

**Testimony of  
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**Hearing on Science and Technology Activities at EPA  
Before the  
Committee on Science, Space, and Technology  
U.S. House of Representatives  
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Good morning, Chairman Lucas, Ranking Member Lofgren, and members of the Committee. I appreciate the opportunity to appear before you today to discuss the role of science at the Environmental Protection Agency.

Protecting public health and the environment is central to our work at EPA, and science is the backbone of sound environmental policy. As a science-based agency, the credibility of our decisions is based on the reliability of the science that informs our work. It is essential that the policies, decisions, guidance, and regulations that protect the lives of Americans are informed by rigorous and quality science. This includes science developed by other Federal agencies or university academics, often in collaboration with EPA. That is why EPA continues to act on President Biden's commitment to relying on science to address public health and environmental challenges like PFAS, lead, air quality, water quality, climate change, wildfires, children's health, and many others.

## **Scientific Integrity at EPA**

EPA is committed to scientific integrity. We have taken steps to restore it at EPA, including implementing a robust training and outreach program. Our Scientific Integrity Policy applies to all EPA employees, including scientists, managers, political appointees, as well as contractors and grantees. EPA's Scientific Integrity Policy is regarded as one of the strongest in government, and we are making significant contributions to efforts that will continue to strengthen scientific integrity across the federal government.

## **Research Highlights**

EPA's workforce includes exceptional scientists, researchers, and engineers who help provide the robust science that enables the Agency to take strong, science-based actions to protect public health and the environment. These professionals are leaders in their fields and are dedicated to providing the critical information that not only informs EPA actions, but also allows states, Tribes, and communities to make decisions that protect their air, water, land, and health. Our researchers work on so many important topics, and I look forward to sharing some of their work with you today.

## ***PFAS***

For far too long, communities across the United States have been exposed to harmful per- and polyfluoroalkyl substances (PFAS). That is why, in October 2021, EPA released its PFAS Strategic Roadmap – EPA's coordinated strategy to protect Americans from PFAS. Research is one of the three pillars of our PFAS Roadmap.

As the science has continued to develop, we know more now than ever about how certain PFAS build up in our bodies over long periods of time, and how they can cause adverse health impacts that can devastate families. At the same time, we still have a lot of work to do to

increase our understanding of PFAS. As part of the PFAS National Testing Strategy, we are leveraging our statutory authority under the Toxic Substances Control Act to require companies who make PFAS to conduct toxicity testing on those chemicals and to provide the information to EPA. In the Testing Strategy, we are employing a category-based approach – testing representative chemicals that will inform our understanding of hundreds of PFAS chemicals within the same structural category. EPA scientists are focusing on methods to detect and measure PFAS in our environment, on understanding the risks PFAS have on our health and our ecosystems, and on ways we can reduce PFAS that are already in our environment. Some of this work includes conducting research to identify where PFAS are coming from, how PFAS move through the environment, and the ways we are exposed to individual PFAS or mixtures of PFAS. Our scientists are developing robust toxicity assessments that can be used, along with other information, to assess risks and inform decisions. And our researchers are developing and testing ways to treat our water and methods to destroy PFAS. For example, our researchers developed the PFAS Thermal Treatment Database and the Drinking Water Treatability Database that utilities, government and local agencies, and others can use to inform decisions that protect the health of their communities.

EPA is working every day to translate this science into action through our cross-agency PFAS efforts. For example, we began distributing \$10 billion in funding to address emerging contaminants under the Bipartisan Infrastructure Law, which includes transformational investments in cleaning up PFAS and other emerging contaminants in water, especially in small or disadvantaged communities. EPA also recently proposed the first-ever national drinking water standards for six PFAS. This proposed rule is a major step protecting the public from PFAS pollution and the proposed rule utilizes the latest science and complements state efforts to limit

PFAS. Under the PFAS Roadmap, and informed by the hard work of EPA scientists, we are also conducting nationwide sampling for 29 PFAS in drinking water, developing Clean Water Act regulations to restrict PFAS discharges to waterways, and improving our understanding of categories of PFAS through EPA's National PFAS Testing Strategy – among many other actions. We will continue to be guided by the science as we maintain our momentum in the months ahead.

I am proud of the progress we have made to address PFAS pollution. And we will continue making progress by working in close collaboration with Tribes, states, communities, and other stakeholders, as well as Congress, to implement solutions that follow the science and stand the test of time.

### ***Wildfires***

We have seen some of the most devastating wildfires in recent history, and wildfires are increasing in frequency and severity – trends show that acreage burned in the U.S. has increased by about fourfold since the 80s. Recently, wildfires in Maui have brought about unimaginable loss of life, homes, and businesses. I am grateful to the over 130 first responders from EPA that have deployed to Hawai'i and are working closely with our federal, state, and local partners. Wildfires can be a major source of air pollution, and emissions can travel thousands of miles, affecting the health of millions. EPA is using science to help address many of the issues wildfires present to our health and to our environment.

Our scientists are developing new ways to model and monitor wildfire emissions. EPA and the U.S. Forest Service developed the AirNow Fire and Smoke Map, which you can also install as a mobile app, to give the public information on fire locations, smoke plumes, near real-time air quality and recommended actions to take to protect their health during wildfires – all in one

place. EPA scientists are also working to understand what additional toxics might be present in smoke, particularly from wildfires that cross into urban areas and burn man-made structures. And our scientists are also evaluating how filtration devices, such as facemasks and DIY air cleaners, can reduce smoke exposures during wildfires.

Wildfires can also degrade water quality, and EPA scientists are studying how lead and other metals can be released during infrastructure-destroying fires that cross into urban areas. They have found that after a wildfire, nutrients, metals, disinfection byproducts, and volatile organic compounds have exceeded primary drinking water standards under certain circumstances. This information can help inform communities and decision makers on what to test water for after a wildfire.

This is just a sample of all the work our researchers are doing to help address and understand the impacts of wildfires.

### ***Climate Crisis***

The climate crisis affects all Americans, and many impacts are projected to worsen, particularly for overburdened communities. Understanding and addressing climate change is critical to EPA's mission of protecting human health and the environment. To do this, we need the best science on the impacts of climate change and the actions that can be taken to avoid negative effects and build resilience. Our climate research is focused on providing the necessary information and tools needed by the Agency and stakeholders to ensure we can protect human health and the environment as the climate continues to change. EPA is coordinating with other agencies through the U.S. Global Change Research Program, and EPA has also recently established the Regional Climate Assistance Network to provide scientific support to regional, state, and Tribal partners for their place-based mitigation, adaptation, and resilience decisions.

EPA researchers are working with communities to improve their resilience, particularly resilience to wildfires, floods, and drought, and are studying the health effects of climate change, particularly for vulnerable populations. EPA researchers are identifying the health and environmental benefits of reducing greenhouse gas emissions, evaluating the benefits of the transition to a more sustainable energy system, and evaluating approaches that can help protect our environment in the face of a changing climate. For example, our researchers are studying how native seagrass can store carbon and increase coastal resilience to flooding, and are evaluating strategies, such as cold-water refuges, to help salmon return to their breeding grounds in the face of warming river waters.

### ***Lead***

Reducing lead exposure is one of EPA's highest priorities, and the Agency is a leader in the whole-of-government approach to protecting families and children from lead exposure. The science is clear – there is no safe level of exposure to lead, especially for children. Our researchers are also developing new ways to identify communities most at risk from lead exposure, which will help target lead risk mitigation efforts. For example, EPA scientists worked with the state of Michigan on a new approach to identify areas with a high prevalence of children's elevated blood lead levels – or lead “hot spots” – using blood lead data, census tract information, and information on housing and sociodemographics. This work is advancing the science of lead mapping so that communities can better target and prioritize actions to reduce lead exposure, and EPA is currently working with our partners to apply this approach to other communities. Additionally, EPA researchers are working to improve drinking water quality by developing innovative ways to treat drinking water and evaluate corrosion control treatments that can reduce lead leaching into water.

EPA continues to take actions that align with the Federal Action Plan to Reduce Childhood Lead Exposures and that support Congress the Biden-Harris Administration's historic investment to reduce lead exposure and EPA's strategy to address the significant disparities in lead exposure along racial, ethnic, and socioeconomic lines. This summer, EPA announced a proposal to strengthen requirements for the removal of lead-based paint in pre-1978 buildings and childcare facilities to better protect children and communities from the harmful effects of exposure to dust from lead paint. If finalized, this rule is estimated to reduce the lead exposures of approximately 250,000 to 500,000 children under age six per year.

Following the agency's review of the Lead and Copper Rule Revisions under Executive Order 13990, EPA concluded that there are significant opportunities to improve the Lead and Copper Rule Revisions to support the overarching goal of proactively removing lead service lines and more equitably protecting public health. EPA anticipates releasing the proposed Lead and Copper Rule Improvements later in 2023. Additionally, thanks the Bipartisan Infrastructure Law, as well as American Rescue Plan and other funding sources, we have billions of dollars to work toward achieving the President's vision of replacing every lead service line in America in the next decade.

Now, EPA is not just making funds available. We are also prioritizing technical assistance to states and communities and developing the science needed to take action. In addition to more than \$200 million invested so far, and \$500 million to be invested by 2024, in technical assistance efforts through Environmental Finance Centers in each EPA region supporting communities, Tribes, and territories in a wide range of project development and funding application needs, our Lead Service Line Accelerators program is working with states and communities to address existing barriers and accelerate lead service line identification and

replacement, and our researchers are leading efforts to develop better ways to identify lead service lines.

## **Conclusion**

EPA is committed to science. And EPA is committed to taking actions that are backed by science. From our actions to address and clean up PFAS, to providing information that helps people during wildfires, to decisions that help protect our nation's drinking and recreational waters, science is the backbone of all that we do at EPA.

Thank you again for the opportunity to appear before you today. I look forward to our continued partnership to achieve our goals and welcome any questions you may have.