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Via eRulemaking Portal
Lawrence E. Starfield
Acting Assistant Administrator
Office of Enforcement and Compliance Assurance
U.S. Environmental Protection Agency
EPA Docket Center: Mail Code 28221T
1200 Pennsylvania Avenue NW
Washington, DC 20460
https://www.regulations.gov/

Re: Comments on EPA's National Enforcement and Compliance Initiatives for Fiscal Years 2024-2027, Docket No. EPA-HQ-OECA-2022-0981

Dear Mr. Starfield:

The Southern Environmental Law Center ("SELC") offers the following comments on the United States Environmental Protection Agency's National Enforcement and Compliance Initiatives for Fiscal Years 2024-2027.[1] These comments are submitted on behalf of SELC and the following 65 organizations:

7 Directions of Service
Alabama Rivers Alliance
Alliance of Nurses for Healthy Environments
American Sustainable Business Network
Bayou City Waterkeeper
Black Warrior Riverkeeper
Blue Ridge Environmental Defense League
Cahaba River Society
Cahaba Riverkeeper
Cape Fear River Watch
Catawba Riverkeeper Foundation
Center for Environmental Health
Charleston Waterkeeper
Clean Cape Fear
Clean Water Action
Climate Reality Project, NOLA Chapter
Coastal Conservation League
Congaree Riverkeeper
Conservation Voters of South Carolina
Coosa River Basin Initiative
Coosa Riverkeeper
Cumberland River Compact
Earth Ethics, Inc.
Environment America Research & Policy Center
Environmental Integrity Project
Environmental Justice Action Research Clinic
For Love of Water (FLOW)
Freshwater Future
Friends of Hurricane Creek
Green Science Policy Institute
Haw River Assembly
James River Association
League of Conservation Voters
Merrimack Citizens For Clean Water
Mobile Baykeeper

[1] Public Comment on EPA's National Enforcement and Compliance Initiatives for Fiscal Years 2024-2027, 88 Fed. Reg. 2093 (Jan. 12, 2023).

MountainTrue
Nature Adventures, LLC
NC League of Conservation Voters
North Carolina Coastal Federation
North Carolina Conservation Network
NRDC
Ogeechee Riverkeeper
Ohio River Foundation
Organic Farming Research Foundation
Pasa Sustainable Agriculture
Potomac Riverkeeper Network
Resilient Lands Matter, Inc
Safer States
Sierra Club
Social Eco Education (SEE)
South Carolina Environmental Law Project
South Carolina Native Plant Society
South Carolina Wildlife Federation
Taproot Earth
Tennessee Citizens for Wilderness Planning
Tennessee Riverkeeper
The Water Collaborative of Greater New Orleans
Toxic Free North Carolina
Virginia Conservation Network
Waterkeeper Alliance
Waterkeepers Chesapeake
Waterspirit
Wild Virginia
Winyah Rivers Alliance
Yadkin Riverkeeper

We support the U.S. Environmental Protection Agency ("EPA") proposal to begin an initiative to address the threat that per- and polyfluoroalkyl substances ("PFAS") pose to our communities.

EPA has already made progress in addressing the threat posed by PFAS. For example, last December, EPA released guidance on how the Clean Water Act's National Pollutant Discharge Elimination System ("NPDES") program can be used to immediately begin reducing PFAS in our rivers, streams, and lakes, without the need for future rulemakings or regulations.[2] The guidance was a notable step forward, but many other actions in EPA's Strategic Roadmap,[3] including the site remediation efforts mentioned in EPA's National Enforcement and Compliance Initiatives, will take years to implement and far longer to address ongoing pollution. That said, the agency cannot treat issuing its PFAS NPDES Guidance as a crossed-off item on its to-do list. The agency must prioritize national implementation of that guidance and enforcement of the Clean Water Act requirements within.

Our communities cannot continue to shoulder the burden of toxic pollution due to agency inaction. As EPA has made clear, the Clean Water Act provides the tools necessary to address much of the PFAS entering our environment today. Rather than focusing exclusively on addressing PFAS at historically contaminated sites or released into the environment by manufacturers and federal facilities, EPA and delegated states must direct their enforcement efforts toward the following priorities:

[2] Memorandum from Radhika Fox, U.S. Env't Prot. Agency, Addressing PFAS Discharges in NPDES Permits and Through the Pretreatment Program and Monitoring Programs (Dec. 5, 2022), Attachment 1 [hereinafter "EPA's PFAS NPDES Guidance"].
[3] U.S. Env't Prot. Agency, PFAS Strategic Roadmap: EPA's Commitments to Action 2021-2024 (Oct. 2021) [hereinafter "PFAS Strategic Roadmap"].

- Controlling PFAS released into publicly owned wastewater treatment plants through swift enforcement of the Clean Water Act's pretreatment program; and

- Controlling PFAS released from categories of industry known to use the chemicals by imposing technology-based effluent limits, as required by the Clean Water Act's permitting program.

Focusing on these categories of dischargers will ensure that PFAS pollution is promptly controlled at the source before the chemicals reach our waters, communities, and homes by placing the burden on entities responsible for releasing the pollution into our environment.

I. PFAS are a serious threat to the health and safety of our communities and environment.

As EPA is aware, PFAS are a group of man-made chemicals manufactured and used broadly by industry since the 1940s.[4] PFAS pose a significant threat to human health at extremely low concentrations. Two of the most studied PFAS—perfluorooctanoic acid ("PFOA") and perfluorooctane sulfonate ("PFOS")—are bioaccumulative and highly persistent in humans.[5] These chemicals build up in the human body, and have been shown to cause developmental effects to fetuses and infants, kidney and testicular cancer, liver malfunction, hypothyroidism, high cholesterol, ulcerative colitis, obesity, decreased immune response to vaccines, reduced hormone levels, delayed puberty, and lower birth weight and size.[6] Because of their impacts on the immune system, PFAS can also exacerbate the effects of Covid-19.[7] Studies show that exposure to mixtures of different PFAS can worsen these health effects.[8] Given these harms, EPA in June 2022 established interim updated lifetime health advisories for PFOA and PFOS in drinking water of 0.004 parts per trillion ("ppt") and 0.02 ppt, respectively.[9]

[4] Lifetime Drinking Water Health Advisories for Four Perfluoroalkyl Substances, 87 Fed. Reg. 36,848, 36,849 (June 21, 2022); *Our Current Understanding of the Human Health and Environmental Risks of PFAS*, U.S. ENV'T PROT. AGENCY, https://perma.cc/V6PX-2PNK (last visited Mar. 8, 2023).

[5] 87 Fed. Reg. at 36,849; U.S. Env't Prot. Agency, Interim Drinking Water Health Advisory: Perfluorooctanoic Acid (PFOA) CASRN 335-67-1 (June 2022), at 3–4, Attachment 2; U.S. Env't Prot. Agency, Interim Drinking Water Health Advisory: Perfluorooctane Sulfonic Acid (PFOS) CASRN 1763-23-1 (June 2022), at 3–4, *available at* Attachment 3.

[6] Arlene Blum et al., *The Madrid Statement on Poly- and Perfluoroalkyl Substances (PFASs)*, 123 ENV'T. HEALTH PERSP. 5, A 107 (May 2015); U.S. Env't Prot. Agency, Drinking Water Health Advisories for PFAS: Fact Sheet for Communities, at 1–2 (June 2022), *available at* https://perma.cc/T7FQ-EKD6.

[7] *See* Lauren Brown, *Insight: PFAS, Covid-19, and Immune Response–Connecting the Dots*, BLOOMBERG LAW (July 13, 2020, 4:00 AM), https://perma.cc/QM9H-7ZT6.

[8] Emma V. Preston et al., *Prenatal Exposure to Per- and Polyfluoroalkyl Substances and Maternal and Neonatal Thyroid Function in the Project Viva Cohort: A Mixtures Approach*, 139 ENV'T INT'L 1 (2020), https://perma.cc/DJK3-87SN.

[9] 87 Fed. Reg. at 36,848–49.

PFAS are also harmful to wildlife and the environment. The chemicals have been shown to cause damaging effects in fish,[10] amphibians,[11] reptiles,[12] mollusks,[13] and other aquatic invertebrates[14]—resulting in developmental and reproductive impacts, behavioral changes, adverse effects to livers, disruption to endocrine systems, and weakened immune systems.[15] PFAS are extremely resistant to breaking down in the environment.[16] Once released, the chemicals can travel long distances and bio-accumulate in organisms.[17] PFAS have been found in fish tissue across all 48 continental states,[18] and PFOS—a particularly harmful PFAS

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[10] Chen et al., *Perfluorobutanesulfonate Exposure Causes Durable and Transgenerational Dysbiosis of Gut Microbiota in Marine Medaka*, 5 ENV'T SCI. & TECH LETTERS 731–38 (2018); Chen et al., *Accumulation of Perfluorobutane Sulfonate (PFBS) and Impairment of Visual Function in the Eyes of Marine Medaka After a LifeCycle Exposure*, 201 AQUATIC TOXICOLOGY 1–10 (2018); Du et al., *Chronic Effects of Water-Borne PFOS Exposure on Growth, Survival and Hepatotoxicity in Zebrafish: A Partial Life-Cycle Test*, 74 CHEMOSPHERE 723–29 (2009); Hagenaars et al., *Structure–Activity Relationship Assessment of Four Perfluorinated Chemicals Using a Prolonged Zebrafish Early Life Stage Test*, 82 CHEMOSPHERE 764–72 (2011); Huang et al., *Toxicity, Uptake Kinetics and Behavior Assessment in Zebrafish Embryos Following Exposure to Perfluorooctanesulphonicacid (PFOS)*, 98 AQUATIC TOXICOLOGY 139–47 (2010); Jantzen et al., *PFOS, PFNA, and PFOA Sub-Lethal Exposure to Embryonic Zebrafish Have Different Toxicity Profiles in terms of Morphometrics, Behavior and Gene Expression*, 175 AQUATIC TOXICOLOGY 160–70 (2016); Liu et al., *The Thyroid-Disrupting Effects of Long-Term Perfluorononanoate Exposure on Zebrafish (Danio rerio)*, 20 ECOTOXICOLOGY 47–55 (2011); Chen et al., *Multigenerational Disruption of the Thyroid Endocrine System in Marine Medaka after a Life-Cycle Exposure to Perfluorobutanesulfonate*, 52 ENV'T SCI. & TECH. 4432–39 (2018); Rotondo et al., *Environmental Doses of Perfluorooctanoic Acid Change the Expression of Genes in Target Tissues of Common Carp*, 37 ENV'T TOXICOLOGY & CHEM. 942–48 (2018).

[11] Ankley et al., *Partial Life-Cycle Toxicity and Bioconcentration Modeling of Perfluorooctanesulfonate in the Northern Leopard Frog (Rana Pipiens)*, 23 ENV'T TOXICOLOGY & CHEM. 2745 (2004); Cheng et al., *Thyroid Disruption Effects of Environmental Level Perfluorooctane Sulfonates (PFOS) in Xenopus Laevis*, 20 ECOTOXICOLOGY 2069–78 (2011); Lou et al., *Effects of Perfluorooctanesulfonate and Perfluorobutanesulfonate on the Growth and Sexual Development of Xenopus Laevis*, 22 ECOTOXICOLOGY 1133–44 (2013).

[12] Guillette et al., *Blood Concentrations of Per- and Polyfluoroalkyl Substances Are Associated with Autoimmune-like Effects in American Alligators From Wilmington, North Carolina*, FRONTIER TOXICOLOGY 4:1010185 (Oct. 20, 2022).

[13] Liu et al., *Oxidative Toxicity of Perfluorinated Chemicals in Green Mussel and Bioaccumulation Factor Dependent Quantitative Structure-Activity Relationship*, 33 ENV'T TOXICOLOGY & CHEM. 2323–32 (2014); Liu et al., *Immunotoxicity in Green Mussels under Perfluoroalkyl Substance (PFAS) Exposure: Reversible Response and Response Model Development*, 37 ENV'T TOXICOLOGY & CHEM. 1138–45 (2018).

[14] Houde et al., *Endocrine-Disruption Potential of Perfluoroethylcyclohexane Sulfonate (PFECHS) in Chronically Exposed Daphnia Magna*, 218 ENV'T POLLUTION 950–56 (2016); Liang et al., *Effects of Perfluorooctane Sulfonate on Immobilization, Heartbeat, Reproductive and Biochemical Performance of Daphnia Magna*, 168 CHEMOSPHERE 1613–18 (2017); Ji et al., *Oxicity of Perfluorooctane Sulfonic Acid and Perfluorooctanoic Acid on Freshwater Macroinvertebrates (Daphnia Magna and Moina Macrocopa) and Fish (Oryzias Latipes)*, 27 ENV'T TOXICOLOGY & CHEM. 2159 (2008); MacDonald et al., *Toxicity of Perfluorooctane Sulfonic Acid and Perfluorooctanoic Acid to Chironomus Tentans*, 23 ENV'T TOXICOLOGY & CHEM. 2116 (2004).

[15] *See supra* notes 10–14.

[16] Carol F. Kwiatkowski, et al., *Scientific Basis for Managing PFAS as a Chemical Class*, ENV'T SCI. & TECH. LETTERS 8–9 (2020).

[17] *See What are PFAS?*, AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY, https://www.atsdr.cdc.gov/pfas/health-effects/overview.html (last visited Feb. 27, 2023); *see also Our Current Understanding of the Human Health and Environmental Risks of PFAS*, *supra* note 4.

[18] Nadia Barbo, et al., *Locally Caught Freshwater Fish Across the United States Are Likely A Significant Source of Exposure to PFOS and Other Perfluorinated Compounds*, 220 ENV'T RES. 115165 3 (2023), *available at* https://perma.cc/SB8F-C3Y6.

compound—is one of the most prominent PFAS found in freshwater fish.[19] Researchers have also found significant PFAS contamination in marine fish, such as those in the Tampa Bay estuary.[20] As a result, the primarily low-income and minority communities that rely heavily on subsistence fishing have been found to have elevated PFAS levels in their blood.[21] In fact, researchers conclude that "[w]idespread PFAS contamination of freshwater fish in surface waters in the U.S. is likely a significant source of exposure to PFOS and potentially other perfluorinated compounds for all persons who consume freshwater fish, but especially for high frequency freshwater fish consumers."[22]

Because of their chemical nature, PFAS cannot be removed by conventional water treatment technology and instead require advanced treatment options (that are not commonly installed yet).[23] Consequently, once released by industries, PFAS flow through our rivers, creeks, and streams and into our drinking water. EPA data confirms that PFAS are present in waterways across at least 20 states.[24] The most comprehensive water investigation completed to date, however, found PFAS in as many as 83 percent of the rivers, streams, creeks, and lakes that were tested across the country, suggesting the contamination could be even more extensive than EPA's documented data.[25] Because these chemicals are in our rivers, it comes as no surprise that they contaminate our drinking water. Across the country, EPA reports that more than 30 states have detected PFAS in their drinking water supplies,[26] affecting the drinking water for more than 200 million Americans.[27] As startling as these statistics are, they likely underestimate the full scope of the pollution because dischargers and drinking water utilities are not routinely

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[19] *Id.* at 4.

[20] Erin L. Pulster et al., *Assessing Per- and Polyfluoroalkyl Substances (PFAS) in Sediments and Fishes in a Large, Urbanized Estuary and the Potential Human Health Implications*, 9 FRONT. MAR. SCI. (Nov. 15, 2022), *available at* https://perma.cc/NNS5-GZCT.

[21] Patricia A. Fair et al., *Perfluoralkyl Substances (PFASs) in Edible Fish Species from Charleston Harbor and Tributaries, South Carolina, United States: Exposure and Risk Assessment*, 171 ENV'T. RES. 266, 273–75 (April 2019), https://perma.cc/7976-XAVU; Chloe Johnson, *Industrial chemicals in Charleston Harbor taint fish – and those who eat them*, POST & COURIER (June 4, 2022), https://perma.cc/Z5TM-MB83.

[22] Barbo, *supra* note 18 at 9.

[23] *See, e.g.*, *Reducing PFAS in Drinking Water With Treatment Technologies*, U.S. ENV'T PROT. AGENCY (Aug. 23, 2018), https://perma.cc/33NN-KKKM (explaining that while conventional treatment technologies do not remove PFAS from water, technologies like activated carbon, ion exchange, and reverse osmosis are capable of removing the chemicals).

[24] *See PFAS Multimedia Environmental Sampling Data from the Water Quality Portal*, U.S. ENV'T PROT. AGENCY (2023), https://awsedap.epa.gov/public/extensions/PFAS_Tools/PFAS_Tools.html (data last accessed on Mar. 8, 2023, filtered to the "Environmental Media" tool, reflecting PFAS detections in ambient water samples); *Mapping the PFAS Contamination Crisis: New Data Show 2,858 Sites in 50 States and Two Territories*, ENV'T WORKING GROUP (June 2022), https://www.ewg.org/interactive-maps/pfas_contamination/.

[25] Kelly H. Foster, et al., Invisible Unbreakable Unnatural: PFAS Contamination of U.S. Surface Waters 17 (Oct. 2022), Attachment 4.

[26] *See UCMR PFAS Public Water Supply Monitoring Data*, U.S. ENV'T PROT. AGENCY (2023), *available at* https://awsedap.epa.gov/public/extensions/PFAS_Tools/PFAS_Tools.html (data last accessed on Mar. 8, 2023, and filtered for facilities with detectable concentrations under the "Drinking Water (UCMR)" tool); *Supplemental Public Water Supply PFAS Monitoring Data*, U.S. ENV'T PROT. AGENCY (2023), *available at* https://awsedap.epa.gov/public/extensions/PFAS_Tools/PFAS_Tools.html (data last accessed on Mar. 8, 2023, and filtered for facilities with detectable concentrations under the "Drinking Water (State)" tool).

[27] *Study: More Than 200 Million Americans Could Have Toxic PFAS in Their Drinking Water*, ENV'T WORKING GROUP (Oct. 14, 2020), https://perma.cc/WK7C-9PZX.

monitoring for PFAS, and laboratory methods can only detect a limited number of the thousands of PFAS compounds. Beginning this year, EPA's Fifth Unregulated Contaminant Monitoring Rule will require broad sampling of drinking water supplies and will further shine light on the extent of PFAS contamination caused by sources across our country.[28]

Despite longstanding knowledge about the harms PFAS pose, companies continue to dump PFAS into our rivers, streams, and drinking water supplies. And even though some states have determined such releases violate the law,[29] very few sources of the pollution have been held accountable. In North Carolina, for example, the Department of Environmental Quality has only pursued an enforcement action against one company,[30] despite the fact that the agency is aware of at least 35 other confirmed sources of PFAS pollution in the very same river basin.[31] Regrettably, North Carolina is not unique. Alabama's Department of Environmental Management similarly has only enforced against one PFAS manufacturer, despite extensive sampling demonstrating PFAS contamination in drinking water supplies across the state.[32] South Carolina's Department of Health and Environmental Control has likewise conducted sampling that reveals PFAS contamination across the state, but the agency has not pursued any enforcement actions and has only recently been willing to consider PFAS monitoring in some NPDES permits.[33] Even this limited action exceeds the response taken by states like Tennessee, which has not provided the public with any information regarding PFAS contamination in state waterways and is only now undertaking testing of state public drinking water sources for select PFAS chemicals.[34]

The environmental persistence of PFAS, the grim presence of the chemicals across our country, and the disparity in state enforcement actions make clear that federal enforcement is necessary to protect communities exposed to this toxic pollution.

II. EPA must enforce existing requirements as it implements the Strategic Roadmap.

In October 2021, EPA announced its PFAS Strategic Roadmap which set a timeline for the agency to take specific actions to protect the public from PFAS contamination. Since then,

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[28] *See* U.S. Env't Prot. Agency, The Fifth Unregulated Contaminant Monitoring Rule (UCMR 5): Program Overview Fact Sheet (Dec. 2021), *available at* https://perma.cc/2X62-ECDF.
[29] *See, e.g.*, Amended Complaint, *State of North Carolina v. The Chemours Company FC, LLC*, 17 CVS 580 (N.C. Super. Ct., Bladen County Apr. 9, 2018), Attachment 5.
[30] *See id*.
[31] N.C. Dep't of Env't Quality, Cape Fear Municipal PFAS & 1,4-Dioxane Sampling (2020) [hereinafter "NC DEQ Cape Fear Municipal Sampling"], Attachment 6 (listing 27 municipal sources of PFAS); N.C. Dep't of Env't Quality, Cape Fear Industrial PFAS & 1,4-Dioxane Sampling (2020) [hereinafter "NC DEQ Cape Fear Industrial Sampling"], Attachment 7 (listing 8 industrial sources of PFAS).
[32] Consent Order, *In re 3M Company*, *3M Decatur Facility*, Consent Order No. 20-086-CWP/AP/GW/HW/DW/SW (July 24, 2020), Attachment 8; Ala. Dep't of Env't Mgmt., PFAS Drinking Water Sampling Results (Aug. 30, 2022) [hereinafter "Alabama PFAS Drinking Water Results"], Attachment 9.
[33] S.C. Dep't of Health and Env't Control, PFAS Drinking Water Sampling Results tbls. 1, 3, 7A, 8B, [hereinafter "SC DHEC, PFAS Drinking Water Sampling"], Attachments 10–13; S.C. Dep't of Health and Env't Control, Ambient Surface Water Project – Results (Dec. 2022) [hereinafter "SC DHEC, PFAS Surface Water Sampling"), Attachment 14.
[34] Tenn. Dep't of Env't and Conservation, *PFAS*, https://perma.cc/W9L8-AWHB (last visited Mar. 6, 2023).

EPA has made some progress in meeting the benchmarks put forth in its plan. For example, the agency proposed to list PFOA and PFOS as hazardous substances under the Comprehensive Environmental Response, Compensation, and Liability Act.[35] EPA has also announced that it will propose effluent limit guidelines controlling PFAS pollution from landfill leachate and two industrial categories: Organic Chemicals, Plastics, and Synthetic Fiber Point Sources and Metal Finishing and Electroplating Point Sources.[36] While these actions are notable steps forward, it will take years before final rules are in place and even longer before these actions actually result in PFAS reductions.

That significant delay is why EPA cannot simply cross the promulgation of its PFAS NPDES Guidance off the agency's to-do list and must instead prioritize national enforcement of the statutory and regulatory protections described in the document.[37] As the guidance makes clear, the Clean Water Act provides the tools necessary to abate significant discharges of PFAS into our rivers, creeks, and streams today, without future rulemakings.[38] Importantly, these tools are not just available for agencies to use at their discretion, they are explicit and mandatory directives in federal law.[39]

Implementing the guidance at the national level is critical for at least three reasons. First, states throughout the country have delayed controlling PFAS through the Clean Water Act NPDES program as they begin the process of developing individual water quality standards or wait for EPA's final rulemakings—using EPA's planned actions as an excuse to delay controls.[40] States in the Southeast, for example, are simply opting to collect data through "monitoring requirements" in NPDES permits as they await further rules and standards from EPA requiring otherwise.[41] Second, states and municipalities are hesitant to be the first to enforce the requirements set forth in the Clean Water Act out of fear that industries will simply relocate to a neighboring state or town. This is already occurring and will create a race to the bottom that will further burden our most vulnerable communities with toxic pollution unless EPA ensures national enforcement of the requirements listed in the PFAS NPDES Guidance. Third, identified sources of PFAS have raised EPA's unfinished rulemaking processes (and the lack of state

[35] *Designation of Perfluorooctanoic Acid (PFOA) and Perfluorooctanesulfonic Acid (PFOS) as CERCLA Hazardous Substances*, 87 Fed. Reg. 54,415 (Sept. 6, 2022).
[36] *Effluent Guidelines Program Plan 15*, 88 Fed. Reg. 6258, 6259 (Jan. 31, 2023); U.S. Env't Prot. Agency, Effluent Guidelines Program Plan 15 7-3 (Jan. 2023), *available at* https://perma.cc/8PK8-GWUA [hereinafter "EPA Program Plan 15"].
[37] *See* EPA's PFAS NPDES Guidance, *supra* note 2.
[38] *Id.* at 1.
[39] *See, e.g.*, 33 U.S.C. § 1342(a); 40 C.F.R. §§ 122.44, 125.3, 403.8.
[40] *See, e.g.*, N.C. Dep't of Env't Quality, North Carolina DEQ Action Strategy for PFAS (June 7, 2022), at 7, Attachment 15 (explaining that the Department's action plan is to develop certain water quality standards rather than mandating disclosure and controlling pollution through existing regulatory structures).
[41] *See, e.g.*, Letter from Julie Gryzb, N.C. Dep't of Env't Quality, to David Marks, Phoenix Lumberton Industrial Investors (Nov. 17, 2022), at 2–3 Attachment 16 (explaining that the state agency's strategy is to only require monitoring requirements until the state passes surface and drinking water standards for PFAS); *see also* Letter from Douglas Dowden, N.C. Dep't of Env't Quality, to Steven Middlebrook, Lear Corporation (Jan. 27, 2023), Attachment 17 (referencing EPA's PFAS NPDES Guidance and merely requiring the company to submit data it has already collected, if any).

agency enforcement in the interim) as a defense to lawsuits involving PFAS pollution—obstructing community efforts to protect their waters from toxic pollution.[42]

It is thus imperative that the requirements in EPA's guidance are used "to the fullest extent available under state and local law."[43] EPA and delegated states must prioritize swift, consistent, and national enforcement of the tools in the agency's PFAS NPDES Guidance (the central tenets of the NPDES program). Otherwise, EPA's Strategic Roadmap will serve as a barrier to citizen attempts to protect our communities.

National enforcement of rules highlighted in EPA's PFAS NPDES Guidance is also essential because the requirements within it have been proven to be effective. In September 2022, for example, the North Carolina Department of Environmental Quality relied on data confirming how effective granular activated carbon is at removing PFAS from wastewater to impose technology-based effluent limits in a NPDES permit for The Chemours Company FC.[44] Chemours, a PFAS manufacturer in Fayetteville, North Carolina, garnered national attention in 2017 when the public learned the company had been dumping PFAS into the air, groundwater, and surface water for decades—contaminating the drinking water supply of nearly 500,000 people.[45] The permit issued to Chemours is one of the most protective in the entire country, and practically eliminates the company's PFAS discharges from part of the site.[46] The limits in the permit serve as a national example of how (1) technology-based limits can be applied to PFAS, and (2) that when applied, significant reductions of PFAS discharges are achieved.

But, as EPA knows, Chemours is not the only source of PFAS in the Southeast, much less the country.[47] EPA must ensure that states and municipalities are universally implementing EPA's PFAS NPDES Guidance and enforcing the Clean Water Act's NPDES permitting

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[42] *See, e.g.*, Memorandum in Support of Motion to Dismiss, *Winyah Rivers Alliance v. Active Energy Renewable Power, LLC, et al.*, 7:21-cv-00043-D (E.D.N.C. June 28, 2022), at 26–29, Attachment 18 (arguing that the court does not have jurisdiction to rule on the company's PFAS discharges because EPA and the N.C. Department of Environmental Quality are undergoing regulatory changes for PFAS); *see also* Brief in Support of Town of Trion, Georgia's Motion to Dismiss, *Earl Parris, Jr. v. 3M Co., et al.,* 4:21-cv-40-TWT (N.D. Ga. May 13, 2021), at 9–10, Attachment 19 (arguing that plaintiffs' Clean Water Act claim must fail, in part, because PFAS "are not regulated pollutants by the EPA" and citing to a lack of finalized drinking water regulations or maximum contaminant levels).

[43] EPA's PFAS NPDES Guidance, *supra* note 2 at 2.

[44] N.C. Dep't of Env't Quality, NPDES Permit NC0090042 (Sept. 15, 2022), Attachment 20 [hereinafter "Chemours' NPDES Permit"]; N.C. Dep't of Env't Quality, Fact Sheet NPDES Permit No. NC0090042 (Sept. 15, 2022), at 11–12, Attachment 21.

[45] *See* Vaughn Hagerty, *Toxin Taints CFPUA Drinking Water*, STAR NEWS ONLINE (June 7, 2017), Attachment 22; *see also* Cape Fear Public Utility Authority, 2022 Annual Report (2022), *available at* https://perma.cc/KY3P-59F2 (explaining the utility serves 200,000 people); *Frequently Asked Questions: Water Treatment Upgrades and Rates*, BRUNSWICK COUNTY N.C., https://perma.cc/U6GQ-2KJN (last visited Mar. 13, 2023) (explaining the utility serves over 300,000 people).

[46] Chemours' NPDES Permit, *supra* note 45 at 3.

[47] *See generally*, *PFAS Discharge Monitoring Report Data From CWA NPDES*, U.S. ENV'T PROT. AGENCY (2023), *available at* https://awsedap.epa.gov/public/extensions/PFAS_Tools/PFAS_Tools.html (data last accessed on Mar. 8, 2023, filtered to the "Discharge Monitoring" tool, displaying industries with PFAS discharges that are monitoring under their NPDES permit); *see also Industry Sectors*, U.S. ENV'T PROT. AGENCY (2023), *available at* https://awsedap.epa.gov/public/extensions/PFAS_Tools/PFAS_Tools.html (data last accessed on Mar. 8, 2023, filtered to the "Industry Sectors" tool, displaying industries in categories known or suspected to discharge PFAS).

program now. If states or municipalities delay or refuse to act, EPA must use its enforcement authority to step in and protect communities across the country from toxic chemical pollution.

III. EPA must prioritize controlling PFAS pollution from publicly owned wastewater treatment plants through the pretreatment program.

EPA's announcement regarding the potential PFAS initiative suggests that the agency intends to prioritize cleaning up sites contaminated by PFAS manufacturers and federal facilities.[48] This priority, while important, ignores ongoing PFAS pollution threatening our communities that could be promptly addressed under existing law. Most notably, some of the largest sources of PFAS across the United States are municipal wastewater treatment plants, otherwise known as publicly owned treatment works.[49] Although these wastewater plants do not create the chemicals themselves, the facilities actively contribute to the extensive PFAS pollution by allowing industries to discharge PFAS into their collection systems and failing to control such discharges through the pretreatment program, as mandated by law.

The Clean Water Act's pretreatment program was implemented to address pollution introduced into wastewater plants[50] and, when executed properly, can effectively control PFAS. By doing so, the pretreatment program places the burden on the entity responsible for the chemicals' presence—the industry profiting off its pollution. The problem across our country is that few wastewater plants are using the authority to abate toxic pollution at its source.

Nationwide enforcement of the pretreatment program is therefore essential. As EPA considers its enforcement efforts to control PFAS, the agency must address—or, when authority allows, direct states to address—PFAS pollution being discharged into wastewater plants.

a. Municipal wastewater treatment plants are a significant source of PFAS pollution.

Across the country, more than 1,600 wastewater plants accept waste from more than 20,000 industries, called "industrial users."[51] Many of these industrial users fall into categories known to use or discharge PFAS. For example, a study in Michigan detected PFAS in 40 percent of categorical industrial users and 55 percent of significant industrial users that release wastewater into treatment plants sampled across the state.[52] As an additional example, in EPA's

[48] 88 Fed. Reg. 2093, 2096.
[49] *PFAS Discharge Monitoring Report Data From CWA NPDES*, *supra* note 47.
[50] *See General Pretreatment Regulations for Existing and New Sources*, 52 Fed. Reg. 1586, 1590 (Jan. 14, 1987) (codified at 40 C.F.R. § 403) ("Requiring industrial users to pretreat their wastes so as not to cause [wastewater plant] noncompliance assures the public that dischargers cannot contravene the statutory objectives of eliminating or at least minimizing discharges of toxic and other pollutants simply by discharging indirectly through [wastewater plants] rather than directly to receiving waters.").
[51] *National Pretreatment Program Implementation*, U.S. ENV'T PROT. AGENCY, https://www.epa.gov/npdes/national-pretreatment-program-implementation (last visited Feb. 28, 2023).
[52] Dorin Bogdan, et al., Evaluation of PFAS in Influent, Effluent, and Residuals of Wastewater Treatment Plants (WWTPs) in Michigan 32 (Apr. 2021), Attachment 23.

Program Plan 15, the agency noted that "[m]ore than half of the textile mills," that responded to EPA's PFAS data collection survey discharge wastewater to a wastewater plant.[53]

The PFAS pollution from a wastewater plant's industrial users ends up in the wastewater plant's discharge. For example, one wastewater plant in Michigan recently reported its discharge contains an average concentration of PFOS exceeding 10,600,000 ppt.[54] Another wastewater plant in Michigan reported concentrations of PFOS and PFOA in its discharge exceeding 3,900,000 ppt and 11,400 ppt, respectively.[55] This pollution is not limited to the Midwest. In Georgia, for example, one wastewater plant has been documented to discharge total PFAS exceeding 3,000 ppt.[56] Wastewater plants in North Carolina have documented routinely high concentrations of total PFAS,[57] some reaching as high as 33,000 ppt.[58] In addition, data from wastewater plants in California similarly show routine discharges exceeding several hundred parts per trillion.[59] Despite the vast amounts of pollution received and discharged by utilities, wastewater plants have long evaded enforcement under the notion that they are not responsible for creating the pollution, failing to acknowledge their complicity in contaminating streams, rivers, and drinking water supplies. As a result, toxic concentrations of PFAS continue to threaten our communities.

i. PFAS in municipal wastewater treatment plant effluent contaminate downstream drinking water sources.

PFAS released into municipal sewer sheds cannot be treated with a utility's conventional wastewater treatment technology and, as a result, the toxic chemicals flow freely through the plant and into our waters, threatening our drinking water supplies.

One illustration of such an occurrence arises from central North Carolina. There, the city of Burlington's wastewater plant is one of the main sources of PFAS contamination in the Haw River, a waterbody that provides the drinking water for the town of Pittsboro, North Carolina. The city's East Burlington wastewater plant is permitted to discharge more than 20 million gallons of wastewater per day[60] and includes industrial wastewater containing PFAS from Shawmutt LLC (a technical fabric company), Elevate Textiles (a textile company), and Unichem

[53] EPA Program Plan 15, *supra* note 36 at 6-8.
[54] *PFAS Discharge Monitoring Report Data From CWA NPDES*, *supra* note 47 (data corresponding to Three Rivers WWTP's discharge monitoring reports for 2022, reported in mg/L and translated to ppt).
[55] *Id.* (data corresponding to Saginaw TWP WWTP's discharge monitoring reports for 2021 and 2022, reported in mg/L and translated to ppt).
[56] *See* Notice of Intent to Sue the Town of Trion Over PFAS Discharges and Contamination in Violation of the Clean Water Act and the Resource Conservation and Recovery Act at and from the Trion Water Pollution Control Plant, S. Env't L. Ctr. (Apr. 8, 2022), at 9 Attachment 24 (summarizing PFAS sampling data); Enthalpy Analytical, LLC – Ultratrace, Town of Trion WWTP: Analytical Report 0620-756 (July 9, 2020), at 4, Attachment 25.
[57] NC DEQ Cape Fear Municipal Sampling, *supra* note 31.
[58] *See* City of Burlington, East Burlington WWTP Effluent (June 16, 2022) [hereinafter "East Burlington Effluent Sampling"], Attachment 26.
[59] *GeoTracker PFAS Map*, CA. WATER BOARDS (2020), https://gispublic.waterboards.ca.gov/portal/apps/webappviewer/index.html?id=4feba1766c224dc99eadea06ef3bd019.
[60] N.C. Dep't Env't Quality, NPDES Permit No. NC0023868 (2014), *available at* https://perma.cc/UPG8-4842.

Specialty Chemicals (a textile and tire manufacturing company).[61] All three of these companies and a county landfill have been found to release extremely elevated levels of untreated PFAS into the city's collection system,[62] which flows through the treatment plant and into the Haw River. Between 2019 and today, Burlington's effluent has contained total PFAS concentrations reaching as high as 33,000 ppt.[63] Predictably, that pollution has, for years, traveled into Pittsboro's homes, schools, restaurants, churches, and businesses.[64] EPA has long known of the PFAS that plagues Pittsboro—in a 2007 report, the agency documented total PFAS concentrations in the Haw River exceeding 900 ppt.[65]

In more recent years, concentrations at Pittsboro's drinking water intake have reached levels as high as 1,200 ppt—with documented PFOA concentrations exceeding 90 ppt (more than 22,000 times what EPA considers safe) and PFOS concentrations exceeding 590 ppt (more than 29,000 times what EPA considers safe).[66] As a result of agency inaction, Pittsboro—a town of less than 6,000 people—had to shoulder the cost of treatment and was forced to install a granular activated carbon treatment system at its water treatment plant. The design and installation of the system alone cost around $3.5 million,[67] and the maintenance required each year could cost the town hundreds of thousands more.[68]

And while Pittsboro's treatment system is running now, installation follows years of toxic exposure that has led to the small town having some of the highest blood concentrations of PFAS in the entire country.[69] In fact, experts at North Carolina State University determined that Pittsboro residents had levels of PFAS in their blood that were comparable, or even higher, than those living downstream of Chemours (a PFAS manufacturer).[70] The PFAS in these residents blood is from wastewater treatment plants. Pittsboro's blood results underscore the devastation caused by a municipality's failure to address PFAS through its pretreatment program.

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[61] Isaac Groves, *Burlington's Water Now Has More Toxic PFAS 'Forever Chemicals' Than EPA Recommends*, THE BURLINGTON TIMES NEWS (July 31, 2022), Attachment 27.
[62] *Id.*
[63] East Burlington Effluent Sampling, *supra* note 58.
[64] *See* Notice of Intent to Sue the City of Burlington for Violation of the Clean Water Act and the Resource Conservation and Recovery Act, S. Env't L. Ctr. (Nov. 7, 2019), at 18, Attachment 28; *see also* GEL Engineering, LLC, Emerging Contaminants Sampling and Analysis Report: Haw River Watershed, North Carolina (Nov. 6, 2019), at 5, Attachment 29 [hereinafter "Burlington PFAS Sampling"] (recording sample results taken from a water fountain in a public library, among other locations, that reached as high as 489 ppt).
[65] Shoji Nakayama, et al., *Perfluorinated Compounds in the Cape Fear Drainage Basin in North Carolina*, 41 ENV'T SCI. TECH. 5271, 5274 (2007), Attachment 30.
[66] Greg Barnes, *PFAS Shows Up in Haw River, Pittsboro Water, But Gets Limited Local Attention*, N.C. HEALTH NEWS (July 30, 2019), Attachment 31.
[67] Town of Pittsboro, Town of Pittsboro Granular Activated Carbon (GAC) Filter Operational, Treated Water Now Entering Distribution System (Aug. 25, 2022), Attachment 32.
[68] *See* Frequently Asked Questions, Cape Fear Public Utility Authority, https://perma.cc/29QQ-2MRU (last visited Mar. 6, 2023) (explaining average expected maintenance costs for granular activated carbon system installed at drinking water utility).
[69] Lisa Sorg, *PFAS found in blood samples of more than 1,000 people in Cape Fear River Basin*, N.C. POLICY WATCH (Oct. 20, 2022), Attachment 33.
[70] *Id.*

Unfortunately, Pittsboro is just one example of a town afflicted by PFAS pollution from an upstream municipal wastewater plant. Across the Southeast and the country, many other communities must reckon with toxic pollution that should be controlled by upstream sources. For instance, in Virginia, the Montgomery County Public Service Authority's wastewater plant receives industrial wastewater documented to be laden with PFAS from ProChem, a company that provides a chemical washing process for industrial equipment.[71] Last year, the company was caught releasing GenX into the wastewater plant's collection system at concentrations nearing 1.3 million ppt.[72] As a result, the wastewater plant's discharge, which is approximately five miles upstream of the drinking water intake for the Spring Hallow reservoir (the water source for thousands in Roanoke and surrounding counties), contained GenX at concentrations as high as 23,900 ppt[73]—more than 2,000 times what EPA considers safe.[74]

Further south, reports have shown that the drinking water supplies for the cities of Centre and Gadsden, Alabama have detectable levels of PFAS—at times reaching as high as 200 ppt and 150 ppt, respectively.[75] The wastewater plant in Trion, Georgia receives industrial wastewater from a textile manufacturer and discharges upstream of public drinking water intakes.[76] It's likely that many other communities across the country face similar threats, but are being left in the dark by their state's failure to order monitoring and disclosure.[77] In order to protect drinking water supplies from PFAS pollution, EPA must focus enforcement efforts on municipal dischargers responsible for threatening downstream drinking water supplies.

ii. PFAS in the sludge created by the municipal wastewater treatment process contaminate surface water, groundwater, and agricultural cropland.

In addition to direct surface water discharges, PFAS not removed by traditional treatment technology end up in the municipalities' biosolids, sometimes referred to as "sludge."[78] Biosolids or sludge, are the byproduct of the wastewater treatment process which generally separates liquid from solid waste,[79] and can contain extremely high concentrations of the toxic chemicals released by industries into a city's sewer system. Sludge produced at wastewater

[71] Laurence Hammack, *Source of 'Forever Chemical' in the Roanoke River Traced to Elliston Plant*, THE ROANOKE TIMES (Nov. 10, 2022), Attachment 34.
[72] *Id.*
[73] *Id.*
[74] U.S. Env't Prot. Agency, Drinking Water Health Advisory: Hexafluoropropylene Oxide (HFPO) Dimer Acid (CASRN 13252-13-6) and HFPO Dimer Acid Ammonium Salt (CASRN 62037-80-3), Also Known as "GenX Chemicals" 35 (June 2022), *available at* https://perma.cc/C4JZ-5GRX.
[75] Nathan Barlet, U.S. Env't Prot. Agency, Final Report: Phase 2: Prioritization of PFAS Contributions to Weiss Lake (Sept. 10, 2019), at 26 (Figure 9), Attachment 35 [hereinafter "Weiss Lake PFAS Study"].
[76] Ga. Dep't of Env't Prot. Div. NPDES Permit No. GA0025607 (Feb. 11, 2019), Attachment 36.
[77] *See, e.g.*, Tenn. Dep't of Env't and Conservation, *supra* note 34.
[78] *See* Johnathon Sheets, *Addressing the Impacts of PFAS in Biosolids*, Wastewater Digest (Sept. 10, 2021), https://perma.cc/7TJK-4UDT; PFAS Strategic Roadmap, *supra* note 3 at 16.
[79] U.S. Env't Prot. Agency, Introduction to the National Pretreatment Program 1-2 (June 2011), Attachment 37.

plants in Michigan, for example, have contained concentrations of PFOS alone reaching as high as 8,600,000 ppt.[80]

Sludge—including sludge containing PFAS—is collected and disposed of by landfill, incineration, or land application.[81] It is estimated that nearly half of the sludge produced in the United States is disposed of by being spread on fields and farmland.[82] Indeed, across the country, more than five percent of all crop fields use sludge from wastewater plants as fertilizer on as many as 20 million cropland acres.[83] This is deeply troubling because once PFAS-contaminated sludge is land-applied, the chemicals can (1) run into surface waters that serve as drinking water supplies, (2) leach into groundwater, threatening private drinking water wells, and (3) end up in the crops grown on agricultural property.[84]

One prominent example of how sludge can impact drinking water arises from rural northwest Georgia. There, the city of Trion operates a municipal wastewater plant that accepts industrial waste from a textile manufacturer.[85] For years, the textile producer released PFAS into the Trion collection system in its wastewater—recently reported at concentrations as high as 1,549 ppt.[86] And Trion's wastewater plant did not have the technology to remove the toxic chemicals from the wastewater.[87] As a result, PFAS ended up in the utility's discharge and sludge, which is spread throughout the Chattooga River watershed. EPA-collected data on Trion's sludge confirmed PFOA and PFOS at concentrations as high as 4,300 ppt and 250,000 ppt, respectively.[88] Later sampling confirmed total PFAS at concentrations as high as 1,641,470 ppt.[89] Unfortunately, that pollution has contaminated a nearby creek that serves as the drinking

[80] Bogdan, *supra* note 52 at 13 (reported in µg/Kg, translated to ppt).
[81] Introduction to the National Pretreatment Program, *supra* note 79 at 1-2.
[82] Tom Perkins, *'Forever Chemicals' May Have Polluted 20m Acres of US Cropland, Study Says*, THE GUARDIAN (May 8, 2022), Attachment 38; *see also Basic Information About Biosolids*, U.S. ENV'T PROT. AGENCY, https://perma.cc/E7EQ-ASD8 (last visited Mar. 6, 2023).
[83] Jared Hayes, *EWG: 'Forever Chemicals' May Taint Nearly 20 Million Cropland Acres*, ENV'T WORKING GROUP (Apr. 14, 2022), Attachment 39.
[84] *See* Andrew B. Lindstrom et al., *Application of WWTP Biosolids and Resulting Perfluorinated Compound Contamination of Surface and Well Water in Decatur, Alabama, USA*, 45 ENV'T. SCI. & TECH. 8015 (2011); Jennifer G. Sepulvado et al., *Occurrence and Fate of Perfluorochemicals in Soil Following the Land Application of Municipal Biosolids*, 45 ENV'T. SCI. & TECH. (2011); Janine Kowalczyk et al., *Transfer of Perfluorooctanoic Acid (PFOA) and Perfluorooctane Sulfonate (PFOS)From Contaminated Feed Into Milk and Meat of Sheep: Pilot Study*, 63 ARCHIVES ENV'T CONTAMINATION & TOXICOLOGY 288 (2012); Holly Lee et al., *Fate of Polyfluoroalkyl Phosphate Diesters and Their Metabolites in Biosolids-Applied Soil: Biodegradation and Plant Uptake in Greenhouse and Field Experiments*, 48 ENV'T. SCI. & TECH. 340 (2014).
[85] *See* NPDES Permit No. GA0025607, *supra* note 76; Town of Trion, Water Pollution Control Plant Process Description, Attachment 40; Town of Trion, NPDES FORM 2A Application Overview (2018), at 18, Attachment 41 [hereinafter "Trion WWTP Application"]; Ga. Env't Prot. Div., Consent Order EPD-WP-8894 (Apr. 13, 2020), at 1, Attachment 42 [hereinafter "Trion Consent Order"] (stating that approximately 90 percent of the wastewater plant's flow comes from the textile mill and that the mill's wastewater contains PFAS).
[86] *See* Enthalpy Analytical, LLC – Ultratrace, Town of Trion WWTP: Analytical Report 0820-703 (Aug. 24, 2020), at 6, Attachment 43.
[87] *See* Trion WWTP Application, *supra* note 85 at 6 (describing the city's treatment process).
[88] Trion Consent Order, *supra* note 85 at 4 (reported in ng/kg).
[89] Enthalpy Analytical, LLC – Utratrace, Town of Trion: Analytical Report 1020-725 (Oct. 29, 2020), at 7, Attachment 44 (reported in ng/g).

water supply for the city of Summerville, Georgia.[90] Sampling of Summerville's finished drinking water has reported PFOA and PFOS in combined concentrations exceeding 90 ppt.[91] These waters flow downstream, crossing state borders, and into the drinking water supplies for the cities of Centre and Gadsden, Alabama.[92] Sampling at both drinking water intakes has confirmed the presences of PFAS.[93]

The same scenario has occurred in Dalton, Georgia. There, nearly 90 percent of the wastewater treated by the city's wastewater plant, Dalton Utilities, is made up of industrial wastewater from carpet manufacturers.[94] For decades, Dalton Utilities land-applied its sludge near the Conasauga River, upstream of the Oostanaula River (the drinking water supply for the city of Rome, Georgia).[95] Sampling collected in surface waters downstream of Dalton's land-application sites has shown PFAS contamination at levels above 30,000 ppt.[96] As a result of the extensive pollution, the city of Rome has had to spend over three million dollars to install a granular activated carbon filtration system, and will have to pay upwards of $500,000 annually to replace the filters to ensure the system works properly.[97]

Unfortunately, drinking water contamination caused by the land application of PFAS-laden sludge is not unique to Georgia. In North Carolina, the city of Burlington sprays millions of gallons of sludge on fields in Alamance, Caswell, Chatham, and Orange Counties each year.[98] The PFAS in Burlington's sludge has been documented at levels as high as 11,953 ppt.[99] Sampling downstream of Burlington's land application sites demonstrates that PFAS from sludge applications runs off into the creeks, streams, and reservoirs nearby, including the drinking water supplies for the cities of Chapel Hill and Pittsboro, North Carolina.[100] Levels in some of these waterbodies, for example, have reached as high as 467 ppt.[101]

In addition to contaminating public drinking water intakes, PFAS spread through the land application of sludge have been linked to contamination of private drinking water wells.[102] In Decatur, Alabama, for example, private wells located near the sites that Decatur Utilities sprayed

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[90] *See* Trion Consent Order, *supra* note 88 at 4–5.
[91] *Id.* at 4.
[92] *See* Weiss Lake PFAS Study, *supra* note 75 at 17, 26 (figure 9).
[93] *Id.*
[94] *Johnson v. 3M*, 563 F. Supp. 3d 1253, 1273 (N.D. Ga. 2021), *aff'd sub nom. Johnson v. 3M Co.*, 55 F.4th 1304 (11th Cir. 2022).
[95] *Id.* at 1274.
[96] *See* Drew Kann, *Rome is Grappling With Toxic 'Forever Chemicals' Fouling Waterways*, THE ATLANTA JOURNAL-CONSTITUTION (Oct. 14, 2022), Attachment 45.
[97] City of Rome, A Rome Water & Sewer Division EPA Update Brief (PFOA/PFOS) (June 16, 2022), Attachment 46.
[98] *See* City of Burlington, 2018 Annual Report Permit No. WQ0000520 (Feb. 4, 2019), at 1, Attachment 47.
[99] Detlef Knappe, Presentation, Perfluorinated Compounds in Treated Wastewater and Biosolids from Burlington (2013), Attachment 48.
[100] Burlington PFAS Sampling, *supra* note 64 at 5.
[101] *Id.*
[102] *See* Peter B. McMahon, et al., Perfluoroalkyl and Polyfluoroalkyl Substances in Groundwater Used as a Source of Drinking Water in the Eastern United States, 56, ENV'T SCI. TECH. 2278, 2285 (2022), Attachment 49.

its sludge suffered from extreme PFAS pollution, some wells containing PFOA and PFOS as high as 61 ppt and 67 ppt, respectively—magnitudes higher than what EPA considers safe.[103]

At the same time that PFAS-contaminated sludge poses a significant threat to water quality, it also leaches into the farmland upon which it is applied, thereby poisoning food products across the country. For example, small farms in Maine have discovered that their crops contain high levels of PFAS as a result of PFAS-tainted sludge being applied as fertilizers for decades.[104] Similarly, dairy farmers in Maine and New Mexico, have had to dump thousands of gallons of milk (and some have had to close their operations) due to PFAS contamination that resulted from land-application of sludge on fields the cows grazed upon.[105] In Michigan, at least one cattle farm has been ordered to stop selling its beef because elevated levels of PFOS were detected in the cuts of meat sold from the local farm.[106] There, once again, the cattle had likely been poisoned by consuming feedstock polluted by PFAS-contaminated sludge.[107] Since discovering the contamination a couple years prior, Michigan and Maine, among other states, have been investigating the hundreds of fields where PFAS-contaminated sludge was applied.[108] As a result of the devastating impact PFAS-contaminated sludge has had on the state's agricultural industry, Maine has banned the use of applying this sludge as fertilizer.[109] If EPA does not enforce requirements to keep PFAS out of sludge, more land-application bans are certain to be adopted in the near future.

Whether through direct discharges into rivers and streams or through contamination following land application of sludge, municipal wastewater plants exacerbate extreme PFAS pollution. EPA must ensure that the PFAS at these facilities is addressed using the existing authorities in the Clean Water Act (as discussed below) in order to protect those exposed.

b. Although municipalities have authority to address PFAS pollution, most are not following the Clean Water Act pretreatment laws.

Wastewater plants that refuse to control PFAS pollution from their industrial users are violating the Clean Water Act's pretreatment program and are subject to enforcement under Section 309. Under the pretreatment requirements, municipalities are first required to know what

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[103] *See, e.g.*, U.S. Env't Prot. Agency, Perfluorochemical (PFC) Contamination of Biosolids Near Decatur, Alabama (Dec. 2009), at 3, Attachment 50 (document reporting concentrations in parts per billion or "ppb").
[104] Tom Perkins, *'I Don't Know How We'll Survive': The Farmers Facing Ruin in America's 'Forever Chemicals' Crisis*, THE GUARDIAN (Mar. 22, 2022), Attachment 51.
[105] Susan Cosier, *America's Dairyland May Have a PFAS Problem*, NAT. RES. DEF. COUNCIL (Oct. 11, 2019), Attachment 52; Kris Maher, *Maine Farmers Dump Milk, Lose Crops as Forever Chemicals Taint Soil*, WALL STREET JOURNAL (July 4, 2020), https://perma.cc/3EJ4-V8M9; Kevin Miller, *'Complete Crisis' as PFAS Discovery Upends Life and Livelihood of Young Maine Farming Family*, MAINE PUBLIC (Feb. 7, 2022), Attachment 53.
[106] *Consumption Advisory: Grostic Cattle Company of Livingston County Beef Sold Directly to Consumers May Contain PFOS*, MICH. AGRICULTURE & RURAL DEVELOP. (Jan. 28, 2022), Attachment 54; Garret Ellison, *Advisory Warns of PFAS in Beef From Michigan Cattle Farm*, MLIVE (Jan. 28, 2022), Attachment 55.
[107] Ellison, *supra* note 106.
[108] *See Per- and Polyfluoroalkyl Substances*, ME. DEP'T OF ENV'T PROT., https://perma.cc/GPG4-GDJZ (last visited Mar. 6, 2023); *Land Application Workgroup*, MICH. PFAS ACTION RESP. TEAM, https://perma.cc/N4HS-Y75P (last visited Mar. 6, 2023).
[109] Tom Perkins, *Maine Bans Use of Sewage Sludge on Farms to Reduce Risk of PFAS Poisoning*, THE GUARDIAN (May 12, 2022), Attachment 56.

waste they receive from their industrial users.[110] As recently as last December, EPA confirmed that this requirement extends to pollutants that are not conventional or listed as toxic, like PFAS.[111] Municipalities are required to instruct their industries to identify their pollutants in an industrial waste survey[112] and then to apply for a pretreatment permit, by disclosing "effluent data," including on internal waste streams, necessary to evaluate pollution controls.[113] Significant industrial users, or industrial users that contribute influential flow to the wastewater plant, are further required to provide information on "[p]rincipal products and raw materials . . . that affect or contribute to the [significant industrial user's] discharge."[114]

A municipality that runs a wastewater plant is further required to regulate its industries so that industries do not cause "pass through" or "interference," or otherwise violate pretreatment laws.[115] "Pass through" is when an industrial discharge causes the wastewater plant to violate its own NPDES permit,[116] including standard conditions such as the one requiring permittees to "take all reasonable steps to minimize or prevent any discharge or sludge use" that has a "reasonable likelihood of adversely affecting human health or the environment."[117] Industries are also not permitted to interfere with publicly-owned treatment works operations.[118] "Interference" occurs when a discharge disrupts the treatment works' operation or its sludge use or disposal and violates the facility's NPDES permit or other applicable laws.[119]

Each day, municipalities that accept PFAS-contaminated wastewater are likely violating the pretreatment program in at least two ways. First, PFAS-laden wastewater that flows through the treatment plant causes "pass through" because it causes a municipality to violate its NDPES permit—either by (1) releasing a chemical the utility is not authorized to discharge or (2) violating standard conditions, including the one that mandates all permittees "take all reasonable steps to prevent or minimize any discharge or sludge use" that has a "reasonable likelihood of adversely affecting human health or the environment."[120] Second, PFAS that end up in the utility's sludge cause "interference" with the city's processes, use, and disposal requirements because the toxic contamination spreads through the soil, groundwater, and surface waters in violation of applicable state and federal laws.[121]

Violating the prohibitions on pass through or interference constitutes a violation of the Clean Water Act's pretreatment standards and requirements.[122] If a wastewater plant is found to

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[110] 40 C.F.R. § 403.8(f)(2).
[111] *See* EPA's PFAS NPDES Guidance, *supra* note 2 at 4–5.
[112] 40 C.F.R. § 403.8(f)(2)(ii); Introduction to the National Pretreatment Program, *supra* note 79 at 4-3.
[113] U.S. Env't Prot. Agency, Industrial User Permitting Guidance Manual (Sept. 2012), at 4-2 to 4-3, *available at* https://perma.cc/VX5L-KQSB.
[114] 40 C.F.R. § 122.21(j)(6)(ii)(C).
[115] *Id.* §§ 403.8(a), 403.5(a)(1).
[116] Pass through is defined as "a [d]ischarge which exits the [treatment works] into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the [treatment works'] NPDES permit (including an increase in the magnitude or duration of a violation)." *Id.* § 403.3(p).
[117] *Id.* § 122.41(d).
[118] *Id*. § 403.8(a).
[119] 40 C.F.R. § 403.3(k).
[120] *Id.* § 122.41(d).
[121] *Id.* § 403.3(k); *see also id.* § 403.5(b).
[122] *Id.* § 403.5(a)(1).

be allowing an industrial user to introduce a pollutant in violation of the pretreatment laws, and does not remediate its violations within 30 days of notice, EPA or states with delegated authority "may commence a civil action for appropriate relief."[123] This relief includes, but is not limited to, "a permanent or temporary injunction, against the owner or operator of such treatment works."[124]

Municipalities are required to control the chemicals released into their sewer shed. Despite their authority and obligation, however, most municipal wastewater plants across the country are not following the pretreatment laws to control PFAS. As a result, these facilities are more than mere conduits for pollution—they are actively allowing toxic chemicals to end up in our drinking water and food products by refusing to meet their obligation to control the pollution. EPA must prioritize enforcement of the Clean Water Act's pretreatment program in this initiative.

c. Effective use of the pretreatment program can significantly reduce PFAS in our nation's waterways.

As EPA has recognized, effective use of the pretreatment program can significantly reduce PFAS pollution today, without having to wait for industry-specific final effluent limit guidelines or for Congress to issue new legislation.[125] The pretreatment program discussed above, gives municipalities broad authority to identify industrial sources of pollution and control their industries so that municipally owned treatment works can comply with the applicable pretreatment laws. They can "[d]eny or condition" pollution permits for industries, control industrial pollution "through Permit, order or similar means," and "[r]equire" "the installation of technology."[126] Municipalities can also implement local limits to control industrial pollution sent to treatment works in the first place.[127]

When required, we have seen utilities are capable of significant reductions, but until EPA or states with delegated authority enforce this program, our communities will continue to be exposed to toxic chemical pollution released by these utilities.

i. Source control efforts in Michigan reduced PFOS in wastewater treatment plants by over 90 percent.

In June 2017, the Michigan Department of Environment, Great Lakes, and Energy discovered that a municipal wastewater plant was discharging PFOS—a particularly harmful PFAS compound—into the Flint River.[128] The PFOS contaminating the treatment plant was attributed to an industrial user releasing wastewater into the sewer system. Following the discovery, Michigan launched a pretreatment initiative "to reduce and/or eliminate PFOA and PFOS from industrial sources that may pass through WWTPs and enter lakes and streams."[129]

[123] 33 U.S.C. § 1319(f).
[124] *Id.*
[125] EPA's PFAS NPDES Guidance, *supra* note 2 at 1–2.
[126] 40 C.F.R. § 403.8(f)(1).
[127] *Id.* § 403.8(f)(1)(B).
[128] Bogdan, *supra* note 52 at 5.
[129] *Id.*

Beginning in early 2018, all 95 municipal wastewater plants were required to sample their industrial users' wastewater, implement PFOA and PFOS reductions at confirmed sources, and, if necessary, develop technology-based local limits to ensure control of PFAS pollution.[130]

Over the following two years, municipal wastewater plants collected data from their industrial users and, when sources were identified, implemented the tasks appointed by the initiative.[131] A subset of municipal wastewater plants that had significant PFAS pollution underwent source reduction efforts, including requiring their industrial user(s) to install granular activated carbon (an effective PFAS treatment technology) and eliminating leaking sources of PFAS pollution.[132] These efforts worked. For the plants that imposed source control mechanisms, PFOS concentrations were reduced *by over 90 percent*.[133] For most of the utilities, reductions ranged between 96 and 99 percent.[134] Concentrations in sludge, like the utilities' effluent, were similarly reduced once source control was imposed.[135]

Michigan's pretreatment initiative demonstrates that use of the pretreatment program effectively reduces PFAS pollution from entering our environment from municipal wastewater plants. The study demonstrates that when approached as enforcement targets, wastewater utilities have the tools necessary to control the toxic pollution from their industrial users in a manner that places the burden on the entity discharging PFAS—not the utility itself.

ii. Simple investigatory measures in North Carolina have dramatically reduced toxic 1,4-dioxane pollution.

Data on how towns have addressed other toxic pollution is instructive about the success of the pretreatment program. In North Carolina, for example, a settlement agreement requiring the city of Greensboro to investigate its industrial users has led to a decrease of 1,4-dioxane in the river basin and downstream drinking water supplies.

The city of Greensboro operates a wastewater plant that receives industrial wastewater contaminated with 1,4-dioxane,[136] a cancer causing chemical.[137] 1,4-dioxane, like PFAS, is used or otherwise generated as a byproduct in a variety of manufacturing processes, does not break down in the environment, and cannot be removed with conventional treatment technology.[138] Greensboro is authorized to discharge 56 million gallons of wastewater per day into a tributary of the Haw River,[139] a waterbody that supplies drinking water to the city of Pittsboro, North Carolina and later flows into Jordan Lake and the Cape Fear River, the water supplies for at least

[130] *Id.*
[131] *Id.* at 5–6.
[132] *Id.* at 14 (table 9).
[133] *Id.*
[134] *Id.*
[135] *Id.* at 13.
[136] *See* N.C. Env't Mgmt. Comm'n, Amended Special Order By Consent EMC SOC WQ S19-010 (Nov. 2021), at 2, Attachment 57.
[137] U.S. Env't Prot. Agency, Technical Fact Sheet – 1,4-Dioxane (Nov. 2017), *available at* https://perma.cc/BF4H-5SBW.
[138] *Id.*
[139] N.C. Dep't of Env't Quality, NPDES Permit No. NC0047384 (2014), at 2, Attachment 58.

300,000 North Carolinians.[140] Because 1,4-dioxane, like PFAS, does not break down once released into the river, much of the toxic pollution released by Greensboro's industrial users makes its way into peoples' homes.

The North Carolina Department of Environmental Quality and Greensboro knew about the 1,4-dioxane pollution since 2014,[141] but for years, both the city and the state agency refused to do anything to control the pollution, claiming that identifying the actual sources of 1,4-dioxane was simply too difficult. In November 2021, following years of advocacy, a lawsuit, and an eventual settlement agreement, Greensboro was required to investigate its industrial users and control the sources of the toxic pollution.[142] The process paralleled that which was mandated by Michigan: Greensboro was directed to collect wastewater samples from each of its industrial users, and if the source had concentrations of 1,4-dioxane above a certain benchmark, the city required the industry to prepare a source reduction plan.[143] Within months, Greensboro identified nine significant industrial users releasing 1,4-dioxane at extremely high levels.[144] Two more sources were identified the following year.[145] Once sources were identified, the city was able to assign allocations to its industrial sources to control the amount of 1,4-dioxane each could release into the sewer system.[146] Greensboro also requires its industries to regularly collect their own composite samples so that if exceedances occur, the city can identify the industrial user responsible.[147] Since this process was implemented, concentrations of 1,4-dioxane have decreased.[148]

Greensboro's performance under the settlement agreement demonstrates that when a municipality is forced to investigate its industrial users and monitor their toxic pollution, reductions can be achieved, and sources can be held accountable. Greensboro's story is yet

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[140] Lisa Sorg, *PW Special Report Part Two: Lax Local Regulation Allows Toxic Carcinogen to Infiltrate Drinking Water Across the Cape Fear River Basin*, N.C. POLICY WATCH (July 23, 2020), Attachment 59.
[141] *Data Summary of The Third Unregulated Contaminant Monitoring Rule*, U.S. ENV'T PROT. AGENCY, https://perma.cc/Z5KD-8TXV (last visited Mar. 6, 2023); N.C. Div. of Water Res., *1,4-Dioxane in the Cape Fear River Basin of North Carolina: An Initial Screening and Source Identification Study* (2016), at 2–3, Attachment 60.
[142] Settlement Agreement, *Haw River Assembly v. N.C. Environmental Management Commission, et al.*, 21 HER 01770 (Nov. 22, 2021), Attachment 61.
[143] *Id.* at PDF 3, 15.
[144] City of Greensboro, Amended Special Order By Consent EMC SOC WQ S19-010 Year One Report: May 1, 2021 – April 30, 2022 6 (June 13, 2022) [hereinafter "Greensboro 1,4-dioxane Year 1 Report"], Attachment 62.
[145] City of Greensboro and NCDEQ Winston-Salem Regional Office, Special Order By Consent (SOC) Year Two: 6th Quarterly Meeting (Sept. 14, 2022), Attachment 63.
[146] Greensboro 1,4-dioxane Year 1 Report, *supra* note 144 at 6.
[147] This process works. In October 2022, Greensboro's effluent contained a slightly higher amount of 1,4-dioxane than average. *See* Jenny Graznak, N.C. Dep't of Env't Quality, Semi-Annual Progress Report on 1,4 dioxane In the Cape Fear River Basin (Jan. 11, 2023), slide 17, Attachment 64. The city checked the trunkline surveillance sampling and, once the proper trunkline was identified, ordered the industrial users on that line to submit weekly composite samples for the days around when the city's effluent had the high concentration. *Id.* Within a matter of weeks, Greensboro had identified the industrial user responsible and was able to pursue enforcement actions against it. *Id.* at 18.
[148] *See* City of Greensboro and NCDEQ Winston-Salem Regional Office, Special Order By Consent (SOC) Year Two: 8th Quarterly Meeting (Feb. 15, 2023), Attachment 65 (showing average discharges dropping from nearly 20 ppb to 4 ppb).

another demonstration of how the pretreatment program can effectively abate toxic pollution without the need for future regulations.

d. EPA must direct its efforts towards enforcing the pretreatment program.

The case studies above demonstrate that effective use of the pretreatment program is an existing tool that can significantly reduce toxic chemical pollution in our waterways. While it traditionally falls on the municipality to carry out the pretreatment program, it is up to EPA and states with delegated authority to ensure the cities are doing so.[149] EPA and states can enforce the pretreatment program by first requiring municipalities to update their industrial user surveys to determine sources of PFAS pollution. In EPA's PFAS NPDES Guidance, the agency states its expectation that permits issued to municipal wastewater plants do just that, stating that these permits should "contain requirements to identify and locate all possible [industrial users]" that are "expected or suspected for PFAS discharges."[150] Second, EPA and states can direct municipal utilities to impose local limits or other control measures on their industrial sources.[151] Finally, if a municipal utility is unwilling to abide by the law, EPA and states can and must seek an enforcement action to ensure that the purpose and goals of the Clean Water Act are not subverted by uncontrolled industrial pollution.[152]

The Clean Water Act already has the tools necessary to address PFAS pollution from wastewater plants across the country—and doing so would properly place the burden on those responsible for the contamination. Therefore, and especially in light of the drastic and far-reaching scope of PFAS pollution from wastewater plants, EPA must make enforcement of the Clean Water Act's pretreatment program one of its highest priorities under this initiative.

IV. EPA's enforcement activity cannot be limited to industries creating PFAS.

Like municipalities, numerous industrial facilities across the country are also contributing high levels of PFAS to the environment and harming nearby communities. EPA and delegated states therefore cannot limit their enforcement to PFAS manufacturers as EPA has proposed to do in its initiative.[153] While those facilities are a significant concern, industrial facilities using PFAS are also a serious threat.

As EPA acknowledged in its PFAS NPDES Guidance, there are multiple industries that are known or suspected to discharge PFAS.[154] Those industries include metal finishing, landfills, leather tanning and finishing, and textile mills, among others.[155] While none of these industries

[149] *See* 40 C.F.R. § 403.8(a); 33 U.S.C. § 1319(f).
[150] EPA's PFAS NPDES Guidance, *supra* note 2 at 4.
[151] 40 C.F.R. § 403.5(a).
[152] We understand that in EPA's Program Plan 15, the agency announced an initiative to collect samples from industrial users that discharge into municipal sewer sheds. Program Plan 15, *supra* note 36 at 6-19. EPA should use this initiative to identify sources of PFAS pollution, but the agency must understand that the initiative cannot replace EPA's enforcement responsibilities. Gathering information does nothing to reduce the pollution burden born by those impacted by wastewater plants. EPA should swiftly demand information under its existing authority, 33 U.S.C. § 1318, and use that information to identify possible targets for enforcement.
[153] 88 Fed. Reg. 2093, 2096.
[154] EPA's PFAS NPDES Guidance, *supra* note 2 at 2.
[155] *See id.*; *see also* EPA Program Plan 15, *supra* note 36 at 6-3 to 6-18.

manufacture PFAS, there are far more of these facilities, and they can each release large amounts of PFAS into the environment. EPA's PFAS Analytic Tools underscore this point. The maps indicate that there are fewer than 150 PFAS manufacturers across the country.[156] By contrast, there are approximately 74,000 industrial facilities known or suspected of using PFAS in the United States.[157] Of those facilities, over 20,000 are located within communities already experiencing another environmental burden.[158] Not including these industrial facilities in EPA's enforcement priorities would miss a considerable part of the problem and leave these communities behind.

EPA's own data reveals the severe threat industrial sources pose. For example, in 2022, IBM Systems & Technology Semiconductor Facility located in Vermont reported that it discharges perfluoroheptanoic acid ("PFHpA") and PFOA into the Winooski River at average concentrations of 36,200 ppt and 31,100 ppt, respectively.[159] In the same year, St. Paul Park Refining Company, an oil refinery in Minnesota, reported that it discharges perfluorobutanoic acid ("PFBA") into the Mississippi River at an average concentration of 600 ppt.[160] The refinery also discharges other PFAS like PFOA and PFOS.[161] In West Virginia, the metal manufacturer Norfolk General Industries reported that it discharges ammonium perfluorooctanoate ("APFO") at an average concentration of 100 ppt into the Little Kanawha River.[162]

While these examples are spread throughout the country, we know that industry is often sited in clusters allowing their pollution to compound on the pollution created by their neighbors. In North Carolina, for instance, the Cape Fear River Basin has some of the highest PFAS concentrations in the Southeast. The Department of Environmental Quality knew Chemours Company (a PFAS manufacturer) was located in that basin but sought to understand whether there were other sources contributing to the high levels.[163] The Department's investigations confirmed that multiple other industrial sources of PFAS were discharging into the very same river basin. For example, Lear Corporation, a textile manufacturer, reported that it discharges PFAS in concentrations ranging from 802 ppt to 1,863 ppt.[164] In other parts of the river, a paper

[156] *PFAS Chemical Manufacturer and Importer Data From TSCA CDR*, U.S. ENV'T PROT. AGENCY (2023), *data available at* https://awsedap.epa.gov/public/extensions/PFAS_Tools/PFAS_Tools.html (data last accessed on Mar. 9, 2023, filtered to "Production" tool, and reflecting total number of PFAS manufacturers and importers).
[157] *Industry Sectors*, *supra* note 47.
[158] *Industry Sectors: EJ Index Above 80 Percentile*, U.S. ENV'T PROT. AGENCY (2023), *data available at* https://awsedap.epa.gov/public/extensions/PFAS_Tools/PFAS_Tools.html (data last accessed Mar. 9, 2023, filtered to the "Industry Sectors" tool with additional filter for facilities with EJ index above 80 percentile).
[159] *PFAS Discharge Monitoring Report Data From CWA NPDES*, *supra* note 47 (filtered to show results from NPDES Permit No. VT0000400; reported in mg/L and translated into ppt).
[160] *Id.* (filtered to show results from NPDES Permit No. MN0000256; reported in mg/L and translated into ppt).
[161] *Id.*
[162] *Id.* (filtered to show results from NPDES Permit No. WV0003204; reported in mg/L and translated into ppt).
[163] *See, e.g.*, Letter from Linda Culpepper, N.C. Dep't of Env't Quality (Apr. 30, 2019), Attachment 66 (template letter that was sent to municipal and industrial dischargers in the Cape Fear River Basin).
[164] NC DEQ Cape Fear Industrial Sampling, *supra* note 31 at 8.

mill and resin manufacturer release PFAS at concentrations reaching 254 ppt and 153 ppt, respectively.[165]

The above examples make clear that industries that use PFAS (not just PFAS creators) are a serious source of toxic contamination. Unfortunately, communities across the Southeast have been devastated by PFAS from these types of industrial sources. For example, over the past few years, the South Carolina Department of Health and Environmental Control has released PFAS sampling of drinking water and surface water across the state showing a serious contamination problem—a problem caused by sources of PFAS other than federal facilities and manufacturers of the chemicals. Almost every drinking water system sampled in the state had PFOS and PFOA levels in excess of EPA's health advisories.[166] The city of Clinton's drinking water, for instance, showed total PFAS concentrations of nearly 90 ppt,[167] while the town of Whitmire's showed total PFAS concentrations of approximately 56 ppt.[168] The Department's surface water sampling similarly showed high levels of PFAS across the state. Big Generostee Creek had total PFAS levels of up to 1,010 ppt, including up to 262 ppt of PFOA.[169] Warrior Creek had total PFAS levels exceeding 780 ppt.[170] Similarly, Buffalo Creek, where industrial sludge is land-applied along the banks upstream, had total PFAS of to 366 ppt, including over 100 ppt of PFOA and PFOS each.[171] None of the drinking water intakes or creeks mentioned above are downstream of a PFAS manufacturer. By focusing only on industries that create PFAS, EPA will leave behind states like South Carolina.

As in South Carolina, nearly every drinking water system in the state of Alabama has PFOA and PFOS levels above EPA's health advisories.[172] In Talladega County, Alabama, PFOA was detected at 12 ppt; PFOS was detected at 16 ppt.[173] In Florence, Alabama, PFOS was detected at 17 ppt; PFOA was detected at 15 ppt.[174] In Irondale, Alabama, PFOS was detected at 47 ppt.[175] Drinking water sampling data shows that PFAS contamination spans the state, with some results showing certain compounds detected in the triple digits. For example, in Centre, Alabama, perfluorobutanesulfonic acid ("PFBS") was detected at 210 ppt; in Gadsden, PFBS was detected in drinking water at levels as high as 720 ppt.[176] Yet, the only PFAS manufacturers

[165] *Id.* at 1 (Arclin), 9 (International Paper – Riegelwood).
[166] SC DHEC, PFAS Drinking Water Sampling, Tbl. 1, *supra* note 33 (Attachment 10).
[167] SC DHEC, PFAS Drinking Water Sampling, Tbls. 7A, 8B, *supra* note 33 (Attachments 12, 13).
[168] SC DHEC, PFAS Drinking Water Sampling, Tbls. 1, 3, *supra* note 33 (Attachments 10, 11).
[169] SC DHEC, PFAS Surface Water Sampling, *supra* note 33.
[170] *Id.*
[171] *Id.*
[172] *See* Alabama PFAS Drinking Water Results, *supra* note 32.
[173] *Id.* at 58.
[174] *Id.* at 21.
[175] *Id.* at 35.
[176] *Id.* at 9, 26.

in the state are located in North Alabama. This makes it clear that industries across Alabama, and even in upstream Georgia, contribute to this widespread pollution.

Similarly, in Georgia, the carpet industry has contributed significantly to industrial PFAS contamination of surface water and drinking water.[177] Sampling conducted pursuant to EPA's Third Unregulated Contaminant Monitoring Rule uncovered PFOA and PFOS contamination in drinking water in Calhoun, Chatsworth, Dalton, Rome, and Summerville, with particularly high levels found in Chatsworth and Rome.[178] In Chatsworth, sampling of drinking water revealed total PFAS concentrations of close to 90 ppt, while in Rome, drinking water samples showed total PFAS levels of nearly 200 ppt.[179] The Georgia Environmental Protection Division has conducted additional PFAS monitoring, focusing on the Coosa River Basin,[180] where various carpet and textile companies manufacture 90 percent of the world's carpet.[181] Monitoring in 2016 showed PFAS levels of up to 2,700 ppt in Polecat Creek, above its confluence with the Conasauga River and downstream from major carpet manufacturers in Dalton.[182] These PFAS contamination concerns have also compelled the city of Rome to shift its drinking water source from the Oostanaula to the Etowah River and, as discussed earlier, make costly investments in filtration technology, resulting in significantly higher bills for ratepayers.[183] EPA conducted a series of studies between 2018 and 2020 documenting the continuing widespread PFAS contamination in the Coosa River basin in Northwest Georgia.[184] EPA has known since a decade prior that the significant sources of PFAS pollution in this region are carpet companies, not PFAS manufacturers.[185]

We recognize that EPA, like any agency, has limited resources and will need to prioritize its enforcement efforts. But the agency's response to resource constraints cannot be to draw arbitrary lines around certain classes of industry. Doing so, as illustrated above, ignores significant harm posed by tens of thousands of industries across the country. Broad and prompt implementation of the enforcement tools described in EPA's PFAS NPDES Guidance will not only reduce PFAS discharges through permit limits or source control activities but will also provide more comprehensive information on the sources and quantities of PFAS discharges through public disclosure and monitoring. Disclosure brought about by the enforcement (or

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[177] Catherine Masingill, *Georgia Ruling Signals New Concerns for PFAS Users and Wastewater Treatment Systems*, AM. BAR ASS'N (Apr. 29, 2022), Attachment 67.
[178] *PFOA and PFOS Information*, GA. DEP'T OF NAT. RES. ENV'T PROT. DIV., https://gaepd.maps.arcgis.com/apps/MapSeries/index.html?appid=e8f2c6a51c1c41088002350f1eabe598 (last visited Mar. 9, 2023).
[179] *Id.*
[180] *Id.*
[181] *Johnson v. 3M Co.*, 55 F.4th 1304, 1306 (11th Cir. 2022).
[182] *PFOA and PFOS Information*, *supra* note 178.
[183] Kann, *supra* note 96.
[184] *See* Derek Little, U.S. Env't Prot. Agency, Phase 1: Study of PFAS Compounds on the Chattooga River (June 13, 2018), at 6 Attachment 68; Barlet, *supra* note 75 at 17; Nathan Barlet, U.S. Env't Prot. Agency, Final Report: Assessment of Resuspended Sediments as a Source of PFAS to the Upper Coosa River Basin, Project ID: 19-0457 (Dec. 5, 2019), at 20–21, Attachment 69; Greg White, U.S. Env't Prot. Agency, Characterization of Ambient PFAS in the Chattooga River Watershed – Final Report, Project ID: 20-0018 (Jan. 22, 2020), at 14–15, Attachment 70
[185] *See, e.g.*, U.S. Env't Prot. Agency Archive Document, Dalton Utilities Data Summary (Aug. 10, 2010), Attachment 71.

threat of enforcement) of the requirements in EPA's PFAS NPDES Guidance will give EPA or a state with delegated authority the information it needs to prioritize the worst offenders and direct enforcement efforts appropriately. It will also provide valuable information to communities downstream who otherwise do not have insight into the scope of toxic chemicals being released into their drinking water.

V. Facilities with current permits must update their applications, otherwise any PFAS discharges are illegal.

As these comments have made clear, PFAS pose an unacceptable health risk and the contamination is significant and widespread across the country. Because of this, EPA and states cannot turn a blind eye to recently permitted facilities when considering enforcement priorities and must push states to reopen permits for PFAS dischargers where those permits do not address such pollution.

The Clean Water Act requires that NPDES permits be renewed after five years.[186] In many cases, NPDES renewal applications remain pending before permitting agencies for many years after expiration. As a result, facilities that discharge PFAS, but received a permit shortly before EPA published its guidance, will likely have permits with no measures to address PFAS for *at least* the next five years, if not longer. That means, if EPA's PFAS NPDES Guidance is only applied to newly issued permits, communities downstream of recently permitted PFAS dischargers will continue to be exposed to PFAS contamination for at least another half-decade.

As a preliminary matter, to the extent these facilities did not disclose PFAS discharges in their permit applications, any discharge of PFAS is unlawful. The Clean Water Act prohibits the discharge of "any pollutant," including PFAS,[187] into waters of the United States without authorization of a NPDES permit.[188] A permit cannot authorize the discharge unless its presence in the effluent was adequately disclosed to the permitting authority in a permit application.[189] EPA has confirmed that these disclosure requirements apply to PFAS stating that "no permit may be issued to the owner or operator of a facility unless the owner or operator submits a complete permit application" providing all information "that the permitting authority may reasonably require to assess the discharges of the facility" including information regarding PFAS.[190] When a facility fails to disclose PFAS in its permit application, it does not have approval to discharge the chemicals.[191] Consequently, EPA and delegated states should include known PFAS dischargers

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[186] 33 U.S.C. § 1342(b)(1)(B).
[187] EPA's PFAS NPDES Guidance, *supra* note 2 at 1.
[188] 33 U.S.C. § 1311(a).
[189] *Piney Run Preservation Ass'n v. Cty Comm'rs*, 268 F.3d 255, 268 (4th Cir. 2001) ("[T]o the extent that a permit holder discharges a pollutant that it did not disclose, it violates the NPDES permit and then the CWA."); *accord In re Ketchikan Pulp Co.*, 7 E.A.D. 605, 1998 WL 248964, at *11 (EPA Env't Appeals Bd. May 15, 1998) ("[W]here the discharger has not adequately disclosed the nature of its discharges to permit authorities, and as a result thereof the permit authorities are unaware that unlisted pollutants are being discharged, the discharge of unlisted pollutants has been held to be outside the scope of the permit.").
[190] EPA's PFAS NPDES Guidance, *supra* note 2 at 2.
[191] *See In re Ketchikan*, 1998 WL 248964 at *11; *Piney Run*, 268 F.3d. at 268 (emphasis added); *see also* Tenn. Dep't of Env't and Conservation, NPDES Permit NO. TN0002330 (2020), Holliston Holdings, LLC, Addendum to

that did not disclose PFAS in their enforcement priorities by bringing enforcement actions against them, urging states to do so, or, at minimum, issuing notices of violation making clear that the facility cannot release undisclosed and unpermitted PFAS.

Relevant to the point on unlawful discharges, although a handful of permits have included monitoring requirements for PFAS, the inclusion of PFAS monitoring in a permit does not make undisclosed discharges lawful, or less of a threat. First, PFAS are still being discharged into local waterways, threatening downstream communities and the environment. Second, post-permit monitoring does not make otherwise undisclosed discharges lawful, nor does it grant a permittee protection under the permit shield. This is because monitoring does not provide EPA or states with the information necessary to understand what the facility proposes to discharge and whether the discharge, including the type, quantity, and frequency, constitutes a significant threat to the environment at the time the agency is drafting the permit.[192] In order for a discharge to come into the reasonable contemplation of an agency, the discharge must be adequately disclosed in the permit application process.[193] Without pre-permit disclosures, it would be impossible for permitting agencies to conduct the necessary technology- and water quality-based effluent limit assessment.[194] Because these discharges continue to be unlawful, EPA cannot exclude these recently-permitted facilities from the scope of its enforcement priorities.

At the very least, EPA and delegated states must ensure recently permitted facilities amend their applications to disclose PFAS to permitting agencies to protect communities from unnecessary PFAS pollution. This will in turn allow agencies to modify NPDES permits, as necessary. Indeed, EPA's PFAS NPDES Guidance contemplates permit modifications for such facilities.[195] In addition, if EPA or states determine that these recently permitted facilities are in fact discharging PFAS, EPA or states must modify the applicable NPDES permit to address such discharges.[196] The Clean Water Act anticipates modifications to occur when "the level of discharge of *any* pollutant which is not limited in the permit exceeds the level which can be achieved by the technology-based treatment requirements."[197] States and the EPA should request

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Rationale, at 37, Attachment 72 ("The facility's application did not report any forms of PFAS as chemicals that there was the potential to discharge. The permittee has no permit shield for the discharge of PFAS compounds because no such chemicals were disclosed in the permit application or otherwise…").

[192] *Piney Run*, 268 F.3d at 268 (pollutants must be disclosed and "within the reasonable contemplation of the permitting authority *during the permit application process*" (emphasis added)); *S. Appalachian Mountain Stewards v. A&G Coal Corp.*, 758 F.3d 560, 565 (4th Cir. 2014) (permit shield only applies when "(1) the permit holder complies . . . with the Clean Water Act's disclosure requirements and (2) the permit holder does not make a discharge of pollutants that was not within the reasonable contemplation of the permitting authority *at the time the permit was issued*." (citation and quotations omitted, emphasis added)); *see also* U.S. Env't Prot. Agency, Central Tenets of the NPDES Permitting Program 6, Attachment 73 (explaining that monitoring cannot be used in lieu of required permit limits).

[193] *S. Appalachian*, 758 F.3d at 569 (stating that an agency's general awareness of pollution does not replace a permittee's disclosure requirements and finding that because a permittee failed to disclose certain pollution, the court did not need to reach the next step and address whether the pollution was reasonably contemplated by the agency).

[194] *Piney Run*, 268 F.3d at 668 (noting that "the permitting scheme is dependent on the permitting authority being able to judge whether the discharge of a particular pollutant constitutes a significant threat to the environment").

[195] EPA's PFAS NPDES Guidance, *supra* note 2 at 2.

[196] 40 C.F.R. § 122.62 (a)(11).

[197] *Id.* (emphasis added).

PFAS data from facilities with active NPDES permits in order to determine whether PFAS limits or other conditions are necessary to protect downstream communities and the environment. If that data shows that the facility is releasing PFAS, the permit must be modified. This is critical to ensuring PFAS discharges are effectively and equitably addressed.

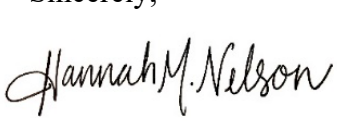
VI. Conclusion.

We recognize and acknowledge the steps EPA has taken to address PFAS across our country. As laid out in detail above, every day, PFAS end up in our environment, drinking water, and food products through discharges into our rivers, streams, lakes, and wastewater plants. This contamination has been flowing for decades, and EPA and delegated states have the authority, the tools, and the obligation to turn off the spigot and stop the spread of toxic pollution at the source. Simple enforcement efforts like (1) mandating use of the Clean Water Act's existing pretreatment program to control industrial discharges into wastewater plants, (2) addressing PFAS from facilities that use PFAS, and (3) amending current permits to address newly discovered pollution, will make a significant impact on reducing the harm our communities face.

Our states and municipalities are waiting to see how EPA acts. EPA must make clear that following the requirements in the Clean Water Act is not optional—across the nation, states and towns should be acting *now* to keep PFAS out of our environment. We need national enforcement of these requirements because without it, even if some states and towns begin to follow the law, industries will relocate to areas without strict controls, resulting in a race to the bottom that will only overburden communities already suffering from environmental injustice. The development of EPA's National Enforcement and Compliance Initiatives for Fiscal Years 2024-2027 is the perfect opportunity for the agency to establish a meaningful program of pollution reduction and make real change for our communities.

Thank you for considering these comments. Please contact us using the information below if you have any questions regarding this letter.

Sincerely,



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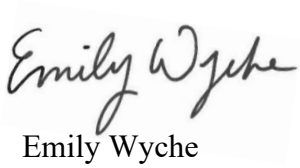

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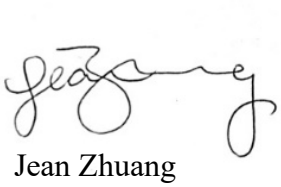

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