



## State of New Mexico

Michelle Lujan Grisham  
*Governor*

June 23, 2021

Dear Administrator Regan:

Attached is my petition to the Environmental Protection Agency requesting a timely listing of per and polyfluorinated substances (PFAS) as a class of chemicals within Subpart C of the Resource Conservation and Recovery Act (RCRA), or in the alternative, list individual PFAS chemicals under RCRA. PFAS chemicals present an imminent and substantial endangerment to human health and the environment. I submit this petition pursuant to 42 U.S.C. § 6921(c), and I look forward to your response on or before September 21, 2021.

Thank you for your consideration of this petition and prompt action to protect the people of my state and the United States as a whole by providing a uniform regulatory process for PFAS regulation.

If your staff have any questions regarding this petition, please contact James Kenney, Cabinet Secretary, New Mexico Environment Department, at [james.kenney@state.nm.us](mailto:james.kenney@state.nm.us) or (505) 470-6161.

Sincerely,

A handwritten signature in blue ink that reads "Michelle Lujan Grisham".

Governor Michelle Lujan Grisham

cc: James Kenney, Cabinet Secretary, New Mexico Environment Department

## I. Introduction

My name is Michelle Lujan Grisham, and I serve as the Governor of the State of New Mexico. Pursuant to 42 U.S.C. § 6921(c), I submit this Petition to the Administrator of the U.S. Environmental Protection Agency (“EPA”) requesting listing of the class of per- and polyfluoroalkyl substances (“PFAS”) as a hazardous waste pursuant to Subtitle C of the Resource Conservation and Recovery Act (“RCRA”), or in the alternative, list individual PFAS chemicals under RCRA known to have harmful effects to humans and the environment. I implore EPA to do what is immediately necessary to protect the people and environment of the United States from the real and potentially devastating effects of exposure to PFAS.

Without regulatory action addressing PFAS chemicals from their manufacturing to disposal, the people of the United States will continue to remain at risk from the toxic characteristics of this class of chemicals. I recognize that other entities have submitted petitions to EPA requesting that the Administrator list PFAS as hazardous waste. Specifically, the Environmental Law Clinic at the University of California, Berkeley (“UCB Petition”) and the Public Employees for Environmental Responsibility (“PEER Petition”) both filed petitions that are currently pending before EPA.<sup>1</sup> Those organizations have provided a wealth of technical data as well as individualized instances of PFAS impacts across the country. I urge the Administrator to consider these petitions in conjunction with mine and expeditiously act to protect the citizens of the United States from the present and future impacts from unregulated PFAS and GenX manufacture, use, disposal, and contamination.

Through the New Mexico Environment Department (“NMED”), I am responsible for protecting and restoring the environment and fostering a healthy and prosperous New Mexico for present and future generations.<sup>2</sup> NMED administers New Mexico’s Hazardous Waste Act, NMSA 1978, Sections 74-4-1 to -14, and New Mexico’s RCRA program.

New Mexico has demonstrated and documented PFAS contamination in several areas; most of these sites are directly related to U.S. Department of Defense (“DOD”) activities at Cannon and Holloman Air Force Bases. These actions have directly contaminated or threatened dairy farms surrounding Cannon Air Force Base, areas on the bases themselves, and Lake Holloman, thereby causing substantial harm to human health, New Mexico’s agricultural industries, recreation, and tourism.

## II. Statement of Need and Justification

Listing of PFAS under RCRA is absolutely necessary to provide EPA and states the framework to regulate PFAS from the cradle to the grave. Without a uniform regulatory process addressing PFAS from manufacture to disposal, states like New Mexico will be left attempting to use a patchwork of statutory and regulatory authorities that may or may not provide enough oversight

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<sup>1</sup> [https://www.epa.gov/sites/production/files/2020-04/documents/pfas\\_petition\\_for\\_haz\\_waste\\_jan\\_2020\\_metadata\\_added.pdf](https://www.epa.gov/sites/production/files/2020-04/documents/pfas_petition_for_haz_waste_jan_2020_metadata_added.pdf);  
[https://eeo.epa.gov/sites/production/files/2020-04/documents/peer\\_pfas\\_rulemaking\\_petition\\_metadata\\_added.pdf](https://eeo.epa.gov/sites/production/files/2020-04/documents/peer_pfas_rulemaking_petition_metadata_added.pdf).

<sup>2</sup> Testimony of James Kenney, U.S. Senate Committee on Environment and Public Works, June 9, 2021, [https://www.epw.senate.gov/public/?a=Files.Serve&File\\_id=0466E61D-85E2-4678-8196-3C2EA1025351](https://www.epw.senate.gov/public/?a=Files.Serve&File_id=0466E61D-85E2-4678-8196-3C2EA1025351).

to protect workers, consumers, users, and disposers of PFAS from the known harms associated with exposure.

PFAS are a large class of synthetic fluorinated organic compounds.<sup>3</sup> Each of these chemicals utilizes a chain of carbon atoms which may be fully (per) or partly (poly) fluorinated.<sup>4</sup> Because of their ability to repel oil and water, manufacturers produced PFAS for a variety of industries and products, including surface treatments for soil, stain, and water resistance; surface treatments of textiles, paper, and metals; and for specialized applications, including fire suppression.<sup>5</sup> In 2014, EPA considered PFAS to be emerging contaminants, the effects of which were not completely understood.<sup>6</sup> Since that time we have continued to learn more about the characteristics and dangers of PFAS for human health and the environment.

The dangers are becoming all too evident. Exposure to certain PFAS has been associated with cancer, diabetes, liver damage, high cholesterol, obesity, thyroid disease, asthma, immune system dysfunction, reduced fertility, low birth weight, and effects on children's cognitive and neurobehavioral development.<sup>7</sup> The toxicity, mobility and bioaccumulation potential of Perfluorooctanesulfonic acid ("PFOS") and Perfluorooctanoic acid ("PFOA"), as well as other PFAS, result in adverse effects on the environment and human health,<sup>8</sup> and when more than one PFAS compound is present, those adverse effects become more severe.<sup>9</sup> New Mexico recognized the dangers of PFAS in 2018 when its Water Quality Control Commission added three PFAS to the list of toxic pollutants as they relate to ground water and surface water. 20.6.2.3103(A)(2) NMAC and 20.6.2.7(T)(2)(s) NMAC.<sup>10</sup>

New Mexico faces particular impact from the use of Aqueous Film Forming Foam ("AFFF"), the concentrate of which contains PFOA and PFOS.<sup>11</sup> AFFF is a firefighting foam developed in the 1960s to be used for flammable liquid fire extinguishment.<sup>12</sup> Training with AFFF is a critical part of proper AFFF use, and my state has contaminated areas directly associated with those training activities. AFFF was primarily used on Air Force installations, including Cannon and Holloman Air Force Bases, at fire training areas, but has also been used, stored, or released in other locations from

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<sup>3</sup> See U.S. EPA Technical Fact Sheet—PFOS and PFOA (Nov. 2017), available at [https://www.epa.gov/sites/production/files/2017-12/documents/frrrofactsheet\\_contaminants\\_pfos\\_pfoa\\_11-20-17\\_508\\_0.pdf](https://www.epa.gov/sites/production/files/2017-12/documents/frrrofactsheet_contaminants_pfos_pfoa_11-20-17_508_0.pdf).

<sup>4</sup> *Id.*

<sup>5</sup> *Id.*

<sup>6</sup> U.S. EPA, *Emerging Contaminants Fact Sheet – Perfluorooctane Sulfonate (PFOS) and Perfluorooctanoic Acid (PFOA)* (March 2014), <https://nepis.epa.gov/Exe/ZyPDF.cgi/P100LTG6.PDF?Dockey=P100LTG6.PDF>.

<sup>7</sup> See: [https://www.epw.senate.gov/public/\\_cache/files/2/2/22ca7c4b-b1dc-4a12-9264-7a4f16608933/BF2D70A4FB747A3F61E584CC30D58D0A.birnbaum-testimony-03.28.2019.pdf](https://www.epw.senate.gov/public/_cache/files/2/2/22ca7c4b-b1dc-4a12-9264-7a4f16608933/BF2D70A4FB747A3F61E584CC30D58D0A.birnbaum-testimony-03.28.2019.pdf)

<sup>8</sup> ATDSR, *An Overview of Perfluoroalkyl and Polyfluoroalkyl Substances and Interim Guidance for Clinicians Responding to Patient Exposure Concerns*, at 1 (June 7, 2017), available at [https://www.atsdr.cdc.gov/pfc/docs/pfas\\_clinician\\_fact\\_sheet\\_508.pdf](https://www.atsdr.cdc.gov/pfc/docs/pfas_clinician_fact_sheet_508.pdf).

<sup>9</sup> See U.S. Dep't of Health and Human Services and Centers for Disease Control and Prevention, *Fourth National Report on Human Exposure to Environmental Chemicals*, Updated Tables (March 2018), available at [https://www.cdc.gov/exposurereport/pdf/FourthReport\\_UpdatedTables\\_Volume1\\_Mar2018.pdf](https://www.cdc.gov/exposurereport/pdf/FourthReport_UpdatedTables_Volume1_Mar2018.pdf).

<sup>10</sup> <https://www.srca.nm.gov/parts/title20/20.006.0002.html>

<sup>11</sup> Although manufacturers of AFFF in the United States now use PFAS other than PFOS, early studies of the replacement PFAS, including what are known as C6 products, indicate that they are nearly as harmful.

<sup>12</sup> U.S. EPA, *Emerging Contaminants Fact Sheet – Perfluorooctane Sulfonate (PFOS) and Perfluorooctanoic Acid (PFOA)*, *supra* note 4, at 2.

hangar fire suppression systems, at firefighting equipment testing and maintenance areas, and during emergency response actions for fuel spills and mishaps.

One specific example of contamination due to PFAS use and disposal in southern New Mexico is Lake Holloman, located about one mile from Holloman Air Force Base. Lake Holloman has been recognized as a state Watchable Wildlife viewing area since 1996. This area provides foraging and nesting habitat for over 73 species of migrating and resident wetland birds. It is the most important area in the Tularosa Basin for shorebirds like Wilson's phalarope and snowy plovers.<sup>13</sup> The results of recent sampling from Lake Holloman taken by the New Mexico Department of Health with the assistance of NMED confirm extremely high levels of PFAS throughout the lake that put the State's citizens and natural resources at risk of harm. Specifically, PFOA was detected at levels as high as 5,900,000 parts per trillion (ppt), more than 84,000 times the EPA's health advisory of 70 ppt, and PFOS was detected as high as 1,600,000 ppt, more than 22,000 times the EPA health advisory.

In spite of the known and continuing contamination at Lake Holloman and multiple other locations, New Mexico faces continued roadblocks from federal facilities who refuse to act quickly to remediate PFAS contamination. In particular, even though PFAS meets the statutory definition of a hazardous waste, the DOD filed an action in federal district court challenging New Mexico's legal authority to regulate PFAS pursuant to RCRA and attempting to reshape congressional intent and authority given to EPA and the states. Because of this unwarranted challenge, New Mexico continues to expend our limited resources defending its ability to regulate, rather than spending those resources on ensuring remediation of the PFAS contamination and protection of human health and the environment.

From an economic perspective, agriculture is an integral part of New Mexico's cultural and economic identity. We are the top state in the country in chile production, second in pecans, in the top 10 in milk production and have the largest average dairy herd size in the nation. According to the most recent U.S. Census of Agriculture, there are 24,800 farms in our state and agriculture and food products are among New Mexico's top five exports. Our agricultural industry employs over 23,000 people in the state with cash receipts approaching \$3 billion annually. Yet, PFAS is putting our cultural and economic identity at risk.

In October 2018, a Curry County, New Mexico dairy farmer that borders Cannon Air Force Base learned his water was contaminated with PFAS. The milk was tested and the New Mexico Department of Agriculture worked with the U.S. Food and Drug Administration (FDA) to risk warning levels for PFAS in milk. The milk was immediately pulled off the market. Since then, the dairy farmer has had to destroy tens of millions of gallons of milk, losing millions of dollars in revenue that otherwise would have recirculated in our state and national economy. This economic impact is in addition to the as yet unknown health impact the dairy farmer and his family may endure because of the DOD's PFAS contamination of the water. New Mexico's agricultural reputation is essential to both the nation's milk supply and our state economy. Other farms near Cannon Air Force Base could face a similar catastrophic fate. Given that Curry County is one of the nation's top milk producers, we will continue to safeguard our agricultural products from PFAS contamination through

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<sup>13</sup> See Lake Holloman Recreational Area Development Environmental Assessment (Aug. 2009), available at <https://apps.dtic.mil/dtic/tr/fulltext/u2/a636343.pdf>.

prevention and analytical testing in the absence of clear national standards from the EPA and through our efforts to get the DOD to clean up the water it has contaminated with PFAS.

Tourism is also essential to New Mexico's economy. Our Tourism Department reports that we have a high percentage of out-of-state visitors who come to New Mexico for outdoor recreation activities, such as river rafting, fly fishing, camping, boating and wildlife viewing along our State's scenic waters. Visitors spent \$846 million on recreation in New Mexico in 2017, supporting 13,000 direct jobs. This is more than twice as many jobs as supported by the energy and mining sectors in our state, combined. The New Mexico Department of Game and Fish reports there are 160,000 anglers who fish in New Mexico, spending \$268 million on these activities annually. The nationally leading New Mexico Outdoor Recreation Division, created through legislation in 2019, is tasked with increasing outdoor recreation-based economic development, tourism and ecotourism; recruiting new outdoor recreation business to New Mexico; and promoting education about outdoor recreation's benefits to public health.

As an example of how PFAS contamination could impact tourism, extremely high levels of PFAS were detected in Lake Holloman as discussed above, where PFAS was released into the environment through decades of the USAF's use of AFFF. Lake Holloman is considered an important habitat for birds, and also serves as a valuable recreational resource to the community surrounding the base, as it is used for boating, bird watching, and camping. In 2019, the New Mexico Attorney General requested the USAF close Lake Holloman and the New Mexico Department of Health directed the public to avoid all contact with the water in Lake Holloman, including drinking or swimming, in order to protect the public from the ongoing PFAS contamination.

Finally, from a consumer standpoint, water or stain resistant sprays containing PFAS are offered to customers by some retailers who sell furniture, rugs and textiles. When these household goods are purchased, retailers offer and apply water- or stain-resistant sprays containing PFAS. Often, the water- or stain-resistant application takes place at a retail store or local warehouse prior to the consumer picking up their purchase. The retailer applies the spray to the household product, cleans up any waste, and disposes of any waste generated from the process. The use of these chemicals by retailers is largely unregulated and may present a risk to consumers, employees, municipal wastewater treatment facilities, and solid waste management facilities. Ultimately, the consumer may not be aware that their stain- or water-resistant furniture, rug or textile may contain PFAS chemicals. This area needs greater study, disclosure and possibly regulation to prevent human and wildlife exposure to PFAS.

### III. RCRA is the Correct Method of Regulation for PFAS

As our body of PFAS-related knowledge grows, it is becoming clear that the breadth and threat presented by PFAS requires listing as a hazardous waste pursuant to RCRA Subpart C. Subpart C is appropriate because PFAS demonstrates the characteristics of a toxic waste. Listing as a hazardous waste would allow New Mexico and other similarly situated states to implement regulations uniformly and through existing local programs.

Congress enacted RCRA in 1976 in response to "a rising tide of scrap, discarded, and waste materials" that had become a matter of national concern. In enacting RCRA, Congress declared it a national policy "that, wherever feasible, the generation of hazardous waste is to be reduced or eliminated as expeditiously as possible. Waste that is nevertheless generated should be treated,

stored, or disposed of so as to minimize the present and future threat to human health and the environment.” Congress recognized, however, that “the collection of and disposal of solid wastes should continue to be primarily the function of State, regional, and local agencies. . . .”, and RCRA allows any state to administer and enforce a hazardous waste program subject to authorization from the EPA. EPA authorized New Mexico’s hazardous waste program pursuant to RCRA in 1985. 40 C.F.R. § 242.1601(a). EPA delegated New Mexico primary responsibility for enforcing its hazardous waste management program. 40 C.F.R. § 272.1601(b).

By definition, a solid waste is, “any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agriculture operations, and from community activities.” 42 U.S.C. § 6903(27). A hazardous waste is “a solid waste 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).

Notably, the definition of hazardous waste includes solid wastes that pose a threat to human health and the environment as well as those that *may* pose a threat. *American Chemistry Council v. EPA*, 337 F.3d 1060, 1064 (D.C. Cir. 2003) (emphasis added). As stated above, PFAS are dangerous; specifically, PFAS are toxic. New Mexicans have experienced this first-hand. In my state, discarded AFFF containing PFAS directly caused groundwater contamination. This contamination led to ongoing direct threats to human health and the environment.

In order for a waste to be considered characteristic for toxicity, it must contain one of the constituents listed in Table 1 of 261.24. 40 C.F.R. § 261.24(a). Federal regulations require that the Administrator shall list a solid waste as a hazardous waste upon determining that the solid waste exhibits any of the characteristics of hazardous waste identified in Subpart C of RCRA; it is found to be fatal to human in low doses; or it contains any of the listed toxic constituents in Appendix VIII combined with consideration of factors listed in (a)(3)(i) – (xi). 40 C.F.R. § 261.11(a)(1) – (3). Additionally, substances are only placed on Appendix VIII if they have been shown in scientific studies to have toxic, carcinogenic, mutagenic or teratogenic effects on humans or other life forms.

Fluorine is listed as a toxic constituent in Appendix VIII to 40 C.F.R. part 261. As mentioned above and more thoroughly demonstrated by UCB and PEER in their petitions, at their foundation, PFAS include a chain of carbon atoms bonded to fluorine atoms. Both UCB and PEER provide a thorough and well-reasoned explanation as to how PFAS meets the criteria for listing required by 40 C.F.R. § 261.11, particularly 40 C.F.R. § 261.11(a)(3)(i) – (xi). Based on their well explained and reasoned arguments, I hereby incorporate by reference Sections IV. through VI. of the UCB Petition and Sections III. through V. of the PEER Petition and the associated legal and scientific arguments made in those sections. With this information, EPA should have sufficient evidence and data to begin the process of amending Table 1 of 40 C.F.R. § 261.24 to include PFAS. This will allow uniform and meaningful regulation of PFAS. Furthermore, the scientific record provides that PFAS could be a candidate for listing in Appendix VIII itself.

Further, the Administrator has the authority to list classes of hazardous waste when there is reason to believe that individual wastes within this class or type of waste typically or frequently are hazardous under the definition of hazardous waste found at 40 C.F.R. § 261.5(c). In their petitions UCB and PEER provide a thorough and extensive discussion explaining the consistent toxic characteristics of many of the various PFAS. Based on this reasoning, I request that the Administrator not only list individual PFAS as hazardous wastes, including PFOS and PFOA, but go further and list PFAS as a class of chemicals, which will cover the thousands of PFAS variations.

#### IV. Conclusion

Without consistent and standardized regulation of such a large class of chemicals as PFAS, the United States will continue to experience wide scale and unrestricted manufacture, use, and disposal of these chemicals. It is incumbent upon the Administrator to act quickly to solidify this necessary tool for the states to be able to take concerted and effective action to prevent and, where necessary, compel clean-up of PFAS contamination. My state needs this designation in order to act quickly and protect its citizens, its water, its economy, and its environment from further contamination by this state's largest PFAS polluters.