preempted by federal statutes. Some state-law cases, however, do move forward as toxic tort claims and will be discussed here as well. In general, fenceline communities have utilized several legal pathways in petrochemical toxics litigation but with limited results, as defendant companies often overcome claims by claiming compliance with regulations or that plaintiffs have not established sufficient causation.

Environmental justice dimensions of petrochemical litigation

Plaintiffs in petrochemical litigation are often fenceline communities near refineries or plants. Most plaintiffs reside in one of three main hotspots in the country: Louisiana, in the area known as Cancer Alley; Texas, mostly in the Houston Ship Channel; and in the Appalachian Ohio River Valley, which spans Ohio, Pennsylvania, and West Virginia. It is important to note the history of the marginalized communities in these areas; the parishes of Cancer Alley are and have been predominantly Black, while the Houston Ship Channel is similarly majority Black and Latino. In 2022 David Boyd, the UN Special Rapporteur on Human Rights and the Environment, identified Cancer Alley²⁵¹ and Port Arthur, Texas²⁵² as pollution “sacrifice zones,” highlighting the injustice of toxic pollution affecting Black communities in particular.

Marginalized communities, especially in Cancer Alley, have maintained for decades that their residents are disproportionately affected by toxic exposure and higher-than-normal cancer prevalence as a result.²⁵³ A report by the Tulane Environmental Law Clinic in 2021 confirmed what community members already knew: Cancer Alley's high rates of cancer are a complex mix of race, poverty, and toxic air pollution affecting predominantly Black communities.²⁵⁴

Citizen science, or community-led monitoring of emissions, is a key part of petrochemical litigation in environmental justice communities, but such initiatives are coming under threat. For example, in Louisiana publicly shared air monitoring data must be collected using EPA-approved equipment, per a new state law enacted in 2024. However, such equipment is particularly costly and thus inaccessible to impoverished communities, where citizen-led science is often needed. Community groups from Cancer Alley challenged the law in federal court in May 2025, alleging a violation of their First Amendment rights.²⁵⁵

This is not the first time Cancer Alley plaintiffs have tried to use other rights-based strategies to address petrochemical pollution in their communities. In 2023, residents sued the local government on claims of racial discrimination via petrochemical plant siting in the city's 2014 Land Use Plan, alleging violations of the Thirteenth and Fourteenth Amendments due to the locations being vestiges of slavery; plaintiffs thus sought a moratorium on future petrochemical plants in their parish.²⁵⁶ St. James Parish plaintiffs survived a standing challenge that made its way to the Fifth Circuit in 2025, and in February 2026, a federal district court in Louisiana rejected the government's motion to dismiss, stating plaintiffs sufficiently pled their Thirteenth and Fourteenth Amendment claims.²⁵⁷ Despite the Trump Administration's repeal of executive orders on environmental justice,²⁵⁸ civil rights-based claims by petrochemical plaintiffs are still moving forward.

i. Regulations

Petrochemicals are regulated through a patchwork of rules under multiple federal environmental statutes. Though most cases fall under regulatory regimes from the Clean Air Act and Clean Water Act, some involve claims based on the Toxic Substances Control Act or procedural claims.

Clean Air Act. The Clean Air Act (CAA) is the primary statute for regulating airborne and volatile petrochemicals. Sections 108 and 109 of the CAA regulate six pollutants to improve ambient air quality: ground-level ozone, lead, nitrogen dioxide, particulate matter, carbon monoxide, and sulfur dioxide.²⁵⁹ Although some of these “criteria pollutants” contribute to petrochemical pollution, this report does not cover them, as they are regulated separately from the toxic air emissions covered here as an emerging litigation trend. Rather, this report focuses on hazardous air pollutants (HAPs) regulated under Section 112 of the CAA, known as the National Emissions Standards for Hazardous Air Pollutants (NESHAP).

Section 112 was last amended in 1990 to require issuance of technology-based standards for major stationary air pollution sources (sources that can emit ten or more tons per year of a HAP, or twenty-five tons of a combination of HAPs). These standards require the “maximum degree of reduction” in HAP emissions and are known as the “maximum achievable control technology” or MACT standards.²⁶⁰ These standards apply to petrochemical facilities, with specific standards for petroleum refineries. Refineries specifically must install emissions control technology under both the NESHAP and New Source Performance Standards (NSPS),²⁶¹ which are technology-based standards that regulate new or upgraded industrial facilities.²⁶²

NESHAP regulates emissions of key petrochemicals through different sectoral rules focused on benzene waste and transfer, ethylene oxide emissions and sterilizers, petroleum refineries, polyether polyols production, and oil and natural gas production facilities.²⁶³ The rule for these last facilities focus on five HAPs, including benzene, toluene, and xylene.²⁶⁴ The rule on petroleum refineries, promulgated in 2013, aimed to reduce emissions on eleven air toxics, including benzene, by 59% of then-current levels.²⁶⁵

The Biden Administration’s EPA proposed updated CAA regulations to require petrochemical facilities to reduce HAPs such as ethylene oxide and other synthetic organic chemicals.²⁶⁶ However, the Trump Administration has announced that under Section 112(i)(4) of the CAA, the President can issue two-year exemptions to stationary sources from compliance standards “if the technology to implement the standard is not available and it is in the national security interests of the United States”;²⁶⁷ the Administration has already issued exemptions to forty-one ethylene oxide sterilizer facilities.²⁶⁸ This use of presidential exemptions is being challenged by environmental groups in the U.S. District Court for the District of Columbia, with plaintiffs arguing that the exemption provision had never been used before, and that the Trump Administration’s national security reasoning is too vague.²⁶⁹

As part of President Trump’s Executive Order 14154 on “Unleashing American Energy,” EPA has listed the Petroleum Refinery Sector Rule, as applied to NESHAP and NSPS, as subject to an exemption request.²⁷⁰ Other petrochemical rules now subject to exemption are: NSPS for the Synthetic Organic Chemical Manufacturing Industry; NESHAP for Synthetic Organic Chemical Manufacturing and Group I & II Polymers and Resins; and NESHAP for Ethylene Oxide Emissions

Standards for Sterilization.²⁷¹ EPA chose these rules to allow exemptions because of alleged concerns over the regulations not being grounded in statutory authority, concerns that the regulations create “unnecessary burdens” for industry, the cost of compliance, questions on the science, and questions on the appropriateness of setting technology-based standards.²⁷²

Clean Water Act. Petrochemicals are also regulated under the Clean Water Act (CWA) through National Pollutant Discharge Elimination System (NPDES) permits, specifically through EPA’s Petroleum Refining Effluent Guidelines. Generally, the CWA requires any discharger of pollutants (through a point source into a water of the United States) to have an NPDES permit.²⁷³ Wastewater discharges (both direct and indirect) for refineries fall under these guidelines, which are then incorporated into site-specific NPDES permits.²⁷⁴

The petrochemical effluent limitation guidelines include: Best Practicable Control Technology Currently Available (BPT, based on in-plant and out-of-pipe technologies), Best Available Technology Economically Achievable (BAT), New Source Performance Standards (NSPS), Best Conventional Pollution Control Technology (BCT), and Pretreatment Standards.²⁷⁵ Under BPT, BCT, and BAT, EPA has established production-based mass limitations for pollutants, and thus only regulates discharges based on limitations like biochemical or chemical oxygen demands or total suspended solids, rather than regulating based on particular chemicals (though ammonia, sulfide, chromium, phenolic compounds, and oil and grease are separately listed in the guidelines).²⁷⁶ These limitations apply to discharges from any facility that processes raw petroleum crude into petrochemicals, gasoline, fuel, etc.²⁷⁷

Toxic Substances Control Act. The Toxic Substances Control Act (TSCA) regulates chemicals by controlling the production, importation, use, and disposal of specific listed substances through risk evaluation and management.²⁷⁸ TSCA specifically restricts the use of thousands of chemicals, including petrochemicals like formaldehyde, 1,3-butadiene, ethylene oxide, and benzene.²⁷⁹ In July 2024, EPA also proposed listing petrochemicals like vinyl chloride and acetaldehyde as new high-priority substances;²⁸⁰ the high-priority designation triggers an immediate risk evaluation to determine whether the chemical presents unreasonable risk to public health or the environment.²⁸¹ While petrochemicals are and continue to be evaluated and regulated under TSCA, there are also second-generation uses of petrochemicals, like creation of biofuels from petrochemical products and by-products, that are emerging as potential areas of TSCA-related litigation.²⁸²

B. Petrochemicals Litigation Overview and Trends

i. Cases challenging government rules or permits

Challenging government rules. EPA rules are often the subject of petrochemical litigation as part of plaintiffs’ efforts to gain stronger regulations against petrochemical companies—usually in a situation where EPA is being held to a duty to improve an existing rule. For example, in 2024, environmental and community advocates in Texas challenged EPA’s rule for ethylene oxide, a sterilization agent, for (1) failing to require sterilization companies to monitor the air around their facilities for toxic emissions, (2) continuing to consider sterilization facilities a “minor” source of toxic emissions, and (3) setting a compliance deadline too far in the future (three years). Similarly, environmental groups in the Houston Ship Channel challenged EPA’s CWA petrochemical effluent guidelines in 2023 for failing to set limits on harmful chemicals, including benzene, in wastewater discharged by petrochemical facilities.

In both instances, EPA had already listed the chemicals at issue as carcinogenic. Such listings can be used as a basis for claims petitioning the Agency to revisit old rules. For example, in 2023, environmental groups sued EPA to review its air toxics standards for polyether polyols facilities, following listing of ethylene oxide (the chemical released there) as a carcinogen without a corresponding update to the polyether polyols rule. Litigation against EPA can also involve agency approval of downstream uses of petrochemicals. For example, environmental groups in 2023 also sued EPA for allowing Chevron to turn plastic waste into so-called biofuel, arguing that the Agency did not identify or implement ways to minimize the harms of petrochemical pollution per TSCA. This led to EPA withdrawing its approval in September 2024 for reconsideration.

Challenging permits. Petrochemical litigation also involves administrative procedure claims based on issuance of or conditions placed on CAA and CWA permits. Procedural issues can include a lack of sufficient time and notice for the public comment period for a proposed permit, a permit not meeting regulatory standards, or a permit insufficiently addressing impacts of a proposed action.

In Louisiana, in 2020, St. James Parish residents again challenged both a federal wetlands permit²⁸³ and CAA permit²⁸⁴ granted to Formosa Plastics by the U.S. Army Corps of Engineers and Louisiana Department of Environmental Quality (LDEQ), respectively. Plaintiffs in the latter case argued that LDEQ approved petrochemical plants “without stopping to assess the total impacts,”²⁸⁵ and plaintiffs in the former challenged the Army Corps’ environmental assessment as inadequate and subsequent decision not to complete an Environmental Impact Statement (EIS) as improper.²⁸⁶ The wetlands case was dismissed in 2021²⁸⁷ after the Corps suspended the permit, with the agency ordering a full environmental review (a multi-year process that would delay the project.²⁸⁸ The CAA permits for the same facility were vacated in 2022 by a Louisiana district court but were reinstated by an appellate court in 2024.²⁸⁹

Similarly, cases may challenge permits issued by state regulators. At the same Formosa Plastics facility, St. James Parish plaintiffs filed a lawsuit against LDEQ for the agency’s decision to grant a fourth extension of a Prevention of Significant Deterioration preconstruction permit to Formosa.²⁹⁰ Advocates for plaintiffs argue that instead of an extension, Formosa should go through the permitting process again to ensure adherence to the most recent and protective air protection standards.²⁹¹

ii. Cases for enforcement of environmental statutes

Citizen suits. Though this avenue is often expensive and complex, plaintiffs will often utilize the CAA and CWA citizen-suit provisions as the basis for their legal claims against petrochemical companies.²⁹² One example is the 2010 suit against ExxonMobil’s Baytown complex in Houston, Texas,²⁹³ where plaintiffs sought to enforce compliance via civil penalties for repeated CAA violations.²⁹⁴ After a series of appeals by defendants, in 2022, the Fifth Circuit ruled that plaintiffs “easily” met their burden of proving injury because “throughout the claims period, [they] regularly saw flares, smoke, and haze coming from the complex; smelled odors, suffered from allergy-like or respiratory problems; feared for their health; refrained from outdoor activities; or moved away.”²⁹⁵ In 2024, ExxonMobil’s appeal of the Fifth Circuit’s panel decision failed again, leading to a \$14.25 million civil penalty.²⁹⁶

Similarly, in 2023, Shell was a defendant in a citizen suit for repeated and ongoing violations of the CAA and Pennsylvania Air Pollution Control Act in Beaver County, Pennsylvania.²⁹⁷ The CWA's citizen suit provision was also used in June 2025 in a North Carolina case against StarPet, a plastics company, for allegedly illegally discharging 1,4-dioxane, an intermediate petrochemical, into drinking water supplies for the Asheboro community.²⁹⁸

Government plaintiffs. The U.S. Department of Justice has also brought suits against petrochemical polluters directly for alleged violations of environmental statutes. However, this appears unlikely to continue during the second Trump Administration; for example, the Trump DOJ recently dismissed the Biden Administration's suit against Denka for alleged CAA violations related to chloroprene emissions at the company's facilities in Louisiana.²⁹⁹ As of August 2025, the Trump Administration has filed only eleven civil lawsuits against major polluters and reached eighteen settlements, compared to the Biden Administration's thirty lawsuits and fifty-three settlements in the first six months in office.³⁰⁰ Enforcement of environmental laws, including in the context of toxic pollution, has significantly fallen off, suggesting that civil suits against polluters based on bedrock environmental laws will be limited in the near future.

Settlements between government and industry defendants. Additionally, EPA has entered settlements with petrochemical companies such as ExxonMobil and Shell to require the significant reduction of benzene, VOCs, and criteria pollutants under CAA New Source Review, New Source Performance Standards, and specific NESHAP regimes.³⁰¹ Under its CAA petroleum refinery rule, EPA has entered into 37 settlements with U.S. companies that operate over 95% of the country's petroleum refining capacity.³⁰² Though specific to petrochemical refining, these settlements cover 112 refineries in 32 states, and have led to companies investing more than \$7 billion in control technology and paying civil penalties of more than \$116 million.³⁰³

Such settlements can also be found at the state and local level. For example, half of Shell's 2023 \$10 million settlement with Pennsylvania will go to environmental projects for the Beaver County community near the company's polyethylene complex.³⁰⁴ Similarly, in 2024, the Bay Area Air Quality Management District levied the largest penalty in the agency's history to Valero for \$82 million, with \$64 million slated to fund projects near the Benicia refinery to reduce exposure and mitigate exposure impacts, and the remaining funds going to clean air projects throughout the Bay Area.³⁰⁵

Overall, fines and civil penalties are often minuscule relative to a petrochemical company's revenues, and do not serve as a significant deterrent for defendants to limit their emissions.³⁰⁶ Even so, financial and litigation pressures remain an issue for petrochemical companies, with some, like Denka in Louisiana or Shell in Pennsylvania, having had to suspend operations of their plants "due to the high cost of reducing toxic pollution,"³⁰⁷ or to consider selling their chemical plant and assets following settlement payments.³⁰⁸

Compliance with regulations. Defendant companies may cite their compliance with existing federal and state regulations as a defense against litigation. For citizen suit claims, both the CWA and CAA have permit shield provisions that defendants can utilize, where permit holders who follow the terms of the permit are considered in compliance and cannot be held liable for discharges.³⁰⁹

For example, in a recent case in Louisiana, a federal judge dismissed plaintiff's claims that a petroleum coke³¹⁰ facility violated the Clean Water Act because the defendant company, backed by LDEQ reports, argued that it had not caused or allowed unpermitted discharges from its facility.³¹¹

Essentially, the company did not disclaim any discharges from their facility, merely that what it did discharge was permitted and therefore in compliance with LDEQ regulations. Similarly, ExxonMobil argued its good-faith effort towards compliance as a defense in a 2010 case in Baytown, Texas,³¹² and in its June 2025 writ of certiorari to the Supreme Court, the company cited its self-reporting and investments in compliance measures as defenses.³¹³

Affirmative defenses. Defendants can also invoke affirmative defenses under certain regulations. For example, petrochemical companies in Texas can invoke an affirmative defense for “unplanned and unavoidable” pollution to avoid penalties for unpermitted pollution,³¹⁴ and the Texas Council of Environmental Quality (TCEQ) granted 85% of such instances from 2017-2021.³¹⁵

iii. Personal injury cases

Preemption of common-law tort claims. Preemption of petrochemical tort claims depends in part on the location of the claim and parties. The CAA expressly preempts federal common law claims and state law claims brought by plaintiffs in one state against sources in other states.³¹⁶ Though courts are generally reluctant to allow common-law suits that could interfere with a federal regulatory regime, the CAA does have a citizen suit saving clause, Section 304, which states that plaintiffs are not restricted from seeking any other form of relief,³¹⁷ and the CWA has a citizen suit saving clause that similarly allows plaintiffs to seek other forms of relief.³¹⁸

Generally, the CAA and CWA do not preempt state-law tort actions against in-state sources of pollution.³¹⁹ However, this is not always the case, as two federal courts did preempt state-law public nuisance claims on the basis that the CAA entrusted EPA, not the courts, to determine the reasonableness of the alleged emissions.³²⁰ So while state tort cases against in-state polluters are generally not preempted, there are exceptions.

State tort claims. In Louisiana, cases filed in state court include both negligence and nuisance claims against petrochemical facilities, particularly those emitting ethylene oxide (though these cases have been removed to federal court).³²¹ In Pennsylvania, residents in Beaver County, in parallel with the citizen suit discussed above, are seeking class-action status for a toxic tort suit in federal district court. Similarly, in Texas, fenceline communities near the Eastman Chemical Plant have filed a negligence case in federal district court for fugitive ethylene oxide emissions causing cancer in local residents.³²² These tort claims, particularly negligence, nuisance, and class actions alleging toxic torts, are typically a result of specific flaring events, such as explosions, fires, or other major chemical releases beyond the usual industry emissions.³²³

State tort litigation has its limitations. Public nuisance claims against petrochemical companies are likely to be preempted, as discussed above, so private nuisance claims are more common as a result.³²⁴ For class action lawsuits, petrochemical pollution cases face issues with causation and establishing commonality among the plaintiff class in demonstrating causation for each class member.³²⁵ And while plaintiffs are filing negligence and nuisance claims, industry is able to raise defenses and remove such cases to federal courts, which will be discussed more below.

Standing and Causation. Defendant companies often challenge certain elements of plaintiffs’ claims, most commonly causation in statutory or tort claims, traceability of the injury for standing, or a specific standard of care. In the Baytown case discussed earlier, ExxonMobil in its writ of certiorari also challenged the traceability of plaintiff’s injuries to specific emissions events or

alleged CAA violations.³²⁶ Similarly, in a 2003 Texas state court case, defendant Lyondell Industries argued that the epidemiological studies presented by workers exposed to benzene were not sufficient to establish that the occupational exposure caused their cancer; the court rules that more specific causation was needed.³²⁷

More recently, Denka argued that its chloroprene emissions did not cause plaintiff's symptoms in an environmental tort case before the Fifth Circuit in 2021.³²⁸ And in tort claims, defendants often argue that plaintiffs failed to allege a specific standard of care, and thus a lack of duty of care. In several cases in Louisiana, plaintiffs asserted a general duty of care in Louisiana to avoid injury to others, including limiting unreasonable emissions, but the Fifth Circuit and lower federal courts in the state agreed with defendants that plaintiffs must assert a specific standard of care based on a statute or judicial precedent.³²⁹

C. Conclusion

Petrochemical litigation, while not necessarily new, remains trending because of the rise in lawsuits against major oil companies and plastics producers.³³⁰ As climate change impacts accelerate pushes for decarbonization, the fossil fuel industry turns to expanding production of plastic and petrochemical products.³³¹ Petrochemicals are finding their way into more products; for example, environmental groups are currently targeting food additives like phthalates, which stem from petrochemicals, due to scientific evidence linking such additives to birth and developmental defects.³³² Furthermore, as the next section will demonstrate, petrochemical companies are reckoning with the health impacts of both their plants' emissions/discharges and the plastics products they produce as part of the broader petrochemical production scheme.

With this push for more petrochemical production, fenceline communities, particularly environmental justice communities, will continue to pursue a myriad of strategies to limit toxic emissions or stop the construction of petrochemical plants entirely, including administrative challenges to agency rules and permits, citizen suits, and rights-based litigation. Due to the geographic locations of and historical circumstances related to petrochemical plant siting, it is likely that future petrochemical litigation will continue to increase in hotspots or "sacrifice zones" like Cancer Alley and Houston Ship Channel.



Plastics (Microplastics and Associated Chemicals)

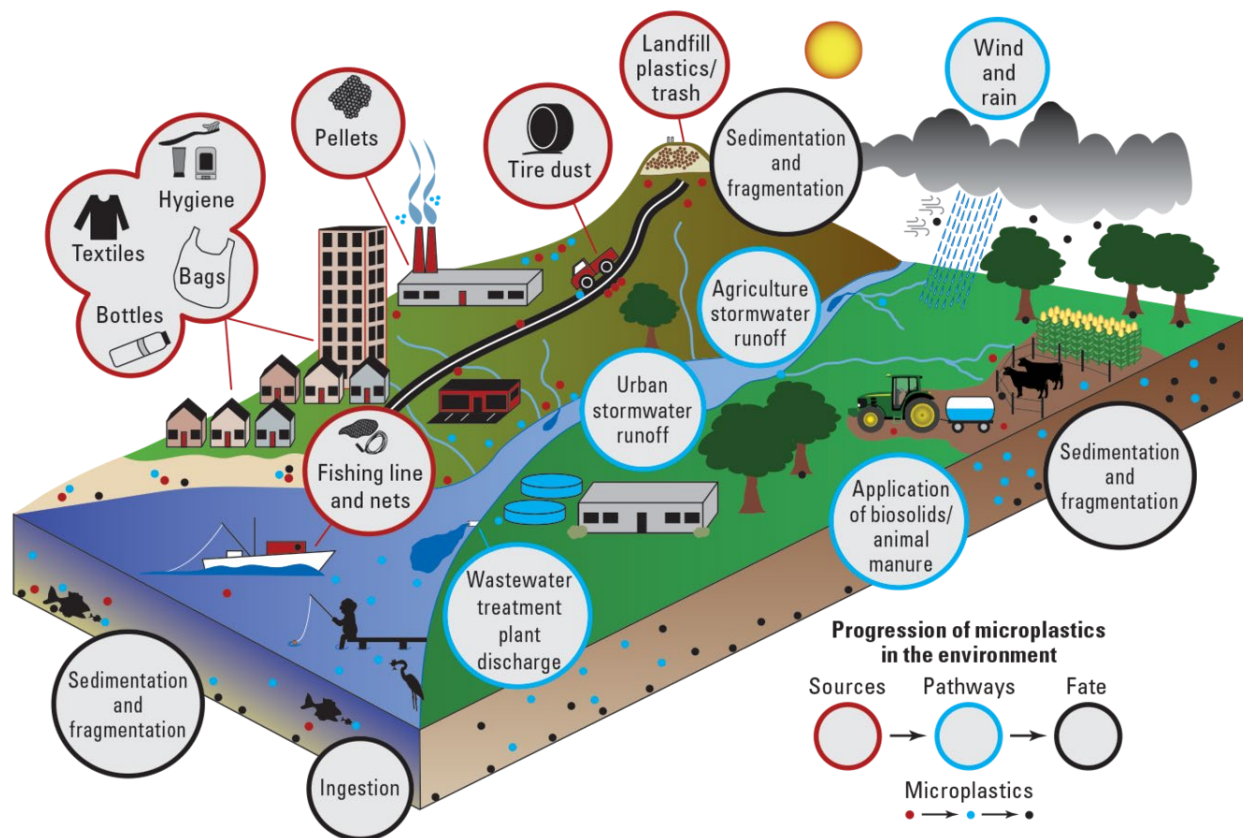
A. Introduction

Another important if still emerging area of toxics litigation—top of mind for industry stakeholders, regulators, and potential claimants—concerns plastics, particularly emerging plastic contaminants such as microplastics and associated chemicals.

Plastic pollution has long been identified as a source of environmental harm, including wildlife injury and death from ingestion and entanglement.³³³ More recently, however, plastics are being considered toxic substances due to their composition, ubiquitous use, environmental persistence, and potential to cause human health impacts. Synthetic plastics are derived from fossil fuels, including crude oil, natural gas, and coal. (Harms associated with plastic production are closely linked to petrochemical production and facilities discussed in the previous section.) Less prevalent bioplastics are derived from renewable resources such as carbohydrates, starches, vegetable fats and oils, bacteria, or other biological substances.³³⁴ Most plastics (whether derived from fossil or bio-based sources) also contain chemical additives or can break down into chemical byproducts.

Of significant note are emerging plastic contaminants—a wide range of substances, including microplastics, nanoplastics, and plastic additives (like PFAS and phthalates), that are present in the environment and have potential to harm human and ecological health. These are considered “emerging” because of rising scientific attention to their health impacts and absence of regulatory controls. Microplastics and nanoplastics in particular raise concerns due to their ability to carry or absorb other harmful chemicals and to be ingested or inhaled and accumulate in human tissue and organs, with growing evidence of health concerns including developmental delays, hormone disruption, digestive and respiratory inflammation, reproductive issues, cancer, heart attacks, and more.³³⁵

Microplastics are plastic particles less than five millimeters and nanoplastics are less than one micrometer. These either derive from breakdown of larger plastic items (secondary microplastics and nanoplastics) or are intentionally manufactured to be small (primary microplastics and nanoplastics, such as microbeads and plastic pellets called “nurdles”). They are found everywhere, from the deepest oceans to the highest mountains, but also significantly in our living environments, drinking water, and even food. Sources include but are not limited to degraded plastic products, synthetic clothing and other textile fibers, tire wear, and personal care items.³³⁶



[Microplastics Sources, Pathways and Fate Conceptual Diagram.](#)

In recent years, plastics have become an area of significant legal and regulatory focus, driven by growing scientific evidence of environmental and health issues, increasing public awareness, and evolving policy landscapes. Industry stakeholders—from manufacturers and packaging companies to retailers and recyclers—are facing heightened scrutiny over the production, labeling, use, recyclability, disposal, and pollution of plastics. In the toxics space, secondary microplastics are becoming an emerging plastic contaminant of concern.

Efforts to regulate microplastics initially were focused on reducing plastic pollution in waterways, and while growing, are currently limited. At the federal level, the Microbead-Free Waters Act, enacted in 2015, prohibits the manufacture, packaging, and distribution of rinse-off cosmetics and non-prescription drugs (e.g., toothpastes) containing plastic microbeads.³³⁷ While this is the only federal law targeted at microplastics, other actions under federal law include implementation of existing regulation of products (the Federal Food, Drug, and Cosmetic Act), as well as regulation of chemicals used by and emissions or discharges emanating from plastic producers (primarily the Toxic Substances Control Act and Clean Water Act). There have also been a range of federal efforts to study and address plastics, including microplastics, more generally via existing authorities and at the discretion of Congress, for example in the Save Our Seas 2.0 Act.³³⁸

Bills have also been introduced in Congress, signaling that this is an area of continuing efforts. The Plastic Pellet Free Waters Act, introduced in the Senate in July 2023, targets primary microplastics and would prohibit the discharge of plastic pellets or other pre-production plastics from facilities that manufacture, use, package, or transport such materials.³³⁹ Recently, human health concerns have broadened the scope of Congressional attention to secondary microplastics. Two bills, the

Microplastics Safety Act (bipartisan bill H.R. 4486) and the Plastic Health Research Act (H.R. 4903) were introduced in 2025 to study, report, and make recommendations on human health impacts of exposure to microplastics, focusing on areas including children’s health, the endocrine system, cancer, chronic illness, and reproductive health.³⁴⁰

Some states have launched efforts to address plastic pollution, including microplastics. In 2022, California issued its first Statewide Microplastics Strategy, a multi-year plan to address pollution particularly in California’s marine environment by focusing on pollution prevention (including source reduction), pathway interventions, education, and scientific research.³⁴¹ In 2025, the state’s Department of Toxic Substances Control proposed adding microplastics to its Candidate Chemicals List, which would allow the agency to evaluate consumer products containing or generating microplastics and potentially require manufacturers to seek safer alternatives.³⁴² Other states’ efforts have sought to ban microbeads as well as single-use plastic products such as bags and bottles, though many microplastics-specific bills have stalled or died in committee.³⁴³ State consumer protection laws and tort claims have therefore become the primary legal mechanisms for addressing the toxicity and microplastic contamination of plastic products.

This section examines key trends shaping plastics litigation, focusing on the rise in cases concerning microplastics toxicity. Trends include a recent surge in consumer protection claims concerning direct exposure to microplastics (and other chemical additives) through the use of plastic products, and a combination of public nuisance and consumer protection claims to address widespread plastic pollution causing environmental contamination and public health concerns. These are often brought by classes of consumers, nongovernmental organizations, and state attorneys general or local governments seeking accountability through monetary damages and injunctive relief.

B. Plastics Litigation Overview and Trends

Plastics litigation raises a complex set of issues that span the areas of tort, consumer protection, regulatory, and environmental law. As scientific evidence around plastic toxicity and pollution strengthens, and public pressure intensifies, courts are increasingly being asked to grapple with novel factual questions and evolving regulatory frameworks.

Thus far, some of the major litigation regarding the toxicity of plastics centers on microplastics, and includes consumer protection lawsuits against makers of baby bottles, food storage bags and containers, baby wipes, and bottled water for microplastic leaching or contamination; as well as against major plastics producers for pervasive plastic pollution. To a lesser extent, health concerns have been raised in pellet spill or dumping cases. The cases often involve claims of misleading or deceptive marketing regarding the safety or recyclability of products, failure-to-warn of harm from microplastic leaching, public nuisance associated with pollution, and violation of environmental laws.

i. Consumer protection cases

A growing area of plastics litigation concerns direct exposure to microplastics or other chemical substances that leach from plastic products. While litigation concerning the leaching of chemicals (such as BPA and PFAS) from plastic products is not necessarily new, the emerging science around

the leaching of microplastics is driving a wave of litigation³⁴⁴ and focusing the issue on the plastics themselves rather than specific chemical constituents.

1. Healthwashing claims

Most of these cases raise issues of deceptive labeling or marketing practices, including misleading health or safety claims. “Healthwashing” (like “greenwashing”) refers to marketing or labeling that suggests a product is safer, healthier, more sustainable, or more natural than it actually is or than scientific evidence supports.³⁴⁵ In the plastics and microplastics context, this might involve claims like “BPA free,” “plastic free,” “microwave safe” or “freezer safe,” “natural” or “pure,” or “recyclable” when the underlying exposures or issues are not fully disclosed or may be misleading. Consumer protection laws—including state unfair and false advertising statutes—are increasingly being used to challenge these practices. These claims typically come down to the truthfulness of the representation, based on a “reasonable consumer” test.

For example, in 2024, consumers filed separate class-action lawsuits against major baby bottle manufacturers—Philips North America LLC (Avent brand baby bottles), Handi-Craft Company (Dr. Brown’s), Newell Brands (Nuk), and Mayborn USA Inc. (Tommee Tippee)—in federal district courts alleging that the plastic bottles release harmful microplastics when heated or otherwise used as directed.³⁴⁶ The primary claims in these suits focus on misleading “BPA free” marketing, product liability, and failure to disclose safety risks to vulnerable infants. In *Miller et al. v. Philips North America*, for example, the court partially dismissed claims under California’s Unfair Competition Law, False Advertising Law, and Consumers Legal Remedies Act, finding that “BPA free” labels only promise the absence of BPA and cannot be extrapolated to imply the products are also free of microplastics or other harmful chemical additives.³⁴⁷

Courts also generally dismiss certain labeling claims when the product complies with federal definitions or standards. In the past few years, there has been a surge in consumer class-action lawsuits alleging that bottled water brands mislead consumers by marketing water as “natural,” “spring,” “mountain,” “pure,” etc. when tests or studies show the presence of microplastics (and sometimes other plastic chemicals).

In *Daly v. Danone Waters of America*, plaintiffs alleged that bottled spring water labeled “natural” was misleading because it contained microplastics. The court found, however, that the claim was preempted because the labeling complied with federal (FDA) regulation and definition of “spring water”³⁴⁸ (i.e., “water derived from an underground formation from which water flows *naturally* to the surface . . .”).³⁴⁹ Further, there is no specific FDA limit on microplastics in bottled water and the regulation does not define “natural” in a way that excludes such contaminants.³⁵⁰ This case suggests that absent specific federal standards, plaintiffs may face difficulty challenging labeling on that basis—at least where established federal definitions control.

2. Failure-to-warn claims

Plaintiffs also frequently allege that manufacturers failed to warn about potential risks posed by microplastics or chemicals in plastic products. These claims rest on the argument that companies knew or should have known about long-term health effects (e.g., endocrine disruption or carcinogenicity) and failed to adequately disclose those risks.

Product liability cases tend to include multiple claims, such as misrepresentation (akin to the healthwashing claims discussed above), unjust enrichment, duty to disclose, and failure-to-warn.³⁵¹ In some cases, failure-to-warn claims have held more water than healthwashing claims. In *Philips*, for example, the court allowed plaintiffs to proceed with their claim that defendants failed to disclose that microplastics leach when the baby bottles are heated.³⁵² The claim that Philips did not meet its duty to disclose was advanced through two theories: affirmative misrepresentation, and material omission.³⁵³ The former was dismissed, but the latter was not because the court agreed that the plaintiffs provided adequate basis for alleging the product was an unreasonable safety hazard.³⁵⁴

ii. Pervasive plastic pollution cases

In addition to class-action lawsuits concerning direct exposure from consumer-based products, a growing number of state attorneys general, local governments, and nongovernmental organizations have brought suits attempting to hold plastics producers and petrochemical companies accountable for the environmental and public-health harms associated with pervasive plastic pollution. This emerging legal strategy—adapted from climate change and tobacco litigation—aims to shift cleanup costs and infrastructure and regulatory burdens back onto producers rather than taxpayers and municipalities.

Municipalities including the City of Baltimore, Los Angeles County, Ford County (Kansas), and state attorneys general including those of California and New York have all filed lawsuits against plastic producers, primarily targeting companies like ExxonMobil, PepsiCo, Coca-Cola, and Frito-Lay for their alleged role in plastic pollution through misleading recycling claims and creating a public nuisance.³⁵⁵ These lawsuits accuse producers of deceptive marketing, misrepresenting the recyclability of plastics (particularly single-use plastics), and causing harm through pollution.

1. Public nuisance claims

In response to pervasive and persistent harms caused by plastic pollution, states, municipalities, and some nongovernmental organizations³⁵⁶ are utilizing public nuisance as a central component of litigation against major plastic producers. Public nuisance claims allege that defendants' design, manufacture, marketing, and distribution of plastic products, particularly single-use plastics, have substantially interfered with public rights—such as clean air, water, and safe public spaces—and contributed to widespread environmental pollution that endangers public health and welfare.³⁵⁷ Plaintiffs further allege that plastic producers acted with knowledge of or willful indifference to the environmental and health impacts of their products, failing to disclose risks and taking insufficient steps to mitigate pollution.³⁵⁸

An underlying narrative in these cases is the ubiquity of microplastic pollution and the potential health impacts. Legal complaints contend that single-use plastics degrade into microplastics and chemical additives that contaminate soils, waterways, and drinking water sources.³⁵⁹ They cite emerging scientific studies that raise concerns about health impacts of microplastics in humans—including inflammation, cell damage, possible links to cardiovascular, immune, and others.³⁶⁰ Highlighting such information underscores the pervasive and persistent nature of plastic pollution and bolsters plaintiffs' arguments that the harms extend beyond visible litter to systemic risks.

There has been some discussion as to whether the public nuisance claims in these cases are stretched, and they have been characterized by some as attempts to “legislate through litigation.”³⁶¹ Courts must grapple with whether plastic pollution is sufficiently “unreasonable” and “foreseeable” to constitute public nuisance, and to what extent upstream manufacturers can be held liable for the downstream disposal and/or pollution associated with products. For example, in *California v. Exxon Mobil Corporation*, the state’s attorney general attempts to hold petrochemical companies liable, alleging defendants’ decades-long production and marketing of polymers and misleading representations about recyclability have “caused or substantially contributed” to statewide environmental harms, including the accumulation of waste and degradation of natural resources.³⁶²

In these cases, defendants argue that their activities were lawful and that municipal responses to plastic waste reflect choices better suited for legislative than judicial resolution. Regardless, the cases illustrate a broader societal trend of traditional tort theories being applied to novel topics, like climate change, guns, lead paint, vaping, social media, and other pervasive problems.³⁶³ In *City of Baltimore v. PepsiCo*, the court has stayed the case pending resolution of a matter concerning similar climate change-related tort claims brought by the City of Baltimore and others against oil and gas company defendants.³⁶⁴

New York’s experience illustrates the significant legal hurdles that public nuisance theories face when tethered to producer liability for plastic waste generated by third-party disposers. *State of New York v. PepsiCo, Inc.* was filed in November 2023, advancing claims for public nuisance, failure-to-warn, and deceptive trade practices based on PepsiCo’s production, marketing, and distribution of single-use plastic packaging and alleged contributions to plastic pollution in the Buffalo River.³⁶⁵ The trial court granted PepsiCo’s motion to dismiss on October 31, 2024, holding that the plaintiff failed to allege that the company “created” the alleged nuisance and that imposing liability for acts of independent third parties was contrary to established tort principles.³⁶⁶ The court characterized the public nuisance theory as extending liability beyond proximate causation and outside the traditional scope of tort law, emphasizing that such policy questions are for the Legislature.³⁶⁷ The Attorney General filed a notice of appeal on December 9, 2024, but has not filed an appellate brief.³⁶⁸

2. Misleading claims about recyclability

Another central theme in recent cases concerning pervasive plastic pollution has been allegations that defendants misled the public about their products’ recyclability and the viability of recycling as a solution to plastic waste.

In California, the state’s complaint against ExxonMobil asserts that the company engaged in a long-running campaign of deception by promoting the idea that plastic products were broadly recyclable and that recycling could solve the plastic waste crisis, despite knowing this was not technically or economically feasible.³⁶⁹ The complaint highlights ExxonMobil’s historical role in promoting the ubiquitous “chasing-arrows” recycling symbol—originally devised for paper—on plastics and its marketing of “advanced recycling” technologies, even though the vast majority of plastic processed through such systems remains largely unrecycled.³⁷⁰ The complaint alleges these representations falsely encouraged consumer and regulatory reliance on recycling as an effective solution to plastic pollution and thus contributed to environmental harm and state law violations, including nuisance, false advertising, and unfair competition.³⁷¹

In New York’s Buffalo River litigation, although the state’s public nuisance suit against PepsiCo (and related companies) was dismissed on proximate-cause grounds, the underlying complaint similarly included allegations that defendants made misleading representations about their environmental efforts, pointing to public statements and corporate sustainability targets regarding reductions in virgin plastic and purported recyclability.³⁷² Plaintiffs contended this messaging contributed to consumer and municipal expectations that recycling would meaningfully mitigate pollution—expectations that, per the complaint, were unsupported by corporate action or recycling realities.³⁷³ Baltimore’s complaint likewise asserts that major beverage and snack companies knowingly marketed single-use plastic packaging as recyclable or part of a so-called “circular economy,” despite understanding that such packaging is functionally unrecyclable at meaningful scale and that many portions of these products consistently escape recycling systems.³⁷⁴ This alleged conduct—combined with defendants’ choice not to pursue sustainable packaging—forms part of the broader alleged “public nuisance” and deceptive business practice that burdens municipal infrastructure and environmental resources.

Across these jurisdictions, plaintiffs tie misleading recyclability claims to broader theories of liability by asserting that these claims contributed to continued high consumption of single-use plastics, reduced incentives for meaningful producer responsibility, and fostered public and governmental reliance on inadequate recycling infrastructure. These allegations intersect with nuisance, consumer protection, and false advertising law as part of an emerging litigation strategy targeting industry “greenwashing” practices in the context of plastic pollution.

iii. Plastic pellet cases

Nurdles have also been the center of litigation concerning environmental degradation and the issue of potential exposure to microplastics. Nurdles are pre-production plastic pellets made from fossil fuels that, due to their size, can absorb and exude chemical toxins from the marine environment when discharged into waterways.³⁷⁵ Two examples of this type of litigation are the Styropek plastic manufacturing facility discharge into the Ohio River and the Frontier Logistics facility spill into the Cooper River.³⁷⁶ Plaintiffs in both cases filed citizen suits, citing violations of the Clean Water Act and Resources Conservation and Recovery Act due to the discharges into the respective rivers and potential for toxic exposure for riparian communities and from ingestion of microplastics through marine resources such as fish.³⁷⁷

Both cases were settled, with Styropek paying \$2.6 million and Frontier Logistics paying \$1.2 million to fund watershed restoration and river cleanup projects.³⁷⁸ Similarly, Formosa Plastics agreed to pay \$50 million to settle a lawsuit in which the company was found to be in violation of Clean Water Act and state permits due to discharges of plastic pellets into Lavaca Bay in Texas.³⁷⁹ These cases concern general pollution of waterways as threats to public health, wildlife, and the environment.

While not currently a major area of litigation, these cases raise various issues concerning the regulation and legal classification of primary microplastics. Courts and regulators may treat them as pollutants under water pollution laws (e.g., CWA) or as solid waste under waste management laws (e.g., RCRA). Defendants have argued that nurdles are “raw materials” or “cargo,” not waste, while plaintiffs have argued that they become contamination once they enter the environment. The classification drives liability, penalties, and available remedies.

Causation and traceability are also prominent issues in these cases. The source of the spill must be attributed to a facility or transporter (where contractual indemnities may apply), and forensic evidence techniques such as the color, polymer type, resin codes, and chemical “fingerprinting” are being used to link nurdles to specific facilities.³⁸⁰

Human health claims are an underdeveloped aspect of this nurdle-spill litigation. Plaintiffs argue that such spills contribute to microplastic exposure via seafood, drinking water, or environmental contamination. While there has been difficulty in proving causation, these claims raise the stakes of the litigation, weigh on settlement pressure, and lay the groundwork for future claims as science supporting causation evolves.

C. Conclusion

As concerns about exposure to plastics and associated health implications grow, and regulators continue to focus on the issue, it is expected that lawsuits seeking to hold companies accountable for their alleged contributions to plastic pollution and exposure will likewise increase.

Practitioners not only anticipate this will be a growing litigation trend, but are advising companies on the very real prospect of plastics-related liability. Some advice has included that companies review their labeling and advertising, consider insurance to offset defense costs and potential losses,³⁸¹ or even conduct supply chain risk assessments, disclose potential risk and consider investor scrutiny, review product design and materials choices for both products and packaging, and more.

In many ways this area of litigation is expected to mirror PFAS and climate change due to parallels such as the pervasive presence of contaminants in the environment and human bodies, growing evidence of human health and environmental harms, alleged corporate knowledge and failure-to-warn, shared roots in the fossil-fuel industry, and similar legal and scientific strategies. The issues are also intrinsically linked, since most plastics are made from petrochemicals; PFAS are used in many plastics; and plastics production and related emissions, recycling, waste management, and pollution contribute significantly to climate change.³⁸²

The proliferation of plastics and their associated pollution crises is likewise ubiquitous,³⁸³ and the problem is complicated by the fact that plastics have made modern life easier and safer in many ways. However, emerging science is exposing that the costs are high, as human and environmental health implications are serious and may not be remediable. At this juncture, litigation is an avenue for some remedies. Plaintiffs driving litigation are attempting to hold companies accountable and forcing them to change behaviors, as well as laying the groundwork for potential regulation.



Key Takeaways

Current litigation over toxics has grown out of and built upon legal doctrines and strategies developed in prior litigation to secure justice and compensation for those harmed by asbestos, tobacco, DDT, and other storied devils of the industrial past. The current battles over pesticides, PFAS, petrochemicals, and plastics are indicative of a world reliant on chemical innovation to facilitate function, yield, and convenience, and one that is now seeing the deleterious effects of some of those substances. The outcome of litigation around each of these substances will have important implications for the health and well-being of people and the environment, the sustainability of our food supplies, the consequences of and responses to climate change, company financials, and more.

In exploring the current litigation landscapes surrounding pesticides, PFAS, petrochemicals, and plastics, we note key takeaways, including common issues and trending developments. Across all, those bringing cases are largely governments, communities, and individuals who have suffered harm, either to persons or lands within their ownership or jurisdiction. Though there are some exceptions, the defendants are mostly companies manufacturing, distributing, or using the substances at issue. Causes of action are underpinned by both federal and state law, with state law providing most of the bases for suits in tort. Some common issues or trends visible across all four areas of toxics litigation are described below.

Litigation plays an important regulatory “backstop” role. By stepping in when legislative or administrative systems fall short, litigation plays a crucial role in governance of toxic substances. In the United States, statutes like the Toxic Substances Control Act and the Clean Water Act establish baseline standards, but enforcement gaps, limited agency resources, and political constraints can weaken oversight. Civil lawsuits—brought by private plaintiffs, state attorneys general, or public interest groups—help fill these gaps by uncovering internal corporate documents, developing scientific evidence, and imposing financial liability for harm. High-profile cases involving chemicals such as PFAS and asbestos have spurred regulatory reform and corporate behavior change even in advance of new rulemaking. In this way, litigation not only compensates victims but also deters misconduct, pressures regulators to act, and drives transparency in the management of toxic risks.

Class actions are on the rise. In some toxic tort cases, a large number of people may be affected by the same toxic exposure. In such instances, the option of class action lawsuits may emerge. These collective legal actions streamline the process by consolidating multiple plaintiffs into a single case against a common defendant. Class actions can expedite proceedings and enable

affected parties to seek compensation collectively, presenting a practical approach when many individuals share a similar grievance. Class action lawsuits can be particularly advantageous when addressing toxic exposures that impact entire communities or when the harm is widespread. They provide a unified front for plaintiffs, often leading to more efficient resolution and the potential for higher damages awarded due to the cumulative impact of the harm.

However, it's important to note that class action lawsuits in toxic torts also have their challenges. They require certification by a court, which involves demonstrating that common issues predominate over individual ones. Additionally, plaintiffs in class actions may have limited control over the litigation process compared to individual lawsuits.

Proof of causation remains a significant hurdle. Key to establishing liability in all four categories of toxics litigation in this report is the concept of causation, which requires that the link between a defendant's action and its consequence(s) is sufficiently direct to hold the defendant legally responsible. The burden of proof is on the plaintiff, who must provide evidence linking the exposure to the claimed injuries, illnesses, or other harms. Demonstrating a causal link between harm and exposure to a product or substance remains a significant hurdle for plaintiffs, particularly in cases involving harms to human health. Proving causation is difficult for many reasons, including the potential latency period between exposure to the substance and the manifestation of health issues, the advanced science and medical knowledge necessary to link them, the need to eliminate other factors—often over a long period of time—as superseding causes, and the need for expert witnesses to testify on behalf of the plaintiff. Medical science has advanced dramatically in understanding the impacts of substances on humans, but debate is still fierce. Defendants have been successful in having scientific experts and testimony excluded from judicial proceedings, exploiting gaps or uncertainties in the scientific literature linking the toxic substance to specific injuries, and emphasizing alternate causes of harm—including by arguing that a plaintiff's exposure to a substance cannot be definitively attributed to the defendant's action or product, particularly given the widespread presence of some substances (such as PFAS) in the environment.

Latency periods and statutes of limitation also complicate claims. It is not uncommon for a long period of time to pass between exposure to a substance and the appearance of environmental harm or symptoms of adverse health outcomes. A long latency period can make it more difficult for a plaintiff to prove causation, since the longer time period makes establishing a direct link harder; impedes the plaintiff from filing suit within the applicable statute of limitations; and complicates evidence collection, as crucial evidence may be destroyed or lost, or memories become less reliable, over time. Some plaintiffs have sought to address this lag by seeking compensation for medical monitoring, in order to support medical exams to monitor plaintiffs' health after known exposure to toxics.

Failure-to-warn claims have become a central, almost universal, argument in chemical and emerging contaminants lawsuits. Failure-to-warn claims play a central role in toxic tort litigation because they focus on a manufacturer's duty to disclose known or reasonably knowable risks associated with exposure. In many cases involving pesticides, industrial chemicals, plastics, other consumer products, pharmaceuticals, and more, plaintiffs allege that companies were or should have been aware of the risk, but failed to provide adequate warnings to users, workers, or downstream communities. These claims are especially significant where regulatory standards set limited or minimum labeling requirements, allowing litigation to probe whether additional risk information should have been communicated.

By scrutinizing internal company research, scientific and risk assessments, and marketing practices, failure-to-warn claims often become a vehicle for testing corporate knowledge and responsibility. As a result, they function not only as a pathway for compensation, but also as a powerful tool for promoting transparency and strengthening risk communication around toxic substances. Whether some federal laws preempt certain state-law failure-to-warn claims is currently a major, unresolved legal conflict.

Federal preemption functions as a powerful defense. Preemption by federal statutes of product liability and mass torts related to substances is a key issue. For decades there has been a notable trend and ongoing debate regarding the expansion of federal preemption of state tort claims as a defense in liability cases. Bayer itself has said that its appeal to the U.S. Supreme Court over preemption of state labeling laws by FIFRA has the potential to make or break its Roundup business.³⁸⁴ In the plastics and PFAS realms, preemption by the Food, Drug, and Cosmetic Act is obstructing lawsuits over water marketed as “natural,” which plaintiffs argue should not have microplastics or PFAS in it if labeled as such. Federal preemption regarding the regulation of PFAS in cosmetics does not yet exist (with a recent congressionally mandated FDA report noting significant uncertainty due to gaps in existing data),³⁸⁵ leaving companies subject to the aforementioned patchwork of PFAS bans. The U.S. Supreme Court’s decision in *Monsanto Co. v. Durnell* will have significant implications for the field of toxics litigation.

Toxics litigation has resulted in major verdicts and settlements. Despite some high-profile reversals and reductions on appeal,³⁸⁶ plaintiffs have achieved very large verdicts and multi-billion-dollar settlements, underscoring the financial and reputational stakes for defendants and the compensatory remedial power of the court system. For example, in the litigation over Roundup, Bayer has agreed to a proposed \$7.25 billion nationwide settlement to resolve thousands of cancer claims after juries had returned significant plaintiff awards in individual cases, and that deal is now the subject of intense debate ahead of U.S. Supreme Court review.³⁸⁷

In talc and asbestos cases against Johnson & Johnson and others, juries have returned verdicts ranging into hundreds of millions and even over a billion dollars for clients alleging cancer caused by contaminated products, creating pressure toward global settlements and bankruptcies of smaller defendants.³⁸⁸ And in environmental claims over PFAS, individual states and municipalities have secured record-breaking settlements worth billions to fund cleanup and damages.³⁸⁹ These outcomes have broad implications, including providing compensation to affected individuals and communities, reshaping corporate risk assessments, influencing regulatory and product safety practices, and signaling to companies and insurers that toxic exposure liabilities can be large and systemic.

Industry is seeking regulatory shields and safe harbors. Defendants have been aggressively lobbying legislatures to enact laws shielding them or limiting their liability. Bayer has embarked on a campaign to convince state legislatures across the country to pass legislation expressly providing that federal registration of a pesticide product by U.S. EPA is sufficient to satisfy any warning or labeling requirements at the state level as well. Legislatures in North Dakota and Georgia have adopted laws to this effect, and other states are considering them.

Regulatory and policy shifts under the second Trump Administration are also likely to tilt the playing field further toward industry defendants. This may occur through potentially narrowing the scope of

qualifying plaintiffs, shortening statutes of limitation, reducing recovery levels, and repealing or making environmental regulations less strict (though that may also have the effect of strengthening common-law claims).

The Administration has also exempted certain chemical manufacturing companies from having to comply with new regulations adopted under the Biden Administration concerning air emissions-control requirements on certain facilities.³⁹⁰ It has likewise indicated a desire to protect “passive receivers” such as water utilities from liability for PFAS contamination, and bills have been filed in the previous and present Congress to achieve that end.³⁹¹ These state and federal legislative developments will potentially have important implications for determining who can sue and be sued and who can be found liable for contamination by toxic chemicals.

Public opinion matters. In addition to fighting in court, defendants are aware that they face huge reputational risk. Bayer, having taken a lot of criticism for underestimating the litigation risk and liability presented by its acquisition of Monsanto, is reportedly exploring the possibility of placing the subsidiary into Chapter 11 bankruptcy, ostensibly as a means of isolating and managing the glyphosate litigation liability.³⁹² For food and other consumer products, companies face a cross-section of consumers who are deeply aware and concerned about health, safety, and the environment, posing the risk for future litigation and/or product boycotts over issues such as PFAS and microplastics contamination.

PART III. COMPARATIVE LOOK AT INTERNATIONAL TRENDS

Though this report focuses on toxics litigation in the United States, toxic pollution is a transboundary, cross-cutting issue. A brief survey of the global landscape provides comparative context and highlights innovative approaches and legal theories. We surveyed Europe, Canada, Australia, Central and South America, Asia, and Africa to identify relevant trends and significant developments.

As in the United States, though not to the same degree, agrochemical and PFAS litigation is on the rise worldwide due to increased awareness of toxicity and resulting regulation. Litigation over petrochemicals is so far restricted to refinery hotspots in places like Canada and China. And while plastics litigation may be gaining momentum, litigation concerning emerging plastic contaminants has progressed the most in North America, Europe, and Australia. In all these types of claims, similar litigation challenges exist with proving causation, scientific complexity, and lack of relevant regulations, but some countries have different legal standards worth exploring here for comparison.

A. PFAS

Europe. Most PFAS cases outside the United States have been in Europe, where the European Union (EU) tends to be more restrictive with chemical pollution. Four EU countries have proposed a complete ban on PFAS under the European Chemicals Agency's REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals) regulation.³⁹³ The proposal is not final, and industries are responding by lobbying against the ban at the European Commission.³⁹⁴

Over 2,000 sites of excessive PFAS pollution have been identified across the continent.³⁹⁵ Lawsuits have addressed PFAS contamination of waterways due to industrial discharges (Belgium³⁹⁶ and the Netherlands³⁹⁷); exposure to toxic fire-fighting foam (Germany³⁹⁸); pollution of food and soil (United Kingdom³⁹⁹ and France⁴⁰⁰); and pollution of drinking water systems (Sweden, France, and Italy⁴⁰¹). Cases of note are highlighted below.

- *Sweden.* Swedish residents sued a municipal water company for injuries from water contaminated by PFAS-inoculated fire-fighting foam, alleging that the water company was liable for the safety defect in their drinking water. The Supreme Court of Sweden held that elevated levels of PFAS in residents' blood was itself a personal injury, not merely a risk of future harm.⁴⁰² The elevated levels were seen as "considerable physical deterioration of their bodies" by the Court, which was enough to meet the legal standard for personal injury in Sweden.⁴⁰³
- *Belgium.* A family in Zwijndrecht, Belgium, was able to receive compensation for high concentrations of PFAS in their blood, even without demonstrating symptoms.⁴⁰⁴
- *Italy.* Company executives, including from Japan's Mitsubishi and Luxembourg-based International Chemical Investors, were convicted in Italy for polluting drinking water and soil with PFAS across a 200-km² (77 square mile) area from the now-defunct Miteni chemical plant in Trissino. The court issued prison sentences of up to 17 years and ordered more than

€64 million in damages paid to the Veneto region and the Italian environment ministry. The suit, which began in 2021, involved hundreds of civil plaintiffs, including Greenpeace and local mothers who became involved after discovering their families had PFAS in their blood.

- *France.* In January 2026, nearly 200 residents of Lyon, dubbed “Chemical Valley” because of the presence of Arkema and Daikin Chemicals, took both companies to court in what is being called “Europe’s largest civil lawsuit over PFAS.”⁴⁰⁵ Plaintiffs are seeking €36 million in compensation for health harms due to widespread pollution in their soil, water, food, and blood.

Australia, New Zealand, and Canada. Australia is restricting some PFAS, having just banned three forever chemicals in July 2025.⁴⁰⁶ The government settled several cases with cities, landowners, and an Aboriginal community affected by PFAS exposure from fire-fighting foam.⁴⁰⁷ Though damages have amounted to hundreds of millions of Australian dollars, the government has not admitted liability, nor did it offer recompense for emotional damages associated with contamination of traditional Aboriginal cultural lands.⁴⁰⁸

New Zealand will be the first country to ban PFAS in cosmetics starting in 2027.⁴⁰⁹ PFAS firefighting foam was already banned in 2006, but has been found in airports and municipal water systems as recently as 2020.⁴¹⁰ Despite being a major polluter, the government has not admitted liability, but it has paid for water cleanup costs.⁴¹¹

Canada, through regulations, has prohibited certain forever chemicals but not all PFAS.⁴¹² In March 2025, the government published its State of PFAS Report, which classified most PFAS as toxic.⁴¹³ This has led to an update to the Prohibition of Certain Toxic Substances Regulations from 2012, which will now include strict bans on specific PFAS effective June 30, 2026.⁴¹⁴ Litigation has accompanied these actions; in 2024, British Columbia Attorney General Niki Sharma filed a class-action lawsuit against chemical producers over PFAS contamination of drinking water systems throughout Canada.⁴¹⁵ The case is modeled on prior civil actions against tobacco and opiate manufacturers.⁴¹⁶

Africa, Asia, and Central and South America. None of these regions have pending PFAS litigation as of February 2026. Testing capability and regulations vary greatly across countries, as do reports of PFAS contamination.⁴¹⁷ Some countries, particularly in Asia and Africa, have limited detection capabilities and thus have limited capacity for PFAS regulation or litigation.

Two outliers are Brazil and Taiwan. The Brazilian Ministry of the Environment is reviewing its national implementation plan under the Stockholm Convention to include PFAS,⁴¹⁸ and Brazil also has enacted a REACH law like that of the EU, though the law has yet to include PFAS or other emerging contaminants.⁴¹⁹ Meanwhile, Taiwan’s ban on PFAS in cosmetics went into effect January 2025,⁴²⁰ and the Taiwan Ministry of the Environment announced a draft addition of 269 PFAS to the list of chemicals of concern in late 2025.⁴²¹

B. Pesticides

Europe. Pesticides⁴²² are heavily regulated in the European Union by the European Food Safety Authority, which conducts risk assessments on plant protection products.⁴²³ Public interest groups are suing European governments for failing to implement legal frameworks to reduce pesticide use

following the EU's Sustainable Use of Pesticides Directive, which aims to reduce pesticide use and instead implement integrated, or holistic, pest management schemes.⁴²⁴

The EU's Court of Justice (ECJ) ruled that countries must take the latest scientific knowledge into account when authorizing pesticide use.⁴²⁵ Public interest groups in late 2024 challenged the European Commission's 2023 renewal of glyphosate use at the ECJ, arguing that the Commission failed to consider critical scientific studies on the impacts of glyphosate.⁴²⁶ Pesticide-related lawsuits will likely continue to increase, as PFAS are now being detected in pesticides in Europe and resulting in additional exposures.⁴²⁷

Pesticide cases in Europe can also include breaches of EU regulations on nitrate pollution, as nitrates are part of fertilizers that can end up in waterways.⁴²⁸ For example, NGOs successfully sued the regional government of Lazio, Italy, under the EU Nitrates, Drinking Water, and Habitats directives for failing to designate area around Natura 2000 Lake Vico as nitrates-vulnerable and to adopt necessary measures to prevent the site from deteriorating, and drinking water from becoming unpotable due to pesticide and fertilizer pollution from hazelnut production.⁴²⁹

Australia, New Zealand, and Canada. Pesticide class action suits have been filed in Australia against Monsanto, alleging that glyphosate use and exposure cause non-Hodgkin's lymphoma.⁴³⁰ In New Zealand, there has been one successful insurance claim (out of 15 cases) involving herbicide 2,4,5-T to the Accident Compensation Corporation, where a farmer was awarded compensation for his terminal cancer diagnosis as a result of herbicide exposure.⁴³¹ New Zealand's Environmental Protection Authority is phasing out the following pesticides as of 2023: prothiofos, terbufos, fenamiphos, methamidophos, and diazinon.⁴³²

In Canada, cases have been filed against Monsanto and Syngenta regarding, respectively, glyphosate-related and paraquat-related illnesses. Earlier this year, environmental and health groups challenged the government's renewal of authorization to sell and use glyphosate products in Canada.⁴³³ The Court set aside the renewal, finding the government's conclusion that the product posed "acceptable risks" to be unreasonable.⁴³⁴

Asia. Pesticides are ubiquitous in Asia, particularly Southeast Asia, with few regulations and weak enforcement of the ones that exist.⁴³⁵ Pesticides that are banned in the EU often get used in Asia.⁴³⁶ Despite the lack of regulation, some suits have been successful in gaining compensation for exposure victims. For example, in South Korea, veterans exposed to Agent Orange established an "epidemiological connection" between Agent Orange and their skin diseases and used a lower causation standard than the United States, making it relatively easier for plaintiffs to win.⁴³⁷ In other countries, plaintiffs have encountered justiciability challenges.⁴³⁸

Activists have brought some pressure on India regarding illegal dumping of endosulfan, using "right to health" claims that received international attention following the 1984 Bhopal disaster.⁴³⁹ In neighboring Bangladesh, the High Court compelled government agencies to form an action plan to phase out pesticides containing glyphosate. The ruling placed the burden on the government to demonstrate why it should not be directed to set up health monitoring and find safer alternatives.⁴⁴⁰

Central and South America. Pesticide use in Central and South America is widespread, and already being litigated in local and international courts. In Argentina, an employer was found liable for an employee's glyphosate exposure, with the court placing the burden of proof on the employer for

showing its compliance with precautionary measures and for demonstrating (unsuccessfully) a lack of causation between failure to comply and the employee's death.⁴⁴¹

Farmworkers in Nicaragua successfully sued U.S. companies over dibromochloropropane (DBCP) exposure, overcoming the more stringent causation standards typically applied in both Nicaraguan and American courts because showing causation for the farmworkers' sterility was more straightforward than for the other injuries suffered from DBCP exposure.⁴⁴² Ecuador and Colombia have gone before the International Court of Justice to settle transboundary harm of toxic herbicide spraying near Colombia's border.⁴⁴³

Africa. There are currently no pesticide cases in Africa,⁴⁴⁴ but research reports indicate that the use of EU-banned pesticides appears to be increasing in South Africa⁴⁴⁵ specifically, and the continent more broadly.⁴⁴⁶ Lawsuits are currently limited due to lack of capacity in countries to implement impact monitoring processes, leaving civil society organizations to fill in the gaps by training farmers and educating policymakers.⁴⁴⁷

Box 1: Legal avenues through international forums

International arbitration

Non-judicial avenues, such as international arbitration, exist for people exposed to toxics across the Global South. In one such case, *Maharashtra Association of Pesticide Poisoned Persons et al. v. Syngenta*,⁴⁴⁸ Indian farmers harmed by Syngenta's Polo pesticide submitted a complaint—called a “specific instance”—with the Swiss National Contact Point (NCP) for the OECD Guidelines for Multinational Enterprises. A specific instance is a non-judicial grievance mechanism to resolve cases involving non-compliance with the Guidelines.⁴⁴⁹

In 2022, the Swiss NCP ruled for Syngenta, which had refused to discuss the pesticide out of concerns that doing so would prejudice the company in other litigation proceedings and left the Indian farmers with no remedy. The NCP merely recommended that Syngenta review its customer complaint process in India to better adhere to OECD guidelines, and that the Indian parties provide comments on training programs for farmers regarding spraying practices.

UN committees or bodies

An Indigenous group in Paraguay brought a complaint to the UN Human Rights Committee (UNHRC) against the state for contamination of its community due to pesticide use on neighboring soy farms.⁴⁵⁰ The UNHRC found that Paraguay did not adequately monitor fumigation and thus failed to prevent the contamination.⁴⁵¹ While not legally binding, the Committee's finding is significant because it relied on the use of Indigenous rights to traditional lands as a legal hook, as the use of pesticides violated the Indigenous community's rights and “sense of home.”⁴⁵²

C. Petrochemicals

Europe. In general, European petrochemical facilities are on the decline; Dow, ExxonMobil, Shell, and TotalEnergies are shutting down European plants due to the costs of maintaining aging facilities amidst a surge of cheaper petrochemical imports from the United States, Middle East, and

China.⁴⁵³ But litigation persists, as INEOS, a major plastics producer, is constructing the first large petrochemical complex in Europe in over twenty years.⁴⁵⁴ INEOS's proposal has been challenged once already in court for not considering the full environmental impacts of ethylene and propylene emissions that will come from the plant.⁴⁵⁵ Though INEOS won on appeal, environmental groups challenged the permits again in September 2024 while the plant remains under construction.⁴⁵⁶

Canada. In Canada, INEOS is closing down by 2025 its petrochemical plant in Sarnia "Chemical Valley," an area known for a concentration of refineries akin to Louisiana's Cancer Valley.⁴⁵⁷ The shutdown follows strengthened government regulations on air emissions levels, in response to a local state of emergency from a spike in benzene emissions at the plant.⁴⁵⁸ Nonetheless, Sarnia's Chemical Valley still has a number of petrochemical refineries and plants affecting fenceline communities, including First Nations in the area, which suggests more litigation in the future.⁴⁵⁹

Africa and Middle East. Petrochemical cases in this region vary in type. In South Africa, the Pretoria High Court in 2022 ruled in favor of environmental justice groups who sued over air pollution in the Mpumalanga Highveld Priority Area, which is known for its concentration of petrochemical refineries.⁴⁶⁰ The Court found that the government's Environment Minister had a legal duty to pass petrochemical regulations and was "unreasonably delayed" in doing so.⁴⁶¹

In Iraq, a family sought damages from British Petroleum (BP) for their son's 2024 death from cancer-causing benzene emissions from gas flaring at the BP plant near their home.⁴⁶² In Ivory Coast, Trafigura, a plastics company, was sued for polluting the coastline in attempts to wash and dispose of naphtha in the area; the company was found liable in a Dutch court in 2010,⁴⁶³ and compensation to victims was awarded through a British civil case against Trafigura in 2009.⁴⁶⁴ Otherwise, petrochemical cases in these regions mostly focus on cleanup of oil spills rather than pollution affecting fenceline communities from petrochemical complexes.

Asia. Three countries, China, India, and South Korea, represent 78% of Asia's petrochemical capacity, with most of the large complexes being sited in China.⁴⁶⁵ China's first public interest air pollution case against the government was only in 2015,⁴⁶⁶ following 2014 amendments to China's Environment Protection Law that expanded the scope of environmental public interest litigation and led to harsher penalties against polluters.⁴⁶⁷ Since then, in 2017, a major Chinese petroleum company lost an air pollution case and paid 10 million CNY for violating emissions standards.⁴⁶⁸ This type of toxics litigation is nascent but on the rise in China, while jurisprudence in Taiwan (Box 3) has progressed even further.

In India, fenceline communities in the 13 states that have petrochemical complexes are challenging environmental impact assessments of those sites. One local village in Panipat sued Indian Oil Corporation over its petrochemical refinery polluting the groundwater, filing their claim with the National Green Tribunal, which led to a joint inspection of the refinery by government agencies.⁴⁶⁹ Though the Tribunal's report found the refinery to be noncompliant, reports in other Indian states appear to be more friendly to industry due to competing economic interests and a lack of transparency in government reporting mechanisms.⁴⁷⁰

In South Korea, ten petrochemical companies agreed to reduce their naphtha-cracking capacity, which will result in less emissions, but this agreement was to address overcapacity rather than environmental concerns.⁴⁷¹ Still, environmental groups appear to be putting pressure on Korean

petrochemical companies through litigation based on greenhouse gas emissions, rather than air or water pollution concerns.⁴⁷²

Box 2: Exposure to “genotoxic” carcinogens, even without symptoms, as an injury

Taiwan. Employees of Taiwan Radio Corporation of America (Taiwan RCA) sued their employer for exposure to benzene and trichloroethylene.⁴⁷³ The group at issue was employees who had not yet been diagnosed with or developed a serious disease. The Taiwan High Court found Taiwan RCA liable, holding that even without perceptible symptoms, “genotoxic” carcinogens alter genes in human cells at the time of exposure, thus causing an injury to plaintiffs.

After a series of appeals, the Taiwan Supreme Court in 2022 found in favor of the plaintiffs, affirming that the “workers’ [constitutional] right to bodily integrity” was breached when they were exposed to toxins, even before exhibiting symptoms. The Court remanded to the High Court to make a Second-Instance Judgment that considers these constitutional claims. In February 2025, the High Court ordered RCA to pay NT\$170 million (US\$5.14 million) to the plaintiffs.⁴⁷⁴ That ruling may still be appealed.

D. Plastics

Global Plastics Treaty. The global discourse on plastics is more relevant than ever, with negotiations underway since 2022 to create a global plastics treaty and address the key health and climate issues related to plastics production.⁴⁷⁵ The Intergovernmental Negotiating Committee is set to meet again in late 2026 to discuss whether to limit production, focus on waste, or take a life-cycle approach, and how to address health impacts.⁴⁷⁶ Meanwhile, the United Nations Environment Assembly established in late 2025 an Intergovernmental Science-Policy Panel on Chemicals, Waste and Pollution (ISP-CWP) as a new independent, intergovernmental body to provide policymakers scientific advice on plastics’ human health impacts; the panel’s first plenary session took place in early February 2026.⁴⁷⁷ While no plastics treaty has been finalized, litigation over plastics is on the rise, with cases emerging in more than 30 countries.⁴⁷⁸

Europe. Regulations like single-use plastic bans and REACH regulations for plastic additives are part of the EU’s strategy to limit and reduce plastics pollution in the region. A key development for plastics was the European Chemicals Agency (ECHA) identifying BPA as a “substance of very high concern” due to the hormone disruptions it can cause in humans.⁴⁷⁹ Plastics industry advocates challenged this classification in court, but the Court of Justice of the EU affirmed ECHA’s decision. Industry advocates have continued to challenge such regulations; Goodwill M+G sued the European Commission in 2023 for its restriction of intentional addition of microplastics to products under REACH, and the case is still pending as of writing.

European plastics litigation also includes claims of greenwashing the recyclability of plastic products; for example, ClientEarth sued Nestlé Poland in September 2025 for misleading claims on the recyclability of single-use plastic water bottles.⁴⁸⁰ Microplastics litigation is in the nascent stages in Europe; for example, an advocacy group sued the UK Environment Agency in 2023 over an alleged lack of testing for microplastics and other pollutants in sewage sludge, but the claim was dismissed with no permission for appeal in 2024.⁴⁸¹ Meanwhile, France’s consumer protection

agency fined a Dublin-based company operating Shein's European websites 1.1 million euros for failing to disclose the presence of synthetic microfibers in Shein clothing products.⁴⁸²

Australia and Canada. In Canada, the federal government issued an order adding "plastic manufactured items" (PMIs) to its List of Toxic Substances under the Canadian Environmental Protection Act (CEPA).⁴⁸³ The order was challenged by plastics industry advocates and struck down in 2023, but in January 2026, the Federal Court of Appeal overturned this ruling and upheld the original order, showing a significant shift in the plastics litigation landscape in Canada.⁴⁸⁴

Australia has likewise made progress; the state government of New South Wales banned microbeads in personal care products in 2021,⁴⁸⁵ and the federal government announced intentions to phase in microfiber filters in all washing machines by 2030 to limit microplastics waste.⁴⁸⁶ While some consumer protection cases about greenwashing have found success in Australian courts,⁴⁸⁷ there are not yet any health-based claims for plastics.

Africa, Asia, and Central and South America. Plastics regulations vary in these regions. Countries have focused their efforts on reducing single-use plastics and limiting both domestic plastic waste and illegal foreign plastic waste dumping.⁴⁸⁸ Notable developments include the Philippines in 2022 passing the first Extended Producer Responsibility (EPR) law in Southeast Asia, which requires companies to be responsible for the entire life cycle of their plastic packaging.⁴⁸⁹ Several countries across these regions have instituted bans on single-use plastics, such as Indonesia⁴⁹⁰ and Malawi,⁴⁹¹ while most Latin American and Caribbean countries have enacted laws to either reduce or eliminate single-use plastics.⁴⁹² Plastic pollution in Africa has been considered as early as 2002, when Uganda's High Court compelled the country's environmental agency to establish regulations for use and disposal of plastics thicker than 100 microns.⁴⁹³ In 2012, the same court was among the first to declare that plastic pollution violates the human right to a healthy environment.⁴⁹⁴

While the focus has been on plastic waste, countries in these regions lack any type of microplastics regulation, with a few notable exceptions. In 2025, South Africa became the first African nation to propose a ban on microbeads and products containing them.⁴⁹⁵ In the same year, the Kerala High Court in India directed the government to prepare regulatory measures for addressing microplastics in food packaging, following a public interest petition on the matter.⁴⁹⁶ In 2024, South Korea proposed a regulation to reduce use of microplastics in electrical products.⁴⁹⁷ And in 2020, Argentina became the first South American country to ban microbeads.⁴⁹⁸

E. Future trends

Globally as in the United States, toxics-related claims are on the rise, even where toxics pollution or health claims are not central to the litigation. Cases to watch include litigation against oil companies and plastics producers for both their environmental and health impacts and their greenhouse gas emissions. The nexus between climate and toxics litigation continues to grow, particularly in consumer protection claims aimed at chemical companies for greenwashing over recyclability and sustainability.⁴⁹⁹ The recent International Court of Justice Advisory Opinion on climate change will likely impact future litigation aimed at petrochemical companies, and that opinion's reliance on using the best available science for climate claims could have cascading effects for the use of complex scientific evidence in toxics claims as well.

PART IV. IMPACTS AND LOOKING FORWARD

Impacts

Toxics litigation has far-reaching implications both in and beyond the courtroom, affecting judicial resources, legal practice, legislators, access to justice and the broader pursuit of environmental justice, financial markets, and investor behavior. These multifaceted impacts are explored below.

Toxics litigation can provide access to justice and compensation for individuals and communities. Toxic tort suits allow individuals and communities to seek redress for harms caused by powerful corporations, and settlements and verdicts in these cases can provide financial relief for medical expenses, lost income, and emotional distress.⁵⁰⁰

Toxics litigation is an important tool for addressing environmental injustice. While the concept of environmental justice was introduced at the federal government level in 1994,⁵⁰¹ federal agencies have not pursued environmental justice goals consistently or reliably.⁵⁰² Instead, communities disproportionately affected by pollution and hazardous substances often rely on litigation as a tool for accountability.⁵⁰³

These overburdened communities bring a variety of cases to fight environmental injustice, including challenges to siting of new sources of pollution or the expansion of existing sources; challenges to Clean Air Act State Implementation Plans, air pollution rules, and other state and federal rulemakings; and tort claims such as nuisance.⁵⁰⁴ This litigation may be their best way to “get a seat at the table” with regulators and polluting entities. Litigation can be uniquely powerful in motivating polluters to negotiate with community groups, force regulators to engage in sounder decision-making, and serve as a way for citizens to enforce federal environmental statutes.⁵⁰⁵

The rise of third-party litigation funding may both increase access to justice and raise new questions. Third-party litigation funding (TPLF)—an arrangement in which a non-party funder agrees to finance a litigant, typically a plaintiff, or a law firm in exchange for an interest in the potential recoverable damages of a lawsuit—has been occurring in the United States since about 2010.⁵⁰⁶ It has become increasingly common in contemporary complex litigation, including toxic tort litigation.⁵⁰⁷

Benefits of TPLF include ensuring plaintiffs with limited resources have the funding they need to litigate their cases, allowing plaintiffs to monetize claims and to offload some of the risk of adverse litigation outcomes to funders.⁵⁰⁸ Disadvantages include that TPLF may prove costly to obtain, deter settlement, increase litigation costs for defendants, lead to exertion of control over the case by the funder, and lead to conflicts of interest between attorneys and their clients.⁵⁰⁹ As TPLF agreements continue to increase in popularity, including in the toxic torts context, both courts and lawyers will need to grapple with them, including whether such arrangements must be disclosed or are discoverable, and whether the structure of certain agreements violates public policy.⁵¹⁰

New legislation related to issues raised in toxics litigation. Litigation can prompt new legislation, as lawsuits often highlight inadequacies in existing laws or create pressure for new legislation or regulation to address issues raised. Recently, several state legislatures have considered or enacted

laws that provide pesticide manufacturers with protection from liability for failure-to-warn claims, a civil tort commonly raised in pesticide cases.⁵¹¹ Similarly, Texas legislators have enacted a series of laws that limit local governments' ability to hold petrochemical companies accountable for air and water pollution.⁵¹² State legislatures are also passing laws to protect communities from toxics. In 2025 alone, 13 states adopted 31 policies and 21 states introduced 240 policies that address toxic chemicals in products and other toxic pollution issues.⁵¹³

Toxics litigation comes with financial risk and potential reputational damage for companies.

Companies can face massive liabilities in the form of toxics litigation.⁵¹⁴ Not only may lawsuits result in substantial monetary damages, they are also time-consuming and expensive to defend and divert company management's time, attention, and resources.⁵¹⁵ For example, the Minderoo Foundation estimated that potential corporate liabilities expected to be triggered between 2022 and 2030 from plastics litigation—including micro- and nano-plastics and toxic chemical additives—could exceed \$20 billion in the United States alone.⁵¹⁶

Companies also face insurance-related financial risk.⁵¹⁷ For instance, while companies typically have insurance to compensate them for litigation-related expenses, this is not always the case for PFAS.⁵¹⁸ Further, the court of public opinion plays a role—lawsuits often lead to negative publicity and public perception, which can harm a company's reputation and erode consumer trust.⁵¹⁹

Toxics litigation may lead to changes in investor behavior. Exposure to litigation and reputational risk of being associated with toxic chemicals have the potential to affect both near- and long-term valuation of companies that produce and use those chemicals.⁵²⁰ Bayer, which acquired Monsanto and manufactures the pesticide Roundup, is one example—its free cashflow is being absorbed by litigation (roughly \$15 billion in the last five years), its dividend has been cut by 95%, and its strategic options, such as investing in growth areas, have been curtailed.⁵²¹ To avoid this risk, investors may exclude a company from their portfolios, short-sell a company's stock, or use their voting power to transition the company to safer alternatives.⁵²²

Looking Forward

As the landscape of toxic chemical exposures evolves, so too does the nature of toxics litigation. Several emerging trends suggest litigation will continue to expand in both scope and complexity. Novel entities—substances ranging from new synthetic chemicals to mobilized natural elements—are being introduced into the environment at an unprecedented rate, with health consequences that are only beginning to surface. As scientific understanding increases and technology advances, new substances, as well as ones once thought to be benign, could become targets for future suits.

At the same time, toxics litigation is increasingly intersecting with climate change litigation, as the same manufacturers are targeted for both toxic pollution and greenhouse gas emissions; and climate disasters are giving rise to new exposure claims after wildfires, floods, and other extreme events release toxics into the environment. Shifts in the regulatory landscape—whether toward stricter enforcement or deregulatory rollbacks—will also shape future litigation. This section explores these key developments and what they signal for the future of toxic tort litigation.

Emerging contaminants are on the rise. While novel entities⁵²³ are constantly being released into the air, water, and land, often little is known about their impacts on human and environmental

health.⁵²⁴ As the effects become clearer, litigation involving these substances is expected to rise.⁵²⁵ For example, since the 1990s, it was suggested that short-chain PFAS, including trifluoroacetic acid (TFA), are less hazardous than longer-chain PFAS.⁵²⁶ Now that more toxicological data has been compiled, a 2024 study found that “TFA poses a risk to humans and the environment and meets the criteria of a planetary boundary threat for novel entities.”⁵²⁷ Thus, TFA may be a future target within PFAS-related litigation. Other emerging contaminants that are expected to be subject to increasing litigation include microplastics, phthalates, heavy metals, formaldehyde, and chlorpyrifos.⁵²⁸

Advances in scientific research and technology will continue to spur collection of evidence, proof of causation, and litigation. Improved testing methods and epidemiological studies will strengthen the ability of plaintiffs to prove causation, by solidifying the link from toxic exposures to health outcomes.⁵²⁹ Advances in technology—such as AI-driven risk modeling and biomonitoring—may also enhance plaintiffs’ ability to prove causation and exposure.⁵³⁰ For example, in *Rhodes v. E.I. DuPont de Nemours & Co.*, the court found that biomonitoring evidence in the form of individual tests showing elevated PFOA concentrations in blood provided by plaintiffs was sufficient to demonstrate significant exposure to PFOA.⁵³¹ Improvements in genetic testing will continue to aid in establishing an individual plaintiff’s exposure to a toxic substance and in establishing or disproving the plaintiff’s genetic susceptibility to illness alleged to have resulted from the toxic exposure.⁵³²

It should be noted, however, that science is facing significant attacks, primarily through political interference and disinformation efforts. This general undermining of scientific integrity enables corporate defendants to more easily challenge scientific evidence and regulatory standards, possibly resulting in inconsistent litigation outcomes and challenges for plaintiffs trying to establish causation.⁵³³

Regulatory momentum around toxic substances is gaining. New laws and regulations and stricter enforcement at the state level⁵³⁴ may serve as a basis for tort litigation, by requiring the listing of toxic substances and uncovering violations.⁵³⁵ Regulatory momentum at the federal level, such as EPA’s actions setting near-zero maximum contaminant levels for six PFAS chemicals in drinking water and designating PFOA and PFOS as hazardous substances under CERCLA, has been fueling tort litigation as well.⁵³⁶ Federal approvals and deregulation under the second Trump Administration—such as pesticides actions including the approval of new PFAS ingredients and the re-approval of dicamba⁵³⁷—is also likely to lead to more litigation, particularly in the form of citizen groups bringing suit against the federal government to challenge deregulatory actions and fill perceived enforcement gaps.⁵³⁸

Toxics litigation and climate litigation will continue to inform and reinforce each other. Current toxics litigation and climate litigation are tied in many ways, and the connections are being looked at more and more. Litigants often utilize similar legal theories and approaches learned from toxic tort, tobacco, and opioid litigation, founded on claims of public nuisance, failure-to-warn, deceptive practices, and product liability. The two strands also have common evidentiary and procedural challenges, such as proof of causation and reliance on complex science.

Beyond the shared legal frameworks, climate and toxics cases often seek to hold similar or even the same industrial actors accountable, particularly in the petrochemical sector.⁵³⁹ Petrochemical production, for example, relies on fossil fuels as both feedstock and energy carrier, making it among the most energy-intensive processing industries.⁵⁴⁰ In addition, the International Energy Agency

identifies petrochemicals as becoming the biggest driver of oil demand growth in this decade due to projected expanded petrochemical production.⁵⁴¹ As petrochemicals are also fundamental building blocks for nearly all plastics, the fossil fuel and chemicals industries are increasingly becoming targets of plastics litigation.

Climate disasters may also drive toxics litigation. Natural disasters are growing in scale, frequency, and intensity due to climate change.⁵⁴² Toxics exposures may occur following such disasters, leading to new avenues of litigation.⁵⁴³ For example, a number of toxics-related lawsuits have been filed in the aftermath of the January 2025 Los Angeles wildfires,⁵⁴⁴ of which climate change was likely a significant driver.⁵⁴⁵

A lawsuit filed in May 2025 alleges that children living near the Eaton Fire were exposed to dangerous levels of asbestos and lead released by the wildfire smoke.⁵⁴⁶ The lawsuit seeks compensation for ongoing medical monitoring from Southern California Edison, alleging that its equipment caused the fire.⁵⁴⁷ Another lawsuit filed in April 2025 alleges that many Los Angeles-area homes—though not burned—were rendered uninhabitable by toxic chemical residue from smoke from the wildfires.⁵⁴⁸ The lawsuit, brought against the California FAIR Plan Association, alleges that the association systematically denied and underpaid these smoke damage claims.⁵⁴⁹

CONCLUSION

As focus on toxic substances and points of exposure increases, toxics litigation provides a powerful tool for victims and their advocates to seek redress, prompt regulatory reform, influence corporate behavior, and grow public awareness. This well-established area of law is evolving to address the reality of pervasive toxic exposure in modern life, and is driven in large part by improved scientific understanding, as well as regulations governing public disclosure of harms. Looking at the current landscape of toxics litigation in the United States, there has been a surge in cases concerning pesticides, PFAS, petrochemicals, and emerging plastic contaminants.

The interconnectedness of these toxic substances is worth noting—petrochemicals are the building blocks for most plastics and pesticides, PFAS are often used in pesticides, plastics, and the petrochemical process, and so on—but litigation tends to address them separately, given the complex nature of the legal claims and proof of causation. The shared approaches to cases, however, provide throughlines highlighting successful claims, defenses, and implications beyond the courtroom. Failure-to-warn and consumer protection claims are central arguments in many of these cases, reflective of the rise in or understanding of consumer exposures. Federal preemption defenses are about to be addressed by the U.S. Supreme Court. Companies are already facing massive verdicts and settlements, prompting pushes for regulatory safe harbors.

As in the United States, toxics cases are on the rise in the rest of the world, including in the four key areas discussed in this report. In Europe, more progress has been made on causation as an issue for PFAS cases, which could inform litigation in the United States as well.

Litigation in these categories and beyond has had far-reaching impacts, in areas including third-party litigation funding, the development of new laws, access to justice and compensation for individuals and communities, environmental justice, financial risk, and investor behavior.

Toxics litigation will continue to evolve with the landscape of toxic exposure. Future developments are likely to include increased litigation around emerging contaminants, advances in science and technology leading to even stronger evidence of causation, a rise in cases spurred by both regulatory advances and deregulatory efforts, further affinities between toxics litigation and climate litigation and climate-related disasters, and continued efforts to shield against litigation-based liability.

This report provides a foundation for understanding current trends and drawing connections across the broader field of toxics litigation. Continuing to monitor and analyze these connections provides an opportunity for innovation and progress toward making the world a healthier place.

ENDNOTES

Introduction

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Part I. Historical Context

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¹⁴ The EPA is considering revoking tolerances of eleven uses of the pesticide, essentially acting as a ban on chlorpyrifos for certain foods, should the rule be finalized. U.S. Env't. Prot. Agency, *EPA Update on the Use of the Pesticide Chlorpyrifos on Food* (last updated Jan. 6, 2026), <https://www.epa.gov/pesticide-worker-safety/epa-update-use-pesticide-chlorpyrifos-food>.

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¹⁶ U.S. Env't. Prot. Agency, *Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Federal Facilities* (last updated July 7, 2025), <https://www.epa.gov/enforcement/comprehensive-environmental-response-compensation-and-liability-act-cercla-and-federal#:~:text=In%20addition%20to%20making%20Federal,adhering%20to%20a%20CERCLA%20mandate.>

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²⁰ *United States v. Occidental Chemical Corp.*, 965 F.Supp. 408 (W.D.N.Y. 1997).

²¹ Allison J. Russell & Lawrence R. Cohan, *Toxic Torts: Chemicals and the Litigation They Generate in Modern America*, SALTZ MONGELUZZI BENDESKY TRIAL LAWYERS (Jan. 16, 2023), <https://www.smbb.com/news-article/toxic-torts-chemicals-and-the-litigation-they-generate-in-modern-america/>.

²² Thiam, *supra* note 5, at 148.

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²⁶ Linda S. Mullenix, *Problems in Complex Litigation*, 10 REV. LITIG. 213, 216 (1991).

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²⁸ Anne Bloom, *From Justice to Global Peace: A (Brief) Genealogy of the Class Action Crisis*, 39 LOY. L.A. L. REV. 719, 721 (2006).

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³⁰ Alejandro de la Garza, *Dark Waters Tells the True Story of the Lawyer Who Took DuPont to Court and Won. But Rob Bilott's Fight Is Far From Over*, TIME (Nov. 25, 2019) <https://time.com/5737451/dark-waters-true-story-rob-bilott/>.

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⁴¹ Nathan Donley, *The USA lags behind other agricultural nations in banning harmful pesticides*, 18 ENV'T. HEALTH art. 44, 52-53 (2019), <https://ehjournal.biomedcentral.com/articles/10.1186/s12940-019-0488-0#:~:text=However%2C%20five%20of%20the%20thirteen,%2C%20terbufos%2C%20and%20tribufos.>

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Part II. Key Areas and Current Trends in Toxics Litigation

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⁶⁷ See, e.g., Pamela King et al., *Supreme Court takes up Roundup cancer fight*, E&E NEWS (Jan. 16, 2026), <https://subscriber.politicopro.com/article/eenews/2026/01/16/supreme-court-takes-up-roundup-cancer-fight-00718901>. Make America Healthy Again (MAHA) advocates have also expressed concerns over the Trump administration’s approvals of certain pesticides, including creating a petition for bans of pesticides like glyphosate and dicamba. Ellie Borst, *What we know about EPA’s coming MAHA agenda*, E&E NEWS (Jan. 8, 2026), <https://subscriber.politicopro.com/article/eenews/2026/01/08/what-we-know-about-epas-coming-maha-agenda-00713905>.

⁶⁸ Note that after its ban was overturned, EPA issued a new proposed rule in 2024 to revoke all tolerances for chlorpyrifos, except for eleven food and feed crop uses; public comment will follow in 2026 prior to the agency’s Interim Decision. U.S. Env’t. Prot. Agency, *Frequently Asked Questions about the Current Status of Chlorpyrifos and Anticipated Path Forward* (last updated Sept. 8, 2025), <https://www.epa.gov/ingredients-used-pesticide-products/frequently-asked-questions-about-current-status-chlorpyrifos>.

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⁷⁰ 7 U.S.C. § 136(u). See also Mont. Code § 80-8-102 (defining “pesticide” as “any (a) substance or mixture of substances, including any living organism or any product derived from a living organism, intended for preventing, destroying, controlling, repelling, altering life processes, or mitigating any insects, rodents, nematodes, fungi, weeds, and other forms of plant or animal life or viruses, except viruses on or in living humans or other animals, that may infect or be detrimental to persons, vegetation, crops, animals, structures, or households or be present in any environment or that the department declares a pest; (b) substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant; and (c) other substances intended for that use named by the department by rule.”).

⁷¹ Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), 7 U.S.C. §§ 136-136y (1996).

⁷² 7 U.S.C. § 136a(a)-(b).

⁷³ 7 U.S.C. § 136a.

⁷⁴ 7 U.S.C. § 136a(c)(5)(D).

⁷⁵ 7 U.S.C. § 136a(g)(1)(A).

⁷⁶ 7 U.S.C. § 136; 40 C.F.R. § 156.

⁷⁷ 7 U.S.C. § 136d(b).

⁷⁸ See, e.g., the Montana Pesticides Act, MONT. CODE §§ 80-8-101 through § 80-8-306 (regulating the registration of pesticides; the licensing of pesticide applicators, operators, and dealers; and enforcement and administrative procedures in Montana); and the Kentucky Fertilizer and Pesticides Storage, Pesticide Use and

Application Act of 1996, KY. STAT. §§ 217B.010-217B.990 (regulating the registration, sale, distribution, proper use, disposal, and application of pesticides in Kentucky).

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⁸² Gary Ruskin, *Paraquat Papers—Updates to U.S. Litigation*, U.S. RIGHT TO KNOW (Nov. 18, 2021), <https://usrtk.org/pesticides/paraquat-papers/>.

⁸³ Charles M. Benbrook, *Trends in Glyphosate Herbicide Use in the United States and Globally*, 28 ENV'T. SCI. EUR. 3 (2016), <https://enveurope.springeropen.com/articles/10.1186/s12302-016-0070-0>. Glyphosate is the declared active ingredient in most versions of Roundup, but Roundup also contains a variety of other ingredients. These ingredients include those designed to help the herbicide stick to plants, be absorbed into the roots, or prevent foaming, as well as dyes. Scientists believe these may be more toxic than glyphosate but because they are not "active ingredients" in Roundup, they are rarely the focus of regulatory health risk assessments. Kara Mayer Robinson & Shelly Shepard, *Glyphosate Herbicides and Your Health*, WEBMD.COM (June 24, 2024) <https://www.webmd.com/cancer/herbicide-glyphosate-cancer>.

⁸⁴ Katy Moncivais, *Roundup Lawsuit*, CONSUMER SAFETY, last updated 23 September 2024, <https://www.consumersafety.org/product-lawsuits/roundup/>.

⁸⁵ Benbrook, *supra* note 83, at 5.

⁸⁶ Moncivais, *supra* note 84.

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¹²³ Goldman, *supra* note 66.

¹²⁴ *Durnell v. Monsanto*, 707 S.W.3d 828, 833 (Missouri Ct. App. 2025).

¹²⁵ See *Hardeman v. Monsanto*, 997 F.3d 941, 954-58 (9th Cir. 2021); *Carson v. Monsanto*, 92 F.4th 980, 982 (11th Cir. 2024).

¹²⁶ *Schaffner v. Monsanto*, 113 F.4th 364, 380-82 (3rd Cir. 2024).

¹²⁷ Press Release, Bayer announces filing of petition to U.S. Supreme Court for review of Durnell Roundup™ case, (Apr. 4, 2025) (stating that “the stakes could not be higher,” and “ongoing litigation also threatens Monsanto’s ability to continue to supply glyphosate-based products to farmers and other professional users”), <https://www.bayer.com/media/en-us/bayer-announces-filing-of-petition-to-us-supreme-court-for-review-of-durnell-roundup-case/>.

¹²⁸ Matthew Dolman, *Roundup Lawsuit: Roundup Cancer Class Action Lawsuit (March 2025 Update)*, LAWSUIT LEGAL NEWS (last updated 13 March 2025), <https://lawsuitlegalnews.com/roundup-lawsuit/#update>; Matthew Dolman, *Paraquat Lawsuit: Parkinson’s Lawsuit Settlements (April 2025 Update)*, LAWSUIT LEGAL NEWS (last updated 27 March 2025), <https://lawsuitlegalnews.com/paraquat-lawsuit/>; *Dacthal (DCPA) Lawsuit: (March 2025 Update)*, LAWSUIT LEGAL NEWS (last updated March 2025), <https://lawsuitlegalnews.com/dacthal-lawsuit/>; see, e.g., Beyond Pesticides, *Parents of Harmed Children Sue Manufacturer of Brain-Damaging Insecticide Chlorpyrifos* (Jul. 14, 2021) (parents of children with developmental disabilities allegedly due to chlorpyrifos exposure brought suit against manufacturer Corteva), <https://beyondpesticides.org/dailynewsblog/2021/07/lawsuits-for-harmed-children-filed-against-manufacturer-of-brain-damaging-insecticide-chlorpyrifos/>.

¹²⁹ *Id.*

¹³⁰ Carey Gillam, *Citing “serious ethical concerns,” journal retracts key Monsanto Roundup safety study*, THE NEW LEDE (Dec. 3, 2025), <https://www.thenewlede.org/2025/12/citing-serious-ethical-concerns-journal-retracts-key-monsanto-roundup-safety-study/>; Nathan Donley & Carey Gillam, *The EPA is Meant to Protect Us. The Monsanto Trials Suggest it isn’t Doing That*, THE GUARDIAN (May 7, 2019), <https://www.theguardian.com/commentisfree/2019/may/07/epa-monsanto-round-up-trial>; see also Stacy Malkan et al., *Merchants of Poison: How Monsanto Sold the World on a Toxic Pesticide*, US RIGHT TO KNOW, December 2022, https://usrtk.org/wp-content/uploads/2022/12/Merchants_of_Poison_Report_final_120522.pdf; Leland Glenna and Analena Bruce, *Suborning Science for Profit: Monsanto, Glyphosate, and Private Science Research Misconduct*, 50 RES. POL’Y., 7 (2021), <https://www.sciencedirect.com/science/article/abs/pii/S0048733321000925>; Leemon B. McHenry, *The Monsanto Papers: Poisoning the Scientific Well*, INT’L. J. RISK SAF. MED. (2018), <https://pubmed.ncbi.nlm.nih.gov/29843257/>.

¹³¹ *Anderson v. Monsanto Co.*, 719 S.W.3d 755, 764 (Mo. Ct. App. May 27, 2025).

¹³² *Id.* at 26-28.

¹³³ *Id.* at 26.

¹³⁴ Carey Gillam & Aliya Uteuova, *Secret ‘Paraquat Papers’ Reveal Corporate Tactics to Protect Weed Killer Linked to Parkinson’s Disease*, THE NEW LEDE (Oct. 20, 2022) (examining internal Syngenta documents and finding a corporate focus on protecting paraquat product sales, refuting external scientific research, and influencing regulators), <https://www.thenewlede.org/2022/10/secret-paraquat-papers-reveal-corporate-tactics-to-protect-weed-killer-linked-to-parkinsons-disease/>.

¹³⁵ *State Farm Mut. Auto. Ins. Co. v. Campbell*, 538 U.S. 408, 416-17 (2003).

¹³⁶ *Id.* at 416.

¹³⁷ *Id.* at 425.

¹³⁸ See *Simon v. San Paolo U.S. Holding Co., Inc.*, 35 Cal. 4th 1159, 1189 (2005) (non-economic component of compensatory damages is high, a lower ratio of compensatory to punitive damages may be appropriate because of deterrent effect of total compensatory damages).

¹³⁹ See, e.g., *Johnson v. Monsanto Co.*, 2018 Cal. Super. LEXIS 37061 (reducing punitive damages in glyphosate NHL case to a 1:1 ratio because a substantial portion of compensatory damages were noneconomic and compensatory damages were “extremely high for a single plaintiff”); *Hardeman v. Monsanto*, 385 F. Supp. 3d 1042 (N.D. Cal. 2019) (finding jury award of \$75M in punitive damage violates the Due Process Clause and reducing punitive damages to approximately four times the compensatory damages award); *Anderson v. Monsanto Co.*, *supra* note 131 (upholding punitive damage awards where awards were significantly reduced by trial court).

¹⁴⁰ See *Judgment on Verdict, Johnson v. Monsanto Co.*, CGC-16-550128 (Cal. Sup. Ct., San Francisco County, 2018) (entering a verdict awarding damages of \$289 million to the plaintiff); *Hardeman v. Monsanto*, 385 F. Supp. 3d 1042 (N.D. Cal. 2019) (jury awarded \$80M in damages to the plaintiff); and *Pilliod v. Monsanto*, 2019 Cal. Super. LEXIS 843 (Alameda Cty. Sup. Ct., 2019) (jury awarded over \$1 billion in damages to each plaintiff).

¹⁴¹ See, e.g., Nate Raymond & Jonathan Stempel, *Judge slashes Bayer \$1.56 billion Roundup verdict to \$611 million*, REUTERS (Apr. 5, 2024), <https://www.reuters.com/legal/judge-slashes-bayer-156-billion-roundup-verdict-611-million-2024-04-05/>; Bill McColl, *Appeals Court Rules in Favor of Bayer-Owned Monsanto in Roundup Cancer Case*, INVESTOPEDIA (Aug. 16, 2024), <https://www.investopedia.com/appeals-court-rules-in-favor-of-bayer-owned-monsanto-in-roundup-cancer-case-8696464#>.

¹⁴² Patricia Cohen, *Roundup Maker to Pay \$10 Billion to Settle Cancer Suits*, N.Y. TIMES (June 24, 2020), <https://www.nytimes.com/2020/06/24/business/roundup-settlement-lawsuits.html>. The settlement covers an estimated 95,000 cases. *Id.*

¹⁴³ See, e.g., Abraham Gutman, *A Philly Jury Again Sides with Monsanto in Trial Over Claims that Roundup Caused Cancer*, THE PHILADELPHIA INQUIRER (May 19, 2025), <https://www.inquirer.com/news/monsanto-roundup-weed-killer-verdict-bayer-20241118.html> (reporting that Philadelphia jury sided with Monsanto, finding that Roundup did not cause local woman’s cancer); Abraham Gutman, *Monsanto Wins Second Roundup Case in Philadelphia, as Jury Finds the Weed Killer was Defective but Didn’t Cause Cancer*, THE PHILADELPHIA INQUIRER (Sept. 13, 2024), <https://www.inquirer.com/news/philadelphia/monsanto-roundup-weed-killer-verdict-bayer-philadelphia-20240913.html> (reporting that Philadelphia jury sided with Monsanto, finding that Roundup was defective but did not cause local man’s cancer); *Schaffner*, 113 F.4th 364 at 399 (ruling in favor of Monsanto holding that a failure-to-warn claim under Pennsylvania law was preempted by FIFRA).

¹⁴⁴ See, e.g., Brendan Pierson, *Bayer Must Pay \$78 Million in Latest Roundup Cancer Trial, Jury Finds*, REUTERS (Oct. 20, 2024)(reporting that Philadelphia jury awarded \$78 million to Pennsylvania resident), <https://www.reuters.com/legal/bayer-must-pay-78-mln-latest-roundup-cancer-trial-jury-finds-2024-10-10/>; Pamela King, *Georgia Jury Awards Landowner \$2.1B in Roundup Cancer Case*, E&E NEWS (Mar. 24, 2025)(reporting that Georgia jury awarded \$2.1 billion to a Georgia landowner), <https://www.eenews.net/articles/georgia-jury-awards-landowner-2-1b-in-roundup-cancer-case/>; see, e.g., *Anderson v. Monsanto Co.*, *supra* note 131 (affirming trial court’s judgments in favor of plaintiffs).

¹⁴⁵ Ronald V. Miller, Jr., *supra* note 97.

¹⁴⁶ Andrew Scurria et. al, *Bayer Seeks New Roundup Settlement While Exploring Monsanto Bankruptcy*, WALL STREET J. (May 15, 2025), <https://www.wsj.com/articles/bayer-seeks-new-roundup-settlement-while-exploring-monsanto-bankruptcy-35bf28de?msockid=15831db355086d370f08082b541a6cf8>.

¹⁴⁷ Carey Gillam, *Outrage mounts as Republicans in Congress move to protect pesticide makers from lawsuits*, THE GUARDIAN (Sept. 27, 2025), <https://www.theguardian.com/us-news/2025/sep/27/republican-pesticide-legislation>.

¹⁴⁸ Mary McCue Bell, *Pesticide politics: Inside the corporate push to limit liability*, INVESTIGATE MIDWEST (Aug. 18, 2025), <https://investigatamidwest.org/2025/08/18/pesticide-politics-inside-the-corporate-push-to-limit-liability>. In addition to North Dakota and Georgia, which have enacted the laws, North Carolina, Ohio, Idaho, Montana, Mississippi, Wyoming, Florida, Tennessee, Missouri, and Iowa are considering such laws. Rob Faux, *We Can Stop Liability Shields for Pesticide Companies*, Pesticide Action & Agroecology Network (Jun. 6, 2025), <https://www.panna.org/news/stop-liability-shields-for-pesticides/>.

¹⁴⁹ N. D. CENTURY CODE § 28-01.3-11. Specifically, the law provides that “any pesticide registered with the [North Dakota] agriculture commissioner ... or the [EPA under FIFRA] which displays a label approved by the [EPA] in registering the pesticide, displays a label consistent with the most recent human health assessment performed under [FIFRA] or displays a label consistent with the [EPA] carcinogenicity classification for the pesticide under [FIFRA] is sufficient to satisfy any requirement for warning or labeling regarding health or safety under this chapter and any other provision or doctrine of state law concerning the duty to warn or label, or any other common law duty to warn.” *Id.* (internal citations omitted).

¹⁵⁰ GA. CODE § 2-7-171.

¹⁵¹ Bell, *supra* note 148.

¹⁵² *Leach v. E.I. Du Pont de Nemours & Co.*, 2002 WL 1270121 (Cir. Ct. W. Va. 2002).

¹⁵³ Hiroko Tabuchi, *Lawyers to Plastic Makers: Prepare for ‘Astronomical’ PFAS Lawsuits*, THE N.Y. TIMES (May 28, 2024).

¹⁵⁴ See, e.g., U.S. Env’t. Prot. Agency, *Our Current Understandings of the Human Health and Environmental Risks of PFAS* (last updated: Nov. 5, 2025), <https://www.epa.gov/pfas/our-current-understanding-human-health-and-environmental-risks-pfas>.

¹⁵⁵ See, e.g., D.C. Dep’t. of Energy and Env’t., *DOEE Provides Fish Consumption Advisory Update*, (Dec. 18, 2024) (cautioning that people should consider eating fewer fish in the Potomac and Anacostia rivers due to PFAS contamination), <https://doee.dc.gov/release/doee-provides-fish-consumption-advisory-update>; Press Release, Maine Department of Inland Fisheries & Wildlife, MDIFW Includes New Area in PFAS Do Not Eat Wildlife Consumption Advisory (Oct. 22, 2025)(sharing information about two do-not eat advisories by the Maine Department of Inland Fisheries and Wildlife due to PFAS contamination), <https://www.maine.gov/ifw/news-events/single-release.html?id=13314990>.

¹⁵⁶ U.S. Env’t. Prot. Agency, *supra* note 154.

¹⁵⁷ JAMES POLLACK ET AL., PFAS DESKBOOK 1 (2023).

¹⁵⁸ PFAS National Primary Drinking Water Regulation, 40 C.F.R. Parts 141 and 142 (2024).

¹⁵⁹ Designation of Perfluorooctanoic Acid (PFOA) and Perfluorooctanesulfonic Acid (PFOS) as CERCLA Hazardous Substances, 40 C.F.R. Part 302 (2024).

¹⁶⁰ Toxic Substances Control Act Reporting and Recordkeeping Requirements for Perfluoroalkyl and Polyfluoroalkyl Substances, 40 C.F.R. Part 705 (2023).

¹⁶¹ See U.S. Env’t. Prot. Agency, *Proposal to List Nine Per- and Polyfluoroalkyl Compounds as Resource Conservation and Recovery Act Hazardous Constituents* (last updated Mar. 20, 2025), <https://www.epa.gov/hw/proposal-list-nine-and-polyfluoroalkyl-compounds-resource-conservation-and-recovery-act>.

¹⁶² Miranda Willson, *EPA ditches historic ‘forever chemicals’ rule*, E&E NEWS (May 14, 2025), <https://subscriber.politicopro.com/article/eenews/2025/05/14/epa-ditches-historic-forever-chemicals-rule-00348566>; see also: Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) Data Reporting and Recordkeeping Under the Toxic Substances Control Act (TSCA); Change to Submission Period, 40 C.F.R. Part 705 (2025).

¹⁶³ As of February 2026, the case was removed from abeyance in December 2025 and is still in D.C. Circuit Court. *Nat’l Ass’n of Manufacturers et al. v. Env’t. Prot. Agency et al.*, Case No. 24-1191 (D.C. Cir. filed June 10, 2024).

¹⁶⁴ *Am. Water Works Ass’n et al. v. EPA, et al.*, Case No. 24-1188 (D.C. Cir. filed June 7, 2024)(respondents, i.e., Trump’s EPA, have requested multiple pauses in this litigation to allow EPA to evaluate how it intends to regulate PFAS). See also Miranda Willson, *EPA seeks more time on PFAS water rule*, E&E NEWS (June 4, 2025), <https://subscriber.politicopro.com/article/eenews/2025/06/04/epa-seeks-more-time-on-pfas-water-rule-00386051>.

¹⁶⁵ Georgina Gustin, *Trump Administration Aims to Roll Back Limits on Toxic “Forever Chemicals” in Drinking Water*, MOTHER JONES (May 16, 2025), <https://www.motherjones.com/politics/2025/05/trump-epa-lee-zeldin-rollback-limits-standards-pfas-forever-chemicals-toxic-drinking-water-supply>. Some have argued that EPA cannot legally extend the deadline for utilities to comply with NPDWR, as the SDWA allows for a maximum of five years for utilities to meet new requirements. See Adele Peters, *Trump’s EPA wants to weaken rules on forever chemicals. It legally can’t—but that doesn’t mean your drinking water is safe*, FAST COMPANY (May 16, 2025) (quoting Erik Olson, senior strategic director for health at the Natural Resources Defense Council). The SDWA provides that “[a]ny revision of a national primary drinking water regulation shall be promulgated in

accordance with this section, except that each revision shall maintain, or provide for greater, protection of the health of persons.” 42 U.S.C. § 300g-1(B)(9).

¹⁶⁶ 42 U.S.C. § 300g-1(b)(9) (1996).

¹⁶⁷ Miranda Willson, *Roadblock looms as EPA weighs ‘forever chemicals’ rollback*, E&E News (Apr. 2, 2025) <https://subscriber.politicopro.com/article/eenews/2025/04/02/roadblock-looms-as-epa-weighs-forever-chemicals-rollback-00263154>.

¹⁶⁸ *Am. Water Works Ass’n, et al. v. EPA, et al.*, Case No. 24-1188 (D.C. Cir. filed June 7, 2024).

¹⁶⁹ The four PFAS for which EPA intends to rescind regulations, including the maximum contaminant level set in 2024, are PFHxS, PFNA, HFPO-DA, and PFBS. Press Release, U.S. Env’t. Prot. Agency, EPA Announces It Will Keep Maximum Contaminant Levels for PFOA, PFOS (May 14, 2025), <https://www.epa.gov/newsreleases/epa-announces-it-will-keep-maximum-contaminant-levels-pfoa-pfos>.

¹⁷⁰ Respondents’ Motion for Partial Vacatur, *Am. Water Works Ass’n et al. v. EPA, et al.*, Case No. 24-1188 (D.C. Cir. filed Sept. 11, 2025), https://www.asdwa.org/wp-content/uploads/2025/09/EPA-Motion-for-partial-vacatur_2025-09-11.pdf.

¹⁷¹ Order, *Am. Water Works Ass’n, et al. v. EPA, et al.*, No. 24-1188 (D.C. Cir. filed Jan. 21, 2026), <https://www.amwa.net/system/files/linked-files/Court%20of%20Appeals%20order%201-21-26.pdf>.

¹⁷² Designation of Perfluorooctanoic Acid (PFOA) and Perfluorooctanesulfonic Acid (PFOS) as CERCLA Hazardous Substances, 40 C.F.R. Part 302 (2024).

¹⁷³ Sharon Lerner, *Did the White House Stop the EPA from Regulating PFAS?*, THE INTERCEPT (Sept. 29, 2020), <https://theintercept.com/2020/09/29/epa-white-house-pfas-pfoa-pfos/>.

¹⁷⁴ *Chamber of Com. of the U.S., et al. v. Env’t. Prot. Agency, et al.*, No. 24-1193, 2025 WL 502373 (D.C. Cir. filed 2024).

¹⁷⁵ Ellie Borst, *Judges signal support for ‘forever chemicals’ Superfund rule*, E&E News (Jan. 20, 2026), <https://subscriber.politicopro.com/article/eenews/2026/01/20/judges-signal-support-for-forever-chemicals-superfund-rule-00737358>.

¹⁷⁶ Justifications provided in support of EPA’s budget planning indicate that the Trump Administration intends to maintain the designations, providing that revenue collected from industry taxes will be used to "initiate new remedial work at National Priority List (NPL) sites to address contaminants including lead and per- and polyfluoroalkyl substances (PFAS)." Ellie Borst, *Trump admin signals it will back Superfund PFAS cleanups*, E&E News (June 24, 2025), <https://subscriber.politicopro.com/article/eenews/2025/06/24/trump-admin-signals-it-will-back-superfund-pfas-cleanups-00421028>.

¹⁷⁷ See 42 U.S.C. §9607(a).

¹⁷⁸ Tabuchi, *supra* note 153.

¹⁷⁹ Miranda Willson, *EPA aims to ease PFAS cleanup costs. Who will pay?*, E&E News, (May 22, 2025), <https://subscriber.politicopro.com/article/eenews/2025/05/22/epa-aims-to-ease-pfas-cleanup-costs-who-will-pay-00362798>.

¹⁸⁰ *Id.*

¹⁸¹ Memorandum from David M. Uhlmann on PFAS Enforcement Discretion and Settlement Policy Under CERCLA to Regional Administrators, Deputy Regional Administrators, Regional Counsels, and Deputy Regional Counsels (Apr. 19, 2024), <https://www.epa.gov/system/files/documents/2024-04/pfas-enforcement-discretion-settlement-policy-cercla.pdf>.

¹⁸² H.R. 1267, 119th Cong. (2025-2026).

¹⁸³ Note that §2(d) of the bill, the Savings Provision, states that there is no preclusion of liability for gross negligence or willful misconduct for PFAS releases.

¹⁸⁴ *Id.* For decades, the EPA encouraged farmers in the United States to spread municipal sewage as fertilizer on millions of acres of farmland. Sewer sludge—called “biosolids” by industry—was rich in nutrients, and it helped keep the sludge out of landfills. Sludge, however, often also contains heavy concentrations of PFAS. Landowners have sued fertilizer providers and the EPA, arguing that the agency failed to regulate PFAS. Hiroko Tabuchi, *Something’s Poisoning America’s Land. Farmers Fear ‘Forever’ Chemicals*, N.Y. TIMES (Aug. 31, 2024), <https://www.nytimes.com/2024/08/31/climate/pfas-fertilizer-sludge-farm.html>.

¹⁸⁵ Toxic Substances Control Act Reporting and Recordkeeping Requirements for Perfluoroalkyl and Polyfluoroalkyl Substances, 40 C.F.R. Part 705 (2023).

¹⁸⁶ *Id.*

¹⁸⁷ Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) Data Reporting and Recordkeeping Under the Toxic Substances Control Act (TSCA); Change to Submission Period, 90 Fed. Reg. 20236, 20236 (May 13, 2025) (to be codified at 40 C.F.R. pt. 705).

¹⁸⁸ Listing of Specific PFAS as Hazardous Constituents, 40 C.F.R. Parts 261 and 271 (Feb. 8, 2024).

¹⁸⁹ Definition of Hazardous Waste Applicable to Corrective Action for Releases From Solid Waste Management Units, 40 C.F.R. Parts 260, 261, 270 (2024).

¹⁹⁰ See 42 U.S.C. § 6901 et seq.

¹⁹¹ See Definition of Hazardous Waste, *supra* note 189.

¹⁹² See, e.g., John M. Doherty, *Will We Be Left in the Dark on Toxics?*, Vibrant Env't. Blog, ENV'T. L. INSTITUTE (May 29, 2025), <https://www.eli.org/vibrant-environment-blog/will-we-be-left-dark-toxics>.

¹⁹³ Willson, *Roadblock looms as EPA weighs 'forever chemicals' rollback*, *supra* note 167.

¹⁹⁴ U.S. Env't. Prot. Agency, *EPA's Per- and Poly fluoroalkyl Substances (PFAS) Action Plan*, 9 (February 2019)(stating that PFOA and PFOS “have been detected in the blood serum of up to 99% of samples collected between 1999 and 2012 in a population that is representative for the U.S.”), available at:

https://www.epa.gov/sites/default/files/2019-02/documents/pfas_action_plan_021319_508compliant_1.pdf.

¹⁹⁵ Andrew Wallender, *Companies Face Billions in Damages as PFAS Lawsuits Flood Courts*, Bloomberg L. (May 23, 2022), <https://news.bloomberglaw.com/pfas-project/companies-face-billions-in-damages-as-pfas-lawsuits-flood-courts>.

¹⁹⁶ The number of cases were obtained by doing a search in Lexis with the search term “PFAS” and filters for only federal court between January 1, 2024 and December 31, 2024.

¹⁹⁷ Miles Scully & Brian Ledger, *PFAS settlements: Future of PFAS litigation landscape to be determined by upcoming decision*, REUTERS (AUG. 32, 2023)(characterizing cases in the MDL in South Carolina as falling into three distinct categories: personal injury plaintiffs claiming injury from exposure to PFAS; actions filed by individual states by Attorney Generals for natural resource and other damages; and public water supplier plaintiffs seeking drinking water testing and remediation costs), <https://www.reuters.com/legal/legalindustry/pfas-settlements-future-pfas-litigation-landscape-be-determined-by-upcoming-2023-08-31/>.

¹⁹⁸ Safer States, *State Attorneys General PFAS Lawsuits* (last accessed: Feb. 5, 2026), <https://www.saferstates.org/priorities/pfas/?section=state-ags-pfas-action>.

¹⁹⁹ See, e.g., *Minnesota 3M PFAS Settlement* (last accessed: Feb. 12, 2026)(where in 2018, Minnesota settled with 3M in return for a \$850 million settlement), <https://3msettlement.state.mn.us/>; and N.J. Dep't. of Env't. Prot., *3M PFAS Settlement* (last updated: Nov. 24 , 2025)(where New Jersey settled their suit against 3M for \$450 million).

²⁰⁰ After owning and operating various industrial sites in New Jersey for over a century, E.I. du Pont de Nemours and Company (“Old DuPont”) began a series of corporate transactions that, among other developments, eventually resulted in the formation of Chemours Company, a subsidiary that assumed direct liability for the majority of Old DuPont’s environmental/PFAS liability. Chemours became independent thereafter, and the companies have been in litigation with one another since over issues related to the separation and the assumption of Old DuPont’s debt and PFAS liability. Press Release, N.J. Office of Att’y. Gen., *Landmark Settlement with DuPont Valued at Over \$2 Billion* (Aug. 4, 2025), <https://www.njoag.gov/ag-platkin-dep-commissioner-latourette-landmark-settlement-with-dupont-valued-at-over-2-billion/>.

²⁰¹ Third Amended Complaint and Jury Trial Demand, *N.J. Dep't. of Env. Prot. v. E.I. DuPont de Nemours and Co., et. al.*, No. 1:19-cv-14766-RMB-JBC (D.N.J. filed Aug. 26, 2024), https://s3.documentcloud.org/documents/25946794/20240826_njvsdupont_thirdamendedcomplaint.pdf.

²⁰² *Id.* at 67, 71, 76. New Jersey’s Spill Compensation and Control Act imposes strict liability on any party responsible for a hazardous substance discharge. N.J. STAT. § 58:10-23.11g(c)(1). The state sought under the Spill Act to recover cleanup costs and damages to natural resources related to historical contamination at the Chamber Works site. The Water Pollution Control Act governs the discharge of pollutants into New Jersey’s surface and groundwater. N.J. STAT. § 58:10A-1 et seq. The state is arguing that DuPont and Chemours committed unauthorized, long-term discharges into the Delaware River and other water bodies, in violation of the law. The Industrial Site Recovery Act ensures that funding for cleanup of contaminated industrial establishments is not left to the state. N.J. STAT. 13:1K-7. The state’s ISRA claim focuses on the transfer of ownership between Old DuPont and Corteva.

²⁰³ Michael Sol Warren, *Landmark trial pits NJ against DuPont over ‘forever chemical’ pollution in South Jersey*, N.J. SPOTLIGHT NEWS (May 19, 2025), <https://www.njspotlightnews.org/2025/05/landmark-forever-chemical-pollution-trial-south-jersey-dupont-chemours/>.

²⁰⁴ *Id.*

²⁰⁵ Press Release, Office of the Att’y. Gen. of N.J., AG Platkin and DEP Commissioner LaTourette Announce Historic Settlement of Up to \$450 Million with 3M for Statewide PFAS Contamination (May 13, 2025), <https://www.njoag.gov/ag-platkin-and-dep-commissioner-latourette-announce-historic-settlement-of-up-to-450-million-with-3m-for-statewide-pfas-contamination>.

²⁰⁶ Natural resource damages are damages for destruction of, injury to, or lost or reduced value of natural resources due to the discharge or release of hazardous substances into the environment. New Jersey law grants the state’s NRD authority under several statutes, including the Spill Compensation and Control Act, which appoints the state as the trustee of natural resources and provides for the restoration and replacement of natural resources as part of cleanup and removal costs, and the Water Pollution Control Act. N.J. STAT. § 58:10-23.11g(c)(1) and N.J. STAT. § 58:10A-1 et seq.

²⁰⁷ Judicial Consent Order, *N.J. Dep’t. of Env’t. Prot. v. E.I. DuPont De Nemours and Co., et al.*, No. 1:19-cv-14766-RMB-JBC (D.N.J. May 12, 2025), https://www.nj.gov/oag/newsreleases25/2025-0513_Tab-F-NJ-3M-JCO-May-12-2025_v3_CLEAN.pdf.

²⁰⁸ Nicole A. Caspers, *New Jersey County Challenges Judicial Consent Order in Landmark PFAS Settlement*, Goldberg Segalla: Env’t. L. Monitor (Dec. 4, 2025), <https://www.goldbergsegalla.com/blog/environmental-law-monitor/new-jersey-elm/new-jersey-county-challenges-judicial-consent-order-in-landmark-pfas-settlement/>.

²⁰⁹ Ry Rivard, *New Jersey announces \$2B forever chemical deal with DuPont*, E&E NEWS (Aug. 4, 2025) <https://subscriber.politicopro.com/article/eenews/2025/08/04/new-jersey-announces-forever-chemical-deal-with-dupont-companies-valued-at-2b-ee-00491635>.

²¹⁰ Press Release, Chemours, DuPont and Corteva Reach Agreement with the State of New Jersey to Comprehensively Resolve All Environmental Claims Including PFAS (Aug. 4, 2025), <https://www.dupont.com/news/chemours-dupont-and-corteva-reach-agreement-with-the-state-of-new-jersey-to-comprehensively-resolve-all-environmental-claims-including-pfas.html>.

²¹¹ *Id.*

²¹² E.A. Crunden, *‘Forever chemical’ giants strike major water utility settlement*, E&E NEWS (June 2, 2023) <https://subscriber.politicopro.com/article/eenews/2023/06/02/forever-chemical-giants-strike-major-water-utility-settlement-00099888>; E.A. Crunden, *3M strikes \$10.3B ‘forever chemicals’ deal*, E&E NEWS (June 23, 2023)

3M: <https://subscriber.politicopro.com/article/eenews/2023/06/23/3m-strikes-10-3b-forever-chemicals-deal-00103401>.

²¹³ *Id.*

²¹⁴ Courtney Ward, *DuPont agrees to \$27M settlement in Hoosick Falls water contamination lawsuit*, THE HILL (July 11, 2025), <https://thehill.com/policy/energy-environment/5396389-dupont-27m-settlement-hoosick-falls-new-york-pfoa-pfas-forever-chemicals-water-contamination-lawsuit/>.

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³²⁷ *Daniels v. Lyondell-Citgo Refining Co., Ltd.*, 99 S.W.3d 722 (Ct. App. Tex., 2003).

³²⁸ *Butler v. Denka Performance Elastomer, L.L.C.*, 16 F.4th 427 (5th Cir. 2021).

³²⁹ Examples of cases already mentioned include: *Butler v. Denka*, *Myers v. Union Carbide*, *Jones v. Evonik*, and *Lebouef v. Evonik*, *supra* note 321.

³³⁰ Zero Carbon Analytics, *Big Oil in Court – the latest trends in climate litigation against fossil fuel companies* (Sept. 2024), <https://zerocarbon-analytics.org/insights/briefings/latest-trends-in-climate-litigation-against-fossil-fuel-companies/>.

³³¹ CIEL, *supra* note 250.

³³² Center for Food Safety, *Health Advocates Sue FDA to Remove Phthalates from Food* (Dec. 19, 2024), <https://centerforfoodsafety.org/press-releases/6983/health-advocates-sue-fda-to-remove-phthalates-from-food>.

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³³⁵ See, e.g., NASEM, *Microplastics Webinar Series: Exploring exposure and related health effects* (Feb. 27, 2025), <https://www.nationalacademies.org/our-work/microplastics-webinar-series-exploring-exposure-and-related-health-effects>; Philip J. Landrigan, et al. *The Lancet Countdown on Health and Plastics*, 406 THE LANCET 1044-62 (Sept. 6, 2025), [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(25\)01447-3/abstract](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(25)01447-3/abstract).

³³⁶ See Khaled Ziani et al., *Microplastics: A Real Global Threat for Environment and Food Safety: A State of the Art Review*, NATIONAL LIBRARY OF MEDICINE (Jan. 25, 2023), <https://pubmed.ncbi.nlm.nih.gov/36771324/>.

³³⁷ U.S. Food & Drug Admin., *The Microbead-Free Waters Act: FAQs* (last updated Feb. 25, 2022), <https://www.fda.gov/cosmetics/cosmetics-laws-regulations/microbead-free-waters-act-faqs>.

³³⁸ Margaret Spring et al., *Existing U.S. Federal Authorities to Address Plastic Pollution: A Synopsis for Decision Makers* (Oct. 2024), <https://www.eli.org/research-report/existing-us-federal-authorities-address-plastic-pollution-synopsis-decision-makers>. Congress passed the Save Our Seas 2.0 Act, where Congress requested a report on microfiber pollution and recommendations for reducing microfiber pollution and for federal agency actions to enforce such reduction. The EPA’s Trash Free Water Program and National Oceanic and Atmospheric Administration’s (NOAA) Marine Debris Program coordinated development of the microfiber pollution report, which was submitted to Congress in 2022. In April 2023, the EPA issued its Draft National Strategy to Prevent Plastic Pollution, which includes voluntary actions aimed at eliminating plastic waste discharges from land-based sources by 2040. Brian S. Scarbrough & Arie T. Feltman-Frank, *The Proliferation of Plastics Litigation and Insurance Coverage*, JENNER & BLOCK (Sept. 23, 2024), <https://www.jenner.com/en/news-insights/publications/client-alert-the-proliferation-of-plastics-litigation-and-insurance-coverage>.

³³⁹ Plastic Pellet Free Waters Act of 2023, S. 2337, 118th Cong. (2023)(introduced).

³⁴⁰ Lynn T. Bergeson et al., *Microplastics in 2025: Regulatory Trends and Updates*, Bergeson & Campbell PC (Sept. 4, 2025), <https://www.lawbc.com/microplastics-in-2025-regulatory-trends-and-updates/>.

³⁴¹ Cal. Ocean Prot. Council, *Statewide Microplastics Strategy: Understanding and Addressing Impacts to Protect Coastal and Ocean Health* (Feb. 2022), https://www.opc.ca.gov/webmaster/ftp/pdf/agenda_items/20220223/Item_6_Exhibit_A_Statewide_Microplastics_Strategy.pdf.

³⁴² Cal. Dep't. of Toxic Substances Control, *Proposed Addition to the Candidate Chemicals List: Microplastics* (June 2025), https://dtsc.ca.gov/scp/candidate-chemical-list_microplastics/.

³⁴³ Minnesota and Rhode Island have their own examples of microplastics-specific bills; Minnesota's senate introduced S.F. 1389 in 2025, which would approach microplastics regulation through an agricultural lens, while Rhode Island's two legislative bodies introduced S.B. 406 and H.B. 5492 to create a state Microplastics Reduction Act. However, these bills stalled or died in committee, similar to Rhode Island's failed bill to limit the plastic pollution created by artificial turf and Vermont's bill to limit the same but with glitter. Bergeson et al., *supra* note 340.

³⁴⁴ For example, independent lab testing conducted for GMO / Toxin Free USA, which revealed certain baby wipes contain significant levels of microplastics, led to a class action consumer protection lawsuit against WaterWipes. The lawsuit alleges that the company marketed its baby wipes as "plastic-free" and the "world's purest," which are false claims that mislead environmentally and health-conscious consumers, particularly parents of babies and young children. See *Merlo v. WaterWipes (USA) Inc.*, 3:25-cv-04640 (N.D. Cal. filed 2025).

³⁴⁵ See, e.g., Felix Delerm, Anna Galmiche & Melanie Levy, *Healthwashing: Corporate Communication Strategies in a Legal Gray Zone*, 36 LOY. CONSUMER L. REV. 23 (2024), <https://lawcommons.luc.edu/lclr/vol36/iss1/3/>.

³⁴⁶ See *Miller et al. v. Philips North America LLC*, 3:24-cv-03871 (N.D. Cal. Filed 2024); *Cortez et al. v. Handi-Craft Company, Inc.*, 3:24-cv-03738 (N.D. Cal. filed 2024); *Barrales v. Newell Brands Inc.*, 2:25-cv-01882 (C.D. Cal. Apr. 2025) (transferred from 1:24-cv-03025 (N.D. Ga.)); *Lopez v. Mayborn USA, Inc.*, 3:24-cv-01164 (D. Conn. filed 2024). Westlaw searches of each case showed that the only continuing one of these baby bottle cases is the class action lawsuit brought against Newell Brands Inc., which originated in the Northern District of Georgia in 2024, and has bounced back and forth between state and federal court in California before finally landing in state court in Los Angeles in April 2025. It is unclear whether the other cases settled out of court, as some parties filed joint stipulations of dismissal. Similar cases concerning BPA in baby bottles were settled in the early 2010s. Rory Harrington, *US Company Settles 'Landmark' Bisphenol A Case*, FOOD NAVIGATOR USA (Jan. 12, 2011), <https://www.foodnavigator-usa.com/Article/2011/01/12/US-company-settles-landmark-bisphenol-A-case/>.

³⁴⁷ *Miller et al. v. Philips North America LLC*, 3:24-cv-03871 (N.D. Cal. filed 2024).

³⁴⁸ *Daly v. Danone Waters of America, LLC*, No. 24 C 2424, 2024 WL 4679086 (N.D. Ill. filed Nov. 5, 2024).

³⁴⁹ 21 C.F.R. § 165.110(a)(2)(vi).

³⁵⁰ U.S. Food & Drug Admin., *Microplastics and Nanoplastics in Foods* (last updated July 24, 2024), <https://www.fda.gov/food/environmental-contaminants-food/microplastics-and-nanoplastics-foods>.

³⁵¹ See Complaint, *Cheslow v. SC Johnson, Inc.*, No. 3:25-cv-03655 (N.D. Cal. filed 2025) (plaintiffs alleging that defendants' food containers are leaching microplastics), <https://www.classaction.org/media/cheslow-vs-sc-johnson-and-son-inc.pdf>.

³⁵² *Miller v. Philips North America LLC*, 2025 WL 582160, 5 (N.D. Cal. filed 2025).

³⁵³ *Id.* at 2.

³⁵⁴ *Id.*

³⁵⁵ See *Mayor and City Council of Baltimore v. Pepsico, Inc., et al.*, No. C-24-CV-24-001003 (Cir. Ct. Balt. Cty. filed 2024); *The People of the State of California v. Pepsico, Inc., et al.*, No. 24STCV28450 (Cal. Super. Ct. filed 2024); *Ford County, Kansas v. Exxon Mobil Corporation et al.*, No. 2:24-cv-02547 (D. Kan. filed 2024); *The People of the State of California, ex rel. v. Exxon Mobil Corporation et al.*, No. CGC-24-618323 (Cal. Super. Ct. filed 2024); *People of the State of New York v. PepsiCo, Inc., et al.*, No. 814682/2023 (N.Y. Sup. Ct. filed 2023).

³⁵⁶ Earth Island Institute, in ongoing litigation against several major plastic producers like Crystal Geyser, Coca-Cola, and PepsiCo, alleges violations under the California Consumers Legal Remedies Act, public nuisance, negligence, defective product liability, and failure-to-warn of the harms caused by defendants'

plastic packaging. This lawsuit, as one of the first against major plastics producers, has already yielded settlements from some defendants, notably, Clorox in 2024, Procter & Gamble in April 2025, Nestle USA in May 2025, and Danone in September 2025. The case is set to go to trial in May 2026. Earth Island Instit., *Taking on Big Plastic* (last updated May 16, 2025), <https://www.earthisland.org/index.php/advocates/suit/taking-on-big-plastic>; and Press Release, Earth Island Instit., Earth Island Institute Reaches Settlement with Danone in Landmark Plastic Pollution Lawsuit (Sept. 2025), <https://www.earthisland.org/index.php/news/entry/earth-island-institute-reaches-settlement-with-danone-in-landmark-plastic-pollution-lawsuit>.

³⁵⁷ *E.g.*, Complaint at 136-137, *The People of the State of Cal., ex rel. v. Exxon Mobil Corp. et al.*, No. CGC-24-618323 (Cal. Sup. Ct. filed Sept. 23, 2024).

³⁵⁸ *E.g.*, Complaint at 23-33, *Mayor and City Council of Baltimore v. PepsiCo, Inc., et al.*, No. C-24-CV-24-001003 (Cir. Ct. Balt. Cty. filed 2024).

³⁵⁹ *E.g.*, Complaint at 11, *Ford County, Kansas v. Exxon Mobil Corporation et al.*, No. 2:24-cv-02547 (D. Kan. filed 2024).

³⁶⁰ *Id.* at 2.

³⁶¹ *E.g.*, Donald J. Kochan, *Public nuisance lawsuits over plastics recycling lack legal foundation*, THE HILL (Feb. 26, 2025), <https://thehill.com/opinion/judiciary/5163149-plastics-recycling-public-nuisance>.

³⁶² Press Release, Office of the Cal. Atty. Gen., Attorney General Bonta Sues ExxonMobil for Deceiving the Public on Recyclability of Plastic Products (Sept. 23, 2024), <https://oag.ca.gov/news/press-releases/attorney-general-bonta-sues-exxonmobil-deceiving-public-recyclability-plastic>; *The People of the State of Cal., ex rel. v. Exxon Mobil Corp. et al.*, No. CGC-24-618323 (Cal. Super. Ct. filed Sept. 23, 2024). See also: Press Release, Sierra Club, Profit Over Planet: Exxon Sued for Hiding the Truth About Plastic Harms (Sept. 23, 2024), <https://www.sierraclub.org/press-releases/2024/09/profit-over-planet-exxon-sued-hiding-truth-about-plastic-harms>.

³⁶³ Kochan, *supra* note 361.

³⁶⁴ *Mayor and City Council of Baltimore v. PepsiCo, Inc., et al.*, No. C-24-CV-24-001003 (Cir. Ct. Balt. Cty. filed 2024).

³⁶⁵ Complaint, *People of the State of New York v. PepsiCo, Inc., et al.*, No. 814682/2023 (Sup. Ct. N.Y. filed 2023), <https://stateimpactcenter.org/files/pepsico-complaint.pdf>.

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³⁶⁷ *Id.* at 9.

³⁶⁸ Notice of Appeal, *People of the State of New York v. PepsiCo, Inc., et al.*, No. 814682 (Sup. Ct. N.Y. (filed Dec. 9, 2024), https://stateimpactcenter.org/files/Notice-of-Appeal-814682_2023_People_of_the_State_of_v_People_of_the_State_of_NOTICE_OF_APPEAL_42.pdf.

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³⁷¹ *Id.*

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³⁷⁶ *PennEnvironment, Inc. & Three Rivers Waterkeeper v. BVPV Styrenics LLC & Styropek USA, Inc.*, No. 2:23-cv-02067-NR (W.D. Pa. filed 2025); *Charleston Waterkeeper v. Frontier Logistics, L.P.*, No. 2:20-cv-1089 (D.S.C. filed 2021).

³⁷⁷ Complaint at para. 1-16, *PennEnvironment, Inc. & Three Rivers Waterkeeper v. BVPV Styrenics LLC & Styropek USA, Inc.*, No. 2:23-cv-02067-NR (W.D. Pa. filed 2025), <https://environmentamerica.org/pennsylvania/wp-content/uploads/2023/12/PennEnvironment-et-al.-v-Styropek-Complaint-w-Exhibits-compressed.pdf>; and Complaint at para. 1, *Charleston Waterkeeper v. Frontier Logistics, L.P.*, No. 2:20-cv-1089 (D.S.C. filed 2021), <https://stateimpactcenter.org/files/27-Complaint-Charleston-Waterkeeper-v.-Frontier-Logistics-L.P.pdf>.

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³⁸² See, e.g., Holly Kaufman et al., *Plastics, Exposing Their Climate Impacts*, PLASTICS & CLIMATE PROJECT (2025), https://7d4a23c1-ff34-46e9-9a96-7be0287ee542.filesusr.com/ugd/261d9f_a175ded22ad8411b97a02a0770139d45.pdf.

³⁸³ Scientists use the “planetary boundaries” framework to illustrate the growing pressures on the planet as a result of human activity. One such boundary that scientists have studied since 2023 are the impact of “novel entities” causing pollution. Novel entities are technological developments that introduce new synthetic chemicals, such as plastics or other toxics, into the environment and otherwise change the way Earth systems function. Scientists note that the lack of adequate safety in the industry, coupled with the increasing amount of synthetic substances released into the environment, place the “novel entities” planetary boundary in the high-risk zone. Stockholm Resilience Center, *Planetary Boundaries* (last accessed Feb. 24, 2026), <https://www.stockholmresilience.org/research/planetary-boundaries.html>.

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³⁸⁵ U.S. Food & Drug Admin., *FDA Finds Insufficient Data to Determine Safety of PFAS in Cosmetic Products* (Dec. 29, 2025), <https://www.fda.gov/news-events/press-announcements/fda-finds-insufficient-data-determine-safety-pfas-cosmetic-products>.

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Part III. Comparative Look at International Trends

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Part IV. Impacts and Looking Forward

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⁵¹¹ Beyond Pesticides, *State Legislation Popping Up to Limit Liability of Pesticide Manufacturers*, (Feb. 22, 2024), <https://beyondpesticides.org/dailynewsblog/2024/02/state-legislation-popping-up-to-limit-liability-of-pesticide-manufacturers/>. North Dakota and Georgia have enacted such laws, while Idaho, Iowa, Missouri, and Florida have introduced bills. Vincent Leggett, *New Legislation Protects Pesticide Manufacturers from Legal Complaints of Harm*, FOOD TANK (May 29, 2025), <https://foodtank.com/news/2025/05/new-legislation-protects-pesticide-manufacturers-from-legal-complaints-of-harm/>. In response to the rise of such state laws, in July 2025, Senator Cory Booker introduced legislation that would ensure that pesticide manufacturers can be held responsible for harm caused by their toxic products by amending FIFRA to create a federal right of action for anyone who is harmed by a pesticide. Press Release from the Office of Senator Cory Booker, *Booker Introduces Pesticide Injury Accountability Act* (Jul. 17, 2025), <https://www.booker.senate.gov/news/press/booker-introduces-pesticide-injury-accountability-act>.

⁵¹² Amnesty International, *The Cost of Doing Business? The Petrochemical Industry's Toxic Pollution in the USA*, January 25, 2024, at 89, <https://www.amnesty.org/en/documents/AMR51/7566/2024/en/>. For example, one such law requires local government attorney's offices to give notice to the state of Texas in advance of filing an enforcement action against a petrochemical company. *Id.* If the state decides to take the case, the local government can no longer pursue it, potentially leading to lower settlement amounts for impacted communities than if the case would have remained with the local government. *Id.*

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⁵¹⁴ Law101, *supra* note 500.

⁵¹⁵ ChemSec, *A Profitable Detox: Why Safer Chemistry Makes Financial Sense* 28 (Oct. 7, 2024) https://chemsec.org/app/uploads/2024/10/A-Profitable-Detox_ChemSec_241007.pdf.

⁵¹⁶ CHRISTOPHER BALDOCK ET AL., PLANET TRACKER, *NOVEL ENTITIES: A FINANCIAL TIME BOMB* 14 (2024) <https://planet-tracker.org/wp-content/uploads/2024/09/Novel-Entities.pdf>.

⁵¹⁷ See ChemSec, *A Profitable Detox: Why Safer Chemistry Makes Financial Sense*, 32 (Oct. 7, 2024), https://chemsec.org/app/uploads/2024/10/A-Profitable-Detox_ChemSec_241007.pdf.

⁵¹⁸ *Id.* Because of the steep rise in lawsuits linked to PFAS, many insurance companies are specifically excluding PFAS from their policies. *Id.* This is the case for companies in the chemical sector as well as other entities at risk of becoming the subject of PFAS-related lawsuits, such as airports, municipalities, and manufacturing companies. *Id.*

⁵¹⁹ *Id.* at 28.

⁵²⁰ BALDOCK ET AL., *supra* note 516, at 5.

⁵²¹ *Id.* at 27.

⁵²² ChemSec, *Chemical Risk – The Biggest Financial Risk You've Never Heard About*, (July 3, 2023), <https://chemsec.org/chemical-risk-the-biggest-financial-risk-youve-never-heard-about/>.

⁵²³ Novel entities are “new substances, new forms of existing substances, and modified life forms that have the potential for unwanted geophysical and/or biological effects.” BALDOCK ET AL., *supra* note 516, at 6. Novel entities include “chemicals, plastics, other types of engineered materials or organisms not previously known to the Earth system and naturally occurring elements (such as heavy metals) that are mobilized by anthropogenic activities.” *Id.* Since 2016, a new substance has been registered in the Chemical Abstracts Service every 1.4 minutes. *Id.*

⁵²⁴ *Id.* at 18.

⁵²⁵ Law101, *supra* note 500.

⁵²⁶ Hans Peter H. Arp et al., *The Global Threat from the Irreversible Accumulation of Trifluoroacetic Acid (TFA)*, 58 ENV'T. SCI. AND TECH. 45 (Oct. 30, 2024), <https://pubs.acs.org/doi/10.1021/acs.est.4c06189>.

⁵²⁷ *Id.*

⁵²⁸ See, e.g., Peter N. Coneski et al., *Litigation Minute: Emerging Contaminants: What's on the Horizon?*, THE NAT'L L. REV. (Mar. 4, 2025), <https://natlawreview.com/article/litigation-minute-emerging-contaminants-whats-horizon>. There is speculation, in particular, that phthalates litigation may follow in the footsteps of PFAS. See, e.g., Reza Zarghamee & Sidney L. Fowler, *The 'Everywhere Chemical'—Might Phthalates Become the Next PFAS?*, PILLSBURY WINTHROP SHAW PITTMAN LLP (June 15, 2021), <https://www.pillsburylaw.com/en/news-and-insights/might-phthalates-become-next-pfas.html>.

⁵²⁹ Law101, *supra* note 500.

⁵³⁰ *Id.*; see also Gary E. Marchant & Cason Schmit, *Understanding Tort Law Impacts Created by Scientific Advances of Human Biomonitoring and Genetic Biomarkers*, NFJE Seventh Annual Judicial Symposium (July 2011), <https://www.dayontorts.com/files/2015/03/06a-Marchant1.pdf> (discussing the use of biomarkers and biomonitoring in toxic tort litigation).

⁵³¹ *Rhodes v. E.I. DuPont de Nemours & Co.*, 253 F.R.D. 365, 375-76 (S.D.W. Va. 2008).

⁵³² Jennifer M. Champagne, *Genetic Testing and Testimony in Toxic Tort Litigation: Admissibility and Evaluation*, 13 N.C. J.L. & TECH. 1 (2011), <http://scholarship.law.unc.edu/ncjolt/vol13/iss1/3>.

⁵³³ See, e.g., Sanne H. Knudsen, *Adversarial Science*, 100 IOWA L. REV. 503 (2015),

<https://ilr.law.uiowa.edu/sites/ilr.law.uiowa.edu/files/2023-02/ILR-100-4-Knudsen.pdf>; Nadia Gaber, et al., *The Devil They Knew: Chemical Documents Analysis of Industry Influence on PFAS Science*, 89/1 *Annals of Global Health* 1 (2023),

<https://pmc.ncbi.nlm.nih.gov/articles/PMC10237242/#:~:text=This%20paper%20examines%20previously%20secret%20documents%20held,in%20turn%2C%20delayed%20regulations%20governing%20their%20use.>

⁵³⁴ Eduardo Valenzuela, *States Leading the Way: Takeaways from the 2025 Legislative Session on Toxic Chemicals and Plastics*, SAFER STATES (July 23, 2025), <https://www.saferstates.org/insights/states-leading-the-way-takeaways-from-the-2025-legislative-session-on-toxic-chemicals-and-plastics/>.

⁵³⁵ Law101, *supra* note 500. See also, Eric Helland and Jonathan Klick, *The Tradeoffs Between Regulation and Litigation: Evidence from Insurance Class Actions*, 1 J. TORT L. 3 (2006) (finding evidence that litigation and regulation tend to piggy-back on each other—rather than serve as substitute channels—in the insurance context).

⁵³⁶ Lucosky Brookman, *PFAS: The Next Wave of Toxic Tort Litigation*, LUCOSKY BROOKMAN LLP (July 15, 2025), <https://www.lucbro.com/news/blogs/detail/10917/pfas-the-next-wave-of-toxic-tort-litigation>. While neither rule has been formally rolled back, both have been challenged in litigation, and EPA announced it will delay the compliance deadlines under the SDWA regulation for two PFAS chemicals and that it will rescind the compliance standards for four other PFAS chemicals. Env't. & Energy L. Program at Harvard Law School, *PFAS in Drinking Water*, (last updated July 22, 2025), <https://eelp.law.harvard.edu/tracker/pfas-in-drinking-water/>; Env't. & Energy L. Program at Harvard Law School, *PFAS and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)*(last updated April 28, 2025), <https://eelp.law.harvard.edu/tracker/pfas-and-the-comprehensive-environmental-response-compensation-and-liability-act-cercla/>.

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⁵⁴⁸ *Id.*

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