

**THE ATTORNEYS GENERAL OF THE STATES OF CALIFORNIA, ARIZONA,  
COLORADO, CONNECTICUT, ILLINOIS, MARYLAND, MINNESOTA, NEW  
JERSEY, NEW MEXICO, NEW YORK, OREGON, AND WISCONSIN, THE  
COMMONWEALTHS OF MASSACHUSETTS AND PENNSYLVANIA, AND THE  
DISTRICT OF COLUMBIA**

April 8, 2024

*Submitted via Federal eRulemaking Portal*

Michael S. Regan  
Administrator  
U.S. Environmental Protection Agency  
1200 Pennsylvania Avenue, N.W.  
Washington, D.C. 20460

**Re: Comments on the U.S. Environmental Protection Agency’s proposed Listing of  
Specific PFAS as Hazardous Constituents, 89 Fed. Reg. 8606 (Feb. 8, 2024), EPA-  
HQ-OLEM-2023-0278**

Dear Administrator Regan:

The Attorneys General of the States of California, Arizona, Colorado, Connecticut, Illinois, Maryland, Minnesota, New Jersey, New Mexico, New York, Oregon, and Wisconsin, the Commonwealths of Massachusetts and Pennsylvania, and the District of Columbia (together, “Attorneys General” or “States”) submit these comments in support of the proposed rule of the U.S. Environmental Protection Agency (“EPA”) to list nine per- and polyfluoroalkyl substances, their salts, and their structural isomers (“Nine PFAS”)<sup>1</sup> as hazardous constituents under the Resource Conservation and Recovery Act (“RCRA”)<sup>2</sup> (“Listing Rule” or “Rule”).<sup>3</sup> By adding these PFAS to the list of hazardous constituents contained in 40 C.F.R. pt. 261 Appendix VIII (“Appendix VIII”) and to the list of hazardous waste requirements for authorized state programs contained in 40 C.F.R. § 271.1 Table 1, any prior or future release of any of the Nine PFAS at any facility in the nation that treats, stores, or disposes of hazardous waste (“TSDFs”) will be subject to the cleanup requirements of the RCRA corrective action program.

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<sup>1</sup> The Nine PFAS proposed to be listed as hazardous constituents are (1) perfluorooctanoic acid (“PFOA”); (2) perfluorooctanesulfonic acid (“PFOS”); (3) perfluorobutanesulfonic acid (“PFBS”); (4) hexafluoropropylene oxide-dimer acid (“HFPO-DA or GenX”); (5) perfluorobutanoic acid (“PFBA”); (6) perfluorononanoic acid (“PFNA”); (7) perfluorohexanesulfonic acid (“PFHxS”); (8) perfluorodecanoic acid (“PFDA”) and (9) perfluorohexanoic acid (“PFHxA”).

<sup>2</sup> 42 U.S.C. §§ 6901, et seq.

<sup>3</sup> Listing of Specific PFAS as Hazardous Constituents, 89 Fed. Reg. 8606 (proposed Feb. 8, 2024).

The Attorneys General strongly support EPA’s proposed action to list Nine PFAS as RCRA hazardous constituents. As amply described by EPA, reliable scientific studies have demonstrated the significant dangers posed by releases of these toxic PFAS into the environment. Such releases can both contaminate natural resources, including soil and ground and surface waters, and can result in human exposure posing serious public health risks. In addition, such PFAS releases may necessitate significant testing and cleanup/remediation measures for the contaminated environmental media and high costs for affected communities. The States have compelling interests in ensuring that releases of toxic PFAS are promptly and effectively investigated and cleaned up consistent with RCRA’s strict requirements and protections. The Listing Rule, if finalized, will help protect the public from the harmful health impacts of the Nine PFAS. The Attorneys General offer the following comments for the agency’s consideration as it proceeds in this important effort. We also urge EPA to engage in a separate rulemaking to further address PFAS contamination by listing the class of PFAS or additional PFAS as RCRA hazardous constituents or hazardous wastes in the near future, if supported by the science.

## **BACKGROUND**

### **I. RCRA**

In 1976, Congress enacted RCRA, our nation’s primary law governing disposal of solid and hazardous waste, “to address increasingly serious environmental and health dangers from waste generation, management, and disposal.” *Fla. Power & Light Co. v. Env’t Prot. Agency*, 145 F.3d 1414, 1416 (D.C. Cir. 1998). RCRA requires permits for facilities that treat, store, or dispose of hazardous waste. Permits are obtained from either EPA or an authorized state. *Fla. Power & Light Co.*, 145 F.3d at 1416; 42 U.S.C. § 6925(a)-(c). Under RCRA, a solid waste is a hazardous waste if it (1) contains at least one of the hazardous constituents listed in Appendix VIII *and* (2) “is capable of posing a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported or disposed of, or otherwise managed.” 40 C.F.R. § 261.11(a)(3). In turn, a substance is listed as a hazardous constituent in Appendix VIII if it has been “shown in scientific studies to have toxic, carcinogenic, mutagenic, or teratogenic effects on humans or other life forms.” *Id.*

Any permit issued to a TSDf under RCRA must require “corrective action for all releases of hazardous waste or constituents from any solid waste management unit at a [TSDf] seeking a permit . . . , regardless of the time at which waste was placed in the unit.” 42 U.S.C. § 6924(u). Corrective action refers to the process of investigating and cleaning up the contaminated soil, groundwater, surface water, and air caused by the release of hazardous waste or constituents. Corrective action must be taken beyond a TSDf’s boundary where necessary to protect human health or the environment, unless the TSDf demonstrates that it cannot obtain the necessary permissions to undertake such action. 42 U.S.C. § 6924(v).

RCRA’s approach to regulating solid and hazardous waste is one of “cooperative federalism.” *Chico Serv. Station, Inc. v. Sol P.R. Ltd.*, 633 F.3d 20, 27 (1st Cir. 2011). Specifically, EPA may authorize states to administer and enforce their own hazardous waste programs within the state in lieu of the federal program when the state program is equivalent to

the federal program. 42 U.S.C. § 6926(b); 40 C.F.R. § 271.1(a), (e), (g). As discussed below, many of our States are authorized to administer and enforce our own hazardous waste program in lieu of the federal program.

## II. PFAS

PFAS are a class of synthetic chemicals that have been used in the United States since the 1940s and are still found in many common products.<sup>4</sup> These chemicals have been widely used because they are resistant to water, heat, and stains.<sup>5</sup> PFAS are highly stable and extremely resistant to biological and chemical degradation—which is why they are known as “forever chemicals.”<sup>6</sup> PFAS have been used to produce countless consumer products, including textiles (like waterproof clothing, car seats, strollers, and stain-repellent furnishings), non-stick cookware, and food packaging.<sup>7</sup> Firefighting foam containing PFAS has also been used for decades by the United States military, airports, industrial facilities, and local fire departments.<sup>8</sup> PFAS are detectable in the blood of most people in the United States.<sup>9</sup>

Facilities that manufacture, process, and use PFAS have also been associated with releases of PFAS into the air, soil, and water.<sup>10</sup> Contaminated sites include areas in and around military bases, firefighting training centers, airports, industrial facilities, landfills, and wastewater residuals disposal facilities.<sup>11</sup> PFAS from many of these sites have migrated into surface water or groundwater, polluting the aquatic ecosystems of the States, and contaminating

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<sup>4</sup> Listing of Specific PFAS as Hazardous Constituents Rulemaking, 89 Fed. Reg. 8606 (proposed Feb. 8, 2024).

<sup>5</sup> EPA, *Our Current Understanding of the Human Health and Environmental Risks of PFAS*, <https://www.epa.gov/pfas/our-current-understanding-human-health-and-environmental-risks-pfas>.

<sup>6</sup> *See, e.g.*, U.S. Centers for Disease Control and Prevention (“CDC”), National Biomonitoring Program, *Per- and Polyfluorinated Substances (PFAS) FactSheet*, [https://www.cdc.gov/biomonitoring/PFAS\\_FactSheet.html](https://www.cdc.gov/biomonitoring/PFAS_FactSheet.html).

<sup>7</sup> Juliane Glüge et al., *An overview of the uses of per-and polyfluoroalkyl substances*, 22 ENVIRON. SCI.: PROCESSES & IMPACTS 2345, 2349 (2020).

<sup>8</sup> U.S. Fire Administration, *Firefighting Foams: PFAS vs. Fluorine-Free Foams* (May 25, 2023), <https://www.usfa.fema.gov/blog/firefighting-foams-pfas-vs-fluorine-free-foams/>; National Fire Protection Association, *The PFAS Problem* (July 21, 2022) <https://www.nfpa.org/news-blogs-and-articles/nfpa-journal/2022/07/22/the-new-foam/foam-sidebar>.

<sup>9</sup> CDC, Agency for Toxic Substances and Disease Registry, *PFAS in the U.S. Population*, <https://www.atsdr.cdc.gov/pfas/health-effects/us-population.html>.

<sup>10</sup> Amila O. De Silva et al., *PFAS Exposure Pathways for Human and Wildlife: A Synthesis of Current Knowledge and Key Gaps in Understanding*, 40 ENVTL. TOXICOLOGY & CHEMISTRY 1, 4-6 (2020).

<sup>11</sup> EPA, *Our Current Understanding of the Human Health and Environmental Risks of PFAS*, <https://www.epa.gov/pfas/our-current-understanding-human-health-and-environmental-risks-pfas>.

nearby public and private drinking water supplies.<sup>12</sup> The number of known contaminated sites continues to grow.<sup>13</sup> Due to such widespread use and resistance to degradation, PFAS tend to accumulate ubiquitously in the environment and in biota.<sup>14</sup>

## STATES' INTERESTS IN THE PROPOSED RULE

The States have a strong interest in the Rule and its implementation. First, the States face substantial threats to public health and the environment from PFAS, as well as significant costs to address PFAS contamination and limit PFAS exposure.<sup>15</sup> Many states, including most of the undersigned, have repeatedly urged both Congress and EPA to take prompt and aggressive action to respond to the unfolding national PFAS crisis.<sup>16</sup> Second, many of the States have numerous

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<sup>12</sup> See, e.g., Weston & Sampson on behalf of Vt. Dep't of Env't Conservation, *Poly- and Perfluoroalkyl Substances at Wastewater Treatment Facilities and Landfill Leachate – 2019 Summary Report – Contract #38584* (2020); Ill. Env't Prot. Agency, *Per- and Polyfluoroalkyl Substances (PFAS)*, <https://epa.illinois.gov/topics/water-quality/pfas.html>; EPA, *Our Current Understanding of the Human Health and Environmental Risks of PFAS*, <https://www.epa.gov/pfas/our-current-understanding-human-health-and-environmental-risks-pfas>.

<sup>13</sup> See Northeastern University Social Science Env't Health Rsch. Inst., *PFAS Contamination in the U.S.*, <https://www.northeastern.edu/environmentalhealth/pfas-lab/>.

<sup>14</sup> Hubertus Brunn et al., *PFAS: forever chemicals—persistent, bioaccumulative and mobile. Reviewing the status and the need for their phase out and remediation of contaminated sites*, 35 ENVTL. SCIENCES EUROPE 1, 28-32 (2023); see also Mohammad Nazmul Ehsan et al., *PFAS contamination in soil and sediment: Contribution of sources and environmental impacts on soil biota*, 9 CASE STUDIES IN CHEMICAL AND ENVTL. ENG'G 1 (2024).

<sup>15</sup> Alissa Cordner et al., *The True Cost of PFAS and the Benefits of Acting Now*, 55 ENVTL. SCI. & TECH. 9630 (2021).

<sup>16</sup> See, e.g., Multistate Comments dated November 7, 2022, regarding EPA's Proposed Designation of Perfluorooctanoic Acid (PFOA) and Perfluorooctanesulfonic Acid (PFOS) as CERCLA Hazardous Substances, 87 Fed. Reg. 54,415 (Sept. 6, 2022), <https://www.regulations.gov/comment/EPA-HQ-OLEM-2019-0341-0414>; Multistate Comments dated April 13, 2022, regarding EPA's Fiscal Year 2022 Spend Plan for PFAS, [https://www.michigan.gov/ag/-/media/Project/Websites/AG/releases/2022/April/State\\_Comments\\_on\\_EPAs\\_PFAS\\_Spend\\_Plan\\_FINAL\\_751106\\_7.pdf?rev=761235fc045d4b9c995b1a4427a2ad3c&hash=DB08B30565068BCA058CB3E5C331694C](https://www.michigan.gov/ag/-/media/Project/Websites/AG/releases/2022/April/State_Comments_on_EPAs_PFAS_Spend_Plan_FINAL_751106_7.pdf?rev=761235fc045d4b9c995b1a4427a2ad3c&hash=DB08B30565068BCA058CB3E5C331694C); Multistate Comments dated September 27, 2021, regarding EPA's Proposed TSCA Section 8(a)(7) Reporting and Recordkeeping Requirements for Perfluoroalkyl and Polyfluoroalkyl Substances, 86 Fed. Reg. 33,926 (June 28, 2021), <https://www.regulations.gov/comment/EPA-HQ-OPPT-2020-0549-0086>; Multistate Comments dated September 17, 2021, regarding EPA's Drinking Water Contaminant Candidate List 5—Draft, 86 Fed. Reg. 37,948 (July 19, 2021), <https://www.regulations.gov/comment/EPA-HQ-OW-2018-0594-0076>; Multistate Comments dated May 10, 2021, regarding EPA's proposal to expand monitoring for PFAS under the Unregulated Contaminant Monitoring Rule (May 10, 2021), [https://coag.gov/app/uploads/2021/05/510.21\\_PFAS\\_Comments.pdf](https://coag.gov/app/uploads/2021/05/510.21_PFAS_Comments.pdf); Multistate Letter to

TSDFs within their jurisdictions and are authorized to implement RCRA’s permitting and corrective action program or have TSDFs located within their jurisdictions that would be impacted by the Rule. For example:

## I. California

Since 1992, the California Department of Toxic Substances Control, on behalf of California, has been authorized to implement certain RCRA hazardous waste requirements, including RCRA’s permitting and permit enforcement provisions. California; Final Authorization of State Hazardous Waste Management Program, 57 Fed. Reg. 32,726, 32,729 (July 23, 1992). California has 230 TSDFs that could be impacted by the Rule. U.S. Env’t Prot. Agency, Economic Assessment of the Potential Costs, Benefits, and Other Impacts on the Proposed Rulemaking to List Specific PFAS as RCRA Hazardous Constituents (Dec. 2023), at 81 (“Economic Assessment”). Of the 230 TSDFs, 90 TSDFs are considered to have a higher likelihood of handling PFAS because they are within industries that either have been identified as having presumptive PFAS contamination or have historically been associated with PFAS, or because the TSDF has reported the release of one of the PFAS through EPA’s Toxic Release Inventory. *Id.* at 79-81. Given this, almost 40 percent of TSDFs in California are in industries with a higher likelihood of handling PFAS, which could have been released into the environment. *Id.* at 81. Data from California’s State Water Resources Control Board shows that PFAS are in drinking, ground, and surface waters, with especially high levels near airports, refineries, chrome plating facilities, military facilities, and landfills.<sup>17</sup> PFAS have been detected in at least 146 public water systems serving 16 million Californians.<sup>18</sup> These chemicals are also present in aquifers that provide millions of Californians with water through unregulated domestic

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Congress dated July 16, 2021, regarding Support for the 2021 PFAS Action Act, [https://content.govdelivery.com/attachments/WIGOV/2021/07/23/file\\_attachments/1886815/Multi-State%20PFAS%20Letter%20071621.pdf](https://content.govdelivery.com/attachments/WIGOV/2021/07/23/file_attachments/1886815/Multi-State%20PFAS%20Letter%20071621.pdf); Multistate Comments dated June 10, 2020, regarding EPA’s Preliminary Regulatory Determinations for Contaminants on the Fourth Drinking Water Contaminant Candidate List, 85 Fed. Reg. 14,098, 14,120 (Mar. 10, 2020), <https://www.regulations.gov/comment/EPA-HQ-OW-2019-0583-0258>; Multistate Comments dated April 17, 2020, regarding EPA’s Supplemental Proposed Rule on Long-Chain Perfluoroalkyl Carboxylate and Perfluoroalkyl Sulfonate Chemical Substances; Significant New Use Rule, 85 Fed. Reg. 12,479 (March 3, 2020), <https://www.regulations.gov/comment/EPA-HQ-OPPT-2013-0225-0217>; Multistate Comments dated February 3, 2020, regarding EPA’s Proposed Addition of Certain Per- and Polyfluoroalkyl Substances; Community Right-to-Know Toxic Chemical Release Reporting, 84 Fed. Reg. 66,369 (Dec. 4, 2019), <https://www.regulations.gov/comment/EPA-HQ-TRI-2019-0375-0086>; and Multistate Letter to Congress dated July 30, 2019, regarding the need for comprehensive PFAS Legislation, [https://oag.ca.gov/system/files/attachments/press-docs/Multistate%20PFAS%20Legislative%20Letter\\_7.30.19\\_FINAL.pdf](https://oag.ca.gov/system/files/attachments/press-docs/Multistate%20PFAS%20Legislative%20Letter_7.30.19_FINAL.pdf).

<sup>17</sup> See data available at the California State Water Resources Control Board’s Geo Tracker PFAS Map, accessible at: [https://geotracker.waterboards.ca.gov/map/pfas\\_map](https://geotracker.waterboards.ca.gov/map/pfas_map).

<sup>18</sup> *Id.*

wells.<sup>19</sup>

## II. Arizona

Arizona is empowered to implement corrective actions under RCRA.<sup>20</sup> EPA estimates that Arizona has 18 permitted TSDFs that could be affected by the proposed rule, of which six are likely to handle PFAS. Economic Assessment, at 81. Five TSDFs in Arizona are federally managed. *Id.* Camp Navajo and Yuma Proving Ground, both federally managed military bases and TSDFs, have already identified PFAS releases into nearby soil and groundwater supplies.<sup>21</sup>

PFAS releases from TSDFs can pollute Arizona's groundwater supplies, requiring nearby water utilities to adopt expensive filtration technologies, endangering public health, and impeding efforts to alleviate local housing price pressures with new development.<sup>22</sup> More broadly, potentially harmful levels of PFAS have been detected in almost 60 public water systems across the state—with many more small systems still to be tested.<sup>23</sup> Accumulation of PFAS in plants and animals across Arizona can harm the state's thriving outdoor recreation, livestock, and agricultural industries by contaminating foods like wild-caught fish, dairy products, and irrigated crops.<sup>24</sup>

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<sup>19</sup> *Id.*

<sup>20</sup> EPA, *Economic Assessment for the Definition of Hazardous Waste Applicable to Corrective Action for Releases from Solid Waste Management Units* (January 2024), <https://www.regulations.gov/document/EPA-HQ-OLEM-2023-0085-0024> at 12.

<sup>21</sup> *Final Site Inspection Report: Camp Navajo, Bellemont, Arizona* (June 2023), <https://www.nationalguard.mil/Leadership/Joint-Staff/Personal-Staff/Public-Affairs/Community-Engagement/Environmental/PFAS-Library/Arizona/FileId/341765/> at ES-2; *Final Preliminary Assessment and Site Inspection of Per- and Polyfluoroalkyl Substances, Yuma Proving Ground, Arizona* (March 2022), <https://aec.army.mil/application/files/5816/7752/8072/YPGPASI.pdf> at 1-2.

<sup>22</sup> Clara Migoya, *Arizona prepares to test hundreds of drinking water systems for toxic 'forever chemicals'*, ARIZONA REPUBLIC (Jan. 3, 2023), <https://www.azcentral.com/story/news/local/arizona-environment/2023/01/03/adeq-starts-statewide-testing-for-forever-chemicals-in-water-systems/69745779007/>; Joshua Bowling, *The fix for water contamination near Luke Air Force Base is Months Behind Schedule. Here's why*, ARIZONA REPUBLIC (July 28, 2021), <https://www.azcentral.com/story/news/local/glendale/2021/07/28/why-fix-luke-air-force-bases-water-contamination-behind/5390994001/>.

<sup>23</sup> Migoya, *Arizona prepares to test hundreds of drinking water systems for toxic 'forever chemicals'*.

<sup>24</sup> Taylor Simmons et al., *Understanding the Impact of PFAS in Arizona Using the One Health Approach*, THE WATER REPORT no. 240 (Feb. 15, 2024), <https://wrrc.arizona.edu/sites/wrrc.arizona.edu/files/2024-02/The-Water-Report-240-v2.pdf>, at 11-12.

### III. Maryland

The Maryland Department of the Environment (“MDE”) has been authorized to implement RCRA’s “base-program” since January 9, 1985. That authority was reaffirmed with revisions in 2016. Maryland: Final Authorization of State Hazardous Waste Management Program Revisions, 81 Fed. Reg. 59,503 (Aug. 30, 2016). Maryland is home to 23 TSDFs with MDE exercising delegated authority over all TSDF permitting decisions but not implementing RCRA’s corrective action program. *See Economic Assessment*, at 81.

### IV. Massachusetts

The Commonwealth of Massachusetts received final authorization to implement its base hazardous waste program under RCRA, which includes TSDFs, on January 24, 1985, effective February 7, 1985, and received authorization for its RCRA corrective action program on August 18, 2010, effective August 23, 2010. 50 Fed. Reg. 3344 (Jan. 24, 1985); Massachusetts: Final Authorization of State Hazardous Waste Management Program Revisions, 75 Fed. Reg. 50,932 (Aug. 18, 2010). There are currently nine licensed TSDFs in the Commonwealth, with two facilities recently having closed. Massachusetts suffers from PFAS contamination in, among others, drinking, ground, and surface waters, including in public water systems, regulated by the Massachusetts Department of Environmental Protection under 310 Mass. Code Regs. 22.00, and private water systems, regulated by local boards of health.<sup>25</sup>

### V. New Mexico

New Mexico received authorization from EPA in 1985 to administer the New Mexico Hazardous Waste Act in lieu of RCRA and, in 1995, EPA authorized New Mexico’s Corrective Action program to require the cleanup of hazardous waste from RCRA-permitted facilities. New Mexico; Decision on Final Authorization of State Hazardous Waste Management Program, 50 Fed. Reg. 1515 (Jan. 11, 1985); New Mexico: Final Authorization of State Hazardous Waste Management Revisions, 60 Fed. Reg. 53,708 (Oct. 17, 1995). New Mexico contains 19 RCRA TSDFs, of which seven have a higher likelihood of handling PFAS, and 11 are federal facilities. *Economic Assessment*, at 81. All three of New Mexico’s U.S. Air Force Bases (i.e., Cannon, Holloman, and Kirtland) are among the federal facilities with state RCRA TSDF permits,<sup>26</sup> and are undergoing investigation and/or response actions for PFAS under Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”).<sup>27</sup> The U.S. Air Force has challenged New Mexico’s exercise of RCRA corrective action authority over PFAS,

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<sup>25</sup> Kate Hogan & Julian Cyr, *PFAS in the Commonwealth of Massachusetts: Final Report of the PFAS Interagency Task Force* (April 2022), <https://www.mma.org/resource/pfas-in-the-commonwealth-of-massachusetts-final-report-of-the-pfas-interagency-task-force/>.

<sup>26</sup> N.M. Env’t Dep’t, *Permitted Facilities*, <https://www.env.nm.gov/hazardous-waste/about-us-permits-management-program/>

<sup>27</sup> Office of the Undersecretary of Defense, Acquisition & Sustainment, *Progress at the 715 Installations Being Assessed for PFAS Use or Potential Release* (Dec. 2023), [/https://www.acq.osd.mil/eie/ee/ecc/pfas/docs/data/DoD-PFAS-Progress-as-of-31DEC23.pdf](https://www.acq.osd.mil/eie/ee/ecc/pfas/docs/data/DoD-PFAS-Progress-as-of-31DEC23.pdf).

including PFOA and PFOS, but has acknowledged that New Mexico has corrective action authority over hazardous constituents, including any constituent identified in Appendix VIII.<sup>28</sup>

## VI. New York

Since 1986, the New York State Department of Environmental Conservation has been authorized to implement certain RCRA hazardous waste requirements in New York, including RCRA's permitting and permit enforcement provisions.<sup>29</sup> New York has approximately 320 TSDFs, some of which are likely to handle PFAS.<sup>30</sup> In fact, corrective action has been required at the Naval Weapons Industrial Reserve Plant in Calverton, Suffolk County, due, in part, to the presence of PFAS.<sup>31</sup>

Two well-known instances of PFAS contamination from manufacturing facilities in New York include the Taconic Plastics release in Petersburg, New York, and the release from Saint-Gobain Performance Plastics in Hoosick Falls, New York. PFOA was utilized by both manufacturers during the course of their production. PFOA concentrations of 18,000 parts per trillion ("ppt") were found in groundwater at the Hoosick Falls' site. Because of the drinking water contamination at both of these sites, Point of Entry Treatment Systems had to be installed and monitored at surrounding properties.<sup>32</sup> Following these instances, in January 2016, New York became the first state in the nation to regulate PFOA as a hazardous substance under state law, followed by its regulation of PFOS in April 2016. Those regulations require the proper storage of the substances, limit releases to the environment, and enable New York to use its legal authority and resources of its State Superfund program to conduct investigations and cleanups of

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<sup>28</sup> Mem. Supp. U.S. Mot. Summ. J. at 10 n.5, *U.S. v. N.M. Env't Dep't*, No. 2:19-cv-046 (D.N.M. June 1, 2021), ECF No. 58-1 ("The United States does not challenge the Permit's application of corrective action to hazardous constituents or the Permit's definition of hazardous constituents."); *see also* Cannon AFB RCRA Permit No. NM7572124454 at 16 (defining hazardous constituent as "any constituent identified in 40 CFR Part 261, Appendix VIII and any constituent identified in 40 CFR Part 264 Appendix IX) *available at* <https://www.env.nm.gov/hazardous-waste/cafb/#PFAS>.

<sup>29</sup> N.Y. Dep't of Env't Conservation, Division of Solid & Hazardous Materials, *RCRA-C in New York State: Managing Hazardous Waste* (December 1999), <https://www.portcompliance.org/files/rcra.pdf>.

<sup>30</sup> N.Y. Dep't of Env'l Conservation RCRA Database.

<sup>31</sup> *See e.g.*, EPA, *Hazardous Waste Cleanup: Naval Weapons Industrial Reserve Plant in Calverton, New York*, <https://www.epa.gov/hwcorrectiveactioncleanups/hazardous-waste-cleanup-naval-weapons-industrial-reserve-plant-calverton>; Naval Facilities Engineering Systems Command, Environmental Restoration Program Public Website, *NAVAL WEAPONS INDUSTRIAL RESERVE PLANT CALVERTON*, <https://www.navfac.navy.mil/Divisions/Environmental/Products-and-Services/Environmental-Restoration/Mid-Atlantic/Calverton-NWIRP/Site-Descriptions/>.

<sup>32</sup> EPA, *Hoosick Falls, New York Drinking Water and Groundwater Contamination Frequently Asked Questions* (January 2016) [https://www.epa.gov/sites/default/files/2016-01/documents/hoosickfalls\\_faqs.pdf](https://www.epa.gov/sites/default/files/2016-01/documents/hoosickfalls_faqs.pdf); N.Y. Dep't of Env't Conservation, *Community Update: Taconic Plastics* (January 2023), [https://extapps.dec.ny.gov/docs/remediation\\_hudson\\_pdf/442047update0123.pdf](https://extapps.dec.ny.gov/docs/remediation_hudson_pdf/442047update0123.pdf).



impacted sites.<sup>33</sup> In 2020, New York mandated that public water systems throughout the state monitor for the presence of PFOA and PFOS, and comply with a maximum contaminant level of 10 ppt for each compound.<sup>34</sup>

## VII. Oregon

Since 1995, the Oregon Department of Environmental Quality (“DEQ”), on behalf of Oregon, has been authorized to implement RCRA’s permitting and corrective action regulations. Oregon: Affirmation of Immediate Final Rule to Authorize State Hazardous Waste Program Revisions, 60 Fed. Reg. 58,520 (Nov. 28, 1995). Oregon has nine permitted TSDFs, based on information disclosed to DEQ, DEQ is aware that one facility is actively handling PFAS. Oregon has had no reported TSDF PFAS releases. EPA’s economic assessment identified three Oregon facilities with higher likelihood of handling PFAS. Economic Assessment, at 80.

## VIII. Wisconsin

Wisconsin has been authorized to implement certain RCRA hazardous waste requirements since January 31, 1986. Wisconsin: Final Authorization of State Hazardous Waste Management Program, 51 Fed. Reg. 3783 (Jan. 30, 1986). The Wisconsin Department of Natural Resources (“DNR”) is working with responsible parties to identify any TSDFs that may be contaminated with PFAS. Currently, the Wisconsin DNR is working with 12 TSDFs to determine whether there is PFAS contamination at these sites. PFAS contamination has been found in surface water and groundwater in Wisconsin. In 2023, the Wisconsin DNR sampled drinking water wells statewide and found that roughly seven in 10 private wells contain one or more PFAS, and one in 100 contain PFAS above current state health guidelines.<sup>35</sup> PFAS have also been detected in at least 70 public water systems.<sup>36</sup>

## COMMENTS

### I. EPA’s Proposed Listing is Supported by Substantial Evidence of the Nine PFAS’ Toxic Effects on Humans and Other Life Forms and is Consistent with RCRA’s Objective of Protecting Human Health and the Environment.

Under RCRA, EPA is required to promulgate regulations for identifying and listing hazardous wastes. 42 U.S.C. § 6921(a). Pursuant to that authority, EPA promulgated 40 C.F.R.

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<sup>33</sup> N.Y. Dep’t of Env’t Conservation, *Per- and polyfluoroalkyl substances (PFAS)*, <https://dec.ny.gov/environmental-protection/site-cleanup/pfas>.

<sup>34</sup> N.Y. Dep’t of Health, *Public Water Systems and NYS Drinking Water Standards for PFAS and other Emerging Contaminants* (October 2022), [https://www.health.ny.gov/environmental/water/drinking/docs/water\\_supplier\\_fact\\_sheet\\_new\\_mcls.pdf](https://www.health.ny.gov/environmental/water/drinking/docs/water_supplier_fact_sheet_new_mcls.pdf).

<sup>35</sup> Wis. Dep’t of Natural Res., *Results of Statewide PFAS Sampling in Private Wells Now Available* (Nov. 3, 2023), <https://dnr.wisconsin.gov/newsroom/release/84721>.

<sup>36</sup> Wis. Dep’t of Natural Res., *Drinking Water System Portal*, <https://apps.dnr.wi.gov/dwsportalpub/ContamResult/Search>.

§ 261.11, which sets forth three independent criteria for the listing of a solid waste as a hazardous waste. As relevant here, one criterion for listing a solid waste as a hazardous waste is that the solid waste (1) contains a hazardous constituent listed in Appendix VIII *and* (2) “is capable of posing a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported or disposed of, or otherwise managed.” *Id.* § 261.11(a)(3). In turn, a substance is listed as a hazardous constituent in Appendix VIII if it has been “shown in scientific studies to have toxic, carcinogenic, mutagenic, or teratogenic effects on humans or other life forms.” *Id.*

EPA has amply demonstrated that the Nine PFAS, including their salts and structural isomers, meet the criteria for listing as RCRA hazardous constituents. The toxicological evidence as to the Nine PFAS that EPA has marshalled for the Listing Rule clearly shows the toxic effect these PFAS can have on humans or other life forms. *See* Listing Rule, 89 Fed. Reg. at 8612-16. The evidence also demonstrates that human exposure to these PFAS can lead to adverse health effects, including high cholesterol, changes in liver function, decreased immune response to vaccination, thyroid disorders, pregnancy-induced hypertension and pre-eclampsia, testicular and kidney cancer (for PFOA), and liver and thyroid cancer (for PFOS). *Id.*

Moreover, the Rule supports RCRA’s objective of ensuring that “hazardous waste management practices are conducted in a manner which protects human health and the environment.” 42 U.S.C. § 6902(a)(4). According to EPA’s Economic Assessment for this Rule, there are 1,740 TSDFs within the United States and its territories that could be affected by the Rule. Economic Assessment, at 76. Of those 1,740 facilities, 48 percent are non-federal<sup>37</sup> TSDFs with a higher likelihood of handling PFAS because they are within industries that either have been identified as having presumptive PFAS contamination or have historically been associated with PFAS, or because the TSDF has reported the release of one of the PFAS through EPA’s Toxic Release Inventory. *Id.* at 78-79. As such, a significant number of TSDFs in the United States have likely handled PFAS and could have released any or all of the Nine PFAS from their solid waste management units. *See id.* Because PFAS are highly mobile in ground and surface water,<sup>38</sup> and because PFAS contamination can lead to adverse health impacts from PFAS exposures, agricultural and real estate impacts, and burdens on local and state governments, it is important that hazardous waste management practices leading to releases of the Nine PFAS be promptly investigated and, if necessary, remedied. By listing the Nine PFAS as hazardous constituents in Appendix VIII, EPA will ensure that RCRA permitting authorities, at the time of permit issuance or renewal, can require TSDFs to effectively and efficiently investigate and remediate contamination resulting from the releases of the Nine PFAS.

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<sup>37</sup> For purposes of defining the regulatory universe, EPA distinguished between TSDFs that are owned or operated by the federal government, and non-federal facilities. Economic Assessment, at 77-78.

<sup>38</sup> Salvatore et al., *Presumptive Contamination: A New Approach to PFAS Contamination Based on Likely Sources*, 9:11 ENVTL. SCI. & TECH. LETTERS 983 (2022).

## II. EPA Correctly Concluded that it Must Not Consider Cost in Listing the Nine PFAS as RCRA Hazardous Constituents.

In addressing its legal authority to promulgate the Rule, EPA correctly concluded that it may not consider costs in identifying hazardous constituents. Listing Rule, 89 Fed. Reg. at 8611-12. As the Supreme Court has held, if Congress directs EPA to “regulate on the basis of a factor that on its face does not include costs, the Act normally should not be read as implicitly allowing the agency to consider costs anyway.” *Michigan v. Env’t Prot. Agency*, 576 U.S. 743, 755-56 (2015); *Whitman v. American Trucking Ass’n*s, 531 U.S. 457, 469-472 (2001). RCRA directs EPA to develop and promulgate criteria for identifying the characteristics of hazardous waste and for listing hazardous waste, and the statute nowhere suggests that EPA should, or may, consider costs. 42 U.S.C. § 6921(a). RCRA defines hazardous waste as

a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may—

(A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or

(B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.

42 U.S.C. § 6903(5).

In developing criteria for identifying hazardous wastes, Congress directed EPA to take into account “toxicity, persistence for accumulation in degradability in nature, potential for accumulation in tissue, and other related factors such as flammability, corrosiveness, and other hazardous characteristics.” *Id.* § 6921(a). Pursuant to 42 U.S.C. section 6921(a), EPA promulgated 40 C.F.R. § 261.11(a), which sets forth three criteria for identifying a hazardous waste. As relevant here, one of the criteria is that the waste (1) contains at least one of the hazardous constituents listed in Appendix VIII and (2) “is capable of posing a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported or disposed of, or otherwise managed.” *Id.* § 261.11(a)(3). As such, the listing of a hazardous constituent in Appendix VIII is one criterion that EPA has identified as a determinant of the characteristic of toxicity and therefore, of a hazardous waste. Accordingly, in listing a hazardous constituent in Appendix VIII, EPA is setting forth a criterion for identifying a hazardous waste by the characteristic of toxicity and is required to only consider the factors identified in 42 U.S.C. § 6921(a).

As EPA explains, 42 U.S.C. § 6921(a) limits EPA to considering health and hazard related factors. Listing Rule, 89 Fed. Reg. at 8611. There is no mention of costs in 42 U.S.C. § 6921(a), and no reasonable reading of that subsection could support a textual commitment of authority to EPA to consider costs in identifying the characteristics of hazardous waste or the listing of a hazardous constituent. Instead, RCRA’s statutory language directs EPA to develop criteria for identifying the characteristics of hazardous waste and for listing hazardous waste by

“taking into account toxicity, persistence, and degradability in nature, potential for accumulation in tissue, and other related factors such as flammability, corrosiveness, and other hazardous characteristics,” which are all factors directed at protecting health and the environment. 42 U.S.C. 6921(a). While RCRA includes the phrase “other related factors,” when read in context, this type of flexible language does not allow EPA to consider costs in its rulemaking because the accompanying language makes clear that the other related factors are a discrete criterion that encompasses considerations of health and hazards. *See Michigan v. EPA*, S. Ct. at 2709. “This stands in stark contrast with other sections of Title 42—such as the Beville Amendment—where the Congress expressly required the EPA to consider, *inter alia*, ‘the costs of . . . alternatives’ in determining whether Coal Residuals should be classified as hazardous waste.” *See Util. Solid Waste Activities Grp. v. Env’t Prot. Agency*, 901 F.3d 414, 449 (D.D.C. 2018).

In any event, while EPA correctly did not base its decision to list the Nine PFAS as hazardous constituents on considerations of costs, EPA has made reasonable determinations and analyses as to the costs and benefits of the Rule as required by Executive Order 12866, as amended by Executive Order 14094. Listing Rule, 89 Fed. Reg. at 8612. EPA expects the direct impacts of the Rule to be “negligible” and that there may be indirect costs to facilities that are required to pursue corrective action. Economic Assessment, at 18-19. However, EPA recognizes that any indirect costs will likely depend on site-specific factors such as the magnitude and the extent of the contamination to be addressed, and the incremental costs of addressing PFAS relative to the baseline costs of cleaning up other contaminants at each site. *Id.* at 19.

Moreover, the benefits of the Rule clearly may be seen to offset some of the costs. For example, EPA quantified the health benefits<sup>39</sup> of the Rule for those whose drinking water comes from a private well located near one of the TSDFs with a higher probability of handling PFAS, assuming corrective action is taken to remediate PFAS contamination in drinking water or action is taken to provide clean drinking water to those affected. Economic Assessment, at 123-131. Depending on the level of reduction of PFAS, the number of wells remediated, and the discount rate, EPA estimated the indirect annualized benefit could be between \$203,000 to \$15.9 million. *Id.* at 130-31. EPA notes that other indirect benefits that could occur as a result of the Rule include reductions in PFAS levels reaching public water systems, thereby reducing potential health effects in the populations served by these facilities and the costs associated with treatment at these facilities, *id.* at 131; TSDFs implementing improved waste management practices to minimize the likelihood of PFAS releases at their facilities due to the possibility that corrective action requirements may be imposed, *id.* at 132; and earlier remediation of PFAS, *id.*

## RECOMMENDATIONS

EPA should promptly finalize its proposed listing of the Nine PFAS as hazardous constituents under RCRA. The States also urge EPA to consider listing the class of PFAS as

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<sup>39</sup> For purposes of this analysis, EPA only quantified the monetary benefit that might occur from PFOA and PFOS reductions in private drinking water from reductions in the frequency of renal cancer, birth weight impacts, and cardiovascular disease. Economic Assessment, p. 131.

hazardous constituents under RCRA in a future rulemaking, if supported by science. “There is growing attention to regulating PFAS as a chemical class because many have been shown to share similar adverse health effects, modes of action, and physical and biochemical properties.”<sup>40</sup> Additionally, “the approach of regulating only individual PFAS or a limited subset of PFAS has led to the replacement of those PFAS with other members of the class that have less well-characterized hazard profiles.”<sup>41</sup> As such, the States urge EPA to consider listing the class of PFAS as hazardous constituents under RCRA in a future rulemaking.

Further, the States urge EPA to consider engaging in a separate rulemaking to list certain PFAS other than the nine addressed by the Rule, or the class of PFAS, as a hazardous waste in the near future. Without listing PFAS more broadly as hazardous waste under RCRA, the disposal of wastes containing PFAS is largely unrestricted and is not subject to RCRA’s comprehensive regulatory program for generators and transporters of hazardous waste, and TSD facilities. *See e.g.*, 42 U.S.C. §§ 6921- 6936b. Given the well-documented health and environmental impacts associated with PFAS, EPA should consider whether the class of PFAS or a certain subset of PFAS meet the requirements of a hazardous waste and warrant subsequent listing. In making this recommendation, the States are cognizant that such a listing could expand the number of facilities that are subject to regulation under RCRA and liability under the CERCLA, such as landfills and wastewater treatment systems, *see* 42 U.S.C. § 9601(14), and that it could impose costs on state, local governments, and other public service providers, such as publicly owned treatment works, public drinking water providers, and municipal landfills. As such, the States urge EPA to concurrently offer funding to help these entities pay for the cost of compliance, including funding for site investigation, emergency response, and cleanup,<sup>42</sup> as well as funding for drinking water and wastewater infrastructure improvements.<sup>43</sup>

Sincerely,

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<sup>40</sup> Salvatore et al., *Presumptive Contamination: A New Approach to PFAS Contamination Based on Likely Sources*; *see also* Simona Andreea Bălan et al., *Regulating PFAS as a Chemical Class under the California Safer Consumer Products Program*, 129:2 ENVTL. HEALTH PERSP.s 02001-1 (2021).

<sup>41</sup> Simona Andreea Bălan et al., *Regulating PFAS as a Chemical Class under the California Safer Consumer Products Program*.

<sup>42</sup> The Infrastructure Investment and Jobs Act, P.L. 117-58 (2021) provided \$3.5 billion towards remediation of sites on EPA’s Superfund National Priority List. 135 Stat. 1398.

<sup>43</sup> The Infrastructure Investment and Jobs Act provided a total of \$5 billion in emergency supplemental appropriations to EPA over a five-year period from FY2022 through FY2026 to address emerging contaminants, including PFAS, through existing wastewater and drinking water infrastructure programs. This funding includes \$1 billion for Clean Water State Revolving Fund (“SRF”) capitalization grants to assist local wastewater treatment facilities and \$4 billion for Drinking Water SRF capitalization grants to assist public water systems. The Infrastructure Act also authorized \$5 billion in grant funding to help small, disadvantaged, or underserved communities address emerging contaminants in drinking water. P.L 117-58, 135 Stat. 1399-1402.

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