Testimony before the Senate Committee on Environment and Public Works Subcommittee on Chemical Safety, Waste Management, Environmental Justice, and Regulatory Oversight

Tracey J. Woodruff, PhD, MPH UCSF Professor and Director, Program on Reproductive Health and the Environment and member of the National Academy of Medicine

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Subcommittee Chairman Curtis, Ranking Member Merkley, and members of the subcommittee, thank you for the opportunity to testify. I am Dr. Tracey Woodruff, a professor from the University of California, San Francisco, and director of the Program on Reproductive Health and the Environment, and a member of the National Academy of Medicine. We conduct research to understand how industrial chemicals and pollutants in the environment impact people's health.

Toxic chemicals take a measurable toll on people's health.

Toxic chemicals are widespread in our air, water, food, homes, and workplaces, and consequently, human exposures begin before birth and continue throughout the lifespan. We know these exposures take a measurable toll on the health of children and adults and can increase the risk of cancer, infertility, neurological and cardiovascular disease, low birth weight, birth defects, autism, and ADHD.[1,2,3,4,5,6] These conditions are increasing in the US as documented in the recent Make America Healthy Again Report.[7]

Health and economic benefits of environmental regulations

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[1] Woodruff T. J. (2024). Health Effects of Fossil Fuel-Derived Endocrine Disruptors. *The New England journal of medicine*, *390*(10), 922–933. https://doi-org.ucsf.idm.oclc.org/10.1056/NEJMra2300476

[2] Gore, A. C., Chappell, V. A., Fenton, S. E., Flaws, J. A., Nadal, A., Prins, G. S., Toppari, J., & Zoeller, R. T. (2015). EDC-2: The Endocrine Society's Second Scientific Statement on Endocrine-Disrupting Chemicals. *Endocrine reviews*, *36*(6), E1–E150. https://doi.org/10.1210/er.2015-1010

[3] DeNicola, N., Lasher, E., BakenRa, A., Joglekar, R., Zhang, J., Hasenburg, A., Gupta, K., Decena, D., Edna, F., Graham, D., Morris, E., Dao, B., & Woodruff, T. (2025). FIGO committee opinion: Environmental drivers of obstetric health and early childhood development. *International journal of gynaecology and obstetrics: the official organ of the International Federation of Gynaecology and Obstetrics*, 10.1002/ijgo.70549. Advance online publication. https://doi.org/10.1002/ijgo.70549

[4] National Academies of Sciences Engi- neering and Medicine. Application of sys- tematic review methods in an overall strat- egy for evaluating low-dose toxicity from endocrine active chemicals. Washington, DC: National Academies Press, 2017.

[5] Lam, J., Lanphear, B. P., Bellinger, D., Axelrad, D. A., McPartland, J., Sutton, P., Davidson, L., Daniels, N., Sen, S., & Woodruff, T. J. (2017). Developmental PBDE Exposure and IQ/ADHD in Childhood: A Systematic Review and Meta-analysis. *Environmental health perspectives*, *125*(8), 086001. https://doi.org/10.1289/EHP1632

[6] Engel, S. M., Patisaul, H. B., Brody, C., Hauser, R., Zota, A. R., Bennet, D. H., Swanson, M., & Whyatt, R. M. (2021). Neurotoxicity of Ortho-Phthalates: Recommendations for Critical Policy Reforms to Protect Brain Development in Children. *American journal of public health*, *111*(4), 687–695. https://doi.org/10.2105/AJPH.2020.306014

[7] The White House. (2025). Make Our Children Healthy Again Assessment. www.whitehouse.gov/wp-content/uploads/2025/05/MAHA-Report-The-White-House.pdf.

Environmental regulations came about from necessity and evidence shows they are enormously effective at improving health, reducing health care costs, increasing life expectancy and productivity. Research finds that reducing air pollution during pregnancy and early childhood leads to higher earnings, improved education, and better health later in life.[8] OMB documents that annual benefits to the American public from major EPA rules ranged from $194 billion to $687 billion per year; [9] almost all from reduced health risks due to lowered air pollutant emissions and chemical exposures. These benefits far outweighed the estimated regulatory costs during that same time period.[10] In fact, EPA regulations yield the highest annual benefits for Americans compared to any other federal agency.

Americans want safe products

Protecting people from harmful chemicals is something Americans agree on. In a recent nationwide survey, over 90% of voters – including Republicans, Democrats, and Independents - agreed the federal government should require products be proven safe before companies are allowed to put them on the market, and **88% of voters support the goal of the Toxic Substances Control Act (TSCA) to protect people from harmful chemicals.**[11]

TSCA and its importance to the health of Americans

In TSCA's first 40 years, EPA struggled to ban harmful chemicals, including asbestos, a known human carcinogen that has caused hundreds of thousands of deaths. TSCA's failures led Congress to update it in 2016 to ensure EPA could better protect people from harmful chemicals. One of the goals of the TSCA amendments was to provide stronger protections for highly exposed and susceptible populations like pregnant women, children, workers, and people who live in areas where polluting facilities have been sited.

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[8] Isen, A., Rossin-Slater, M., & Walker, W. R. (2017). Every Breath You Take—Every Dollar You'll Make: The Long-Term Consequences of the Clean Air Act of 1970. Journal of Political Economy, 125(3), 848–902. https://doi.org/10.1086/691465.

[9] Office of Management and Budget. 2017 Report to Congress on the Benefits and Costs of Federal Regulations and Agency Compliance with the Unfunded Mandates Reform Act. Table 1-1. https://www.whitehouse.gov/wp-content/uploads/2019/12/2019-CATS-5885-REV_DOC-2017Cost_BenefitReport11_18_2019.docx.pdf. Note: annual benefits estimate reported in 2015 dollars.

[10] Office of Management and Budget. 2017 Report to Congress on the Benefits and Costs of Federal Regulations and Agency Compliance with the Unfunded Mandates Reform Act. Table 1-1. https://www.whitehouse.gov/wp-content/uploads/2019/12/2019-CATS-5885-REV_DOC-2017Cost_BenefitReport11_18_2019.docx.pdf. Note: annual benefits estimate reported in 2015 dollars.

[11] PRHE. (2022). Poll: Voters Agree on Need for More Protections from Chemicals. Program on Reproductive Health and the Environment. https://prheucsf.blog/2022/10/11/poll-voters-agree-on-need-for-more-protections-from-chemicals/

However, with the chemical lobby pouring millions of dollars into influencing the regulatory process,[12] we have seen troubling patterns of EPA brushing aside rigorous science that demonstrates health risks, ignoring dangerous exposures to more than half of exposed populations, and weakening rules for scientific assessments to benefit industry at the expense of people's health.

New chemical program – and the cost of getting it wrong

It's no secret that the chemical industry wants to reduce the public health protections promised by TSCA in exchange for less regulation and more profits. One of their criticisms is that EPA is not approving new chemicals fast enough. Yet TSCA requires EPA to assess the safety of new chemicals and **prevent potential risks before these chemicals are allowed on the market.**

Congress was clear that EPA should not cut corners on the thoroughness of reviews to serve industry's demand for rushed approvals. Despite this, EPA has granted low-volume exemptions for over 600 PFAS, a class of over 15,000 chemicals are so persistent that they have been detected in nearly all people tested[13] and on every corner of the planet from rainclouds[14] to the deepest parts of the ocean.[15] A new report from New York University's Institute for Policy Integrity estimates annual health costs of PFAS harms in the U.S. from $1 billion to over $60 billion.[16] The report also cites a study which found that the cost of destroying one year's worth of PFAS releases exceeds annual global GDP.[17] In other words, PFAS contamination is a problem that we cannot effectively clean up.

Under the guise of supporting innovation, EPA also approved a new chemical for use in jet and boat fuel,[18] that has a cancer risk so high that nearly every person who is exposed to this chemical through foreseeable uses is expected to develop cancer. That is unacceptable.

So, while industry says, "faster, faster" and uses buzz words like "progress and innovation," it is essential that policymakers understand the repercussions of unleashing new toxic chemicals on

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[12] OpenSecrets. (n.d.). Federal lobbying: Industries summary (N13, 2021 cycle). https://www.opensecrets.org/industries/indus?ind=N13

[13] CDC. (2024). Fast Facts: PFAS in the U.S. Population. Per- and Polyfluoroalkyl Substances (PFAS) and Your Health. https://www.atsdr.cdc.gov/pfas/data-research/facts-stats/index.html

[14] Cousins, I. T., Johansson, J. H., Salter, M. E., Sha, B., & Scheringer, M. (2022). Outside the Safe Operating Space of a New Planetary Boundary for Per- and Polyfluoroalkyl Substances (PFAS). Environmental Science & Technology, 56(16), 11172–11179. https://doi.org/10.1021/acs.est.2c02765.

[15] Miranda, D. de A., Leonel, J., Benskin, J. P., Johansson, J., & Hatje, V. (2021). Perfluoroalkyl Substances in the Western Tropical Atlantic Ocean. Environmental Science & Technology, 55(20), 13749–13758. https://doi.org/10.1021/acs.est.1c01794.

[16] Safavi, L., & Howard, P. (2025). Evaluating the Full Cost of PFAS.

[17] Ling, A. L. (2024). Estimated scale of costs to remove PFAS from the environment at current emission rates. Science of The Total Environment, 918, 170647. https://doi.org/10.1016/j.scitotenv.2024.170647.

[18] Lerner, S. (2023). The EPA Faces Questions About Its Approval of a Plastic-Based Fuel With an Astronomical Cancer Risk—ProPublica. https://www.propublica.org/article/chevron-epa-plastic-biofuel-cancer-risk

the population. Once they're out there, you can't take them back, and the result is that people get sick and die. Instead, we need a stronger TSCA that creates incentives for the industry to develop new chemicals that will not harm health or the environment.

EPA science

The chemical lobby is also attacking EPA's Office of Research and Development because they don't like science that finds that their chemicals and products are toxic. They are attacking the TSCA risk evaluation framework rule because they don't want EPA to consider all real-world chemical uses and exposures or the full extent of human health hazards and risks for lethal chemicals like methylene chloride. And they don't want EPA to address the consequences of cumulative impacts, especially to fenceline community residents who are exposed to dozens of harmful chemicals at the same time and have rates of cancer and other chronic diseases that far exceed those in the general population. All because it poses a threat to their bottom line.

Industry lies

As you consider next steps for TSCA, you should also consider how polluting industries have lied about the harms of their products to you, to the American people – and even to their own employees. Internal industry documents from PFAS manufacturers that show the industry knew about PFAS health harms decades before the public.[19] And we uncovered documents showing the chemical industry waged a campaign to hide the health harms of phthalates since the 1970's. These companies have a vested financial interest in minimizing EPA's regulations at the expense of the public interest.

EPA's mission

EPA was established to protect the health of people and the environment – not to increase corporate profits. EPA is funded by taxpayer dollars and should function to protect the public. And Americans agree. Eliminating environmental rules is not popular, except with health-harming industries with a financial interest. I urge you to act in the best interest of the American people and preserve and strengthen TSCA's mission to protect the public's health.

[19] PRHE. (2023). Makers of PFAS 'forever chemicals' covered up the dangers. Program on Reproductive Health and the Environment. https://prheucsf.blog/2023/06/01/makers-of-pfas-forever-chemicals-covered-up-the-dangers/