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**Via Email and [www.regulations.gov](http://www.regulations.gov)**

Mr. Bruno Pigott  
Principal Deputy Assistant Administrator,  
Office of Water  
Mail Code 4303T  
United States Environmental Protection  
Agency  
1200 Pennsylvania Avenue NW  
Washington, DC 20460  
bruno.pigott@epa.gov

Ms. Doruntinë Rexhepi  
Engineering and Analysis Division, Office  
of Water  
Mail Code 4303T  
United States Environmental Protection  
Agency  
1200 Pennsylvania Avenue NW  
Washington, DC 20460  
rexhepi.doruntine@epa.gov

**Re: Comments on Preliminary Effluent Guidelines Program Plan 16,  
Docket ID No. EPA-HQ-OW-2024-0158**

Dear Mr. Pigott and Ms. Rexhepi:

The Southern Environmental Law Center and the 75 organizations listed below offer the following comments on the United States Environmental Protection Agency's Preliminary Effluent Guidelines Program Plan 16.<sup>1</sup>

Alabama Rivers Alliance	Congaree Riverkeeper
Allegheny-Blue Ridge Alliance	Coosa Riverkeeper
American Rivers	CRPA
Amigos Bravos	Dan Riverkeeper
Bayou City Waterkeeper	Defend Our Health
Birds Georgia	Earth Ethics, Inc.
Black Warrior Riverkeeper	Earthjustice
Blue Ridge Environmental Defense League	Environment America Research & Policy Center
Cahaba Riverkeeper	Environment Georgia Research & Policy Center
California Environmental Voters	Environment North Carolina
Cape Fear River Watch	Environment Texas Research and Policy Center
Center for Biological Diversity	Environmental Integrity Project
Center for Environmental Health	Environmental Justice Community Action Network (EJCAN)
Charleston Waterkeeper	Environmental Law & Policy Center
Choctawhatchee Riverkeeper	Environmental Working Group
Clean Cape Fear	Food & Water Watch
Clean Water Action	
Clean Wisconsin	
Coastal Carolina Riverwatch	

<sup>1</sup> Preliminary Effluent Guidelines Program Plan 16, 89 Fed. Reg. 102,893 (Dec. 18, 2024).

For Love of Water (FLOW)	North Carolina NAACP
Freshwater Future	Ogeechee Riverkeeper
Friends of the Reedy River	Ohio River Foundation
Friends of the Rivers of Virginia (FORVA)	Potomac Riverkeeper Network
Georgia Interfaith Power and Light	River Guardian Foundation
Great Egg Harbor Watershed Association	River Network
Harpeth Conservancy	Savannah Riverkeeper
Haw River Assembly	South Carolina Coastal Conservation League
Jackson Kayak	Sowing Seeds Outside the Walls
Lake Erie Waterkeeper	Surfrider Foundation
Lake Watch of Lake Martin	Surfrider Foundation Cape Fear Chapter
Latino Farmers & Ranchers International, Inc.	Tennessee Environmental Council
Minnesota Center for Environmental Advocacy	Tennessee Riverkeeper
MountainTrue	Tennessee Scenic River Association
National Wildlife Federation	The 6th Branch
Natural Resources Defense Council	Totier Creek Watershed Association
NC Conservation Network	Virginia Conservation Network
NC League of Conservation Voters	Waterkeeper Alliance
North American Climate, Conservation and Environment (NACCE)	Waterkeepers Chesapeake
North Carolina Coastal Federation	Waterspirit

**I. Introduction**

The Biden-Harris administration has taken significant steps in protecting communities from the burdens of per- and polyfluoroalkyl (“PFAS”) by adopting rules limiting the concentrations of certain PFAS allowed in drinking water and listing two PFAS as hazardous substances under the Nation’s Superfund law. While efforts like these are important for addressing existing contamination, EPA must now turn its focus toward preventing industries from continuing to release PFAS chemicals. EPA must also ensure its landfill effluent limitation guidelines are informed by the newest information on PFAS in landfill leachate and do not exclude key wastewater pollution pathways by focusing only on leachate. Unfortunately, the PFAS-specific actions set forth in Preliminary Plan 16 are unreasonably delayed and fall short in protecting communities, including our most overburdened populations. EPA must do more.

In addition to continuing its critical work to address PFAS pollution, EPA must also work expeditiously to address ongoing and harmful pollution from Concentrated Animal Feeding Operations (“CAFOs”), which are polluting water resources and air quality, leading to sickness and even death for nearby residents, and exacerbating environmental injustices across the country. We urge EPA to complete its detailed study of its CAFO effluent limitation guidelines as quickly as possible and move forward with new robust guidelines that will better protect water resources and human health.

## **II. EPA must require industries to control their PFAS pollution as quickly as possible—Preliminary Plan 16 does not do that.**

As mentioned, EPA has taken important steps towards protecting communities from PFAS pollution. The agency has designated perfluorooctanoic acid (“PFOA”) and perfluorooctane sulfonic acid (“PFOS”) as hazardous substances under the Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA” or “Superfund”),<sup>2</sup> an essential way of holding polluters accountable. In addition, EPA established the first ever drinking water standards for six PFAS chemicals.<sup>3</sup> Despite these actions, industries continue to release PFAS into our air, water, and drinking water sources. To protect our communities, EPA must now focus on requiring industries to stop PFAS pollution at the source. Given that these chemicals are dangerous at incredibly low concentrations, as well as highly persistent,<sup>4</sup> it is essential that EPA expedite, strengthen, and broaden its plan to develop effluent limitation guidelines (“ELGs”) for PFAS polluters.

### **a. Industries must control and treat their PFAS pollution.**

Controlling industrial sources of PFAS is essential for two primary reasons. First, it ensures that impacted communities do not alone shoulder the burden of cleaning up their drinking water. And second, it ensures that communities are protected from the thousands of PFAS that are not covered by EPA’s drinking water standards.

If PFAS are not removed by the industries that release (and profit off) them, then the burden of cleanup falls entirely on downstream utilities and communities. EPA has estimated that across the country, approximately 100 million people have PFAS in their drinking water.<sup>5</sup> In North Carolina alone, the drinking water for an estimated 3.5 million people exceeds EPA’s drinking water standards,<sup>6</sup> costing the state \$209 million a year in health impacts like cardiovascular diseases, renal cell carcinoma cases, and neonatal impacts.<sup>7</sup> In addition to these health expenses, families face the costs of installing water treatment technology in their homes and suffer from decreased property values,<sup>8</sup> all due to the continued release of PFAS.

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<sup>2</sup> Designation of Perfluorooctanoic Acid (PFOA) and Perfluorooctanesulfonic Acid (PFOS) as CERCLA Hazardous Substances, 89 Fed. Reg. 39,124, 39,124 (May 8, 2024) (to be codified at 40 C.F.R. pt. 302).

<sup>3</sup> PFAS National Primary Drinking Water Regulation, 89 Fed. Reg. 32,532, 32,532 (Apr. 26, 2024) (setting drinking water standards and also a maximum contaminant level goal of 0 ppt for PFOA and PFOS in recognition of the negative health impacts associated with those chemicals) (to be codified at 40 C.F.R. pts. 141, 142).

<sup>4</sup> See PFAS National Primary Drinking Water Regulation, 89 Fed. Reg. 32532, 32532 (Apr. 26, 2024) (to be codified at 40 C.F.R. pts. 141, 142); EPA, *Our Current Understanding of the Human Health and Environmental Risks of PFAS* (Mar. 16, 2022), <https://perma.cc/V6PX-2PNK>; Agency for Toxic Substances & Disease Registry, *What Are PFAS?* (Jan. 18, 2024), <https://perma.cc/M2XX-LT52>; Carol F. Kwiatkowski et al., *Scientific Basis for Managing PFAS as a Chemical Class*, 7 *Env’t Sci. & Tech. Letters* 535 (2020), <https://perma.cc/Z28W-7KVQ>.

<sup>5</sup> EPA Press Release, *Biden-Harris Administration Finalizes First-Ever National Drinking Water Standard to Protect 100M People from PFAS Pollution* (Apr. 10, 2024) (estimating number of people who are exposed to people in their drinking water who would benefit from EPA’s PFAS drinking water standards), <https://perma.cc/PZG5-7Z9L>.

<sup>6</sup> N.C. Dep’t Env’t Quality, *Fiscal Note for Adoption Amended of 15A NCAC 02B .0200 and 15A NCAC 02B .0400* at 2, 8 (July 10, 2024), <https://perma.cc/R9TR-WXJU>, Attachment 1 [hereinafter “NC PFAS Standards RIA”].

<sup>7</sup> NC PFAS Standards RIA, *supra* note 6, at 47.

<sup>8</sup> NC PFAS Standards RIA, *supra* note 6, at 50–52.

At the utility level, the numbers are equally as extreme. Researchers estimate that it could cost drinking water utilities across the country as much as \$55 billion to comply with EPA’s drinking water standards.<sup>9</sup> In North Carolina, many utilities have begun the process of installing treatment for PFAS—carrying the cost of pollution they did not create. For example, the Cape Fear Public Utility Authority, which serves over 200,000 customers in North Carolina, discovered in summer 2017 that PFAS from Chemours’ Fayetteville Works Facility were in its finished drinking water. One of the PFAS, GenX, reached levels of up to 1,100 parts per trillion (“ppt”) in the treated drinking water, more than a hundred times the EPA’s health advisory level.<sup>10</sup>

In September 2017, Chemours agreed to stop pumping its PFAS-contaminated wastewater directly into the Cape Fear River, the source of Cape Fear Public Utility Authority’s water.<sup>11</sup> However, PFAS levels in the river and in the drinking water utility’s finished drinking water have persisted from contamination in the soil and groundwater at Chemours’ facility,<sup>12</sup> in sediment in the Cape Fear River and its tributaries,<sup>13</sup> and possibly even in bacteria that coat the inside of Cape Fear Public Utility Authority’s pipes which pump its treated drinking water.<sup>14</sup> The Cape Fear Public Utility Authority has spent \$43 million to add granular activated carbon filters to remove PFAS from Chemours at its water treatment plant<sup>15</sup> and anticipates an additional \$5 million annually for maintenance.<sup>16</sup> Brunswick County, North Carolina similarly spent \$170 million to install a low-pressure reverse osmosis system to remove PFAS at its water treatment plant.<sup>17</sup> Brunswick County estimates it will cost an additional \$3 million per year to maintain its plant.<sup>18</sup> Pittsboro, North Carolina, a town with an annual budget of less than \$10 million,<sup>19</sup> paid \$3.5 million to install carbon filters to remove PFAS from the city’s drinking water and estimated it would pay up to \$750,000 per year to maintain them.<sup>20</sup> Citing ongoing water quality

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<sup>9</sup> See Alison L. Ling, *Estimated Scale of Costs to Remove PFAS From the Environment at Current Emission Rates*, 918 *Sci. Total Env’t* 170647 (Mar. 25, 2024),

<https://www.sciencedirect.com/science/article/abs/pii/S0048969724007861#:~:text=For%20example%2C%20the%20Bipartisan%20Infrastructure,and%20Veatch%2C%202023%3B%20U.S.%20EPA.>

<sup>10</sup> Cape Fear Pub. Util. Auth., *GenX Surface Water Sampling Results* 3 (2017), <https://perma.cc/KJ3Z-XTY4>.

<sup>11</sup> Consent Order, *North Carolina v. The Chemours Company FC, LLC*, 17 CVS 580 (Bladen County Super. Ct., Feb. 25, 2019), at ¶ 10, <https://perma.cc/S2ZA-UGF2>, Attachment 2 [hereinafter “Chemours Consent Order”].

<sup>12</sup> See generally Geosyntec Consultants, *Cape Fear River PFAS Loading Reduction Plan* (Nov. 2019), <https://perma.cc/DR45-JXDJ>.

<sup>13</sup> Univ. of N.C. Wilmington, *Report to the Environmental Review Commission from the University of North Carolina at Wilmington Regarding the Implementation of Section 20(a)(2) of House Bill 56 (S.L. 2017-209)*, <https://perma.cc/MP2J-APY5>.

<sup>14</sup> Cheryl Hogue, *What’s GenX Still Doing in the Water Downstream of a Chemours Plant*, *Chemical & Eng’g News* (Feb. 12, 2018), <https://perma.cc/NS7Z-TDCR>.

<sup>15</sup> Cape Fear Pub. Util. Auth., *CFPUA’s Legal Action Against Chemours and Dupont*, <https://perma.cc/4GK8-KDEL>.

<sup>16</sup> Cape Fear Pub. Util. Auth., *Sweeney Treatment Enhancements Project* (document pulled June 5, 2023), <https://perma.cc/RD4V-N5M9>.

<sup>17</sup> Amy Willis, *Recent Testing Shows Brunswick County Water Contains PFAS Not Monitored by EPA*, *Port City Daily* (Apr. 14, 2023), <https://perma.cc/DP57-QTAK>.

<sup>18</sup> CDM Smith, *Brunswick County Moves Swiftly to Treat PFAS Compounds* (July 24, 2023), <https://perma.cc/4DZB-EDF9>.

<sup>19</sup> Town of Pittsboro, *Adopted Budget, Fiscal Year 2022-2023* at 4 (2022), <https://perma.cc/2LQB-8F57>.

<sup>20</sup> Lisa Sorg, *Pittsboro Sues 20 Companies, Including 3M, Chemours, DuPont over PFAS Contamination in Town Drinking Water*, *NC Newsline* (Jan. 27, 2023), <https://perma.cc/K754-US4E>; Adam Wagner, *Pittsboro Sues Forever Chemical, Firefighting Foam Manufacturers over Water Pollution*, *The News & Observer* (Jan. 29, 2023), <https://perma.cc/59DQ-NUXR>.

concerns, Pittsboro ultimately had to source its drinking water from another North Carolina city.<sup>21</sup>

Communities in other states are facing similar financial burdens from industrial PFAS pollution. The city of Rome, Georgia, for example, is currently in the process of commissioning and installing a nearly \$100 million reverse osmosis treatment system.<sup>22</sup> Columbia, South Carolina has analyzed its treatment options and determined that installing PFAS filters for its public water supply could cost \$200 million, plus \$20 million annually.<sup>23</sup> This would double Columbia's current water treatment costs.<sup>24</sup>

The cost of treating PFAS at a community's drinking water utility is often unfairly passed on to ratepayers. From the examples discussed above, the Cape Fear Public Utility Authority projects that its customers—who have already been harmed by Chemours' pollution for decades—will face a 14 percent increase in their water bills because of the actions the utility must now take to combat industrial PFAS pollution.<sup>25</sup> Brunswick County absorbed some of the cost of its treatment system, but its water customers still saw a large increase in their water bills to finance the treatment project.<sup>26</sup> Prior to the city's decision to source its drinking water from a neighboring city, the Pittsboro County Commission proposed a 15 percent rate hike to pay for Pittsboro's PFAS treatment technology.<sup>27</sup> And water rates in Rome, Georgia are projected to increase 9 percent for each of the next four years to pay for Rome's treatment system.<sup>28</sup>

In addition to affecting public water supplies and their ratepayers, ongoing PFAS contamination threatens those who rely on groundwater for drinking, irrigation, and farming. Sludge produced by wastewater treatment plants is often sprayed onto farmland, threatening groundwater, as the chemicals can easily seep through the surface of the land and into aquifers<sup>29</sup>—some of which may serve as drinking water sources for nearby residents. Contaminated groundwater and soils also pose a risk to crops that grow on or near the fields where sludge has been applied.<sup>30</sup> Indeed, studies across the country have shown that the land

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<sup>21</sup> Town of Pittsboro, *Merger*, <https://perma.cc/9K6A-M238>.

<sup>22</sup> Drew Kann, *Rome is Grappling with Toxic 'Forever Chemicals' Fouling Waterways*, *The Atlanta J. Const.* (Oct. 14, 2022), <https://perma.cc/KAG2-6LY>; John Bailey, *Water Facility to Remove Toxic Chemicals from Rome's Water Supply to Be Located on Riverside Parkway*, *Rome News Tribune* (May 5, 2023), <https://perma.cc/T9KL-4M8G>.

<sup>23</sup> Skylar Laird, *Columbia Water Customers Could Pay up to \$200 Million to Meet New EPA Chemical Rules*, *The Columbia Post & Courier* (Mar. 25, 2023), <https://perma.cc/XES2-MLCB>.

<sup>24</sup> *Id.*

<sup>25</sup> EPA, *Combined Presentations from EPA PFAS Community Engagement in Fayetteville, NC*, at slide 78 (Aug. 14, 2018), <https://perma.cc/JC9H-T5VE>.

<sup>26</sup> Brunswick Cnty., *Frequently Asked Questions About the Brunswick County FY22 Approved Water Rates, Wholesale Water Rates, and Northwest Water Treatment Plant Upgrades* (Jan. 11, 2022), <https://perma.cc/J4R9-NL4C>.

<sup>27</sup> Taylor Heeden, *Pittsboro Commissioners Hold Second Public Hearing for 2022-23 Budget*, *Chapelboro* (May 14, 2022), <https://perma.cc/K5V2-V9MY>.

<sup>28</sup> Kann, *supra* note 22.

<sup>29</sup> See Gwynn Johnson, *PFAS in Soil and Groundwater Following Historical Land Application of Biosolids*, 211 *Water Rsch.* 118035 (2022), <https://perma.cc/PD8U-592P>.

<sup>30</sup> Jared Hayes, *EWG: 'Forever Chemicals' May Taint Nearly 20 Million Cropland Acres*, *Env't Working Grp.* (Apr. 14, 2022), <https://perma.cc/85R3-T4RB>; 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), <https://perma.cc/RC4H-DQJR>.

application of sludge has led to high levels of PFAS in produce, cattle, milk, and other agricultural products.<sup>31</sup> Families and farmers that rely on that land for their food and livelihood unjustly bear the burden of this contamination.

It is far more cost effective to control PFAS pollution at the industrial source,<sup>32</sup> and doing so can save our communities hundreds of millions of dollars annually in health costs, water treatment expenses, and decreases in property values (among other things).<sup>33</sup> What is currently happening—communities being forced to shoulder the costs of toxic pollution—is not fair, feasible, or effective. EPA must instead require industries to control their pollution at the source before it contaminates our drinking water.

Controlling industrial sources is also important for ensuring that communities are protected from the thousands of PFAS chemicals that are currently released into the country’s rivers and drinking water sources—not just the six PFAS covered by EPA’s drinking water standards. EPA’s preliminary plan alone identifies a slew of PFAS compounds released by PFAS processors (facilities that receive PFAS feedstocks to produce goods or intermediate products) that are not covered by the agency’s drinking water standards, including perfluorobutanoic acid (“PFBA”), perfluoropentanoic acid (“PFPeA”), and perfluorohexanoic acid (“PFHxA”).<sup>34</sup> Our collective experience shows that without comprehensive regulation, manufacturers will substitute longer-chain PFAS with shorter-chain and novel PFAS.<sup>35</sup> This “whack-a-mole” approach to regulation fails to protect our communities from ongoing contamination—jeopardizing the health and well-being of innocent people while prioritizing industry profits. EPA must require industrial sources to control their pollution *before* it is released into our environment. That is the only solution to this ongoing problem.

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<sup>31</sup> See, e.g., Hiroko Tabuchi, *Something’s Poisoning America’s Land. Farmers Fear ‘Forever’ Chemicals*, New York Times (Aug. 31, 2024), <https://perma.cc/2ADL-HYMV>; Perkins, *supra* note 30; Susan Cosier, *America’s Dairyland May Have a PFAS Problem*, Nat. Res. Def. Council (Oct. 11, 2019), <https://perma.cc/5V38-M6YM>; Kris Maher, *Maine Farmers Dump Milk, Lose Crops as Forever Chemicals Taint Soil*, Wall St. J. (July 4, 2020), <https://perma.cc/2JD3-QNET>; Kevin Miller, *‘Complete Crisis’ as PFAS Discovery Upends Life and Livelihood of Young Maine Farming Family*, Maine Pub. (Feb. 7, 2022), <https://perma.cc/ZYY7-LAWK>; Garret Ellison, *Advisory Warns of PFAS in Beef From Michigan Cattle Farm*, MLive (Jan. 28, 2022), <https://perma.cc/DAN8-7TLH>.

<sup>32</sup> NC PFAS Standards RIA, *supra* note 6, at 58.

<sup>33</sup> See, e.g., NC PFAS Standards RIA, *supra* note 6.

<sup>34</sup> EPA, *Preliminary Effluent Guidelines Program Plan 16* at 31 (Dec. 2024), <https://perma.cc/7DVQ-FMPL> [hereinafter “Preliminary Plan 16”].

<sup>35</sup> Interstate Tech. Regulatory Council, *History and Use of Per- and Polyfluoroalkyl Substances (PFAS) Found in the Environment* (Sept. 2023), <https://perma.cc/JEP8-BSVE>.

**b. EPA has not done enough to control industrial sources of PFAS through effluent limitation guidelines and EPA continues this harmful pattern in Preliminary Plan 16.**

As EPA recognized in its 2021 PFAS Roadmap, effluent limitation guidelines “are a powerful tool to limit pollutants from entering the nation’s waters.”<sup>36</sup> In its Roadmap, EPA announced its plan to use this tool to “restrict PFAS discharges from multiple industrial categories,” including but not limited to PFAS manufacturers and industries that use PFAS in electroplating and metal finishing.<sup>37</sup> In fact, the agency stated in its 2021 Roadmap that it already had “the data to do so.”<sup>38</sup> Now, nearly four years later, the agency has not yet released *any* final or proposed rulemakings to control PFAS from any industrial categories—even for the organic chemicals, plastics and synthetic fibers (“OCPSF”) industrial category, which includes facilities that manufacture and use PFAS. These facilities, owned by companies like Chemours, 3M, and Daikin, have devastated communities throughout the country.<sup>39</sup> EPA has estimated that the OCPSF industrial facilities in the United States “manufacture or use at least 118 PFAS and produce 85,000 tons of [PFAS-containing] fluoropolymers annually.”<sup>40</sup> Not only that, EPA has acknowledged that “PFAS manufacturers and formulators have few monitoring requirements, effluent limitations, or pretreatment standards for PFAS in their wastewater discharge permits and *may continue to discharge PFAS to [publicly owned treatment works] or surface waters unless effective controls are in place.*”<sup>41</sup> These industries do not have limits or pretreatment standards in their permits because EPA, states, and other permitting agencies have failed to use the tools available to stop these discharges.

Instead of acting aggressively to stop industrial sources through ELGs, EPA has proposed in its Preliminary Plan 16 to continue *studying* industries that are known PFAS polluters. For instance, EPA has decided to continue studying pollution from PFAS processors, despite already determining that they are significant sources. EPA has documented individual PFAS concentrations reaching 177,000 ppt from one of six PFAS processors that have been evaluated.<sup>42</sup> Given that these facilities are releasing numerous other PFAS,<sup>43</sup> total PFAS concentrations are undoubtedly far higher. It is unacceptable for EPA to delay action on controlling these discharges.

As another example, EPA proposes to continue studying pollution from textile mills, despite acknowledging that: (1) “PFAS have been and continue to be used by textile and carpet manufacturers,” (2) PFAS are not only released by industry directly into rivers, but also released

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<sup>36</sup> EPA, *PFAS Strategic Roadmap: EPA’s Commitments to Action 2021-2024* at 13 (Oct. 2021), <https://perma.cc/RVX9-RRUW>.

<sup>37</sup> *Id.* at 13.

<sup>38</sup> *Id.*

<sup>39</sup> Matthew Prenskey, *NC Residents Face Risk of Health Issues from GenX, PFAS Exposure, New Research Shows*, *Wilmington StarNews* (Oct. 19, 2022), <https://perma.cc/8Q6R-2JV>; Cheryl Hogue, *3M Admits to Unlawful Release of PFAS in Alabama*, *Chem. & Eng’g News* (June 25, 2019), <https://perma.cc/325Z-9BNW>.

<sup>40</sup> EPA, *Multi-Industry Per- and Polyfluoroalkyl Substances (PFAS) Study – 2021 Preliminary Report 5-10* (Sept. 2021), <https://perma.cc/26TN-WXEF> [hereinafter “Multi-Industry Study”] (emphasis added).

<sup>41</sup> *Id.*

<sup>42</sup> Preliminary Plan 16, *supra* note 34, at 30.

<sup>43</sup> *Id.* at 30.

by mills to publicly owned treatment works (also known as municipal wastewater treatment plants) that cannot remove the chemicals, and (3) PFAS will continue to be used by the industry into the future.<sup>44</sup> Even more, the textile industry has repeatedly refused to cooperate with EPA regarding its PFAS discharges.<sup>45</sup> Instead of standing firm and proposing an ELG to address PFAS from textile mills, EPA is delaying critical action in order to continue to study this known PFAS-polluting industry.

EPA's decision to continue studying a public health crisis that is well-understood, rather than adopting ELGs that would begin to resolve the crisis, has serious impacts on communities. In North Carolina, a textile facility owned and operated by Elevate Textiles has released extremely high levels of PFAS into the city of Burlington's wastewater treatment plant.<sup>46</sup> Levels of PFAS in Elevate's discharge have surpassed *10.8 million ppt*<sup>47</sup>—a devastating number considering EPA has found that certain PFAS can be harmful at levels as low as 0.004 ppt.<sup>48</sup> Burlington's wastewater plant cannot remove PFAS, so Elevate's chemical pollution—if not controlled—is released from the city's discharge into rivers and downstream drinking water supplies and spread onto nearby fields through contaminated sludge.<sup>49</sup> This practice threatens the drinking water for downstream communities. Largely due to Elevate's pollution, Pittsboro, North Carolina has had PFAS in its drinking water supply for years. At times, the PFAS in Pittsboro's drinking water exceeded 1,200 ppt.<sup>50</sup>

In Georgia, similar devastation has occurred from textile mills. For example, Mount Vernon Mills, a major textile manufacturer in Trion, Georgia, released PFAS into the City of Trion's wastewater treatment plant for decades. Because Trion's wastewater plant did not have the technology to remove PFAS, PFAS from Mount Vernon Mills ended up in the city's discharge and sludge, which was spread throughout the Chattooga River watershed—affecting

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<sup>44</sup> *Id.* at 30.

<sup>45</sup> EPA, *Effluent Guidelines Program Plan 15* at 6-7 (Jan. 2023), <https://perma.cc/P26V-9GMQ> [hereinafter "Program Plan 15"] ("EPA attempted to meet with representatives of two industry trade associations...and their member companies to collect, on a voluntary basis, information on the use and discharge of PFAS by textile mills; however, EPA has been unsuccessful in arranging such a meeting."); Multi-Industry Study, *supra* note 40, at 8-4 ("EPA attempted to meet with representatives of industry trade associations and companies to collect, on a voluntary basis, information on the use and discharge of PFAS at textile and carpet mills. Ultimately, EPA did not meet or receive additional information from these entities.").

<sup>46</sup> See Isaac Groves, *Burlington's Water Now Has More Toxic PFAS 'Forever Chemicals' than EPA Recommends*, *The Burlington Times News* (July 31, 2022); see also Lisa Sorg, *Burlington Will Curb PFAS Discharges, Per Legal Settlement with Haw River Assembly*, *N.C. Newsline* (Aug. 2, 2023), <https://perma.cc/4WYH-KVE3>.

<sup>47</sup> Env't Analytical Chem. Lab., *PFAS Analytical Data from Sampling of the City of Burlington's Wastewater Treatment Plant Influent And Effluent And Elevate Textiles' Wastewater Discharges*, Duke Univ., <https://perma.cc/46YY-A7GG>, Attachment 3. The Environmental Analytical Chemistry Laboratory at Duke University—on behalf of Haw River Assembly and the Southern Environmental Law Center—conducted Targeted and Total Oxidizable Precursor (TOP) Assay analyses of industrial sources releasing wastewater into Burlington's wastewater treatment plant, including Elevate Textiles.

<sup>48</sup> Lifetime Drinking Water Health Advisories for Four Perfluoroalkyl Substances, 87 Fed. Reg. 36848, 36,848 (June 21, 2022).

<sup>49</sup> SELC, *Notice of Intent to Sue the City of Burlington for Violations of the Clean Water Act and the Resource Conservation and Recovery Act* (Nov. 7, 2019), <https://perma.cc/454Y-3VDU>, Attachment 4.

<sup>50</sup> Greg Barnes, *PFAS Shows Up in Haw River, Pittsboro Water, But Gets Limited Local Attention*, *N.C. Health News* (July 30, 2019), <https://perma.cc/663W-C5EW>.



communities that rely on the watershed for drinking water.<sup>51</sup> Not only did Trion’s effluent flow into downstream drinking water supplies for Centre and Gadsden, Alabama,<sup>52</sup> the city’s sludge fields polluted drinking water for the city of Summerville.<sup>53</sup> In fact, Trion’s sludge at one point had PFAS levels as high as 1,641,470 ppt.<sup>54</sup>

These are just a few of the communities that have been exposed to harmful PFAS pollution that could have been controlled by tools like ELGs. EPA has the information it needs to develop ELGs for multiple industries, and it must not delay action any longer.

**c. EPA must expedite and broaden its plan to develop ELGs for PFAS polluters.**

Industrial PFAS discharges can be avoided. As EPA has stated “technologies are able to remove more than 99 percent of some PFAS in industrial wastewater, or completely eliminate the discharge of wastewater containing PFAS.”<sup>55</sup> The use of these treatment technologies can be compelled if EPA develops ELGs for the industries that use and release PFAS. Although states have existing tools to control PFAS discharges under the Clean Water Act,<sup>56</sup> developing effluent limitation guidelines for PFAS would provide regulatory certainty across the country. It would ensure that industries throughout all fifty states control their pollution to a level achievable by available technologies. And it would protect communities across the board—including those living in states that are not using available tools to prevent PFAS pollution. This is essential given that some states—like North Carolina—have met resistance towards controlling industrial PFAS discharges.<sup>57</sup>

First, EPA should begin rulemaking for all industry categories that are significant sources of PFAS. In particular, EPA should immediately propose ELGs for PFAS manufacturers, as well as for PFAS formulators and processors. EPA has already developed the record demonstrating that these industries are releasing dangerous and avoidable PFAS pollution into the country’s waters.<sup>58</sup> Further, the agency should not delay rulemaking for metal finishing, electroplating, and textile mills. EPA may require any mandatory surveys necessary to develop ELGs but must begin rulemaking in the meantime and collect data throughout the rulemaking process.

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<sup>51</sup> See Ga. Env’t Prot. Div., Consent Order EPD-WP-8894 (Apr. 13, 2020), at 2, <https://perma.cc/3RM8-2JWT>, Attachment 5 [hereinafter “Trion Consent Order”].

<sup>52</sup> See Nathan Barlet, *LSASD Project ID: 19-0253, Final Report: Phase 2: Prioritization of PFAS Contributions to Weiss Lake* 17, 26, fig. 9 (Sept. 10, 2019), <https://perma.cc/VU56-RBSX>.

<sup>53</sup> See Trion Consent Order, *supra* note 51, at 4–5.

<sup>54</sup> Enthalpy Analytical, LLC – Ultratrace, *Town of Trion: Analytical Report 1020-725* at 7 (Oct. 29, 2020), <https://perma.cc/HSH5-M7VQ> (reported in ng/g).

<sup>55</sup> Multi-Industry Study, *supra* note 40, at 5-10.

<sup>56</sup> 40 C.F.R. § 125.3(2)(i)(B); *see also* 33 U.S.C. § 1342(a)(1)(B).

<sup>57</sup> Adam Wagner, *Republicans Now Enforcing NC Water Rules Are Delaying Efforts to Limit PFAS, 1,4-Dioxane*, *The News & Observer* (May 8, 2024), <https://perma.cc/5478-DEBX>.

<sup>58</sup> See EPA, Supporting & Related Material for EPA Docket, Clean Water Act Effluent Limitations Guidelines and Standards for the Organic Chemicals, Plastics and Synthetic Fibers Point Source Category, Advance Notice of Proposed Rulemaking, EPA-HQ-OW-2020-0582, <https://perma.cc/H6WS-B3FE>; Preliminary Plan 16, *supra* note 34, at 31; Multi-Industry Study, *supra* note 40.

EPA can no longer delay action due to a lack of data.<sup>59</sup> Industries are required disclose any PFAS discharges in their National Pollutant Discharge Elimination System (“NPDES”) permit applications.<sup>60</sup> Enforcing this requirement would provide the agency with the necessary data on PFAS discharges. And while we acknowledge that industries and industry association groups have refused to cooperate when EPA does request data,<sup>61</sup> EPA cannot fold to industry defiance at the expense of communities who will be harmed by these chemicals.

Finally, any rulemaking that EPA pursues must include rigorous pretreatment standards. Industrial PFAS pollution that passes through municipal wastewater treatment plants are a significant source of PFAS—both through the utilities’ direct discharges and sludge.<sup>62</sup> North Carolina has estimated that of the industrial PFAS sources in the state, only 39 of them are likely direct dischargers, whereas 606 of them discharge to wastewater treatment plants.<sup>63</sup> PFAS pollution released by industries to these utilities cannot be ignored. To significantly reduce the levels of PFAS in wastewater plant effluent and sludge, EPA should issue pretreatment standards that require PFAS to be strictly controlled.

**d. In adopting effluent limitation guidelines for landfills, EPA must consider additional data and expand the guidelines to all wastewater discharges, including discharges of contaminated groundwater.**

EPA correctly concludes that landfill PFAS ELGs are warranted, and we support its commitment to propose revised ELGs for landfill leachate discharges in 2027 (or ideally earlier). Indeed, because current leachate treatment technologies are often inadequate to reduce or eliminate PFAS in treated effluent, some estimates show that 750 kilograms of PFAS—a massive amount for a class of compounds that are toxic in quantities so small they are measured

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<sup>59</sup> Program Plan 15, *supra* note 45, at 6-7 (“[H]owever, limited discharge sampling data available indicated that PFAS may be present”); Multi-Industry Study, *supra* note 40, at 2-1 (“EPA determined that further data collection and study were necessary to inform decisions about how best to address industrial PFAS discharges and announced the Multi-Industry PFAS Study.”).

<sup>60</sup> The discharge of a specific pollutant (or group of pollutants) cannot be permitted if it is not disclosed in a NPDES permit application. *See* Consolidated Permit Application Forms for EPA Programs, 45 Fed. Reg. 33,526–31 (May 19, 1980); *Piney Run Pres. Ass’n v. Cnty. Comm’rs of Carroll Cnty., Md.*, 268 F.3d. 255, 265 (4th Cir. 2001).

<sup>61</sup> Program Plan 15, *supra* note 45, at 6-7 (“EPA attempted to meet with representatives of two industry trade associations . . . and their member companies to collect, on a voluntary basis, information on the use and discharge of PFAS by textile mills; however, EPA has been unsuccessful in arranging such a meeting.”); Multi-Industry Study, *supra* note 40, at 5-2 (“EPA contacted industry to seek more information on the list of 256 PFAS reported but did not receive additional information.” . . . “EPA did not receive any additional information from Archroma, Arkema, BASF Corporation, or Solvay.”); *Id.* at 8-4 (“EPA attempted to meet with representatives of industry trade associations and companies to collect, on a voluntary basis, information on the use and discharge of PFAS at textile and carpet mills. Ultimately, EPA did not meet or receive additional information from these entities.”).

<sup>62</sup> Water Res. Div., *Michigan Industrial Pretreatment Program (IPP) PFAS Initiative - Identified Industrial Sources of PFOS to Municipal Wastewater Treatment Plants*, Mich. Dep’t of Env’t, Great Leaks, & Energy (Aug. 2020), <https://perma.cc/ELQ3-VNPNJ>; City of Burlington, N.C., *PFAS/1,4 Dioxane Information* (last visited Jan. 10, 2025), <https://perma.cc/J2KG-DLTP>.

<sup>63</sup> Div. of Water Res., *Fiscal Note for Adoption Amendment of 15A NCAC 02B .0200 and 15A NCAC 02B .0400*, N.C. Dep’t of Env’t Quality (July 10, 2024), <https://perma.cc/P4L6-NME2>, Attachment 6.

in parts per *trillion*—are released into the environment via treated leachate discharges from landfills each year.<sup>64</sup>

However, EPA should also (1) consider new data from North Carolina landfills demonstrating that PFAS concentrations in landfill leachate may be higher than previously believed, and (2) expand the ELGs to cover more than landfill leachate discharges, as many other types of wastewater from landfills are often highly contaminated with PFAS.<sup>65</sup> North Carolina’s largest landfill, the Sampson County Landfill, provides a prime example of how passing up this opportunity to comprehensively control landfill PFAS discharges could spell disaster for overburdened, underserved communities.

In Snow Hill, a predominantly Black, rural community in Eastern North Carolina, residents are exposed to PFAS and other pollution from the Sampson County Landfill.<sup>66</sup> Many nearby residents—like millions of others in North Carolina and more around the country—rely on private drinking water wells.<sup>67</sup> Sampling of drinking water wells near the Landfill uncovered numerous PFAS compounds in many homes throughout Snow Hill.<sup>68</sup> The Landfill also discharges PFAS-contaminated groundwater and stormwater into Bearskin Swamp, which is commonly used for recreation and subsistence fishing and which recharges groundwater for the drinking water wells in the area. The consequences of this ongoing pollution are dire.<sup>69</sup> Residents

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<sup>64</sup> Thabet Tolaymat et al., *A Critical Review of Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) Landfill Disposal in the United States*, 905 *Sci. Total Env’t* 167185 (Sept. 2023), <https://perma.cc/SAG9-K7ES>. Importantly, direct discharges of treated leachate to surface waters are only part of the problem, because the vast majority—nearly three quarters—of landfills send leachate offsite for treatment, and the wastewater treatment plants that receive it are rarely equipped to filter out the high levels of PFAS these wastewater streams contain. See Mert Gokgoz, et al., *Survey on the Current Leachate Treatments of Public Municipal Solid Waste Landfills and the Potential Impacts of Per- and Polyfluoroalkyl Substances in the Eastern and Northwestern United States*, 73 *J. Air & Waste Mgmt. Ass’n* 638-48 (2023), <https://perma.cc/H7SA-HNEJ>; see also Danyi Feng et al., *Environmental, Human Health, and Economic Implications of Landfill Leachate Treatment for Per- and Polyfluoroalkyl Substance Removal*, 289 *J. Env’t Mgmt.* 112558 (July 2021), <https://perma.cc/R8PV-YD4E> (noting that around 62% of leachate in the United States is treated offsite at wastewater treatment plants, but that the treatment technologies these facilities typically use “are generally ineffective in PFAS removal,” with removal efficiencies of, at most, 32.2% and, in some cases, even observing “elevated PFAS concentrations in [wastewater treatment plant] effluent as compared to influent”).

<sup>65</sup> In addition to reviewing the new data, we encourage EPA to expand the data it considers to the maximum extent possible without delaying a proposed rule, as such data is readily available. This is also important because leachate generation, and thus leachate profiles, may vary across different parts of the country due to varying geographic conditions, so EPA’s focus on Minnesota, Michigan, and New Jersey are not necessarily representative of PFAS in landfill leachate in other parts of the country, such as the South or the West. See, e.g., Thabet Tolaymat et al., *A Critical Review of Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) Landfill Disposal in the United States*, 905 *Sci. Total Env’t* 167185 (Sept. 2023), <https://perma.cc/SAG9-K7ES> (conducting meta-analysis of published landfill leachate studies and finding significant variation in the average and range of total PFAS across studies due to multiple factors, “especially rainfall precipitation”).

<sup>66</sup> See, e.g., SELC, *Complaint: Environmental Justice Community Action Network v. GFL Environmental, Inc.* (Aug. 30, 2024), <https://perma.cc/V5KZ-S5WL>, Attachment 7 (explaining how landfill discharges of PFAS-contaminated stormwater and groundwater have polluted surface water and drinking water in Snow Hill).

<sup>67</sup> See generally Michele Okoh, *Forgotten Waters*, 11 *Geo. L. J.* 723 (2023), <https://perma.cc/L8BP-YA84>.

<sup>68</sup> See, e.g., Lisa Sorg, *Homes Near Sampson County Landfill on Bottled Water After PFAS Detections* (Nov. 17, 2023), <https://perma.cc/979L-8GP6>.

<sup>69</sup> See, e.g., Joey Horan, *‘We All Feel Targeted’: Rural N.C. Community Pushes Back Against Landfill, Hog Farms*, *Southerly* (Feb. 3, 2021), <https://perma.cc/7W3H-FMLM> (“[R]esidents fear eating out of their own gardens. They

report that diseases associated with PFAS pollution have become increasingly common. As one Snow Hill community member explained, “[t]here is not a house in this community that has not had a person who has suffered from some type of cancer or kidney failure.”<sup>70</sup> EPA must protect Snow Hill and other communities like it from PFAS pollution from landfills.

**i. EPA should consider new data from North Carolina indicating that PFAS levels in leachate are higher than previously contemplated.**

Following a 2023 directive from the North Carolina Department of Environmental Quality to all landfills in the state to conduct at least two sampling events for PFAS in surface water, groundwater, and leachate, a massive amount of new PFAS landfill data is now available.<sup>71</sup> The results are alarming, and in some cases dwarf the figures contemplated in Preliminary Plan 15.<sup>72</sup> Recent leachate sampling at the Sampson County Landfill, for instance, shows nearly 700,000 ppt of total PFAS,<sup>73</sup> with some individual compounds exceeding the maximum concentrations identified at *any landfill* in EPA’s 2021 study.<sup>74</sup> These results are important because they underscore EPA’s conclusion that landfill leachate is a significant source of PFAS pollution.

But the results are also important because they confirm that, even among the most highly contaminated landfills, leachate “is likely able to be treated by typical PFAS treatment

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buy water from the store to cook with to avoid what emerges from their wells . . .”); Will Atwater, *Sampson County Residents Wary of Landfill’s Methane Plan*, N.C. Health News (Aug. 21, 2023), <https://perma.cc/CW5A-K883> (“For five decades, Snow Hill residents have complained that the landfill has reduced their quality of life. They say the landfill has fouled the air, soil and water. They also blame it for . . . the cancer and other health issues that plague the community.”); Danielle Koonce, *Opinion: Landfill Toxic to Sampson County Residents*, The Fayetteville Observer (Apr. 26, 2021), <https://perma.cc/SAX7-AU2B> (“[C]ommunity members share how they can no longer garden or enjoy the outdoors due to the thick odor and fumes from the landfill. One person shared rumors of a cancer cluster with over six individuals from different houses on the same road experiencing some form of cancer.”); Shelby M. Rimmler et al., *Photovoice Reveals Residents’ Concerns for Air and Water Quality in Industry-Impacted Rural Community*, 20 Int’l J. Env’t Rsch. Pub. Health 5656 (Apr. 2023), <https://perma.cc/LEL5-79RC> (“Residents of the [Snow Hill] community identified the [Sampson] county landfill as the most pressing environmental hazard and threat to the quality of life in their community.”).

<sup>70</sup> See generally Cameron Oglesby, *Waste, Race, and Place*, The Assembly (Jan. 19, 2024), <https://perma.cc/G9HV-NUTL>.

<sup>71</sup> See generally N.C. Dep’t of Env’t Quality, *Waste Management Work on Emerging Compounds* (last visited Jan. 7, 2025), <https://perma.cc/F2YC-HSCT> (linking to Laserfiche folder with solid waste records for each of the hundreds of permitted solid waste facilities in the state, <https://perma.cc/8TNJ-48W5>). Although data is still being submitted, more than 130 landfills have submitted PFAS data so far from at least one sampling event.

<sup>72</sup> Compare *id.* with Eastern Rsch. Grp., *Landfill Leachate PFAS Concentration Summary from the PFAS Wastewater Characterization Analytical Database: EPA-HQ-OW-2021-0547-0626, DCN PFAS00845* (Nov. 2022) (finding the average total PFAS for reporting landfill leachate is 5,135 ppt).

<sup>73</sup> See GFL Env’t, Inc., *Water Quality Monitoring Report, First Semi-Annual 2024 Sampling Event 308* (Aug. 30, 2024), <https://perma.cc/S2LK-7N82>, Attachment 8 (sum of detected PFAS in column 8202-L1). Previous samples of this landfill’s leachate, obtained through public records requests, have exceeded one million parts per trillion of total PFAS.

<sup>74</sup> For example, of the 386 detections at 128 facilities’ leachate of PFPeA documented in EPA-HW-OW-2021-0547-0626 (DCN PFAS00845), the highest single observation was 23,100 ppt and the average was 1,251. The Sampson County Landfill’s leachate has 120,000 ppt of PFPeA—nearly *one hundred times* more than the average concentration contemplated by the study. With levels this disparate, and ever-evolving sampling technology, EPA must consider more data than it has thus far in developing the ultimate PFAS ELG for landfill wastewater, while ensuring consideration of this new data does not delay the expeditious publication of a proposed rule.

technologies.”<sup>75</sup> Preliminary testing shows that reverse osmosis, for example, can reduce PFAS to undetectable levels, even for the Sampson County Landfill’s highly contaminated leachate.<sup>76</sup> Adequately considering results like these would bolster EPA’s decision to set aggressive effluent limitations for *all* landfills’ leachate, even those with significantly higher levels of PFAS than previously contemplated.

**ii. The landfill effluent limitation guideline should address all forms of landfill wastewater, including contaminated groundwater.**

Concerningly, Program Plan 15 and Preliminary Plan 16 focus exclusively on the role of leachate discharges from landfills. Many other landfill discharges, such as stormwater, gas collection condensate generated during landfill gas production and processing, and contaminated groundwater, can also lead to PFAS pollution from landfills.<sup>77</sup> Any future landfill PFAS ELG should be at least as expansive as 40 C.F.R. § 445 in defining “landfill wastewater” for the purpose of which discharges are covered.<sup>78</sup> We recommend, however, that EPA go even further by eliminating the exclusion for contaminated groundwater, which can be a significant source of unnecessary PFAS pollution into the environment.

The Sampson County Landfill highlights how regulating leachate discharges alone will not adequately protect communities from surface water pollution. The facility currently discharges leachate to wastewater treatment plants,<sup>79</sup> and has proposed to discharge treated leachate directly into surface water in the future.<sup>80</sup> But the facility also discharges contaminated

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<sup>75</sup> EPA, Effluent Guidelines Program Plan 15 at 6-13 (Jan. 2023), <https://perma.cc/2Q2S-VR39>.

<sup>76</sup> NPDES permit application materials for the proposed Sampson County Landfill leachate discharge treatment system demonstrate that, in a pilot study of reverse osmosis treatment, even the highly concentrated PFAS levels in this landfill’s leachate were reduced to undetectable or significantly lower levels following treatment. See GFL Env’t, Inc., *Permit Application No. NC0089966* at 42 (May 28, 2021), <https://perma.cc/J6KW-SZK6> (during several sampling events, not a single PFAS was detected in treated effluent). See also, e.g., Thabet Tolaymat et al., *A Critical Review of Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) Landfill Disposal in the United States*, 905 *Sci. Total Env’t* 167185 (Sept. 2023), <https://perma.cc/SAG9-K7ES> (reviewing studies of treatment methods for PFAS in landfill leachate and finding that effectiveness of treatment can depend on the concentration of PFAS).

<sup>77</sup> See Yutao Chen et al., *Evaluation of Per- and Polyfluoroalkyl Substances (PFAS) in Leachate, Gas Condensate, Stormwater and Groundwater at Landfills*, 318 *Chemosphere* 137903 (Mar. 2023), <https://perma.cc/GU88-NPB4>.

<sup>78</sup> 40 C.F.R. § 445.2(f) (“Landfill wastewater means all wastewater associated with, or produced by, landfilling activities except for sanitary wastewater, non-contaminated storm water, contaminated ground water, and wastewater from recovery pumping wells. Landfill wastewater includes, but is not limited to, leachate, gas collection condensate, drained free liquids, laboratory derived wastewater, contaminated storm water and contact washwater from washing truck, equipment, and railcar exteriors and surface areas which have come in direct contact with solid waste at the landfill facility.”) (emphasis added).

<sup>79</sup> One such plant is the Lumberton Wastewater Treatment Plant, which receives 58,179 gallons per day of the landfill’s highly PFAS-contaminated leachate from this landfill. This likely contributes to the dangerously high levels of PFAS in the plant’s effluent; in 2022, for example, sampling indicated the plant’s discharges contain 11,379.5 ppt of total PFAS. See, e.g., SELC, *Comments on NPDES Wastewater Draft Permit NC0024571, Lumberton Wastewater Treatment Plant 5* (July 17, 2023), <https://perma.cc/BX7V-2NZM>. EPA should utilize the pretreatment program to ensure that, when a landfill PFAS effluent limitation guideline is eventually promulgated, landfills cannot simply evade its requirements by indirectly discharging highly contaminated leachate to wastewater treatment plants rather than taking on the expense of installing treatment technology to discharge directly to surface water.

<sup>80</sup> See generally GFL Env’t, Inc., *Permit Application No. NC0089966* (May 21, 2021), <https://perma.cc/9BQT-4H8T>.

groundwater, among other wastewater sources that would be excluded from a future PFAS ELG if the agency were to limit its rule to leachate.<sup>81</sup>

Failing to control sources like contaminated groundwater would be dangerous for communities living near landfills. As evidence, the groundwater in and around the Sampson County Landfill is heavily polluted with PFAS.<sup>82</sup> The facility pumps this groundwater up and out from under the landfill and then discharges it into Bearskin Swamp.<sup>83</sup> Sampling of the groundwater discharge outfalls shows these discharges contain approximately 4,000 ppt of total PFAS.<sup>84</sup> This almost certainly contributes to PFAS levels in nearby surface water. One surface water sampling location near the groundwater discharge outfall measured more than 5,200 ppt of total PFAS, while the upstream sample unaffected by the groundwater discharge measured less than 15 ppt.<sup>85</sup> Treating such highly contaminated groundwater is not only necessary for protecting public health and the environment—it is technologically feasible, and the ELGs must reflect this. Indeed, the Sampson County Landfill has committed to implementing treatment technology to remove PFAS from the groundwater before it is discharged, and it is in the process of seeking a NPDES permit to do so.<sup>86</sup> Bringing contaminated groundwater within the scope of the PFAS ELG for landfills would protect communities like Snow Hill from suffering from exposure to similar unpermitted PFAS discharges.<sup>87</sup>

As demonstrated by the Sampson County Landfill, landfills are a substantial source of PFAS—not just from their leachate, but also from groundwater, stormwater, and other

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<sup>81</sup> PFAS data is not available for other types of wastewater discharged by the facility, such as stormwater and landfill gas condensate, but studies of other facilities indicate these media are likely also contaminated. See Yutao Chen et al., *Evaluation of Per- and Polyfluoroalkyl Substances (PFAS) in Leachate, Gas Condensate, Stormwater and Groundwater at Landfills*, 318 *Chemosphere* 137903 (Mar. 2023), <https://perma.cc/ZB2A-DS8A>.

<sup>82</sup> See GFL Env't, Inc., *Water Quality Monitoring Report, First Semi-Annual 2024 Sampling Event* 306 (Aug. 30, 2024), <https://perma.cc/S2LK-7N82>, Attachment 8 (monitoring well MW-107A measured more than 17,000 ppt of total PFAS).

<sup>83</sup> This “gravity groundwater intercept” system is used to lower groundwater levels below the landfill to maintain compliance with a state law requirement mandating four feet of separation between waste and the water table. See Stacey A. Smith & Joan A. Smyth, *Gravity Driven Dewatering Systems for Landfill Expansion*, 109 *Waste Mgmt. & Env't* IV 183 (2008), <https://perma.cc/N8H5-98EB>.

<sup>84</sup> See GFL Env't, Inc., *Water Quality Monitoring Report, First Semi-Annual 2024 Sampling Event* 307-308 (Aug. 30, 2024), <https://perma.cc/UZY9-2XA5>, Attachment 8 (sum of detected PFAS in column GGI-Outfall2, the groundwater discharge outfall).

<sup>85</sup> See *id.* (sum of detected PFAS in 8202-SW1, an upstream surface water location, and 8202-SW5, a downstream surface water location). Previous sampling of these discharge locations showed 9,590.99 ppt total PFAS at the groundwater discharge outfall and 8,878.36 ppt total PFAS in the surface water point.

<sup>86</sup> See generally, e.g., GFL Env't, Inc., *Alternatives Evaluation Report PFAS Treatment for GGI Outfalls* (Aug. 30, 2024), <https://perma.cc/BR54-XS9Z>, Attachment 9 (explaining treatment technology alternatives for PFAS-contaminated groundwater discharges).

<sup>87</sup> Sampson County Disposal's discharge of contaminated groundwater is an unpermitted discharge in violation of the Clean Water Act, notwithstanding the groundwater exemption in 40 C.F.R. 445(d). To address this violation and others, the landfill entered into a Consent Decree that requires it to reduce certain PFAS compounds in its pumped groundwater before it can be discharged into Bearskin Swamp. Clearly including contaminated groundwater within the scope of the ELG would mean other landfills across would be required to implement common-sense, available treatment technologies, too, without the need for citizen suits or settlements. See generally Consent Decree, *Env't J. Cmty. Action Network v. GFL Env't, Inc.*, Civil Action No. 7:24-CV-00831, ECF No. 19 (E.D.N.C. Dec. 5, 2024), <https://perma.cc/Z8YV-M4U7>, Attachment 10.

wastewater that they collect and discharge. These discharges harm surrounding communities and ecosystems, and a future landfill ELG must control PFAS pollution from all of them.

### **III. EPA should complete its study of effluent guidelines for CAFOs and subsequently initiate rulemaking to improve the applicable guidelines.**

We urge EPA to complete its detailed study of CAFO effluent limitation guidelines under the Clean Water Act, 40 C.F.R. Parts 122, 412. The study will undoubtedly conclude that EPA's current guidelines for CAFOs fail to prevent discharges and create regulatory loopholes that result in significant under-permitting. These failures have led to extensive water pollution and detrimental effects to human health,<sup>88</sup> and this harm disproportionately falls on communities of color.<sup>89</sup> Ultimately, we urge EPA to move forward with proposed rules that more effectively protect water resources and neighboring communities, reflect the best available science,<sup>90</sup> and build on decades of investment in cleaner waste management technology.<sup>91</sup> The ongoing water pollution and public health harms in North Carolina illustrate the urgency of EPA's work to protect communities from CAFO pollution.

North Carolina is home to thousands of hog and poultry CAFOs. The state is the third largest hog producer in the country. More than 9 million hogs are housed in over 2,000 operations

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<sup>88</sup> See Julia Kravchenko et al., *Mortality and Health Outcomes in North Carolina Communities Located in Close Proximity to Hog Concentrated Animal Feeding Operations*, 79 N.C. Med. J. 278, 278 (2018), <https://doi.org/10.18043/ncm.79.5.278> (documenting physical and mental health risks in communities near industrial hog operations); Nina G.G. Domingo et al., *Air Quality-Related Health Damages of Food*, 118 Proc. of the Nat'l Acad. of Sci. 3 (2021), <https://perma.cc/728N-KXCN> (attributing thousands of deaths to ammonia emissions created by industrial animal agricultural operations); Iowa State Univ., *Iowa Concentrated Animal Feeding Operations Air Quality Study: Final Report* 123–24 (2002), <https://perma.cc/Y382-LWMM> (discussing ammonia emissions from hog operations and associated public health impacts); Arbor J.L. Quist et al., *Exposure to Industrial Hog Operations and Gastrointestinal Illness in North Carolina, USA*, 830 Sci. Total Env't 154823, 2022.

<sup>89</sup> Letter from Lilian Dorka, EPA, to William G. Ross, N.C. Dep't of Env't Quality, Letter of Concern (Jan. 12, 2017), <https://perma.cc/8CCA-QBCL> (expressing “deep concern about the possibility that African Americans, Latinos, and Native Americans have been subject to discrimination as the result of NC [Department of Environmental Quality]'s operation of the Swine Waste General Permit program”); see Letter from Blakely Hildebrand, SELC, to Administrator Michael Regan, EPA, Re: Complaint under Title VI of the Civil Rights Act of 1964 (Sept. 27, 2021), <https://perma.cc/ZRN2-PE2V>, Attachment 11 (alleging that the N.C. Department of Environmental Quality's decision to permit swine waste-to-energy facilities in Duplin and Sampson counties has a disproportionate impact on communities of color); Letter from Blakely Hildebrand, SELC, to Administrator Michael Regan, EPA, Re: Supplement to Complaint No. 054NO-21-R4 (Dec. 22, 2022), <https://perma.cc/FBD5-AFKK>, Attachment 12 (supplementing the 2021 complaint to allege that the newly issued Digester General Permit will have a disproportionate impact on communities of color); see also, e.g., Steve Wing et al., *Environmental Injustice in North Carolina's Hog Industry*, 108 Env't Health Persps. 225, 228 (2000), <https://perma.cc/DN8Q-EMK2> (documenting that Black, Latino, and Native American families are more likely to live within a short distance from CAFOs than their white counterparts); Steve Wing & Jill Johnson, *Industrial Hog Operations in North Carolina Disproportionately Impact African-Americans, Hispanics, and American Indians* 1 (2014), <https://perma.cc/Y6TU-2CHH> (similar).

<sup>90</sup> Specifically, we direct EPA's attention to the work of Dr. Michael Mallin, Dr. Courtney Woods, Dr. Chris Heaney, Dr. Julia Kravchenko, Dr. Nina Domingo, Dr. Viney Aneja, Dr. JoAnn Burkholder, and Dr. Alison Deviney, among many others who have dedicated their research to evaluating industrial agriculture's impact on the environment and public health.

<sup>91</sup> See Alison Deviney, et al., *Pathways to Sustainable Transitions in a Complex Agricultural System: A Case Study of Swine Waste Management in North Carolina*, 7 Frontiers in Sustainable Food Sys. (Jan 2024), <https://perma.cc/Z9W3-92XL>.

in the southeastern corner of the state—a low-lying, flood prone region that is frequently hit by hurricanes and other major weather events. In Duplin and Sampson counties, the top two producing counties in the country, hogs outnumber people 30-to-1. The Cape Fear River Basin is home to more hog operations than any other river basin in the country.<sup>92</sup> Nearly every hog CAFO in North Carolina utilizes the so-called lagoon and sprayfield system, in which hog feces and urine are flushed from confinement barns into open-air cesspits and then sprayed on nearby fields, ostensibly as fertilizer. Hog operations pollute waterways through runoff of waste into rivers and streams, leakage of waste into groundwater from aging and ineffective lagoons, seepage of waste from sprayfields, atmospheric deposition of ammonia, and failure of lagoons and flooding of sprayfields during major rain events.<sup>93</sup>

North Carolina also leads the country in poultry production, and production of turkeys and broilers is increasing rapidly: the State produced nearly 357,000,000 chickens and turkeys in 2022, a 43 percent increase from 2007.<sup>94</sup> This increase in production is largely happening outside the purview of state regulators: almost none of the thousands of poultry operations hold discharge or non-discharge permits from the state, despite evidence of discharges.<sup>95</sup> At these operations, thousands of birds are confined in barns, and their waste, bedding, and feathers are collected and stored in large, often uncovered piles outside the barn and on the banks of waterways. This waste is either land-applied at the facility or transported to another location for land-application. Poultry production facilities are located across the state, including in the Cape Fear River basin, where the poor water quality throughout the southern portion of the basin is symptomatic of EPA's ineffective CAFO effluent guidelines.<sup>96</sup>

Of the thousands of hog and poultry operations in the state, only a handful have Clean Water Act permits.<sup>97</sup> Indeed, EPA's broad interpretation of the agricultural stormwater exemption and its near-exclusive reliance on nutrient management plans as a pollution control measure have led to untold numbers of hog, poultry, and dairy operations escaping permitting altogether.<sup>98</sup> The Clean Water Act exempts agricultural stormwater from NPDES permitting requirements, and EPA

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<sup>92</sup> Colleen N. Brown et al., *Tracing Nutrient Pollution From Industrialized Animal Production In A Large Coastal Watershed*, 192 *Env't Monitoring & Assessment* 1, 14–16 (2020); Elizabeth Christenson et al., *A Watershed Study Assessing Effects of Commercial Hog Operations on Microbial Water Quality in North Carolina, USA*, 838 *Sci. Total Env't* 1, 5 (2018), <https://perma.cc/4TF3-MSX9>; Michael A. Mallin et al., *Industrial Swine and Poultry Production Causes Chronic Nutrient and Fecal Microbial Stream Pollution*, 226 *J. Water, Air & Soil Pollution* 1, 8 (2015).

<sup>93</sup> See Mallin *supra* note 92, at 8; Viney P. Aneja et al., *Characterizing Ammonia Emissions from Swine Farms in Eastern North Carolina*, 42 *Atmospheric Env't* 3291, 3292 (2008); JoAnn Burkholder et al., *Impacts of Waste from Concentrated Animal Feeding Operations on Water Quality*, 115 *Env'tl Health Persps.* 308, 308–10 (2007).

<sup>94</sup> See Sarah Graddy & Al Rabine, *Innovative EWG Study Uses AI to Find 357M Poultry on North Carolina's Factory Farms*, *Env't Working Grp.* (Sept. 12, 2024), <https://perma.cc/9XLC-X9AG>.

<sup>95</sup> *Animal Facility Map*, N.C. Dep't of Env't Quality, <https://perma.cc/GT4J-3DMX> (last visited Jan. 9, 2025)

<sup>96</sup> See *Integrated Report Files: 2024 Draft 303(d) List*, N.C. Dep't of Env't Quality, <https://perma.cc/ATJ3-R4LF> (noting numerous streams in CAFO-intensive watersheds impaired for fecal coliform, benthos, and other parameters, in part a result of CAFO discharges).

<sup>97</sup> *Animal Facility Map*, *supra* note 95.

<sup>98</sup> See, e.g., Earthjustice et al., *Petition to Adopt a Rebuttable Presumption That Large CAFOs Using Wet Manure Management Systems Actually Discharge Pollutants Under the Clean Water Act* 41-45 (Oct. 2022), <https://perma.cc/V8HM-MN2R>, Attachment 13. See also Food & Water Watch, *Petition to Revise the Clean Water Act Regulations for Concentrated Animal Feeding Operations* (2017), <https://perma.cc/E3NA-MPQB>, Attachment 14.



has applied this exemption to CAFOs, despite Congress' intent to regulate CAFO discharges as point source pollution. But even under EPA's current, overly broad definition of this term, only those CAFO discharges that are the result of precipitation and in compliance with site-specific nutrient management plans as specified in 40 C.F.R. § 122.42(e)(1)(vi)-(ix) may lawfully qualify for this exemption.<sup>99</sup> Discharges resulting from overapplication of liquid manure and unlawful irrigation ahead of rain events,<sup>100</sup> two practices routinely observed by citizens and community organizations that result in discharges, are not agricultural stormwater. But states routinely fail to require NPDES permits from facilities that overapply manure, irrigate ahead of storms, or otherwise discharge waste.

EPA has not updated the CAFO ELGs since 2008. Since that time, a growing body of research and citizen science have amply demonstrated that the current ELGs have failed to prevent discharges—the chief aim of the ELGs—and thus failed to protect water quality.<sup>101</sup> Moreover, several community organizations have petitioned EPA to update its CAFO ELGs to better align the guidelines with farm practices, research, and best practices.<sup>102</sup> We urge EPA to conclude its detailed study and immediately initiate a rulemaking to close regulatory gaps and protect water quality in North Carolina and across the country.

#### **IV. Conclusion**

As EPA acknowledges, ELGs “ensure industrial facilities with similar characteristics will, at a minimum, be required to achieve a similar amount of pollutant reduction based on... the performance of the ‘best’ pollution control technologies, regardless of their location or the nature of their receiving water or the [wastewater treatment plant] into which they discharge.”<sup>103</sup> By doing so, ELGs help secure protections for all communities. But to promote the equitable, protective, and lawful application of the Clean Water Act, EPA must take further action consistent with these comments towards controlling industrial sources of PFAS and limiting the pollution from CAFOs.

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<sup>99</sup> 40 C.F.R. § 122.23(e)(1); *Concerned Area Residents for the Env't v. Southview Farm*, 34 F.3d 114, 120-21 (2d Cir. 1994); *see also Cmty. Ass'n for Restoration of the Env't v. Sid Koopman Dairy*, 54 F. Supp. 2d 976, 981 (“The agricultural stormwater . . . exemption . . . does not act to relieve CAFO farmers from responsibility for over applications and misapplications of CAFO animal wastes to fields in amounts or locations which will then discharge into the waters of the United States.”).

<sup>100</sup> *See, e.g.*, Noel R. Gollehon et al., *Estimates of Recoverable and Non-Recoverable Manure Nutrients Based on the Census of Agriculture—2012 Results* 9, tbl. 2, USDA (2016).

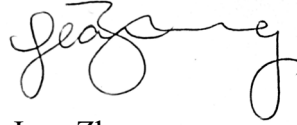
<sup>101</sup> *See supra* note 92.

<sup>102</sup> *See supra* note 98.

<sup>103</sup> Preliminary Plan 16, *supra* note 34, at 5.

Thank you for considering these comments. Please contact SELC at (919) 967-1450 if you have any questions regarding this letter.

Sincerely,



Jean Zhuang



Blakely Hildebrand



Zoe Mehta



Hannah Nelson

Southern Environmental Law Center  
136 E. Rosemary Street, Suite 500  
Chapel Hill, NC 27514