AUTHENTICATED
U.S. GOVERNMENT
INFORMATION
GPO

S. HRG. 117–150

EVALUATING THE FEDERAL RESPONSE TO THE PERSISTENCE AND IMPACTS OF PFAS CHEMICALS ON OUR ENVIRONMENT

HEARING

BEFORE THE

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS UNITED STATES SENATE

ONE HUNDRED SEVENTEENTH CONGRESS

FIRST SESSION

OCTOBER 20, 2021

Printed for the use of the Committee on Environment and Public Works



Available via the World Wide Web: http://www.govinfo.gov

U.S. GOVERNMENT PUBLISHING OFFICE
46–729 PDF WASHINGTON : 2022

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

ONE HUNDRED SEVENTEENTH CONGRESS

FIRST SESSION

THOMAS R. CARPER, Delaware, *Chairman*

BENJAMIN L. CARDIN, Maryland
BERNARD SANDERS, Vermont
SHELDON WHITEHOUSE, Rhode Island
JEFF MERKLEY, Oregon
EDWARD J. MARKEY, Massachusetts
TAMMY DUCKWORTH, Illinois
DEBBIE STABENOW, Michigan
MARK KELLY, Arizona
ALEX PADILLA, California

SHELLEY MOORE CAPITO, West Virginia
Ranking Member
JAMES M. INHOFE, Oklahoma
KEVIN CRAMER, North Dakota
CYNTHIA M. LUMMIS, Wyoming
RICHARD SHELBY, Alabama
JOHN BOOZMAN, Arkansas
ROGER WICKER, Mississippi
DAN SULLIVAN, Alaska
JONI ERNST, Iowa
LINDSEY O. GRAHAM, South Carolina

MARY FRANCES REPKO, *Democratic Staff Director*
ADAM TOMLINSON, *Republican Staff Director*

C O N T E N T S

Page

OCTOBER 20, 2021

OPENING STATEMENTS

Carper, Hon. Thomas R., U.S. Senator from the State of Delaware 1
Capito, Hon. Shelly Moore, U.S. Senator from the State of West Virginia 3

WITNESSES

Fox, Hon. Radhika, Assistant Administrator, Office of Water, U.S. Environmental Protection Agency 6
Prepared statement 8
Responses to additional questions from:
Senator Carper 19
Senator Merkley 20
Senator Markey 21
Senator Capito 22
Senator Inhofe 33
Senator Shelby 34

ADDITIONAL MATERIAL

Testimony of New York Senator Kirsten Gillibrand 58

EVALUATING THE FEDERAL RESPONSE TO THE PERSISTENCE AND IMPACTS OF PFAS CHEMICALS ON OUR ENVIRONMENT

WEDNESDAY, OCTOBER 20, 2021

U.S. SENATE,
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS,
Washington, DC.

The committee, met, pursuant to notice, at 10:04 a.m. in room 406, Dirksen Senate Office Building, Hon. Thomas R. Carper (chairman of the committee) presiding.

Present: Senators Carper, Capito, Cardin, Whitehouse, Duckworth, Stabenow, Kelly, Inhofe, Cramer, Lummis, Boozman, Sullivan, Ernst.

OPENING STATEMENT OF HON. THOMAS R. CARPER, U.S. SENATOR FROM THE STATE OF DELAWARE

Senator CARPER. Good morning, everyone. I am pleased to call this hearing to order.

I am particularly pleased to welcome back to our hearing room Assistant Administrator Radhika Fox. After your confirmation hearing, we took a vote off the record, a secret ballot, and voted that you have the coolest name of any nominee to come before us is a long time.

[Laughter.]

Senator CARPER. As you well know, Ms. Fox, we are all quite interested to learn more about EPA's plan to tackle complicated challenges associated with the presence of forever chemicals, known as PFAS, in the environment and our lives. I very much appreciate your leadership in pulling EPA's strategic roadmap together to confront PFAS contamination head-on.

As a former Naval flight officer, I flew with the confidence that firefighting crews on the ground would have the backs of my aircrew and others in the event of an accident. After all, the firefighting crews had a PFAS-containing foam that could be dispensed and used to extinguish fires, in many cases, quickly.

Like most Americans, I welcomed many of the products created through modern chemistry, from nonstick pans and waterproof jackets to stain-proof furniture fabric and even dental floss. My guess is that every one of us in the room have maybe used one of these products even today, even today. It is some amazing stuff. It can resist sticky and staining food while smothering flames and lasting, seemingly, forever.

But that is not all these chemicals can do. Because they are so persistent, hence the name "forever chemicals," the lion's share of these substances do not break down in the environment. Instead,

what they do is accumulate. Where do they accumulate? Well, they accumulate in plants, in animals, and ultimately, in our bodies, and in the bodies of our children and our grandchildren.

In fact, according to the Center for Disease Control, 97 percent of us carry PFAS inside of our bodies, and several of these forever chemicals have proven to be toxic, causing among other maladies liver damage, thyroid disease, fertility problems, immune issues, and even cancer.

There is no question that these chemicals are widely used, and understandably so. Since the 1940's, it is estimated that more than 9,000 PFAS chemicals have been manufactured and used in a variety of industries around the world. Creative chemists are finding ever more uses for these chemicals, from enabling lighter-weight materials for our electric vehicles, better components for the batteries of the future, to high-efficiency methods for cooling huge and energy-hungry servers that keep us connected.

Embracing the miracle of modern chemistry comes with a price, though, and a grave responsibility. We have to keep the lessons of Parkersburg, West Virginia, Hoosick Falls, New York, and Cape Fear in North Carolina fresh in our minds as we in government, in business, and in communities across the Country plot our course going forward.

As has so often been the case, many times we embrace the miracles of modern chemistry before we fully understand the complete consequences of doing so. Remember chemicals like PCBs, DDT, and dioxins? Sadly, with PFAS, as with many of its predecessors, we have invested billions of dollars to develop the chemistry and not enough in anticipating and preventing their adverse effects. So, that leaves us with a grave predicament on our hands and an extraordinarily complex and expensive process to deal with.

That brings us to the topic of our hearing today. We are extremely grateful to you, Ms. Fox, and all of the hardworking career staff at EPA for investing the time to thoughtfully and strategically address our daunting PFAS challenges, not only the legacy of past contamination in our land and our waters and our bodies, but also the future threats posed by our ongoing and future use of these compounds.

We have heard from the witnesses who participated in our hearing on PFAS contamination earlier this year Americans deserve a robust, national strategy when it comes to addressing this pervasive public health threat.

While I am encouraged by EPA's issuance of a new PFAS roadmap, the key to meaningful change lies in its timely, complete implementation. This will no doubt be a heavy lift, especially for EPA, but also for the rest of us.

Ranking Member Capito, sitting here to my right, I just want to say that I look forward to working with you on this challenge, along with all our other EPW colleagues and our Senate colleagues who are not members of this committee, and with other stakeholders in order to support and supplement EPA's work as needed to ensure that we avoid the mistakes and heartbreak we have witnessed with novel compounds too often in the past.

With that, I am going to recognize our Ranking Member, Senator Capito, for her opening statement. Before I do, let me just note that

Senator Capito has, unfortunately, had a great deal of experience in my native State of West Virginia with PFAS pollution in the mountain State. I want to thank her for her leadership on this important issue, this important matter, and to acknowledge the suffering of her constituents and far too many families and far too many communities across our Country. So, thank you, and we look forward to working with you in getting more good stuff done. Thank you.

Senator Capito.

OPENING STATEMENT OF HON. SHELLEY MOORE CAPITO, U.S. SENATOR FROM THE STATE OF WEST VIRGINIA

Senator CAPITO. Thank you. Thank you, Chairman Carper, for calling this hearing today, and thank you, Assistant Administrator Fox, for being here to discuss, as the Chairman said, EPA's efforts to address PFAS, including the new PFAS Strategic Roadmap that was just released earlier in the week.

Before I turn to PFAS, I would like to take a moment to thank you for all of the agency's efforts in helping us to deal with the lead issues that were discovered in Clarksburg, West Virginia. While there remain some process questions about how we got to where we are, I appreciate EPA's close coordination with the State of West Virginia and the city of Clarksburg to ensure that the citizens of Clarksburg have safe drinking water, so that you for that.

As you know, addressing PFAS contamination is extremely important to me and has been one of my highest priorities as EPW Ranking Member. EPA has been working hard to understand and address PFAS for many years now, and across multiple administrations. I would note that there is increased interest and increased awareness among our membership here in the Senate of the pervasiveness of PFAS and in what forms.

So, while I applaud all the EPA for the progress, I think much work remains.

Of utmost importance to me is that EPA expeditiously sets a drinking water standard for two specific PFAS: PFOS and PFOA. This has been a longstanding priority of mine through the past administration and this one, and we have talked about it on the phone, and I am pleased that the Biden Administration has stated it will complete these standards in the Roadmap under a process initiated by the Trump Administration.

I also appreciated that the White House, and EPA specifically, responded quickly to my February 17th letter by lifting the Biden Administration's freeze on promulgating those regulations. It is vital that Americans have safe drinking water, and these regulations will help to ensure that. I look forward to hearing an update.

I do have some issues with the roadmap because it touches on a whole host of EPA offices and statutory authorities, and often, the details, particularly on timing within the document are vague and several years down the line. The American people deserve to have the transparency into how EPA plans to address these regulatory matters, when and how the science will be to leading to those conclusions and outcomes.

I look forward to hearing detailed updates on other potential regulatory actions and EPA's PFAS research activities in your office

and others which I know are necessary to form the basis of appropriate Federal action.

Back in April, I wrote to EPA requesting an update on the agency's research initiatives. I was a bit disappointed that EPA's reply did not really provide any of the specificity of the information that I had requested. As I had stated in my April letter, many of the regulatory and enforcement actions the Federal Government and States may pursue hinge on continued research. Quite simply, we need a more in-depth understanding of the chemistry and environmental and health challenges posed by this broad class of compounds.

The Roadmap released only on Monday fails to describe what new research or technological breakthroughs are triggering or modifying EPA's approach to addressing PFAS.

As EPA stated, "Robust research is a prerequisite to improving EPA's understanding of the risks associated with PFAS and helping the agency make more informed decisions to protect public health." I assure you, Administrator Fox, I hope that you are prepared to share the current status and current expected completion dates for EPA's incomplete research and regulatory efforts today and why, after a history of missed internal deadlines on this issue, keeping in mind that you probably weren't there when they were missed, we would expect something different. It is vital that EPA ensures that science and not politics is driving the regulatory decisions.

My colleagues and I cannot determine that this is the case with this Administration without improved transparency and the latest information from EPA detailing what the agency knows, what it does not know, and how progress is being made.

I have helped ensure that EPA has the necessary authorities to fill any information gaps related to PFAs. PFAS legislation that I drafted, the PFAS Release Disclosure and Protection Act, was approved by this committee and ultimately signed into law in the NDAA Fiscal Year 2020. Some of these authorities are listed in the PFAS Strategic Roadmap.

One of the reporting requirements in my legislation was that companies comply with a one-time reporting event for PFAS manufactured since January 1, 2011. EPA has proposed a rule to implement that requirement this summer, and I thank you for that. I hope the information that the agency will obtain from this reporting and others like TRI and TSCA Section 8 will better inform the agency as it determines how to best address the challenges of PFAS contamination.

As I believe we all know, and the Chairman stated this as well, PFAS is present all over this Country and all over the world, with background levels of contamination from a multitude of sources. This is a very complex issue. But the actual threats to human health and the immediate environment can be highly localized. This is exactly why a deliberative, science-based approach to testing and remediation is necessary.

Last, with plenty of misinformation out there, appropriate risk communication from the Federal Government is critical, we talked about this on the phone, for helping our constituents understand and address this PFAS pollution.

I look forward to hearing updates on each of these important issues, and I thank you again for coming.

Senator CARPER. Thanks, Senator Capito.

Senator Capito knows, and our colleagues know, Senator Inhofe, who used to be the Chairman of this committee, and is still a valued member of this committee, has spent a lot of his life in airplanes, flying all over this Country and around the world. I mentioned earlier, I don't know if you were here, Jim, when I mentioned this, but during my time as a Naval flight officer, I was stationed at Moffett Field, California. When we were in Southeast Asia, we were in Moffett Field, which is close to Mountain View, which is south of San Francisco.

One day, driving into work to join my crew and go for a flight, you could see black smoke coming up from, as I was driving down Route 101, and I got closer and closer. I got to the main gate to go in, and I said, what is going on? What has happened here? As it turned out, we had parallel runways, and the traffic controller was bringing in two airplanes, one a big NASA plane, and one smaller Navy P3 aircraft. Instead of keeping them on separate parallel runways, put them both on the same runway, and the larger NASA plane literally landed on top of the Navy P3.

I think we lost 15 lives that morning, and within minutes, the fire rescue troops were out there, spraying down the planes with firefighting foam, trying to save as many lives as they can.

Fast forward to about, oh gosh, eight or 9 years ago, I am in Delaware, driving to Southern Delaware, coming down Route 1 just past Dover, and going right by Dover Air Force Base. Just as I get south of Dover Air Force Base, I see black smoke coming up, just off of State Route 1. As it turn out, A C5, a huge, maybe the largest airplane in the world, we have C5s and C17s at Dover, a C5 had loaded up that morning to fly around the world, go over the top of the world to go to Afghanistan, I believe.

So they had a full bag of fuel, full load of cargo, and they got through clearance, took off, and as they climbed out, the engineer, they have four engines in the plane, and they got an engine light, which meant a warning on one of the engines, as Jim knows. When that happens, you turn off that engine.

The engineer turned off the wrong engine, so a plane that was supposed to fly across the planet and take all that cargo ended up not on four engines, but two. They did their best as they climbed out to try to get around and come in and land the airplane, and couldn't make it, so the plane went in just south of the Dover Air Force Base, just south of the main runway, about a mile.

The firefighting crews rushed out and they sprayed down the airplane to try to save as many lives as they can. Happy ending, everybody lived. Amazing ending. That is the good news. The bad news, there were four communities around the base that now have polluted water because of the firefighting foams. It is something that was designed to save lives. It can also put lives at risk.

I just wanted to share that this is a serious matter, and one that deserves the kind of attention, I think, that you and your team have provided. I can assure you that this woman right here will make sure that, given her interests from West Virginia, my native State, that we are going to give it a lot of time and attention. The

time for action is here. The time for the words, we need action, and we look forward to working with you. You are recognized, please.

Senator INHOFE. Whatever happened to the guy that turned off the wrong engine?

Senator CARPER. I think he had suffered real psychiatric problems. Imagine living with that for the rest of your life. It is a very, very sad story all around. Radhika Fox, welcome.

STATEMENT OF HON. RADHIKA FOX, ASSISTANT ADMINISTRATOR, OFFICE OF WATER, U.S. ENVIRONMENTAL PROTECTION AGENCY

Ms. FOX. Thanks. Good morning, Chairman Carper and Ranking Member Capito and members of the committee. I am Radhika Fox, Assistant Administrator for Water at the EPA, as well as the co-chair for EPA's Council on PFAS.

Your opening remarks really illustrated to me how much bipartisan support there is to make progress on PFAS. So I wanted to begin by recognizing the leadership of this committee on PFAS. Chairman Carper, you have pushed to improve our understanding of the prevalence and impact of these chemicals on our community. Ranking Member Capito, your legislative efforts have helped EPA and many other agencies take important steps.

The last time I testified in front of this committee, I talked about the Flint water crisis, and I shared my belief that no community in this Country should suffer from environmental contamination. I remain committed to ensuring that all people, regardless of their income, their zip code, or the color of their skin, have environmental protections in place and that their communities are safe.

Today, we will discuss the complex and very serious challenge of PFAS and EPA's bold strategy to protect public health and the environment. PFAS have been manufactured and used in various applications since the 1940's, and they are still in use today. As a result, PFAS can be found nearly everywhere: in our air, in our land, in our water, in our wildlife, in our own bodies. A growing body of scientific evidence shows us that PFAS exposure can adversely impact human and ecological health.

That is why President Biden made bold commitments to protect communities from PFAS contamination, and the President appointed someone with first-hand experience to lead the EPA. Under Administrator Regan's leadership, EPA has hit the ground running as we have made significant progress in just 9 months. But what I am really most excited about is to share our PFAS strategic roadmap, which was driven by the career experts across the EPA. We released it on Monday, and I look forward to today's discussion about it.

The roadmap builds on the agency's 2019 action plan while committing to bolder and new policies to safeguard public health, protect the environment, and to hold polluters accountable. The human health and ecological risks posed by PFAS demand that the EPA attack the problem on multiple fronts and that we leverage multiple statutory authorities on behalf of the American people. The roadmap plays out a whole-of-agency approach to accelerate progress, and we commit, we have set timelines by which the agency will take specific actions.

For the first time, EPA now has a comprehensive approach to addressing PFAS, and it is grounded in three central directives: research, restrict, and remediate. Under this plan, EPA will invest in research to better understand PFAS exposures, its impacts to human health and ecosystems, and the most effective interventions. We are going to continue to build the scientific foundation to approach PFAS as groups, because we believe that over time, this can help us accelerate our regulatory work.

We will also pursue an ambitious agenda to restrict PFAS from entering air, land, and water in the first place. That is the strongest, most foundational way we can protect communities from these forever chemicals.

We are going to broaden and accelerate our efforts to remediate PFAS contamination. When EPA sees that there is contamination, we will push for cleanup, and we will hold polluters accountable.

Research, restrict, remediate: these are the central directives that will guide EPA's work on forever chemicals.

I also want to note that the agency's work will be prioritizing and ensuring that disadvantaged communities have equitable access to solutions, whether they are urban communities or rural communities. We have to center this work in equity.

Each step and action identified in the roadmap is a bold step forward, but what is so exciting is the cumulative impact that these actions will have. They buildupon one another, and they will lead to enduring protections for communities across America.

Senators, please also know that there is a lot we still don't know about PFAS, and so EPA is going to be in a continuous mode of learning. As EPA learns more, we will do more.

Finally, EPA wants to partner. We want to partner for progress with this committee, with impacted communities around the Country, with all interested stakeholders.

I want to thank you for the opportunity to testify today, and I really look forward to today's discussion.

[The prepared statement of Ms. Fox follows:]

TESTIMONY OF RADHIKA FOX

ASSISTANT ADMINISTRATOR FOR WATER
U.S. ENVIRONMENTAL PROTECTION AGENCY

BEFORE THE
SENATE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

October 20, 2021

Good morning, Chairman Carper, Ranking Member Capito, and Members of the Committee. I am Radhika Fox, Assistant Administrator for Water at the U.S. Environmental Protection Agency. I appreciate the opportunity to testify before this Committee today on the very important topic of per- and polyfluoroalkyl substances—also known as PFAS. In addition to my role as Assistant Administrator for Water, I co-chair EPA's Council on PFAS and I look forward to our discussion today.

Addressing PFAS is a bipartisan issue and I want to recognize the leadership of this committee and its members on this important subject. Chairman Carper, your leadership in identifying the many ways that PFAS enter the environment, affect public health, and impact the livelihoods of Americans, has been vital to advancing progress. Ranking Member Capito, your leadership on PFAS, including provisions that were passed as part of the 2020 National Defense Authorization Act, has helped the EPA and other agencies take critical steps to better protect our communities. Others on this committee have sponsored or voted for actions to address PFAS and for that, I thank you.

The Biden Administration, with EPA Administrator Michael S. Regan's leadership, is taking bold action to protect communities from PFAS contamination. In January 2021, the

Administration hit the ground running and has made significant progress in just nine months. In addition to several important actions taken since January, on Monday, October 18, 2021, the Agency released its PFAS Roadmap, which lays out the EPA's whole-of-agency approach to use every available tool to safeguard communities from PFAS contamination. The cumulative impact of actions the EPA has already taken, and the actions we intend to take in the coming years, will help ensure that the Agency makes rapid progress to protect public health and the environment.

The last time I testified in front of this committee, at my confirmation hearing, I talked about the Flint water crisis. I shared my belief that no community should suffer from environmental contamination. I also committed to ensuring that all people—regardless of their income, zip code, or color of their skin—have environmental protections to keep them safe, and help their communities thrive. Today, we will discuss the complex and very serious challenges that PFAS pose to public health and the environment.

PFAS have been manufactured and used in a variety of industries in the United States and around the globe since the 1940s. Because we have used them for so long, because of the diversity of their uses, and because of their durability in the environment, PFAS can now be found in surface water, groundwater, soil, and air—from remote rural areas to densely populated urban centers. They can be found in the tissue of fish caught in our rivers and lakes and streams. Despite evidence suggesting that some PFAS are toxic, they are still used in a wide range of consumer products and industrial applications.

Human exposure to PFAS can occur in a number of ways, such as through consuming PFAS in drinking water or food Exposure also occurs through contact in the handling or use of PFAS in manufacturing, chemical processing, firefighting, and other applications. Some levels of

exposure may also occur by using products that contain PFAS. And exposure can even be passed on from mother to child during pregnancy and breastfeeding.

A growing body of scientific evidence shows that exposure at certain levels to specific PFAS can adversely impact human and ecological health. Studies indicate that two common PFAS—perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS)—can cause reproductive and developmental, liver and kidney, and immunological effects in laboratory animals. Both chemicals have caused tumors in animal studies. The most consistent findings from human epidemiology studies are increased cholesterol levels among exposed populations, with more limited findings related to infant birth weights, effects on the immune system, cancer (for PFOA), and thyroid hormone disruption (for PFOS).

Every level of government—federal, state, and local—needs to exercise increased and sustained leadership to accelerate progress to clean up PFAS contamination, prevent new contamination, and make game-changing breakthroughs in the scientific understanding of PFAS.

Even before his inauguration, President Biden recognized the importance of addressing PFAS and laid out four commitments to the American people:

1. Accelerating research and toxicity studies;
2. Designating PFAS as a hazardous substance;
3. Setting enforceable limits on PFAS in the Safe Drinking Water Act; and
4. Identifying opportunities to reduce PFAS use through procurement.

The President also illustrated his commitment to tackling PFAS contamination by appointing Michael S. Regan as the EPA Administrator. Administrator Regan has seen this problem up close. In North Carolina, he tackled PFAS in the Cape Fear River. He followed the

science. He followed the law. And he made significant progress. But he also learned first-hand that there is a desperate need for federal leadership on this issue, and that is what he is bringing to the EPA.

One of Administrator Regan's earliest actions was to establish the EPA Council on PFAS. The Council is comprised of senior Agency leaders who are charged with developing a whole-of-agency plan to accelerate progress on PFAS. Administrator Regan also charged the Council with prioritizing partnerships and collaboration within the EPA and with the EPA's partners, and with continuing to engage with the public about the risk associated with these chemicals. As I mentioned earlier, I co-chair this Council along with EPA Region 1 Acting Administrator Deb Szaro.

Under the Biden-Harris Administration, the EPA has worked tirelessly from day one to restore scientific integrity and accelerate the research and policies needed to systematically shift and accelerate the Agency's approach to protecting the public from PFAS. Since January 20, 2021, the Agency has taken bold actions, including:

- The EPA is moving forward to propose national primary drinking water regulations for PFOA and PFOS under the Safe Drinking Water Act. Later this year, we expect to consult with the EPA's Science Advisory Board on the science behind the impacts of PFOA and PFOS in drinking water. The Agency is also continuing the process to collect information and data on additional PFAS chemicals, as outlined in the Safe Drinking Water Act;
- Last month, following a multi-industry study, the EPA announced an aggressive multi-pronged approach to restrict PFAS discharges through our Effluent Limitation Guidelines (ELG) program;

- In early September, the EPA published a single-laboratory validated analytical method for detecting 40 PFAS compounds in wastewater, surface water, groundwater, and soils. This method can be used in various applications, including National Pollutant Discharge Elimination System (NPDES) compliance monitoring;
- The Agency proposed a rule to require all manufacturers (including importers) of PFAS in any year since 2011 to report information related to chemical identity, categories of use, volumes manufactured and processed, byproducts, environmental and health effects, worker exposure, and disposal. Once finalized, this rule would provide the EPA with the most comprehensive dataset on PFAS manufactured in the United States. EPA plans to publish a final rule by January 2023, consistent with the Fiscal Year 2020 National Defense Authorization Act;
- Because the EPA needs to evaluate a large number of PFAS for potential human and ecological effects while most PFAS have limited or no toxicity data, the EPA is developing a national PFAS testing strategy to deepen understanding of the impacts of PFAS, including potential hazards to human health and the environment. This will help the EPA identify and select PFAS for which the Agency will require testing using the Toxic Substances Control Act (TSCA) authorities;
- Under TSCA, the EPA is working to protect communities by limiting new PFAS from entering the market by ensuring that new PFAS are subject to rigorous reviews and appropriate safeguards. The EPA has previously allowed some new PFAS to enter the market through expedited low-volume exemptions (LVEs). In April 2021, the EPA announced that it would generally expect to deny pending and future LVE submissions for PFAS based on the complexity of PFAS chemistry, potential health effects, and their longevity and persistence in

the environment. Moving forward, the EPA will apply a rigorous premanufacture notice review process for new PFAS to ensure these substances are safe before they enter commerce;

- In July 2021, the EPA released preliminary data collected for 170 newly added PFAS under the Toxics Release Inventory (TRI), which helps the EPA compile data and information on releases of certain chemicals and supports informed decision making by companies, government agencies, nongovernmental organizations, and the public; and
- Earlier this year, the EPA pulled down and called for a review under the Agency's Scientific Integrity Policy of the toxicity assessment for the PFAS compound PFBS (Perfluorobutanesulfonic acid). Earlier this year, the Agency issued an updated toxicity assessment for PFBS that reflects the best available science; involved extensive federal, state, and public engagement; and is critical to the EPA's efforts to help communities impacted by PFAS.

While the actions the EPA has taken since January 20, 2021, have spurred essential progress, we know that there is more to be done. The risks posed by PFAS demand that the Agency attack the problem on multiple fronts at the same time and leverage the full range of statutory authorities to confront the human health and ecological risks of PFAS. On Monday, the EPA released its PFAS Strategic Roadmap for enacting bold actions to address PFAS under President Biden's first term.

To deliver needed protections for the American people, the roadmap sets timelines by which the Agency will take specific actions during the first term of the Biden Administration. The strategic roadmap builds on and accelerates implementation of policy actions identified in the Agency's 2019 action plan and commits to bolder new policies to safeguard public health,

protect the environment, and hold polluters accountable. The EPA Council on PFAS developed the roadmap, which lays out EPA's whole-of-agency approach, and is guided by the following goals:

- **Research.** Invest in research, development, and innovation to increase the understanding of PFAS exposures and toxicities, human health and ecological effects, and effective interventions that incorporate the best available science;
- **Restrict.** Pursue a comprehensive approach to proactively prevent PFAS from entering air, land, and water at levels that can adversely impact human health and the environment; and
- **Remediate**. Broaden and accelerate the cleanup of PFAS contamination to protect human health and ecological systems.

These touchstones will guide all of the EPA's work as the Agency advances progress to apply a lifecycle approach to PFAS and works to prevent PFAS from entering the environment in the first place. The Agency will also seek to hold polluters and other responsible parties accountable for their actions and for PFAS remediation. The EPA will also invest in a surge of scientific research to fill gaps in understanding of PFAS, to identify which additional PFAS may pose human health and ecological risks at which exposure levels, and to develop methods to test, measure, remove, and destroy them. The Agency will also ensure that disadvantaged communities have equitable access to solutions. The actions described in this document each represent important and meaningful steps to safeguard communities from PFAS contamination, including:

- The EPA's Office of Chemical Safety and Pollution Prevention will enhance the quality and quantity of PFAS information collected through TRI. The Agency intends to propose a

rulemaking in spring 2022 to categorize the PFAS on the TRI list as "Chemicals of Special Concern" and to remove the de minimis eligibility from supplier notification requirements for all "Chemicals of Special Concern." The EPA will also continue to update the list of PFAS subject to TRI and expects to announce an additional rulemaking to add more PFAS to TRI in 2022, as required by the NDAA. And, critically, the EPA announced this week a national testing strategy that breaks the large number of PFAS into smaller categories, a major part of our effort to accelerate research and regulatory actions;

- The EPA's Office of Water will protect drinking water through a range of actions. The Office of Water published the proposed fifth unregulated contaminant monitoring rule in March 2021, and as proposed it would provide new data critically needed to improve our understanding of the frequency that 29 PFAS are found in the nation's drinking water. We are also quickly moving to establish a national primary drinking water regulation for PFOA and PFOS, and also evaluating additional PFAS and regulatory actions to address groups of PFAS. The EPA plans to publish the toxicity assessments for two PFAS, hexafluoropropylene oxide dimer acid and its ammonium salt, known as "GenX chemicals," in fall 2021. The EPA is also currently developing toxicity assessments for five other PFAS—PFBA, PFHxA, PFHxS, PFNA, and PFDA. Going forward, the EPA will develop health advisories as the Agency completes toxicity assessments for additional PFAS. The EPA will also act boldly to restrict PFAS discharges from industrial sources through a multifaceted ELG program under the Clean Water Act. The Agency anticipates proposing ELGs for two significant dischargers—PFAS manufacturing facilities and chromium electro plating facilities – while we continue to examine whether other ELGs may be appropriate. The EPA will propose revisions to the Organic Chemicals, Plastics and Synthetic Fibers

ELGs to address PFAS discharges from facilities manufacturing PFAS (expected Summer 2023) and revisions to the Metal Finishing ELGs to address PFAS discharges from chromium electroplating facilities (expected Summer 2024). The Agency will also initiate mandatory data collection for three PFAS industrial dischargers—formulator facilities, textile manufactures, and residential landfills;

- The EPA's Office of Land and Emergency Management will develop a Notice of Proposed Rulemaking to designate PFOA and PFOS as Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) hazardous substances. Such designations would require facilities across the country to report on PFOA and PFOS releases that meet or exceed the reportable quantity assigned to these substances. The hazardous substance designations would also enhance the ability of federal, state, Tribal, and local authorities to obtain information regarding the location and extent of releases. The EPA or other agencies could also seek cost recovery or contributions for costs incurred for the cleanup;
- The EPA's Office of Air and Radiation will build the technical foundation to address PFAS air emissions. The Clean Air Act requires the EPA to regulate emissions of hazardous air pollutants (HAPs), which are pollutants that are known or suspected to cause cancer or other serious health effects. At present, the EPA actively works with Tribal, state, and local governments to reduce air emissions of 187 HAPS to the environment. While PFAS are not currently listed as HAPs under the Clean Air Act, the EPA is building the technical foundation of PFAS air emissions to inform future decisions;
- The EPA's Office of Research and Development will develop and validate methods to detect and measure PFAS in the environment; advance the science to assess human health and

environmental risks from PFAS; and evaluate and develop technologies for reducing PFAS in the environment;

- As an agency, the EPA is prepared to use its enforcement tools, as appropriate, to better identify and address PFAS releases at facilities. The EPA is using multiple environmental authorities— the Resource Conservation and Recovery Act (RCRA), TSCA, the Clean Water Act, the Safe Drinking Water Act, the Clean Air Act, and CERCLA—to identify past and ongoing releases of PFAS into the environment at facilities where PFAS has been used, manufactured, discharged, disposed of, released, or spilled. The EPA is conducting inspections, issuing information requests, and collecting data to understand the level of contamination and current risks posed by PFAS to surrounding communities and will address threats to human health with all its available tools; and
- The EPA will also follow the recommendation of the National Environmental Justice Advisory Committee (NEJAC) to meet with affected communities in each EPA region to develop a holistic understanding of the many and distinct health impacts, concerns, and ways that PFAS contamination impacts their lives and livelihoods. The EPA will use the input and knowledge from these engagements to develop and share information to reduce potential health risks in the near term and help communities begin the path to remediation and recovery.

Cumulatively, these actions will build upon one another and lead to more enduring and protective solutions. They will also bolster our knowledgebase. As the Agency does more, it will learn more. And as the EPA learns more, it will do more. The EPA looks forward to working closely with this committee, and all of Congress, to forge progress together.

Thanks to the dedicated work of researchers, the leadership of community activists, and the experience of federal, state, and local partners—the Agency knows more today and can take bold and comprehensive actions to better protect people from PFAS.

However, to truly deliver the protections that communities deserve—to be able to tell people across the country that their air, land, and water are safe—all of the Agency's partners must work together. Our collective ability to achieve needed health and ecological protections as quickly as possible will be determined by our partnership with Congress, other federal agencies, Tribal governments, state health and environmental agencies, community organizations, local officials, public health professionals, industry, and academia. As the EPA acts to research, restrict, and remediate PFAS, it invites all interested and impacted stakeholders to join the Agency on this road to a healthier, safer future.

Thank you for the opportunity to testify before you today, and I look forward to our discussion.

QUESTIONS FROM SENATOR CARPER TO ASSISTANT ADMINISTRATOR RADHIKA FOX

Question 1. The PFAS Roadmap anticipates the development of proposed Effluent Limitation Guidelines (ELGs) for two industry categories by the summer of 2023 and 2024 but did not include deadlines for the issuance of final ELGs. Further, the Roadmap anticipates a decision about whether to move forward with ELGs for three categories—electrical components, textiles, and landfills—by the end of 2022 based on detailed studies, and anticipates completing the data reviews for other categories which include leather tanning and finishing, plastics molding and forming, and paint formulation by the winter of 2023. a. Please provide addition detail regarding the process the agency will undertake to develop ELGs, including any deadlines. Does EPA need additional resources to accelerate the development of ELGs? If so, please describe.

Response. Effluent Limitations Guidelines (ELGs) are a powerful tool to limit pollutants from industrial sources from entering the nation's waters. ELGs establish national technology-based regulatory limits on the level of specified pollutants in wastewater discharged into surface waters and into municipal sewage treatment facilities. EPA has been conducting a PFAS multi-industry study to inform the extent and nature of PFAS discharges. Based on this study, EPA is taking a proactive approach to restrict PFAS discharges from multiple industrial categories. EPA plans to make significant progress in its ELG regulatory work by the end of 2024. EPA has established timelines for action—whether it is data collection or rulemaking—on the nine industrial categories in the proposed PFAS Action Act of 2021, as well as an additional industrial category: landfills.

EPA's ELG work is industry-specific and highly dependent on data necessary to characterize the facilities that make up the industry, the type and amount of pollutants being discharged, the treatment technologies available to reduce or eliminate pollutants, and the economic impact that requiring removal of pollutants consistent with the available technologies would have on the industry as a whole. For the industrial categories where EPA has announced it is revising ELGs due to PFAS—Organic Chemical Manufacturing and Metal Finishing/Electroplating—EPA is moving ahead quickly to acquire the data needed to fully understand the profile of the industry; the PFAS compounds made, used, and discharged; and the extent of those discharges.

The schedules for final rulemakings for these two categories are dependent on what we learn about these industrial categories through EPA's data collection and analysis. This limits EPA's ability to set more precise timelines until such data are gathered and fully analyzed. Through the rulemaking and the additional industrial category studies identified under the PFAS Roadmap, EPA intends to make significant progress toward closing these data gaps and then using the resulting data to make regulatory decisions.

EPA published its Preliminary Effluent Guidelines Program Plan 15 in the Federal Register on September 14, 2021. EPA is currently reviewing public comments on the proposed plan in anticipation of publishing a final Program Plan 15 in 2022 that will further describe EPA's plans related to PFAS.

EPA will require, and anticipates allocating, additional resources to complete the ELG actions included in the PFAS Roadmap. The ELG program at EPA has declined in both staffing and extramural resources by almost 40 percent over the last 10 years.

Question 2. We appreciate the agency's efforts to accelerate the development of a drinking water standard for PFOA and PFOS. What steps does EPA plan to take to establish limits for other PFAS chemicals in drinking water?

Response. In addition to EPA's commitment to issue a proposed National Primary Drinking Water Regulation (NPDWR) for PFOA and PFOS in Fall 2022, and a final rule by Fall 2023, the Agency is also evaluating additional PFAS and considering regulatory actions to address groups of PFAS. Going forward, EPA will continue to analyze whether NPDWR revisions can improve public health protection for additional PFAS in drinking water.

In addition to EPA's commitment to move forward on these regulatory actions, EPA's PFAS Roadmap also commits EPA, going forward, to develop health advisories as the Agency completes toxicity assessments for additional PFAS.

Question 3. According to recent analysis, thousands of industrial furnaces, incinerators or cement kilns across the country could unsuspectingly be burning the Pentagon's PFAS waste after it is blended into the fuel that is used to power their operations. According to DOD records, as much of 25 percent of DOD's legacy Aqueous Film Forming Foam (AFFF) is being sent to fuel blending facilities through this

process instead of directly to a hazardous waste incinerator. What steps is EPA taking or planning to take to limit PFAS incineration via blended fuel?

Response. EPA would defer to the Department of Defense to characterize the current status of DOD's disposal of legacy AFFF.

To meet a requirement of the Fiscal Year 2020 National Defense Authorization Act (NDAA), EPA published interim guidance on destroying and disposing of PFAS and certain identified non-consumer PFAS-containing materials in December 2020 for public comment. It identifies three technologies that are commercially available to either destroy or dispose of PFAS and PFAS-containing materials and outlines the significant uncertainties and information gaps that exist concerning the technologies' ability to destroy or dispose of PFAS while minimizing the migration of PFAS to the environment. The guidance also highlights research that is underway and planned to address some of these information gaps. Furthermore, the interim guidance identifies existing EPA tools, methods, and approaches to characterize and assess the risks to disproportionately impacted people of color and low-income communities living near likely PFAS destruction or disposal sites.

In the PFAS Roadmap, EPA committed to issuing updated guidance no later than the NDAA statutory deadline of December 2023. EPA's updated guidance will address the public comments and reflect newly published research results. Since the publication of the interim guidance, EPA and other agencies have been conducting relevant research on destruction and disposal technologies. EPA anticipates that additional research data will become available starting in 2022. EPA will update the guidance when sufficient useful information is available and no later than the statutory deadline.

Question 4. The latest agency guidance on PFAS disposal indicates that interim storage is currently the best option, given concerns related to disposal methods such as landfilling and incineration. How is EPA communicating that advice to industries and other entities that use PFAS? Is EPA planning to take steps to limit incineration while it continues its PFAS destruction research?

Response. By publishing the interim guidance, EPA took a significant step toward educating industry and the public on available destruction and disposal technologies as well as their significant uncertainties and information gaps. As noted, EPA's interim guidance highlighted that while not a destruction or disposal method, interim storage may be an option if the immediate destruction or disposal of PFAS and PFAS-containing materials is not imperative. In general, interim storage could be utilized until research reduces the uncertainties associated with other options. However, EPA understands that interim storage may not be an option for some entities due to limitations.

EPA's PFAS Roadmap includes specific commitments to issue updated destruction and disposal guidance; to build the technical foundation to address PFAS air emissions; to develop and validate methods to detect and measure PFAS in the environment; and to evaluate and develop technologies for reducing PFAS in the environment.

QUESTIONS FROM SENATOR MERKLEY TO ASSISTANT ADMINISTRATOR RADHIKA FOX

Question 1. The PFAS Roadmap discusses EPA's requirement to update its guidance on destroying and disposing PFAS waste per the 2020 NDAA. It also requires that EPA revise this guidance every 3 years. In December 20, EPA published it first interim guidance on PFAS disposal. The guidance notes that three technologies that are currently available to destroy or dispose of PFAS. However, the PFAS Roadmap also points out that [quote] "significant uncertainties and information gaps exist concerning the technologies' ability to destroy or dispose of PFAS while minimizing the migration of PFAS to the environment." Ms. Fox, what steps will EPA take between now and December 2023 to ensure that communities surrounding incinerators are not harmed by ongoing PFAS incineration? Can you explain why EPA decided not to implement a rulemaking to ensure incineration of toxic PFAS waste is banned when we know polluters like the Department of Defense have been burning PFAS-containing waste, including firefighting foam? Please put your second question here, if you have one, and continue with this format for additional questions. Thank you.

Response. By publishing the interim guidance, EPA took a significant step toward educating industry and the public on available destruction and disposal technologies as well as their significant uncertainties and information gaps. As noted, EPA's interim guidance highlighted that while not a destruction or disposal method, interim storage may be an option if the immediate destruction or disposal of PFAS and PFAS-containing materials is not imperative. In general, interim storage could be utilized until research reduces the uncertainties associated with other options.

EPA's PFAS Roadmap includes specific commitments to issue updated destruction and disposal guidance; to build the technical foundation to address PFAS air emissions; to develop and validate methods to detect and measure PFAS in the environment; and to evaluate and develop technologies for reducing PFAS in the environment.

Question 2. PFAS has been detected at airports and military sites in my home State of Oregon. The suspected source of this PFAS if firefighting foam. Ms. Fox, as you know, firefighting foam made with PFAS is among the major sources of PFAS pollution. On Monday, the White House released a press released on PFAS action that states that the "FAA and DOD are working to find a PFAS-free firefighting foam alternative." Ms. Fox, is the EPA working with these agencies to find an alternative to PFAS-free fighting foam? If so, can you please provide an update on this work?

Response. Congress has provided DOD and FAA with statutory directives related to developing PFAS-free firefighting foam. EPA is working with these agencies to identify ways for EPA to support their efforts, including through coordination of ongoing research and development activities.

Question 3. As the Senate sponsor of the Break Free from Plastic Pollution Act, I am greatly concerned about the chemicals present in plastic products—and how they impact public health and the environment. In March 21, EPA released a study which found PFAS in some fluorinated containers of high-density polyethylene. According to E&E News this material is "widely used in food packaging because it can easily seal out moisture and other temperature changes. The packaging is generally used during the manufacturing process to hold large quantities of ingredients like oils or flavorings." Since then, the Food and Drug Administration has warned industry that only certain fluorinated polyethylene containers are approved for contact with food. Ms. Fox, can you elaborate on these EPA findings? What steps is EPA taking to work with FDA to address the use of these plastics containers?

Response. EPA is aware that many companies are using fluorinated High Density Polyethylene (HDPE) containers to store and distribute pesticides and other products. EPA has been working with the Food and Drug Administration, the U.S. Department of Agriculture, and industry and trade organizations to raise awareness of this emerging issue and discuss expectations of product stewardship. For example, EPA has corresponded with the Ag Container Recycling Council, the American Chemistry Council, Crop Life America, the Household & Commercial Products Association, and the National Pest Management Association. In addition, on January 14, 2021, EPA issued a TSCA subpoena to a company that fluorinates the containers to learn more about the fluorination process used on the HDPE containers. On March 5, 2021, EPA also released testing data showing PFAS contamination from the fluorinated HDPE containers used to store and transport a mosquito control pesticide product. While EPA is still early in its investigation, the agency will use all available regulatory and non-regulatory tools within EPA's authority to determine the scope of this issue and its potential impact on human health and the environment and will continue to coordinate with other agencies and organizations on matters outside EPA's jurisdiction.

QUESTIONS FROM SENATOR MARKEY TO ASSISTANT ADMINISTRATOR RADHIKA FOX

Question 1. In the Environmental Protection Agency's (EPA) PFAS Action Plan, which was issued in 2019, the agency stated that it would partner with Environmental Council of the States to build an interactive, publicly accessible map of potential PFAS sources and occurrence. The EPA anticipated that the map would be completed and implemented in 2019. What is the status of this endeavor?

Response. As highlighted in EPA's PFAS Roadmap, the Agency remains committed to educating the public about the risks of PFAS. EPA continues work to develop different approaches for identifying and mapping potential PFAS sources and occurrence. In the Biden-Harris Administration, EPA has renewed its partnership with ECOS and continues to discuss opportunities—both within EPA and with ECOS—to increase available resources on PFAS contamination. EPA has recently publicly released data regarding PFAS detections and possible sources through its FOIA Online data base.

Question 2. Given the Food and Drug Administration's detection of PFAS in our food supply, will the EPA consider additional interagency plans for PFAS remediation?

Response. Coordination with FDA and other agencies will be critical to combating PFAS pollution. EPA will work with other Federal agencies through the newly formed Interagency Policy Committee on PFAS, which is led by the White House

Council on Environmental Quality, to coordinate and help develop new policy strategies to support research, remediation, and removal of PFAS in communities across the country.

Question 3. The EPA has identified more than 120,000 facilities across the country that may be handling PFAS, including about 2,500 in Massachusetts. What is the EPA doing to identify if PFAS is present at these sites and how will the EPA make the American public aware of these potentially harmful facilities?

Response. Harmful PFAS are an urgent public health and environmental issue facing communities across the United States, and EPA's PFAS Roadmap seeks to broaden and accelerate the cleanup of PFAS contamination to protect human health and ecological systems. Many communities and ecosystems are continuously exposed to PFAS in soil, surface water, groundwater, and air. Areas can be exposed due to their proximity to industrial sites, airports, military bases, land where biosolids containing PFAS have been applied, and other sites where PFAS have been produced or used and disposed of for specific and repeated purposes.

When EPA becomes aware of a situation that poses a serious threat to human health or the environment, the Agency will take appropriate action. For other sites where contamination may have occurred, the presence of certain PFAS in these environments necessitates coordinated action to understand what specific PFAS have been released, locations where they are found, where they may be transported through air, soil, and water in the future, and what remediation is necessary. EPA will seek to hold polluters and other responsible parties accountable for their actions, ensuring that they assume responsibility for remediation efforts and prevent any future releases.

With respect to the facility numbers included in your question, the total number of facilities identified by these data sets includes some facilities where PFAS has been detected by states and other entities, but also includes many facilities that are in one of the data sets solely because they are part of an industry category that generally handles PFAS. Such facilities may be handling PFAS because of their industrial categorization, but EPA does not have specific evidence of potential contamination for many of these facilities.

Question 4. Will the EPA consider strengthening regulatory or compliance requirements beyond the establishment of a voluntary stewardship program to mandate that all industrial sources of PFAS reduce their emissions into the environment?

Response. Yes. EPA will use its authorities to impose appropriate limitations on the introduction of new unsafe PFAS into commerce and will, as appropriate, use all available regulatory and permitting authorities to limit emissions and discharges from industrial facilities. However, reducing PFAS exposure through regulatory means can take time to develop, finalize, and implement. Moreover, current PFAS regulatory efforts do not extend to all of the PFAS currently in commerce in the United States. As a companion to other efforts described in the Roadmap, EPA will establish a voluntary stewardship program challenging industry to reduce overall releases of PFAS into the environment. The program, which will not supplant industry's regulatory or compliance requirements, will call on industry to go beyond those requirements by reporting all PFAS releases in order to establish a baseline and then continuing to report to measure progress in reducing releases over time. EPA will validate industry efforts to meet reduction targets and timelines.

Question 5. Regarding the issue of PFAS in firefighting foams used in aviation, will the EPA issue a comprehensive list of products that may contain PFAS? Concurrently, will the EPA issue performance standards for PFAS-free alternatives to enable a rapid transition away from such products?

Response. As part of the PFAS Roadmap, EPA is not currently planning to develop a comprehensive list of PFAS-containing products or performance standards for PFAS-free products. However, EPA looks forward to engaging regularly with communities experiencing PFAS contamination, co-regulators, industry, environmental groups, community leaders, and other stakeholders, to clearly communicate its actions and to stay abreast of evolving needs.

QUESTIONS FROM SENATOR CAPITO TO ASSISTANT ADMINISTRATOR RADHIKA FOX

Question 1. In response to a question from Senator Carper, you stated "as PFAS legislation moves, we would love to be in discussion with Congress about additional authorities, statutory authorities that might enable EPA to go faster." What additional authorities does EPA need, that it does not already have, to address PFAS?

Response. My remarks to Senator Carper on this point were meant to highlight that there are areas in which congressional action can be a much faster approach

than an EPA rulemaking, such as the rulemaking processes identified in the PFAS Roadmap under the Comprehensive Environmental Response, Compensation, and Liability Act, the Safe Drinking Water Act, or the Clean Air Act. EPA looks forward to opportunities to share technical assistance with you and with Chairman Carper on how legislation could further buildupon the commitments included in the PFAS Roadmap.

Question 2. Various bills proposed in Congress have defined PFAS as "a perfluoroalkyl or polyfluoroalkyl substance with at least one fully fluorinated carbon atom." This definition has been described as too broad because it captures products that do not include PFAS, such as lithium ion batteries. In EPA's proposed rule for TSCA Section 8(a)(7) Reporting and Recordkeeping Requirements for PFAS and the Draft Fifth Contaminant Candidate List (CCL) 5, EPA uses a structural definition of PFAS that "includes per-and polyfluorinated substances that structurally contain the unit R-(CF2)-C(F)(R')R.. Both the CF2 and CF moieties are saturated carbons and none of the R groups (R, R' or R.) can be hydrogen." Can you explain the difference between the definition used in past legislation and the structural definition EPA is using and why EPA prefers the structural definition?

Response. The definition in various legislative proposals you reference would define PFAS using the recently revised definition provided in the OECD document, "Reconciling Terminology of the Universe of Per-and Polyfluoroalkyl Substances: Recommendations and Practical Guidance," and is broader than the definition cited, for example, in EPA's TSCA 8(a)(7) proposed rule. OECD has explained that the definition does not inform whether a substance is potentially harmful, only that it shares the same common trait for having one fully fluorinated carbon atom.

The EPA working definition you highlight has been used by EPA's Office of Pollution Prevention and Toxics (OPPT), which administers the Toxic Substances Control Act (TSCA). This working definition identifies chemicals with at least two adjacent carbon atoms, where one carbon is fully fluorinated and the other is at least partially fluorinated. The EPA/OPPT working definition is focused on PFAS likely to be present in the environment, especially water, thereby focusing data collection on PFAS with greater potential for exposures to people/environment and by extension more potential to present risks. This working definition provides focus on PFAS of concern based on their persistence and potential for presence in the environment and human exposure.

For example, chemicals with (-CF2-) that are not (-CF3) are expected to degrade in the environment and most substances with only one terminal carbon (-CF3) are expected to degrade to trifluoroacetic acid, which is a well-studied substance.

In the context of the TSCA 8(a)(7) rule, EPA is evaluating the potential impact of the OECD definition on the scope of the rule.

Question 3. Is EPA working on a uniform Agency-wide definition of PFAS?

Response. At this time, EPA is not developing an Agency-wide definition of PFAS.

Question 4. If EPA does not develop an Agency-wide definition of PFAS, how will EPA decide which definition to use in a given Agency action?

Response. The risks posed by PFAS demand that EPA attack the problem on multiple fronts at the same time, and EPA must leverage the full range of statutory authorities to confront the human health and ecological risks of PFAS. As EPA takes action on PFAS under a particular statutory authority, EPA will evaluate the best-available scientific information as well as the specific statutory context when determining the scope of its action.

Question 5. Now that the PFAS Strategic Roadmap has been released, can you explain what the role of the EPA Council on PFAS will be moving forward and the specific processes the Council will utilize to share data and information across the Agency, with Congress, and with the public?

Response. EPA's Council on PFAS was established by Administrator Regan in April 2021 to collaborate on cross-cutting strategies; advance new science; develop coordinated policies, regulations, and communications; and engage with affected states, tribes, communities and stakeholders. Among the Council's primary initial responsibilities was to develop a multi-year strategy to deliver critical public health protections to the American public, which EPA released on October 18 as the PFAS Strategic Roadmap. Now that the Roadmap has been released, the PFAS Council will continue its collaborative, cross-agency work and will continue to tackle the additional areas outlined in the Administrator's April memo, such as to:

- Continue close interagency coordination on regional specific and cross-media issues to assist states, tribes and local communities faced with significant and complex PFAS challenges;

- Work with all national program offices and regions to maximize the impact of the EPA's funding and financing programs to support cleanup of PFAS pollution, particularly in underserved communities; and to
- Expand engagement opportunities with Federal, state, and tribal partners to ensure consistent communications, exchange information and identify collaborative solutions.

Question 6. In response to my February 17, 2021 letter to White House Chief of Staff Ronald Klain, EPA announced its intent to move forward with the "Final Regulatory Determinations for the Fourth Drinking Water Contaminant Candidate List," in which EPA finalized its determination to regulate both PFOS and PFOA under the Safe Drinking Water Act. This action by EPA was published in the Federal Register on March 3, 2021. What is the status of this regulatory process?

Response. EPA is moving forward to propose national primary drinking water regulations for PFOA and PFOS under the Safe Drinking Water Act. This December, EPA will begin consultation with EPA's Science Advisory Board on the science behind the impacts of PFOA and PFOS in drinking water. EPA expects the SAB will provide advice to EPA in late Spring 2022, followed by EPA proposing a National Primary Drinking Water Regulation in Fall 2022. At the same time, EPA is continuing the process to collect information and data on additional PFAS chemicals, as outlined in the Safe Drinking Water Act.

Question 7. The bipartisan American Innovation and Manufacturing (AIM) Act was enacted last December and directs EPA to address HFCs—a refrigerant that causes global warming—by phasing down their use in the United States by 85 percent over the next 15 years. The "next-generation" alternative to HFCs are called HFOs. Studies have shown the potential that HFOs could breakdown in the atmosphere to form TFA, a short-chain PFAS. Has EPA evaluated the PFAS risks of TFA and how any resultant PFAS could contaminate air, soil, or water?

Response. Although implementation of the AIM Act is outside my responsibility as Assistant Administrator for Water, my work as co-chair of EPA's PFAS Council has highlighted the importance of close coordination across the Agency on PFAS and related issues. My colleagues in the Office of Air and Radiation have highlighted this issue for me and other members of EPA's PFAS Council, and I look forward to continuing this close coordination as EPA's implementation of the AIM Act and the PFAS Roadmap continue. My understanding from the Office of Air and Radiation is that current research indicates the environmental effects of TFA, or trifluoroacetic acid, produced from HFO breakdown are currently very small and are expected to remain negligible over the next decades, and are currently judged not to pose a risk to human health or to the environment.

Question 8. Has the Office of Water or other offices within EPA provided input to the Office of Air and Radiation as it considers regulations and implements the AIM Act? If not, do you have plans to provide input?

Response. Although implementation of the AIM Act is outside my responsibility as Assistant Administrator for Water, my work as co-chair of EPA's PFAS Council has highlighted the importance of close coordination across the Agency on PFAS and related issues. My colleagues in the Office of Air and Radiation have highlighted this issue for me and other members of EPA's PFAS Council, and I look forward to continuing this close coordination as EPA's implementation of the AIM Act and the PFAS Roadmap continue.

Question 9. How do you intend to ensure water systems—particularly small, rural, and disadvantaged systems—can afford and comply with additional regulatory mandates on PFAS?

Response. Ensuring that small, rural, and disadvantaged systems can comply with drinking water regulations is a priority for me, as is taking bold action to address PFAS contamination that has impacted these communities for too long. As part of developing a National Primary Drinking Water Regulation for PFOA and PFOS, EPA will prepare a health risk reduction and cost analysis that will evaluate these considerations. EPA also recently sought nominations from small entities that may be subject to its regulation to provide advice and recommendations to EPA about the potential impacts of the proposed rule on small entities.

Question 10. In developing the PFAS Strategic Roadmap, did EPA consider the potential impacts and costs to small, rural, and disadvantaged systems before including each proposed regulatory action?

Response. Harmful PFAS pollution is an urgent public health and environmental issue facing communities across the United States, and EPA's PFAS Strategic Roadmap lays out EPA's whole-of-agency approach to addressing PFAS and delivering

needed protections for the American people. As EPA undertakes the specific regulatory and non-regulatory actions outlined in the Roadmap, EPA will consider such potential impacts, seeking to hold polluters accountable for the contamination they cause and ensuring disadvantaged communities equitably benefit from solutions.

Question 11. EPA's PFAS Strategic Roadmap states that EPA is developing a Notice of Proposed Rulemaking (NPRM) to designate PFOA and PFOS as hazardous substances under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). On October 26, 2021, EPA announced that it will initiate two rulemakings to address PFAS contamination under the Resource Conservation and Recovery Act (RCRA). Why is EPA pursuing separate rulemakings under both CERCLA and RCRA when listing PFOA and PFOS as RCRA hazardous waste will also result in the designation of both chemicals as CERCLA hazardous substances?

Response. In the PFAS Roadmap, EPA committed to leverage its full range of statutory authorities and to work with its partners to implement a multi-media approach to address PFAS contamination. Both CERCLA and RCRA provide important tools EPA can use to address PFAS contamination and EPA is committed to take action accordingly. Under the Biden-Harris Administration, EPA has restarted the rule development process for designating PFOA and PFOS as CERCLA hazardous substances, and in the PFAS Roadmap has committed the Agency to timelines for a proposed rule (Spring 2022) and final rule (Summer 2023). This rulemaking will help accelerate public health protections and quickly deliver results.

In addition, EPA will initiate two additional actions. The first will be a rulemaking to clarify in our regulations that the RCRA Corrective Action Program has the authority to require investigation and cleanup for wastes that meet the statutory definition of hazardous waste, as defined under RCRA 1004(5). This modification would clarify that emerging contaminants such as PFAS can be addressed through RCRA Corrective Action. The second action the agency is initiating is the process to propose adding four PFAS chemicals as hazardous constituents in Appendix VIII under 40 CFR Part 261 (implementing 42 U.S.C. §6921), by evaluating data for these chemicals to establish a record to support a proposed rule. The four PFAS EPA will evaluate are PFOA, PFOS, perfluorobutane sulfonic acid (PFBS), and GenX chemicals.

Question 12. In California River Watch v. city of Vacaville, the Ninth Circuit held that RCRA does not require that the "transporter" of the solid waste must also play some role in "discarding" the waste. Therefore, the Ninth Circuit held that "a triable issue exists as to whether the City is a 'past or present transporter' of solid waste" and that "[t]aken as true, [the] facts establish that the City is transporting solid waste through its water-distribution system." How is EPA considering this holding and its potential impact on local governments and municipal entities as the Agency pursues rulemakings to address PFAS contamination under RCRA?

Response. EPA announced on October 26 that the Agency will be initiating the rulemaking process for two additional actions to address PFAS under RCRA. As EPA moves ahead with these processes, EPA will ensure that its rulemaking efforts follow the law and follow the science.

Question 13. Does EPA plan to convene a Small Business Advocacy Review panel prior to proposing to designate PFOA and PFOS as CERCLA hazardous substances?

Response. EPA is analyzing relevant potential impacts as part of the development of a proposed rulemaking.

Question 14. Has EPA considered the regulatory impact and costs of disposal of carbon filters if they are regulated as hazardous materials under CERCLA due to saturation with PFAS?

Response. EPA is evaluating relevant potential impacts as part of developing a proposed rule to designate PFOA and PFOS as CERCLA hazardous substances.

Question 15. Does EPA have the authority to provide a regulatory exemption from liability for public water and wastewater utilities if certain PFAS are listed as CERCLA hazardous substances?

Response. EPA is evaluating this issue as part of developing a proposed rule to designate PFOA and PFOS as CERCLA hazardous substances. EPA plans to propose a rule in Spring 2022 for public comment, and EPA looks forward to comments on these and other issues. EPA will ensure that its rulemaking efforts follow the law and follow the science.

Question 16. CERCLA provides for joint and several legal liability and allows potentially responsible parties (PRPs) to sue other PRPs for cost recovery. Where public water and wastewater utilities treat drinking water and wastewater containing

PFAS, do you believe those systems should be considered PRPs, and therefore be subject to cost recovery suits from PFAS manufacturers?

Response. EPA is evaluating this issue as part of developing a proposed rule to designate PFOA and PFOS as CERCLA hazardous substances. EPA plans to propose a rule in Spring 2022 for public comment, and EPA looks forward to comments on these and other issues. EPA will ensure that its rulemaking efforts follow the law and follow the science.

Question 17. During the hearing, in response to the discussion of biosolids and PFAS, you stated that "there is a lot that we don't know around the human health and ecological effects of PFAS and biosolids" and that EPA would have a "risk assessment in place in the next couple of years." In the PFAS Strategic Roadmap, EPA indicates plans to finalize a risk assessment in Winter 2024 for PFOA and PFOS in biosolids that will serve as the basis for determining whether regulation of PFOA and PFOS in biosolids is appropriate. Will you confirm that EPA will not issue any regulation impacting biosolids and PFAS before a final risk assessment has been published?

Response. In the PFAS Roadmap, EPA committed to leverage its full range of statutory authorities and to work with its partners to implement a multi-media approach to address PFAS contamination. The actions in the Roadmap will help accelerate public health protections and quickly deliver results. Completing a risk assessment for biosolids by Winter 2024 is the specific action highlighted in the PFAS Roadmap for biosolids. However, EPA is committed to considering additional actions, as appropriate, and to updating the public on any future actions the Agency may take, including through an annual public progress report.

Question 18. CERCLA's definition of "release" excludes the normal application of fertilizer. Does EPA consider the application of biosolids on farms a "normal application of fertilizer" that is exempt under CERCLA?

Response. EPA is evaluating this issue as part of developing a proposed rule to designate PFOA and PFOS as CERCLA hazardous substances. EPA plans to propose a rule in Spring 2022 for public comment, and EPA looks forward to public comments on its proposal.

Question 19. On December 18, 2020, EPA released the Interim Guidance on Destroying and Disposing of Certain PFAS and PFAS-Containing Materials. The Interim Guidance outlines the current State of the science on techniques and treatments, but it does not recommend a particular technique or treatment for destruction or disposal of PFAS and PFAS-containing materials. In the PFAS Strategic Roadmap, EPA details plans to update the guidance when sufficient useful information is available, and no later than the statutory deadline of December 2023. If EPA is unable to publish updated guidance on disposal and destruction prior to a potential designation of PFOA and PFOS as CERCLA hazardous substances, how will the Agency direct EPA staff, contractors, and potentially responsible parties to dispose of or destroy material containing PFAS?

Response. To meet a requirement of the Fiscal Year 2020 National Defense Authorization Act, EPA published interim guidance on destroying and disposing of PFAS and certain identified non-consumer PFAS-containing materials in December 2020 for public comment. It identifies three technologies that are commercially available to either destroy or dispose of PFAS and PFAS-containing materials and outlines the significant uncertainties and information gaps that exist concerning the technologies' ability to destroy or dispose of PFAS while minimizing the migration of PFAS to the environment. The guidance also highlights research that is underway and planned to address some of these information gaps. Furthermore, the interim guidance identifies existing EPA tools, methods, and approaches to characterize and assess the risks to disproportionately impacted people of color and low-income communities living near likely PFAS destruction or disposal sites.

In the PFAS Roadmap, EPA committed to issuing updated guidance no later than the NDAA statutory deadline of December 2023. EPA's updated guidance will address the public comments and reflect newly published research results. Since the publication of the interim guidance, EPA and other agencies have been conducting relevant research on destruction and disposal technologies. EPA anticipates that additional research data will become available starting in 2022. EPA will update the guidance when sufficient useful information is available and no later than the statutory deadline.

Question 20. EPA's Interim Guidance acknowledges that incineration is currently being used by certain entities to destroy PFAS. What is EPA's position on ongoing incineration of PFAS?

Response. In the PFAS Roadmap, EPA committed to issuing updated guidance on destroying and disposing of PFAS and PFAS-containing materials no later than the NDAA statutory deadline of December 2023. EPA's updated guidance will address the public comments and reflect newly published research results. Since the publication of the interim guidance, EPA and other agencies have been reviewing relevant research on destruction and disposal technologies, including incineration. EPA anticipates that additional research data will become available starting in 2022. EPA will update the guidance when sufficient useful information is available and no later than the statutory deadline.

Question 21. In Spring 2020, EPA established the PFAS Innovative Treatment Team (PITT), which was a dedicated, full-time team of multidisciplinary research staff who concentrated their efforts and expertise on disposal and destruction of PFAS-contaminated media and waste. The PITT was a 6-month effort. Since disposal and destruction are listed in the objectives of all three of the goals in the PFAS Strategic Roadmap (Research, Restrict, and Remediate), does EPA intend to reinstate the PITT in any form to focus on this research?

Response. The PITT was a multi-disciplinary research team that worked full-time for 6-months on applying their scientific efforts and expertise to a single problem: disposal and/or destruction of PFAS-contaminated media and waste. While the PITT formally concluded in Fall 2020, and EPA has no plans to formally reinstate the PITT, the research efforts initiated under the PITT continue.

Question 22. In the National PFAS Testing Strategy, EPA identified secondary and tertiary structural categories. Can you provide the data set showing the number of PFAS in each secondary and tertiary structural category and additional details on the variability within each of the 70 terminal categories of PFAS?

Response. As described in the National PFAS Testing Strategy, there are more than 6,000 PFAS arrayed across the 70 nested primary, secondary and tertiary categories. Furthermore, there is a 'distance from centroid' parameter for each of the PFAS.

EPA also notes that as described in the National PFAS Testing Strategy document, the categorization process is iterative and EPA is working to further refine the initial categories using additional data (e.g., mechanistic, toxicokinetic data, degradation, and exposure data). EPA is working to compile and display these lists in a digestible and informative way as part of developing a more technically detailed document describing the categorization procedure and will be prepared to provide the lists when that work is completed.

Question 23. The National PFAS Testing Strategy states that EPA used "the centroids as the conceptual anchor within each terminal category to define a candidate PFAS for testing" and for the 24 terminal categories with an identifiable manufacturer, EPA "will consider the distance from the centroid in selecting PFAS for testing." In selecting PFAS chemicals for test orders, is EPA selecting the closest point to the centroid where the PFAS chemical has an identifiable manufacturer?

Response. Yes, when identifying PFAS candidates for testing, EPA selected the chemical closest to the centroid that has an identifiable manufacturer.

Question 24. EPA identified only 24 terminal categories that contained PFAS with an identifiable manufacturer to whom EPA could issue a test order. Do this figure encompass all active manufacturers as well as active PFAS chemicals?

Response. No, the 24 terminal categories do not encompass all active manufacturers and active PFAS. The Strategy document—see Section 6 and Figure 6, in particular—describes in detail how EPA identified the initial testing candidates. EPA expects implementation of the Strategy to be an iterative process. In other words, additional phases of testing are expected. In addition, EPA may expand this initial list of candidate PFAS as EPA identifies additional PFAS manufacturers through, for example, reporting under the future TSCA section 8(a)(7) rule.

Question 25. What is the relationship between the categories used to select representative chemicals in EPA's National PFAS Testing Strategy and EPA's cross-program work to identify PFAS categories with an expected completion date of Winter 2021?

Response. To accelerate EPA's ability to address PFAS and deliver public health protections sooner, EPA is working to break the large, diverse class of PFAS into smaller categories based on similarities across defined parameters (such as chemical structure, physical and chemical properties, and toxicological properties). This builds upon the work Congress directed under the 2020 National Defense Authorization Act to develop a process for prioritizing which PFAS or classes of PFAS that should be subject to additional research efforts based on potential for human expo-

sure to, toxicity of, and other available information. EPA plans to initially categorize PFAS using two approaches. In the first approach, EPA plans to use toxicity and toxicokinetic data to develop PFAS categories for further hazard assessment and to inform hazard-or risk-based decisions, such as to identify PFAS candidates for testing as in the National PFAS Testing Strategy. In the second approach, EPA plans to develop PFAS categories based on removal technologies using existing understanding of treatment, remediation, destruction, disposal, control, and mitigation principles. EPA plans to use the PFAS categories developed from these two approaches to identify gaps in coverage from either a hazard assessment or removal technology perspective, which will help EPA prioritize future actions to research, restrict, and remediate PFAS.

Question 26. How does EPA plan to use PFAS categories when developing future regulations and which criteria (e.g. toxicity; chemical composition) will be used to define these categories?

Response. To accelerate EPA's ability to address PFAS and deliver public health protections sooner, EPA is working to break the large, diverse class of PFAS into smaller categories based on similarities across defined parameters (such as chemical structure, physical and chemical properties, and toxicological properties). EPA plans to initially categorize PFAS using two approaches. In the first approach, EPA plans to use toxicity and toxicokinetic data to develop PFAS categories for further hazard assessment and to inform hazard-or risk-based decisions. In the second approach, EPA plans to develop PFAS categories based on removal technologies using existing understanding of treatment, remediation, destruction, disposal, control, and mitigation principles.

EPA plans to use the PFAS categories developed from these two approaches to identify gaps in coverage from either a hazard assessment or removal technology perspective, which will help EPA prioritize future actions to research, restrict, and remediate PFAS. For example, EPA may choose to prioritize research to characterize the toxicity of PFAS that are not being addressed by regulations that require the implementation of removal technologies. Conversely, EPA may prioritize research to evaluate the efficacy of technologies designed to remove PFAS that are included in a hazard-based category with relatively higher toxicities. To support coordination and integration of information across PFAS categories, EPA plans to develop a PFAS categorization data base that will capture key characteristics of individual PFAS, including category assignments.

Question 27. EPA has been conducting Tier 1 high-throughput toxicity testing on around 120 different PFAS chemicals. On March 15, 2021, EPA's website on the Status of EPA Research and Development on PFAS stated that "[l]iterature and laboratory generated-data will be available Q4 2020" and "EPA expects a draft report for internal review in Q4 2020."EPA has since removed that language from this website. Is the literature and laboratory generated-data available? If so, please provide a link. If not, why is this information unavailable for review by Congress and the public?

https://web.archive.org/web/20210318065037/https://www.epa.gov/chemical-research/status-epa-research-and-development-pfas

Response. EPA is generally releasing results from its PFAS research and development activities through peer-reviewed scientific journals. To date, results from one of the high-throughput toxicity tests that evaluates a subset of important cellular pathways have been published and are available at https://www.sciencedirect.com/science/article/abs/pii/S0300483X21001128. EPA is also curating existing scientific data on PFAS human health and ecological effects and makes these data available through the

The website referenced in this question contains anticipated internal timelines that EPA uses to track planned research activities, and these timelines are subject to change.

Question 28. What is the status of EPA's Tier 1 toxicity testing of these PFAS compounds and when will EPA release the results?

Response. EPA's Tier 1 toxicity testing is ongoing and will yield information for prioritizing PFAS chemicals for further testing and to inform possible categorization, as described in the National PFAS Testing Strategy. EPA is generally releasing results from its PFAS research and development activities through peer-reviewed scientific journals.

Question 29. EPA's PFAS Strategic Roadmap states that EPA will "[c]lose the door on abandoned PFAS and uses." In this context, can you define "abandoned" and provide details of how EPA intends to "close the door"?

Response. Many existing chemicals (i.e., those that are already in commerce and listed on the TSCA Inventory of chemicals), including PFAS, are currently not subject to any type of restriction under TSCA. In some instances, the chemicals themselves have not been actively manufactured for many years. In others, chemicals may have in the past been manufactured or processed for certain uses that have been discontinued. Absent restriction, manufacturers are free to begin producing those abandoned chemicals or resume those abandoned uses at any time. Under Section 5(a) of TSCA, by rule, EPA can designate uses of a chemical that are not currently ongoing—and potentially all uses associated with an inactive chemical—as "significant new uses." Doing so ensures that an entity must first submit a notice and certain information to EPA before it can resume manufacturing or processing for those uses. TSCA then requires EPA to review and make an affirmative determination on the potential risks to health and the environment and to require safety measures to address unreasonable risks before allowing the manufacturing or processing to resume. EPA is considering how it can apply this significant new use authority to help address abandoned uses of PFAS as well as future uses of PFAS on the inactive portion of the TSCA Inventory.

Question 30. Did EPA convene a Small Business Advocacy Review panel prior to publishing the TSCA Reporting and Recordkeeping Requirements for PFAS proposed rule?

Response. At the time the rule was proposed, EPA concluded that this action would not have a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 et seq.), as described in Section VII.C of the proposed rule (86 FR 33926) and therefore did not convene a SBAR panel prior to proposal. EPA is reviewing public comments and conducting internal analyses to determine whether a supplemental proposal and/or an SBAR panel is needed.

Question 31. In vacating the Navigable Waters Protection Rule, EPA and this Administration are interpreting the opinions of just two district court decisions as the "law of the land" and applying nationally. Does EPA plan to apply this same standard to any district court opinion moving forward?

Response. It would be premature for me to speculate on the content and impacts of hypothetical future judicial decisions.

Question 32. After EPA sent a draft proposal for a new definition of "waters of the United States" to the Office of Management and Budget (OMB) for review, the Agency later announced its plan to initiate regional roundtables on the WOTUS definition. The fact you sent the proposal to OMB before announcing the roundtables suggest they are nothing more than window-dressing because they did not inform your development of the regulatory proposal. In your proposal, are there any substantive changes beyond a simple reinstatement of the pre-2015 definition and updates to be consistent with relevant Supreme Court decisions?

Response. The agencies have initiated a new rulemaking process that proposes to return to pre-2015 regulations and would re-establish in our regulations the familiar and fundamental protections for waters and wetlands on a long-standing scientific, regulatory, and historical foundation, updated to be consistent with Supreme Court decisions. That proposed rule is now available for public review and comment. The agencies also anticipate developing a second rule that would be informed by further robust stakeholder engagement as well as the experience of implementing the pre-2015 regulations, the 2015 Clean Water Rule, and the 2020 Navigable Waters Protection Rule (NWPR).

Question 33. If there are changes beyond a simple reinstatement of the pre-2015 definition and updates to be consistent with relevant Supreme Court decisions, why did EPA send a proposal to OMB before completing the stakeholder process?

Response. The agencies have initiated a new rulemaking process that proposes to return to pre-2015 regulations and would re-establish in our regulations the familiar and fundamental protections for waters and wetlands on a long-standing scientific, regulatory, and historical foundation, updated to be consistent with Supreme Court decisions. That proposed rule is now available for public review and comment. The agencies also anticipate developing a second rule that would be informed by further robust stakeholder engagement as well as the experience of implementing the pre-2015 regulations, the 2015 Clean Water Rule, and the 2020 NWPR.

Question 34. What does EPA view as the necessary updates for the pre-2015 regime to be consistent with relevant Supreme Court decisions?

Response. The agencies have initiated a new rulemaking process that proposes to return to pre-2015 regulations and would re-establish in our regulations the familiar

and fundamental protections for waters and wetlands on a long-standing scientific, regulatory, and historical foundation, updated to be consistent with Supreme Court decisions. That proposed rule is now available for public review and comment. The agencies also anticipate developing a second rule that would be informed by further robust stakeholder engagement as well as the experience of implementing the pre-2015 regulations, the 2015 Clean Water Rule, and the 2020 NWPR.

35. During the hearing, you were asked whether the replacement of the Navigable Waters Protection Rule would be used to "impose new regulatory burdens in the name of climate change." You responded by saying, "[n]o," and that you "are not using the WOTUS role in that way." Will you confirm that climate change will not be evaluated as a factor in determining whether a water is a "navigable water" in EPA's rulemaking to repeal the Navigable Waters Protection Rule?

Response. As I said during the hearing, EPA is not utilizing the "Waters of the United States" rulemaking to impose regulatory burdens in the name of climate change. The agencies are working expeditiously to move forward with the rulemakings announced on June 9, 2021, in order to better protect our nation's vital water resources that support public health, environmental protection, agricultural activity, and economic growth. The agencies' regulatory effort will be guided by several considerations, including considering the latest peer-reviewed and relevant science, including the science of climate change. The agencies remain committed to crafting a durable definition of "waters of the United States" that is informed by diverse perspectives and based on an inclusive foundation.

Question 36. Will you confirm that climate change will not be evaluated as a factor in determining whether a water is a "navigable water" in EPA's future rulemaking to replace the Navigable Waters Protection Rule following the repeal rulemaking?

Response. As I said during the hearing, EPA is not utilizing the "Waters of the United States" rulemaking to impose regulatory burdens in the name of climate change. The agencies are working expeditiously to move forward with the rulemakings announced on June 9, 2021, in order to better protect our nation's vital water resources that support public health, environmental protection, agricultural activity, and economic growth. The agencies' regulatory effort will be guided by several considerations, including considering the latest peer-reviewed and relevant science, including the science of climate change. The agencies remain committed to crafting a durable definition of "waters of the United States" that is informed by diverse perspectives and based on an inclusive foundation.

Question 37. During the hearing, you were asked whether you could confirm that EPA would not be removing the exemptions for prior converted crop lands that existed in the Navigable Waters Protection Rule in any future rulemaking, to which you responded with "yes." Will you confirm that EPA will retain the prior converted croplands exemption as it existed in the Navigable Waters Protection Rule in EPA's rulemaking to repeal the Navigable Waters Protection Rule?

Response. The agencies have initiated a new rulemaking process that proposes to return to pre-2015 regulations and would re-establish in our regulations the familiar and fundamental protections for waters and wetlands on a long-standing scientific, regulatory, and historical foundation, updated to be consistent with Supreme Court decisions. That proposed rule is now available for public review and comment, and the proposed rule includes a proposed exemption for prior converted croplands.

The agencies also anticipate developing a second rule that would be informed by further robust stakeholder engagement as well as the experience of implementing the pre-2015 regulations, the 2015 Clean Water Rule, and the 2020 NWPR. I do not want to prejudge the outcome of either regulatory process; EPA looks forward to ongoing and robust stakeholder engagement as the Agency develops a proposed second rule and takes public comment on both.

Question 38. During the hearing, you confirmed details about EPA's plan to retain the prior converted croplands exemption in the Agency unpublished proposal that was with OMB for interagency review, but when asked about other agriculture-related elements that could be potentially covered in a proposal or subsequent rulemaking, you replied that you "cannot prejudge the outcome of a rulemaking." Can you explain how you did not prejudge the outcome of a rulemaking when you confirmed details about EPA's plan to retain the prior converted croplands exemption in the Agency unpublished proposal?

Response. The agencies have initiated a new rulemaking process that proposes to return to pre-2015 regulations and would re-establish in our regulations the familiar and fundamental protections for waters and wetlands on a long-standing scientific, regulatory, and historical foundation, updated to be consistent with Supreme Court

decisions. That proposed rule is now available for public review and comment, and the proposed rule includes a proposed exemption for prior converted croplands.

The agencies also anticipate developing a second rule that would be informed by further robust stakeholder engagement as well as the experience of implementing the pre-2015 regulations, the 2015 Clean Water Rule, and the 2020 NWPR. I do not want to prejudge the outcome of either regulatory process; EPA looks forward to ongoing and robust stakeholder engagement as the Agency develops a proposed second rule and takes public comment on both.

Question 39. Can you provide details on any other agriculture-related elements that could be potentially covered in a proposal or subsequent rulemaking and all information on why EPA is considering addressing them in this proposal or subsequent rulemaking?

Response. The agencies have initiated a new rulemaking process that proposes to return to pre-2015 regulations and would re-establish in our regulations the familiar and fundamental protections for waters and wetlands on a long-standing scientific, regulatory, and historical foundation, updated to be consistent with Supreme Court decisions. That proposed rule is now available for public review and comment.

The agencies also anticipate developing a second rule that would be informed by further robust stakeholder engagement as well as the experience of implementing the pre-2015 regulations, the 2015 Clean Water Rule, and the 2020 NWPR. I do not want to prejudge the outcome of either regulatory process; EPA looks forward to ongoing and robust stakeholder engagement as the Agency develops a proposed second rule and takes public comment on both.

Question 40. On the briefing call the Agency provided to Committee staff, EPA staff stated that the initial rulemaking—the repeal of the Navigable Waters Protection Rule—will also seek to incorporate concepts of regionalization. Under the implementation of a "regionalization" element to a rulemaking relating to navigable waters, how would EPA determine the different standards or factors to apply to different areas of the United States, such as those areas that are coastal versus those that are landlocked, or those that are arid versus those that receive more precipitation?

Response. The agencies have initiated a new rulemaking process that proposes to return to pre-2015 regulations and would re-establish in our regulations the familiar and fundamental protections for waters and wetlands on a long-standing scientific, regulatory, and historical foundation, updated to be consistent with Supreme Court decisions. That proposed rule is now available for public review and comment.

The agencies also anticipate developing a second rule that would be informed by further robust stakeholder engagement as well as the experience of implementing the pre-2015 regulations, the 2015 Clean Water Rule, and the 2020 NWPR. I do not want to prejudge the outcome of either regulatory process; EPA looks forward to ongoing and robust stakeholder engagement as the Agency develops a proposed second rule and takes public comment on both.

Question 41. EPA has detailed that the Office of Water is managing three pilot programs on the implementation of the White House's Justice40 initiative, including the Drinking Water and Clean Water State Revolving Funds and the Water Infrastructure Improvements for the Nation Act (WIIN Act) Grant Programs focused on lead. Can you provide more details on the purpose of the pilot programs and why these three programs were selected?

Response. The pilot programs identified in the July 20, 2021, "Interim Implementation Guidance for the Justice40 Initiative" will undertake an initial implementation of the Justice40 Interim Implementation Guidance to maximize the benefits that are directed to disadvantaged communities. These pilots are intended to serve as a blueprint for other agencies to help inform their work to implement the Justice40 Initiative across government. The programs listed in the July 20, 2021, memorandum, including EPA's State Revolving Funds and Reducing Lead in Drinking Water grant program, were selected by reviewing White House Environmental Justice Advisory Council recommendations, consulting with the White House Environmental Justice Interagency Council, and reviewing agency responses to information requests about current Federal investments in disadvantaged communities.

Question 42. Are there other programs in the Office of Water that are being targeted in further implementation of the Justice40 initiative?

Response. Justice40 is a whole-of-government effort to ensure that Federal agencies work with states and local communities to make good on President Biden's promise to deliver at least 40 percent of the overall benefits from Federal investments in climate and clean energy to disadvantaged communities. The July 20 interim guidance identifies a number of potentially covered programs, and the Office

of Water programs identified above are the only programs specifically included as pilot programs.

Question 43. As part of potential implementation of the Justice40 initiative, does EPA envision changes to the operations of these programs that would impact those who receive funding or impose any restrictions on what grantees could do with potential funding?

Response. Consistent with the July 20, 2021, interim implementation guidance, EPA is working to undertake an initial implementation of the Justice40 Interim Implementation Guidance to maximize the benefits that are directed to disadvantaged communities. EPA is currently identifying applicable program funding mechanisms, policies, and procedures based on the July 20 interim implementation guidance, and is considering program-specific guidance that provides recommendations for maximizing the benefits of the programs that accrue in disadvantaged communities, as appropriate and consistent with applicable law.

Question 44. During a recent environmental justice stakeholder call, EPA officials stated that as part of the potential implementation of the Justice40 initiative, funds that are revolved back to the states could be subject to any subsequent Justice40 criteria. Can you provide an explanation of what this means or how it would change the implementation of these and potentially other programs at EPA?

Response. As noted above, EPA is currently identifying applicable program funding mechanisms, policies, and procedures based on the July 20 interim implementation guidance, and is considering program-specific guidance that provides recommendations for maximizing the benefits of the programs that accrue in disadvantaged communities, as appropriate and consistent with applicable law.

Question 45. Does this not change retroactively the agreed understanding under which those Federal dollars were previously provided to the states? If not, why not?

Response. EPA does not expect implementation of the Justice40 initiative to impact any funding that has already been provided to states or other grant recipients. Consistent with the July 20 interim implementation guidance, EPA is taking action in accordance with its existing authorities and consistent with applicable law.

Question 46. I have previously written to EPA on April 27, 2021 and July 29, 2021 requesting a full accounting of how the Agency has expended and plans to expend the $100 million appropriated under section 6002 of H.R. 1319, the "American Rescue Plan" (ARP, Public Law 117–2). Congress provided four specific statutory authorities under which EPA is authorized to issue grants or conduct activities—which included the Safe Drinking Water Act. EPA has provided an initial, incomplete response to me on June 24, 2021, and then, an additional response on September 14, 2021, but EPA has not provided a detailed allocation plan to the Committee that provides details of all the funding that has been provided using Safe Drinking Water Act authority. Can you provide details on all ARP funding that has been issued using Safe Drinking Water Act authority?

Response. EPA is committed to maximum transparency with you, your colleagues in Congress, and the American people. We provided detailed information in our two letters, explaining the work the Agency has done to implement the American Jobs Plan, which was signed into law by President Biden on March 11, 2021. Since that time, EPA has developed detailed budget allocations and internal controls required to support implementation. On June 24, we provided you with a summary of the budget amounts by program project, a description of how the EPA plans to use the funds, and the availability of resources. Subsequently, as EPA began to fund proposed projects and request proposals to fund more projects, EPA shared information with the public on June 25 and July 7. On September 14, we provided you with updated version of the Agency's allocation plan, indicating funds that had been obligated since June, as well as the ARP statutory alignment of each allocation. That updated version specified that the program projects authorized at least in part by SDWA section 1442 include: civil enforcement, climate protection program, compliance monitoring, criminal enforcement, drinking water programs, environmental justice, integrated environmental strategies, children and other sensitive populations, and regulatory/economic-management and analysis. Additionally, EPA has since published a website, available at www.epa.gov/arp to provide regular updates and further uphold our commitment to the fullest transparency possible regarding the reporting, tracking, and communication of EPA's use of ARP funds, including the eventual outcomes of these resources in making a difference on the ground for our country's most disproportionately impacted communities.

Question 47. EPA has previously detailed that the Agency "prioritized use of existing grant and contractual vehicles for expenditure of these funds to facilitate the

quickest allocation of resources to aid in critical responses to the impacts of the COVID–19 pandemic, which continues to disproportionately impact these communities." Were any of these "existing grant and contractual vehicles" within the Office of Water?

Response. As explained in our September 14 letter, after President Biden signed the American Rescue Plan in March, EPA developed an allocation plan and internal controls, then allocated resources among the Environmental Programs and Management (EPM) account and State and Tribal Assistance Grants account. Among other program projects in the EPM account, one of the program projects allocated funds is for the Office of Water's drinking water program. These funds will be used to support SDWA section 1442(a) science, research, demonstrations or other section 1442 activities as well as drinking water systems lacking sufficient funds to meet Safe Drinking Water Standards. These funds will be used to provide financial and managerial training, tribal drinking water compliance, and technical assistance.

QUESTIONS FROM SENATOR INHOFE TO ASSISTANT ADMINISTRATOR RADHIKA FOX

Question 1. Ms. Fox, it's my understanding you are incorporating the supposed impacts of "climate change" into the repeal of the Navigable Waters Protection Rule (NWPR). Will you please elaborate on EPA's plan to incorporate "climate change" into the repeal of the NWPR? a. Have you collaborated with any officials in the White House on incorporating "climate change" into the repeal of the NWPR?

Response. As I said during the hearing, EPA is not utilizing the "Waters of the United States" rulemaking to impose regulatory burdens in the name of climate change. The agencies are working expeditiously to move forward with the rulemakings announced on June 9, 2021, in order to better protect our nation's vital water resources that support public health, environmental protection, agricultural activity, and economic growth. The agencies' regulatory effort will be guided by several considerations, including considering the latest peer-reviewed and relevant science, including the science of climate change. The agencies remain committed to crafting a durable definition of "waters of the United States" that is informed by diverse perspectives and based on an inclusive foundation.

Question 2. Ms. Fox, farmers and ranchers are determined to keep their land and water clean as that is vital to crop and livestock stability as well as for future generations of farmers and ranchers. As EPA prepares to repeal and replace the NWPR, it is vital that the Agency maintain important agricultural exemptions including for stock ponds, agricultural ditches and prior converted cropland. Will these specific exemptions be maintained? a. And to what extent has EPA engaged with agriculture stakeholders so far?

Response. The agencies have initiated a new rulemaking process that proposes to return to pre-2015 regulations and would re-establish in our regulations the familiar and fundamental protections for waters and wetlands on a long-standing scientific, regulatory, and historical foundation, updated to be consistent with Supreme Court decisions. That proposed rule is now available for public review and comment.

The agencies also anticipate developing a second rule that would be informed by further robust stakeholder engagement as well as the experience of implementing the pre-2015 regulations, the 2015 Clean Water Rule, and the 2020 NWPR. I do not want to prejudge the outcome of either regulatory process; EPA looks forward to ongoing and robust stakeholder engagement as the Agency develops a proposed second rule and takes public comment on both. Section 404(f) of the Clean Water Act contains statutory exemptions for certain agricultural activities which cannot be changed by the proposed rulemakings.

The agencies are committed to hearing from voices across the spectrum when developing a durable regulatory definition on which co-regulators, stakeholders, and communities can rely. As a first step, on July 30, 2021, EPA and the Army announced a series of engagement opportunities, including an opportunity for stakeholders and the public to provide written recommendations and participate in a series of public meetings. In addition, the agencies initiated federalism and Tribal consultations and hosted a series of dialogs with State and Tribal co-regulators this fall.

The agencies also plan to convene regionally focused and inclusive roundtables. These roundtables will allow a full spectrum of the agencies' partners to engage and discuss their experience with definitions of "waters of the United States"—including what has worked and what has not. The roundtables will provide opportunities to discuss geographic similarities and differences, particular water resources that are characteristic of or unique to each region, and site-specific feedback about implementation. The agencies are interested in hearing from all stakeholders, including communities, states, Tribes, local governments, association groups, small busi-

nesses, farmers, and families. EPA recently extended the deadline for roundtable submissions until December 1, 2021.

QUESTIONS FROM SENATOR SHELBY TO ASSISTANT ADMINISTRATOR RADHIKA FOX

Question 1. On the briefing call that the EPA provided to EPW committee staff, the agency and the Corps of Engineers stated that step 1-the repeal of the Navigable Waters Protection Rule—will also seek to incorporate concepts of regionalization. a. Does this mean that there could be different standards or factors that apply to different areas of the United States, such as those areas that are coastal versus those that are landlocked, or those that are arid versus those that receive more precipitation? What does this mean for states like my own, where there are a wide range of different climates and ecosystems—does this mean there is a possibility that there could even be different standards that apply in different parts of my state?

Response. The agencies have initiated a new rulemaking process that proposes to return to pre-2015 regulations and would re-establish in our regulations the familiar and fundamental protections for waters and wetlands on a long-standing scientific, regulatory, and historical foundation, updated to be consistent with Supreme Court decisions. That proposed rule is now available for public review and comment.

The agencies also anticipate developing a second rule that would be informed by further robust stakeholder engagement as well as the experience of implementing the pre-2015 regulations, the 2015 Clean Water Rule, and the 2020 NWPR. I do not want to prejudge the outcome of either regulatory process; EPA looks forward to ongoing and robust stakeholder engagement as the Agency develops a proposed second rule and takes public comment on both.

Senator CARPER. Thank you for that statement, and again, thank you for coming.

I would note for the record, my colleagues know I like to call people on their birthdays, and today is Vice President Kamala Harris' birthday. Brian Schatz, who is one of our Senate colleagues from Hawaii, it is his birthday, and as it turns out, it is also the birthday of Sheldon Whitehouse.

Often, we ask whoever is witnessing to lead us in singing Happy Birthday to the witness. I was going to ask for fun, just to say my first question would be, would you lead us in singing Happy Birthday to Sheldon Whitehouse? I am not going to do that today. I won't put you through that torture.

Ms. FOX. Happy birthday, Senator.

Senator WHITEHOUSE. Thank you.

Don't allow him to haze you this way. Now, if you wanted me to sing Happy Birthday, we could clear this room in a moment.

[Laughter.]

Senator CARPER. Well, Senator Whitehouse, normally the person having the birthday receives gifts, but for us, Sheldon is a gift from the people of Rhode Island. I am honored to have the chance to serve with him, especially to have his leadership on this committee. We will sing later.

Let me start off with a question or two on effluent guidelines. One of the key actions in the plan that you have been working on with your colleagues, one of the key actions in the plan is to limit discharges of PFAS from facilities into surface water and municipal sewage treatment plants.

The roadmap mentions plans to develop rules to control discharges from the following industrial sources: organic chemicals, plastics, and synthetic fibers, metal finishings, and electric plating facilities, among others. Here is my question: would you just explain for us why the roadmap does not include plans to develop rules for six additional industrial sources that are listed in the

PFAS action plan? For those sources, just tell us more about the agency's plans to gather information as well as any other next steps the agency is considering, please.

Ms. FOX. Thank you for the question, Senator. So, we have actually been getting a lot of questions about how we are utilizing our Effluent Limitations Guideline Program to really tackle these industrial discharges, so I appreciate the question.

You are right; we are moving forward with rulemaking that was announced last month, the three industrial categories that I just named. We anticipate completion of one of those rules by the fall of 2023 and the second one by the fall of 2024. We have information, good information, on those three industrial categories, and therefore, we are acting and undertaking these rules.

There is also a number of the industrial categories, but we have some information, but not enough information to make a scientific determination if a regulation is needed, and those are around. In that instance, what we are doing is undertaking detailed studies to really build the record, the scientific record to make that determination, and those are for landfills, textiles and carpeting, and electrical components. The career team anticipates those detailed studies will be complete by this time next year to inform whether or not we will undertake a rulemaking.

Another category that we are moving forward with as it relates to ELGs is, industries where concern has been expressed, but we don't have enough information around PFAS discharges, so those include paint formulators, plastics, and leather tanneries. With those three industrial categories, we are undertaking data reviews as well as we are going to be doing mandatory data calls on those facilities, so we can learn more, and then be able to make an informed decision about whether a regulation is necessary.

Then, the way that we are tackling, one additional approach we are taking is that there is several industries, including airports and pulp and paper manufacturers, where we understand that the use of PFAS is going to be phased out by 2023 or 2024. In those instances, what we are doing is monitoring. As part of our ELG Plan 15, which will be finalized in the fall of 2022, we will report out to the American people about what we learn from that monitoring.

I would say, we are taking a very proactive approach around the Effluent Limitation Guidelines. We are acting when we have the information to develop the rules, and we are building the scientific foundation where we don't for future decisions. I anticipate that we will make significant progress on all of those industrial categories by the end of 2024.

Senator CARPER. Great, thanks for that response.

My second question is around environmental justice. Ms. Fox, we are pleased to see that the concept of environmental justice is woven throughout the plan. It is a well-known fact that many sources of pollution, including PFAS, are disproportionately located near low-income communities, and oftentimes, communities of color. In the roadmap, EPA commits to ensuring that these communities have equitable access to solutions to address this critical public health issue.

Here is my question: please share with us today any specifics you may have about how the agency will prioritize the protection of dis-

advantaged communities through actions described in EPA's roadmap.

Ms. FOX. Happy to, Senator. Under Administrator Regan's leadership, he has really directed all of his AAs that environmental justice is not a program that we have over here. It has to be woven into the very fabric of how we do our work, and that is what you see in the PFAS roadmap.

One of the things that we have committed to do is something that the EJAC, or Environmental Justice Advisory Council has long been asking for, which is we are going to be taking this roadmap on the road. We are going to be visiting every EPA region and meeting with those communities that are on the front lines of PFAS contamination to really get their feedback on the roadmap, what other actions they want us to be doing.

Certainly, members of this committee have some of these communities in your States. So we welcome also, partnering with all of you as we have those environmental justice sessions on PFAS across the Country.

Additionally, we are really trying to think about how we bake in environmental justice considerations into all of the rulemaking. So for example, in my shop, in the Office of Water, we are thinking about that very seriously in the context of the drinking water standard that we are moving forward with. As we do more health advisories, we are going to make sure they are in multiple languages so that all communities are understanding the health risks.

Then, we are actually utilizing EJSCREEN, for example, the Office of Air and Radiation as they are building the technical foundation to consider whether we should designate PFAS as a hazardous air pollutant. They are utilizing tools like EJSCREEN as they are building that technical foundation. So we are really, at every turn, trying to incorporate those considerations into this work.

Senator CARPER. Thank you. Senator Capito is next. I think she is indicating her willingness to yield to Senator Inhofe.

Let me just walk through the order here. It looks like it will be Senator Inhofe next, Senator Capito after him, Senator Whitehouse, Senator Cramer has joined us, welcome, Kevin, Senator Duckworth, who is with us by WebEx, and Senator Lummis, who is with us by WebEx. A lot of interest in this hearing. The room is not full of Senators, but we have Ben Cardin after Senator Capito, I mentioned.

Senator CAPITO. He will go after Inhofe.

Senator CARPER. OK, good enough. So, Jim Inhofe, Senator Cardin, and then back to Senator Capito. Thanks so much.

Senator INHOFE. I want to thank Senator Capito and everyone. Some are not aware that we have competing committees, and it is difficult to be in two places at once.

I want to thank you for the time that we have spent together, and we talked about these things. While there are some basic differences in our philosophies and the various areas in the jurisdiction of this committee, you are a great one to listen to and be a part of and communicate with, and I look forward to continuing that.

I appreciate the conversation we had yesterday. It is comforting to know on one issue that you are not looking, and I think it is

good to State this publicly, to punish anyone. As you know, my major concern, as pointed out by the Chairman, I have a lot of activity in aviation. So it is only natural I get comments and questions from our commercial aviation community out there with this fear that they have that this suppressing material that can be used to suppress fires is something they may have a problem with, because they want to be sure that the airport operators are not going to be held responsible for something over which they really have no control.

We talked about that yesterday, and I am not sure what you can say that would give the maximum comfort to this community. Let's give it a try.

Ms. FOX. Senator, first of all, it is lovely to see you again. But what I would say is you pointed out an issue that really requires very strong interagency coordination. If FAA or DOD are requiring that airport operators are utilizing this firefighting foam and it then causes contamination, that they may be responsible for, if PFAS are designated as a hazardous substance under CERCLA, it is really our responsibility as Federal agencies to work together to kind of iron out those things.

My understanding, we are working closely with FAA and DOD to first find alternatives to firefighting foam, safe alternatives that don't have PFAS. There is really great progress being made. So I think the industry is going to be moving in that direction. But really, that is critically important.

In part because of the need for this type of interagency coordination of various policies, Brenda Mallory, the Chair of White House Council for Environmental Quality, just on Monday launched an interagency council that has the Deputy Secretaries working together to resolve these kinds of things. But I can assure you, Senator, we are not looking to punish airport operators if they are following direction and they are following guidance provided by FAA. We have to figure that out.

Senator INHOFE. Yes, and I understand that. The guidance is out there, but the problem is it is not done yet. The problem is that some disaster could happen in the meantime, and these people are out there not being able to answer the question, what happens if we have a disaster, and we have a material that we are not able to use.

So, the problem is still a problem, and I understand, and you are very emphatic to me, that you are personally involved in looking into it and trying to get the White House to do the same thing, but it is not done yet.

Have you thought about having some kind of an exemption put in place that could work? I almost have to carry something back to give some comfort to individuals who have expressed that concern.

Ms. FOX. So, we are very early in the rural development process for the CERCLA hazardous designation, and we anticipate proposing that rule in the spring of 2022, so in about 6 months or so. There is going to be a robust process of both interagency review of the proposed rule as well as robust opportunity for public comment on the rule itself before we get to a final rule the following year.

So I can't prejudge the outcome of the rule, Senator. It has to go through that regulatory process, but I hear you loud and clear on this concern, and you have my commitment that I will take this concern back to the leadership in the Office of Land and Emergency Management, who are leading the development of that proposed rule.

Senator INHOFE. Well, I will try to participate in the little area of comfort for these people and may be calling up and asking you to reach in some other areas that might offer some type of temporary relief.

I know that my time is about to expire, but I did want to talk about the EPA does not have plans to use the WOTUS in regulatory process as an excuse to impose new regulatory burdens in the name of climate change. Now, we did talk about that. Is there any comment you can make, very briefly, on that? Because that is a concern that we have.

Senator CARPER. I would ask you to be brief in your response, and then you can respond more fully for the record, but go right ahead.

Ms. FOX. Absolutely, I am happy to respond more fully for the record, but the answer is no, we are not using the WOTUS rule in that way.

Senator INHOFE. Thank you very much.

Senator CARPER. That was pretty brief.

Senator INHOFE. That is brief.

[Laughter.]

Senator CARPER. Not every witness is that brief.

Senator INHOFE. One last, very, very brief though, Mr. Chairman, that is, because I think I know what her answer is, can you confirm that these important agricultural exemptions can be maintained?

Ms. FOX. I am happy to give an in-depth answer in the questions for the record on that, as well.

Senator INHOFE. I will live with that.

Senator CARPER. Thanks. Thanks so much for joining us. I think Jim Inhofe may have more flight hours than anybody in the Senate, except maybe for our late colleague from the Vietnam War, John McCain, and my guess is Mark Kelly. I remember that Kelly was a member of, was a Navy captain fighter pilot, and the three of you.

Senator INHOFE. I have more hours than the two of them put together, but they have more miles than I do.

[Laughter.]

Senator CARPER. Well, all of you have bragging rights, then.

Senator WHITEHOUSE. Kelly had more altitude.

[Laughter.]

Senator INHOFE. You got it.

Senator CARPER. Something for everybody.

Senator Cardin, I think, is joining us by WebEx. Ben, are you out there? Earth calling Senator Cardin, come in Ben. We will wait for him to join us. He may be like Senator Inhofe, who has a lot of committee meetings going on at the same time, so Senator Capito, I think you are on, please.

Senator CAPITO. Do you want to go to Senator Whitehouse, to the Democrats? You are good? OK, thank you.

Well, welcome again, and the first question I have is a little bit along the same lines as Senator Inhofe. You and I spoke briefly, and I mentioned a possible case study of a wastewater plant that would then remove PFOA or PFOS from the water in terms of cleaning it, but then have biosolids left over, and the disposal of those. There is some concern about what would the liabilities be for a wastewater, that basically, they didn't create it, they are trying to clean it up, yet they have to dispose of that. If you could clarify the liability issue, what you all are looking at that, much like what Chairman Inhofe said.

Ms. FOX. Absolutely. So, I think you mean, Senator, in the context of designating PFOA and PFOS as a hazardous substance under CERCLA, but liability?

Senator CAPITO. Right.

Ms. FOX. So, as with other hazardous substances that have long been established as hazardous under CERCLA, there is a process that is followed. If a CERCLA designation is made on these two PFAS chemicals, it does a couple of things. One, it requires that facilities report in a quantifiable way on potential releases, but then in order to have liability, there is also a responsibility to show who is responsible for that PFAS release, and then a court determination.

So, there is a process that has long been in place for a range of hazardous substances under CERCLA. Should PFAS be named a hazardous substance, if we get to that final rule, it would be the same way.

Then, since you also asked about biosolids separately from the liability issue, one of the key actions that we are taking in the roadmap is to begin a risk assessment, because there is a lot that we don't know around the human health and ecological effects of PFAS and biosolids. So we are also undertaking greater research to have that risk assessment in place in the next couple of years.

Senator CAPITO. Thank you. Let us kind of take it down a little bit, if somebody's watching this, and they don't know what PFOA, PFOS is, although we have said it is everywhere, which we know that is true in certain levels. The drinking water level, there is a level right now that is a suggested level, I guess, of safety. In your strategic roadmap, have done something that I have been pressing for both through the last administration and this one is to set a definitive level that is science-based that we can know what our kids and grandkids are drinking, and we are drinking, has an acceptable level.

But in the roadmap, the length of time that this is going to take is very frustrating to me, because we have been looking at this, gosh, I have probably been involved in this issue two or 3 years, and why is it going to take so long when we know that the Office of Water can move more quickly? If you could just explain to people who are listening right now, what that level might be right now, and how you anticipate that this lengthy period of time is going to change that level.

Ms. FOX. Senator Capito, I share your frustration. We should have had a drinking water standard for PFOA and PFOS years

ago. Administrator Regan and I, we are trying to make up for lost time in moving forward this designation.

Why it is so lengthy, why it takes so long, is we have to follow the science, and we have to follow the law as we develop these regulations, and many of those steps and processes are established by Congress. They are embedded in the Safe Drinking Water Act.

I will say that we are very much trying to meet the statutory deadline, or, I am sorry, beat the statutory deadline of March 2023, so we intend to propose a rule by the fall of 2022. We will take all of the interagency review and feedback; we will take ample public comment. It is such an important rule; we have to get it right.

We are aiming to have that rule in place by 2023. We are not taking it lightly. We are concerned about communities who have been waiting far too long for such protections as a drinking water standard would provide.

But please know we are moving with all deliberate speed, but we want to get something that is right, something that is durable, and that is grounded in science.

Senator CAPITO. I want it to be right, and I want it to be grounded in science.

But I am frustrated. Looking through the roadmap, all of the different aspects of this, there is a lot in there, and there is a lot of things to do, without finding a better way of stating that.

So I would urge you, because I think this drinking water level is so very, very important, to prioritize this, if not the top, near the top of the list, because of the impacts it will have all across this Country. Thank you for coming.

Ms. FOX. Thank you, Senator.

Senator CARPER. Senator Capito, thank you for your continued interest and leadership on this, Senator. I don't know if you have been figuring out where the road trip you are going to be taking across the Country is going to, as you unveil the roadmap, if that roadmap might take you through West Virginia, but that might be the place.

Ms. FOX. I am still waiting for my invitation, Senator.

Senator CAPITO. Oh, any time. We are happy to have you.

Senator CARPER. The welcome mat is out.

Senator Cardin tried to join us by WebEx a little bit ago, and he couldn't, and was unable to because of the technology, but he is here, live and in person. I am going to yield to him right now.

Senator CARDIN. Well, Mr. Chairman, I was with you with WebEx because I was in my car. But now that I am here, in person, I didn't want to miss the opportunity with meeting Administrator Fox.

Thank you very much. I am going to follow-up on the Chair and the Ranking Member on the water standards.

Let me just point out that all of us have examples in our States. In Maryland, the city of Westminster and the town of Hampstead have had to take their treatment plants off-service because of samples collected with high measured levels of PFOAs and PFOS.

So, we see this directly, and we recognize that we are in desperate need of having a national standard based upon best science. We know the risk factors. The good news from the point of view of congressional support, it is bipartisan, it is strong, and we are

prepared to put up resources necessary to do the remedial work, as is obvious in the bipartisan infrastructure bill.

So, I appreciate your sense of urgency, and I just really want to underscore the point on timing. I recognize you have to get it right; I understand the process issues require an orderly process where you have input. But if we continue to delay these issues being regulated appropriately, it is going to be even more challenging in the future.

So I just want to first urge you to move these issues as quickly as possible. I know you are going down several tracks, according to the game plan that you laid out. Some are a little bit more ready to move than others. But if you could just share with us your time schedule that you see as realistic in order to implement your plan.

Ms. FOX. On the drinking water standard?

Senator CARDIN. You can do drinking water. You also, I know there are other parts of your program.

Ms. FOX. Absolutely. So, one thing that we did with the roadmap, Senator, is put anticipated timelines on all of the actions, and ongoing. For example, we just, on Monday, announced our PFAS testing strategy, and the first test orders are going to be coming out in a matter of weeks. It is imminent that we are going to be releasing a Gen-X toxicity assessment and follow that on with a health advisory.

So we are really firing on all cylinders, and across all of our media offices to make progress on things, delivering in the short-term as well as long-term.

On the drinking water standard, I just want to reiterate the need for urgency that you just spoke of, that Senator Capito just spoke of. It is one of the keystone rules that we have to put in place during Administrator Regan's tenure, and we are very focused on that. We are moving quite rapidly with building the foundation for that rule. We just started, we did a nomination for the small business participation just yesterday. The Science Advisory Board is going to be meeting by the end of the year, and as I said, we are on track to propose the rule by this time next year.

Senator CARDIN. Let me ask you about your partnerships with States in dealing in this roadmap with support for fisheries and seafood safety. In Maryland, we have taken considerable strides to better understand the incurrence of PFAS in fish tissue, oysters, and crabs. Do you have in your roadmap working with our States so that we can advance the science necessary to understand the risk factors and the remedial actions necessary in regard to our safe food stock?

Ms. FOX. Absolutely. We are going to be working very closely with States and Tribes, our co-regulators in building out the actions in this roadmap. ECOS, which is the Environmental Council of the Environmental Secretaries from across the Country, they are a partner in these efforts with us. The truth is, as you know, Senator, there is a number of States who have been leading when the Federal Government hasn't done enough. So that partnership with the States is going to be critical.

I am so glad that you asked about the fish tissue issue. There is a number of things that we are doing on that front. We are basically in the process of developing ambient water quality criteria,

which is essential for States and Tribes as they are setting water quality standards around PFAS. We also are doing a lot of work around fish advisories, because our early sampling in places like the Great Lakes show that there is some level of PFAS in nearly every fish sample.

So we are also working to build out the science and the information that States need and Tribes also need to do these fish advisories, which is, of course, really critically important for subsistent fishers, for the seafood industry, as you mentioned, as well as for our Tribal nations, who consume larger numbers of fish.

Senator CARDIN. Well, we look forward to working with you on that. I think partnering with our States is going to be critically important, particularly on the fish stock.

Thank you, Mr. Chair.

Senator CARPER. Senator Cardin, thank you so much for joining us, and for your leadership on this and other issues, as well.

Just to run briefly through the ordering of questions, it looks like the next person up is Senator Cramer, Senator Whitehouse, Senator Boozman, and Senator Duckworth, by WebEx. So, Senator Cramer, take it away.

Senator CRAMER. Thank you, Mr. Chairman, and thank you, Ms. Fox, for being here and for your service. It is great to see you again.

I am going to maybe steer this a little bit along the same path that Senator Cardin was just talking about and that you were talking about in response to his very specific question, and that is, you referenced your co-regulators, State and Tribal regulators. I am just going to draw a little bit of an illustration and let you expand on it.

I think the EPA first came into North Dakota in 2013, 2015, did some baseline sampling. Basically, they didn't find any PFAS, at least of the six most prominent, most often present chemicals. Then in 2018, the North Dakota Department of Environmental Quality did a much larger baseline survey and certainly found some, but again, very minor, nothing really that affected drinking water significantly or really in any dangerous way. There were a couple of fire safety sites or training facilities, but again, they cleanup, and we are blessed with a geology that protects the water table pretty well, so all in all, things are pretty good.

I draw that little bit of an illustration because many of our water systems, like many of the members here, of course, are rural water systems, not a lot of financial resources, spread out population, a chemical that largely doesn't exist or barely exists.

So, as you are doing the roadmap, I was heartened by, like I said, what you just said to Senator Cardin, and maybe if you could just expand a little bit on that relationship with Tribes and States and how to craft rules that aren't overly burdensome to particularly rural systems that, if needed, I guess we could help finance. But we don't want to burden them if it is unnecessary.

Just talk through that a little bit with me about how you see that relationship working out.

Ms. FOX. Absolutely. It is good to see you, Senator Cramer.

I think one of the best tools that we have as we think very thoughtfully about partnering with our co-regulators, the State, is

the leadership that Administrator Regan brings. As a State environmental regulator, he is very attuned to the importance of being in partnership with the State, not telling States what to do, but figuring it out together. We are really aspiring to do that, not only in our PFAS work, but in all of the rules that we are undertaking at EPA.

With each of the actions that are regulatory in nature in the roadmap, whether it is the CERCLA hazardous designation or the drinking water standard, we will have ample and robust dialog with States. We have formal consultations with States and Tribes on each and every one of these rules. We have to make sure it is meeting the very diverse needs of States across the Country.

So you certainly have Administrator Regan's commitment, my commitment, to do that, both in PFAS, but again, in all of the things that we are doing at EPA.

Senator CRAMER. Speaking as a former State regulator, I find that background of Administrator Regan's to be one of the more endearing qualities, and he has got lots of them. But we regulators don't often talk endearingly about one another.

[Laughter.]

Ms. FOX. I will make sure to let him know you said that.

Senator CRAMER. I appreciate that. Along the same theme then, let us talk just a little bit about WOTUS, since we have a minute and a half left, because it is kind of the same lines. I know you find yourself one rule, then not, and then a new rule, and then not, and the NWPR, which we in North Dakota thought was a pretty good rule, not perfect, but pretty clearly defined the role of States and the role of the Federal Government and encourages everybody to stay in their own lane.

But now we are on the path to what you like to call a more durable rule, perhaps, and I think we would all like a more durable or sustainable rule that doesn't have to get ping-ponged between administrations and courtrooms. That said, maybe just talk a little bit about, and thank you for your commitment to come out to my little State and talk to some people that deal with a very diverse landscape as it relates to water and WOTUS, talk a little about your approach, now that you are partway through this discovery process in coming up with a new, permanent rule.

Ms. FOX. Absolutely, and I am looking very much forward to the visit as well. My approach, my position on Waters of the United States hasn't changed since I was last before this committee. We have, over the summer and early fall been doing very robust engagement, pre-publication engagement, around Waters of the United States.

As I think we have described in other settings, we are still moving forward with the two-step rulemaking process. The first rule is a rule to promulgate the kind of pre-2015 regulations, and then we will move forward with the second rule to build on that foundation.

Of course, Senator, the landscape continues to change around Waters of the United States, as we, Army and EPA, continue this work. Two district courts in Arizona and New Mexico have both vacated the Navigable Waters Protection Rule. So based on those two court decisions that the concerns that those two courts had, we have instructed both the EPA regional offices as well as the Army

district offices to move forward with implementation of that 1986 regulatory regime. That is currently what the law of the land is until we move forward with our rulemaking.

We do anticipate proposing that step-one rule before the end of the year, by the end of 2021. When we propose that, we will again do ample and robust stakeholder engagement in North Dakota and really, around the Country.

Senator CRAMER. I look forward to that. Thank you very much.

Thank you, Ms. Chair.

Senator CAPITO.

[Presiding.] Thank you.

Senator Whitehouse.

Senator WHITEHOUSE. Thank you, Senator Capito, and welcome, Ms. Fox. I am glad you are back with us again.

I wanted to just flag Rhode Island's situation for you, as we have a moment here together. In 2019, our Department of Health tested every major drinking water supply in the State, and the water in every school that had its own well. We still have a lot of well supply in Rhode Island.

Eighty percent of Rhode Islanders, through this process, had their primary source of water tested, so it was pretty comprehensive. PFAS chemicals were detected in 44 percent of the locations tested. Drinking water serving 14 different Rhode Island cities and towns, like North Providence and Pawtucket, Newport, Cumberland, and South Kingstown, tested positive for PFAS at levels that have already been declared unsafe under the standards of neighboring States.

Elevated levels were detected in school water systems, in Foster, in Glocester, in North Smithfield, in Scituate, and at our wonderful University of Rhode Island. PFAS contamination was, perhaps, unsurprisingly also found at Naval Station Newport.

We are now following Federal guidance by requiring people to avoid drinking water that has PFOA or PFOS in levels above 70 parts per trillion. Massachusetts sets that limit at 20 parts per trillion combined for six of the most common PFAS compounds, and Vermont also sets the limit of 20 parts per trillion combined for five PFAS compounds.

So, our Department of Health has begun work on its own PFAS regulations and is working on drafting our State level drinking water standard.

In February, our Department of Environmental Management signed on to a letter with other State environmental agencies in New England, highlighting for you specific efforts that the EPA could take to help Federal, State, and local governments address PFAS, including expanding maximum containment level rules beyond PFOA and PFOS, regulating PFAS as a class, developing guidance for disposal of PFAS products, and recognizing stricter State—level standards where they exist compared to Federal standards.

I would ask you to please review that letter, and it would be helpful if you could send me an updated reply as to where you all are with respect to the various proposals to you that the States have made.

Ms. FOX. First of all, Senator, happy birthday.

Senator WHITEHOUSE. Thank you.

Ms. FOX. And, absolutely, I would be happy to follow-up with a formal reply. I would also be happy to meet with some of the stakeholders and leaders you just described in Rhode Island. We would love to learn from their experience and make sure we are getting what we do right. I am happy to commit to doing that.

Senator WHITEHOUSE. Great. Look forward to it. Thank you. Keep going.

Ms. FOX. Thank you.

Senator CARPER. Thanks, Senator Whitehouse. Again, thanks for letting us share your birthday, a special day, with you.

Next, Senator Lummis. Thank you for your patience, and thanks for joining us.

Senator LUMMIS. No, thank you, Mr. Chairman. I appreciate it.

Welcome, Ms. Fox. Senator Cramer and I, before he walked out of the room, were talking about how grateful we are that we don't have nearly the PFAS issues identified that Senator Whitehouse just mentioned exist in his State. I think it is a perfect example of why federalism works so well.

According to the Environmental Council of the States, States have assumed more than 96 percent of the delegable authorities under Federal environmental laws. So concerning PFAS, there is no reason States can't or shouldn't lead on research and regulation. Senator Whitehouse just mentioned that his State certainly is doing so and has identified many issues in his State that do need to be addressed.

In this area and in a lot of areas at EPA, working with the States, the concepts of federalism seem to be the best path, the workable path going forward. So I just want to implore EPA to see the States as partners and work with them and to accept their leadership in a lot of areas where they are well-positioned to lead.

I, too, like Senator Cramer, want to raise the issue of the Navigable Waters Protection Rule while we are here, because that is the more concerning issue in my State, as it is in his State of North Dakota than, quite frankly, the PFAS issue is. So, one of my concerns about it is the amount of delay we have seen coming from the agency on oversight requests for information on the repeal and replacement of the Navigable Waters Protection Rule.

For example, it took the agency 9 weeks to provide this committee with a briefing on the rationale underlying the agency's decision to take these actions. That delay causes States like mine a real heartburn, and we are concerned about transparency that we think is not evident with regard to the times involved in this. I just want to alert you that we have great concerns about the replacement of the Navigable Waters Protection Rule, and we very much want as much information as we can get.

Now, do you agree that 9 weeks is too long for this committee to wait for a briefing on this issue?

Ms. FOX. Senator, thank you for sharing your concerns around delays in responding to oversight requests. I don't manage that for the EPA, and so you have my commitment that I will take that concern back to Administrator Regan and to those at EPA who manage that and see if we can act more quickly. Of course, we

have so many things we are juggling, but we will be more mindful of that moving forward.

I just also wanted to appreciate your comments about letting the States lead and really partnering with them so that we get these regulations right. I could not agree with you more, and I would say that it really is the obligation of the EPA to protect public health and safeguard the environment by establishing Federal floors for things. So much of what we are trying to do with this roadmap is to establish a Federal floor of protection for people who have been suffering far too long from PFAS contamination. We fully expect that other States will go farther than us, and they should, and they should lead, and we will learn from them. It will, I think, be a very virtuous cycle of partnership between States and the Federal Government moving forward.

Senator LUMMIS. Well, thank you. I think the illustration of big differences between States and dealing with issues and having it be an issue for each of us would argue for having the States take a strong leadership position, and then ask for assistance from the EPA when necessary. Certainly, in a lot of areas, the EPA is well-equipped to help the States fulfill their roles in this area, as well.

I want to return, and I know this isn't your area, but I hope that you will take back with you Wyoming's concern about changing the Navigable Waters Protection Rule. On a briefing call, staff stated that there actually have been no observed and documented significant environmental damage or ongoing environmental harm stemming from the implementation of the Navigable Waters Protection Rule, and because of that, we don't even understand why you want to change it, why the agency wants to change it. It seems to be working well, and we have concern that we are going to be taking a step backward with regard to changes with this rule.

Are you aware of any significant environmental damage or ongoing environmental harm stemming from the current implementation of the Navigable Waters Protection Rule that has been observed either by EPA or the Army Corps of Engineers?

Ms. FOX. Senator, the Navigable Waters Protection Rule is no longer the definition of Waters of the United States. It was vacated by two district courts. We are currently implementing the regulatory regime pre-2015. So courts have found that the Navigable Waters Protection Rule had significant concerns, and that is why they took that action.

Senator LUMMIS. Did they take the concern because they felt that it was inadequately implemented under the rulemaking authority, or because the rule was inadequately actually protective of waters? Do you know which it was? Was it procedural, or was it substantive?

Ms. FOX. I would be happy to have our Office of General Council brief you more fully on those two court decisions, if that would be of interest to you, Senator.

Senator LUMMIS. It absolutely would, and I very much appreciate the offer, and I will take you up on that.

Ms. FOX. OK, thank you.

Senator LUMMIS. Thank you, Mr. Chairman. I really appreciate it.

Senator CARPER. You bet. Thank you for your willingness to do that. We are grateful.

Ms. FOX. Absolutely.

Senator CARPER. I believe Senator Duckworth is ready to join us on WebEx. Senator Duckworth, if you are there, please join us.

Senator DUCKWORTH. Thank you, Mr. Chairman.

I just want to start off by associating myself with comments from Senator Inhofe about the concerns that airports have for being held liable for use of PFAS in AFFF retardants. By the way, Mr. Chairman, I think no other Senator has as much flight time that is as slow and as low to the ground as I do. All of you guys are all jet jocks.

Senator CARPER. There are a lot of record-holders here, you know?

Senator DUCKWORTH. If you want to go very slowly and at 300 feet or less above ground, I am your gal.

[Laughter.]

Senator CARPER. All right.

Senator DUCKWORTH. Mr. Chairman, as Chair of the Water Subcommittee and a fellow founding member and co-chair of the Senate's first Environmental Justice Caucus, I commend your leadership in making sure our committee pays as much attention to upgrading our Country's unseen infrastructure as we provide for the resources for fixing our roads, bridges, and rail.

I am proud that, working together, we have secured record funding levels for water infrastructure across a bipartisan infrastructure bill, including more than $10 billion dedicated to PFAS cleanup. These historic investments would deliver significant benefits to low-income communities, in particular, rural areas as well, and communities of color. It will help right the past wrongs of allowing our military families and industrial communities to bear the brunt of toxic chemical dumping.

Administrator Fox, now that your team has put forward the most comprehensive PFAS plan in EPA's history, could you address how preserving the robust water infrastructure funding in the bipartisan infrastructure bill and the Build Back Better Act would enhance EPA's ability to provide clean, safe, reliable water for all Americans?

Ms. FOX. Yes, thank you, Senator, for the question.

We are very excited by the comprehensive nature of the roadmap, and we were really intentional about identifying what we can do with our existing resources.

But the bipartisan infrastructure package in the Build Back Better Plan would be a game-changer in our ability to address PFAS. For example, the $10 billion that is proposed in the bipartisan bill that this committee led the development of and passed through the Senate, I mean, that $10 billion would be a game-changer for communities and being able to do cleanups, making sure drinking water and wastewater systems are safe and PFAS-free. So those dollars are essential.

But beyond the resources for PFAS that are in that legislation, the rest of the resources that would be going to building and reinvesting in our drinking water and wastewater systems, removing lead service lines, really retiring them so that communities have

lead-free water, all of these things are desperately needed in our communities. Communities have been waiting too long for these investments. What I can say is, under Administrator Regan's leadership, we stand ready to steward these resources, if passed by Congress, safely, responsibly, efficiently, to again, support our communities in living the healthiest lives possible.

Senator DUCKWORTH. Thank you.

I want to return to the firefighting use of aqueous firefighting foams that contain PFOS and other PFAS, long-chain PFAS. We have known for decades that these are a dangerous risk to public health. Despite this knowledge, we have continued to use these harmful foams to put out industrial fires. In the process, they have now seeped into our ground.

We have been talking about this all morning, but most Americans don't know that we are still using them. In my home State of Illinois, AFFF has been used in three separate incidents in just the last several months. This includes a battery storage fire, where AFFF was used for hours until EPA was finally consulted and advised that they should stop using AFFF immediately and procure non-PFAS foams.

Just last week, 50,000 gallons of AFFF were dumped at the Sugar Camp Coal Mine, and now the local area has contamination levels of serious concern.

Of course, Illinois is not alone in this. AFFF represents a national public health threat that touches upon the three core components of EPA's PFAS roadmap.

Ms. Fox, can you address how implementing the roadmap's three central directives will enable us to proactively prevent the use of PFAS foams, making sure that we strengthen the cleanup efforts in communities where this foam has already been used, and also support research and development to promote non-PFAS firefighting foams and other alternative technologies?

Ms. FOX. Absolutely, Senator. We are doing our part at the EPA to help transition away from these firefighting foams that have PFAS in them, as well as supporting remediation cleanup. But this is really an area where we need a whole-of-government approach to really solve this issue. FAA and DOD are also working very hard on this issue.

But because we need a whole of agency approach, the White House, just this week, announced that under Chairman Brenda Mallory's leadership, there is a Deputy Secretary-level interagency council. We really view the council as a place for this type of cross-agency challenge to be solved together.

So this is a priority for us; it is a priority across the administration, and we are really looking to make rapid progress moving forward.

Senator DUCKWORTH. Thank you so much. I yield back, Mr. Chairman.

Senator CARPER. You don't have to yield back, but thanks so much for coming. Thanks for the insights that you have offered.

We have been joined by Senator Stabenow, but before her, is Senator Mark Kelly. We have been talking a lot about PFAS, especially with respect to firefighting foams today, something you know a lot about. Mark, thanks for joining us.

Senator KELLY. Thank you, Mr. Chairman. Yes, in my early days in the Navy, I spent time with the hose and the AFFF, putting out fires for training, not realizing at the time that chemical was going to do so much harm to groundwater across the Country. So, that is what I want to talk about, the PFAS issue.

Thank you, Administrator Fox, for being here today. It was great talking to you last week and seeing you again.

As you know, Arizona is in the midst of an historic drought. In August, the Bureau of Reclamation declared a tier one shortage on the Colorado River, cutting back Arizona's allocation of Colorado River water for the first time ever. While Arizona has spent years making investments to prepare for this, to prepare for the tier one shortage, recent hydrological reports indicate that in the not-too-distant future, we could quickly get to tier two or even tier three, those shortages.

This would prompt significant cuts for communities throughout our State. If these cuts are triggered, communities in Phoenix and in Tucson and the surrounding areas may have to rely on their secondary source of drinking water, which is groundwater.

Yet, as you know, there are significant and growing PFAS plumes in aquifers both in Phoenix and in the Tucson metropolitan areas. These competing challenges makes remediating the PFAS plumes in Arizona's aquifers an urgent priority.

That is why I fought to include $10 billion in the bipartisan Infrastructure Investment and Jobs Act for PFAS cleanup efforts. While the House still needs to pass the bill, I wanted to ask you today about EPA's plan for quickly getting this much-needed funding out to States if and when the bill is signed into law.

Administrator Fox, what can you share about the work your office is doing to prepare to quickly allocate funding provided for PFAS cleanup in the infrastructure bill?

Ms. FOX. Thank you, Senator Kelly, for that question. So, absolutely, if and when the infrastructure bill is passed, EPA is ready to go. We are having conversations with States. A lot of the infrastructure money will flow by formula, through the SRF formula to States. So we are working actively with States to really understand what might be their challenges, how do we anticipate and plan for them, how do we make sure projects are ready to go, especially with these carve-outs for the $10 billion for PFAS and then the carve-out for lead.

So we are ready to act quickly. We know communities desperately need these resources to ensure that they have safe, clean drinking water and reliable wastewater service.

I also just want to underscore, Senator, that the story that you just told about Arizona is so sobering to me because it shows us all of the unintended consequences of decisions that we make and why we actually need a more one-water approach. The fact that this drought situation may leave communities in Arizona to rely on groundwater that is contaminated with PFAS, I mean, that is just awful, right?

So, we really need to be attuned to the interconnected nature of these water challenges. It is why Administrator Regan has charged us with our PFAS roadmap to use every statutory authority to bring our funding and financing programs to bear, not tackle it one

PFAS at a time, one chemical at a time, or one exposure pathway at a time.

So you certainly have our commitment at EPA that we are ready to act. We are ready to steward resources wisely to communities, and that we really want to bring a more integrated, comprehensive approach so that as we make future decisions on water management, it doesn't create yet another unintended consequence.

Senator KELLY. Right. Thank you for that, and that is going to help.

When we talk about where Arizona is going to be in two to 3 years, the storage, the water in Lake Mead went down 10 percent in a year, and it is at 30 percent. Arizona gets 40 percent of its water from the Colorado River. It is at 1,067 feet above sea level. When it gets to a 1,050, which is possible in a year or two, then we are in tier two. Then we are in a situation where we have to rely on groundwater for drinking water and the PFAS plumes.

The one in Tucson, by the way, got so significant that the facility to take the PFAS out of the water was just overwhelmed by too much PFAS. It couldn't do it and had to shut down.

So I appreciate the Administrator's focus on this. It is critically important that we get these funds as soon as the bill is passed, that we get these funds to Arizona to start this remediation. Thank you.

Senator CARPER. Senator Kelly, thanks so much.

We have been re-joined by Senator Joni Ernst, and I am going to yield to you now, and then once you have asked whatever questions you would like to, then Senator Stabenow will ask her questions, and she will do it with the gavel in hand, unless Senator Capito comes back and wrestles it away from you.

Thank you, and I am going to run and vote, and if you would just preside in my absence, that would be great. Thank you. Senator Ernst, thank you.

Senator ERNST. Yes, thank you, Chairman Carper. Thank you very much.

Administrator Fox, we are already seeing broad and costly policies implemented by the Administration on an unjustified basis. They are increasing energy costs on American families; they are harming out international economic competitiveness, and they are placing unnecessary burdens on our Nation's taxpayers.

We seem to be seeing a lot of this coming out of the EPA as well, with a huge target on agriculture. I have continually fought for our farmers, and I am afraid we are now back in the same fight that we had over Waters of the United States. I know that you are coming out with a proposal here in the upcoming weeks, and I am concerned that what we may see will just be a return to the harmful policies we saw under the Obama administration.

Now, the EPA has told this committee and our staff during a briefing that you would not be removing the exemptions for prior converted croplands. Are you able to confirm that?

Ms. FOX. Yes.

Senator ERNST. OK. I appreciate the smart decision, I do.

I am very concerned about other provisions that we have seen used by the Obama administration against our farmers, and since you were able to confirm the details about prior converted crop-

lands, you should be able to tell us what other ag-related implications or elements we should expect to see.

Do you have some of those that you could detail with us today?

Ms. FOX. Senator, I cannot prejudge the outcome of a rulemaking. We will be proposing our Waters of the United States step 1 rule. We anticipate, by the end of the year, there will be ample engagement with the agricultural community, with your State, with a range of stakeholders through the formal process.

Senator ERNST. Yes, and I appreciate that, because we will need to have that stakeholder engagement to make sure that we are not putting in place policies that would further harm our farmers and our ranchers, and again, I just want to reiterate my huge concerns with the Obama-era Navigable Waters, or Waters of the U.S. Rule.

I know that Senator Lummis also was asking about the repeal of Navigable Waters. I would like to go back to what she was discussing, and the issues that were raised on WOTUS or the claims that you and others in the administration made about environmental damage and harm that was cause by the Trump Administration's Navigable Waters Protection Rule.

That is not really anything that our farmers are seeing on the ground, and I have not seen any data from the EPA or the Corps that shows the Federal Government has documented any of this damage and harm. So I think for Senator Lummis and I, we would like to see evidence of that, rather than just a hypothetical. It is an assumption, and your basing an unnecessary repeal and a rewrite of the rule on information that has not been provided to any of us.

Can you confirm that the EPA has documented evidence of actual environmental damage or harm that was caused by the Navigable Waters Protection Rule?

Ms. FOX. Senator, I am happy to share with you the Army Corps' data, which is publicly available. I can share that with you. I do want to also just reinforce that two district courts have vacated the Navigable Waters Protection Rule, because they felt it had significant concerns with the rule and its consistency with the ultimate objectives of the Clean Water Act.

So we are now trying to look forward and develop a rule that is fair, that is balanced, and that is durable. We think the ping-pong that has happened for far too long on Waters of the United States needs to stop. That is really Administrator Regan's and my priority, as we undertake this rulemaking.

We have, I think, time and again been illustrating our commitment to listen to all sides, to hear the divergent perspectives from regions across the Country. In fact, just last week, we announced a call for hosting 10 regional roundtables. We would love if folks in Iowa would propose for one of those regional roundtables to be in Iowa, so that we can dig in more deeply.

But I think from the day Administrator Regan has taken office, he has committed to listening to all sides, and we have been doing that consistently with the agricultural community, and we will continue to do so.

Senator ERNST. Yes, and I appreciate that. I think that we would be more than happy to host one of those roundtables in our great State of Iowa, because the Navigable Waters Protection Rule is one

that was put in place, it was greatly appreciated over the past administration's WOTUS Rule.

But again, what we want to see is the evidence, not just that we have had a couple of courts that have said we should vacate the rule. But we want to see the evidence, because EPA is claiming that there was actual environmental damage caused by the Navigable Waters Rule, not just that they have vacated the rule. But we want to see that evidence, so I hope that as we do these roundtables and we are able to have a dialog, that evidence is presented.

Thank you very much.

Senator STABENOW.

[Presiding.] Well, thank you very much, Assistant Administrator Fox. I appreciate you and the Administrator reaching out, certainly, in Michigan, and the efforts to really listen to all of our residents in every part of the economy in Michigan.

As a State that is surrounded by water, there are so many issues that I could ask you about today. But I want to specifically focus on PFAS, and thank you for your leadership and the leadership the EPA is showing.

As you and I have discussed, Michigan has had significant challenges when it comes to working with the Department of Defense to address PFAS contamination on and around our military bases. PFAS has been detected on at last 10 bases in Michigan. At one base, we had readings as high as 32,200 parts per trillion, which is huge.

At some of our bases, such as Wurtsmith and Camp Grayling, we have PFAS migrating off the base and into lakes, other water bodies. I have seen PFAS-contaminated foam floating across the lakes. It is terrible what is happening; it is really frightening.

On July 22d, 2020, the State of Michigan finalized its own drinking and groundwater standards for numerous PFAS. It is my understanding that current law is clear: in the absence of national drinking and groundwater standards, the Department of Defense is required to comply with State standards. Unfortunately, it doesn't seem that the Defense Department interprets this statute the way that we do, that I believe that it should be interpreted, and I have had trouble getting a straight answer.

Let me ask you: do you agree that Federal statute requires the Department of Defense to comply with State drinking and groundwater standards for PFAS if Federal standards don't exist, or a State has more stringent standards than the Federal one?

Ms. FOX. First of all, Senator Stabenow, I just share your concern around PFAS, and the people of Michigan have been suffering because of this contamination, and they have waited far too long for a good Federal partner to walk with the State on addressing some of these issues.

I cannot speak for the Department of Defense, but what I will say is that we are doing everything we can at the EPA through this roadmap to restrict new PFAS from entering, to do our part in supporting remediation. We are in regular dialog with the Department of Defense on areas of collaboration. I will take this back to the Assistant Secretary that I work with at DOD to share this.

I spoke about it a little while ago, but one thing that we are incredibly excited about as well is that, on Monday, the White House Council of Environmental Quality, under the leadership of Chair Mallory, has launched an interagency effort around PFAS, and it is the Deputy Secretaries across the agencies that are engaged in that. So I will share this there.

I also want to say that, as the EPA moves forward with our actions under our authority, we are going to be putting a much stronger Federal floor in place through setting a drinking water standard, by moving forward a rule for CERCLA hazardous designation. Because States have for far too long not had a Federal floor when it relates to PFAS. It is people's health that has suffered. So you have that commitment from me moving forward, Senator.

Senator STABENOW. Well, I appreciate that. I really appreciate what the White House has announced, and again, the outreach efforts in Michigan around these issues, as well as the steps that you are taking with the EPA in terms of PFAS, including hard timelines for completing drinking water and cleanup standards.

Our difficulty is that Michigan has taken the lead, stepped out, because we have so many contaminated sites, and we have the standards in place. We made sure that it was clear that if there are standards in place, that the DOD sites need to follow those. So while you are doing the great work to finalize your rules, we have a great sense of urgency about this.

I have one other quick comment. I know I am running out of time, but I do need to just ask quickly about the lead situations in Michigan. I was deeply involved still, and I am with the people of Flint and the horrors around not being able to drink the water because of lead. Now we have other situations occurring, including a very important community in Benton Harbor, where we have had very troubling details emerge about high lead levels, dating back now to 2018.

The Governor has stepped in and is moving forward on a number of things, and they have done an October 6th decision to recommend bottled water for cooking and drinking and so on. But I wonder if you could just speak for a moment on how the EPA is working with the city and the State to address lead contamination in the near and long-term, because this is such a serious issue.

Ms. FOX. I completely agree with you. We are very concerned about the lead exceedance levels in Benton Harbor that have been, as you said, Senator, going on for some time now. So, we are really spending a lot of time and focus on this issue, both in the very near-term. We have been working closely with the State and with some of the community groups on that bottled water distribution that the State has recently begun, as you just said.

We are providing oversight over that bottled water distribution. We have asked to see their plans; we are providing technical assistance as we can. The EPA is also supporting a filter study that has three parts to it, and so we are proceeding with that.

Senator STABENOW. Let me ask on that one point, because have you gotten any results yet in terms of analyzing whether the water filters that were previously given are working? Do we know?

Ms. FOX. The study that we are doing is moving forward. So we are going to, in the very near future, do sampling in about 300 homes to get a baseline, and then there are some follow-on filter studies that we will be doing. They will be happening within weeks. We are happy to kind of loop back with your office to share the findings of that. So EPA is investing and undertaking that filter study.

In addition, we have been working closely with both the city and the State reviewing their data and around the corrosion control, looking at the studies around water chemistry. Really, we have kind of unleashed all of our technical experts within headquarters to help. We also did a recent inspection of the water system in Benton Harbor, and that report should be ready soon. We would be happy to brief you and your office on that.

Please know that we are making this a top priority to collaborate with the State and the city and the community organizations there. The situation is serious, and we have to bring all of our resources to bear.

Senator STABENOW. Absolutely, and I appreciate also the EPA grant we were able to bring in for $5.6 million to begin replacing, obviously, the lead pipes in our bipartisan infrastructure bill, our Chairman is back, all of his leadership and members of this committee. We certainly have dollars there, but from a community standpoint, when you have to drink water every day and cook with water every day and all the exposures and so on, the sense of urgency couldn't be higher for what needs to happen. So I look forward to working with you.

Mr. Chairman, I am handing the gavel back to you.

Senator CARPER.

[Presiding.] Senator Stabenow, you are doing double duty. She not only chairs the Agriculture Committee, she is going from this committee to Finance Committee and filling in for Senator Wyden. I don't know, we are going to have to pay her three times for this day. Thank you so much for chairing.

I have maybe two more questions, and I don't think anyone else is coming back, as far as I can tell, from our members. This is maybe the best question I will ask today, and that is: how can Congress help? How can we help? I want to ask you to make us a guided missile, if you will.

I really appreciate your spending the time with us today and providing some of the details of the roadmap that you and your colleagues have been working on, and I am encouraged that the agency is giving what is a real critical health threat in a lot of our States the close attention that it has deserved and certainly deserves going forward.

Virtually all Americans, whether they know it or not, are exposed to PFAS substances, which never break down, and they tend to accumulate, as we know, in the tissues of living things, including all of us. This is truly, I think what you presented is, my staff described as a soup-to-nuts plan, which is nicer than they have described some other plans that we have received on other issues. I can appreciate the amount of work that it will take to get all this work done.

Just tell us what the Congress could do, ideally, what we could do to help EPA succeed with this effort, either through legislation or maybe additional resources, please.

Ms. FOX. Thank you for the question.

Senator CARPER. You are welcome.

Ms. FOX. So, I would say there are three ways that Congress could be invaluable. One, as you know, Senator, EPA was eviscerated during the Trump Administration. We lost a thousand career staff, science and intellectual capacity that we have to rebuild. So the kinds of investments in EPA that are proposed in the Fiscal Year 2022 budget are just the kind of things that we need to help build back the EPA, so those resources to rebuild the very foundation of our agency.

Two, passing the infrastructure bill that this committee led would be invaluable. The $50 billion investment in water would be historic for communities across America, and that $10 billion proposed for PFAS would be a huge down payment on getting our drinking water systems, our wastewater systems, clean and safe and PFAS-free.

Senator CARPER. How much was that again?

Ms. FOX. There was $10 billion for PFAS. Then the third is, I know this committee is contemplating future legislation on PFAS. There is the PFAS Action Act from the House. So as PFAS legislation moves, we would love to be in discussion with Congress about additional authorities, statutory authorities that might enable EPA to go faster.

When we wrote this roadmap, when we put the commitments that we have made in this roadmap down, the charge from Administrator Regan was, use every statutory authority that you currently have. That is what we are trying to do with this roadmap. But there are places where Congress, through additional authority, could help us move faster, and we welcome that dialog with you moving forward.

Senator CARPER. Great. Thank you. I think this would be the last question I have, and maybe the last question of this hearing. As you know, many communities across our Country have suffered a whole lot by being continuously exposed to PFAS in their environment, in our environment.

One example, it comes from the 49th largest State, that would be the second smallest. We are really small. Every one of our three Delaware counties, we only have three counties, most people live up north in New Castle County, and Kent County is where Dover Air Force Base is, in the middle, and then Sussex County is one of the largest counties in America. We have a lot of chickens, not many people.

Anyway, small State, three counties. Every one of our counties has been plagued by the presence of PFAS in our drinking water. A key component of EPA's roadmap involves holding polluters accountable through enforcement, and according to the roadmap, anyone who causes PFAS contamination will be held responsible for cleaning it up and for preventing future releases. Please tell us why enforcement is an essential component of the roadmap and how EPA plans to hold polluters accountable.

Ms. FOX. Well, thank you for the question, Senator Carper.

Senator CARPER. You are welcome.

Ms. FOX. When I hear the story you just told about Delaware, the thing that really saddens me is this is what communities around the Country have been suffering from for too long. They have been caught holding the bag for contamination that industry or other facilities have created, and they need help.

That is why Administrator Regan has said loud and clear, enforcement is back at the EPA, and that if we see that contamination exists and that there is imminent and substantial danger to communities, we will use our enforcement authority, our current enforcement authorities to act. It is also why one of the linchpin strategies in this roadmap is moving forward, at long last, with a rule to designate PFAS as a hazardous substance under CERCLA. Because States need that tool, we need that tool, to hold polluters accountable. That is what this EPA is going to be about, moving forward.

Senator CARPER. OK. Almost every member of this committee has participated in today's hearing. It gives you an indication of just how important it is, not just to the first State, Delaware, and not just to my native State and Senator Capito's native State, West Virginia, but the entire United States.

We are looking for some action and looking to be a good partner with the agency. You made a good point about the resources, making sure you have people prepared, trained, and so forth, with good leadership. Part of our responsibility is to provide the money for the resources and when we have good nominees from the Administration, like you, to be able to get you confirmed and at work in a hurry.

I want to close by just asking one last question. This would be a question from you. Is there a question that you wish had been asked, but you haven't been asked? A question you wish had been asked, but have not been asked. Go ahead, think about that.

Ms. FOX. No.

Senator CARPER. Hillary Clinton was once asked this question, I think when she was Secretary of State, and she was being asked to testify before the House of Representatives. Democrats were the minority, and the hearing lasted forever.

After about five or 6 hours, she was asked the same question by one of the members: is there a question you haven't been asked that you wish you had been asked, and she said, I wish someone had asked if I needed a bathroom break.

[Laughter.]

Senator CARPER. I thought that was pretty good, on the spot like that.

Ms. FOX. Yes.

Senator CARPER. Do you want to ask the last question of yourself, and give us a good answer? If not, we will wrap it up.

Ms. FOX. No, I just want to say, on behalf of the entire EPA, thank you for your leadership, Senator Carper. You have been such a good partner to the EPA as we are trying to move President Biden's bold vision for the environment forward.

So just thank you, and thank you for the opportunity to participate in this really important discussion this morning.

Senator CARPER. Well, you are welcome, and thank you, Administrator Fox, Radhika Fox, best name of any witness in this Congress. We want to thank you for helping us to understand better not just the goals, but the actions and the timelines of EPA's strategic PFAS roadmap.

I was talking, again, with Shelley, Senator Capito, as to whether or not the roadmap might bring you and your team through West Virginia. I know they would love if that would happen. It would be great if you could make it to the first State, but West Virginia has, as you know, suffered hugely through this.

We are grateful to learn how much we already know about the threat posed by some of these PFAS chemicals, and we are also encouraged that there are well-informed and rapid steps we can take to address the worst of the risks we face while gathering the knowledge we need to protect our environment, our families, and our children over the long, long-term.

In the Navy, we have a term called all hands on deck. You have heard it, I am sure, in any number of applications, but I also appreciate that this is all hands on deck opportunity. Maybe I should say not just opportunity, but a necessity, a necessity. We look forward to working with you, with your team, with your EPA colleagues, as well as my Ranking Member, Senator Capito, and every member of this committee, most of whom have joined us today, either in person or virtually. We want to make sure that we are doing our best to address the problems we already face and to avoid the threats in the future.

Before we adjourn, I have a little bit of housekeeping to do. I want to ask unanimous consent to submit for the record a variety of materials that include records from stakeholders and other materials that relate to today's hearing. Since I am the only one here, I am not going to object to my unanimous consent request, but I think will just say, without objection.

[The referenced information follows:]

KIRSTEN GILLIBRAND
NEW YORK
SENATOR
RUSSELL SENATE OFFICE BUILDING
SUITE 478
WASHINGTON, DC 20510-3205
202-224-4451

United States Senate
WASHINGTON, DC 20510-3205

COMMITTEES:
ARMED SERVICES
ENVIRONMENTAL AND PUBLIC WORKS
AGRICULTURE
SPECIAL COMMITTEE ON AGING

October 20, 2021

Dear Chairman Carper, Ranking Member Capito, and Members of the Senate Committee on Environment and Public Works (EPW),

Thank you for holding this important and timely hearing, "*Evaluating the Federal Response to the Persistence and Impacts of PFAS Chemicals on our Environment",* which will further elevate this critical public health and environmental issue and help support Congress' efforts to tackle the PFAS pollution crisis. I urge this Committee to ensure that any legislative actions it takes to address PFAS pollution are as ambitious as the House *PFAS Action Act*.[1] I commend the leadership of U.S. House of Representatives for twice passing the bipartisan *PFAS Action Act*, which includes similar provisions to my *Clean Water Standards for PFAS Act of 2021*. I also commend the EPA and the Biden administration for taking this issue seriously and releasing a PFAS Roadmap that includes steps to ensure additional progress is made on curbing the release of industrial discharges into the air and water.

We have known for years that PFAS contamination is a major issue in New York and across the country. When these forever chemicals are introduced to the water supply or the air from industrial plants, they make their way into our bodies where they can stay for long periods of time and cause serious health problems. Thousands of communities across the country have confirmed the presence of PFAS in their drinking water and most people in America have PFAS chemicals in their bloodstream. Experts estimate that as many as 30,000 manufacturers across a variety of industries could be discharging PFAS and making this problem worse every day.[2] This is exactly why my legislation must be enacted now – so that the PFAS pollution crisis can be tackled in a way that reflects the urgency of the problem.

The *Clean Water Standards for PFAS Act of 2021,* which is co-sponsored by three members of this Committee and the Senate Majority Leader, would require the EPA to develop water quality criteria under the *Clean Water Act* for all measurable PFAS or classes of PFAS within two years, and develop effluent limitations guidelines and standards for all measurable PFAS or classes of PFAS within four years for nine priority industries. This includes establishing pretreatment standards, which are a type of effluent limitations guideline and standard, to prevent the introduction of PFAS into publicly-owned water treatment facilities; those standards will

[1] https://www.congress.gov/bill/117th-congress/house-bill/2467
[2] https://www.ewg.org/news-insights/news-release/2021/07/twelvefold-increase-suspected-industrial-dischargers-forever

help us stop PFAS at the source before it gets into the municipal water system. The nine priority industry categories included in my bill for which the EPA would need to establish final rulemakings within four years include: Organic Chemicals, Plastics and Synthetic Fibers (OCPSF); Pulp, paper, and paperboard; Textile mills; Electroplating; Metal finishing; Leather tanning and finishing; Paint formulating; Electrical and electronic components; and Plastics molding and forming. The bill also authorizes $200 million per year for grants to assist Publicly Owned Treatment Works with implementation.

I want to highlight that EPA's PFAS Roadmap does put the agency on a path to addressing industrial discharges of PFAS, and addresses the nine priority industries outlined in my bill in some way. However, the communities downwind and downstream of these industrial plants expect swift federal action with strict deadlines. The Roadmap only sets deadlines for two proposed rulemakings, and includes no deadlines for any final rulemakings. To deliver results for those communities, legislative action is needed.

I have spoken directly with residents of Hoosick Falls, New York, who have been dealing with the impacts of PFAS contamination for years, some who have survived cancer and many who have lost loved ones to it. I've heard about generations of families dealing with thyroid disease and other health challenges. I've even heard from one mother whose youngest daughter was born with elevated levels of chemicals in her bloodstream, even though she was born two years after this mom had stopped drinking the contaminated water. The PFAS Roadmap is a critical first step, but the EPA must work faster to address this issue, and my legislation would require them to do just that.

Congress has a unique opportunity to pass comprehensive PFAS legislation that will hold polluters accountable and address this issue expeditiously. I urge the Members of the Committee to support the *Clean Water Standards for PFAS Act of 2021,* and to include it in any future PFAS package the Committee considers.

Thank you for your attention to this urgent issue and for your leadership on PFAS. I look forward to continuing to work with the EPW Committee and the Biden administration to tackle PFAS head on to keep our communities safe from these toxic chemicals.

Senator CARPER. Additionally, Senators will be allowed to submit questions for the record through the close of business on Wednesday, November 3d, that is Wednesday, November 3d. We will compile those questions and send them to our witnesses and ask our witnesses, in this case, our witness, to reply by Wednesday, November 17th, please.

With that, I think we normally say the hearing is adjourned. I will just say, it is a wrap. Thank you so much. The hearing is adjourned.

[Whereupon, at 11:47 a.m., the hearing was adjourned.]

