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Testimony of

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Before the

Senate Committee on the Environment and Public Works

On

**Examining Legislation to Address the Risks Associated with
Per- and Poly- Fluoroalkyl Substances (PFAS)**

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Thank you for the opportunity to testify on behalf of the Environmental Working Group, a national environmental health organization which has sought to address the health risks posed by per- and poly- fluoroalkyl substances for two decades.

To address the growing PFAS contamination crisis, Congress should address ongoing sources of PFAS contamination, measure the scope of existing PFAS contamination, notify communities impacted by PFAS contamination, and dramatically accelerate efforts to clean up PFAS contamination. More broadly, Congress should reform our federal environmental and public health laws to better address the threats posed by contaminants like PFAS.



PFAS Chemicals Pose Serious Health Risks

Nearly all of us are contaminated by PFAS chemicals.¹ Americans are exposed to dozens of PFAS every day -- through our food, water, air, indoor dust, carpets, clothing and cosmetics. While diet and dust are likely significant sources of PFAS exposure, even low PFAS concentrations in drinking water can substantially increase our body burden.²

Exposure to very low doses of some PFAS chemicals is associated with serious health risks, including cancer, reproductive harm, developmental harm, damage to the immune system, hormone disruption, and liver and kidney damage.³ Because some PFAS chemicals have a long half-life in our bodies,⁴ some PFAS bio-accumulate, or build up, in our blood serum and organs. Once released into the environment, PFAS are highly mobile and do not readily break down -- thus leading to the designation of PFAS as “forever chemicals.”⁵

While the health effects of PFOA and PFOS are well known, there is growing evidence that replacement chemicals -- such as GenX and PFBS -- pose many of the same health risks.⁶ Other PFAS chemicals linked to chronic health problems include PFHxS, PFNA, PFDeA, PFDoA,

¹ Centers for Disease Control and Prevention, National Biomonitoring Program, Per- and Polyfluorinated Substances (PFAS) Factsheet, https://www.cdc.gov/biomonitoring/PFAS_FactSheet.html (last updated April 7, 2017). See also <https://www.ewg.org/news-and-analysis/2019/02/children-s-exposure-pfas-chemicals-begins-womb>

² See, e.g., Gloria B. Post & Jessie A. Gleason, *Technical Support Document: Interim Specific Ground Water Criterion for Perfluorooctanoic Acid (PFOA, C8)*(CAS #335-67-1; Chemical Structure: CF₃(CF₂)₆COOH), (New Jersey Department of Environmental Protection, Division of Science, Research & Environmental Health, at 4 (Jan. 2019), <https://www.nj.gov/dep/dsr/Technical%20Support%20Document%20Draft%20ISGWQC%20for%20PFOA.pdf>.

³ Agency for Toxic Substances and Disease Registry, *Toxicological Profile for Perfluoroalkyls* (2018) <https://www.atsdr.cdc.gov/toxprofiles/tp200.pdf>

⁴ Half-life estimates range from over 2 years from PFOA and PFNA to 5.4 years for PFOS to 8.5 years for PFHxS. See Anna Reade, Tracy Quinn, & Judith S. Schreiber, *Scientific and Policy Assessment for Addressing PFAS in Drinking Water* (2019) at 12, <https://www.nrdc.org/sites/default/files/assessment-for-addressing-pfas-chemicals-in-michigan-drinking-water.pdf>.

⁵ Joseph G. Allen, *These Toxic Chemicals are Everywhere--Even in Your Body. And They Won't Ever Go Away*, Wash. Post, Jan. 2, 2018, https://www.washingtonpost.com/opinions/these-toxic-chemicals-are-everywhere-and-they-wont-ever-go-away/2018/01/02/82e7e48a-e4ee-11e7-a65d-1ac0fd7f097e_story.html?utm_term=.af2b55788f59

⁶ Environmental Protection Agency, GenX and PFBS Draft Toxicity Assessments (2018), <https://www.epa.gov/pfas/genx-and-pfbs-draft-toxicity-assessments>



PFUA, PFHxA, and PFBA.⁷ Short-chain PFAS can be equally persistent, more mobile in the environment, and also accumulate in the body.⁸

PFAS chemicals impact our health at all stages of life but pose unique risks to infants and children.⁹ As EPA addresses the health impacts of PFAS, EPA should be directed to consider the impacts of PFAS on infants as well as on breast-feeding women, should consider all health effects including damage to the immune system, and should apply appropriate uncertainty factors. PFAS safety standards which protect infants and which consider all health impacts, including harm to the immune system, range from 8 ppt and 9 ppt for PFOS and PFOA, as proposed by Michigan¹⁰; to 13 ppt and 14 ppt for PFOS and PFOA, as proposed by New Jersey¹¹; to a sum of 20 ppt for five and six PFAS, as proposed by Vermont¹² and Massachusetts¹³, respectively. Other studies and public health agencies have recommended even lower values.¹⁴ Fortunately, some water treatment technologies can reduce concentrations of PFOA, PFOS, PFNA, PFHxS, GenX and other PFAS chemicals to levels below 1 ppt and address other contaminants of concern.¹⁵

⁷ Agency for Toxic Substances and Disease Registry, *Toxicological Profile for Perfluoroalkyls* (2018) <https://www.atsdr.cdc.gov/toxprofiles/tp200.pdf>

⁸ Reade et al., *supra* note 4, at 25-26.

⁹ Kristen M. Rappazzo, Evan Coffman, & Erin P. Hines, *Exposure to Perfluorinated Alkyl Substances and Health Outcomes in Children: A Systematic Review of the Epidemiological Research*, 14 *Int. J. Environ. Research & Public Health* 691 (2017), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5551129/>

¹⁰ Michigan Department of Health and Human Services, Division of Environmental Health, PFAS Action Response Team Human Health Working Group, *Public Health Drinking Water Screening Levels for PFAS* (Feb. 22, 2019), https://www.michigan.gov/documents/pfasresponse/MDHHS_Public_Health_Drinking_Water_Screening_Levels_for_PFAS_651683_7.pdf.

¹¹ New Jersey Department of Environmental Protection, Site Remediation Program, <https://www.nj.gov/dep/srp/emerging-contaminants/> (last updated March 13, 2019).

¹² Press Release, State of Vermont Agency of Natural Resources, Health Department Updates Health Advisory for PFAS, State Expands Testing Plan to Include 10 Schools in Pilot Project (July 10, 2018), <https://anr.vermont.gov/node/1223>.

¹³ Letter from Yvette DePieza, Program Director, Drinking Water Program, Massachusetts Department of Environmental Protection, to Public Water Suppliers (April 17, 2019), <https://www.mass.gov/files/documents/2019/04/18/pfas-letter-faq.pdf>.

¹⁴ See e.g. <https://www.ewg.org/research/ewg-proposes-pfas-standards-fully-protect-children-s-health>

¹⁵ Reade et al., *supra* note 4, at 53.



Congressional Action Urgently Needed

In February, EPA released a PFAS Action Plan that failed to treat the PFAS contamination crisis with appropriate urgency.¹⁶ In particular, EPA failed to address ongoing PFAS releases into air and water, failed to add any PFAS chemicals to the Toxic Release Inventory, failed to expand efforts to monitor for PFAS, and took no concrete steps to clean up existing PFAS contamination. To reduce the risks posed by PFAS contamination, Congress should: address ongoing sources of PFAS contamination; document the sources and scope of existing contamination; and dramatically accelerate efforts to clean up existing PFAS contamination.

Address Ongoing PFAS Contamination

To address ongoing air and water releases of PFAS, Congress should subject industrial PFAS releases to Sec. 307 and Sec. 311 of the Clean Water Act and Sec. 112 of the Clean Air Act, direct EPA to limit the application of bio-solids containing PFAS,¹⁷ and should, at a minimum, phase out non-essential uses of PFAS in cookware, food packaging, textiles, cosmetics and other consumer products.¹⁸ Congress should also address the management of PFAS waste, and replace fluorinated fire-fighting foams with safe and effective alternatives.

¹⁶ Press Release, Environmental Working Group, Trump PFAS Plan is a Recipe for More Contamination, (Feb. 14, 2019), <https://www.ewg.org/release/trump-pfas-plan-recipe-more-contamination>

¹⁷ Congress should direct EPA to revise 40 CFR Part 503.13 to add PFAS to the list of pollutants to be regulated, and to prohibit land application of biosolids containing PFAS on agricultural lands. See Environmental Protection Agency, Office of Inspector General, *EPA Unable to Assess the Impacts of Hundreds of Unregulated Pollutants in Land-Applied Biosolids*, Report #19-P-0002 (Nov. 2018), <https://www.epa.gov/office-inspector-general/report-epa-unable-assess-impact-hundreds-unregulated-pollutants-land>

¹⁸ New PFAS should not be approved until EPA and FDA regulators meet existing statutory obligations to assess health effects. The Environmental Defense Fund has documented both agencies failure to do so. See, e.g., Tom Neltner, *FDA-Approved PFAS: A Serious Breakdown in Assessing Food Additive Safety*, Environmental Defense Fund (Nov. 4, 2018), <http://blogs.edf.org/health/2018/11/04/fda-approved-pfas-breakdown-assessing-food-additive-safety/>; Richard Denison, *Part I: EPA Rams Through its Reckless Review Scheme for New Chemicals Under TSCA, Your Health Be Damned*, Environmental Defense Fund (Aug. 1, 2018), <http://blogs.edf.org/health/2018/08/01/epa-rams-through-its-reckless-review-scheme-for-new-chemicals-under-tsca-your-health-be-damned/>.



Document the Scope of PFAS Contamination

Congress should also expand our ability to understand the scope of PFAS contamination. In particular, Congress should improve our ability to detect PFAS in water and soil, as proposed by S. 950, the PFAS Detection Act of 2019.¹⁹ S. 950 would authorize the U.S. Geological Survey to conduct nationwide sampling for PFAS and to develop new PFAS detection methods.²⁰ S. 950 is an important first step. Congress should also amend Sec. 1445(a)(2)(B)(i)²¹ of the Safe Drinking Water Act to add all detectable PFAS to the next Unregulated Contaminant Monitoring Rule.²² In combination, monitoring ground and surface water, monitoring soil, and monitoring tap water will allow us to better characterize the full scope of PFAS contamination. Congress should also expand efforts to monitor PFAS in household dust, food, and blood,²³ and should ensure that communities impacted by PFAS contamination are notified, especially military families, as proposed in S. 1105, the PFAS Registry Act of 2019.²⁴

Congress should also improve our ability to identify the sources of PFAS contamination. Many PFAS chemicals currently in use can be reasonably anticipated to cause serious health risks, including GenX, PFBS, PFHxS, and PFNA, PFDeA, PFD_oA, PFUA, PFHxA, and PFBA,²⁵ and many of these PFAS are being detected in water.²⁶ All PFAS that are reasonably anticipated to

¹⁹ The PFAS Detection Act of 2019, S. 950, 116th Cong. (2019).

²⁰ This month, EWG used publicly available data to document PFAS contamination at 610 sites in 43 states, including 117 military installations. See Bill Walker, *Mapping the PFAS Contamination Crisis: New Data Show 610 Sites in 43 States*, Environmental Working Group (May 6, 2019), <https://www.ewg.org/news-and-analysis/2019/04/mapping-pfas-contamination-crisis-new-data-show-610-sites-43-states>.

²¹ 42 U.S.C. § 300j-4(a)(2)(B)(i).

²² Congress should exempt PFAS from the current statutory limit on the number of chemicals which can be added to the UCMR, and should direct EPA to development a detection method for total PFAS.

²³ See, e.g., Centers for Disease Control, National Biomonitoring Program, <https://www.cdc.gov/biomonitoring/index.html> (last updated April 7, 2017) (CDC's biomonitoring program monitors blood for contaminants like PFAS); Food and Drug Administration, Total Diets Study, <https://www.fda.gov/food/science-research-food/total-diet-study> (last updated Feb. 23, 2018) (FDA monitors food for contaminants like PFAS); and U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion, American Healthy Homes Survey, <https://www.healthypeople.gov/2020/data-source/american-healthy-homes-survey> (last updated May 17, 2019) (HUD monitors indoor dust for contaminants like PFAS).

²⁴ PFAS Registry Act of 2019, S. 1105, 116th Cong. (2019).

²⁵ Agency for Toxic Substances and Disease Registry, *Toxicological Profile for Perfluoroalkyls* (2018) <https://www.atsdr.cdc.gov/toxprofiles/tp200.pdf>.

²⁶ A recent study of source and treated water detected 12 PFAS including PFBS, PFHxS, PFBA, PFHxA, PFNA, PFDeA, and PFDA as well as PFOA and PFOS. See J. Scott Boone et al., *PFAS in Source and Treated Drinking*



pose cancer or other chronic health risks should be added to the Toxic Release Inventory. At a minimum, Congress should require that all industrial discharges of PFAS subject to a Significant New Use Rule²⁷ be added to the TRI, as proposed in S. 1507, the PFAS Release Disclosure Act of 2019.²⁸ Congress should also require that all PFAS for which there are final toxicity values be added to the TRI, as proposed in S.1507.²⁹ Because PFAS pose health risks at low levels, Congress should direct EPA to use the same reporting threshold typically applied to chemicals of special concern.³⁰

Accelerate PFAS Clean-Up Efforts

Congress should also dramatically accelerate efforts to clean up PFAS contamination. To do so, Congress should designate PFAS as hazardous substances under Sec. 102 of CERCLA, as proposed in S. 638, the PFAS Action Act of 2019.³¹ By designating PFAS as hazardous substances, Congress will trigger certain reporting requirements and remedial actions. What's more, designating PFAS as hazardous substances will also ensure that the costs of PFAS remediation are shared by responsible parties, including the Department of Defense.³² Congress should also ensure that PFAS wastes are properly managed.³³

Water in the United States, 653 *Science of the Total Environment* 359 (2019),
<https://www.sciencedirect.com/science/article/pii/S004896971834141X>.

²⁷ This would include all PFAS chemicals covered by 40 C.F.R. § 721.10535 (a significant new use rule covering long-chain perfluoroalkyl carboxylate chemical substances) and 40 C.F.R. § 721.9582 (a significant new use rule covering 271 perfluoroalkyl sulfonates). Once finalized, this would also cover any chemicals in EPA's 2015 proposed SNUR on PFAS. See Long-Chain Perfluoroalkyl Carboxylate and Perfluoroalkyl Sulfonate Chemical Substances; Significant New Use Rule, 80 Fed. Reg. 2885 (Jan. 21, 2015).

²⁸ PFAS Release Disclosure Act of 2019, S. 1507, 116th Cong. (2019).

²⁹ Congress should also require that any substantial risk submission made pursuant to Sec. 8(e), 15 U.S.C § 2607(e), of the Toxic Substances Control Act to be automatically added to the TRI.

³⁰ See Lower Thresholds For Chemicals of Special Concern, 40 CFR § 372.28,
<https://www.law.cornell.edu/cfr/text/40/372.28>.

³¹ The PFAS Action Act of 2019, S. 638, 116th Cong. (2019). Designating PFAS under Sec. 307(a) or 311(b)(2)(A) of the Clean Water Act, Sec. 112 of the Clean Air Act, Section 7 of TSCA, or Sec. 3001 of RCRA, would also add a substance to list of "hazardous substances" subject to CERCLA. See 42 U.S.C. 9601(14).

³² The Department Of Defense is a major source of PFAS pollution. See Melanie Benesh & Audrey Lothspeich, *Mapping PFAS Chemical Contamination at 106 U.S. Military Sites*, Environmental Working Group (March 6, 2019), <https://www.ewg.org/research/pfas-chemicals-contaminate-us-military-sites>

³³ In particular, Congress should designate PFAS as "hazardous substances" under Sec. 3001 (42 U.S.C. § 6921) of the Solid Waste Disposal Act, better known as the Resource Conservation and Recovery Act, or RCRA. At a minimum, Congress should direct EPA to quickly provide guidance for the management of PFAS waste.



To better address contamination caused by military installations and other federal facilities, Congress should direct federal agencies to develop cooperative agreements with states to monitor and remediate contaminated sites, as proposed in S. 1372, the PFAS Accountability Act of 2019.³⁴ These agreements should require PFAS clean-up efforts to meet or exceed the most health protective standards, including state standards, as proposed in S. 1372. If a cooperative agreement is not finalized within a year of a state request, DOD and other federal agencies responsible for PFAS contamination should be required to alert Congress, as proposed in S. 1372.

Congress should also set a deadline for the development of a National Primary Water Drinking Regulation for PFAS, as proposed in S. 1473, the Protecting Drinking Water from PFAS Act of 2019.³⁵ Many states have established or proposed drinking water standards for PFAS which protect vulnerable populations, such as infants, and which address all of the health risks posed by PFAS, such as damage to the immune system. But, many states have not taken steps to reduce PFAS contamination in tap water, and EPA has consistently failed to address these threats.³⁶ Drinking water standards developed by EPA, as proposed in S. 1473, should be required to take vulnerable populations and *all* health effects into account and should build upon the progress being made by states.

To help water utilities meet these standards, Congress should help share the cost of effective PFAS treatment technologies.³⁷ Designating PFAS as hazardous substances will help ensure that

³⁴ The PFAS Accountability Act of 2019, S. 1372, 116th Cong. (2019).

³⁵ The Protecting Drinking Water from PFAS Act of 2019, S. 1473, 116th Cong. (2019).

³⁶ EPA's voluntary PFAS stewardship program was launched in 2006. See Environmental Protection Agency, Fact Sheet: 2010/2015 PFOA Stewardship Program, <https://www.epa.gov/assessing-and-managing-chemicals-under-tsca/fact-sheet-20102015-pfoa-stewardship-program> (page last updated Aug. 9, 2018); EPA's first Long-Chain Perfluorinated Chemicals Action Plan was released in 2009. See Environmental Protection Agency, *Long-Chain Perfluorinated Chemicals (PFCs) Action Plan* (Dec. 30, 2009), https://www.epa.gov/sites/production/files/2016-01/documents/pfcs_action_plan1230_09.pdf. The most recent PFAS Action Plan pledges to propose a regulatory determination by the end of 2019, but does not commit to complete a National Primary Water Drinking Regulation. See Environmental Protection Agency, *EPA's Per- and Polyfluoroalkyl Substances (PFAS) Action Plan*, at 3 (Feb. 14, 2019), https://www.epa.gov/sites/production/files/2019-02/documents/pfas_action_plan_021319_508compliant_1.pdf.

³⁷ For example, The Providing Financial Assistance for Safe (PFAS) Drinking Water Act of 2019, HR. 2533, would provide \$500 million in annual funding to implement PFAS treatment systems, and The Water Affordability,



polluters share clean-up costs. However, Congress should also establish a fee system to ensure that companies which have profited from PFAS pay their fair share.³⁸

More broadly, Congress should reform our federal environmental and public health laws to better address the threats posed by contaminants like PFAS. S. 1251, the Safe Drinking Water Assistance Act of 2019,³⁹ provides a first step by creating a national research initiative to address the threats emerging contaminants pose to our drinking water supplies. As the GAO report referenced in S. 1251 noted, EPA has failed to keep pace with these threats.⁴⁰ In particular, the GAO report referenced in S. 1251 found “EPA has made limited progress in prioritizing drinking water contaminants on the basis of greatest public health concern” since the enactment of the 1996 amendments to the Safe Drinking Water Act.⁴¹

EWG is grateful for the opportunity to testify, and we look forward to working with you to continue to address the PFAS contamination crisis. Last year, Congress allowed civilian airports to use fire-fighting foams that do not contain PFAS. The bipartisan bills that are the subject of today’s hearing -- S. 638, S. 950, S. 1251, S. 1372, S. 1473, and S. 1507 -- will build on that progress by documenting the scope and sources of PFAS contamination and by accelerating efforts to clean up PFAS contamination.

Transparency, Equity and Reliability (WATER) Act of 2019, H.R. 1417, would amend Drinking Water State Revolving Fund to provide grants to address PFAS contamination.

³⁸ For example, H.R. 2750, the PFAS User Fee Act of 2019, would create a fee system to help share the cost of water treatment. Available at <https://www.govtrack.us/congress/bills/116/hr2570/text>

³⁹ The Safe Drinking Water Assistance Act of 2019, S. 1251, 116th Cong. (2019)

⁴⁰ Government Accountability Office, *EPA Should Improve Implementation of Requirements on Whether to Regulate Additional Contaminants*; GAO-11-254 (May 27, 2011), <https://www.gao.gov/assets/320/318967.pdf>.

⁴¹ *Id.* at 17.