

INTERIOR, ENVIRONMENT, AND RELATED AGENCIES APPROPRIATIONS FOR 2022

HEARINGS BEFORE A SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS HOUSE OF REPRESENTATIVES ONE HUNDRED SEVENTEENTH CONGRESS FIRST SESSION

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PART 6

	Page
Efforts to Address Marine Plastic Pollution Through Recycling	1
Wood Innovation: Sustainable Forest Products to Reinvigorate	
Rural Economies	61
The Effects of Covid-19 on Arts and Humanities Organizations	113
U.S. Forest Service Budget Request for Fiscal Year 2022	155
Department of the Interior Budget Request for Fiscal Year 2022	231
Environmental Protection Agency Budget Request for Fiscal Year	
2022	299



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INTERIOR, ENVIRONMENT, AND RELATED AGENCIES APPROPRIATIONS FOR 2022

THURSDAY, MARCH 18, 2021.

EFFORTS TO ADDRESS MARINE PLASTIC POLLUTION THROUGH RECYCLING

WITNESSES

**WINNIE LAU, SENIOR MANAGER, PREVENTING OCEAN PLASTICS, THE
PEW CHARITABLE TRUSTS**

**GINGER SPENCER, PUBLIC WORKS DIRECTOR, CITY OF PHOENIX, ARI-
ZONA**

**NICOLE COLLIER, SENIOR DIRECTOR, CORPORATE AFFAIRS, NESTLE
USA**

Ms. PINGREE. Good morning. This hearing will now come to order.

As the hearing is fully virtual, we must address a few house-keeping matters. And, before I welcome everyone, I need to read this verbatim to comply with the rules.

So, for today's meeting, the chair, or staff designated by the chair, may mute participants' microphones when they are not under recognition for the purposes of eliminating inadvertent background noise. Members are responsible for muting and unmuting themselves.

If you notice that you have not unmuted yourself, I will ask you if you would like the staff to unmute you. If you indicate your approval by nodding, the staff will unmute your microphone.

I remind all members and witnesses that the 5-minute clock still applies. If there is a technology issue, we will move to the next member until the issue is resolved, and you will retain the balance of your time.

You will notice a clock on your screen that will show how much time is remaining. At 1 minute remaining, the clock will turn to yellow. At 30 seconds remaining, I will gently tap the gavel to remind members that their time is almost expired. When your time has expired, the clock will turn red, and I will begin to recognize the next member.

In terms of speaking order, we will follow the order as set forth in the House rules, beginning with the chair and ranking member; then members present at the time the hearing is called to order will be recognized in order of seniority; and, finally, members not present at the time that the hearing is called to order.

Finally, House rules require me to remind you that we have set up an email address to which members can send anything they

wish to submit in writing at any of our hearings or markups. That email address has been provided in advance to your staff.

So that is the end of our technical script.

And I will officially welcome you all to the first Interior and Environment Subcommittee hearing of the 117th Congress, and thank you to everyone. This is my first committee as chair, so I will try to make as few mistakes as possible. And I am very excited to say that my daughter, who used to be the Speaker of the House, has loaned me her gavel for this particular reason.

So we have several new members on the committee who will be joining us at some point: Mr. Harder, Ms. Lee, and Mr. Cartwright. Thank you very much for joining our committee. We are excited to have you.

Ms. Kaptur, we will have her with us at some point today. Mr. Joyce is in another meeting, and he will be with us as soon as he can, but I am looking forward to working with him as the ranking member. And thank you. I see Mr. Stewart and Mr. Amodei. Great to be back on the committee with you. And I am sure that, now that I am the chair, I will be able to visit the wild horses and the sage-grouse at some point in time.

I am pleased that the first subcommittee oversight hearing will be focusing on marine plastic pollution, recycling, and steps currently underway to move us toward a circular economy. Coming from Maine, as you can imagine, the ocean is critical to our culture and to our economy, and I, personally, have a long-standing interest in addressing waste challenges and improving sustainability.

This hearing builds on the subcommittee's work last Congress. For the newcomers on the committee, we had a hearing in September of 2019 on marine debris and its impacts on ecosystems and species. And, in February 2020, we held a hearing on ways to strengthen community recycling programs.

I am just going to go over a few of the key takeaways from those hearings.

The marine plastic pollution problem is global in scope. It becomes worse each year, and is increasingly devastating for its consequences. Addressing it will require coordinated response from governments, the private sector and nongovernment stakeholders. There are enormous economic opportunities and environmental benefits to moving towards a circular economy, but it will take a sustained commitment of the effort and resources we have to get there.

Many of the tools that we need are available today, and we will hear more about that. But, unless we substantially increase the ambition and scale, the problem will only grow worse as pollution growth outpaces solutions.

Finally, Federal Government has a key role to play, both domestically and internationally, and, most importantly, we are currently on the wrong trajectory. We need to move forward on the complex solutions to this problem, and we need to do it now.

So I want to welcome our panelists. Thank you very much for taking your time to be with us today.

Dr. Winnie Lau, senior manager of Preventing Ocean Plastics, here on behalf of Pew Charitable Trusts, who have done tremendous work in this area.

Ginger Spencer, Director of Public Works for the city of Phoenix, Arizona. Thank you so much. We are excited to hear from you.

And Nicole Collier, Senior Director for Corporate Affairs at Nestle USA.

The panelists will discuss their work researching strategies to reduce marine plastics and successes and challenges that they face to improve—in improving recycling rates by the public in their communities. Also, some investments the private sector is undertaking to reducing packaging, and to increase recyclability of their products.

I think we all know that COVID has created new challenges that we now have to navigate. So, I hope our witnesses will talk a little bit about how the pandemic has impacted their efforts and if they think we can get back to where we were with recycling in plastics prior to the pandemic.

Finally, I hope to hear more about what the Federal Government can be doing to support these efforts, and what else we should be doing to increase circularity and sustainability. We know we need to work together to address the plastic pollution problem, and it will be instructive to learn about the progress in sustainable packaging that will help with waste management and reduce sources of this pollution, and our creative solution to addressing the global trash problem.

Before the opening statements from our panel, since Mr. Joyce is not here, I will be pleased to yield to the chair of the full committee, Ms. DeLauro. Thank you very much for joining us, and please go ahead with your statement.

The CHAIR. Thank you so much. I admire the—first of all, congratulations on chairing the committee. It is a delight, and no one knows these issues better than you do, Madam Chair. And, having known her daughter, I think that that was an appropriate size gavel for her to be wielding, and now passing it on to her spectacular mom.

So—but I thank the chair and the ranking member, and our witnesses this morning for testifying.

Our world's oceans are near and dear to all of our hearts. I grew up on the shores of the Long Island Sound, and have fond childhood memories of visiting New Haven's Lighthouse Point, where I remember playing on the beach, swimming in the water with my family and friends. But, as the years have gone by, I have watched with sadness as both the Sound and all of our oceans have become choked with plastic pollution. When I was a kid, finding plastic on the beach was a rarity, but now it is all too common.

Connecticut alone uses 400 million plastic bags each year, many of which eventually make their way into our oceans and waterways. And, while recent efforts to clean up the Sound have made an important impact, the most recent data shows that more than 100,000 plastic bags still end up in the waters of the Long Island Sound each year.

This has a profound impact on the health and vitality of Connecticut's economy, which depends on the Sound, from commercial and recreational fishing, to ecotourism, water-dependent businesses, like lobster fishing. Connecticut derives tens of billions an-

nually from the Long Island Sound. Shellfishing alone generates \$30 million in sales and provides 300 jobs Statewide.

But, as the impact of plastic pollution grows, the future of these industries is uncertain. This is certainly a global issue, but it has local and individual causes and costs.

Keep America Beautiful estimates that litter clean-up costs the United States more than \$11.5 billion each year. That is all the more reason why every American, whether in Connecticut or California, has a vested interest in the future of our plastic consumption.

As chair—co-chair of the Long Island Sound Caucus, I have been working for years on the clean-up and revitalization of our Nation's waterways. But this problem needs a comprehensive response.

Some estimates indicate that people across the world may be consuming as much as half a pound of plastic in our food and water each year. It is in our shellfish. It is in our salt. It is raining from our skies. Plastic is everywhere, and if we do not take meaningful action to stop it, not only will plastic soon be found in everything, it will also soon be found in every way.

Our Nation must lead in cleaning up this plastic problem, the recycling system. The focus of today's hearing is a key part of the solution. As we will learn today, we must invest in research that studies ways to keep plastic out of our environment and advance policies that tackle the plastic pollution problem throughout the supply chain.

We must become more aggressive in reducing the amount of disposable packaging, single-use plastics, substitute more sustainable materials for single-use plastics that are difficult to recycle, and design products in packaging to make it easier for every American to be able to recycle.

Congress and the private sector must partner with local governments to enhance recycling programs to capture and repurpose our waste and move towards a circular economy. That requires us to reimagine the role that plastic plays in our economy and our environment.

Fortunately, that process is already underway, as we will hear this morning from our witnesses. Our role must be to support those efforts and accelerate the transformation as best we can.

And, with that, I thank the chair and the ranking member, and I yield back my time.

Ms. PINGREE. Thank you very much, Madam Chair, and thank you for joining us and making that wonderful statement.

Since we don't have the ranking member yet, I am just going to go ahead and let the panelists start. And, when he arrives, we will happily recognize him for an opening statement.

So, with that, let's start with Dr. Winnie Lau. Thank you very much for being with us today.

Ms. LAU. Thank you.

Chairman Pingree, Ranking Member Joyce, members of the subcommittee, thank you for your invitation to discuss the growing problem of marine plastic pollution, and possible solutions to address it.

My name is Winnie Lau, and I am the senior manager for The Pew Charitable Trusts' Preventing Ocean Plastics Project.

Plastic pollution in the ocean is a major environmental challenge that is growing worse each year but society has yet to come together around a strategy to reverse this trend.

Plastic pollution stems from the current linear plastic system where a product is produced and then discarded after use, as opposed to a circular one, where a product is designed for long use and ideally reused, and then recycled and waste eliminated wherever possible.

The cost of plastic pollution to people, the economy, and nature is estimated at \$1.5- to \$2.2 trillion a year. Last year, Pew and our partners produced a report, *Breaking the Plastic Wave*, a comprehensive assessment of pathways towards stopping ocean plastic pollution, and a paper in the *Journal Science*. This morning, I will present our findings and relevant recommendations for your consideration.

One of the starkest findings from Pew's work is that without action, the amount of plastic going into the world's oceans, rivers, lakes, and on land each year could triple by 2040, leading to a quadrupling of the plastic that is already in the ocean today.

The private sector and governments are responding with commitments and new policies, but these would only reduce plastic pollution by 7 percent in 2040. At this rate, businesses could face a financial risk of \$100 billion in the next 20 years if governments passed the cost of plastic waste management onto them.

There is no silver bullet. A fundamental system change is needed. Relying mainly on recycling, disposal, or reduction, would, at best, keep plastic pollution at around today's level in the year 2040, but would still require a lot of effort and resources. We simply will not be able to recycle our way out of this problem. At the same time, recycling will need to be part of the solution.

The one strategy that could significantly reduce plastic pollution going into our environment is a system-change approach that applies actions synergistically across the whole plastic system. With the technologies and approaches that exist today, we have the tools to reduce annual ocean plastic pollution by 80 percent in the next 20 years.

The biggest bang for the buck is to eliminate avoidable plastic use and encourage to switch to the reuse and refill systems. These changes could generate 30 percent less plastic waste by 2040, and governments globally could save \$70 billion over the next 20 years on waste management costs.

For example, the U.S. Government could exercise its considerable procurement power, and put in place policies to reduce the purchase of single-use plastic, and incentivize reuse and refill models by its vendors.

A second complementary tool is to achieve a doubling of recycling rates in the next 20 years. Only 15 percent of global plastic waste is recycled, and the U.S. figure was only 4.5 percent in 2018.

Three key factors hinder the growth of the recycling sector. First, 80 percent of the plastic produced today cannot be recycled economically. Second, collecting and sorting of plastic wastes are too costly due to the diversity of products in the market. Third, recycled plastic often costs more than virgin plastic.

Putting in place design standards, recycled content targets, and improved collection and sorting technologies, could support a robust domestic recycling industry with economic, social, and environmental benefits.

I would like to highlight two other key areas that need attention. First, the U.S. contribution to plastic pollution does not stop at its borders. Decreasing and monitoring scrap plastic export to middle- and low-income countries is needed.

Second, microplastic pollutions, especially tire tread particles, is an increasingly growing concern, especially for high-income countries like the U.S., and will require more research to understand its impacts and ways to prevent and reduce it.

We feel there is an opportunity for the U.S. to take a global leadership role to reduce plastic pollution by 80 percent in the next 20 years, especially in the oceans, by encouraging a comprehensive system-change strategy across government and the private sector.

Thank you, and I look forward to answering your questions.

[The information follows:]

**Testimony for The Pew Charitable Trusts Presented by Winnie Lau, Senior Manager,
Preventing Ocean Plastics Project
House Committee on Appropriations
Subcommittee on Interior, Environment, and Related Agencies
March 18, 2021**

Chair Pingree, thank you for your invitation to discuss the growing problem of marine plastic pollution and possible solutions to address it. My name is Winnie Lau and I am the senior manager for The Pew Charitable Trusts' preventing ocean plastics project, which is aimed at proposing economically and politically feasible strategies to reduce the global ocean plastic pollution problem.

Plastic pollution in the ocean is a major environmental challenge that is growing worse each year, and yet, society has yet to coalesce around a strategy to reverse this trend. Plastic pollution stems from the fundamental flaws in the currently linear plastic system: the dominance of single-use plastic items and packaging means that 95% of the global aggregate value of plastic packaging, totaling \$80 to \$120 billion dollars a year, is lost to the economy often after only one short-lived use.¹

Single-use items and packaging present a particular challenge to effective waste management, leading to mismanagement and environmental pollution. The growth of the linear plastic economy - where a product is produced and then discarded after use - as opposed to a circular one - where a product is "restorative or regenerative by design, enable[s] resources...[to be in use] for as long as possible and aim[s] for the elimination of waste"² - directly correlates with the impact of unchecked plastic pollution on people, the economy, and nature. The production, use, and disposal of plastics affect human health and quality of life, for example through the chemicals that leach into our food and drinks from plastic containers, the microplastics found in our seafood, and the plastic waste clogging waterways, hanging from trees, and littering our beaches. Plastic pollution in the environment is estimated to cost the global economy \$1.5-2.2 trillion dollars across multiple sectors from shipping to tourism to fisheries.^{3,4} Over 800 marine species are affected by plastic, including globally endangered species such as sea turtles. Impacts include salmon die-offs in the Pacific Northwest caused by chemicals in microplastics generated from tires⁵, and coral reefs being more susceptible to diseases the more they encounter plastic waste.⁶

Between 2018-2020 Pew partnered with SYSTEMIQ, a consulting firm based in London, Munich, and Jakarta addressing system-level challenges, and four other organizations and worked with a panel of 17 global experts to undertake a comprehensive assessment of the different pathways the world could take to reduce, and hopefully stop, ocean plastic pollution. This effort culminated in Pew's 2020 report

¹ World Economic Forum, Ellen MacArthur Foundation, and McKinsey & Co. 2016. "The New Plastics Economy: Rethinking the Future of Plastics".

² The Save Our Seas 2.0 Act (S. 1982).

³ Beaumont, NJ, Aanesen, M, Austen, MC, Borger, T, Clark, JR, Cole, M, Hooper T, Lindque, PK, Pascoe, C, and Wyles KJ. 2019. Global Ecological, Social and Economic Impacts of Marine Plastic, *Marine Pollution Bulletin*, 142:189-95.

⁴ Forrest, A, Giacobazzi, I, Dunlop, S, Relisser, J, Tickler, D, Jamieson, A, and Meeuwig, JJ. 2019. Eliminating Plastic Pollution: How a Voluntary Contribution From Industry Will Drive the Circular Plastics Economy," *Frontiers in Marine Science*, 6. <http://dx.doi.org/10.3389/fmars.2019.00627>.

⁵ Tian, Z, et al. 2021. A ubiquitous tire rubber-derived chemical induces acute mortality in coho salmon. *Science*, 371:185-189.

⁶ Lamb, JB, Willis, BL, Fiorenza, EA, Couch, CS. 2018. Plastic waste associated with disease on coral reefs. *Science*, 359:460-462.

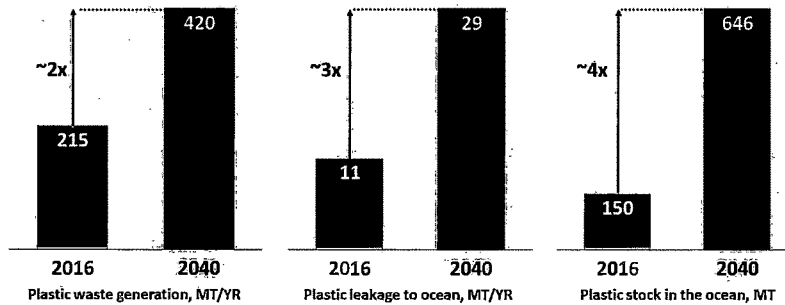
Breaking the Plastic Wave and the accompanying paper “Evaluating Scenarios Toward Zero Plastic Pollution” published in the journal *Science*. This morning, I will present our key findings and relevant recommendations for consideration by this subcommittee. All of the facts and figures below are from this report and paper, unless otherwise noted.

Plastic pollution today is a significant global problem and predicted to grow at an alarming rate

One of the starkest findings from Pew’s assessment showed that, without action, the annual flow of plastic into the world’s oceans, rivers, and lakes will increase from 11 million metric tons in 2016 to 29 million metric tons in 2040 – this would be equivalent to dumping 70 pounds of plastic waste along every foot of coastline around the world, and would quadruple the amount of plastic that is in the ocean today. Projected increases in plastic waste on land are even more stark, rising at nearly double the rate of ocean pollution – growing from 18 million metric tons per year in 2016 to 52 million metric tons in 2040.

Business-as-Usual Projection of Plastic Production and Pollution

The next 20 years will see plastic waste generation double, plastic leakage to the ocean nearly triple, and plastic stock in the ocean more than quadruple.



“Plastic waste generation” refers to the total mass of plastic found in municipal solid waste. “Plastic leakage” refers to mismanaged or unmanaged plastic waste that is lost from the plastic system and enters the environment as pollution, including microplastics. “Plastic stock in the ocean” refers to the amount of plastic in all of the world’s oceans, at all depths.

Flexible monomaterial plastics, like plastic bags and plastic packaging/shrink wraps, make up nearly 50% of the plastic pollution entering the ocean in 2016. Multilayer and multimaterial plastics - like chip bags and condiment and product sample packets - are the next most common, at a quarter of the pollution. Rigid monomaterial plastics – like water and detergent bottles – are nearly 20% of the plastic pollution,

with microplastics (defined as those that first enter the environment as microplastics, like microfibers and plastic pellets) rounding out the remaining 10%.

The projected growth in global plastic pollution will exacerbate the financial and ecological impacts already felt by people and natural ecosystems around the world, including in the U.S. Estimates have put damages already in the trillions of dollars globally.^{7,8} While the public is increasingly demanding that governments solve the plastic pollution problem, businesses globally could face a financial risk of \$100 billion dollars if governments pass the cost of plastic waste management to the private sector. The environmental impacts of unchecked plastic pollution would also include an increase in greenhouse gas emissions associated with the plastic value chain that would be 2.5 times that of the present day, growing to 2.1 gigatons of CO₂e per year by 2040.

Current government and industry commitments need to dramatically scale up

The impact of current plastic waste reduction commitments by the private sector and government policies (up to mid-2019), even if fully implemented, would only reduce 7% of plastic pollution going into the ocean or land by 2040. The industry commitments that Pew analyzed tended to focus on increasing recycling rates and, to some extent, increasing the use of recycled plastic for rigid monomaterial products. Additionally, many of the government policies we looked at predominantly focused on single-item bans, like bag bans. These commitments, while a good start, have limited impact on reducing plastic pollution given that they fail to address the scale of predicted future growth in plastic production and use, have predominantly focused solely on increasing recycling rather than on the use of recycled plastic, and are often narrowly focused on a small portion of plastic products polluting the environment or implemented by only a small number of countries or businesses.

Recent commitments by industry have predominantly focused on recyclability of products but some are beginning to pilot more upstream approaches such as plastic reduction targets and refill systems, though such efforts are currently very small-scale. Some governments are beginning to take a more comprehensive approach, such as establishing incentives for refill systems and collection (e.g., deposit-return schemes) and introducing extended producer responsibility. Scaling up these broader commitments and policies over the next few years and ensuring full implementation will be crucial to reducing plastic waste. Without immediate global action, we found that in as little as five years an additional 80 million metric tons of plastic waste could find its way into the ocean.

There is no silver bullet – a fundamental system change is needed

If implemented in isolation, the three single-solution strategies we assessed – recycling, reduction and substitution, and collect and dispose – will only keep ocean (and terrestrial) plastic pollution to around today's levels in 2040, and yet would still require considerable effort and resources to implement. In assessing these solutions, we worked with our expert panel to identify ambitious but feasible limits for each of these strategies. Even with maximum effort, if the U.S. were to focus on just one strategy in

⁷ Beaumont, *et al.*, 2019.

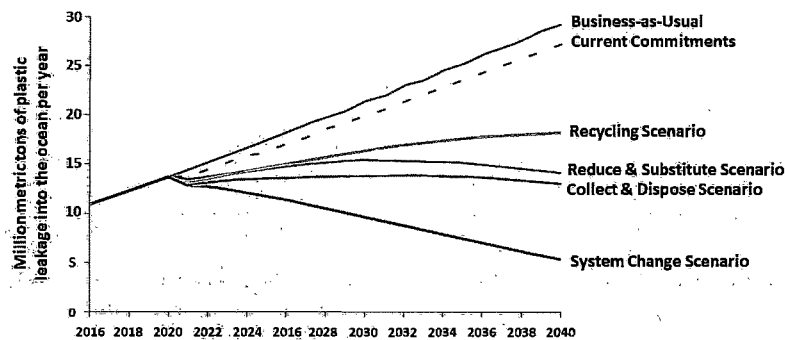
⁸ Forrest *et al.*, 2019.

isolation – such as recycling – it would not be able to recycle its way out of the plastic pollution problem by 2040.

The only strategy that could significantly reduce plastic pollution in the ocean (and on land) is the adoption of a system change approach that applies mitigation strategies synergistically across the whole plastics system. Using technologies and approaches that exist today, annual ocean plastic pollution could be reduced by 80% in the next 20 years, from 29 million metric tons to 5 million metric tons per year.

Land-based Plastic Leakage into the Ocean under Different Scenarios

The System Change Scenario/Strategy would achieve about an 80% reduction in annual plastic leakage into the ocean relative to Business-as-Usual, exceeding all other scenarios analysed.



This system change approach begins by (1) assessing whether plastic is needed or the best material for a particular purpose, (2) eliminating unnecessary plastic and (3) designing for reuse and recycling, and then (4) closing the loop by maximizing recycling and, equally importantly, the use of recycled materials. By taking this approach, the world in 2040 could still meet the utility or function that plastics provide (e.g., in food service) while reducing waste and using 11% less virgin plastic in the system than today. This system change would require less government funding toward waste management and would benefit U.S. efforts to reduce greenhouse gas emissions associated with oil and gas extraction for virgin plastic production.

Reduction offers the biggest potential to reduce plastic waste and pollution

Eliminating low-utility avoidable plastic and switching to consumer reuse and refill systems and new delivery models could not only reduce as much as 30% of plastic waste generation in 20 years (by 2040), but is also the most attractive solution from environmental, economic, and social perspectives. Examples include eliminating the use of packaging for produce through the application of edible

coatings, bulk dispensers in stores and e-commerce solutions, such as reusable packaging that is returned to the retailer.⁹

In addition to less pollution, reduction approaches also provide net savings estimated at \$70 billion globally over the 20 years due to lower government waste management spending needs, and from reduced costs of plastic production and waste management. Consumer reuse and refill systems and new delivery models can also create new, and local, business opportunities to provide these services, creating jobs in local communities.

Substituting plastic with sustainable and biodegradable materials like paper and other compostable materials represents another approach to reducing plastic production. As noted in *Breaking the Plastic Wave*:

Substitution could switch one-sixth of projected plastic waste generation by 2040. Ninety-five per cent of this potential substitution comes from six key product applications for which known material alternatives already exist at some level of scale: monomaterial films; other rigid monomaterial packaging; sachets and multilayer films; carrier bags; pots, tubs, and trays; and food service disposables. All substitutions need careful management at end of life and have varied environmental impacts. They create opportunities, risks, and trade-offs that must be carefully managed and assessed on a case-by-case basis. [Substituting plastic] has 1.7-2 times higher production costs than virgin plastic per metric ton of plastic utility, so substitutes were selected only when they replace plastic that cannot be reduced or mechanically recycled. The intervention plays an important role in minimizing ocean plastic pollution and could help reduce overall GHG [greenhouse gas] emissions.

Systemic challenges in the recycling sector hinder recycling rates

Currently just 15% of global plastic waste is recycled, and the U.S. plastic recycling rate in 2018 was even lower at 8.7%.¹⁰ One of the reasons for these low rates are the pressures faced by the plastic recycling sector at both the pre- and post-consumer stages.

Collecting and sorting plastic waste for recycling is economically challenging. Plastic products come in many forms and are made from many different polymers and chemical formulations. Designers of plastic products generally do not consider the feasibility or ease of recycling of the products they design. Plastic's barrier properties make it attractive for food grade applications, as well as for holding liquids; however, these uses often result in plastic waste that is contaminated with the product it held, which can raise the cost of collecting, sorting, and cleaning prior to recycling.

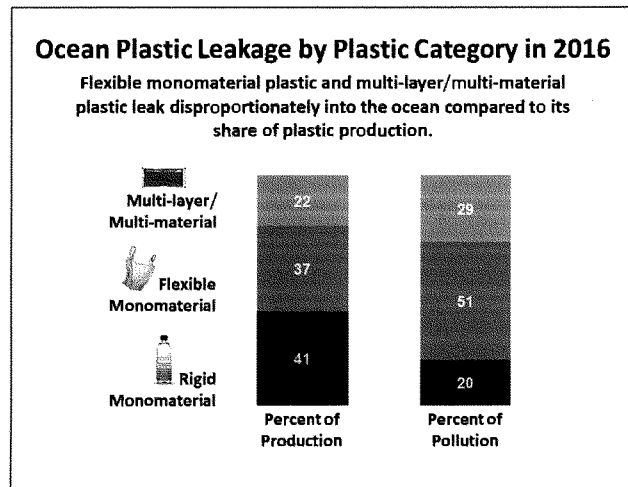
Eighty percent of the plastic produced globally today is economically unrecyclable. The main technology that is currently at commercial scale is mechanical recycling, where collected and sorted plastic waste is

⁹ The Ellen MacArthur Foundation, 2020. "Upstream Innovation: A guide to packaging solutions." Available at: <https://plastics.ellenmacarthurfoundation.org/upstream>.

¹⁰ <https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/national-overview-facts-and-figures-materials>

cleaned, chopped up, heated, and reformed into plastic pellets. Mechanical recycling is economically feasible only for half of the rigid monomaterial plastic (e.g., bottles). The remainder is either too costly to collect and sort, or too contaminated. Flexible monomaterial plastic (e.g., packaging wraps), can technically be mechanically recycled, but generates too low a value to be economical because waste plastic scrap is sold by mass and flexible plastic tends to be lightweight. Multilayer/multimaterial plastic cannot be mechanically recycled at all.

Because of the technological and economic challenges of collecting and recycling flexible monomaterial and multilayer/multimaterial plastic, these two plastic categories are leaked into the ocean disproportionately to their overall production. While flexible monomaterial is 37% of plastic production, it contributes 51% of the ocean plastic pollution from land.



Multi-layer/multi-material plastics include sachets, laminated paper and aluminum (e.g., cartons), sanitary products and diapers, and household goods. Flexible monomaterials include carrier bags and packaging and other plastic films. Rigid monomaterials include bottles, food service disposables, pots, tubs and trays, household goods and business-to-business packaging.

Additionally, there are significant hurdles around price and costs for mechanical recycling to compete and be profitable. Recycled plastic prices have been volatile as they are linked to the global commodity price for oil and often cannot compete with the price of virgin plastic.¹¹ This price disparity has limited investments in the collection and recycling infrastructure and capacity that could drive costs down. On the other hand, disposal via landfills and incineration has historically been cheaper than recycling,

¹¹ OECD, 2018. "Improving Plastics Management: Trends, policy responses, and the role of international co-operation and trade. OECD Environment Policy Paper No. 12." Available at: <http://www.oecd.org/environment/waste/Policy-Highlights-Improving-Markets-for-Recycled-Plastics.pdf>.

making these technologies a financially more attractive option for managing plastic waste. However, both of these disposal methods have had negative environmental impacts such as air pollution and greenhouse gas emissions. Further in some communities, landfills take up precious space.

Chemical recycling – chemical conversion of plastic waste back to plastic polymers – has been promoted as an emerging technology that could solve the feasibility issue with flexible or mixed plastics. Commercial scaling of this technology is still in the development stage and global capacity is at around 0.5 percent. Unfortunately, the adoption of new technologies generally takes several decades to reach widespread commercial scale. Our assessment showed that maximizing the scaling of chemical recycling at the highest historical rate for similar technologies would only lead to 6% of plastic being chemically recycled in 2040, assuming it can be made economically viable.¹²

Similar to mechanical recycling, chemical recycling will also have to compete with the price of virgin plastic and disposal costs. Collection and sorting costs would also be higher for flexible plastic for chemical recycling as they are much lighter in weight than rigid plastic. Chemical recycling also has associated greenhouse gas emissions that are 110% higher than mechanical recycling.

Investments in mechanical recycling could double recycling rates in the next 20 years and increase its profitability through incorporating “design for recycling” principles¹³, at the product design stage (including shifting from flexible plastic to rigid plastic), improving sorting technology, and establishing recycling content targets, among other approaches. Each metric ton of mechanically recycled feedstock would offset about half of greenhouse gas emissions over virgin plastic feedstock.

Microplastics are an increasingly growing concern, especially for high-income countries

Although high-income countries like the U.S. have close to 100% access to waste management services, they have the highest per capita microplastic generation, more than triple that of middle- and low-income countries, due to high plastic consumption rates and the inherent difficulty in capturing microplastics before they enter the environment.

Among the four sources of microplastic we analyzed (for which sufficient global data were available), tire wear particles by far comprised the biggest component of microplastic pollution into the ocean, lakes, and rivers (70-80%). Pellets are the second largest component (18%), followed by microfibers from textiles and microplastic ingredients in personal care products. Similar to the trend seen for municipal plastic waste (macroplastic waste), microplastic pollution is expected to double by 2040, under a Business as Usual trajectory, adding 11 metric tons of plastic to the world’s oceans.

Due to their small size, it is currently technologically and economically unfeasible to clean up microplastics once they enter the environment. The best approach at controlling this waste stream is to either remove them from products entirely or to capture/contain them at source or close to the source.

¹² The Pew Charitable Trusts and SYSTEMIQ. 2020. “Breaking the Plastic Wave: A Comprehensive Assessment of Pathways Towards Stopping Ocean Plastic Pollution”, p. 78-84.

¹³ For example: The Association of Plastic Recyclers’ “APR Design Guide”. Available at <https://plasticsrecycling.org/apr-design-guide>.

For example, microplastics could be removed from all personal care products, existing measures for plastic pellet management could be strengthened, and technological solutions for reducing microfiber pollution such as in-line filters in washing machines and improved textile design to reduce microfiber generation could be implemented. However, the technological gap for tire wear particles is large and existing solutions may only be able to reduce this type of pollution by 50% by 2040, mainly by increasing the use of alternate forms of transportation (like mass transit) and by driving less.

The U.S. contribution to plastic pollution does not stop at its borders

Plastic pollution is often seen as a problem of developing countries that do not have adequate waste management services. Plastic pollution in middle- and low-income countries is indeed higher than high-income countries and growing due to a confluence of rising income and per capita plastic waste generation, growing population, and the increasing gap between waste generation and waste management capacity. Although in the U.S. solid waste management services extend to nearly 100% of the population, the picture is more nuanced when it comes to the recycling of plastics and ocean pollution.

The U.S. is the highest plastic waste-generating country globally and has the highest per capita plastic waste generation in the world, more than four times that of middle- and low-income countries.¹⁴ The U.S. is also the number two exporter of scrap plastic waste for recycling.¹⁵ Collected plastic waste that is then exported has previously been considered managed waste; that is, it has not factored into a country's plastic pollution estimates. A recent study showed that the U.S. is in fact adding five times more plastic waste into the environment than previously estimated when domestic littering and mismanagement of the exported plastic waste are accounted for.¹⁶ As a result, the U.S. could rank as high as the world's number three plastic polluter.

Unlike the U.S., middle- and low-income countries have a significant solid waste management services gap. About 2 million people globally lack waste collection and management services today and this would grow to 4 million people in 2040 if no significant investments are made. For a sense of the scale of the problem, it would take connecting to waste management services 500,000 people per day every day for the next 20 years to reach full waste management capacity.

Compounding this problem, the waste from countries like the U.S. is usually exported to middle- and low-income countries that lack sufficient infrastructure and capacity to handle their domestic waste. Waste collection and recycling in middle- and low-income countries relies on the informal waste sector, often working under poor sanitary conditions with low wages. Exported waste from the U.S. can add to global inequality and injustice. A substantial proportion of exported plastic waste can be made up of low-value (e.g., flexible), contaminated plastic waste that cannot be recycled economically and must be dumped or burned¹⁷, causing land, water, and air pollution. Degradation of air quality around open

¹⁴ Law, KL, Starr, N, Siegler, TR, Jambeck, JR, Mallos, NJ, and Leonard, GH. 2020. The United States' contribution of plastic waste to land and ocean. *Science Advances*, 6. DOI: 10.1126/sciadv.abd0288.

¹⁵ Brooks, AL, Wang, S, and Jambeck, JR. 2018. The Chinese import ban and its impact on global plastic waste trade. *Science Advances*, 4. DOI: 10.1126/sciadv.aat0131.

¹⁶ Law *et al.*, 2020.

¹⁷ Law *et al.*, 2020.

burning or incineration sites can become severe, affecting human health. Dumped plastic in rivers can clog waterways and cause flooding.

Recommendations / Potential Policy Solutions

Based on data from our study, The Pew Charitable Trusts recommends that the U.S. adopt a system change strategy at the federal and state level, implementing solutions ambitiously and concurrently across the whole of the U.S. plastic production, consumption, and distribution infrastructure. The U.S. should further take on a global leadership role to demonstrate how it is possible to achieve an 80% reduction in plastic pollution by 2040. The solutions are often interconnected and focusing only on one or a subset of solutions could significantly reduce effectiveness of even those targeted. For example, increasing recycling rates without driving demand for recycled plastic or designing for recycling would not overcome the economic hurdle posed by cheaper virgin plastic and dampen actual incorporation of recycled plastic back into the economy.

Different combinations of solutions and system interventions could be prioritized based on the desired outcome, such as cost reduction, plastic pollution reduction, greenhouse gas emission reductions, implementation speed, technology readiness or feasibility, and the acceptable trade-offs. Despite the complexity of the plastic infrastructure system, we believe the criteria- and evidence-based approach used in Pew's assessment does offer policy options for consideration by this subcommittee.

Government procurement and policy can drive a reduction in plastic production and incentivize the switch to reuse and refill business models

Among the menu of solutions, reducing plastic production in the U.S. by eliminating unnecessary plastic use, expanding consumer choice around reuse, or developing new delivery models is the most attractive solution, taking into account environmental, economic, and social factors. It offers the biggest reduction in plastic pollution, often represents a net savings, and provides the highest mitigation opportunity for greenhouse gas emissions. The approaches below outline opportunities that Pew hopes will be explored in depth in the upcoming "Report on Minimizing the Creation of New Plastic Waste" called for in section 305 of The Save Our Seas 2.0 Act (S. 1982).

The power of government procurement policies could help drive the phaseout of single-use plastic items and a switch to reusable items. To incentivize the private sector, U.S. government agencies could provide grants or put in place preferential purchasing programs for businesses, especially small businesses, that switch from single-use plastic items to reusable or plastic-free biodegradable items or employ new delivery/refill models. Bag fees, bag bans and single-use item phase-outs (such as for expanded polystyrene containers, utensils and straws) have already been put in place in some jurisdictions (e.g., California, Connecticut, Maine, Hawaii¹⁸). Government agencies could likewise put in place de facto phase-outs or bans of the single-use plastic items and hard-to-recycle plastics they purchase directly. These government procurement policies could incentivize business opportunities around new delivery models that reduce plastic packaging and waste generation. Single-use plastic

¹⁸ <https://plasticpollutioncoalitionresources.org/resources/maps/>, accessed 11 March 2021

items could also be phased out from federal lands, including national parks, or banned from particularly sensitive areas, such as designated wilderness areas or endangered species habitats.

Additionally, resources could be allocated to federal agencies, such as the Environmental Protection Agency (EPA), to conduct detailed environmental impact assessments of new plastic production facilities; reduce permits issued for production facilities overall to curb the growth in plastic production, a primary driver of the projected growth in plastic pollution; update pollution standards and regulations; and increase enforcement capacity related to air, terrestrial and aquatic pollution from plastic production facilities. These facilities are often co-located near fossil fuel infrastructure, adding to the pollution burden and health impacts on neighboring communities, and often disproportionately impact low-income and minority communities.¹⁹ Phasing out subsidies to plastic production and instead redirecting those funds to green subsidies for refill and recycling technologies would also help shift the economic incentives towards circular economy production and consumption business models and create new business opportunities for local communities.

A robust domestic recycling program generates social and environmental benefits and economic activity

Based on technology maturity and costs, mechanical recycling will be the predominant recycling technology for the next two decades, treating over 95% of the plastic to be recycled. Over this time period mechanical recycling rates will need to double globally.

Many municipalities across the U.S. have cut their recycling programs and many recyclers have gone out of business since China enacted its waste import ban in 2018 as well as over the past year due to the COVID-19 pandemic. The low cost of oil has driven virgin plastic prices even lower, further pricing out recycled plastic feedstock.

Along with reduction strategies, doubling domestic recycling over the next 20 years could significantly reduce the U.S. contribution to the global plastic pollution problem and facilitate a circular economy approach to plastic production and consumption. Increasing recycling rates would also allow the U.S. to export less plastic waste, reduce the potential of inadvertently contributing to pollution and human health problems in other countries, and cause the U.S. to rely less on the international plastic recycling industry.

The amount of economically recyclable plastic will need to double over the next 20 years to achieve reductions in ocean plastic pollution. One approach is to make the cost of plastic recycling more economically competitive. Congress could invest in providing guidance and establishing standards on design for recycling and recycling labels that are harmonized with local systems and across jurisdictions, as well as easy to understand by consumers. Guidance could also be provided to shift away from low-value, economically unrecyclable plastic (flexible and multimaterial plastic) toward the use of mechanically recyclable plastics (rigid monomaterial plastic). Clearer standards and guidance coupled with programs to educate consumers about recycling programs in their communities could cut the costs

¹⁹ D. Azoulay et al., "Plastic and Health: The Hidden Costs of a Plastic Planet" (Center for International Environmental Law, 2019). Available at <https://www.ciel.org/reports/plastic-health-the-hidden-costs-of-a-plastic-planet-february-2019/>.

associated with collecting and sorting plastic waste for recycling. Extended producer responsibility policies would further complement public participation by covering the costs of collection, recycling and disposal, as well as providing economic incentives to the private sector to increase the reusability and recyclability of products. We hope the recommendations above will inform the “Report on Eliminating Barriers to Increasing Collection of Recyclable Materials” that the EPA is preparing under the Save Our Seas Act 2.0.

Initiatives that drive up demand for recycled plastic are also crucial to grow the market for recycled plastics. National recycled content targets that are reviewed and ratcheted up periodically could signal that companies should invest in recycling infrastructure and programs, increasing capacity and bringing down costs.

Building a robust domestic recycling industry also presents a job creation opportunity, especially at the community level. Last year, Australia announced an A\$190 million (US\$130 million) investment in its Recycling Modernization Fund to strengthen its waste and recycling industry and to ban most waste export by 2024, with the potential to create as many as 10,000 jobs.²⁰ Creating a similar fund here in the U.S. could likewise lead to job creation, even more so than in Australia given the size of the domestic market and its plastic waste stream.

As noted in this subcommittee’s House Report 116-100, state and local governments have asked for federal assistance to support recycling infrastructure. To that end, Congress could allocate funds to support municipalities in procuring and operating improved collection and sorting infrastructure and technology, developing separate recycling and compost collection programs at the household level, and providing more education and outreach to the public about recycling programs to increase participation and reduce loss due to contamination. The federal government could also provide support to state and local governments to implement collection incentives and funding mechanisms such as deposit return schemes or extended producer responsibility policies to fund and expand recycling programs.

Microplastics require more attention to understand their full scale, potential solutions, and impacts

There are significant uncertainties around identifying and measuring microplastics in the environment. This is due to not only the lack of standardized methods for collecting and analyzing microplastics in environmental samples like water and air, but also the lack of reliable information on how and where microplastics are used in products and how quickly and in what quantities they are generated in the environment from the breakdown of larger plastic items. For example, little is known about how plastic ingredients in paints may contribute to microplastic pollution, but there is evidence that this may be another important source.²¹

²⁰ <https://www.weforum.org/agenda/2020/08/turning-trash-into-treasure-how-australia-plans-to-recycle-its-way-to-recovery-after-covid-19/>, accessed 11 March 2021.

²¹ Gaylarde CC, Neto JAB, da Fonseca EM. 2021. Paint fragments as polluting microplastics: A brief review. Mar Pollut Bull. 162:111847. doi: 10.1016/j.marpolbul.2020.111847.

Building on research by the European Chemicals Agency²², there is currently proposed regulation in the European Union to phase out the use of microplastic ingredients in products that may enter the environment (covering a range of sources such as personal care products, detergents, paints, agricultural products, etc.), as well as proposed reporting requirements and a roadmap under development for policy measures to address microplastic emissions from tires, textiles and pellets. The U.S. would benefit from a similar research and reporting effort on microplastic uses and sources to assess rates of environmental pollution, as well as potential implications for air quality and human health to inform policy needs.

Under the Clean Water Act, the EPA could increase its regulation of plastic production, conversion and recycling facilities to target the sources of plastic pellet pollution. The EPA could also look into monitoring microfiber release by clothing manufacturers and investigate the potential efficacy of microfiber removal systems at textile and clothing production and recycling facilities. Finally, research needs to be conducted to develop standardized testing methods for tire wear rates, as well as textile shedding rates to inform the potential development of future standards for products.

Building on the Microbead Free Waters Act, the EPA could undertake an effort to compile a comprehensive inventory of microplastic ingredients added to both consumer and industrial products, such as detergents, paint, agricultural products, and industrial abrasives. Following the inventory, the EPA could establish sampling and monitoring protocols for the prevalent products, conduct environmental sampling to assess their extent, as well as impacts to people and nature.

Additional research is needed to understand impacts and track progress

A main reason that a comprehensive system-wide study on plastic pollution, like the one Pew conducted, had not been done previously is that the data are scarce, even for high-income countries like the U.S. Pew's assessment identified various data gaps that could benefit from additional research to improve future assessment of the effectiveness of proposed policies and monitoring of progress.

Funding could be allocated to the EPA in collaboration with the National Institute of Standards and Technology (NIST) to establish standard methods for measuring and monitoring plastic pollution, including microplastics, in our waterways and the ocean, as well as on land. This would allow us to track plastic pollution load in the environment and measure progress.

The upcoming Report on Minimizing the Creation of New Plastic Waste will include "an estimate of the current and projected United States production and consumption of plastics, by type of plastic, including consumer food products." We agree that these data are needed and can only be provided accurately by industry and the companies themselves. Ideally a disclosure and reporting system would be developed for annual reporting by companies of their full plastic usage, including in their operations and throughout their supply chain and covering both macro- and microplastics.

²² European Chemicals Agency, 2019. "Annex to the Annex XV restriction report: Proposal for a restriction". Available at <https://echa.europa.eu/registry-of-restriction-intentions/-/dislist/details/0b0236e18244cd73>.

Better data are also needed on the environmental and economic impacts of plastic pollution on the environment and economy, the externalities and social costs, such as human health impacts and loss of ecosystem services, of plastic pollution. A comprehensive study by the EPA in collaboration with the National Academies of Sciences, Engineering and Medicine could contribute to understanding the full impacts of plastic pollution, inform trade-off discussions, and make better decisions about policy priorities.

Because scrap plastic is traded globally, a worldwide tracking system of exported plastic waste is needed to assess each country's contribution to the global ocean plastic pollution problem. And because the informal sector handles much of the imported waste, working conditions in this sector will need to be monitored to ensure that high-income countries are not exporting their pollution problems to middle- and low-income countries.

Investments into research and innovation to develop new materials, particularly for tires and food-grade packaging, as well as creative new business models that provide the utility that plastic delivers without generating plastic waste could be modeled after the National Science Foundation's engineering research centers or the Convergence Accelerator program. Establishing these types of programs or developing partnerships with them could examine and address the multiple dimensions to the plastic issue. Innovation will be a key ingredient to stopping plastic pollution within the next two to three decades.

If we are to successfully reduce plastic pollution, the U.S. and the world will need to adopt a system change approach, one that reduces avoidable plastic use, manages plastic waste and recaptures its value through a circular economy. On behalf of The Pew Charitable Trusts, thank you for the opportunity to present the findings from our comprehensive assessment on pathways toward stopping ocean plastic pollution.

Ms. PINGREE. Thank you very much.

Ms. Spencer, we would love to hear from you.

Ms. SPENCER. Congratulations, Chairwoman Pingree. To you, to chair—Madam Chair DeLauro, to Ranking Member Joyce, and members of the subcommittees, thank you for the opportunity to share the city of Phoenix's story on how we have met recycling challenges, and our work to build a circular economy.

My name is Ginger Spencer. I am the public works director for the city of Phoenix, and I am very honored to be here today.

The city of Phoenix is the fifth largest city in the Nation where our mayor is Kate Gallego. The city is home to 1.5 million-plus people and spans more than 500 square miles.

Mayor Gallego and our city leadership are passionate and committed to recycling, sustainability, and building a circular economy.

In 2011, Phoenix was described as the least-sustainable city in the world. In 2012, our then-newly elected mayor, and now Congressman Greg Stanton, set out to change that. The mayor and city council established a new initiative called Reimagine Phoenix, where our goal was to divert 40 percent of our waste from the landfill by the year 2020. At the time, we had a 16 percent diversion rate, so this was a very ambitious goal.

I am here to report that we achieved a high diversion rate of 36 percent in 2019, prior to COVID-19, and exceeded the EPA's national average recycling rate of 34 percent at the time, and that was without any mandates, fees, or fines to incentivize our residents to recycle. Everything we did was on a voluntary basis using our existing resources and revenue.

So how did we do it? In short, it was through innovation and partnerships. Thanks to the leadership and action of our mayor, city council and city management, new public-private partnerships, a strong solid waste team, and some of the hardest-working and most dedicated employees and essential workers that I know, we met the challenge head-on. We said we have got trash and lots of it. We said we have got trash, and we don't know what to do with all of it. And we said we have got trash, and we want to transform it into a resource.

The city has been in the recycling business for more than 30 years. We own two MRFs, two transfer stations, one compost facility, one open landfill in the city of Buckeye, and five closed landfills in Phoenix.

First, we did a waste characterization study to determine the composition of our garbage and recycling, and we found out, for example, that 30 percent of what our residents were throwing away was compostable material. So we built a compost facility to divert the waste from the landfill.

We also determined what was it costing us per ton to send our material to the landfill, and we entertained new business proposals to transform the waste into a resource that basically would cost less than to send it to the landfill, allowing us to create new programs and services for our residents without increasing their fees.

We partnered with businesses, universities, NGOs, and innovators from throughout the U.S. to repurpose our waste. We partnered with Arizona State University and developed the Resource Innovation and Solutions Network and the Technology Solu-

tions Incubator. That program, the Incubator, helped grow 19 start-up companies, generated \$4.1 million in revenues, raised \$3.72 million in capital, created 68 jobs, and manufactured 25 new products.

We issued a Call for Innovators—i.e., requests for information—and partnered with our Economic Development Department to issue RFPs like mattress recycling, palm frond recycling, waste-to-energy RFPs. We partnered with the Recycling Partnership using their free resources to develop the Oops Shine On program to educate our residents and reduce recycling contamination.

In week one, 70 percent of our residents received an Oops tag for contamination in the recycling. By week five, 70 percent of our residents received a Shine On tag for great recycling.

We partnered with the Closed Loop Partners, and received a zero interest loan to make upgrades to our recycling facility located in the northern part of town, which allowed us to increase capacity. It improved the quality of our recyclables, and it increased our net revenue from \$3 million that was projected to \$6 million annually.

We partnered with our friends across the pond, and became a member of the Ellen MacArthur Foundation so we could learn from international cities who are already leading the way in building a circular economy, and to highlight our challenges and opportunities here in the U.S.

When the National Sword policy hit and we had to find a new home for 80 percent of our recyclables that previously went to China, we basically figured out what to do. With plastics three through seven, we found out they no longer had a home, but we said, Are there any plastics that do have value, and found out that number fives, polypropylene—basically your yogurt cups—did have value. So we slowed down our MRFs, caught that material, and we partnered with Renewology to turn our plastics into fuel.

When COVID-19 hit and we saw an increase on average of 20 percent in garbage, recycling and bulk trash, we stepped up and met that challenge. It was a \$4 million increase to our operation, and we were able to get coronavirus relief funds to help out with that as well.

We had to put our plastics-to-fuel project on hold because of the uncertainty in the market. I am glad to announce that we have restarted those conversations with Renewology and their investors, such as Mitsubishi, to restart the Renew Phoenix Project by doing a smaller demonstration project.

The city of Phoenix has a new goal of achieving zero waste by 2050. We embrace the EPA's new national goal of achieving 50 percent diversion by 2030. We are activators of the U.S. Plastic Pact, a partnership between The Recycling Partnership, World Wildlife Fund, and the Ellen MacArthur Foundation, with more than 89 activators representing brands, manufacturers, MRFs, government entities, academia, and other stakeholders along the supply in plastics manufacturing chain, working to build a roadmap to address the plastic waste challenge.

Lastly, our residents—we asked our residents if they were satisfied with our solid waste services; if they value recycling and compost; and, lastly, if they were willing to pay a little more to maintain these services, and they said yes, yes, and yes.

Our residents are relying on us to provide this service and to keep our communities clean and safe, and to do our part to protect the environment.

Thank you very much for this opportunity to share our story.
[The information follows:]

CITY OF PHOENIX PUBLIC WORKS DEPARTMENT

Statement for the Record

U.S. House of Representatives Committee on Appropriations

Subcommittee on Interior, Environment and Related Agencies

Hearing on "Efforts to Address Marine Plastic Pollution Through Recycling"

March 18, 2021

**Ginger Spencer
Public Works Director
City of Phoenix**

Chairwoman Pingree, Ranking Member Joyce, and Members of the Subcommittee, thank you for the opportunity to submit a statement into the official hearing record for the U.S. House of Representatives Committee on Appropriations Subcommittee on Interior, Environment and Related Agencies.

The City of Phoenix is the fifth largest City in the United States with a population of 1.5 million people and spans 519.7 square miles and is currently the fastest growing city in the country. The City of Phoenix pursues excellence throughout the organization and delivering quality, efficient, and cost-effective services to Phoenix residents is the cornerstone of our commitment to public services. The City of Phoenix recognizes that we must focus on the well-being of residents, a strong economy and a healthy environment, and embrace a full approach to sustainability. It is our responsibility to provide leadership and demonstrate commitment through innovative and efficient policies that assure clean land, air and water, and improve working and living environments. We're a vibrant, growing city and a great place to live, work and play.

The City of Phoenix has a Council-Manager form of government where Mayor Kate Gallego serves as the 62nd Mayor of Phoenix and Ed Zuercher serves as the City Manager/Chief Operating Officer of the city responsible for policy implementation and day-to-day operations. Mayor Kate Gallego took office on March 21, 2019 and is fully committed to diversifying the economy, strengthening infrastructure investment, and working to make Phoenix a leader in sustainability. Mayor Gallego is passionate about building a Phoenix that works for everyone and increasing the quality of life for all Phoenicians.

The City of Phoenix Public Works Department is the fourth largest city department behind police, fire, and water and is responsible for the management of solid waste, fleet, facilities, and flood control operations. The Public Works Department's solid waste division is comprised of 600 employees responsible for solid waste collection, management and disposal for

400,000 single-family residents. The Public Works Department owns two transfer stations, two material recovery facilities (aka MRFs or recycling facilities), one compost facility, one open landfill in the City of Buckeye and five closed landfills located within the Phoenix. The Public Works Department has been a leader in the solid waste industry dating back to the 1970's. The concept of managed competition, where government competes with the private sector to deliver city services to residents, was pioneered by the City of Phoenix in the late 1970's. Phoenix was one of the first cities in the nation to adopt the automated collection concept also in the 1970's. In the early 1990's, Phoenix had one of the largest city-owned single stream recycling facilities in the nation. In the past several years, the city has been known for its innovation in transforming waste into a resource and building a circular economy. This success story has generated a national and international reputation for the City of Phoenix and provided guidelines and inspiration for numerous other public agencies.

In his 2011 book *Bird on Fire*, New York University sociologist Andrew Ross branded Phoenix as the least sustainable city in the world. Then Phoenix Mayor and now Congressman Greg Stanton made the sustainability of Phoenix his central goal and challenged city departments to come up with innovative policies and solutions to transform the city into a leader in sustainability.

In 2013, then Mayor Greg Stanton and the Phoenix City Council announced a new citywide sustainability initiative, *Reimagine Phoenix*, to divert 40 percent of waste from the landfill by the year 2020. At the time, Phoenix had a waste diversion of 16 percent. Working with the Public Works Department, the city focused on three main areas to develop goals for this new waste diversion and sustainability initiative: 1) enhancing the city's current solid waste programs to encourage more sustainable practices; 2) increasing community outreach, communication and education about sustainability efforts to residents and to businesses; and 3) partnering with industry and community leaders on sustainability. In the same year, China announced its "Operation Green Fence" policy.

In 2014, fueled by the *Reimagine Phoenix* citywide diversion and sustainability goals, the Phoenix City Council approved funding to initiate the Resource Innovation and Solutions Network (RISN) partnership with Arizona State University (ASU) to establish a network focused on creating value and economic development opportunities from solid waste streams. The five-year partnership was managed and operated by the Walton Sustainability Solutions Initiatives at ASU and extended an additional 18 months through grant funding provided by the U.S. Economic Development Administration. RISN provided research, development, education and solutions to more effectively manage solid waste resources and create economic value. The City and ASU also partnered on the creation of the RISN Technology Solutions Incubator for start-up/emerging technologies and manufacturing processes.

In 2015, the Phoenix City Council approved the development of the Resource Innovation Campus (RIC), a hub for innovators and home for public-private partnerships to be located next to the city-owned transfer-station and recycling facility dedicated to the creation and growth of a circular economy. The RIC offers approximately 50 acres of land available for

leasing and aims to be a hub for innovators and manufacturers with market-ready technologies and manufacturing processes to develop Phoenix's circular economy and find sustainability resources. It seeks to attract innovators and manufacturing companies that will use technologies to transform waste into new products and resources.

The City issued the Reimagine Phoenix Call for Innovators (CFI) in 2015 to seek additional partners to achieve the city's goal of diverting 40 percent of waste from the city's landfill. More commonly known in government procurement as a Request for Information (RFI), the city sought information from innovators with technology and manufacturing processes to transform trash into energy and new products by asking "What are your innovative ideas? What emerging technologies do you want to grow in Phoenix? What market-ready concepts do you have to transform trash into energy and new products? What new technologies and manufacturing processes would you like to develop and improve? How can Phoenix assist in making your ideas come to fruition?" Ideas from the CFI were then turned into Requests for Proposals (RFPs) such as recycled plastics diversion, carpeting and carpet foam, palm frond diversion, anaerobic digestion, waste to energy and other RFPs.

The City of Phoenix became the first American city to become a member of the Ellen MacArthur Foundation's Circular Economy 100 program as a government and cities member in 2016 joining a select group of international municipalities seeking to advance their circular economy thinking and practices, and to collaborate with the business and academic community on innovative circular solutions. Together as members, the city of Phoenix and Arizona State University became the first city-university partner members of the CE100 in the same region working with the Foundation to research and develop innovation and solutions that encourage a more circular economy.

In 2017, the Phoenix City Council unveiled Phoenix's new compost facility located on 27-acres on the Resource Innovation Campus. Using an already-developed site and innovative waste reduction methods, the facility takes green waste from residents and private landscapers and some food waste from local grocers and partners using aerated piles and bio-filters to reduce odors and emissions. Storm water is managed on- and off-site using locally produced compost to prevent run-off. The compost reduces the need for pesticides and fertilizer while diverting waste from the landfill. Compost from the award-winning Envision Silver Sustainability Rating is used on city parks and provided to residents at give-away events.

In 2018, China announced its "National Sword" policy restricting recycling contamination to less than one percent which meant that 80 percent of Phoenix's recyclables did not meet the new criteria. It challenged Phoenix and other cities to evaluate our heavy reliance on international recycling markets and to focus on the need for reinvestment in local markets spurring innovation and job creation.

In 2019, with a zero-interest loan from the Closed Loop Infrastructure Fund, the City of Phoenix updated our aging North Gateway recycling facility to enable greater diversion of plastics from the landfill and to improve the quality of baled paper produced. The upgrade

enabled the city to increase capacity at the north recycling facility and to take the south recycling facility offline, increased capture rates of PET, HDPE, plastics and fiber, and increased recycling revenue.

None of this would be possible without partnerships. The city recognizes that partnerships are critical to achieving our diversion and sustainability goals, because municipal efforts are not enough. The city has partnered with and is member of several organizations committed to improving recycling and building a circular economy such as the Environmental Protection Agency (EPA), U.S. Conference of Mayors Municipal Waste Management Association, American Public Works Association, Solid Waste Association of North America, National Waste and Recycling Association, The Recycling Partnership, Closed Loop Partners, the Ellen MacArthur Foundation, U.S. Plastics Pact, Keep America Beautiful, Keep Phoenix Beautiful, and Local First to name a few.

One of the city's greatest partnerships is with its residents. Residents' satisfaction with our solid waste services was evident when they helped approve a rate increase to maintain solid waste services including recycling and composting – the first solid waste rate increase in 11 years that was approved by Mayor Kate Gallego and the Phoenix City Council in February 2020. The following month, the COVID-19 pandemic hit resulting in a 20 percent increase on average in garbage and recycling collection. Due to the leadership and action of the Mayor and City Council, some federal funding, staff perseverance and dedication to help the community, the City of Phoenix is meeting this new challenge.

Looking forward to the future, we embrace the EPA's new goal to increase the national recycling rate to 50 percent by 2030 as we strive to reach our own new Zero Waste By 2050 goal. As an activator of the U.S. Plastics Pact, which is a partnership between The Recycling Partnership, World Wildlife Fund and the Ellen MacArthur Foundation, we are one of 89 activators representing for-profit companies, government entities, non-governmental organizations (NGOs), researchers and other stakeholders along the supply and plastics manufacturing chain working to build a roadmap to address the plastics waste challenge.

In conclusion, the United States has nearly 19,500 cities and towns. National research has shown that residents in these cities and towns value recycling, they want recycling, and they rely on local governments to provide this service. Phoenix has been in the recycling business for more than 30 years. The city went from being the least sustainable city in the world to become a leader in circularity and achieved a high diversion rate of 36% in 2019 exceeding the EPA's national goal of 34 percent without any mandates, fees or fines to incentivize residents to recycle and many times without any increased revenues or resources. These best practices and efforts can be replicated in cities across the nation. Phoenix's experience has proven that investing in sustainability is a good return on investment. To achieve these ambitious diversion goals locally and nationally, it takes investment, partnerships, time and effort.

We urge Committee members to support funding important bills, policies and programs that will help improve recycling in our nation. Thank you for this opportunity to share our story.

Ms. PINGREE. Thank you so much for your testimony.

Ms. Collier.

Ms. COLLIER. Thank you, Chairwoman Pingree, Ranking Member Joyce, and members of the subcommittee.

Thank you for the opportunity to speak with you this morning about Nestle's commitment to tackling plastic waste and critical infrastructure that both industry innovation and recycling infrastructure will play in that effort.

My name is Nicole Collier, and I am the senior director of corporate affairs for Nestle with responsibility over our U.S. policy priorities, including efforts that support our sustainability goals.

Nestle is the world's largest food and beverage company, and the U.S. is our largest market. Our products are in 97 percent of U.S. homes. We offer products that include Coffee-Mate creamers, Purina Pet Care, plant-based brands, like Sweet Earth, and baking products, like Nestle Toll House morsels. Nearly all of what we sell in the U.S., we produce right here, with over 30,000 committed employees at our 68 facilities throughout the country.

Our vision is that none of our packaging, including plastics, ends up in landfills, oceans, or waterways. To achieve this, we have set the goal that 100 percent of our packaging will be reusable or recyclable by 2025. And, by that same year, we will reduce our use of virgin plastic in our packaging by one-third.

Some of these transitions are particularly challenging for food products, where packaging and food safety are regulated by the FDA. In some cases, there simply are not approved alternatives for current packaging.

There is reason to be optimistic with industry investment and discoveries. Nestle's Institute of Packaging Sciences is making incredible headway, and Nestle is pouring research and development dollars into the design of recyclable and alternative materials.

Last year, we announced a \$2 billion global investment to help lead the shift from virgin to food-grade recycled plastics. As part of that, we created a sustainable packaging venture fund focusing on start-up companies that are developing innovative packaging solutions. And we are not alone in these pursuits. Other consumer-facing companies have similar goals.

For example, several years ago, we founded the Sustainable Food Policy Alliance, or SFPA, along with Danone, Mars, and Unilever, because we value a collaborative approach to policymaking, and believe we can contribute to that process while solving issues facing our employees, our consumers, our supply chain, and retail customers.

We realize that systemic change is needed to achieve our packaging goals, and prevent recyclable materials from being sent to landfills, and to increase the amount of recycled material that is collected and processed in the U.S. and made available for reuse.

To achieve this, SFPA supports the adoption of a Federal Extended Producer Responsibility, or EPR system. An EPR system would place a fee on packaging, and the revenue from the collected fee would be dedicated to recycling infrastructure improvements. Nestle and the other SFPA member companies participate in EPR systems globally, and we know what works.

In the U.S., we support a nationally consistent, economy-wide approach to life-cycle management of packaging with shared responsibility between communities and brands for waste collection, handling, and recycling.

This subcommittee's work to support the Recycling Needs Survey and Assessment at EPA will help target investments to increase recycling rates, reduce contamination, and attract stronger end markets. There is a tremendous amount of innovation and partnership happening in this space. We have worked closely with partners, including the Recycling Partnership's Circular Economy Accelerator, to develop a framework using this policy approach for the U.S.

Another example is the U.S. Plastics Pact, which launched last year with over 70 founding activators, including Nestle. This group is aligning on national standards and a common vision for a circular economy that will likely be published in the summer of 2021.

I want to thank this committee for continuing to create opportunities like this for thoughtful and bipartisan discussions on these issues. We applaud your work to direct a national recycling strategy that includes collaboration among all levels of government, nonprofits, and the private sector, and we look forward to continuing to partner with you and put our size and scale to work in the area of plastic waste reduction.

Thank you.

[The information follows:]

Hearing on “Efforts to Address Marine Plastic Pollution Through Recycling”

Testimony before the
House Subcommittee on Interior, Environment and Related Agencies
March 18, 2021

Nicole C. Collier
Senior Director, Corporate Affairs
Nestlé USA

Madam Chairwoman, Ranking Member Joyce and members of the Committee – thank you for the opportunity to speak with you this morning about Nestlé’s commitment to tackling plastic waste and the critical importance that both industry innovation and recycling infrastructure will play in that effort.

My name is Nicole Collier, I am the Senior Director of Corporate Affairs for Nestlé with responsibility over our US policy priorities, including our efforts to achieve a waste free environment and contribute to policy discussions and actions that help us achieve our sustainability goals.

Nestlé is the world’s largest food and beverage company and the U.S. is Nestlé’s largest market. Our products are in 97% of U.S. homes. We offer a broad portfolio that includes *Coffee-Mate*® creamer, *DiGiorno*® pizza, plant-based brands like *Sweet Earth*®, and baking products like *Nestlé Toll House*® morsels. Nearly all of what we sell in the U.S., we produce here in the U.S. with over 30,000 committed employees at our 68 facilities throughout America. We are proud contributors to the American economy, and we strive to make a positive impact on the lives of families, in our communities and on the planet.

Our vision is that none of our packaging, including plastics, end up in landfills or oceans and waterways. To achieve this, we have set the goal that 100% of our packaging is reusable or recyclable by 2025. Additionally, we will reduce our use of virgin plastic in our packaging by one third by 2025 and eliminate 100% of single use plastic in our facilities from factories to corporate offices.

And we are not alone in these pursuits, other consumer facing companies have similar goals. Several years ago, Nestlé, Danone, Mars and Unilever, all competitors in the marketplace, founded the Sustainable Food Policy Alliance (SFPA). We value a collaborative approach to policy making and believe we can bring our business values forward and contribute to the policy making process while solving issues facing our employees, consumers, supply chain and customers. As a coalition of four of the world’s largest food companies we have aligned on a set of climate principles, as well as plastic waste reduction and infrastructure policy priorities aimed at transformational change in U.S. solid waste management. Together, we recognize that transitioning to a circular system along with packaging innovation is essential to reducing our carbon footprint. Like Nestlé, the other SFPA member companies have set ambitious goals to integrate post-consumer recycled content (PCR) into product packaging that cannot be met without significant shifts in our nation’s current waste management and recycling systems.

We all recognize both the societal impact our companies can have and the business interest we all share in sustaining and protecting our environment, today and in the future.

Most relevant for today's hearing, SFPA supports the adoption of a Federal Extended Producer Responsibility, or "EPR" system as described below as a foundational element of the transformation to a circular economy. An effective EPR system would place a fee on packaging, and the revenue from the collected fee would go toward funding stronger infrastructure. Nestlé and the other SFPA member companies participate in EPR programs globally. We have used that experience to identify the following elements of successful EPR programs worldwide, which we hope may serve as a guide to policymakers. And we have worked closely with The Recycling Partnership's Circular Economy Accelerator to develop a framework using this policy approach for the U.S.

Specifically, we support a nationally consistent, economy-wide approach to life-cycle management of packaging, with shared responsibility between communities and brands for waste collection, handling, and recycling systems, run through a public-private partnership that is empowered to make decisions on expenditure of funds collected through the packaging fee are dedicated to recycling infrastructure improvements to drive the transition to a circular economy.

In addition, SFPA supports enhancements to air quality, siting, and other permitting processes to ensure that infrastructure investments do not adversely impact the environment or disadvantaged populations.

While the existing U.S. infrastructure presents challenges for our packaging, Nestlé is accelerating our efforts to impact the system and achieve our goals through an approach that leverages R&D, technical packaging expertise, innovative partnerships and advocacy, and consumer communication. We are actively reducing our use of material, scaling reusable and refillable systems, using new and recyclable materials or post-consumer recycled content, investing in and advocating for more effective and efficient infrastructure, and last but not least harnessing the power of our employees, consumers, partners, our supply chain and others to encourage better recycling behavior.

There is also reason to be optimistic with industry investment and discoveries. Nestlé's Institute of Packaging Sciences is making incredible headway and Nestlé is pouring research and development dollars into the design of recyclable and alternative materials. We're removing problematic plastics and simplifying structures for easier recycling. An example is last year's launch of the Gerber *IncrediPouch™*, the first-of-its-kind single-material baby food pouch design that is designed for the future of recycling. The pouch is 100% recyclable through Gerber's national recycling program with TerraCycle®. Meanwhile, Nestlé is actively working on solutions to make flexible plastic more easily recyclable. Nestlé is a founding member of Materials Recovery for the Future (MRFF), a research collaborative that partnered with a recycling business in Pottstown, PA to pilot the first curbside recycling program in the U.S. to accept flexible plastics. We continue to work towards solutions for flexible plastic with The Recycling Partnership and industry peers.

And last year, we announced a \$2 billion global investment to help lead the shift from virgin to recycled plastics. As part of that we created a sustainable packaging venture fund focusing on start-up companies that are developing innovative packaging solutions. The first investment was made in the U.S., with the Closed Loop Leadership Fund. And we are looking towards creating markets for food grade recycled plastic, which many in our industry are desperately in need of.

In the absence of national standards, definitions and sometimes clear data there is a tremendous amount of innovation and partnership happening in this space, companies are piloting alternative collection and recovery systems, looking to scale refillable models with small and large retailers. The U.S.

Plastics Pact launched last year with over 70 founding activators, including Nestlé, aligning on national standards and a common vision for a circular economy. The roadmap will likely be published in the summer of 2021.

I want to thank this committee for continuing to create opportunities for thoughtful and bipartisan discussions of these issues and recognizing that the recycling system can be a true example of public/private partnership. We applaud the opportunities you have taken to direct a national recycling strategy that includes collaboration among all levels of government, non profits, and the private sector. This collaboration is critical to identifying gaps and areas where further investment and research is needed. Additionally, the Recycling Needs Survey and Assessment will help us target opportunities to increase recycling rates and target places where we can reduce contamination and attract stronger end markets.

We are pleased with our progress so far and are well on our way to achieving more, but we know that we must move even faster for our employees, our consumers and the planet. One company alone cannot solve the packaging waste challenge and we think it's critical that industry positions continue to evolve and that policy makers remain open to our input as we rethink these systems.

We look forward to continuing to partner with you and putting our size and scale to work in the area of plastic waste reduction.

Ms. PINGREE. Thank you so much for your testimony and to all of you for being here today.

I see Mr. Joyce has joined us. And if you would like to make opening remarks, please go ahead.

Mr. JOYCE. There we go.

Ms. PINGREE. Well done. That is the biggest challenge of today, is unmuting yourself.

Mr. JOYCE. I need my daughters around so they can help me fix all my problems with the software. Thank you for allowing me to be here. Madam Chair, so nice to see you.

Let me be the first to say congratulations on your new role as the head of this Interior and Environment Subcommittee. It is well-deserved. I have heard your advocacy on behalf of Maine for the years you have been on the subcommittee, and they should be proud to have you as their advocate.

Ms. PINGREE. Thank you.

Mr. JOYCE. And it is always a pleasure to see that the chair, Rosa DeLauro, who I first served on Labor HHS has joined us. She taught me a lot of lessons, too, in her time there. But you have always been a hard-working and well-respected member of the Appropriations Committee, and I am really thankful for the friendship and the way we are going to work together.

As we kick off subcommittee activity in the 117th Congress, I am hopeful that we will continue the tradition that Betty and I, and certainly Betty and Ken had in the past to reach across the aisle and tackle the tough issues our constituents face, while also maintaining proper oversight of the critical programs that fall within our jurisdiction.

With that, Madam Chair, thank you for holding today's hearing. I look forward to working with all the people on the committee in trying to make sure we do what is best for our country.

Thank you.

Ms. PINGREE. Thank you so much, Mr. Joyce. It is a pleasure to have the opportunity to work with you, and will do my best to fill the big shoes that Ms. McCollum left behind, and to do my best to get up to speed quickly on all the things that you need to know to be on this committee, that I know you know a lot about, so I will lean on you.

I will recognize myself for 5 minutes to begin the questions. And, again, thank you so much to our witnesses. It is going to be wonderful to have a chance to chat with you more.

So let me just start with Ms. Lau. And, again, thank you so much for the work that Pew has done on this topic, and really, the comprehensive assessment of what needs to be done. So let me just throw out a couple questions for you.

Why is a material design and substitution for plastic products not enough to address the problem? And then, maybe I will just throw in a couple of other parts of this. Why must we focus on both pre-consumer and post-consumer? And, also, in looking at the whole problem here, what other research is necessary to understand the life cycle of different plastics and the challenges that we are facing?

Sorry for that load, but I figured it would just be easier to get them out there.

Ms. LAU. Thank you, Chair Pingree. I was writing it all down, so I will try to capture all of your questions. If I miss anything, please do let me know.

So what we have found is that, you know, we started the work recognizing that plastic has a utility and it has a value in society, but at the same time, that the rate at which we are producing plastic is much higher than the rate at which we are growing the solutions, the waste management processes and infrastructure to handle that.

So, by applying approaches both to the pre-consumer and to the post-consumer stages of the plastic system, we would be able to dramatically reduce plastic pollution going into the environment. What we found was, if we only focused on pre-consumer, while we can reduce some of the—a significant amount, 30 percent—we can reduce 30 percent of the plastic away, and then substitute around 17 percent of the plastic away, we would still be left with about 50 percent. And, right now, the recycling industry is only at 15 percent of recycling for plastic.

So that would mean we still have about 30 to 40 percent of plastic that needs to be captured and safely handled, and hopefully recycled back into the system. So, without applying action to both pre-consumer and post-consumer stages of the plastic system, we would not be able to decrease plastic waste generation and decrease plastic pollution going into our environment.

So material design, as you said, it is a really important part of this whole process. Part of the reason that it is difficult and costly to recycle plastic is that the plastic, when it is designed, is not necessarily taking into account what happens to the product, the packaging, once it is used. So sometimes different plastic materials are mixed together, which makes it very difficult to recycle, or maybe impossible, could make it—and then, also, in the design of it—and you have multiple, different polymers, different chemical formulations that require a lot of effort in sorting.

So the whole system right now is not very efficient, and there are different ways to make it more efficient. As I said earlier, you could have design standards, you could have recycling content targets. Those could make the whole system more effective.

And then, at the same time, by reducing away the very-difficult-to-recycle plastic, then you can take the inefficiencies out of the system.

Ms. PINGREE. Thank you. Thanks. And I have many more questions, but I will just quickly ask Ms. Spencer—thank you so much for talking to us about really the amazing work that Phoenix has done. Such a great role model for our other cities, and I am thrilled to hear that you have a composting operation and that you have just really taken a comprehensive view.

So, in going forward—and I only have a minute to ask, but I can always get back to you. What kind of research or information do you need to be able to make the assessments and decide what is going to be cost effective to do going into the future?

Ms. SPENCER. Thank you, Chairwoman, for that question.

So one of the things that was very helpful for us in the beginning was to do a waste characterization so we could figure out the makeup. What are our residents throwing away in the garbage?

What are our residents putting into the recycling bin that is contamination, so that way, we knew how to focus our efforts. Also, trying to figure out, well, what was our cost per ton to send material to the landfill, and compare that against decisions to do composting, to do recycling, to do upgrades to our MRF, or to build a composting facility, for example, or to do other partnerships.

One of the things that will be very, very helpful for us from a research standpoint moving forward is similar to what Ms. Lau said, is about being able to do life-cost analysis when it comes to materials, when it comes to commodities. So not only are we looking at what is the cost of the material? What is the economic benefit that we can bring by selling that material? But, also, what is it doing to reduce greenhouse gas emissions? What is the long-term effect, so that we could actually look at what we call the triple bottom line in that overall economic benefit.

So, life cycle analysis definitely would be very, very helpful in our efforts to continue to build a circular economy.

Ms. PINGREE. Great. I have to leave it there. I am over my time. And thank you so much.

Mr. Joyce, you are recognized for 5 minutes.

Mr. JOYCE. Thank you, Madam Chair. And, also, for the record, I would like to ask for unanimous consent to include my full opening statement and a letter from the American Chemistry Council in the hearing record today.

Ms. PINGREE. Without objection, so moved.

[The information follows:]



**Statement for the Record
American Chemistry Council**

**Hearing on:
“Efforts to Address Marine Plastic Pollution Through Recycling”**

**House Committee on Appropriations
Subcommittee on Interior, Environment, and Related Agencies
March 18, 2021**



The American Chemistry Council (ACC) is pleased to submit this Statement for the Record to the Subcommittee on Interior, Environment, and Related Agencies of the Committee on Appropriations regarding the hearing titled, “Efforts to Address Marine Plastic Pollution Through Recycling.”

ACC represents a diverse set of companies engaged in the U.S. business of chemistry, a \$768 billion enterprise that is helping to solve the biggest challenges facing our country and the world. Chemistry touches 96 percent of all manufactured goods, and the use of plastics in modern automotive, building and construction, and food packaging industries is helping to create a more sustainable society.

- **Automotive:** Today’s plastics make up 50 percent of the volume of new cars but only 10 percent of the weight. Lighter cars are more fuel efficient, and as a result, emit fewer CO₂ emissions.
- **Building and Construction:** Architects and designers rely on plastics to help maximize energy efficiency, durability, and performance of our homes, offices, and schools.
- **Food Packaging:** Plastics help keep our food fresh and clean with less packaging while reducing food waste. Reducing food waste is important because EPA estimates that more food reaches landfills and incinerators than any other single material in our everyday trash, constituting 22 percent of discarded municipal solid waste.

ACC and our members are deeply committed to ending plastic and other waste in the environment and creating a more circular economy for plastics. ACC has established goals to reuse, recycle and recover all plastic packaging in the United States by 2040 and make all plastic packaging recyclable by 2030. We are walking the talk: Our testimony today provides an overview of the efforts ACC and its members are making to achieve these goals and policy recommendations to address plastic waste and improve recycling and circularity for plastics.

Ending Plastic Waste in the Environment

ACC strongly supports efforts to end plastic waste in the environment. We believe in a comprehensive approach to reducing waste including reducing, reusing and recycling and creating a new circular economy for plastics. ACC and its members have committed to reusing, recycling, or recovering all plastic packaging by 2040 and making all plastic packaging reusable, recyclable or recoverable by 2030.

ACC has also led the development of The Declaration of the Global Plastics Associations for Solutions on Marine Litter, announced at the 5th International Marine Debris Conference in 2011. Otherwise known as the Global Declaration, this is a global commitment to combat ocean pollution. Since its inception, eighty plastics associations in 43 countries have signed the Declaration and more than 395 projects to address marine debris are planned, underway, or have been completed around the globe. We are working to advance innovative new technologies, increased traditional and advanced recycling infrastructure, develop new uses and end markets for



recovered plastics, and a number of other innovative solutions to reduce the amount of plastic that ends up in the environment.

In addition, ACC helped launch ¹, a \$106 million fund that provides zero-interest financing for waste management infrastructure projects in South and Southeast Asia. The fund seeks to implement many of the findings from the Ocean Conservancy's Trash Free Seas Alliance reports *Stemming the Tide*² and *The Next Wave*. Stemming the Tide found that improvements in waste management are critically needed to stop plastic waste in China, Indonesia and the Philippines. *Circulate Capital*³, a \$106 million fund that provides zero-interest financing for waste management infrastructure projects in South and Southeast Asia. The fund seeks to implement many of the findings from the Ocean Conservancy's Trash Free Seas Alliance reports *Stemming the Tide*⁴ and *The Next Wave*. Stemming the Tide found that improvements in waste management are critically needed to stop plastic waste in China, Indonesia and the Philippines.

Creating a Circular Economy for Plastics

The plastics industry continues to move towards a more circular economy for plastics. In 2018, America's plastic makers established a goal of making all plastic packaging in the United States reusable, recyclable, or recoverable by 2030 and for all plastic packaging to be reused, recycled, or recovered by 2040.

In October of 2020, ACC released our Roadmap to Reuse and Guiding Principles for realizing our vision of a more circular economy for plastics. The Roadmap is a detailed and sequenced work plan for how we will achieve these goals. It is a set of actions built around six core areas that, together, will modernize recycling through:

1. more effective value chain engagement to optimize new and existing programs;
2. more active consumer engagement so Americans know what and how to recycle;
3. expanded access so all Americans can recycle in their communities and away-from-home;
4. solving the challenge of economically collecting and sorting harder to recycle plastic packaging formats e.g., films, pouches, foams and small formats;
5. dramatically scaling domestic capacity in both mechanical and advanced recycling; and
6. solving the challenges of domestic sortation and end markets for plastics, especially those formerly exported to overseas markets.

³ <https://www.circulatecapital.com/>

⁴ <https://oceanconservancy.org/wp-content/uploads/2017/04/full-report-stemming-the.pdf>



The Guiding Principles include policies that ACC supports to create a circular economy for plastic. The Roadmap and Guiding Principles builds on a strong foundation of ACC leadership seeking to improve domestic recycling of plastics. The Foundation for Chemistry Research and Initiatives, a separate non-profit organization established by ACC, developed the Materials Recovery for the Future⁵ (MRFF) project. MRFF supports advanced sorting technology to allow flexible plastics to be recycled in curbside bins. ACC's Wrap Recycling Action Program⁶ (WRAP) is a partnership with US EPA, The Sustainable Packaging Coalition and several state governments. WRAP educates consumers on the ability to take polyethylene film including bread, dry cleaning, and retail bags and product wraps including wraps around paper towels, cases of soda, diapers, other wraps and mailers used by companies like Amazon back to over 18,000 retail stores nationwide. This material can then be recycled into composite decking material or new bags and film. Partnerships with government agencies such as EPA are essential to helping reduce plastic and other waste.

ACC's Advanced Recycling Alliance for Plastics is supporting the development of advanced recycling including non-combustion technologies such as pyrolysis, gasification, purification, and other technologies. These technologies capture the value of plastics not recycled mechanically and convert them into a variety of valuable end products including feedstocks for new plastics. An analysis by Good Company in Eugene, Oregon found that pyrolysis technologies have very low emissions including lower criteria air pollutant emissions than sources such as hospitals, universities and food manufacturing.⁷ Additionally, the U.S. Department of Energy's Argonne National Laboratory recently added plastics-to-ultra-low-sulfur-diesel to its Greenhouse Gases, Regulated Emissions and Energy Use in Transportation (GREET) model. GREET models over 100 different fuel pathways and found that compared to virgin ULSD, that using plastics as the feedstock would reduce fossil energy use by 96% and fresh water use by up to 58%. These findings were peer-reviewed and published in the scientific journal fuel.⁸

Collaboration with EPA and DOE

We support the EPA's recent announcement of a National Recycling Goal to increase the national recycling rate to 50% by 2030. As a signatory to the America Recycles Pledge and an organization leading the transition to a more circular economy for plastics, ACC is pleased to be working the EPA on the development of a national framework, specifically relating to advanced plastics

⁵ <https://www.materialsrecoveryforthefuture.com/>

⁶ <https://www.plasticfilmrecycling.org/>

⁷ *Comparison of Plastics-to-Fuel and Petrochemistry Manufacturing Emissions to Common Manufacturing Emissions*. July 24, 2017. Good Company, Eugene, Oregon. <https://plastics.americanchemistry.com/Plastics-to-Fuel-Manufacturing-Emissions-Study.pdf>

⁸ *Life cycle analysis of fuels from post-use non-recycled plastics*. Fuel 203: 11-22 September 2017. https://www.researchgate.net/publication/316525873_Life-cycle_analysis_of_fuels_from_post-use_non-recycled_plastics



recycling, innovation, increased collection and recycled content for plastics. Over the last six months, ACC has been pleased to work with the EPA by submitting comments on its key workstreams. These include EPA's developing draft national recycling goals, draft national strategy, and recycling rate methodology. In January of 2020, ACC signed an MOU with the U.S. Department of Energy to collaborate on their recently announced Plastics Innovation Challenge. The DOE is interested in helping to develop and scale new technology that can help bring more value to post-use plastics.

Federal Legislation

In addition to our efforts to end plastic waste in the environment, ACC and our members continue to support federal legislation that will help improve plastic recycling and recovery in the United States. We have actively supported the bipartisan Save Our Seas (SOS) Act (versions 1.0 and 2.0), as well as the RECOVER Act and RECYCLE Act. ACC members are leading in the deployment of system improvements and technology advances to convert a variety of used plastics into resources to make new plastics and other valuable products.

SOS 1.0 and 2.0 reauthorized the Marine Debris Act, increased investment and technical assistance to help expand waste management systems and best-practices in rapidly industrializing nations, supported scientists and agencies in studying innovative ways to repurpose used plastics and study ways to repurpose plastics in infrastructure projects, such as roads and bridges. We believe these actions will help accelerate progress toward a circular economy for plastics in the United States and abroad.

The RECYCLE Act will improve the effectiveness of residential and community recycling programs through increased public education and outreach. At present, studies show that about 25 percent of recyclable materials are lost due to a lack of knowledge about what should and shouldn't be placed in recycling bins. By promoting education and best practices, the RECYCLE Act will improve both the quality and quantity of materials collected for recycling. This much needed legislation will not only help to optimize our existing recycling infrastructure; by increasing collection, it will provide a critical foundation to support a class of advanced technologies that could revolutionize the way we use—and reuse—plastics.

The RECOVER Act establishes a Recycling Infrastructure Program within EPA to award financial assistance to States, local governments, and tribal governments. Funding will support and expand the recycling infrastructure and recycling programs in such States, local governments, and tribal governments.

China Sword Creating New Domestic Recycling Opportunities



For decades China has dominated the markets for many recyclable commodities including mixed paper and non-bottle rigid plastics. Domestic recyclers have not been able to compete against China. In addition, communities particularly on the west coast relied on this market and did not invest in improving sortation that would be required to make segregated resin bales needed by domestic processors. Thus, China's National Sword policy that restricted imports has resulted in serious disruptions to recycling programs in the US and around the world. This disruption while costly over the last year and a half has created an opportunity for U.S. investment. Over the last 18 months, we have seen more than \$5 billion in new investments in plastics recycling with potential to divert 9 billion pounds of plastics from landfill and create a new market for mixed plastics across the country.

In addition to increased recycling investment, growing market demand for recycled content is being driven by consumer goods companies. Over thirty-seven of the largest consumer brands and retailers have made public commitment to use between 20 and 100 percent recycled content in packaging by 2025. Today's domestic recycling infrastructure is unable to meet this demand. Additional investments in mechanical and advanced recycling will be needed to achieve company targets. Closed Loop Partners recent study, *Advancing Circular Systems for Plastics*⁹, identified a market opportunity in North America of \$120 billion annually for advanced recycling. This market reflects those outputs that have a pathway back to plastics. Demonstrating the market viability, there are 40 advanced recycling facilities already in operation, with more planned. There are many new developments in advanced recycling that are attracting attention:

- Nexus Fuels in Atlanta, GA is transforming post-use plastics into useful liquids that are being used by Shell to make a range of chemicals.
- Agilyx in Tigard, OR is partnering with Delta Airlines to convert post-use plastics into jet fuel.
- Agilyx and styrenics supplier, Americas Styrenics are currently converting thousands of tons of post-use polystyrene back to styrene monomer for new plastics via their jointly owned facility in Tigard.
- Brightmark Energy expects their \$260 million new advanced recycling facility in Ashley, Indiana to be operational by the end of 2020. It will convert 100,000 tons of plastics into 18 million gallons of diesel and naphtha for BP and nearly 6 million gallons of wax.

State policymakers have taken notice and are eager to attract greater investment in their states while simultaneously boosting end markets for post-use plastics. Legislation to regulate these technologies as manufacturing facilities, as opposed to solid waste facilities, has been passed in a number of states, including Florida, Wisconsin, Georgia, Iowa, Tennessee, Texas, Illinois and Ohio. And, based on analyses done by ACC, the U.S. could support up to 260 advanced recycling facilities, generating nearly 39,000 jobs and \$9.9 billion in economic output. Finally, the U.S. Department of Energy has taken notice and recently announced their Plastics Innovation Challenge which includes a heavy focus on spurring innovative new technologies. ACC and DOE recently

⁹ <https://www.closedlooppartners.com/research/advancing-circular-systems-for-plastics/>



signed a Memorandum of Understanding to work towards evaluating and advanced new innovations and technologies. Congress ought to consider how it can also play a role in scaling innovation of new technologies that can convert post-use plastics into a wide range of valuable end products.

Product Bans Would Increase Environmental Impacts

ACC strongly supports efforts to end plastic waste in the environment and bipartisan legislation such as the Save Our Seas and Save Our Seas 2.0 Acts. We also support approaches taken in past legislative proposals such as the RECOVER and RECYCLE Acts. But ACC opposes the proposed “CLEAN Future Act,” that would ban many plastic products, impose a moratorium on new plastic plants and require renewable energy for only plastic production. Focusing on plastic product bans without consideration of the availability and environmental impacts of alternatives is counterproductive. Studies by TruCost and Franklin & Associates show that alternatives to plastics have greater environmental impacts such as greater energy use, increased greenhouse gas emissions and more waste. In the 2016 report, the environmental accounting firm Trucost found the natural capital cost of plastic in 16 sectors to be \$139 billion but the environmental costs for alternative materials was estimated at \$533 billion annually. This 3.8 fold increase in natural capital costs of alternatives included greenhouse gas emissions, marine litter, and other impacts. In a study of plastic packaging compared to alternatives, Franklin Associates found that greenhouse gas emissions would be doubled by banning plastic packaging¹⁰.

The potential for policies to increase environmental impacts is especially large for packaged goods, such as food, which often requires a significant amount of energy and water to produce. According to the United Nation’s Food and Agriculture Organization (FAO), one third of all food produced never reaches the consumer’s table. FAO further states that this food waste results in a greenhouse gas impact of 4.4 GtCO₂, which would rank third in terms of total greenhouse gas emissions behind only China and the United States¹¹. Reducing food waste through improved handling, logistics, and packaging of food is essential to reducing food waste and the associated greenhouse gas emissions. The essential role that plastic packaging plays in reducing food waste must be considered.

Although bans would increase environmental impacts, ACC supports policies that reduce waste and unnecessary consumption such as straws upon request. This policy rather than banning products allows consumers to ask for a straw when they need one or decline it when they don’t. This common sense approach reduces waste without burdening families with small children, the elderly, or handicapped customers.

¹⁰ <https://plastics.americanchemistry.com/Reports-and-Publications/LCA-of-Plastic-Packaging-Compared-to-Substitutes.pdf>

¹¹ <http://www.fao.org/food-loss-and-food-waste/en/>



Conclusion

The American Chemistry Council appreciates the need to address plastic waste and domestic recycling infrastructure in a sustainable, circular way. We encourage the committee to support domestic investment in recycling infrastructure and technology to enable the U.S. to realize its vision for a 21st century recycling system. For example, in the last three years, 64 projects aimed at updating recycling in the U.S. have been announced, valued at \$5.3 billion. Together, these projects have the potential to divert more than 4.0 million metric tons (about 8.9 billion pounds) of waste from landfills each year. The plastics industry recognizes the need to do more. Policies supporting a national approach to community recycling programs, encouraging the use of recycled content in new manufacturing and packaging, and increasing private investment in circularity by updating regulatory frameworks for new and advanced recycling technologies, are critical. ACC and our member companies look forward to the opportunity to work with the Committee and the federal agencies to transform our domestic recycling system helping keep plastics out of our environment and in our economy.



Mr. JOYCE. Thank you.

Ms. Collier, thank you so much for being here—all of our witnesses today, thank you for being here.

I am so proud of what you have done at Nestlé and the bold commitment that you have made to make 100 percent of your packaging recyclable, or reusable by 2025 and to reduce the use of virgin plastics by one-third. I am especially proud that you are employing 4,000 Buckeyes to help make this goal a reality.

Can you take a moment to describe how Nestlé will meet this goal using innovative solutions, partnerships, and consumer communication? How might heavy-handed Federal mandates and product bans potentially, hinder Nestlé's ability to foster a circular economy and develop innovative packaging solutions?

Ms. COLLIER. Thank you very much, Ranking Member Joyce. We are really proud to be in the heart of Solon, Ohio, so thank you for that.

We do agree—I agree with all of the panelists and many of the comments that have been made. This is a complex problem, and Nestlé is looking at this, and looking at the kind of multifaceted-pronged approach to solving this issue.

One, we also have tremendous research capabilities throughout the company, and we are putting a lot of those resources and efforts into this plastic and sustainable packaging issue.

We are one—to achieve our commitment, we are looking at the plastic that we currently use. As I mentioned, we have a goal of reducing virgin plastic in our packaging by one-third by 2025, and so, we are very committed to doing that where we can.

However, I think, as was already mentioned by Winnie Lau, plastic does play an important role in food packaging. It helps sustain shelf life. It has a portion of food safety that we rely on. And, so, it likely will be a part of the food industry for some time.

We are looking to continue redesigning and designing our packaging for recycling in order to commit to achieve our goals. We also are spending a lot of research and development dollars, as I mentioned, on new alternative materials, whether those are fiber-based, bio-based. We are looking at a lot of other types of materials for our packaging.

We have a diverse portfolio of products, and a diverse portfolio of needs of packaging as well. And, so, we have spent a lot of time investing in that.

We also created this venture fund to invest in small companies and start-ups that are innovating equipment for local MRFs throughout the world, and some of that investment has come to the U.S., and I hope to speak about that as well.

So there are lots of different areas that we are trying to achieve this work. While we know plastic remains to be a big problem, we do still use it, we do see that it has value, and we are trying to make it as recyclable as possible.

And, last but not least, one of the things that I really have focused a lot of my time on is infrastructure in the U.S. It is really important that we enhance and strengthen that infrastructure so that all of that diverse packaging really can be circular—be a part of the circular economy and we can drive circularity through our infrastructure. It is a big issue for us.

Mr. JOYCE. As you innovate and develop more sustainable packaging solutions, is it challenging to do so without compromising food safety and quality protections?

Ms. COLLIER. No. I mean, we can't—we have to balance that appropriately. And, as I mentioned, there are food safety requirements to our packaging that are regulated by the FDA. We are fully compliant, and we work very closely with our partners there to ensure that.

And that is why I made the comment about plastic. There are some items today where we don't have alternative materials that would be appropriate. But, where there are opportunities, we do seek to use different materials.

But, you know, again, I think one of the big pieces here is, in order for most—the majority of Americans to be able to recycle, we really have to have more consistency in our recycling system.

Today, there are winners and losers across the country, and we really need to be able to strengthen that so that all of the packaging can actually be a part of the circular economy.

Mr. JOYCE.

Thank you, Madam Chair. I yield back.

Ms. PINGREE. Thank you very much, Mr. Joyce.

And I am pleased to recognize the chair of the Appropriations Committee, Ms. DeLauro, for 5 minutes. Thank you for being here.

The CHAIR. Thank you very, very much, and thank you for the testimony to our witnesses. It is really not only informative, but it really is, you know, direction for the future and very innovative, and so I am grateful for that.

Ms. Spencer, you mentioned China's new recycling standards have forced Phoenix to reassess its plastic disposal methods. We have got many municipalities who have suffered from this change. I mean, Stamford, Connecticut used to earn \$95,000 selling its recyclables. But, after the policy change, it cost the city \$700,000 to dispose of them. China's new standards have effectively eliminated a major foreign market for our plastic waste.

And you noted the need to redevelop in the U.S. recycling market, the opportunity it presents in job creation, innovation, partnerships. And it seems that recycling hubs would need to be used by multiple localities to reduce the cost of running them and to be able to maintain them.

Has the city of Phoenix worked with other municipalities in Arizona to design new recycling hubs? How could the Federal investment increase this effort? And, in terms of job creation, do you have a projection on how many jobs a city of Phoenix's size could create with new recycling investments?

Ms. SPENCER. Madam Chair DeLauro, thank you for that question. Great comments, observations, and a great question.

When it comes to plastics, what we do know from a Phoenix perspective, that basically 11 percent of what was showing up in the garbage was actually plastics, and about 15 percent of what was in our recyclables was plastics as well.

To your point, we have worked with other cities. We have two MRFs here in Phoenix, recycling facilities. And there are other cities from throughout the Valley of the Sun that actually send their recyclables to us, so we have agreements in place.

When the National Sword hit, when COVID-19 hit, there were other cities who reached out to us who wanted to bring their recyclables to us as well.

Right now, though, we—with the upgrade that we did at our north facility, through the zero-interest loan that we got from the Closed Loop Partners, we were able to take down our older plant that is located in southern parts of town and send all of our recyclables there. Once we bring that location back up, we could look at bringing in additional cities.

So investment, in recycling infrastructure is so important, and, if that was available, many cities would be able to continue to be in the recycling business.

It creates jobs—we know that—for the people who are working in the plants; for the people that are processing and sorting the recyclables; for the individuals who are selling the actual recyclables; for the people that are taking the recyclables and transforming that waste into a new product. So recycling, what we know, is great for the economy.

The CHAIR. I will just say, as we think about—and I say this to the chair and ranking member, as we think about infrastructure in its broader terms, you are talking about recyclable infrastructure seems to be a very worthwhile effort.

If I can, let me ask Dr. Lau a question. And this has to do with the concept of the Extended Producer Responsibility, which has not received support at the Federal level in the past, but there—as I understand it, there is activity at the State level.

Is the lack of Extended Producer Responsibility success due to it not being scaled at the Federal level? What other policy proposals would you pair with it in the recycling system change? Do you think industry's support for this effort—for this model is sufficient, or do you think corporations should also work to eliminate plastic packaging?

Ms. LAU. Thank you, Madam Chair DeLauro.

So Extended Producer Responsibility is one of the policy solutions that we included in our analysis, and found to be one of the solutions that will be needed to help increase the recycling rate globally, and as well as in the U.S.

And Extended Producer Responsibility is one of those policies that can help reduce the cost of recycling, and, therefore, making the industry more robust and more profitable. And it is one where, likely, it will require government and private-sector collaboration to make it work.

As to whether it should be a Federal policy, it isn't something that we have looked at, whether it needed to be implemented at a national level or a subnational level, so I can't comment on that at the moment. But we do know that it is an effective policy. It can be an effective policy to make the recycling industry profitable and robust.

As to it not being scaled, I think it is a newer policy, and it is one that more and more governments are looking at and trying, and, so, I think, in the near future, this is a policy that would likely be applied more here, I hope, at home in the U.S., but also globally.

The CHAIR. Thank you.

And, Madam Chair, thank you. I have gone over my time, and I—well, can't yield back any time. I just took over my time. So thank you very much for your indulgence. Thank you.

Ms. PINGREE. We are very pleased to have you join us today, so thank you so much for your questions.

Mr. Stewart, you are recognized for 5 minutes.

Mr. STEWART. Well, thank you to the witnesses. Thanks for being here, but also, more importantly, thanks for what you do. I support it. Obviously, I think all of us do. It is better for everyone, and it is clearly better for the environment, and, hopefully, better for the consumers.

I actually am not going to ask a question. I will just voice my support. I have another hearing I have got to run to, and I want to be able to stay and listen to the answer, but, Madam Chair, I yield back.

Ms. PINGREE. Thank you. And thank you so much for joining us and hearing the witnesses today.

So, I think that next on the list is Mr. Harder, and welcome to the committee, or do I see him there?

Actually, I don't see Mr. Harder. I think he may have left the room. So, if he comes back, we will bring him back on.

I don't see Mr. Amodei, who was here in the beginning, so nice to have had him here.

And we will go to Mrs. Lee. So good to have you on our committee.

Mrs. LEE. Thank you. Well, thank you, Madam Chair, and as well the Ranking Member Joyce for hosting this hearing. This is, to me, a really important issue.

And I want to focus on one particular approach for how we can incentivize industry and investments to shift away from the production of new plastic and towards reuse systems and sustainable substitute materials.

As you know, I represent southern Nevada. We have a robust tourism and hospitality and convention industry. And, as you can imagine, plastic use is prevalent. But, you know, our tourism industry has the power to drive demand for plastic incentives and the economic incentives to make a shift towards more sustainable substitute materials.

Already, some of our key industry players have made major steps in the right direction, including the Las Vegas Sands organization that added single-use plastic reduction to its ECO360 plan, sustainability strategy. This was back in 2018, and they developed a new single-use plastic plan in 2019 that annually replaces 6.5 million plastic takeaway containers and cutlery with plant-based alternatives.

In addition, they also eliminated plastic laundry collars, and plastic hangers have been replaced with cardboard alternatives. Including, there has been several national hotel or global hotel chains, Marriott International, InterContinental Hotel Groups, that have also committed to getting rid of the small plastic bottles used in their hotels for products like shampoo and shower gel.

So, as we know, these are steps in the right direction, but plenty more to be done, and I am looking forward to working on this subcommittee in a bipartisan manner to help promote those solutions.

Dr. Lau, I want to—recognizing the cost of plastic pollution to the global economy, anywhere from \$1.5- to \$2.2 trillion across the sectors from shipping to tourism, I want to ask you: Can you speak to how government procurement policies can help accelerate the shift away from single-use plastic items and towards sustainable substitutes?

Ms. LAU. Thank you, Ms. Lee, for that question, and thank you for all the great work in your home State.

For the tourism industry—for governments, procurement is a very powerful tool that could be used, because the government does spend a lot of money in our economy with its purchasing power. So, the government could put in place policies that put preferences on—away from single-use plastic to reusable systems directly in what they purchase, as well as in the vendors that you choose to work with by putting in place things like preferential sourcing with vendors that do not use single-use plastic, but use refill and reuse systems. So, I think that could be a very powerful tool.

Mrs. LEE. Thank you.

And, Madam Chair, we should also start with our own House. I am always amazed at the small little plastic bottles we have at every committee hearing. So, I think we can start to do some of that work internally.

Dr. Lau, you also found that a comprehensive approach to plastic waste reduction that incentivizes reduced plastic production and expands the reuse and refill systems could collectively save governments around the world \$70 billion.

Can you elaborate on these cost savings and how this approach reduces waste management spending needs?

Ms. LAU. Thank you for that question.

So, in our analysis, a lot of the cost of plastic is in production, as well as the waste management piece. And, by substituting away plastic, we essentially take away the need to manage the plastic waste that would be generated, and that, as you said, could be substituted—we could reduce about 30 percent of the plastic—using refill-reuse systems, as well as eliminating avoidable plastic.

And then, with substitution, similarly, we could switch away from plastic to other more sustainable materials. Those materials do have waste management costs. But, for example, paper was one we looked at, and paper—has a very robust recycling industry. Currently, it is at above 50 percent. So that industry—the recycling—paper recycling industry can generate revenue.

And then, between the need for less waste management capacity, as well as switching to materials that are recyclable and profitable, globally, we could reduce \$70 billion over the next 20 years in the need to provide infrastructure, as well as the services that are associated with it.

Mrs. LEE. Great. I am sorry I have gone over my time, but thank you.

Ms. PINGREE. Thank you. I think you muted yourself at the very end, but thank you for your questions.

And I will say, under Chair McCollum, back in the last session, when we were actually meeting in the committee room—well, under Ranking Member Joyce and Chair McCollum, we had pitchers of water and individual cups. So there was an attempt on this

committee that cares deeply about the environment to reduce our plastic use, even though that is kind of minuscule in the whole picture, but important to do.

So, Mr. Cartwright, very nice to have you here. You are next. I recognize you for 5 minutes.

Mr. CARTWRIGHT. Thank you, Chair Pingree, and it is an honor to join this subcommittee. And thank you to all of our witnesses for appearing here today.

Now, I am from a district in northeastern Pennsylvania, which is far from the ocean, but we are home to beautiful lakes and rivers and streams and brooks and, unfortunately, we are also home to a huge amount of unwanted waste that could have been recycled. We are the home to a very large landfill, and I want to talk about that in a little bit.

Recent testing completed under NOAH standards by PennEnvironment found microplastic and plastic fragment contamination in both the Susquehanna and Lackawanna Rivers in my district; but my district is burdened with more than its fair share of waste from external sources. We received shipped waste from New York, New Jersey, Connecticut, and all other parts of Pennsylvania at the bloated 714-acre Keystone Sanitary Landfill in Dunmore that is currently undergoing permitting to continue expanding their operation for another 50 years. More than 64 percent of their 7,200 tons of trash per day comes from out of State.

To that end, I have introduced the Trash Act to help promote recycling so less unnecessary waste makes its way into my community. So, you see, you don't need to be near the ocean to have your life intimately affected by unnecessary waste and plastics.

And I want to invite Ms. Collier's attention to my first questions. I was fascinated by the idea of a small fee that companies would put on their products. Ms. Collier, what do you call that program? You had a name for it.

Ms. COLLIER. Thank you, Congressman. Extended Producer Responsibility or EPR.

Mr. CARTWRIGHT. EPR, okay. I want to learn a lot more about that because it seems to track a lot of—I am going to jump off this call and I am going to go testify in a Natural Resources hearing about the abandoned mine lands trust fund, which operates on the same principle, that ongoing mine operations will pay just a little bit of their gross revenue to clean up abandoned mine lands. It is the same idea, and I like it, and I want to talk more about it.

And it certainly seems that Nestle is taking many of the right steps in ensuring that it produces easily recyclable products. My question is, have you worked specifically with waste management centers to discuss the end-of-life phase of your products and whether or not its economically beneficial for them to recycle your products?

Ms. COLLIER. Thank you, Congressman.

That is a really big issue related to the infrastructure. We need to make sure that any systems that we develop or enhance, that it can remain profitable and sustainable and that there are markets for the post-consumer material.

So, yes, we have had lots of conversations. One of the things that we have found to be really successful are some of the partnerships

and coalitions that we have been a part of, and a lot of those coalitions, like the recycling partnerships coalition, and we have done a lot of work also with closed loop partners as well, brings together all of these like-minded and kind of interested parties, some of which, you know, are competitors.

Like I mentioned, we are working with some of our competitors in the marketplace, but also some of which are not always aligned on how we should deal with these issues. And these coalitions have given us an opportunity to really talk about what an enhanced system, recycling system, a properly financed system really could look like and how do we make it more profitable and more sustainable for our local recycling centers. It is a really key stakeholder.

Mr. CARTWRIGHT. I want to jump to my last question.

Norway recently adopted a system that charges companies what they call an environmental levy on plastic bottlemakers, and it is a levy that declines as the recycleability increases. In much the same way, Britain is planning to tax manufacturers of plastic packaging that is less than 30 percent recycle.

What are the pros and cons of a system such as that? And how can we ensure that any burdensome costs don't fall on consumers who may not be able to afford them?

Ms. COLLIER. Is that also for me?

Mr. CARTWRIGHT. Yes, it is, Ms. Collier.

Ms. COLLIER. Yes, there are lots of systems that include—we sometimes call that eco-modulation. It discounts the fee that you might pay based on innovations that you have made in your packaging, and we are supportive of that type of system. We would like to see any U.S. system incorporate the investments that companies have made in their packaging, companies like Nestle and many others.

Additionally, we believe that businesses like us that are forward-looking and that are connected to the consumer will make the investment now because we are thinking about our future and tomorrow. And so there may be some costs that we incur and absorb early on, but that will level out as the marketplace changes. So we don't anticipate a lot of consumer costs upfront. We are trying to make a system and develop a system that would avoid that.

Mr. CARTWRIGHT. Thank you for your testimony. I would like to talk further offline.

And I yield back, Madam Chair.

Ms. PINGREE. Thank you very much, Mr. Cartwright.

I see Mr. Amodei. Do you have any questions for our witnesses today?

Mr. AMODEI. Madam Chair, thank you. And I appreciate you giving the shout out to the world-famous sagehen at the beginning of the meeting. We will make sure and show you as good or better a time as we did last Congress' chair, so no worries there to visit the bird with a face only a mother could love.

But anyhow, I think I want to ask, the question I have—and I have been doing a little of multitasking, so I hope this hasn't been asked before. I think I want to ask the lady who manages waste programs in Phoenix—is she still on?

Ms. SPENCER. Yes.

Mr. AMODEI. Okay, great, Ginger. Sorry, I don't know you that well, but Ginger, I know how to pronounce that, I think.

Anyhow, as I look at the recycling programs and as a guy, I know people think Republicans don't recycle, but I guess I am an aberration. So I am a dedicated personal recycler, but one of the things I have noticed—and I live in an area where water isn't quite as abundant as it is in other areas of the country, which is good news for the Nestle people, because we are buying it in bottles and stuff like that. And my question deals not with the simple stuff like those bottles, but we have received a lot of stuff—and I think the company that has the franchise in my neck of the woods is headquartered in Phoenix, and they do the recycling as well as the trash removal; but a lot of the recycling stuff the rules say it can't be contaminated in terms of food.

And so as you sit there and look at the products that are being used for doggie bags, for pizza boxes, for all of that health food stuff that I am sure we all know about, is there anything in terms of—because to sit there and go, well, cardboard is supposedly freely recyclable, or Styrofoam or all of that stuff, but I mean—and I found myself doing this. I know that this is a secret meeting so nobody will know this, but you sit there and you use water to wash the stuff that you are going to be able to recycle, which doesn't make a heck of a lot of sense.

Help me, since it sounds like you are kind of on the cutting edge of all of this stuff, are we moving towards something where—and I get it if it is destroyed and, obviously, hazardous materials and stuff like that, but recycling being something that can't have food residue on it is an interesting concept if we are trying to encourage recycling.

Ms. SPENCER. Congressman Amodei, thank you for that question.

So we get that a lot, and we do a lot of education with our residents. We actually have a tool called Recycle Wizard where you can actually put in an item and see if it is recyclable or see if it is compostable or see how you can reuse it. Food waste in recyclables is a contaminant, and actually what we have done is videos to say—first of all, because Phoenix we are very concerned about water use.

Mr. AMODEI. As we are.

Ms. SPENCER. We promote xeriscape landscaping and that sort of thing, so water is a resource, and we want to protect it. But what we found, I will just use a yogurt cup for an example. You know, instead of rinsing it out with water, what we would encourage you to do is just leave it out on your counter, let it dry up, then you can crunch the cup and scoop out the food waste, right, and now it is clean and you can put it in your recycle bin.

When it comes to glass even, with candles, again, you can burn the actual candle material out, wipe it out, and then discard the glass. So we do a lot of education and videos to our residents. All of our information is free. We share it very freely as well with others on how you can actually recycle without using water to get rid of the food waste so that we can help the environment and be sustainable from a water standpoint, as well as a recycling standpoint.

Mr. AMODEI. Okay. And thank you for choosing the example for me that has to do with the yogurt cup. As I am sure everybody

knows, I am a big yogurt customer. Not. But, anyhow, thanks for giving me a chance. I will try some sometime.

That is all I have. I yield back, Madam Chair.

Ms. PINGREE. Thank you, Mr. Amodei. And if we had known you were such a good recycler, we would have had a member quiz at the beginning to see who passed and who didn't, so maybe next time.

Ms. Kaptur. Chair Kaptur, thank you very much for joining us today.

Ms. KAPTUR. Thank you very much, Chair Pingree and also Ranking Member Joyce. What an interesting hearing. I am sorry I couldn't join earlier. I had a Veterans hearing as well.

I wanted to mention that both Congressman Joyce and myself share a fresh water coast in the Great Lakes, and we are told that about 22 million pounds of plastic are dumped into the Great Lakes each year, half of which enters Lake Michigan alone, and that is enough to fill 100 Olympic-sized swimming pools. And my dear staff has told me that it is heavier than 4,500 adult Beluga whales, so it is a lot of stuff. And we are told also that 90 percent of the litter that is picked up around the Great Lakes is plastic.

I want to commend NOAA for launching something we call marine debris, where in our region we challenge young people to be conscious of marine debris and to present artwork and papers that raise consciousness regionally.

So I am interested if Ms. Lau could talk a little bit about the regional impacts of plastic pollution, particularly on inland oceans like the Great Lakes. I have wondered as I have listened to this today, Ohio State University has been very involved in using a corn byproduct to actually make bags that used to be made out of plastic. And these bags—the first time they did it and I went to a county fair and I picked up a bag, it melted, so it didn't work. But I wonder, I think they have perfected it now, if part of the answer lies in science and in developing materials that, in fact, disintegrate at some point.

I also, in addition to that question about fresh water ecosystems and some of the challenges that we face there, I wanted to just put this on the record, the concentration of microplastics in some of our tributaries.

The Maumee River is the largest river that flows into the shallowest of the Great Lakes, Lake Erie, which is very sick right now, and we got the figure of 2.6 particles per cubic meter. This compares to 1.7 to 2.1 particles per cubic meter in the Portage and Sandusky Rivers, which are more upstream, and microplastics inputs to Lake Erie are estimated to be fourfold higher than the other Great Lakes, Lake Huron, and so forth, and we are told it is 80 fold higher than Lake Superior.

Could the witnesses elaborate on what some of the long-term challenges these increased microplastic levels might have on the health, drinking water, and fisheries? And I will wait for the reply.

And thank you so much for this hearing again, Madam Chair. You make a difference.

Ms. LAU. Thank you, Ms. Kaptur, for the questions.

First, with our study, we looked at plastic pollution in all waterways, oceans, lakes, rivers, and streams, as well as on land, and

the trend is the same. We will be seeing tripling of plastic pollution across all of these different ecosystems in the next 20 years if we don't dramatically put in changes to reverse the trend.

Our study was a global study, so we didn't look at individual countries or individual regions. So I am sorry I won't be able to provide that specific answer for you; but extrapolating from our global study, I would say that you are right in your concern that in the Great Lakes region plastic pollution will continue to be a very big problem and likely will continue to get worse and worse unless changes are put in place.

In terms of microplastic, it is something that is gaining a lot more attention as a pollutant, and in our study we found that tire tread particles, in fact, made up $\frac{3}{4}$ of the microplastic pollution among the four sources of microplastics we looked at. So tire tread particles, textiles from our clothing, the pellets, plastic pellets that turns into plastic products, as well as the microbeads that are in our personal care products, those are actually smaller categories, still very important; but tire tread particles are extremely important.

There was a recent study that looked at salmon die-offs in the Pacific Northwest, and they identified that it was a chemical from tire dust particles that was causing the die-off in the salmon in the Pacific Northwest. So it is quite likely there are these other impacts in other ecosystems, other freshwater systems.

So it is going to be very important that more research is done on microplastics and their impacts, but also their sources, so that we can find better ways to reduce them and prevent them from getting into our environment.

Ms. KAPTUR. Thank you.

Madam Chair, I just wanted to mention if I could—I know I am over time, and I will try to do this really fast.

Ms. PINGREE. Thank you.

Ms. KAPTUR. But there are companies—and I will provide them to the record. I think one is called Re-New or Re-Gen, I just can't remember—where they are taking plastic because of their deep concern that half of the forests—the wood in the forests in our country, that is being cut down, is being cut down for pallets, and they are trying to find a substitute for wood in pallets, and they have been recycling plastic to a point where they are able to make it stronger than steel actually as they get it to glump together through a heat process I believe it is.

And because they were worried about reforestation and what's happening with our forests. And I think it would be interesting to look at new industries that are being born by reusing recyclables like plastics.

And I hear what you are saying about eliminating it in the first place, but I think there also are people working on the other end and, hopefully, we can attract some of those to do business, do greater business. And I will share those with the record.

Thank you.

Ms. PINGREE. And thank you, Chair Kaptur. It is really a wonderful resource to have you and our ranking member so knowledgeable about the Great Lakes. Those of us on the coast tend to think about water bodies and think about the ocean, but they are such

essential resources that I know we will have a chance to talk much more about them during this year.

And next week our committee hearing will be about forest, forest products, the health of our forests, so if you want to put that on your calendar, it would be great to have your input.

We have heard from all of the committee members, but we have a chance for a second round. So I am just going to go ahead and ask another question. I recognize myself for 5 minutes.

Ms. Collier, thank you so much for being here with us today, and I am very familiar with the work that Nestle does, especially as part of the Sustainable Food Policy Alliance. That has been a really great movement forward in terms of so many things around transparency and packaging and just a whole variety of things, food waste, everything else. I have gotten to work with you and the other companies on a variety of issues. So thank you for being a part of that.

As you know, Nestle has a long history of Maine as the owners of Poland Spring Water. Poland Spring Water is a 175-year old water company, and we have been thrilled in that capacity to see that Nestle is a brand that is using recycled packaging so seriously.

We have also been excited to have the University of Maine, which has done a lot of work on silastic nano products to really look at some of these alternative methods for plastics, and I know there have been some alliances around the research that is going on there.

But I also note that Nestle is selling off Poland Springs, so we will not be a long-term partner with Nestle, but I know that you will go on to create important things. But I was interested to read because we, of course, have followed that in Maine about the coming sale of Poland Spring, but one of the factors was around bottled water and some of the decline in people using it because of their concerns about the plastic waste.

And I only bring that up because I think it speaks to some of the questions that have come up earlier about how—the importance of resolving these issues in terms of consumer demands. Consumers are increasingly saying, We want to use environmentally friendly packaging, we want to use things that are good for our climate, and that that factors into enormous decisions, like whether a company is bought and sold or what the future of a particular product is.

So that I think makes this even more important and also emphasizes the complexity of this problem that so many of you have talked to us about today, whether it is how it gets recycled, what is in the initial product, what leaches out of the products, so many things.

So I am just going to ask you because I know the company is doing some work on bioplastics, and that is a big interest of ours. In Maine—Ms. Kaptur mentioned it, you know, with corn. People have talked about potato-based plastics. We are interested in wood fiber, just the opportunities there for more compostable products or just the new fibers that might be used that may leave less toxins in the environment.

So sorry my question was so long, but just interested to hear how you see that work and where you think we are with it.

Ms. COLLIER. Thank you, Chairwoman Pingree. We really do look forward to continuing to work with you and have appreciated your leadership on food waste, for example, but certainly in these areas as well.

You know, there are a lot of decisions and factors that go into business decisions like the ones we have had to make in the last couple of years. I won't necessarily speak to that too specifically, but I can say, whenever we have products—and you are right, our consumers are telling us that they want changes in our packaging and they want to see less waste and they don't want to feel guilty about purchasing products that they are not sure how to recycle or how to dispose of them, and we are doing a lot of work to try to communicate with our consumers about their packaging and about their food.

So that is one thing for sure we have to be very responsive to that. And Nestle does invest in the space. As I mentioned, in 2019, we created this Institute for Packaging Sciences, and we continue to look at different packaging applications. Recycling is sometimes preferred for certain packaging because we can have that circular approach. But bio-based and biodegradable packaging is certainly also something that we are considering in doing a lot of work on.

We have partnered with fantastic universities, like the University of Maine. We also partner with other universities around the world in this space, and we also have a partnership with the company, Danimer Scientific to develop a marine biodegradable and recyclable bottle, and there is some information about that that is public, and we continue to do work on that. That is research and development work that is not necessarily tied to specific businesses or divisions within the company.

So we are continuing to do all of that. We want to be able to offer consumers a lot of variety and what they want, and we are also are paying attention to what's necessary for the quality and safety of our foods as well.

Ms. PINGREE. Thank you so much.

Mr. Joyce.

Mr. JOYCE. Thank you, Madam Chair.

Ms. Spencer, I am glad to see that you came back. I was worried that I was going to lose you when your screen went blank.

Given education is a proven tool to increasing recycling participation and producing more viable recyclable streams, last Congress I was proud to co-sponsor the Recycle Act. The Recycle Act would create a new EPA grant program to help educate households and consumers about their residential and community recycling programs.

I, for one, in the local paper at home started reading about the problems we were having at the recycling center at the township, and being the guy who shuttles all the household recycling up there, I know my wife—mason jars, bottom will crack, can't go in the stream. It is glass, so why would it go in there. Obviously, we need to be educated.

I was especially pleased that in fiscal year 2021 Congress provided up to \$1.5 million for these efforts. Can you take a moment to discuss how community outreach, communication, and education

about sustainability efforts to residents and businesses were critical in helping Phoenix reach its sustainability goals?

Ms. SPENCER. Thank you, Ranking Member Joyce, for that, and also thank you for your leadership and for the Recycle Act. That is huge, that is huge, and it will go a long way to help communities with increasing education for our residents.

In Phoenix, that is our first fear when we looked at developing our Reimagine Phoenix Program so. So the very first part is how can we educate our residents, the second part was new programs and services, and the third was public-private partnerships. So, again, it starts with our residents.

One of the things is we need to be consistent in our messaging, and we need to have technologies that will allow all cities to be able to recycle the same type of products. You mentioned glass. In Phoenix we are very fortunate, we can recycle glass. We have optical sorters that allow us to do it, and we have a company that is located here that actually can take that glass and repurpose it.

But the one thing that will be very helpful working with EPA, as well as other organizations and coalitions, if we can have consistent messaging. And, again, if we can have the technology that will allow our MRFs, whether you have a MRF in your own township or your own city or if you are using a regional approach or if you are even working with the private sector through their MRFs, that we can actually take the material in the first place, process it, and, most importantly, have a market for it so that it can sell and then be repurposed.

So we do a lot when it comes to education. And, again, for us, the residents, they are at the top of the food chain. They are our bosses, and they want recycling, and we have to engage them. We surveyed them, and that is really what helped us with our efforts here in Phoenix is hearing their voices and knowing that they value it and that they expect it and that they rely on us.

Mr. JOYCE. Now, is it, in fact—it has been helpful to you to do that, but isn't the—like I said myself, when you schlep this stuff up there in the township, and then the township—the article was about it is not cost effective for them, people were throwing too much junk into the stream. If it is not going into the recycling stream, then it is just basically going to the lots or to the—

Ms. SPENCER. To the landfill.

Mr. JOYCE. Correct, thank you. I was going to say junkyard, but I knew that wasn't it.

Ms. SPENCER. That too. And so, yes, sir, it is just very important that we keep our recycling messages very simple and that we give our residents options, but we should be clear about if we are taking a material, right, and our residents are paying us to do that, that it is being recycled at the end of the day and not sent to the landfill.

So, again, it is about keeping up the infrastructure and keeping up the technology so that we can take that material and we can recycle it, and it is also about creating those local markets and partnerships so that, at the end of the day, it is being recycled, it is being repurposed, it is creating new products or turned to fuel, whatever the case may be.

So we want to keep the message simple, and we definitely want to work with our residents, and we do community meetings, you know, prior to COVID. Now we do a lot of information online, a lot of videos, a lot of tools for our residents.

Mr. JOYCE. And it is not a question, but I would like to follow up and be able to view some of those things offline after we get through with this hearing.

Ms. SPENCER. Yes, sir, be glad to do that.

Mr. JOYCE. Thank you.

And it looks like, once again, it is you and I, Madam Chair, and I know these ladies, we have put them through a couple of hours here, and I apologize for being late to begin with, but all of us get stuck in other meetings.

But I know you are in good hands with our chairwoman, and I really appreciate the opportunity to hear from all of you today. It is very enlightening, and thank you for your service and work.

I yield back.

Ms. PINGREE. I want to thank all of you. You have been really wonderfully informative to all of our colleagues, and I know we will have follow-up questions going into the future, and you are all great resources for us as we work towards these issues, all of which are very critical and need our attention and resolution now. I can see from all of the statistics this is not something we can continue to put off for so many reasons, so——

Mr. JOYCE. Madam Chair, before we close, I would like to enter a letter into the record from my distinguished colleague, Tim Ryan, about a company in his district and some of the processes that they use to help eliminate waste.

Ms. PINGREE. Absolutely. Without objection, so moved.

[The information follows:]

THE RECYCLING PARTNERSHIP

Hearing on “Efforts to Address Marine Plastic Pollution Through Recycling”

Statement for the Record

House Subcommittee on Interior, Environment and Related Agencies

March 18, 2021

Dylan de Thomas
Vice President, External Affairs
The Recycling Partnership

Thank you for the opportunity to submit a statement into the hearing record for the House Appropriations Subcommittee on Interior, Environment and Related Agencies’ hearing “Efforts to Address Marine Plastic Pollution Through Recycling.”

The Recycling Partnership is a national nonprofit that works with companies, communities, and policymakers across the nation to strengthen public recycling programs. Our organization puts private dollars to work in communities because we know that when we invest in a system that creates jobs, feeds manufacturing, protects resources, empowers sustainable action, and unlocks opportunity, everyone wins.

We applaud the Subcommittee for holding this hearing which focuses on important issues relating to recycling in the United States, and for its prior work in advancing this cause. The Recycling Partnership commends the Subcommittee’s inclusion of report language and associated funding in the FY2021 Omnibus Appropriations bill that directs the Environmental Protection Agency (EPA) to develop a comprehensive data collection effort to strengthen residential recycling in the U.S. and to promote the movement towards a circular economy. Strong data is the foundation of good policy. Through learning more about the status of recycling programs in communities throughout the country, and by identifying the gaps in our current recycling system, public and private entities can have informed conversations about the state of recycling in the United States, craft effective solutions for increasing the efficient collection and processing of recyclable materials, strengthen recycling markets, and measure the effectiveness and progress of efforts moving forward against a meaningful benchmark.

Last fall, The Recycling Partnership, through its policy arm, the Circular Economy Accelerator, released a report entitled *Accelerating Recycling: Policy to Unlock Supply for the Circular Economy*, the culmination of more than a year’s worth of stakeholder engagement and policy research. The report proposes a shared-responsibility policy for sustainably funding the U.S.

recycling system and identifies federal leadership as a critical component in establishing a more consistent, effective, and efficient system.

In our report, we highlight three areas of the U.S. recycling system that need sustainable investment: infrastructure, education, and community recycling program operations. Our policy proposal addresses these three needs through a shared responsibility model that includes a packaging and printed paper fee and a federal disposal surcharge.

The first component of our shared responsibility policy proposal, packaging and printed paper fees, would be data-driven and based on a needs assessment. Fees would be calculated to address to level of investments needed to:

1. Provide parity of access between recycling and trash;
2. Reduce levels of inbound contamination; and
3. Provide assistance to ensure that recycling sortation facilities, or materials recovery facilities, in our country incorporate the technology and other best practices they need to efficiently and effectively sort collected materials.

A third-party, non-governmental organization would lead this effort by setting and collecting fees based on the identified needs and disbursing funds in order to meet statutory goals. We recommend that fees be eco-modulated, creating economic incentives for environmental design criteria such as inclusion of recycled content and recyclability.

The second component of our policy proposal is a federal disposal surcharge, a funding mechanism that has been identified as a best practice with over 30 states having implemented a state-level fee. It is vitally important that all revenue from the disposal surcharge goes back to communities to help offset recycling operational costs, such as the salaries of employees who drive collection trucks and the contracts with materials recovery facilities which have been a source of increased costs in recent years.

Our policy proposal addresses all curbside recyclable materials because the entire U.S. recycling system needs to be leveled up. No single material makes up the majority of the recycling bin and therefore no single material can be held accountable for the challenges facing the residential recycling system. Furthermore, all material types benefit from decreased levels of contaminations, and many struggle with getting enough material back through the recycling system. We often say that “we’re all in this bin together.”

We’re proud to have eighteen partners endorse this approach – Alpek Polyester, Aluminum Association, American Beverage Association, American Chemistry Council, Association of Plastic Recyclers, Ball Corporation, Can Manufacturers Institute, The Coca-Cola Company, Danone, Dow, Glass Packaging Institute, Indorama, Keurig Dr Pepper, Mars, Nestle, PepsiCo, Sustainable Food Policy Alliance, and Unilever – who have said that the policy proposal advances the opportunity for the private sector to act as stewards of the circular economy.

We are facing a challenge that requires public, private, and nonprofit partners to work together and transition from simply fixing problems to looking at the possibilities of a circular economy future. It's a future where we no longer bury valuable materials, but instead put these materials to work for our economy, creating new jobs and protecting our environment. Congress has an opportunity to be a consequential actor on these issues, and we urge attention to the opportunities we have suggested.

We commend the Subcommittee for its attention to this important issue. Thank you for allowing us to submit this statement to the hearing record. We look forward to working with you on solutions that create jobs and protect our planet and its people.

Mr. JOYCE. Thank you, Madam Chair.

Ms. PINGREE. Absolutely.

Okay. So, again, thank you to all of the witnesses. We really do appreciate your questions. And if there are no additional questions, the hearing is now adjourned.

Thank you.

TUESDAY, MARCH 23, 2021.

**WOOD INNOVATION: SUSTAINABLE FOREST PRODUCTS
TO REINVIGORATE RURAL ECONOMIES**

WITNESSES

**CYNTHIA "CINDI" WEST, DIRECTOR, FOREST PRODUCTS LABORATORY
AND NORTHERN RESEARCH STATION**

**STEPHEN SHALER, PROFESSOR AND DIRECTOR, UNIVERSITY OF
MAINE, FORT MAINE, SCHOOL OF FOREST RESOURCES**

**PETER MACKEITH, DEAN AND ARCHITECT, FAY JONES SCHOOL OF
ARCHITECTURE AND DESIGN, UNIVERSITY OF ARKANSAS**

**MARC BRINKMEYER, OWNER, IDAHO FOREST GROUP, IDAHO FOREST
PRODUCTS COMMISSION**

Ms. PINGREE. Good morning. This hearing will now come to order.

As this meeting is fully virtual, we must address a few house-keeping matters, and I will read the opening verbatim.

For today's meeting, the chair or staff designated by the chair may mute participants' microphones when they are not under recognition for the purposes of eliminating inadvertent background noise.

Members are responsible for muting and unmuting themselves. If you notice you have not unmuted yourself, I will ask you if you would like the staff to unmute you. If you indicate approval by nodding, staff will unmute your microphone.

I remind all members and witnesses that the 5-minute clock still applies. If there is a technology issue, we will move to the next member until the issue is resolved, and you will retain the balance of your time.

You will notice a clock on your screen that will show how much time is remaining. At 1 minute remaining, the clock will turn to yellow. At 30 seconds remaining, I will gently tap the gavel to remind members that their time is almost expired. When your time has expired, the clock will turn to red and I will begin to recognize the next member.

In terms of speaking order, we will follow the order set forth in the House rules, beginning with the chair and ranking member. Then, members present at the time that the hearing is called to order will be recognized in the order of seniority; and, finally, members not present at the time that the hearing is called to order.

Finally, House rules require me to remind you that we have set up an email address to which members can send anything they wish to submit in writing at any of our hearings or markups. That email address has been provided in advance to your staff.

All right. That is the end of the technical stuff, so we can go ahead and open this up.

Well, I am very excited to be having today's hearing in our committee. It is a really important time to talk about some of the exciting developments in the forest product industry. This industry is critical to my State, and I know it is to many others in this country.

Just as an aside, our State is 90 percent forested. We are the most forested State in the Nation. And unlike a lot of western States, we are mostly, 90 percent, privately owned, so quite a difference.

As another small aside, I just want to say, I live on a 200-acre piece of property that is covered by an old-growth spruce-fir forest. So I've spent much of my life around forestry and harvesting, and we know some of the challenges that are happening given the droughts that we are experiencing now, the invasive species, the end of the useful life of many of these trees and the importance of replanting and harvesting for good use. So we have a lot of engagement in that.

So there are a lot of innovations in sustainable, climate-friendly products that really could be important to reinvigorate a sector hit hard by reduced demand for certain traditional wood products like pulp and paper. We certainly know in our State the heartbreak of losing a paper mill, losing the jobs, losing the heart of the community. So these innovations and new markets are particularly important to us, as they have been in many other places. The nice thing about this emerging market for climate-friendly products, it is also a good opportunity to promote rural job growth.

Today's hearing will explore the ways in which innovative, new forest products could function as excellent alternatives to traditional materials while also being climate-friendly because they are renewable resources and they store carbon once in buildings. We will have a chance to discuss mass timber and how the widespread adoption of new timber products in the construction industry could have a major impact on the carbon footprint of the construction industry as a whole.

Research shows that wood products can have multiple layers of benefits. In an agriculture policy committee hearing that was held last year, Michael Goergen of the Endowment for Forestry and Communities testified about the potential for biodegradable and recyclable food packaging made from forest products. The University of Maine has participated in this research, and I am pleased that one of our witnesses today is from the University of Maine and can tell us more about projects like this.

Coincidentally, last week, we held a hearing on plastic waste and recycling, and we learned that plastic pollution costs the global economy over \$1.5 trillion a year due to impacts on a variety of sectors. Packaging alternatives created from forest products could help solve some of this crisis.

Much of the innovation in the wood industry is credited to the research and support provided by the Forest Service. In fiscal year 2021, we appropriated \$20.3 million for the Forest Products Laboratory. FPL's research ranges from fiber and chemical science to composites, and its work has allowed a wide range of wood products to emerge and develop into viable consumer products, from nanocellulose-enhanced flooring to wood cellulose supporting films

and electronics, to advanced composites and many things in between.

I look forward to hearing how we can continue to support progress and innovation in the wood products industry through support of the Forest Service.

So, to discuss this important issue, I am pleased to welcome Dr. Cindi West from the U.S. Forest Service and the Director of the Forest Products Laboratory in the Northern Research Station.

Joining Dr. West today are three witnesses with a deep knowledge of forest products development and research into emerging products and their uses in construction: Dr. Stephen Shaler, director and professor at the School of Forest Resources at the University of Maine, representing FOR/Maine; Marc Brinkmeyer, owner of the Idaho Forest Group, representing the Idaho Forest Products Commission; and our final witness is Dean Peter MacKeith joining us this morning.

And we are very fortunate to have him introduced by Representative Womack. Thank you so much for joining us today, and I will turn the introduction over to you.

Mr. WOMACK. All right. Thank you so much, Chairwoman Pingree. And what a great honor it is to be with this subcommittee this morning and my colleagues on the Appropriations Committee.

To all of you, I want to welcome from the Natural State Peter MacKeith. If you hear someone mention "the Hill" in Washington, they refer to Capitol Hill, but in Arkansas we refer to the University of Arkansas campus. So, while Dean MacKeith would need little introduction on the Hill in Fayetteville, I do want you, my colleagues on the Appropriations Committee, to know a little bit about his background.

He's a professor and the dean of the Fay Jones School of Architecture and Design at the University of Arkansas, a cornerstone of higher education in my district. He was appointed as the fifth dean of the school in 2014 and has made his mark in the industry as a nationally recognized scholar, teacher, and administrator.

Since his arrival on campus, he has expanded academic and outreach programs and fostered innovative design thinking across the State and well beyond. A long list of accolades includes a Fulbright fellowship, multiple Design Educator of the Year titles, and recognition of the Design Futures Council. I could go on, but I am positive his expertise will be demonstrated in his testimony this morning.

Before joining us in northwest Arkansas, he was an associate dean, professor of architecture, and adjunct associate curator for architecture and design at the Sam Fox School of Design and Visual Arts at Washington University in St. Louis. Prior to his tenure at WashU, he served as director of the Master of Architecture International Program at the Helsinki University of Technology in Finland from 1995 to 1999.

Superb academic achievement laid the groundwork for Mr. MacKeith's success in the field. A participant in the prestigious Echols Scholar Program, he received his Bachelor of Arts in literature and international relations from the University of Virginia in 1981 and his Master of Architecture from Yale in 1985.

He is also currently serving as chair of the Advisory Committee for the Northwest Arkansas Design Excellence Program, in addition to overseeing the design and construction of the Anthony Timberlands Center for Design and Materials Innovation, a regional center for research and development of new wood products and new approaches in sustainable construction materials.

Mr. MacKeith is also an accomplished author and has served as the editor of *Perspecta*, the Yale Architecture Journal, in addition to the *SOM Journal*.

As even a cursory examination of his record makes abundantly clear, he is an excellent asset to the University of Arkansas and the greater Fayetteville and northwest Arkansas community. His substantial experience will elevate today's discussions, and I am pleased to welcome him to today's hearing.

Before I yield back, let me take a shameless opportunity to note that the Razorbacks are headed to the Sweet Sixteen for the first time in 25 years. And I know Mr. MacKeith is just as excited about that as I am.

So, Mr. MacKeith, thank you for joining us. And go, Hogs.

Ms. PINGREE. There you go. Okay. Well, I am sure we will hear about some other favorite teams as the day goes on, but very exciting news for Arkansas. And thank you so much for being here to introduce your witness from your State.

Now I will yield to Mr. Joyce for any opening remarks he would like to make.

Mr. JOYCE. Thank you, Chair Pingree.

And special thanks to my friend and colleague, Congressman Womack, for taking the time to help introduce our witnesses this morning.

I would also like to extend a warm welcome to Dr. Cindi West, Peter MacKeith, Dr. Stephen Shaler, and Marc Brinkmeyer. I want to thank you all for participating today. While I regret that we cannot be together in person, I look forward to hearing your perspectives on innovative wood products and their impact on rural economies and the health of our Nation's forests.

Our Nation's forests, both public and private, offer substantial environmental and economic benefits. Forests improve our air and water quality, provide habitat for plants and wildlife, reduce carbon in the atmosphere, and help control floods and erosion. Forests also furnish recreational opportunities; timber, mineral, and energy resources; but, most importantly, quality jobs, especially in rural areas, for communities across the country.

I have seen these benefits firsthand in my home State of Ohio. Nearly 8 million acres of forestland help support over 120,000 forest-related jobs that contribute more than \$20 billion to Ohio's economy. When considering the economic impact of forest products nationwide, the industry directly employs over 900,000 workers and manufactures nearly \$300 billion worth of products annually.

I recognize, though, for our forests to meet the needs of current and future generations, we must commit to finding ways to utilize, manage, and protect our Nation's forests while maintaining a viable market for wood products. Innovative wood products provide us with an opportunity to meet these challenges. By developing and exploring new uses for wood, especially low-value or low-quality

wood, we can create new jobs and market demand and reinvigorate rural economies.

Innovative wood products also provide landowners with more opportunities for active management of our Nation's forests, which helps us ensure that our forests are more resilient to insect infestations and diseases as well as reduce the risk of catastrophic wildfires.

I look forward to hearing today about how the U.S. Forest Service is accelerating the development of innovative wood products through research efforts at the Forest Products Laboratory. I am also keen to learn about the agency's work to help create new, expanded markets for wood products through partnerships and grants.

Additionally, I hope to hear more about the benefits associated with the diverse range of innovative wood products, including cross-laminated timber and other mass timber products, in addition to wood products derived from nanotechnology.

With that, I look forward to this discussion ahead of us. In Ohio, we have no more teams left in the NCAA tournament, but I always like a underdog, so I will take Oral Roberts, since they knocked off the Buckeyes.

Thank you, Madam Chair. I yield back.

Ms. PINGREE. There you go. Thank you, Mr. Joyce. I guess I better quickly pick a team.

Would any other members like to make opening remarks?

Mr. SIMPSON. Chairwoman Pingree.

Ms. PINGREE. Yes, Mr. Simpson.

Mr. SIMPSON. Thank you.

I would like to introduce a friend of mine, but, before I do, I haven't had the opportunity yet to thank you for putting on this hearing and congratulate you on being the chairwoman of the Interior Appropriations Committee. I look forward to working with you.

And I notice you have a bunch of books behind you, and so do I. We are going to have to exchange titles and see what we can do.

And just as an aside, I like the Razorbacks, but they haven't met Gonzaga yet. So the Bulldogs are going to eat everybody up, just so you know that and you are not disappointed when it comes.

But let me introduce a friend and advisor of mine for many years, Marc Brinkmeyer. He is the owner and chairman of the board of the Idaho Forest Group, as was mentioned. One of America's largest producers across Idaho and Montana, the Idaho Forest Group owns six sawmills and a finger-joint facility with capacity of over 1 billion board-feet per year. Marc is an accomplished business leader, a champion of education and innovation, and a longtime philanthropist.

Based in Coeur d'Alene, Idaho Forest Group grows, harvests, manufactures, and distributes lumber and other wood byproducts to customers in the United States and abroad. The company emphasizes a talented workforce of more than 1,000 employees and 2,000 partner contractors. IFG's mission statement is to "enhance the lives and livelihood of our employees, customers, and partners and the communities in which we operate by providing the Earth's best renewable building products."

He is a champion in the forest products industry, and I look forward to hearing their testimony.

Welcome, Marc. Thank you for participating today.

Ms. PINGREE. Thank you, Mr. Simpson. And thank you for your kind words. It is wonderful to have someone from Idaho today here with us, and it will give us a chance to decide who has the better forest and the better potatoes, Maine or Idaho. It is always a competition.

Let's start off our witnesses with Dr. Cindi West.

Thank you so much for being here, Ms. West.

Ms. WEST. Thank you, Chair and Ranking Member and members of the committee. I appreciate this opportunity to share with you information about how the U.S. Department of Agriculture's Forest Service supports innovative wood products and their impact on our Nation.

The investment by the Federal Government in wood innovation and research started in 1910, when the National Center for Forest Products Research was established in Madison, Wisconsin. We had a critical need for the Nation to lengthen the life of wood rail ties to fuel economic development of this country.

Today, the Forest Service uses all of its authorities across the agency to support wood innovation. In addition to research, State and private forestry grant programs support early adoption and application of wood innovations across the spectrum. They provide technical assistance and market development.

We develop and trial many of our new technologies on national forest. We demonstrate their benefit and their efficacy and use demonstration to transfer and speed up adoption of these innovations.

We work from the smallest components of wood today at the nano scale to mass timber for multistory structures at the largest scale. And although we started as a national center, a single research organization within this country, we now work through a collaborative of university, industry, and NGO partners to innovate and address the most pressing issue of our time: how to build a sustainable future.

Now, the year I was born, the world's population was around 2.9 billion. Today, it is 7.8 billion. And at the end of the century, when my grandchildren will be 85 and 82, the world's population is projected by the U.N. to be at 11 billion. It is urgent that we develop the technology to sustainably provide for the needs of 11 billion people across the world—solutions that address ecological, economic, and social needs.

Nature offers us a sustainable path [inaudible] Through the best [inaudible] Practices for forests and also for use. Wood is our most abundant, renewable, and versatile raw material on planet Earth.

Today, you may not really realize how many wood products you touched before getting to work this morning. They included maple syrup, toothpaste, of course your wooden house, your home, your furniture, clothing, cardboard, paper, and in aspirin that was compounded originally from a tree.

The United States is a world leader in sustainable forest management. We are blessed with very abundant natural resources. However, climate change is increasing the risk to these resources

and to our forest. The amount of biomass accumulated in areas of increasing drought is not sustainable. As we have seen over this last decade in the Intermountain West, warming temperatures and invasive species, such as the emerald ash borer, are transforming the composition and regeneration of northern forest.

We cannot take for granted our forests will continue to provide wildlife, recreation, clean water, carbon sequestration in the same abundance as in the past. We need to take action now unless we want to see impacts from these types of stresses on our forest.

Sustainable management of our forest will continue to provide our Nation with a positive carbon sink, reduce the loss of wildfires to forests, and provide benefits that enhance our quality of life—water, habitat, outdoor recreation, and economic opportunities for rural communities.

Increasing markets for renewable wood materials and products makes a positive economic incentive to retain private forest as forest and to mitigate the effects of climate change. Innovative wood products diversify and support a vibrant forest private sector, which is essential to forest health and sustainability.

My written statement provides many details on how the Forest Service is contributing to sustainable solutions through research, innovation, and market development with a wide variety of partners. But let me just talk a little bit about how we are advancing from the lab to putting discovery and innovation to use in growing a wood products sector, economy, and opportunities for good forest management.

Together with our partners, we are increasing wood use in the Nation's industrial building sector by supporting the development and application of mass timber products such as cross-laminated timber, CLT, in the construction of tall, multistory buildings.

To meet building code requirements in the United States, we are working with organizations like the International Code Council, WoodWorks, the Softwood Lumber Board, the American Wood Council, and, importantly, the Department of Defense to support the changes necessary in building codes to use this technology. We have conducted numerous and necessary seismic and fire performance tests, blast tests, to gain code support required for this construction.

The Wood Innovations Program has supported education and technical assistance for architects and engineers to design and build these systems.

In 2014, when the Forest Service initiated engagement in the CLT sector, the U.S. had zero manufacturing facilities. Today, there are 10 operational mass timber manufacturing facilities, and we anticipate additional plants coming on line soon.

We are building the collaborations with businesses and organizations to help develop markets for CLT and mass timber products through the agency's competitive Wood Innovations Grants Program.

And, finally, we are working to develop and refine new mass timber material, consistent with the goal of utilizing low-value and small-diameter trees. And, thus, we can provide forestland owners and managers viable markets to support management activities to improve forest conditions.

The Forest Service is fulfilling a Federal role as an agent to coordinate national capacity across different entities to develop a sustainable future and competitive advantage for forest owners and wood product businesses and industries. Using the materials that nature provides ensures our forests will continue to provide for the Nation and the world.

We appreciate the committee's interest in our work related to innovative wood products and look forward to working together to ensure these programs are delivered in the most efficient and effective manner possible. I am happy to answer any questions you may have.

Thank you very much.

[The information follows:]

**TESTIMONY OF CYNTHIA WEST, DIRECTOR,
FOREST PRODUCTS LABORATORY
UNITED STATES DEPARTMENT OF AGRICULTURE—FOREST SERVICE**

**BEFORE THE UNITED STATES HOUSE OF REPRESENTATIVES
COMMITTEE ON APPROPRIATIONS
SUBCOMMITTEE ON INTERIOR, ENVIRONMENT, AND RELATED AGENCIES
March 23, 2021
CONCERNING “INNOVATIVE WOOD PRODUCTS”**

Chair Pingree, Ranking Member Joyce and members of the Subcommittee, thank you for the opportunity to appear before you today as the Committee considers the role wood innovation has on our nation’s forests, economy, and society. My testimony will cover how the USDA Forest Service supports innovative wood products, and their impact on our nation.

INNOVATIVE WOOD PRODUCTS AND THE FOREST SERVICE

The USDA Forest Service provides leadership on innovative wood products to support the agency’s mission of sustaining the health, diversity, and productivity of the Nation’s forests and grasslands to meet the needs of present and future generations. Research and development of innovative wood products is a critical component to science-based forest management as a natural solution to climate change in the United States. Markets for innovative wood products, particularly those that use low-value biomass as inputs, incentivize forest stewardship and help keep forests as forests. We need these forests to provide the nation with a positive carbon sink, as well as other ecosystem benefits that sustain people and communities—clean water, wildlife habitat, outdoor recreation opportunities, and economic opportunities for local communities.

Forests and forest products can help us build a pathway to a more environmentally sustainable economy. To help our nation and the world move in that direction, the Forest Service supports development of a diverse range of wood products - from mass timber for tall wood buildings to nano materials that can make concrete stronger. The agency’s research and development in this growing field is accomplished at the Forest Products Laboratory, regional research stations, and through our Wood Innovations Program.

RESEARCH AND DEVELOPMENT

The Forest Service has the largest forestry research and innovation organization in the world. The agency supports all stages of research: from discovery, to product and process development, and proof of concept leading to commercialization. The USDA Forest Products Laboratory (FPL) is a hub for basic and applied research, coordinating the work of numerous academic, governmental, industrial, and non-profit groups to initiate and accelerate development of innovative forest products to provide economic and environmental benefits to the nation. The agency’s unique system of research capabilities, partnerships, and a strong technology development and transfer program makes this approach possible.

Forest products research at the FPL currently focuses on four areas:

Nanotechnology

Much of the basic research showing properties and potential of cellulosic nano materials from wood was conducted by FPL scientists, in collaboration with university partners around the country. FPL is in partnership with the United States Endowment for Forestry and Communities to accelerate transfer of these cutting-edge particulate materials from the laboratory to commercial application by industry in fields ranging from packaging films to food additives. As an example of this collaboration, people in Yreka, California, are now driving over a bridge constructed in 2020 with cement that is 20 percent stronger due to the incorporation of cellulosic nano materials from wood.

Bioenergy/Biorefinery

FPL researchers and their university partners have been at the forefront of developing fundamental science to efficiently convert wood into renewable transportation and heating fuels using chemical and biological treatments. Working with nine universities and four industrial partners through the Northwest Advanced Renewable Alliance, FPL played a key role in making 1,000 gallons of fuel for the first ever cross-country commercial flight in 2016 using biofuel from wood. This work could help the airline industry meet its goals for mitigating greenhouse gas emissions. Research on torrefaction paves the way to convert wood to biochar, a solid fuel, from forest residues and byproducts of forest restoration activities. Biochar is a renewable energy substitute for coal and natural gas. When used as a soil amendment, biochar can improve soil health and productivity by increasing soil carbon and nutrient availability.

Advanced Composites

Advanced composites are produced by bonding wood materials together which gives them their unique performance characteristics. Ranging from fiber-based products to laminated beams, these products are used in a variety of structural and nonstructural applications. FPL's state-of-the-art pilot composites plant draws researchers from academia and industry to work together with FPL scientists and technicians to accelerate development and commercialization of advanced composites. For example, the basic science behind bonding with soy adhesives was carried out at FPL. Now industrial partners who worked at FPL are making it a commercial reality: soy adhesives are quickly becoming the chosen alternative to formaldehyde adhesives. In addition, FPL scientists and industry cooperators are developing a high-performance natural composite from sustainable wood resources for the United States Navy to use in missile nose fairing and other aircraft components. The new composites are designed to replace legacy plywood parts made from increasingly scarce resources. Finding lightweight and strong domestic substitutes is imperative to meeting the military's technology needs.

Advanced Structural Materials

FPL scientists are developing laminated mass timber materials from softwoods, hardwoods, and wood-based composites. These materials are being used to produce structural beams, columns, and panels at commercial-scale sizes used in the building industry. The burgeoning construction markets for these products are projected to grow as demand for green buildings increases. We are working with partners to develop advanced cross-laminated timber (CLT) panels to fulfill United States Department of State performance standards for protective building design. This work will

make it possible for federal facilities to reap the sustainability and aesthetic benefits of wood construction, while maintaining protective design standards. In addition, FPL, university, and industry cooperators are developing mass timber structures to resist multiple hazards, including earthquakes, hurricanes, and tornadoes. As a result, the first prequalified CLT shear wall will be listed in the next edition of the governing structural design standards of the United States. Ongoing work in walls and horizontal floor and roof slabs will qualify more mass timber structural components to be included in building code standards.

FPL economists and analysts provide economic analysis and projections indicating impacts of changing wood products use. Economists provide information describing how and why wood products markets and technologies change over time. They also highlight natural resource management implications and selected broader environmental, economic, and social impacts. This information is used to assess market opportunities and inform investment decisions. Through application of Life Cycle Analysis, FPL and partners also provide environmental impact and benefit assessments resulting from the use of different wood-based materials. There is growing demand for this information as organizations and businesses seek opportunities to reduce their environmental footprint and improve their sustainability ratings received from financial institutions.

WOOD INNOVATIONS PROGRAM

Market Development

The Forest Service Wood Innovations Program expands and creates markets for wood products and wood energy that support long-term, sustainable management of National Forest System lands and other state and private forest lands. This program addresses the nationwide challenges of reducing the risk of catastrophic wildfires and associated carbon emissions and reducing the incidence of forest diseases and infestations, by retaining or expanding markets for material removed during forest management activities. This work reaches across national forest boundaries to states, Tribes, communities, and non-industrial private forest landowners. The Wood Innovations Program is carried out through two national competitive grant programs, other key investments, and many partnerships. The program established the Wood Education and Resource Center to support the forest products industry in the Eastern Hardwood Region and nationally through its Wood Energy Technical Assistance Program. The Center also works closely with agency researchers on hardwood utilization and product improvements to increase the value and market opportunities for hardwood resources.

In addition to research on CLT, the Forest Service is revolutionizing the nation's building sector by supporting the market introduction of mass timber products. In 2014, when the Forest Service initiated engagement in the CLT sector, there were zero manufacturing facilities in the United States. Today, there are ten mass timber manufacturing facilities, and additional plants are anticipated to come online. Most notable is a new plant being built in Arkansas to provide mass timber from Arkansas-grown trees to Walmart for their new corporate office complex that will accommodate over 10,000 employees.

To support introduction of CLT to the United States, the Forest Service worked closely with a

myriad of partners. The Forest Service worked with the International Code Council on fire tests and other research to support changes in the 2021 International Building Code that now allow mass timber buildings of up to 18-stories. This code change has supported growing demand and new construction for CLT buildings in our nation's urban areas, including Atlanta, Portland, Seattle, Boston, and Denver. The Forest Service also worked closely with the Department of Defense and other partners on the first-in-the-world blast testing of CLT, which resulted in Department of Defense initiating its own CLT construction program.

In addition, the Forest Service supports the nonprofit WoodWorks, a partner that provides free project assistance, education, research, and resources related to the design of multi-family, commercial and institutional wood buildings. Since 2014, WoodWorks has converted or influenced approximately 7,600 projects to incorporate wood solutions, including over 1,000 mass timber projects across the United States. Converting these buildings to wood has the carbon benefit of sequestering or avoiding 20 million metric tons of carbon dioxide emissions over the same period. This is the equivalent impact of pulling 4.3 million cars off the road for an entire year.

As a result of market development work by the Forest Service and our essential partners, companies like Microsoft, Google, Walmart, Nike, and Adidas are now building offices out of CLT. Corporate leadership in sustainable construction has positive implications for both forest management and the forest-to-market supply chain. New CLT plants are in rural areas near timber supplies. These new plants have supported economic development and new jobs in rural communities.

Wood Innovations Grant Program

Launched in 2015, the Wood Innovations Grant Program creates new opportunities for wood products and wood energy markets that create jobs, revitalize local economies, and support sustainable forest land management. Last year, the program supported 35 business, nonprofit, university and tribal partners in 19 states and Puerto Rico who matched the grants with a 2:5 grantee match. Of the 35 projects selected, 27 focus on expanding markets for wood products and 8 seek to increase markets for renewable wood energy. The projects expand uses for small diameter wood, develop new markets for biochar and wood-powered energy, explore using CLT in health care facilities, examine how to finance urgent restoration work, and more. The projects take place in 19 states including Alaska, Arizona, California, Colorado, Hawaii, Illinois, Massachusetts, Maine, Minnesota, Mississippi, Montana, Nebraska, New York, Oregon, South Dakota, Utah, Virginia, Vermont, Washington, and Puerto Rico.

These grants act as a catalyst, allowing partners to hit the ground running and more prepared for market success. For example, the agency supported Carbon12 in Portland, Oregon, which is the tallest mass timber building in the country; and Ascent in Milwaukee, Wisconsin, which will be the tallest mass timber building in the world when completed in 2022. Likewise, the agency is supporting a new wood insulation product through GO Lab's conversion of a closed paper mill in Maine. Menominee Tribal Enterprise in Wisconsin received a grant and additional support from the Wood Energy Technical Assistance Program to support a new wood-fired combined heat and power system. The new system significantly improved air quality in the community and

provides an annual savings of nearly \$500,000 in fuel and maintenance costs over the old system.

Community Wood Energy and Wood Innovation Grant Program

Made possible through the 2018 Farm Bill and launched in 2020, the Community Wood Energy and Wood Innovation Grant Program provides funding for grants to install thermally led community wood energy systems or to build innovative wood product manufacturing facilities in rural communities nationwide. Last year, the program made grants to seven projects that use locally sourced wood to reduce energy costs and fossil fuel use while supporting local forest management in Alaska, Maine, Minnesota, Oregon, and Washington. One of the awardees, Limington Lumber in East Baldwin, Maine, is developing a combined heat and power system using their wood manufacturing residues to generate electricity. This project reduces their electricity costs, improves profitability, and utilizes residues that have no other markets.

CONCLUSION

The Forest Service creates solutions for our natural resource challenges through research, grants, and partnerships to bring innovative wood products to the market. Through strong partnerships and a dedicated community working together, we are collectively building a more sustainable future through wood products. These innovations directly benefit the health of our nation's forests and their continued ability to mitigate climate change through carbon storage - all while providing new opportunities for employment in rural America. We appreciate the Committee's interest in our work related to innovative wood products and look forward to working together to ensure these programs are delivered in the most efficient and effective manner possible.

Ms. PINGREE. Thank you, Dr. West.

Dr. Shaler, it would be great to hear from you next.

Mr. SHALER. Good morning, Chair Pingree, Ranking Member Joyce, and members of the subcommittee. My name is Steve Shaler. I am director of the School of Forest Resources at the University of Maine, a land, sea, and space grant university located in the homeland of the Penobscot Nation. Thank you for the opportunity to testify about increasingly innovative wood products and their growing markets.

The intent of my remarks today will be to illustrate the importance of forest-sourced products to rural communities, their role in promoting sustainability, and opportunities for carbon sequestration in wood building materials and other wood products.

Maine, home to the first sawmill in North America, is the most heavily forested State in the country, at 90 percent of the land area. The health and sustainability of our rural communities is entirely dependent on that of the forest. These forests are the economic heart of many of our rural communities, supporting forest products, outdoor recreation and tourism industries, while providing vital habitat for wildlife, improving water and air quality for all life.

We live in a challenging time where the impacts of climate change on forest health are increasingly evident, whether it is through temperature, drought, fire, invasive pests, muddy roads from early thaws, and heavy rain events. The need to adapt how we manage the forest depends on the presence of markets. And, conversely, the ability to meet increased demand for wood products from forest systems requires the forest be healthy and sustainably managed.

There has been incredible disruption in the forest products industry over the last two decades with the closure of many pulp and paper mills that have long been the region's largest economic engines and the biggest buyers of wood. But exciting opportunities are emerging that will diversify, strengthen, and sustain the forest economy and the communities dependent upon it.

Accelerating innovation in forest products and their applications is key to meeting increasing global demand for low-carbon materials, chemicals, and fuels that come from forests. But that innovation must occur within the context of a vibrant, interconnected network of the environment, society, and economy.

An example of a collaboration building upon strengths through innovation to shape the future of the forest economy and forest-dependent communities can be found in Maine in the Forest Opportunity Roadmap/Maine, also known as FOR/Maine.

FOR/Maine is a unique cross-sector collaboration between industry, communities, government, education, and nonprofits. We have come together to ensure that Maine strategically adapts, capitalizes on changing markets to maintain our leading role in global forest economy, and to support prosperity in the State while sustaining our natural resources.

FOR/Maine evolved from a Federal Economic Development Assistance Team initiated in 2016 and is currently funded through the U.S. Economic Development Administration. The University of Maine is proud to play a central role in this effort, serving on FOR/

Maine's executive committee, a number of its subcommittees, including those focused on emerging technologies, market attraction, workforce development, and wood supply analysis.

Our research and development are critical to Maine and the Nation's ability to add value to existing industries and create new ones. We are increasingly seeing demand driven by industry interest for sustainable and renewable feed stocks, which actively managed forests can provide. Since 2016, over \$1.1 billion in CapEx has been invested in Maine forest industries, including pulp and paper, lumber, wood energy, and wood composites.

In 2019, the University of Maine was awarded 1 of 10 university mass timber grants funded by the U.S. endowment in the Forest Service to support demonstration projects showcasing mass timber technologies on university campuses. The project helped to support the conceptual design, engineering, and pricing of a cross-laminated timber laboratory facility.

To capture the full carbon picture of the project, a preliminary cradle-to-grave whole-building lifecycle assessment was performed, and the study highlighted that the materials sourcing is a key driver of embodied carbon and that storage of biogenic carbon in wood-building materials is a clear positive attribute for the life of the structure.

Opportunities for wood product innovation in the building space beyond load-bearing solutions also exist. Use of low-grade biomass or mill residuals for low-density wood fiber insulation materials is one example. Wood fiber insulation is currently being imported into the U.S., but high shipping costs have kept it an expensive niche product. Active collaboration with emerging domestic manufacturers in Maine are projecting wood fiber insulation to be a cost-neutral, drop-in replacement for petroleum-based insulation products.

A final example is a \$1.5 million investment by the U.S. Forest Service to build a pilot plant for production of cellulose nanofibrils as part of a joint venture in 2011. Since inception, the University of Maine has shipped cellulose nanomaterials, including those produced at the Forest Products Laboratory, to 50 countries, 305 companies, and 276 universities to support R&D and product development. Though global in reach, 60 percent of samples have gone to U.S.-based organizations.

This supports a large community of researchers and startups using cellulose nanofibers in a wide variety of applications, including adhesives, foams, packaging, building materials, and, yes, even bones. Many of these will replace products made with petroleum products.

To summarize, collaboration involving industry, government, universities, and local communities are central to leveraging the maximum impact of wood innovation, as is sustained Federal investment that fosters that collaboration while supporting research and development.

Thank you again for the opportunity to speak and for your ongoing interest and investment that is sustaining the forest economy, the communities, and the citizens dependent upon it.

[The information follows:]

**House Appropriations Committee
Interior, Environment, & Related Agencies Subcommittee
Hearing on Innovation in New Wood Products and Markets**

March 23, 2021

Good morning Chair Pingree, Ranking Member Joyce, and Members of the Subcommittee. My name is Stephen Shaler, and I am the Director of the School of Forest Resources at the University of Maine, a land, sea and space grant university located in the homeland of the Penobscot Nation. Thank you for the opportunity to testify about increasingly innovative wood products and their growing markets. The intent of my remarks today will be to illustrate the importance of forest-sourced products to rural communities, their role in promoting sustainability, and opportunities for carbon sequestration in wood building materials and other wood products.

The United States is fortunate to have forests covering over 750 million acres (one-third) of the land area. Maine, home to the first sawmill in North America, is the most heavily forested state in the country at 89% of the land area. The health and sustainability of our rural communities is entirely dependent on that of the forest. These forests are the economic heart of many of our rural communities – supporting forest products and outdoor recreation and tourism industries while providing vital habitat for wildlife and improving water and air quality for all life.

We live in a challenging time where the impacts of climate change on forest health is increasingly evident, whether it is through temperature, drought, fire, invasive pests, muddy roads from early thaws and heavy rain events. The need to adapt how we manage these forests depends upon the presence of markets and conversely the ability to meet increased demand for wood products from forest systems requires that the forests be healthy and sustainably managed.

There has been incredible disruption in the forest products industry over the past two decades with the closure of many pulp and paper mills that had long been among the region's largest economic engines and the biggest buyers of wood. But exciting opportunities are emerging that will ultimately diversify, strengthen and sustain the forest economy and the communities dependent

upon it. Accelerating innovation in forest products and their application is key to meeting the increasing global demand for low-carbon materials, chemicals, and fuels that can come from forests. But that innovation must occur within the context of a vibrant, interconnected network of the environment (forest), society (rural communities at the source and increasingly urban global markets at the end), and economy.

An example of a collaboration building on traditional strengths through innovation to shape the future of the forest economy and forest-dependent communities can be found in Maine in the Forest Opportunity Roadmap/Maine project, known as FOR/Maine¹.

FOR/Maine is a unique cross-sector collaboration between industry, communities, government, education, and nonprofits. They have come together to ensure that Maine strategically adapts and capitalizes on changing markets to maintain our leading role in the global forest economy and to support prosperity in our state while sustaining our natural resources. FORMaine evolved from a federal Economic Development Assistance Team (EDAT) initiated in 2016 and is currently funded through the U.S. Economic Development Administration. The University of Maine is proud to play a central role in this effort, serving on FOR/Maine's executive committee and a number of its subcommittees including those focused on emerging technologies, market attraction, workforce development and wood supply analysis. Our research, development and commercialization activities are critical to Maine and the nation's ability to add value to existing forest products and create new ones. We are increasingly seeing demand driven by industry interest for sustainable and renewable feedstocks, which actively managed forests can provide. Since 2016, over \$1.1 billion in CAPEX has been invested in Maine forest industries including pulp and paper, lumber, wood energy and wood composite facilities.

In October 2019, the University of Maine was awarded one of ten University Mass Timber Grants, funded by the U.S. Endowment for Forestry & Communities/U.S. Forest Service to support demonstration projects showcasing mass timber technologies on university campuses. The

1. <https://formaine.org>

project helped to support the conceptual design, engineering and pricing of a cross-laminated Timber (CLT) laboratory facility. To capture the full carbon picture of the project, a preliminary cradle to grave, whole building life cycle assessment was performed to examine the material carbon impact from structural and architectural elements in the timber design. The study highlighted that material sourcing is a key driver of embodied carbon and that storage of biogenic carbon in wood building materials is a clear positive attribute for the life of the structure.

The opportunities for wood product innovation in the building space extend beyond load-bearing solutions. The use of low-grade biomass and/or mill residuals (waste) for low-density wood-fiber insulation materials is one example. Wood fiber insulation (WFI), is currently being imported into the U.S., but high shipping costs have kept it an expensive niche product. Active collaboration with emerging domestic manufacturers in Maine are projecting WFI to be a cost-neutral, drop-in replacement for petroleum-based insulation boards, such as extruded/expanded polystyrene foam.

A final example is the \$1.49M investment by the USFS to build a pilot plant for production of cellulose nanofibrils (CNF) as part of a joint venture in 2011. Since inception, the University of Maine¹ has shipped cellulose nanomaterials, including those produced at the Forest Products Laboratory, to 50 countries, 305 companies, and 276 universities to support R&D and product development. Though global in reach, 60% of the samples have gone to U.S.-based organizations.

Through the involvement of dedicated people, hard work, and resulting global collaboration, the University of Maine has become a globally recognized center of excellence for the production and application of cellulose nanomaterials. It also supports a local community of UMaine researchers and startups using cellulose nanofibers in a wide variety of applications including adhesives, foams, packaging, building materials, and even bones. Many of these will replace products made with petroleum products.

1. <https://umaine.edu/nanocellulosevalley/>

To summarize, collaborations involving industry, government (local, state, federal and international), universities, and local communities are central to leveraging the maximum impact of wood innovation, as is sustained federal investment that fosters that collaboration while supporting research and development.

Thank you again for the opportunity to speak with you today and for your ongoing interest and investment that is sustaining the forest economy and the communities and citizens dependent upon it.

Ms. PINGREE. Thank you very much. Thank you for your comprehensive remarks.

Mr. Brinkmeyer, we are excited to hear about the message from Idaho.

You might need to unmute, or we can unmute you.

We still can't hear you.

Can our tech team unmute Mr. Brinkmeyer?

STAFF. Madam Chair, it looked like he was unmuted on the Webex, but he was not getting audio through. So we will have to have somebody look into that.

Ms. PINGREE. Okay. Why don't we work that out.

Sorry, Mr. Brinkmeyer. We are anxious to hear from you, but I will put Dean MacKeith first, and then we will come back, and hopefully it will all be settled by then.

Mr. MACKEITH. Yes?

Ms. PINGREE. We hear you.

Mr. MACKEITH. Good morning, Chair Pingree, Ranking Member Joyce, and members of the committee.

Thank you for the invitation and opportunity to speak with you regarding the importance of America's forests, of our Nation's timber and wood products industries, and of the rural communities which reside within these forests, but, in particular, to speak of the essential role that the vision, commitment, and innovation of our Federal Government should play in enhancing our Nation's forests and our Nation's environmental future.

I serve the University of Arkansas, the State's land grant university, as dean of the Fay Jones School of Architecture and Design. While I will speak to the specifics of Arkansas's forests and its timber and wood industries today, I also speak on behalf of many schools and many universities across the United States engaged in similar endeavors.

I offer here an Arkansas case study in the effectiveness, value, and essential importance of innovative research and development in the cause of America's forests. Two questions frame our work: What does it mean to be a Nation of forests, of forested States? What is the value of funding innovation in our forests in the cause of the Nation?

By focusing on the potential of Arkansas forests, timberlands, and wood products industries, the Fay Jones School, together with our School of Forestry and Natural Resources and with significant assistance from the U.S. Forest Service and its Wood Innovations Grant Program, as well as the Forest Products Laboratory, we have been able to stimulate both greater economic environmental health for this essential renewable resource and greater economic development in the State, with attention to our rural communities and a more sustainable low-carbon future.

In 2017, a U.S. Forest Service Wood Innovations Grant funded research into the viability of building new mass timber residence halls at the University of Arkansas. Design research studios funded by this grant developed residence hall prototypes constructed from mass timber. In validation of this effort, the university built a new \$79 million residence hall out of mass timber, currently the largest such building in the United States. The Forest Products Laboratory

has now provided funds further to our school for important research on this completed building.

Our School of Forestry has also received Wood Innovations Grant funds, and with these we are forming a statewide consortium of forestry, timberlands, and wood-products stakeholders so as to maximize the environmental and economic benefits of Arkansas's forests.

Collectively, the effects of this funding and the design research it yielded have been remarkable, as the University of Arkansas has become perhaps the most significant supporter of advanced timber construction in higher education. With more than \$100 million in construction so far and with the new \$20 million Anthony Timberlands Center for Design and Materials Innovation, a home to our numerous wood initiatives and a new applied research center, now in the early stages of design, we are now a critical actor in the stimulation of the architecture, engineering, and contracting industries in the State, as well as turning our attention to our rural economies and communities.

The impact of these initiatives now extend statewide, as our proof of concept at the university informs significant private enterprise in Arkansas. Structurlam, the leading mass timber manufacturer in North America, from Canada, is now investing \$90 million and hiring 130 Arkansas employees for its first U.S. facility, producing CLT panels in Conway, Arkansas. Structurlam's first primary project will be Walmart's new mass timber headquarters in Bentonville, a 3-million-square-foot campus which will use 1.1 million cubic feet of Arkansas timber. And more projects, public and private, are on the way across the State.

In total and in constant growth, this is the Arkansas timber project, stimulated by innovation funds from the USFS and collateral partners.

I will be emphatic now in summary. The United States of America is a forest Nation. The forests are inextricably engaged with our history, our society, our politics, our culture, our environment, our future. The forests of the United States must therefore be wisely conserved, stewarded, and employed for the greatest good, for the greatest number, for the greatest benefit. These last words echo, of course, the credo of Gifford Pinchot, the founder of the USFS.

This ambition can only be achieved through the concerted, far-sighted efforts of both public institutions and agencies and private stakeholder and corporate interests and organizations. The ideals, the purposes, activities, people, and funding mechanisms of the USFS are central to this larger goal. The specific work and collaborative funding of the Forest Products Laboratory and the specific funding of the USFS Wood Innovations Grant Program are demonstrably essential, valuable, and impactful across a broad range of actors and audiences in this mission across the country.

If what we have achieved in Arkansas is any measure of effectiveness and value, then, on behalf of my colleagues, partners, and allies in Arkansas and across the country all engaged in the larger America's Forests Project, I confirm today the absolute value of a federally supported emphasis, with enhanced and accelerated funding, on America's forests, on America's timber and wood industries,

and on America's timber and wood innovation initiatives to the greater good of our society and our Nation.

Thank you. I will be happy to take questions when that moment comes.

[The information follows:]

Witness Statement**Submitted to:**

House of Representatives / Committee on Appropriations / Subcommittee on the Environment
Representative C. Pingree (D-Maine), Chair of the Committee

Submitted by:

Peter B. MacKeith, Dean and Professor of Architecture
Fay Jones School of Architecture and Design, University of Arkansas / Fayetteville, Arkansas

Statement Date:

March 23, 2021

Good morning, Chairperson Pingree, Ranking Member Joyce, and members of the Committee.

Thank you for the invitation and opportunity to speak with you today regarding the importance of America's forests, of our nation's timber and wood products industries, and of the rural communities which reside within these forests – but in particular, to speak of the essential role that the vision, commitment, and innovation of our federal government should play in enhancing our nation's forests, and our nation's environmental future.

I serve the University of Arkansas, the state's land-grant university, as dean of the Fay Jones School of Architecture and Design. While I will speak to the specifics of Arkansas's forests and its timber and wood industries today, I also speak on behalf of many schools across the United States engaged in similar endeavors. I offer here an Arkansas case study in the effectiveness, value, and essential importance of innovative research and development in the cause of America's forests.

Two questions frame our work:

"What does it mean to be a nation of forests, of forested states?"

"What is the value of funding innovation in our forests, in the cause of the nation?"

By focusing on the potential of Arkansas forests, timberlands, and wood products industries, the Fay Jones School, together with our School of Forestry and Natural Resources, and with significant assistance from the US Forest Service and its Wood Innovations Grants programs and the Forest Products Laboratory, has been able to stimulate both greater environmental health for this essential, renewable resource and greater economic development in the state, with attention to our rural communities and a more sustainable, low-carbon future.

In 2017, a US Forest Service Wood Innovations grant funded research into the viability of building new residence halls at the University of Arkansas out of mass timber. Design research studios funded by this grant developed residence hall prototypes constructed from mass timber. In validation of this effort, the University built a new \$79,000,000 residence hall out of mass timber, currently the largest such building in the United States. The FPL has now provided further funds to our School for important research on the completed building. Our School of Forestry has also received Wood Innovation Grant funds and with this, we are forming a state-wide consortium of forestry, timberlands and wood products stakeholders, so as to maximize the economic and environmental benefits of Arkansas' forests.

Collectively, the effect of this funding and the design research it yielded has been remarkable, as the University of Arkansas has become perhaps the most significant supporter of advanced timber construction in higher education, with more than \$100 million in construction so far, with the new \$20m Anthony Timberlands Center for Design and Materials Innovation, a home to our numerous wood

initiatives and a new applied research center, now in the early stages of design. We are now a critical actor in the stimulation of the architecture, engineering and contracting industries.

The impact of these initiatives now extends statewide, as our “proof-of-concept” informs significant private enterprise in Arkansas. Structurlam, the leading mass timber manufacturer in North America, based in Canada, is investing \$90 million and hiring 130 Arkansas employees for its first U.S. facility, producing Cross Laminated Timber panels in Conway, Arkansas. Structurlam’s first primary project will be Walmart’s new mass timber headquarters in Bentonville, a 3,000,000 s.f campus, which will use 1.1 million cubic feet of Arkansas-sourced timber. And more projects, public and private, are on the way.

In total, and in constant growth, this is the Arkansas Timber Project, stimulated by innovation funds from the USFS and collateral partners.

I will be emphatic in summary:

The United States of America is a forest nation. The forests are inextricably engaged with our history, our society, our politics, our culture, our economy, our environment – our past, our present, our future.

The forests of the United States must therefore be wisely conserved, stewarded and employed for the greatest good, for the greatest number, for the greatest benefit. These last words echo, of course, the credo of Gifford Pinchot, the founder of the USFS.

This ambition – the purpose and goal – can only be achieved through the concerted, far-sighted efforts of both public institutions and agencies AND private stakeholder and corporate interests and organizations.

The ideals, purposes, activities, people and funding mechanisms of the USFS are central to this larger goal. The specific work and collaborative funding of the Forest Products Laboratory, and the specific funding of the USFS Wood Innovations Grant program are demonstrably essential, valuable and impactful across a broad range of actors and audiences in this mission.

If what we have achieved in Arkansas is any measure of effectiveness and value, then on behalf of my colleagues, partners, and allies, in Arkansas and across the country, all engaged in the larger “America’s Forests” project, I confirm today the absolute value of a federally-supported emphasis, with enhanced and accelerated funding, on America’s forests, on America’s timber and wood industries, and on America’s timber and wood innovation initiatives – to the greater good of our society and our nation.

Thank you.

Ms. PINGREE. Thank you very much, Dean MacKeith. Always wonderful to hear someone quote Pinchot and know about the long history of our Forest Service.

My understanding is, there are still some technical issues with Mr. Brinkmeyer. Kind of looks like it. But we could go ahead and start questions, and I will hear from the technical people as soon as they have that resolved. I know it was working earlier, so it is just that the internet has a mind of its own. So, if we go to questions, we will just come back to his testimony.

And I am going to yield for my first question to Ms. McCollum, because she needs to be at her Defense hearing shortly. And so I am happy to yield to her my time, and I will ask some questions later.

Ms. MCCOLLUM. Well, thank you, Chair Pingree, for allowing me.

And I want to say, as long as we are speaking of defense, I want to acknowledge the partnership between the Army's Development Command Research Laboratory and the Forest Products Laboratory and the extraordinary story of how leaders of their joint projects sent legacy mahogany wood that was over a century old here to the Capitol to repair the damage endured on the January 6 attack.

So, once again, Chair Pingree, we find ways in which we can cross-pollinate through our work. I want to particularly just say that this priceless lumber, it is going to rebuild the heart of our democracy. And I hope when we can all go back in the Capitol and look at it again that we get an opportunity to see the wood replacement.

But I wanted to take a second to just talk about FPL's ability to help our Nation rebuild every day in every way throughout our communities. As we look forward to making serious investments in infrastructure across America, I would like to hear more about the role that FPL sees its forest products playing in sustainable source construction and new facilities, even in structures like bridges.

So I am going to give Minnesota a shout-out. Mr. Joyce and I are often stuck in the middle between Ms. Pingree and Mr. Simpson talking about their potatoes and their timber, but Mr. Joyce and I, just saying, we do have the greatest lakes.

So the University of Minnesota has been working with the Resources Research Institute, their division at the university, and they have published some amazing and interesting research on the efficiency and durability of bridges that use timber alone or in a combination with other materials.

And here is why timber bridges can be very exciting. They can be constructed in all weather conditions, and the wood is not damaged by continuous freeze and thaw conditions, and it can hold up to deicing road salt. So there are combinations where the bridges use timber in the construction.

So could you maybe elaborate a little more, if you could, on how we could see these forest products in recent years help prepare for that role of more sustainability and, in some ways, be very green with reducing carbon footprint?

Ms. WEST. Thank you very much, Congresswoman McCollum. I appreciate that question.

I have worked for the last 7 years in looking at green products and their benefits, particularly in carbon sequestration and sustainability. And wood is, again, the only renewable material that is part of a biogenic cycle for carbon. By utilizing wood, we are taking wood out of forests, we are allowing new trees to grow and accumulate carbon, all while taking that material that we removed that will continue to accumulate carbon.

And let me just give you an example. I live in a 125-year-old house. I have flooring that needed to be replaced, so I went down to my local mill, and they had beams from a barn that was probably 150 years old. They sawed those beams into new flooring to match my old house. These trees probably for the barn building were at least 150 years old. So you begin to add up, 150 years, plus another, you know—and 150 years of carbon sequester in the forest, in the tree, 150 years in use at the barn, now going into my old house, you know, which will add another at least 125 to 150 years of carbon sequestration, and you begin to add up and look at across 400 to 500 years of carbon sequester from when that tree or that seedling grew in a forest to where it is in service in life in my home.

Now, wood in service accumulates and—or it is a body of carbon. We can use lots of materials. We can substitute many materials that are nonrenewable and combine them with other materials.

So, for example, just recently, we have taken the smallest particles from wood, nanomaterials, combined that with cement to create concrete that has higher strength properties, which means that we could reduce the amount of concrete that we use by adding nanomaterials from wood by 20 percent.

And you begin to add up the road miles, as the U.S. endowment calculated, a one-road-mile four-lane highway would help us to thin and improve forest—about 26 acres of forest per road mile of using this material for road servicing. And I could go on and on.

Bridges. I started my career a number of years ago, and I remember the startup of the timber bridge program to be able to utilize eastern species, particularly hardwood species, that had low-value markets to create a higher-value product using a technology that was easy to implement—low capitalization—that local communities could develop.

And so the bridge program is mature, but we are looking forward. We have had a lot of requests for looking at different applications. I can look forward to the future and say, we will have a next generation of bridges that combine wood and other products, are higher performance, low cost, and to create local jobs and businesses.

Thank you.

Ms. MCCOLLUM. Thank you, Madam Chair.

Ms. PINGREE. Chair McCollum, Dean MacKeith wanted to give a quick answer. And I know you are over time, but I know you won't be here for a second question.

So, Dean, if you could just give a quick answer before we lose Ms. McCollum.

Mr. MACKEITH. Yes. Two issues, one related to defense.

Currently, in concert with the U.S. Forest Service, the U.S. Endowment for Forestry and Communities, there is a three-university

project underway led by Clemson University's wood utilization laboratories and Pat Layton, but together with Arkansas and Oregon, Oregon State, looking at prototyping new designs from cross-laminated timber for defense facilities across the country. It is a very important growth of innovative research and collaborative research all together.

Second, the Forest Products Laboratory is doing important work in moisture sensing, believe it or not, of newly constructed cross-laminated timber buildings. We are doing one here on campus with them.

And then even more importantly, I would say, is lifecycle analysis of the full life of a building, from pre-construction all the way through 2, 5, 10 years on the road, to really prove as much as possible on an evidence-based approach that these buildings constructed this way are of ultimate value to the consumer as well as to, really, the manufacturer.

Ms. MCCOLLUM. Well, thank you. It looks like Mr. Kilmer and I have some extra homework in the Defense committee.

Thank you, Madam Chair.

Ms. PINGREE. Thank you.

Now, I think we have it all worked out for Mr. Brinkmeyer.

Please accept our apology for the technical problem. Hopefully we will be able to hear you now.

Mr. BRINKMEYER. How is this?

Ms. PINGREE. I can hear you.

Mr. BRINKMEYER. Wow. Sorry, Madam Chairwoman.

First of all, I am pleased to be here, and want to thank our Representative Simpson. He casts a big shadow in Idaho. And he already put in Gonzaga, so we dispensed with that requirement.

There has been a lot said. And, just quickly, we, in our company and myself personally, have had a significant appetite to learn, and our training ground has been Europe. We have been heavily involved in the European community for the last 20-some years. Our company is 40 years old, and, as the comment was made in the opening remarks, our company has grown with technology.

And cross-laminated timber was invented by Wolfgang Weirer at the University of Graz, which is really the bastion of research on wood that we have found. Universities in the States are certainly picking up and making progress, but cross-laminated timber factories, laminated beam timber factories in Europe are significantly advanced. And it is technology that will benefit the U.S. as the U.S. begins to adapt.

I am here representing the Forest Products Commission in Idaho, which was started in 1992. And it was an earlier version of the Softwood Lumber Board, which I had the opportunity to be involved in from the very beginning.

I am especially pleased with Secretary Vilsack being back, because the Softwood Lumber Board was created under his watch. It is a check-off. And like the Forest Products Commission, it is embedded in our State. All the forest products companies pay into the fund, and it is for education, conservation, forest health, and so forth.

The Softwood Lumber Board is the lumber producers in the United States, including all lumber producers that import. We are

in our eighth year. We have just increased our dues. And we will, over the next 7 years, put \$125 million into mass timber.

Now, we call it mass timber, but really it is a moniker for non-residential housing. Residential housing in the United States is approximately—94 percent is wood-related. Commercial, on the other hand, is not. And our competitors in that regard are steel and concrete. Wood has certainly a better carbon footprint than steel and concrete, but, really, all building materials have their rightful place in the construction environment. And our goal is for wood to have its rightful place.

And we are accomplishing this through WoodWorks, which Softwood Lumber Board supports significantly. I believe that we are their largest supporter economically. And the other is the American Wood Council, which is a group of unsung heroes who do marvelous work and are involved with the Forest Lab to some degree.

But it is through the efforts of the Softwood Lumber Board and the American Wood Council that, last year, in the code cycle, they were successful in changing the codes to allow mass timber construction for buildings 18 stories.

We had asked for 12 when we started that process. We were able to go to 18 because of the science of work from universities, work from the Forest Products Lab, research done by the industry through the American Wood Council. There were comments earlier about some of the bomb tests that were done, and for schools to be built on military bases, extensive fire testing, which is one our competitors use against us from time to time as being a risk.

But mass timber has a huge opportunity to grow in the United States. And I think, with what you heard today in testimony, there is a lot of very capable people, very bright people focused on this.

And I might add that WoodWorks' sole job is to talk to people building in the commercial space and convert those buildings to mass timber. And so far, they have been successful and have converted over 4.5 billion feet of lumber being utilized in projects.

For us and what we see in the future is—

Ms. PINGREE. Uh-oh, I think we lost your audio again, just when you were—you are back.

Mr. BRINKMEYER. I am back?

Ms. PINGREE. Yep. You were starting to say what you see in the future.

Mr. BRINKMEYER. What I see in the future is, we will have continued focus with mass timber as we have more and more focus on climate change, which is real. It is not perceived; it is real. We experience it in the Intermountain West, and I will talk about that in a moment.

But one area that we need focus—and our company is focused on it now—is what we call “all of the fiber that is nonrectangular.” Because, at the end of the day, lumber producers make precision rectangles. And we have—approximately 30 percent of a log is residual fiber.

And we just lost in July one of the most modern newsprint plants in North America at Usk, Washington. And, without any notice, they closed the plant, paid out the WARN Act obligation to the employees, and handed the keys to the bankruptcy judge in Spo-

kane, where it still exists today. No one will buy it. That is a message, one we should pay attention to.

We feel that wood fiber—you talk about plastics. We know a lot about biofuel. We are working with the National Lab in Idaho now and with the experts. A particular group we are working with and I am fascinated with are the fellows that came together and manufactured the bio-jet fuel that Alaska Airlines used to fly from Seattle to Washington, D.C., here a few years ago.

There is the area that is the most promising. Mass timber will take care of itself. It is a great product, and it will find its place. And the architects and the engineers, it is now up to them to bring it into fruition. But we see the fiber side of it as a huge opportunity.

As we address forest health in the West, we have submergible material that is a fire loading on the lands that we need to deal with. And my hope is that this body, as you look at an infrastructure bill going forward, that you will consider infrastructure funds for forest health, and, in that infrastructure bill, you look towards what to do with this low-value fiber. It is nonstructural fiber in its current state, but it can be used from a BTU point of view with respect to carbon.

The U.K. has huge investments in pellet plants in the South, because it is proven technology that current coal-fired power plants, if they are fired with 80 to 90 percent pellets, they can maintain that electrical generation infrastructure. And you can look to Enviva, you can look to Drax, you can look at those companies now that are building very large pellet facilities all around the U.S. that take advantage of this fiber situation and how it fits into the carbon equation. And these are things that we need to pay attention to.

One other area of—

Ms. PINGREE. I am going to need to have you wrap up, but we can ask some more of these things in the questions later. Can I get you to say—

Mr. BRINKMEYER. Okay. I want to make one last comment. And I am sorry, Madam Chairwoman, for going over here.

Ms. PINGREE. It is perfectly fine.

Mr. BRINKMEYER. We are working with Oxford University in Cambridge, and have been for the last 4 years, on satellite imagery. Our Intermountain Forest, where our mills are located, comprises approximately 16 million acres. It was discussed early on of the problems of the wildfires in the Intermountain Forest. And that exposure is huge.

And for our particular company, the future of our company is the Intermountain Forest. And, as a result, we took it upon ourselves that—I personally wanted to understand and know, because of our species diversity, what that forest is going to look like today, tomorrow, and 20 years from now.

And with Oxford University and its emerging technology group, from what they call the satellite catapult, we have been doing research on the Intermountain Forest and have completed roughly 9,000 plots and using artificial intelligence to train the algorithms, where we can look at habitat, we can share information with our friends in the conservation community and others.

And this is something I personally and our company are taking on. We have great leadership in a gentleman by the name of Tom Schultz, who has taken this and has [inaudible] Understand this.

I just muted out. It is time to quit, Madam Chairwoman. I will take any questions when the time is right. Apologize for all this. You would think a technical company wouldn't have technical problems, but apparently we do.

[The information follows:]

**Testimony of Marc A. Brinkmeyer
Chairman – Idaho Forest Group**

On behalf of the Idaho Forest Products Commission

**Before the House Committee on Appropriations
Subcommittee on Interior, Environment, and Related Agencies
United States House of Representatives**

**Wood Innovation: Sustainable Forest Products to Reinvigorate Rural Economies
March 23, 2021**

Introduction

Chairwoman Pingree, Ranking Member Joyce, and members of the Subcommittee, thank you for the opportunity to submit testimony today about innovative wood products and related issues. My name is Marc Brinkmeyer and I am the owner of Idaho Forest Group (IFG). IFG is a family-owned company and is one of our nation's largest lumber producers with capacity for over 1.2 billion board feet per year and markets around the globe.

I am also here as a representative of the Idaho Forest Products Commission (IFPC), which was created by the Idaho legislature in 1992. The work of the IFPC helps assure balanced and sustainable timber, wildlife, recreation and scenic beauty for the welfare of Idaho's citizens. The Idaho Forest Products Commission is committed to providing information that leads to balanced, responsible management of Idaho's economically vital public and private forests.

At IFG and IFPC, we are strong proponents of creating rural jobs, working to improve forest health, and growing the market for wood products. I am also the past Chairman of the Softwood Lumber Board and currently serve on the Binational Softwood Lumber Council – two organizations that help drive the use of innovative wood products in the built environment.

Increased and Improved Rural Jobs

In my home state of Idaho, the forest products industry was responsible for over 31,000 jobs in 2020, according to the University of Idaho's College of Natural Resources. Forest jobs also supply competitive jobs in rural parts of Idaho, averaging \$55,000 annually, nearly 40% higher than other industries. By growing demand for all wood products, we can protect existing rural jobs and support investment which is vital to any industry. Newer sawmills, like we are building in the South, utilize advanced manufacturing and material handling technologies, which require a workforce of technicians and engineers. Mass timber structures and the related application of this construction technology require advanced engineering and design training. Our industry supports rural capital investment and rural jobs.

Improved Forest Health

More intense wildfires, drought and insect infestations are a reality in the west. Forest management and restoration are needed at a much larger scale. With your support, the Forest Service can ramp up forest health activity, which will maximize carbon stored in our forests and

forest products and reduce loss of stored carbon from tree mortality. Innovative wood products, like mass timber and advanced utilization of residual wood fiber, create revenue to support investment in the technology to change the conversation around landscape restoration of our federal forests. Mass timber is an emerging technology, which can provide the same structural function as concrete and steel with a positive carbon profile. These types of advancements create higher value end use for solid wood materials that have historically been steel and concrete.

Public-Private Partnerships

The Forest Service currently has partnerships with wood products industry partners that are truly moving the needle in terms of growing markets and uses for innovative wood products. One of those partnerships is with WoodWorks. WoodWorks' mission is to make it easier for project teams to design, engineer and construct successful commercial and multi-family wood buildings in the U.S. They do so by providing free project support, a robust nationwide education program, and a wide range of published resources. WoodWorks has impacted over 4.5 billion board feet of wood use in projects in the United States since 2015. Their efforts are made possible, in part, by funding from Forest Service's Research budget and the State and Private Forestry budget. WoodWorks is working with the Forest Service to trace material from restoration thinning on a National Forest through the manufacturing process and into a completed wood building.

Another critical partnership for USDA is the Softwood Lumber Board (SLB). The SLB is an industry funded check-off program established to promote the benefits and uses of softwood lumber products in outdoor, residential, and non-residential construction. Through the USDA Check-Off Program System, the softwood lumber industry has its rightful place in agriculture. In addition to supporting Woodworks, the SLB supports the American Wood Council which advances the utilization of all wood products in construction. It is instrumental in advancing testing for seismic, fire and structural protocols necessary to advance mass timber.

As past president of the board, I have seen firsthand how effective the SLB has been in helping grow markets for innovative wood products. The SLB, along with the Forest Service, helps fund WoodWorks.

One such partnership that IFG is a member of—and that I truly value—is the Western Governors Association (WGA). WGA works in a bipartisan fashion and tackles issues, including endangered species, the wildfire and forest health problems, and recently, climate change and its role in the western experience. IFG works with the WGA to identify for Congress consensus-driven policies that will lead to healthier landscapes and communities for western states.

Growing the Market and Carbon Sequestration

Another significant benefit of building with wood products, including innovative mass timber, is carbon sequestration. Trees and other cellulosic plants absorb carbon and continue to sequester it for decades. Once the tree is harvested, its carbon content remains in wood products for the lifetime of the building. Further the product life is extended thru recycling.

The carbon footprint of wood is significantly less than steel and concrete. Wood fiber not used for construction has significant value from a BTU perspective. Substituting wood for fossil fuel-intensive materials is a way of avoiding GHG emissions. Life cycle assessment (LCA) studies consistently show that wood outperforms other materials in this area (Sathre and O'Connor, 2010).

When using a carbon calculator to evaluate the environmental impact, we often see that the use of wood in a typical 100,000 sq. ft. multifamily project can have the environmental carbon impact equivalent to pulling 500 cars off the road for an entire year. When you think about the impact of this at scale, it is quite impressive. Especially when you consider that this benefit is currently often overlooked but something we are now actively educating about.

IFG, together with other forest products companies, provided a substantial amount of the wood and related services for the mass timber for the new 62,000 square foot basketball arena at the University of Idaho. WoodWorks provided much of the technical assistance that was used to build the arena.

What Can Congress Do?

There are a number of actions that Congress can take through the appropriations process to help increase the use of sustainable forest products and grow rural economies.

USFS National Forest Systems, Forest Products Account

Congress should increase funding for the Forest Service's National Forest timber program. There must be certainty in the timber sale program so that the Logging and Hauling Families in our rural communities can have a reliable contractual pipeline to enable investment in advanced technology, which is more efficient and requires less energy than older equipment. The sale program should be directed towards sustaining and creating local jobs. This will increase the pace of forest restoration and address the forest health crisis. National Forest timber must be processed domestically, so increased timber sales generate needed jobs in economically distressed rural counties.

USFS, Research, Forest Products Lab

Congress should increase funding for the Forest Service's Forest Products Lab (FPL). FPL partners with WoodWorks, developers of wood bridges, developers of cellular nanotechnology, wood energy innovators, and more. As the use of innovative wood products grows in the U.S., the need for research and development funding is all the more critical.

USFS Wood Innovation Grants

Congress should continue funding for the Forest Service's Wood Innovations Grant Program (WIG). The program works to expand wood products and wood energy markets that support forest management and deliver economic and environmental benefits to communities. Funding goes to projects that significantly stimulate or expand wood products and wood energy markets that support the long-term management of National Forest System and other forest lands.

Thank you for this opportunity to testify, and for your continuing support. I would be happy to answer your questions.

Ms. PINGREE. Yeah, well, that is because the internet has a mind of its own, so certainly not your fault. But we really appreciate it. And thank you so much for your wonderful testimony and all the experience and work that you are doing.

I will yield to Mr. Joyce for questions.

Mr. JOYCE. I thank you, Chair Pingree.

You know, Marc, the loss of your internet makes a good case on why we need to increase broadband throughout the country. And I disagree with you on the big shadow of Mr. Simpson. He is half the Congressman he used to be when I first got here. He is losing weight at a rapid pace every year.

But, Dean MacKeith, good to see you.

Last Congress, I was proud to cosponsor Congressman Bruce Westerman's bill, the Trillion Trees Act, to plant 1 trillion trees globally by 2050 and promote sustainable forest practices to make our forests more resilient to disease and wildfires while also reducing carbon in the atmosphere.

To increase carbon storage, the Trillion Trees Act sought to incentivize innovative building practices with a sustainable building tax credit.

Dean, consistent with the policies in the Trillion Trees Act, can you take a moment to discuss the potential benefits of building with innovative wood products, especially how products like cross-laminated timber store carbon and reduce CO₂ emissions during construction?

Mr. MACKEITH. Thank you very much, Representative Joyce.

I have appreciated very much coming to know Congressman Westerman and his constituents in the State of Arkansas, as well as his advice, certainly. As you know, he is the only forester in the House of Congress. So there is a great deal to be learned.

The benefits—and I was—speaking as the dean of a school of architecture and design, I want to, in fact, resound what Mr. Brinkmeyer has said. All materials have a use value that can be understood. At a very basic level, I am quite ecumenical on the subject of steel and concrete as much as timber. Each of these materials has a role to play.

And yet the use value, the lifecycle value, certainly can be estimated and even calculated at a higher value when considering the use of wood products and mass timber more generally. This is partially what the Forest Products Laboratory is doing now in concert with universities and schools across the country.

I think there is an important aspect to be understood, certainly, here from the State of Arkansas and, I think, across the Southeast of the United States more generally, which is a southern yellow pine fiber basket, along with significant hardwood stands. And that is to say that, currently, in Arkansas and elsewhere across the Southeast, we are, in a sense, growing more than we can reasonably harvest and utilize. We had a growing issue of surplus, which is either still standing in the forests or on the ground.

This is, you could say, a negative value, so to speak, in the sense that it sets us up for potential forest fires, for insect infestation, as is being experienced elsewhere, and a range of other environmental effects, including into the groundwater supply.

So there is a benefit which needs to be noted from the outset, which is: A dramatic surge in the development of new products and markets for those products, as well as just expanded markets for the products we have, will bring environmental benefit by—it is beginning to address, in part, this surplus condition. Surplus has to be seen as an opportunity. So above and beyond what we see in terms of the built constructions, there is, I think, an underlying environmental benefit which I believe all of us can understand, and it goes to the heart, I think, of the discussion today.

The other question, having to do with the character of the construction itself—this is to say, making use of, as was already discussed, smaller-dimension woods, off-cuts or tree thinnings, making maximum use of every tree, in a sense, that is taken down.

This, to me, is, I think, an ultimate principle of economy and environment at the same time. And it means that our buildings can be built less wastefully. It means that they can be, in many ways, built more quickly and more efficiently. And, ultimately, although there is still significant ways to go in terms of the research, residing within a timber building is beginning to be shown to have advantageous psychological effects. We work better, we work more productively, we work more optimistically from working within a wood-based environment.

So there is a range of issues. I could go on. I see my time is up, but I am happy to continue to expand at request.

Mr. JOYCE. Thank you.

I yield back, Madam Chair.

Ms. PINGREE. Thank you, Mr. Joyce.

Mr. Kilmer has another committee, so I happily defer to him for the next question.

Mr. KILMER. Thank you, Madam Chair.

Based on that last comment, I am thinking about asking for a bill to turn the U.S. Capitol into a wood building.

My first question is for Dean MacKeith.

You know, we know that building with wood has the potential to reduce embodied carbon in buildings. The data suggests massive emissions reductions over the next 50 years, about 870 million tons of CO₂, you know, which is powering about 100 million homes for a year. That is equal to the emissions gains in that regard. That is a huge deal.

And, you know, now that we have seen the 2021 edition of the International Building Code include an update to allow wood buildings up to 18 stories tall, which captures most residential and commercial buildings in the U.S., it feels like the time is right to see a significant increase in tall wood building construction.

But we haven't seen that shift really materialize quite yet, and I am just curious what you think the holdup is. Is it just a natural adjustment period, or are there remaining barriers that you see that are preventing the private sector from transitioning to more tall wood construction? Do we have the manufacturing capacity to meet the demand? What is cooking?

Mr. MACKEITH. Thank you. And, again, this is a multifront question, or a multifront discussion, and you have identified some of the significant factors here.

Manufacturing, yes. Seven years ago, when we began to look at what was possible in the State of Arkansas, I showed Governor Hutchinson a map of the United States indicating where the fiber basket was in the Southeast, where Arkansas was, and where the cross-laminated timber facilities were in North America, let alone the United States. And, of course, they were in Canada; there were two or three coming into being in your State and elsewhere, in Oregon and Idaho and so forth; and there was one, potentially, on the books in Alabama. But there was nothing in the center of the United States, where arguably the Mississippi River has a great presence still in transportation.

So there is a supply question, a manufacturing and supply question, no doubt, that brings this into greater reality for anyone thinking of a new building. That is certainly one aspect.

The other aspect, I think, has to do, as you have noted, with the building codes, their relationships to insurance costs, their relationship to pro forma costs as developers and other commissioning agents see those costs.

The IBC has, yes, advanced significantly, but, of course, building codes are still maintained at the local or at the State levels. And, therefore, it does take a while for the new building code to be brought into, I guess, code compliance or code agreement, even at the level of a city or a State or a county. So there is work to be done there too.

I do want to—so, yes, code, insurance, and also financing, right, which has to do with how buildings are financed, how they are underwritten. And there are an increasing number of banks and other financial concerns which see the value of this to their bottom line. I attended a significant conference 2 years ago organized by Bank of America, which you may know is seeking to invest significant amounts into a low-carbon future. This is very much on their agenda.

The last thing I want to note, again, looking at just keeping an eye on the clock, is, for me—and I am not alone in this, but others could differ—the real challenge here is not the tallest building in the world. That is, I think, always something of an architect's dream, perhaps, but it is not really the sweet spot for mass timber and wood product construction. The sweet spot is the 8- to 10-story building, whether it is speculative or commercial, cultural or academic. And, equally, it is into the residential market, especially multifamily, multistory.

And this is where we come to building our small towns and communities—building our rural communities, at that—by really addressing the ability for mass timber to move into the residential market.

Mr. KILMER. Thank you for that.

And thank you, Madam Chair, for fitting me in. I may come back after testifying to Budget. So thanks so much. This is a great topic, and I appreciate the subcommittee taking this up. And I yield back.

Ms. PINGREE. Thank you, Mr. Kilmer.

Mr. Simpson is recognized for 5 minutes.

Mr. SIMPSON. Thank you, Chairwoman. I have to leave after this question, also, for another meeting and stuff, and hopefully I will be able to come back after it.

But, Marc, I wanted to ask you, you know, one of the important things is—we can talk about all the interesting things that happen in the forest products industry and what they are developing and so forth. One of the most important things is getting that wood from the forest to the mill so that they can actually do those types of activities that are necessary.

In a 2015 ruling, in the Cottonwood, it has created a barrier that stands in the way of improving health of our Federal forests. How has the Cottonwood decision created uncertainty in your supply chain, and what can we do about it?

Mr. BRINKMEYER. Great question, Congressman. Thank you.

Cottonwood is one of those red-herring lawsuits that, once we go through the whole collaborative process on a timber sale or work in the woods, whatever it be, it is still subject to exposure if there is new science that may be unrelated that shows up in another issue, in another place, and it can be used to hold up that particular timber sale.

And so what the whole purpose with Cottonwood—and Senator Daines and another Senator from California have legislation that we hope will be passed to clean up the Cottonwood. As you know, there was great work done on the farm bill here years ago, and we have not had the benefit, because of Cottonwood, really to continue the efforts in the woods.

Our position and the work we have done with the Western Governors' Association, which is something that deserves a shout-out—and you are aware of it through our Governor, Butch Otter, who was a huge proponent of that. It is the bipartisan effort of the western States coming together on western health issues. And it is through that focus we will get to the Cottonwood issue.

I am not for closing the doors to the courthouse, but we have to have some action against serial litigators. And Cottonwood is used by the serial litigators to stop timber sales.

You are aware we have Good Neighbor Authority in Idaho. Good Neighbor Authority is coming in Montana, where the State foresters have the ability to work with the Federal forest professionals in administering timber sales. All the right pieces are in place for our forest health and continued effort on the forest floor, but those are important.

One other area that I didn't mention in my earlier comments is, the true tools for forest health are our loggers. And our loggers need certainty for timber under contract and so forth so they can invest in their equipment and keep their businesses going.

We have over 2,000 logging families that work for our company in the Intermountain. And, to me, it is really important that we look out for them and advance their technology, logistics, and other attributes that we can bring in helping them. Because it has been overlooked for some time. I am not sure what has gone on in other States in that regard, but it has certainly in the Intermountain. It is the Federal forests that have the issue with Cottonwood.

Mr. SIMPSON. Well, thank you. I appreciate that answer. And we look forward to working with you on this.

Just for the sake of the other members, I will tell you that—we have mentioned here Mr. Westerman's bill on the trillion tree planting or whatever. There is also a bipartisan bill that I am the

lead cosponsor of called the REPLANT Act that been reintroduced in the House, which would help the Forest Service plant 1.2 billion trees over the next 10 years and create 40,000 new jobs.

And it is okay to have—it is okay to cosponsor both of those bills. I think both of them would be beneficial to get through Congress. So I look forward to working with all of you on that.

And thanks for this hearing, Representative Pingree.

Ms. PINGREE. [Inaudible] Great having you on the call.

But I wanted to ask you, since the university has had the opportunity to kind of look at this broad range of products, from, you know, the cellulosic fibers to CLT and now the new innovation around wood-related building insulation, where do you see the most promise? And I know that is kind of a big-picture question, but there are so many things on the forefront, I would just be interested to hear from your perspective on that.

Mr. SHALER. Thank you for the question.

Yes, “most promise” is a big question. I think one of the real values and important themes about innovation is that, there isn’t one solution. And it is this broadening of markets mass timber that we have had discussions about, putting in the insulation, new materials, from nanocellulose, the small fiber. Markets have natural ups and downs, so having that diversity for the manufacturing sector is really important.

A characteristic of the industry in the State, if I may be so bold, is that it has a variety of markets. I think in Arkansas they say, “Use everything of the hog but the squeal.” In Maine, you tend to use, if you have the ability to use the pulp, if you have the ability to use the lumber, if you have the energy, if you have the new products from the nanocellulose, you have the ability to use every part of the tree for its highest value as markets change. You are not stuck in a single paradigm. And, as the world changes, we need to have that flexibility and that innovation moving forward.

So we need it all; it is that connection. And we have had a discussion about the life cycle analysis. We also think in terms of circular economy, where we are looking at—the end of that 120 years or 60 years or 3 years in packaging or 6 months in packaging, designing and innovating so it continues to be reused and has the lowest carbon and sustainable impact.

I didn’t exactly answer your question directly, but everything is important, and how they work together is really vital.

And that ties in with the mass timber. What happens when we deconstruct that building? Will we be able to put it into flooring? How do we design that building? What is the connector system innovation? All of those come into the long view. We are solving some of today’s problems right now, but this is really the long-view solution.

Ms. PINGREE. Yeah. Thank you for that.

And it kind of leads into another question that I was going to ask Dr. West, and Mr. Brinkmeyer brought it up as well. But when we talk about harvesting the forest, one of the opportunities—because you mention it—is the, sort of, full use of everything in the forest. That can be kind of helpful on two fronts, in terms of managing the forest and cleaning up some of the left-behind that could put

us in a better position when it comes to forest fires in the future. And that is something we have to invest in quite a bit.

But some people raise concerns about what does get left behind and how we sustainably do that. So, before I go to Dr. West, do you want to make any comment about how that has been perceived in Maine in terms of, like, sort of, you know, snout-to-tail use of the forest, in a sense?

Mr. SHALER. Thank you for the question.

I don't know how to answer that, to be honest.

Ms. PINGREE. Okay. That is fine. Well, why don't I just skip to Dr. West and then see what time I have left.

But, well, you know full well, Dr. West, because, you know, hazardous fuel reduction is a big part of our budget. And I think Mr. Brinkmeyer mentioned putting it into an infrastructure package. And we have looked at that, the idea of the massive amount of cleanup that needs to take place, either in forests where there has been a burn or just in the cleanup and maintenance of it.

So how do you sort of see that fitting in the picture? And is there a way to do some of these good forest products, turn things into a usable product, but also maybe save us some money on the forest cleanup budgets?

Ms. WEST. I want to talk a little bit—we talk about hazardous fuels, and that has been a term that has been used for a couple decades. I want to suggest that, right now, in many of our places across the Nation, that the environmental conditions our forests are growing under now in this century are fundamentally different from the environmental conditions that they were growing under when we developed all those guidelines for foresters to manage, right? So how many trees per acre, what size, what species.

And what we know from what we have experienced through drought, massive drought, more than a million acres of beetle kill, you know, earlier this century in the Intermountain West, to 4 years of drought setting up massive die-back and beetle kills and fire in California—in the Intermountain West now, we are seeing, and across several States, where, for the first time since we have been collecting data, that we are losing carbon. So we are not getting more carbon in our forests, but they are becoming emitters.

So I would say that, you know, part of it is hazardous fuels, in that we have too much material in there to burn, but also, in order to keep our forests healthy so that they can withstand insects and disease that will cause death, dry fuels in the forest, it is a bigger picture and a bigger cycle. We need to go in and remove material from this forest. There is not enough water on this landscape to support all of that biomass in addition to fire.

And when we take this material—we have lost—and several folks have spoken to this. We have lost our low-value residual wood markets, right? And that was our pulp industry. And so, with the loss of that, we are looking at, where can we utilize this material? What technology can we develop?

Well, we have technologies. We know how we can take and use this material. But what we need to put in place and think about are policies that help us to make those technologies economical, whether we are converting wood to various types of fuels, bio-char,

whether we are removing these and putting them into a composite or an engineered wood product.

We know how to do this. We just need the policies to help us work across both Federal and State agencies, with the private sector, to make these things economical. So technology we have got, but—and if we can advance the science. But that is where I think we our biggest gap right now.

Thank you.

Ms. PINGREE. Thank you. That is very helpful.

I recognize Mr. Stewart for 5 minutes. Thank you.

And your clock is wrong. I think it is 2 hours later here. So I don't know. You have got that "9:30" on your clock.

And you are muted.

Mr. STEWART. Thank you. I was saying it is a beautiful day out here in Utah, and you are right, a couple hours behind. Ms. Pingree, thank you for hosting us, and, of course, to the witnesses today.

Ms. Pingree, you started out talking about some of the differences in the forest between the West, generally, that, of course, I represent, and the East. And I have had a chance to enjoy the beautiful forests in the East.

And, Dr. West, you alluded to the thing I wanted to talk about today, and that is, there are some differences—private forest versus public forest, public lands.

One of the things we know about out here in the West, as you said, Dr. West, is that, in some cases, our forests—in fact, in many cases, far too many, our forests are overgrown, that we do need a healthy restoration. And the threat of catastrophic wildfire is one of the things we have to live with because of that overgrowth.

One of the problems we have here in Utah—and I think it is not only within my State; I think it is broadly in the West—we don't grow these enormous trees. Many of them are small-diameter trees. And the market for these small-diameter trees—and when I say small-diameter, I am talking now 8, 12, 14 inches. They are not, you know, tiny. They are certainly viable on the market, except for only for special uses.

And we are experiencing a couple interesting things right now. One of them is an incredible inflation in timber. If you are in the housing or if you are trying to buy a home or build a home right now, that is certainly reflected, as we have seen timber prices double over, really, a matter of less than a year. And yet we can't use these small-diameter trees that are so common out here in the West. And if we could, it would help reduce the threat of these catastrophic fires.

There are a couple alternative sources, you know, like bio-char or wood shavings. And I am asking, I guess, the Forest Service, how can we help match the demand for timber products with the challenges of the small timber and, at the same time, you know, reduce the threat of the forest fires and become part of the healthy restoration as well?

And, Dr. West, if you could maybe lead.

Ms. PINGREE. I think, Mr. Stewart, your camera is off. I think it probably was a mistake too.

Who is it?

Chris Stewart, your camera is off.

Mr. STEWART. For some reason, when I go to unmute myself, it turns my camera off. You tell me. It has been that way for a couple weeks, and we are trying to fix it.

Ms. PINGREE. That is fine. We know you are there, so please continue.

And, Dr. West, I think you are next.

Ms. WEST. Thank you for that question.

I have family that live on the Wasatch Front. And I have talked with water utilities and concerns of Salt Lake City, where 60 percent of the water comes down through the Cottonwood Canyon and the extreme conditions in those canyons and impact on water quality and quantity.

So what we need is a solution to take small trees and make them into higher-value wood products. We have limited uses and capacity in your State and, actually, throughout the Intermountain West to be able to utilize this material with current technologies that typically would make an engineered product or a composite product that requires high capitalization costs with a lot of uncertainty for timber supply for those types of investments.

So what we need is something that is to scale, that can be capitalized at a lower cost, and will take these small stems and convert them to a higher-value product. And that is one of the areas of research that we have targeted. And some promising technologies that we have identified to be able to take the stem and convert it with lower-capitalized technology that we can put in at the right scale in these communities to address this problem.

And so that is a future use. And—

Mr. STEWART. And, Dr. West, if I could, on that, very quickly, the market has just shifted, as I said, although I actually think that I didn't express it very well, in the sense that, in the past, the market didn't demand these small-diameter trees, but in talking with the people in the market and people here in the West, that is no longer true. There is a market for this.

But what we don't have, as you said, is the infrastructure in the market. But we can't develop the infrastructure if there is not the promise that we would have large-scale tracts that would be available. And that is what I am encouraging the Forest Service to do.

It is a little bit of a "chicken or the egg, what comes first?" If the Forest Service would commit to make large tracts available for these small-diameter trees, the market would move in and provide the infrastructure. I am convinced of that. But we need the forest to be more accommodating to tract sales that they just haven't been willing to do in the past.

Ms. WEST. The Forest Service is aware of this challenge and working with States and others as we advance, you know, our stewardship work and our shared stewardship program across the West to find solutions to the problem that you just described.

Mr. STEWART. All right. And my time has expired. But, again, thank you. We look forward to working with you and others as well.

Ms. PINGREE. Thank you, Mr. Stewart.

Mrs. Lee, you are recognized for 5 minutes.

Mrs. LEE. Thank you, Chairwoman Pingree and Ranking Member Joyce, for this hearing, as well as all of our guests and witnesses. It has been fascinating.

I am proud to represent the State of Nevada, where we have had the fastest-growing population of any State during the last five decades. As we have grown, the demand for affordable housing has rapidly outpaced our supply, and today we have a shortage of roughly 80,000 affordable units for low-income renters.

So, while we may not have large swaths of forest in southern Nevada—although my counterpart, Mark Amodei, from up north has a different scenario—we are certainly invested in wood innovation and, in particular, the impacts it has on building materials and construction.

One innovative wood product that I am particularly interested in is mass timber. We have heard today how mass timber can be made from the smaller and weaker trees that are removed from forests during thinning operations to prevent wildfires. Another big concern in the drought Southwest is we are basically in a megadrought. We have also heard that, when produced sustainably, mass timber building materials have the potential to be stronger, more fire-resistant, and promote faster, cost-efficient construction.

So I want to direct my question to Mr. MacKeith.

You have described how sustainably sourced mass timber can be used as a low-carbon alternative for building materials. And as we tackle our housing crisis here in southern Nevada, I am particularly interested in the potential cost benefits of using mass timber in building construction.

Can you comment on that and talk about how you see that transpiring?

Mr. MACKEITH. Thank you very much for the question. And very much thank you for saying the word “housing.” Housing is critical to our future as a Nation and certainly critical in any State, whether it is here in Arkansas or in your State of Nevada.

We believe that there is a role for mass timber and wood product development within the housing industry, within the housing market, within the housing territory altogether. As I alluded to earlier, this is where the financial metrics as well as the quality-of-life metrics can potentially be most broadly realized.

This is also where I would say the universities and the research enterprises in the universities can be of real importance. And just to quote one example, I know this is being worked on at Clemson. I know it is being worked on at Oregon, Oregon State. I can tell you it is being worked on here in Arkansas, where we have our own design-to-income issues for affordable housing.

We know that stick-frame construction, of course, is a major market for the existing wood industry as it is, but, at the same time, the dimensions really pertain to what is, in essence, a private-market-driven territory in which we can either reduce the cost of land, reduce the cost of design, or reduce the cost of construction.

I can certainly be addressing the cost of design. And what we can do within our schools and universities is to produce prototypical affordable-housing unit-based design based upon mass timber panelized construction that can reduce that line item on a pro forma to make this attractive to a developer, whether that is a gov-

ernment agency or a private-market developer. That is what we can be doing to then leverage the manufacturing capacity that is currently in development in the United States.

There are a lot of wins that we can achieve out there, but, as was said earlier, it has to be done in a consortium-based approach—government, industry, and, really, the economy—to further this along.

Our approach is to say we will prototype design, and then we will provide those designs at minimal cost to developers or non-profits alike in order to incentivize their use of mass timber in a repetitive way. That, for us, is the real next horizon.

Mrs. LEE. Thank you.

And my time is up, so I have to yield. Thank you very much.

Ms. PINGREE. Sorry. I forgot to unmute myself.

Mr. AMODEI, would you like to be recognized for 5 minutes for questions?

Mr. AMODEI. Thank you, Madam Chair.

A couple of preliminary things. I noticed that the vice chair was talking about something to do with the Great Lakes. As an individual who represents the greatest single lake, that being Tahoe, we are happy to welcome those lakes where they needed five or six of them to go ahead and make the “great” thing. But, you know, no hard feelings. But that old saying that I believe you folks in Maine are familiar with: Quality is preferable over quantity.

But, anyhow, let’s get on to the hearing.

Thank you.

I was intrigued to hear the discussion a little bit earlier about low-value fiber and forest health and fuels management. You have touched on it; other people have. I believe Mr. Stewart referred to it as low-diameter trees or something along those lines.

And as the home—of which represents my colleague Susie Lee’s district in Mount Charleston and the Spring Mountains—the home of the HumboldtToiyabe National Forest, which I think is the largest one acreage-wise in the Nation, the challenges are such that—I am glad to hear the discussion about all the innovation and stuff like that, and I certainly support all that, but I think we need to talk about, as the committee does its work, talk about the 800-pound gorilla in the room, which is forest health, which is also fuels management.

And so, when we talk about that and we also add in carbon—I am guessing that maybe some of the folks on the panel can answer this question. But when we lose wood in the forest, fuel in the forest, through the forest-fire mechanism, the carbon release and the air-quality implications are nothing short of catastrophic.

We don’t highlight that a lot, but, nonetheless, when we talk about—I was intrigued to hear the discussion about turning biomass into pellets to make that—dealing with carbon release, whether it is biomass or fuel generation or other stuff, is eminently manageable compared to rapid oxidation.

And I can tell you, no offense to my colleagues in the Golden State, but when there is a big fire in the forest in California, Nevada’s air quality goes right out of sight, in terms of, you can’t see anything, there are health district warnings, there is all that stuff, which has become all too common.

So I would like to hear if any of the folks on this panel have information regarding what the air-quality carbon-release realities are—and I know that it differs based on what the fuel is for the acre that is burning, but none of it is good—if there is any existing data on that.

And then, also, if there are one or two clearinghouses, if you will, that talk about the low-value fiber products and how that can be basically looked at in a responsible infrastructure policy going forward.

Ms. PINGREE. It looks like—Mr. Brinkmeyer, did you want to take that?

Mr. BRINKMEYER. Yes, please. Is my audio working?

Ms. PINGREE. Perfectly.

Mr. BRINKMEYER. It is. All right. Well, great question, and I have a couple comments here.

I think I mentioned earlier that we are building a new mill in Mississippi. And the reason we are going to Mississippi is assurance of supply. And with respect to the gentleman that asked the question about the small trees in Utah, if there is certainty available with respect to raw materials supply, the industry will come.

And we have the technology to deal with small logs. That technology going to the State of Maine—knowing Mr. Irving and other producers, your logs are quite small. Your trees are quite old. They are slow-growing. They have structural integrity used in I-joists and other products. Nature's own engineered wood, if you will. And so the technology exists to economically handle the small material.

With respect to forest health, the answer is pellets. In the infrastructure bill—there are pellet manufacturers now. There is technology that is emerging. It has been in Europe for some time. And to give an example, residual—let's just pick—sawdust, in Europe, sells for 80 euros a ton. In the United States, we get \$5 to \$7 per ton.

The whole point being, this is about—because natural gas in the United States versus in Europe, that they don't. And it is used for energy, so the BTU value in Europe is much higher than the United States, hence the pellet plants being built in the Southeast for export to Japan and other places in Europe.

So the answer to the small-diameter wood and the recipes that have come out of the pellet industry is that it will take bark. So it is chippers, to the logging community, to be able to remove this small material and economically put it into pellets and use it for fuel, as was mentioned earlier.

So my point is, we have solutions. The industry will rise to the occasion to be able to deal with it. But we are just a tool. And we are not—we are an industry that is not subsidized. We are not looking for a subsidy. What we need is certainty. And the mills—there are other families in the industry that would build mills and have the technology and ability to do it. But that would be the issue.

So these are all solvable.

Thank you.

Ms. PINGREE. Thank you.

Mr. Amodei yields back.

And Mr. Cartwright is recognized for 5 minutes.

Mr. CARTWRIGHT. Thank you, Chair Pingree.

And thank you to all our witnesses for being with us today.

Thank you, particularly, to Dr. MacKeith, Dean MacKeith, for mentioning Gifford Pinchot, who hails from my district, from Milford, Pennsylvania. Started the forestry school at Yale, the first U.S. Forest Service chair. And great friend of Theodore Roosevelt, the both of them terrific conservationists.

And Gifford Pinchot went on to become the Governor of Pennsylvania in 1931, largely through the efforts of his wife. Many people don't realize Cornelia Pinchot was basically the leader of the suffragist movement in Pennsylvania, enabling an entire gender of voters to come on line. And it was his popularity because of his wife that really ushered Gifford Pinchot into the office of Governor of Pennsylvania in 1931.

And he had this summer camp for the Yale forestry school at his home in Milford, Pennsylvania, as well. And there is no coincidence there. As you all may be aware, Pennsylvania is home to many beautiful forests. The name "Pennsylvania" means "Penn's woods." Over 58 percent of Pennsylvania is covered in forests right now. Many of the forests are publicly owned, but there are 750,000 people who are private owners of forestland in Pennsylvania, with less than 3 percent of the land owned by the forest product industry.

The first question I have is about invasive insects and diseases. The introduction and spread of non-native invasive insect, pathogen, and plant species are causing significant harm to both urban and rural forests.

I recently introduced the Native Plant Species Pilot Program Act to try to understand the cost-effectiveness of using native plant materials in land management activities.

Dr. West, the first question goes to you. What efforts is the Forest Service taking to combat invasive species and reestablish native species?

Ms. WEST. Thank you for the question.

As I mentioned earlier in my remarks, invasive species are significant throughout particularly our eastern forests. We have seen many of these species, both insects, invasive diseases, that have affected the composition of our native forests.

So, you know, there is not a one-track solution. We are working, and working with universities, with other Federal agencies, with State agencies, first of all, to early detections of any new invasives coming in, and then, once detection, trying to eradicate quickly.

When we have lost the game there, now we have to manage and control. So, working on that front, we are also looking at developing biological control methods, we are looking at managing that with different chemical treatments, as well as looking at what comes after.

So, even though we have lost the game, we have to look at, how do we restore behind? I think the Chief may have mentioned in her testimony in another hearing about we need to, you know, begin to think how we re-ash our forests. The chestnut white took out chestnuts. We are looking at challenges for oak regeneration.

And, in the face of this, we are facing changing climatic conditions around climate change.

But the good news is, nature is resilient. And with our help and the work we are doing to find solutions, including genetic selection of solutions for trees that could become resistant to diseases, we can help to shape the forests of the future. And I think that is where we need to be looking to, is the future.

And there are a lot of great biologists, ecologists working, of course, with State universities. We are working on Federal lands, State lands, through our State agencies, to better understand the trajectory of our forests and what we need to do as managers and as well as developing the technologies and the treatments for the future of our forests. And I can provide you with a great more details on that, if you would like, Congressman.

Mr. CARTWRIGHT. I think we are going to follow up.

And I have gone over my time. And, Madam Chair, I yield back.

Ms. PINGREE. Mr. Cartwright, it looks like we might have a brief second round of questions.

So thank you to our witnesses, if you are willing to have a few more questions. I will start with myself.

Mr. Brinkmeyer, thank you so much. It has really been helpful to have your perspective, you know, from the business side.

Everyone has been great, so thank you for all of the testimony.

But you mentioned a couple things in your first testimony that I am just interested to ask you more about. I think you said that you have long turned to Europe to look at some of their best practices and seen that as a source of, kind of, looking into the future of wood products. And, also, you mentioned the check-off system.

So I guess my two questions are: Do you think we still—do we adequately utilize the forest practice and products that are being developed in Europe right now? Is there more we could do with that, sort of, shared information?

And are we using the check-off system enough—I know that is in the Ag Committee, but not here—but just in terms of this whole question about developing markets, getting more built with some of these wood products, particularly the new and innovative ones? What is your perspective on that?

Mr. BRINKMEYER. Well, thank you very much for the question.

With respect to Europe, the European sawmill community and the forest products community is virtually all family-held. And I have had the opportunity to be part of the international association and have gotten to know the families over the years and their embracing of technologies. So there aren't public companies and large public infrastructures. So they're quite conservative.

Their sustained yield program in Austria and Germany is over 200 years old in how they manage their forest. And so there is a message there. And they, for example, have processes, because of their energy costs, where the actual slash is bailed and bundled and brought in and converted to energy. So there are messages in those states—same thing with respect to Finland, Sweden, and so forth. So we, personally and professionally, in our company, we look to Europe first.

And, for example, in processing logs, just to give you an example, it is all done with laser data points. On a 20-foot log, we have 20,000 data points. And what we are doing is we are extracting precision rectangles out of a truncated cone.

Three or four years ago, we invested in a CT scanner, and the reason we did that—all we can do is saw from the outside in. Today, we can saw from the inside out. We know where the knots are, we know where the defect is. And so all of this can lead to a higher grade of lumber.

This is all European technology; it didn't come from the United States. And so our new mill in Mississippi will employ not only that technology but other technology as we study that log for better yield and better products.

Cross-laminated timber is very vibrant. New mills are being built in Europe, and that is where the technology is. The University of Graz is a bastion of utilization of wood fiber.

Keep in mind that they do not have a dimension, structural American lumber standards for it like we have here in the United States. So they don't have commodity lumber. North America is ahead of the game in that respect. But Europe, from a managing forest point of view, their plants, how they handle energy, and their product development is quite good. Necessity drives investment, and necessity is the mother of invention in Europe.

Cross-laminated timber really gained market momentum in the European communities because, as was mentioned earlier, the sweet spot with respect to buildings is 8 to 10 stories. So just imagine, in the large metropolitan areas—pick London, pick any of the large European cities that have six-story buildings—have been utilizing cross-laminated timber to add two stories to those buildings. Because wood is 20 percent of the weight of steel and concrete and has the same strength characteristics. That is where the innovation comes from, and that is where it is fascinating.

And so we believe that, from a forest health point of view, managing their forests, there is a lesson.

There is also another lesson here in the United States. The fires on private lands and public lands are minimal, on a percentage basis. The fire situation is on the Federal lands. Now, there are issues with respect to sagebrush and other forms of wildfires that are an issue and contribute to the fire situation. With respect to managed forests, there is less fire exposure than there is on the national forest, and it is purely because of the forest health.

And that is what we feel that—we don't feel it is appropriate to complain about it. We feel it is appropriate to work with folks, such as yourself and the western Governors and others, to bring this information forward to see if we can't show you and have you look at it with the same optics that we do. Because we are operating people. Our world is the woods, our world is fires. We have had some fires that we have had to deal with. But that is all part of the forest products community.

But management of the Federal forest, allowing us to do our job, allowing the professionals in the Forest Service—who are super. The State foresters we have, the Federal foresters we have, they know what they are doing. Give them a chance to do their job. They will do the right thing.

Ms. PINGREE. Thank you so much. I have to cut you off right there. I am out of time. Thank you.

Mr. Joyce, do you have another question you would like to ask?

Mr. JOYCE. Thank you, Chair Pingree.

Dean MacKeith, if you wouldn't mind, can you tell us how the advancements you have witnessed in Arkansas's timber and wood industries have impacted rural communities throughout the State? And just take a moment, as well, to discuss the importance of Forest Service funding in achieving those goals.

Mr. MACKEITH. Yeah. Thank you very much for the question.

As I indicated in my remarks, the first, I think, advantage and the first appeal on this, beyond the evident need to address the surplus condition, the environmental condition, there is, I think, as well, the need to address the economic vitality, the quality of life in the rural communities of the State.

If you were to map in a somewhat laminated way the presence of the forests in the State of Arkansas, the presence of sawmills and other wood product operations in those forests, you would also be mapping rural communities as well. So these are all inter-related. That is, I think, vital to this understanding.

The first thing, then, is in terms of jobs. And whether that is the restoration or creation of new jobs in logging and in sawmill operations or new jobs in the sense for the development of new markets—new products and new markets. And that is where, for instance, our ability to attract a cross-laminated timber manufacturer to set up operations in the middle of the State is job creation of immediate residents around that facility and then further and further residents out.

So this is about job creation. That is one thing which can be of great benefit to rural communities. Equally, then, we believe that there is a role that we can play, as a school, in quality of life in those communities. And I come back to the issue of housing.

So we are now working with a combination of a foundation grant as well as USFS funding to look at the issue of affordable housing in rural communities situated in the forest in such a way that we can truly provide affordable housing for those citizens of those communities in a way that makes absolute sense to them. It is made of wood, and its essence is something that they can identify with.

This is the value chain that I continue to emphasize, not only the partnership between government, industry, and university, but also the responsibility that we have to our citizens in these rural communities to really demonstrate the value of their work directly to the places where they are living.

So, again, the USFS funding has been critical for us all along the way. And then, coming in the wake of everything that we have done, everything we have built, Forest Products Laboratory research funding just enhances that and furthers it down the line.

Mr. JOYCE. Thank you. I appreciate it.

Chair Pingree, I know we have other folks who want to ask additional questions, so I would defer to them. Thank you.

Ms. PINGREE. Yeah. Thank you for that.

Let's see. Mr. Cartwright was going to go next, but I think he has disappeared, so that would bring us back to Mr. Kilmer for 5 minutes.

Mr. KILMER. Thank you, Madam Chair.

I just, actually, want to mention, in response to the last comment around housing, there is actually some interesting stuff that is happening in my neck of the woods. We have another interesting

product, composites, recycled composites, that are being used in coordination with cross-laminated timber to build tiny homes for homeless veterans in our area. And if there is interest in learning more about that, I would be happy to pass on some of the interesting work that is happening in my neck of the woods.

I also wanted to just ask, again, trying to get at what we can do—you know, I am conscious of the fact that the Federal Government is our Nation's largest builder, and so I think there is a lot of opportunity to sort of move the needle by getting the Federal Government to lead more in this space. You know, on this committee, you know, I have worked with GSA and with the Department of Defense to try to update their procurement policies to reflect the carbon benefits of wood construction.

But I would love to get a sense—and I am not sure who to direct this to, maybe Dr. West or Dr. Shaler—of what steps can the Federal Government take to help lead the shift toward wood construction and to solidify the role of advanced wood products as low-embodied-carbon building material that will be key to meeting our net-zero goals?

Ms. WEST. I am glad to take that question and really appreciate the question.

The Federal Government has the power through the sheer number of buildings that we put in place. And many of these are not those tall, 18-story buildings, but they are the lower-rise buildings that we are putting in place. And whether it is through our programs with HUD for affordable housing, or with FEMA and HUD to address replacing housing after major disasters from fires and from major storms, and where it is that we are building upon our own facilities.

We had a program and a plan about 12 years ago called our Green Building Strategy, and part of that strategy that we put together with our partners identified incentives for the Federal Government to lean into building from wood. And resurrecting those recommendations and incentives—you know, we have made some progress. I mean, this is in the Forest Service and other agencies and within USDA. With the new sustainability office and the department sustainability plan and forum, we have an opportunity to lead out on that. So we certainly can do that.

Department of Defense is a huge organization with many needs and structures. So we have innovations, from using, you know, thin nanocellulose material that has been combined with cement and concrete to create thin walls to put up to withstand blasts for temporary housing for military personnel—is one thing. If we can develop some of these systems with these CLT panels that we can ship flat, we can move houses around the country from where we put our component parts together.

So we have a lot of opportunity in working, again, resurrecting what we started with 12 years ago in Green Building Strategy for Federal agencies.

Mr. SHALER. If I could briefly add on: part of the other issue is—in the low-carbon procurement standards. Details matter in terms of how those calculations are made. I think that is an important area.

And the other part of this: We talk to contractors and look at how they de-risk. We know that once a company has built these, they reduce time to market because they are comfortable with the new building technology, and they can price that into their models moving forward. Demonstration giving these companies the experience so that they have confidence in putting more projects forward—is an important component.

Mr. KILMER. Thanks very much. And to the credit of some of the leaders in my State, they are doing some demonstration projects using CLT. And I mentioned the work on the veterans' housing using recycled carbon fiber and CLT. It is entirely with an eye towards doing that sort of demonstration.

So thank you, Madam Chair. I yield back.

Ms. PINGREE. Thank you, Mr. Kilmer.

I see Mr. Harder has joined us. So it will be Mr. Amodei, if you would like to ask another round of questions, and then Mr. Harder.

Mr. AMODEI. Thanks, Madam Chair.

Just to follow up on the earlier stuff, which is, in terms of your committee's work, Madam Chair, and also the members' work in terms of fuels, forest management, all that sort of stuff, if there is—and I don't know whether that is Dr. West or any of the other panel members—but if the data is out there that talks about, for instance, the carbon effects of wildland fire and also the cost to produce whatever creates a BTU or whatever of coal with existing technology versus the cost to create the same unit of measure, whether it is BTU or a ton or something like that, regarding wood pellets, I think those would be phenomenally persuasive facts when we go forth and say, "Hey, we need money to do this. You want clean air, and pellets are cleaner than coal and the cost to create them is competitive, if those are the facts. Oh, and, by the way, all of that stuff is not going into the air in the form of the next forest fire during these drought times" or climate change or whatever. I would think that would be phenomenally persuasive for us to go to our colleagues.

So my request would be, if there is an entity or entities that have that information, please share that with the committee so that we can develop that and use that to make our other colleagues aware of it and go forth and try to get the right thing done.

Ms. WEST. Congressman, we do have quite a bit of information that does those comparisons. We do quite a bit of monitoring for air quality and emissions during forest fires. And we are glad to put together some additional information and share that with you.

Mr. AMODEI. Thank you very much.

I yield back, Madam Chair.

Ms. PINGREE. Great.

Mr. Harder, I recognize you for 5 minutes.

Mr. HARDER. Thank you, Madam Chair. No questions from me. Thank you. I yield back.

Ms. PINGREE. I think that Mr. Brinkmeyer had a hand up. I don't know if he wanted to answer Mr. Amodei's question or just weigh in.

Mr. BRINKMEYER. Yeah. Thank you, Madam Chairman. I just wanted to share that, together with Dr. West, we can help with the information on pellets and the value proposition.

One of our team members supplied me the information on the last round of wildfires. It is 112 million tons of carbon that went up in the air. And so, just looking at California and that issue—and then we can break it down based on forest versus wildland fires and so forth.

But we would be happy to—and there is independent valued research that has been done in this space that we can share with this committee, however you would like to receive it, if we bring it in through Dr. West or however you would want us to bring that information forward for you.

Ms. PINGREE. Great. Well, we will follow up with you on that, and we will follow up on Mr. Amodei's question, because I think we could gather a lot of very useful information from these witnesses that we have had today.

So we have kept you for 2 hours, and you have all been really generous with your time. Unless any members want to ask any more questions—and it looks like we can let you off the hook.

So I just want to thank our witnesses for appearing in front of us today. We really appreciate your testimony. This has been an important, really helpful conversation to all of us. And, as I said, we would love to follow up with you. You all have a wealth of information, and I think you are really such useful resources for our committee in making some of these challenging decisions going forward.

So there are no additional questions and we won't have any more additional comments, so this hearing is now adjourned. Thank you all very much. Thank you so much.

THURSDAY, MARCH 25, 2021.

**THE EFFECTS OF COVID-19 ON ARTS AND HUMANITIES
ORGANIZATIONS**

WITNESSES

**KATHLEEN MUNDELL, CULTURAL RESOURCES
CALEB CAGE, NEVADA HUMANITIES BOARD OF TRUSTEES
DEBORAH LENK, MUSEUM DIRECTOR, MUSEUM OF GLASS
ULYSSES SLAUGHTER, PROJECT MANAGER, CHESTER MADE**

Ms. PINGREE. Good afternoon. This hearing will officially come to order.

As the hearing is fully virtual, we must address a few house-keeping matters, and I will read this verbatim.

For today's meeting, the chair or staff designated by the chair may mute participants' microphones when they are not under recognition for the purposes of eliminating inadvertent background noise. Members are responsible for muting and unmuting themselves.

If you notice that you have not unmuted yourself, I will ask if you would like staff to unmute you. If you indicate approval by nodding, staff will unmute your microphone.

I remind all members and witnesses that the 5-minute clock still applies. If there is a technology issue, we will move to the next member until the issue is resolved, and you will retain the balance of your time.

You will notice a clock on your screen that will show how much time is remaining. At 1 minute remaining, the clock will turn to yellow. At 30 seconds remaining, I will gently tap the gavel to remind members that their time is almost expired. When your time is expired, the clock will turn red, and I will begin to recognize the next member.

In terms of the speaking order, we will follow the order set forth in House rules, beginning with the chair and ranking member. Then members present at the time the hearing is called to order will be recognized in order of seniority, and, finally, members not present at the time the hearing is called to order.

Finally, House rules require me to remind you that we have set up an email address to which members can send anything they wish to submit in writing at any of our hearings and markups. That email address has been provided in advance to your staff.

Okay. That is the end, so I will begin.

Well, thank you so much to our witnesses for being here and to committee members for taking up this important topic. COVID-19, as we all know—I don't have to say this—has taken a grave toll on communities across the country, and the dire impacts have been far-reaching. Today, in this committee hearing, we will examine how the pandemic has affected the arts and humanities sector.

By nature, many of these organizations, like museums and performing arts groups, are inherently dependent on interaction with their consumers. So workers in these industry have faced high unemployment, lost income and benefits, and challenging decisions on how to protect their health while preserving their livelihoods.

Last year, Congress provided much-needed relief, appropriating \$75 million to each of the endowments through the CARES Act. Still, I think we all knew that the needs were far greater than that, and I am pleased that an additional \$135 million has been provided for each endowment in the recent American Rescue Plan.

The National Endowment for the Arts' Office of Research and Analysis estimates that these funds will support about 2,300—234,000 jobs in the arts. These are largely good, stable, middle-class jobs and provide much-needed respite for organizations until normal funding streams can resume.

In April 2020, the National Endowment for the Humanities estimated that museums and historic sites were reporting losses of \$1 billion a month.

The NEA estimates that while the national endowment rate for the fourth quarter of 2020 was approximately 6 percent, the unemployment rate for dancers and choreographers was 77.8 percent; for actors, 47.6 percent; and for musicians, 21.5 percent.

Those are sobering statistics about the state of our arts and humanities sectors across the country. And it is important to remember, even though those are numbers, there are real people behind all those numbers, and that is the purpose of our hearing today.

Today's witnesses represent a wide swath of arts and humanities groups from across the country, and they are integral to arts and humanities in their communities. I look forward to hearing from them what Federal funding through the NEA and NEH has done to help these organizations and their communities and what needs we may need to address as a subcommittee going forward. I hope they will help us to understand the on-the-ground reality and the outlook for recovery in this sector.

I will now welcome our panelists, Kathleen Mundell, who is the director of Cultural Resources in Rockport, Maine—pleased to have a Mainer here with us today; Debbie Lenk, who is the executive director of the Museum of Glass in Tacoma, Washington; Ulysses Slaughter, who is the project manager for Chester Made in Chester, Pennsylvania; and Caleb Cage, Nevada Board of Humanities, who I think we may hear more about from Mr. Amodi.

Before the—before hearing the opening statements from our panel, I would like to yield to our yanking—ranking member, Mr. Joyce, for any opening remarks he would like to make.

Mr. JOYCE. Thank you for yielding, Madam Chair.

Today's oversight hearing provides an opportunity to understand how the COVID-19 pandemic has affected arts and humanities organizations across the country and how Federal resources are being used to mitigate the virus' impact.

Like the chair, I would like to welcome our witnesses, Caleb Cage, Deborah Lenk, Kathleen Mundell, and Ulysses Slaughter. I appreciate you taking the time to join us this afternoon.

COVID-19 has brought unprecedented hardships and tragedies, and it has turned a lot of lives upside down. It has disrupted our

communities and left no industry untouched. I recognize that COVID-19 has hit the arts and humanities sector especially hard, given the industry's characteristics and their reliance on in-person experiences.

Last spring, Congress passed, and President Trump signed, the Coronavirus Aid, Relief, and Economic Security Act, more commonly known as the CARES Act. The CARES Act provided \$75 million in emergency funding for the National Endowment for the Arts and also for the National Endowment for the Humanities to help State and regional councils, as well as cultural organizations and institutions, blunt the financial impacts of the pandemic.

Madam Chair, while I wish we could have held this hearing in advance of another \$270 million being provided, I am hopeful that through our discussions today we can understand how groups across the country are using funding to stay afloat, support at-risk jobs, and protect ongoing projects during the pandemic. And whether these funds more broadly benefited local economies and communities, including students and teachers displaced from their classrooms during the pandemic.

I know we are all looking forward to the day when we can return to a full concert venue, a gallery opening, or a museum exhibition. In the meantime, it is helpful for us as appropriators, who want to ensure we remain good stewards of taxpayer dollars, to hold these oversight hearings to understand the impact COVID-19 emergency funding has had on various industries like the arts and humanities. And to recognize the industry needs have continued to evolve throughout the pandemic, which could help guide our future funding considerations.

Thank you for yielding, Madam Chair. I look forward to this discussion ahead, and I yield back.

Ms. PINGREE. Thank you very much, Mr. Joyce.

Would any other member like to make opening remarks?

Seeing none, we will start with Ms. Mundell. Thank you very much, and welcome to a fellow Mainer.

I think you might be muted. There you go.

Ms. MUNDELL. Great. Thank you.

Thank you, Chair Pingree and Ranking Member Joyce and other members of the subcommittee, for inviting me to speak this afternoon.

My name is Kathleen Mundell, and I am the director of Cultural Resources, a nonprofit based in Maine, that for the last 30 years, has worked with local communities on developing strategies, alliances, and programs that help sustain their traditional culture.

Franco-American step dancing in Lewiston, Wabanaki basket making in Princeton, Rwandan drumming in Portland, almost every community in Maine has cultural traditions worth sustaining. These traditions are passed down informally, usually face to face, from one generation to the next, and are rooted in the way of living, reflecting shared cultural values.

Drawing on a set of skills acquired over a lifetime of practice, traditional artists are often recognized by fellow community members as the ones who are doing it right. Such mastery calls for a deep understanding of natural materials, places, and cultural practices. Where there is a longstanding sense of place, people know

what works and what doesn't, what is useful and what is beautiful. And although some of these people, who live in an area for a long time, sometimes are reluctant to call themselves artists, they are definitely keepers of their culture.

Cultural Resources works with communities and artists to sustain this culture. We do this through fieldwork and community gatherings, resulting in the development of apprenticeship programs and traveling exhibits.

Our longest working relationship is with the Wabanaki traditional artists and Tribal members. These are members of the Passamaquoddy, Penobscot, Micmac, and Maliseet Tribes. With support from the National Endowments for the Arts' Folk and Traditional Arts Program, Cultural Resources has worked with members of the Wabanaki Tribes and the Maine Arts Commission in developing a highly successful apprenticeship program that contributed to the resurgence of the ash basketry tradition and also helped create a new generation of basket makers, many who have gone on to national recognition, including four National Heritage winners, as well as many award winners at the Santa Fe Indian Market.

The apprenticeship program was also instrumental in the formation of the Maine Indian Basketmakers Alliance, a native-run non-profit dedicated to sustaining this endangered tradition.

More than just one-on-one instruction, apprenticeships help communities maintain traditions by connecting elders with younger students for an exchange of techniques and cultural knowledge, which includes language and selection and preparation of natural materials.

Being able to utilize nearby natural resources has great resonance in Maine, especially the North Woods. This part of Maine is America's oldest working forest and is home to the remarkable range of traditional artists. Given the harsh climate and limited economic opportunities, to be a practicing traditional artist requires a strong sense of purpose, resourcefulness, and ingenuity.

Last year, as eight new apprenticeships were about to begin, everything came to a grinding halt when Governor Janet Mills issued a stay-at-home order. As a result, many of the apprenticeships were postponed, as well as the development of a new exhibit called "Always Home: Wabanaki Traditional Arts," which was to open in Monson Arts in northern Maine.

With CARES Act funding from the National Endowment for the Arts, Cultural Resources will be able to move forward with the apprenticeships and continue to develop this exhibit, which will open at the end of May 2021.

This past year has been one of tremendous loss—of lives, of jobs, and of human connection. We have also witnessed the extraordinary capacity of the human spirit to find ways to keep going. I believe supporting traditional arts anchors people, helping to support communities through such difficult times by honoring people, their places, and their culture.

It is through the support of this committee and the National Endowment for the Arts that such programs are successful and will continue for future generations.

Thank you for your support and for all that you do.

[The statement of Ms. Mundell follows:]

Thank you for inviting me to speak this afternoon.

My name is Kathleen Mundell and I am the Director of Cultural Resources, a non-profit based in Maine, that for the last 25 years has worked with local communities on developing strategies, alliances and programs that help sustain their traditional culture.

What are traditional arts?

Franco-American step dancing, Wabanaki basket-making, Rwandan drumming, every community has cultural traditions worth preserving. These traditions are passed down informally, usually face to face, from elder to youth, and are rooted in a way of living, reflecting shared cultural values.

Drawing on a complex set of skills acquired over a lifetime of practice, traditional artists are recognized by fellow community members as the ones who are “doing it right.”

Such mastery calls for a deep understanding of natural materials, place and cultural practices.

Where there is a long-standing sense of place, people know what works and what doesn’t, what is useful and even beautiful. And some people who have lived in an area for a long time, although often reluctant to take on the term of “expert” or even “artist”, can be the keepers of this culture. What Barry Lopez describes as “local geniuses.” He explains: “Their knowledge is intimate rather than encyclopedic, human not necessarily scholarly. It rings with the concrete details of experience.”

How does Cultural Resources work with artists and communities on conserving their cultural heritage?

We do this through fieldwork and organizing community gatherings resulting in the development of a range of programs from apprenticeship programs to travelling exhibits.

Our longest working relationship is with Wabanaki traditional artists (members of the Passamaquoddy, Penobscot, Micmac and Maliseet tribes). With support from the National Endowment for the Arts, Folk and Traditional Arts Program, Cultural Resources worked with the Maine Arts Commission in developing a highly successful apprenticeship program that contributed to the resurgence of the ash basketry tradition and help create a new generation of basket makers, many of whom have gone onto national recognition including 4 National Heritage winners, 3 USA artists fellowship winners and many first-place winners at the Santa Fe Indian Market. This work was also instrumental in the formation of the Maine Indian Basketmakers Alliance, a native run nonprofit dedicated to conserving this endangered tradition. More than just one on one instruction, apprenticeships, help communities maintain their cultural traditions, connecting experienced artists with younger students for an exchange of techniques and cultural knowledge, which often includes language instruction and the preparation and selection of natural materials.

Being able to rely on one's own talents and utilize nearby natural resources has great resonance in Maine and especially the North Woods. This part of Maine is America's oldest working woodlands, and it is home to a remarkable range of traditional artists. Whether shaping snowshoes or building birch bark canoes, these artists are keeping alive an important part of this region's heritage. Given the harsh climate and limited economic opportunities, to be a practicing traditional artist in this region requires a strong sense of purpose, resourcefulness, and ingenuity. One of Cultural Resource's touring exhibitions, "Artists of the Forest," is a tribute to their creativity and dedication.

Many traditional art forms continue because they fit into a self-sufficient lifestyle that is an essential part of living in Maine. Such practices continue because their makers choose to keep

them going—adapting them to fit contemporary circumstances and new markets, while at the same time, affording them the freedom to live and work in a place they love.

What is COVID's impact?

The apprenticeship program and the traveling exhibit program are at the core of our mission.

Last year, just as 8 new apprenticeships were about to begin, everything came to a halt when Governor Janet Mills issued a stay-at-home order. As a result, many of the apprenticeships were postponed as well as a new exhibit entitled “Always Home: Wabanaki Traditional Arts” which was to open at Monson Arts, in northern Maine. With Cares Act funding, Cultural Resources will be able to move forward with the apprenticeships and open the exhibit at the end of May, 2021.

This past year, has been one of tremendous loss — of lives, of jobs, and of human connection.

We have also seen the extraordinary capacity of the human spirit to find ways to keep going. I believe supporting traditional arts helps people through such dark times by honoring people, their places and their cultural practices

It is through the work of this committee and the National Endowment for the Arts that such programs are able to continue.

Thank you so very much for what you do and for your support.

Kathleen Mundell, Director
Cultural Resources,
Camden, Maine

Ms. PINGREE. Thank you so much.

Ms. Lenk.

Ms. LENK. Thank you, Chair Pingree, Ranking Member Joyce, and members of the committee.

As mentioned, I am Debbie Lenk, executive director at Museum of Glass. I appreciate the opportunity to speak with you about the devastating effects of COVID-19 on museums and communities we serve.

Museum of Glass, affectionately known as MOG, is based in Tacoma, Washington. Long known as the Gritty City, we have a reputation for hard work, a large military presence, and a willingness to roll up our sleeves to make life more equitable and accessible for all.

We are also known for glass. The Pacific Northwest is home to the largest concentration of glass artists in the world, making MOG a vital player in shaping the future of glass nationally and internationally. Unique among museums, we are a hands-on maker space where creativity becomes art every day.

But the crowning feature of the museum is our Hot Shop, with an amphitheater and two furnaces each filled with a thousand pounds of molten glass. We invite artists to experiment and work with our renowned team, and use the glass-making shop for community programs that heal, inspire, and educate.

While most Museum of Glass programming is offered onsite, MOG frequently provides in-class programs in local schools, designed to foster critical thinking skills and instill a passion for lifelong learning. We have also been working to develop greater partnerships among historically underserved communities to bring access to our youth programs.

We never imagined a world where Museum of Glass would operate only 4 months in 2020. Last March, for the first time in 20 years, our exhibitions, Hot Shop, and programming went idle. Without vital Federal funding, including the grant from the National Endowment for the Arts, Museum of Glass would not have survived this past year.

Thanks to the NEA, we have deepened our understanding of arts as healing through our Hot Shop Heroes program, which supports the individual therapies of soldiers and vets with visible and invisible wounds, injury, or illness. The NEA was one of the first to support the museum's effort to engage the military in their recovery and work towards understanding why a structured series of glass-making classes seemed to profoundly impact wellness.

Throughout this extraordinary year, we have remained concerned about the financial and human impacts of our closure. An independent news site here in Seattle, Crosscut, recently surveyed 118 local arts organizations on the impact of COVID-19. The majority, 72 percent of the respondents, said they don't have enough cash on hand to cover operating expenses for the next 12 months. This is the reality for nonprofit arts organizations like MOG.

Fifty percent of our museum's revenue comes from earned sources—admission tickets, hands-on activities, classes, et cetera. To sustain the organization for the long term and position us for a very unpredictable year, we placed all staff on furlough imme-

diately after closing. It was difficult, and it took an emotional toll on our people.

The financial instability of families, stress of parents homeschooling children, the social and political climate, fear of coronavirus, and a constant state of evolving restrictions have pushed people to their limits. Our communities need art more than ever.

CARES Act, PPP, and EIDL loans were critical lifelines for us to cover ongoing site costs and to adapt key programs to virtual formats. We also received a special COVID CARES Act grant from the NEA to bring our Hot Shop staff back to evolve our techniques and create safe processes to blow glass with masks on.

On April 2, Museum of Glass will reopen, and we believe guests are ready to return. We look forward to reengaging programs that had to be put on hold.

At the institutional level, this next year will still be uncertain. The health of museums is dependent on Federal programs and funding provided by organizations like the National Endowment for the Arts, which enable us to do what we do best, heal our communities through art.

Thank you. I appreciate the chance to tell MOG's story and let you know how much we appreciate your support.

Deborah (Debbie) Lenk
Executive Director, Museum of Glass, Tacoma, WA

Opening statement

Museum of Glass, affectionately known as “MOG”, is based in Tacoma, Washington, the third largest city in the state, and one of the fastest growing. Long known as the Gritty City, we are known for our hard work and willingness to roll up our sleeves to change what needs to change for life to be equitable and accessible for all. Today, Tacoma is experiencing an influx of young families and emerging artists who are attracted to our quality of life and our reputation as a maker-city. These new residents join soldiers who serve at Joint Base Lewis-McChord, just ten miles from the city’s center, and a host of visionary community leaders who continue to want the very best for Tacoma.

Tacoma is part of Pierce County, one of the most topographically diverse counties in the nation, from the deep-water Port of Tacoma in Commencement Bay to Mount Rainier at 14,000 feet. Pierce County is also honored to have the Nisqually and Puyallup Indian Reservations within our borders. In fact, Museum of Glass, is located on Puyallup tribal land. We are deeply grateful to the Puyallup people, and to the Coast Salish tribes of Western Washington which have recently served as advisors on two of the Museum’s Native American glass art exhibitions.

Museum of Glass, which opened its doors in downtown Tacoma in 2002, was built on a former Super Fund site and was the first EPA reclamation of a marine waterway in the United States. Substantial economic impacts have resulted from this federal investment, with MOG now serving as the cornerstone of the ongoing development of the Thea Foss Waterway on which the Museum stands. In addition to MOG, the downtown area is comprised of five other museums. This cultural area is a draw for both locals and tourists, providing an economic driver for the city.

Our area overall is home to the largest concentration of glass artists in the world, making MOG a vital player in shaping the future of glass in the Pacific Northwest, nationally, and internationally through glassmaking, exhibitions, and programming. Unique among museums, MOG is a hands-on makers’ space where creativity becomes art every day.

The Museum’s mission is to ignite creativity, fuel discovery, and enrich lives through glass and glassmaking.

As a relatively young institution with an enthusiastic board and staff, MOG has established a reputation for:

- Hosting engaging artist residencies

- Developing nationally traveling glass exhibitions that encourage dialogue among visitors about the important issues of our time, and
- Creating unique programs that celebrate the arts as inspirational and healing.

A crowning feature of the Museum is our Hot Shop, which is the West Coast's largest and most active glassmaking studio. Our Hot Shop includes a large amphitheater and two furnaces each filled with 1,000 pounds of molten glass. This gem of Tacoma is located in an iconic stainless-steel cone. Our Hot Shop affords MOG the opportunity to invite artists to experiment and work with our renowned team, often resulting in a new body of work for the artist. The Hot Shop also uses glassmaking to heal and inspire those in our community. It is truly a magical place where transformation is encouraged and celebrated.

Thanks to the National Endowment of the Arts, Museum of Glass has been able to deepen our understanding of the arts as healing, through Hot Shop Heroes, a glassmaking program, for soldiers and veterans with post-traumatic stress, traumatic brain injury and other depressive disorders. The NEA was one of the first to step forward to support the Museum's efforts to not only engage soldiers and veterans in their recovery, but also to more fully understand why a structured series of glassmaking classes seems to profoundly impact wellness.

NEA has been an important partner in the development, continuation, and growth of Hot Shop Heroes, including the nationwide expansion of the program.

Museum of Glass also collaborates with Creative Forces, a network committed to improving the well-being of service members, veterans, and their families through creativity and community. Creative Forces was established by the National Endowment for the Arts in partnership with the U.S. Department of Defense. MOG has been actively engaged with Creative Forces and received funding in the first quarter of 2020 to help purchase tools and molds for our Hot Shop Heroes Advanced Production Class.

Due to COVID-19, it has been more than a year since we were last able to invite Visiting Artists to the Hot Shop or provide transformative hands-on programming such as Hot Shop Heroes. According to the [Washington State Department of Commerce](#), Washington is sixth in the nation in the number of active-duty military within its borders. The military and defense sector employs another 39,000 civilians, mostly at JBLM and Puget Sound Naval Shipyard (PSNS), the latter of which is located about 35 miles north of Museum of Glass. The state also tracks a veteran's population higher than the national average.

Our location in Western Washington meant we were at the epicenter of the first documented cases of COVID-19 in February 2020. Our governor, Jay Inslee, acted quickly, declaring a state of emergency on February 29, followed by an order to shutdown schools and all non-essential

indoor venues including museums, effective March 17. Museum of Glass would not open again until September 25, and only for a brief period, until on November 16, when rising COVID numbers resulted in a second shutdown issued by Governor Inslee. Today our Museum remains shuttered.

We never imagined a world where Museum of Glass would operate for only four months in 2020. It was the first time in 20 years our Hot Shop and programming went idle. During uncertain and dark times, people look to art for healing and inspiration. It was, and remains, a heavy burden for MOG to not be able to serve our community in the same manner we have for two decades.

It has been an extraordinary time with continuous concern about the financial impacts of being closed. We have been fortunate to date, thanks to the CARES Act funding, our committed Board of Trustees, and being permitted to open for a brief period. We know many other arts organizations were not so lucky.

An independent, nonprofit news site in Seattle, *Crosscut*, recently surveyed 118 local arts organizations on the impact of COVID-19. The majority (72%) of respondents said they do not have enough cash on hand to cover operating expenses for the next 12 months. About a quarter of respondents indicated their cash balance would only get them through two to three more months. This is the reality for us, and other nonprofit arts organizations.

Fifty percent of MOG's revenue comes from admission tickets, hands-on and other educational classes. An immediate, and ongoing concern has been conservation of cash. To sustain the organization for the long term and position us for what would be a very unpredictable year, immediately after closing we placed all staff on furlough. It was difficult and took an emotional toll. Many had not been on unemployment before and with offices overwhelmed by the volume of claims, there were challenges with getting all staff taken care of.

On behalf of Museum of Glass staff, we want to express our gratitude for the additional weekly unemployment benefit, \$600 in the spring and summer and \$300 per week this fall and winter. That did help provide staff still on furlough some stability, and ease anxiety and fear, but the impact of this year on mental health of our staff, the emerging artists, youth, members of the military, and underserved communities we, and our counterparts in the Tacoma Museum District serve, will not be easily healed.

The financial instability of families, stress of parents homeschooling children, the social and political climate, fear of coronavirus and constant state of evolving restrictions have pushed people to their limits. Our communities need art more than ever. Throughout the past 12 months we have focused squarely on providing what programs we can in order to give people hope, and we have worked to ensure our staff have jobs when MOG can reopen.

MOG has virtually moved our mission forward by creating and adapting programs to video formats to support homeschooling and community center programs, while temporarily placing other programs on pause. We have examined relationships with underserved/marginalized neighbors and intentionally maintained relationships with supporters, and we are making plans to re-open.

Museum of Glass applied for and received Cares Act PPP and EIDL loans. These have been critical lifelines to bring staff back. They allowed us to push ourselves in exciting directions and begin developing new virtual programs for use in schools. As a past grantee recipient, we also received a special Cares Act grant from the NEA to reopen the Hot Shop. That helped us evolve our glassblowing techniques and create safe processes to blow glass during COVID. Our blow pipes have been adapted to use with masks and processes have been changed to allow more distance among team members. This is a critical step for us in developing and trialing glassblowing so we can safely reopen the Hot Shop.

While we were able to create new ways to serve the community with the help of the PPP, EIDL, and NEA funding, the reality is we would not have survived as an organization without them.

What we have weathered will, ultimately, make us stronger. On April 2, 2021 Museum of Glass will reopen, and we believe guests are ready to return. In Washington, vaccine supply is growing, and we are seeing optimism grow, too. We look forward to reengaging with neighborhood community centers, as well as with families and youth served by programs that had to be put on hold. Our popular hands-on programs will be reworked in the short term. Our new virtual programming is versatile enough to continue serving schools for the time being and then to become a valuable teaching tool when students return to class full time.

A priority as we return this Spring is to bring back Hot Shop Heroes. We look forward to resuming work with the Soldier Recovery Unit and the Intrepid Spirit Center at Joint Base Lewis-McChord, and with the Veterans Administration. Hot Shop Heroes supports the individual therapies designed to help soldiers and veterans return to active duty or to transition successfully into civilian life.

We appreciate this opportunity to share our experience in navigating the unprecedented impacts of COVID-19 on the arts. While we are hopeful, we need people – both our staff and visitors – to feel safe returning to museums. For many, feeling safe means receiving the vaccine. Access is increasing, but much work is needed to ensure all Americans are vaccinated.

At the institutional level, the health of Museum of Glass and organizations like us is dependent on funding provided by organizations like the National Endowment for the Arts, which enable us to do what we do best – heal our communities through art.

We hope we can count on your support in rebuilding arts and cultural organizations nationwide.

Museum of Glass thanks you for the opportunity to share our experiences dealing with the impact that Covid-19 has made on the arts.

Ms. PINGREE. Thank you so much for your testimony.

And since my birthday is April 2, I really appreciate you recognizing that day for your reopening—for me.

Ms. LENK. Happy to do that.

Ms. PINGREE. Mr. Slaughter, we would love to hear your testimony.

Mr. SLAUGHTER. Good afternoon. My name is Ulysses Slaughter. I am the senior project manager for the Pennsylvania Humanities Council and the project manager for the arts and culture initiative called Chester Made.

Today, I would like to talk with you about how COVID-19 has impacted places like Chester, Pennsylvania, and cultural organizations throughout the State, and how CARES funding is helping to continue—to help us to continue to reclaim, repurpose, and rebuild our lives and communities.

I want to thank you, subcommittee chair, Congresswoman Pingree, and the members of the subcommittee for inviting me during this very, very difficult time.

The Pennsylvania Humanities Council is one of the many State humanities councils across the Nation that partners with the National Endowment for the Humanities. We put the humanities in action to create positive change. We are the voice and the leader for Pennsylvania's cultural sector, including our museums, historical societies, and public libraries.

Over the last two decades, I have worked on the ground with Chester's creatives in cultural communities, and now manage a project we call Chester Made. I am proud to be both a witness and an actor on the stage of Chester's relentless fight to bring joy, peace, and harmony to a town that refuses to be defeated.

Chester, Pennsylvania is the first city of Pennsylvania, a city of 30,000, that lies just outside of Philadelphia. Founded in 1682 by William Penn, Chester thrived in the early 20th century as a manufacturing hub. Like many industrial cities, however, fortunes fell when factories closed. Nevertheless, we see people—boarded-up buildings, and people think that this is a disinvestment. Well, the artists in Chester see this as an asset. They see this as an opportunity. That is what artists do. They know that the most important and precious resource in a town is its city.

I want to be clear that Chester is, in fact, one of the hardest hit places in Pennsylvania, but not just because of the pandemic, but because of a long history of racial, environmental, and economic injustice. People like legendary martial artist Freda Cheetah Gibbs comes from Chester. Reverend Dr. Martin Luther King studied in Chester, and a woman named Ethel Waters was inspired here in this city called Chester.

Chester Made was a name that was given by the people to Chester Made, and it flows off of the slogan "What Chester Makes, Makes Chester." It is a humanities-based initiative that is designed to celebrate and promote arts and culture in the city of Chester. It is a project of the Pennsylvania Humanities Council and one that is co-created with the Pennsylvania Humanities Council.

Chester Made is based on a simple idea that community revitalization can be accomplished by building on the strengths and talents of community residents.

One of the more painful results of COVID-19 was watching all of the vibrant and vital spaces in the community that housed Chester Made programs and opportunities for connection—to watch them close their doors was painful. But Chester is resilient and creative and is no stranger to adversity.

With the support of the Pennsylvania Humanities Council and the National Endowment for the Humanities, we went viral—viral. We went virtual—excuse me—and some of them that were virtual did go viral.

The people of Chester built new platforms and found new ways to engage. We put together a digital storytelling project that allowed people the opportunity to reclaim their history through video.

It is no coincidence that President Joe Biden visited Chester this month. Chester, like many cities, is at the forefront of the meaningful change that needs to happen everywhere across our country. We have towns across Pennsylvania, including one called Carbondale, where committee member Congressman Matt Cartwright's district is located.

One of the things that we want to pay attention to is that the Americans for the Arts last year said that in 2020, our creative and cultural sector in PA experienced a \$4.4 billion loss in revenue. More than half of our creative and cultural workers are now out of jobs and have no savings. In a nationwide study by the Johns Hopkins Center for Civil Society Studies says that it is going to take 26.4 months to improve this situation.

I want to close by thanking you again for having us. And I want to reemphasize that the cultural sector is resilient and our residents have the talent. And it will come back stronger than before, but it needs substantive help at the Federal level to support the work of PHC and the NEH.

Thank you so much.

[The statement of Mr. Slaughter follows:]

Opening Statement of Ulysses Slaughter
Hearing : The Effects of COVID-19 on Arts and Humanities Organizations
Committee: House Committee on Appropriations
Subcommittee: Interior, Environment, and Related Agencies
Hearing Date: March 25, 2021 at 1pm

Introduction

Good afternoon. My name is Ulysses Slaughter. I am the Senior Project Manager for the Pennsylvania Humanities Council and the Project Manager for the arts and culture initiative Chester Made. Today I'd like to talk to you about how COVID-19 has impacted places like Chester, Pennsylvania and cultural organizations throughout our state, and how CARES funds are helping us to continue to reclaim, repurpose, and rebuild our lives and communities. I want to thank subcommittee Chair Congresswoman Pingree and the members of this subcommittee for inviting me to testify at this difficult time in history where we are being called to rise to a challenge unlike any challenge we have ever known or faced as a nation.

The Pennsylvania Humanities Council is one of the many state humanities councils across the nation that partners with the National Endowment for the Humanities. We put the humanities in action to create positive change. We are the voice and leader for Pennsylvania's cultural sector, including our museums, historical societies, and public libraries.

Over the last two decades I've worked on the ground with Chester's creative and cultural communities through the project we call Chester Made. Though I was born in Chicago, Illinois, I am proud to say I was raised - I was made - in Chester Pennsylvania. I am in fact Chester Made. I am proud to be both a witness and actor on the stage of Chester's relentless fight to bring peace, joy and harmony to a town that refuses to be defeated.

Chester, PA

Chester, Pennsylvania is the first city of Pennsylvania, a city of 30,000 that lies just west of Philadelphia. Founded in 1682 by William Penn, Chester thrived in the early 20th century as a manufacturing hub. Like many industrial cities, fortunes fell when factories closed. Nevertheless, where some people see boarded up stores and disinvestment today, I see what other artists see: I see cultural assets. I see raw resources awaiting transformation. I know its most precious resource - its people, it's human capital -- comes to life through the artists and entrepreneurs who populate Chester neighborhoods like Overtown, Sun Village and The West End .

To be clear, Chester is one of the hardest hit places in Pennsylvania, not just because of the pandemic, but because of a long history of racial, environmental and economic injustice. Still, it's not surprising that legendary martial artist Freda "Cheetah" Gibbs comes from Chester. This city has a resilient and fighting spirit that inspired The Reverend Dr. Martin Luther King Jr, as a student at Crozer Theological Seminary in Chester. It inspired the melody of a woman named Ethel Waters as well.

Chester Made

Chester Made was named by the people of Chester and based on the slogan "What Chester Makes, Makes Chester." Chester Made is a humanities-based initiative to celebrate and promote arts and culture in Chester, Pennsylvania and harness that power as a force for community revitalization.

Chester Made is a community project The Pennsylvania Humanities Council co-creates with people who live, work, and play in Chester. PHC started the project by creating a story-based asset map with residents about the arts and culture they treasured, Chester Made is based on the simple idea that community revitalization can be accomplished by building on the strengths and talents of its community residents.

PHC worked with residents and artists on the creation of a downtown maker space, We produced videos that celebrated local arts and history, co-curated pop-up art shows, and provided workshops exploring the history of the downtown, artist exchanges, and youth summer camps to make mini museums on family history. Storefront properties along Avenue of the States downtown have been purchased and renovated by African American residents. A theater was opened, in addition to art galleries and workspaces, restaurants, and shops in the neighborhood. Chester Made was making a noticeable difference in the community.

One of the many painful results of COVID-19 was watching all the vital and vibrant spaces in the community that housed Chester Made programs and opportunities for connection, education, and inspiration close their doors. But Chester is resilient and creative -- and it's no stranger to adversity. With the support of the PHC and the NEH, we went virtual; the people of Chester built new platforms and found new ways to engage.

Chester Made started a Digital Storytelling Project to let the people of Chester tell their own stories and continue to reclaim their history and rebuild their community. This brought healing, community, and historical perspective during an isolating time. It also created an opportunity for residents to develop storytelling and media-making skills to not only grow the project in Chester but to take it on the road to other communities

across the state. Our storytellers shared memories of growing up in Chester and their desire to shape its future. The story circle continues to grow with younger residents stepping forward to offer their talents and perspectives. Chester Made stays in touch with local artists and is assisting them with new projects in anticipation of public gatherings in the near future.

It's no coincidence that President Joe Biden visited Chester this month -- Chester, Pennsylvania is at the forefront of the meaningful change that needs to happen everywhere.

As are the many communities PHC works with across the state with its PA Community Heart and Soul program. There are 14 towns, including one of its newest located in Committee member Congressman Matt Cartwright's district. Tucked away in Northeastern Pennsylvania, the City of Carbondale (pop 8,482), is renewing itself too and building on its historic charms and hidden treasures. Known as "The Pioneer City", it was one of the sparks that ignited the Industrial Revolution more than a century ago. But we need more support to build upon the work we've accomplished so far in places like Carbondale and Chester.

Impact of COVID-19

There are communities across Pennsylvania that, like Chester and Carbondale, are fighting to rebuild and learn to adapt but the COVID impact on our state's creative and cultural sector is dire. Let me provide you some numbers to give you an idea of what we're facing.

- According to Americans for the Arts, last year, in 2020, our creative and cultural sector in PA experienced \$4.4 billion loss in revenue. More than half of our creative and cultural workers are now out of jobs and have no savings.
- In a nationwide study, the Johns Hopkins Center for Civil Society Studies recently reported that it is estimated that it will take the arts and cultural sector more than two years -- 26.4 months -- to improve.
- This last week, the Greater Philadelphia Cultural Alliance released sobering data about what's happening in Chester and the entire region. The estimated total revenue loss for our sector from March 2020 - the beginning of the shutdown -- and now in March 2021 is \$371.7 million. 41% of responding organizations report they are not likely to survive beyond Fall 2021.

At PHC, we discovered similar circumstances among our applicants for CARES funding last year. In the first 6 months, our 313 statewide applicants reported \$66.8 million in losses, with our smallest organizations (with budgets under \$250k/year) like public libraries, hit the hardest. They reported over 2,131 layoffs, with 72% hourly staff. That's on average 7 layoffs per organization.

Impact of CARES Funding

The \$75 million that the NEH received in the CARES Act provided a lifeline for the organizations that received the grants and their surrounding communities. State councils received 40% of those funds -- \$30 million to distribute. In PA, together the NEH and PHC distributed over \$3.2 million to 161 organizations, with PHC awarding \$780,500 to 140 libraries, museums, and historic sites.

Though the funding was a lifeline, it was not enough to meet the need. Our applicants requested \$3.1 million. Nationwide, NEH could only fund 14% of its applications. Even with the increased additional funding we estimate to receive through the recent American Relief Bill, we will not meet the need in PA again, falling short by more than \$1.5 million.

“Road Trip” to Carlisle: CARES Grantee Cumberland County Historical Society

Let me tell you about one the recipients of our CARES awards: Cumberland County Historical Society in Carlisle, PA., which received \$10,000 to fund essential operations and creative, community-centered programming during this difficult time. Our funds helped to support staffing of a Community Outreach Director who worked in the Greater Carlisle area on PHC’s Community Heart & Soul program and to provide virtual and in person history programming in the community. Before and after the pandemic hit, Lindsay Varner Houpt played a key role in rebuilding and healing in the community. Like Chester Made, our Community Heart & Soul uses the tools of the humanities to creatively engage residents in planning and decision-making processes as a way to strengthen a town’s social, cultural and economic vibrancy.

In Mount Holly Springs, just outside of Carlisle, black residents were reluctant to share their stories about an abandoned church built by a former enslaved person. But a story-gatherer from the Greater Carlisle Heart & Soul project persuaded the Gumby family to bravely share their story, which led to community-led church preservation efforts leading to its eventual designation as a National Historic Landmark. That’s the humanities in action.

During the pandemic, that work did not stop. To raise awareness about the historic Lincoln Cemetery, the Cumberland County Historical Society worked with the Greater Carlisle community, the descendants of individuals buried in the cemetery, and local artists to recognize the over 600 people buried at Lincoln dating back to the 1900s. For years, the cemetery, which was a final resting place for many African-American residents, was neglected and ignored. There was no official recognition of this sacred land and headstones were removed or vandalized.

Humanities funding from PHC supported an effort to tell the story of the cemetery and restore honor to the individuals buried there. Residents wrote the names of the 676 individuals buried in the cemetery on colorful ribbons and tied them to the fence surrounding the land. The project culminated in the development of a permanent mural, led by local artist Jim Griffith, to honor those forgotten individuals.

According to Cara Holtry Curtis, archives and library director at CCHS, "This project led to renewed discussion about the history of the Lincoln cemetery. The borough recently issued an official resolution of apology for the treatment of this cemetery and the African-American community. There are still wounds that need to heal and stories that need to be shared but these projects are one step in the right direction."

Closing

These are the kinds of transformative stories we hear every day -- in places like Chester, Carbondale, and Carlisle. The humanities are helping PA communities reclaim, repurpose, and rebuild their future during this critical time. As we begin to open back up again, continue to support such efforts. Chester Made continues to celebrate the city's past and present, and is determined to support its residents through arts and culture to determine its future.

In closing, I'd like to re-emphasize that the cultural sector is resilient and our residents have the talent and will to come back stronger than before -- and it needs more substantive help at the federal level to support the work of the PHC and NEH to continue to make positive change with the humanities in PA.

Thank you.

Ms. PINGREE. Thank you for your testimony.

Before we hear from our last witness, I think Mr. Amodei may like to add some remarks of introduction before Mr. Cage begins. Is that true?

Mr. AMODEI. Thank you, Madam Chair.

And, listen, I won't do a keynote introduction, because it is Caleb's testimony that we are looking for, not my intro. But I will just say that your committee staff has done an excellent job of identifying someone from a nationwide perspective who is basically a utility infielder for public service, whether that is service in his younger years—not that he is old compared to me—but as a—in our Nation as a graduate of the U.S. Military Academy, serving in the Middle East, returning to Nevada, fulfilling a variety of roles there, some of which involve veterans in terms of standing up some new offices for veterans services, as well as State director of emergency management and those sorts of things.

In his latest role, he is directing the State's COVID-19 efforts in terms of managing, coordinating that stuff. But he is here today, and you have got a great—you have got a great witness, because he is a volunteer member of the Nevada Board for Humanities.

So, without further adieu, if I haven't ruined Caleb's reputation, Madam Chair, I yield back.

Ms. PINGREE. Thank you.

And thank you. We look forward to hearing from you, Mr. Cage.

Mr. CAGE. Thank you very much, Madam Chair and members of the subcommittee. And thank you for that introduction, Congressman Amodei. Thank you for the opportunity to present testimony on behalf of State humanities councils and State affiliates of the National Endowment for the Humanities.

As you know, my name is Caleb Cage, and I serve as a Governor's appointee to the Nevada Humanities Board of Trustees. I also currently serve as the COVID-19 response director for the State of Nevada. In this role, my job is to help the State of Nevada and Nevadans navigate the current pandemic crisis.

Since March of last year, I have worked to implement Nevada Governor Steve Sisolak's vision to protect Nevada's public health, to maintain our economy, and to ensure our ability to provide services to the public in the future. These factors and others, in short, amount to our best efforts to ensure that we are resilient as a State.

The humanities provide us the essential and necessary tools of reflection and understanding that contribute to this resilience. Using these tools, we interpret the pandemic through our world view and values to determine how we will handle and respond to the challenges the crisis represents. This is the act of assessing our current situation in terms of what we have experienced throughout our history and having the vision and wisdom to both look forward to and create a different future.

As we find meaning in crisis our Nation is experiencing today, we determine how we can persevere as individuals and also collectively as members of a society, of a culture, and of our local communities. This is the work of the humanities.

This is also the work of Nevada Humanities, as Nevada's leading cultural organization, collaborating with libraries, historical soci-

eties, and museums, folklife centers and other cultural organizations of many kinds.

On behalf of the National Endowment of the Humanities and the State humanities council, I would like to thank you for the 2020 CARES Act COVID-19 relief funding that has provided necessary funds to keep local humanities organizations open during the pandemic.

On a national scale, the American Alliance of Museums estimates that one-third of museums in the United States will permanently close as a result of COVID-19, while over 52 percent of museums have 6 months or less of operating reserves, and 53 percent have had to furlough or lay off staff. These challenges have also been felt acutely by humanities organizations in Nevada, and our organizations mirror the national crisis.

The National Endowment for the Humanities received \$75 million in CARES Act funds, which became a lifeline for cultural and educational organizations. In Nevada, Nevada Humanities distributed \$368,873 in CARES Act grants to 46 organizations across the State, providing rapid response, short-term operating support for Nevada nonprofit humanities and cultural organizations facing the crisis of the pandemic.

I would like to share some examples of some of those programs at the local level.

Marilyn Gillespie, executive director of the Las Vegas Natural History Museum, notes that through her programs, southern Nevada children and their families could remain connected with humanities-focused programs and high-quality educational resources despite the numerous changes in their daily lives presented by COVID-19—because of COVID-19.

In northern Nevada, the David J. Drakulich Art Foundation, a small nonprofit organization founded by the family of fallen U.S. Army Sergeant David J. Drakulich. As a veteran of the Iraq war and former director of veterans services at the State, I worked closely with this organization and can tell you of the great work they do.

But in the founder, Tina Drakulich's words, as she shared with us: "The Nevada Humanities CARES grant came at a time of great uncertainty. It helped the David J. Drakulich Art Foundation employ veterans to sew masks for their community using donated supplies and military uniforms at the time when PPE was unavailable to individuals scrambling to protect themselves from COVID-19."

And, finally, in reference to the National Cowboy Poetry Gathering, or The Gathering, the founder—or the executive director notes: The National Cowboy Poetry Gathering normally injects several million dollars into the local economy at a time of year when it is needed most, but this year, the pandemic prohibited us from holding an in-person event, resulting in a 60 percent loss in operating income. Funding we received from the National Endowment of the Humanities and other CARES Act grant funding allowed us to continue.

Thank you very much.

[The statement of Mr. Cage follows:]

Testimony on Behalf of the Federation of State Humanities Councils

Prepared for the House Appropriations Subcommittee on the Interior, Environment, and Related Agencies by Caleb Cage, Governor's Appointee to the Nevada Humanities Board of Trustees, Nevada Humanities, Addressing the National Endowment for the Humanities, March 25, 2021.

Madam Chair and members of the subcommittee, I thank you for the opportunity to present testimony on behalf of the state humanities councils, the state affiliates of the National Endowment for the Humanities. My name is Caleb Cage, and I serve as a Governor's Appointee to the Nevada Humanities Board of Trustees — Nevada's nonprofit state council affiliate of the National Endowment for the Humanities. I have volunteered for the Nevada Humanities Board since 2016 and have seen first-hand the vital importance and impact of the work of the state humanities councils.

I also currently serve as the COVID-19 Response Director for the State of Nevada. On the surface, you might not see that these two roles are complimentary, but, in fact, the state humanities councils have critical roles to play in nurturing resilient communities and in supporting a robust recovery in Nevada and across the nation.

The current public health emergency facing our nation and our planet has disrupted our lives in unimaginable ways. This disruption has been profound. It has caused uncertainty, both in how we care for our vulnerable loved ones and how we participate in our economy. It has robbed millions of people of their livelihood and created a national mental health crisis. It has kept our kids from attending schools, from playing sports, from cultivating healthy social networks, and otherwise living their normal lives. It has affected the most vulnerable members of our society, and in the worst cases, it has taken our loved ones from us as well.

My job is to help the State of Nevada and Nevadans navigate this crisis. Since March of last year, I have worked to implement Nevada Governor Sisolak's vision to protect Nevada's public health, to maintain our economy, and to ensure our ability to provide services to the public in the future. These factors, and others, amount to our best efforts to ensure we are resilient even in these challenging times.

While we are facing and experiencing the disruption caused by COVID-19, we also have to more deeply understand the pandemic and make meaning of it. At Nevada Humanities our emphasis is on the public humanities, and we understand the humanities to be how people process, document, express, comprehend, and live the human experience, and that through the wide breadth of human learning, as well as civic, social, and cultural activities, everyone participates in and has access to the humanities. These values and perspectives have informed everything we do and contribute to our reframing of the humanities as utilized and accessed by all people. We understand the humanities as lived.

The humanities provide us the essential and necessary tools of reflection and understanding. Using these tools, we interpret the pandemic through our worldviews and values to determine how we will handle and respond to the challenges this crisis represents. This is the act of assessing our current situation in terms of what we have experienced throughout our history and having the vision and wisdom to both look forward to and create a different future. As we find meaning in crises our nation is experiencing today, we determine how we can persevere as individuals, and also collectively as members of a society, of a culture, and of our local communities. This is the work of the humanities, and without the perspective that the humanities brings us we would be stranded without hope.

This is also the work of Nevada Humanities as Nevada's leading cultural organization collaborating with libraries, historical societies, museums, folklife centers, literary and literacy organizations, education institutions, heritage groups, and cultural organizations of many kinds. Through the many programs that Nevada Humanities and its partners produce, Nevadans are encouraged to explore local culture and Nevada's unique landscapes, share Nevada's diverse heritage, and participate in, and contribute to, their communities through civic engagement and beyond. Nevada Humanities also has the crucial role of regranteeing federal and state funds to Nevada nonprofit organizations.

I would like to share with you a handful of examples that illustrate how people have made meaning of the challenges and disruption of the pandemic over the last year and how Nevada Humanities - and the nation's other state humanities councils - have had a role in cultivating resilient communities.

On behalf of the National Endowment for the Humanities and the state humanities councils I would like to thank you for the 2020 CARES Act COVID-19 relief funding that has provided necessary funds to keep local humanities organizations open during the pandemic. Thank you as well for the new American Rescue Plan Act funding that will continue to provide hope for the future in Nevada and across the nation. This funding, combined with the annual budgetary allocation to the National Endowment for the Humanities and the operating grants made to the state humanities councils, has been key to the sustenance and survival of our nation's humanities-based cultural institutions.

On a national scale, the American Alliance of Museums estimates that one third of museums in the U.S. will permanently close as a result of COVID-19, while over 52 percent of museums have six months or less of operating reserves, and 53 percent have had to furlough or lay off staff. As state and local budgets are gutted because of the decline of sales taxes, libraries, museums, historic sites, and community centers in rural communities and small towns face particularly dire financial futures. Small and midsize organizations are especially in need of additional operational and programmatic support.

These challenges have also been felt acutely by humanities organizations in Nevada, and our organizations mirror the national crisis. Nevada organizations have also been struggling with the audience restrictions, the cancellation of programs, and the steep learning curve needed to shift operations to accommodate online programming. They have been through the uncertainty brought on by surges in cases, by mitigation measures intended to reduce the burden of this virus, and by limited access to vaccines. CARES Act funding offered a burst of resources to help organizations retain their vitality and to continue to deliver important educational services.

The National Endowment for the Humanities received \$75 million dollars in CARES Act funds, which became a lifeline for cultural and educational organizations. The state humanities councils received 40% of those funds to distribute at the local level. The National Endowment for the Humanities distributed 317 direct grants to humanities organizations nationwide while the state and jurisdictional humanities councils made more than 4,500 grants to humanities organizations through their CARES Act grant programs. The magnitude of these local grants helps to illustrate the boots-on-the-ground nature of the state councils' work.

In Nevada, Nevada Humanities distributed \$368,873 in CARES grants to 46 organizations across the state, providing rapid-response, short-term operating support for Nevada nonprofit humanities and cultural organizations facing financial hardship and duress resulting from the COVID-19 health emergency. The grants administered by Nevada Humanities had an enormous impact in Nevada. At a time when nonprofit organizations were suffering dramatic losses of income and struggling to operate

as best that they could and retain their employees, this funding helped pay rent, cover basic operating costs, retain 213 cultural sector jobs in Nevada, and also create 19 new jobs. This funding also helped organizations reimagine their programs and find creative ways to serve the needs of the state.

Marilyn Gillespie, Executive Director of the Las Vegas Natural History Museum, which has served as a critical educational resource for millions of people in southern Nevada since the 1990s, told us that Nevada Humanities support has been crucial to their success over the years, especially during the COVID-19 pandemic when the museum temporarily closed to the public on March 17, 2020, and re-opened on May 31, 2020, at reduced capacity in compliance with Nevada's COVID-19 guidelines. With the Nevada Humanities funding the museum received, the museum was able to develop more than 50 humanities-focused, online education presentations available at no-cost to public school children in need of educational enhancements that could be accessed from home. In Marilyn Gillespie's own words:

"Through these programs, Southern Nevada children and their families could remain connected with humanities-focused programs and high-quality educational resources despite the numerous changes in their daily lives because of COVID-19."

In northern Nevada, the David J. Drakulich Art Foundation is a small nonprofit organization founded by the family of fallen U.S. Army Sgt. David J. Drakulich. As a veteran of the Iraq War and former director of veterans services for the state of Nevada, I have worked closely with the Drakulich family and their foundation for years. To put it simply, the David J. Drakulich Art Foundation is exactly the kind of organization that uses the humanities to make meaning of adversity.

This unique organization produces innovative arts and humanities programs specifically for veterans and military families, focusing on reintegration and healing. These opportunities result in therapeutic, creative self-expression and generate community-wide support for veterans as they reintegrate with the civilian population. Faced with COVID-19 challenges, the Drakulich Art Foundation has had to think creatively. As their Executive Director Tina Drakulich shared with us:

"The Nevada Humanities CARES grant came at a time of great uncertainty. It helped the David J. Drakulich Art Foundation employ veterans to sew masks for their community using donated supplies and military uniforms at the time when PPE was unavailable to individuals scrambling to protect themselves from COVID-19. Veterans displaced from their jobs because of the pandemic were employed by the Foundation providing sustenance and hope to them while providing a crucial service to their community. In granting CARES Act funding to the Foundation, Nevada Humanities not only gave us a lifeline and the ability to maintain course through uncertain times, but supported veterans who needed immediate help. This resulted in the distribution of over 2,000 handsewn masks to a community in need."

Tina went on to say:

"The David J. Drakulich Art Foundation operates on the premise that successful reintegration occurs when veterans receive the gift of humanity. That means that they may be more in demand of such humanities as literature, community discourse, storytelling, poetry, theater, dance, visual art, and the like. The Foundation knows, as do Nevada Humanities and the National Endowment for the Humanities, that the arts and humanities enrich communities and raise our quality of life."

In rural Nevada, the small town of Elko is home to the world-renown National Cowboy Poetry Gathering, known to most people as “The Gathering.” The Gathering is produced annually by the Western Folklife Center, and it draws visitors from all over the nation and the world to Elko for one very cold week every January. The Gathering has become an annual ritual for thousands of people who value and practice the cultural traditions of the American West and are concerned about the future of those traditions. Kristin Windbigler is the Executive Director of the Western Folklife Center, and she shared this with us:

“The National Cowboy Poetry Gathering normally injects several million dollars into the local economy at a time of year when it is needed most, but this year, the pandemic prohibited us from holding an in-person event, resulting in a 60% loss in operating income for our organization while also having a deep impact on other local businesses. Funding we received from the National Endowment for the Humanities, Nevada Humanities, and other CARES Act grant funding allowed us to continue offering programming online, keep our gallery and gift shop open, as well avoid laying off staff, which will help ensure we are able to return to normal operations more quickly when conditions allow us to gather in Elko again. The restorative power of cultural expression and creativity in such a difficult and isolating time should not be underestimated.”

Conclusion

Ultimately, with the right support, I envision a bright future for cultural and educational organizations in Nevada and across the nation. These are essential institutions, and we rely on them to help vitalize our communities, cultivate our humanity, and give our lives meaning. I do believe that we will eventually regain the robust momentum that we were experiencing before the pandemic. Even so, we are still in the midst of this crisis, and we have a lot of work to do to stabilize these organizations and help them thrive. I feel confident that this is possible with sustained and increased support for Nevada Humanities and the state humanities councils around the nation. Our state humanities councils have a critical role to play in pandemic recovery, the health of our communities, and the restoration of our nation.

Thank you for the opportunity to share the work of Nevada Humanities, the state humanities councils, and the National Endowment for the Humanities with you today, and for the support you have provided over the years for this important work.

Ms. PINGREE. Thank you so much for your testimony.

I don't think we have ever had a panel of witnesses that were so perfectly timed to 5 minutes each. It is quite an impressive panel, and you are impressive in so many other ways.

We will begin the questions, and I will start by recognizing myself for 5 minutes.

So, Kathleen, thank you again so much for being here and representing the work that you do in Maine. We are all really grateful for the many years you have put in to preserve such important Maine traditions.

And I want you to know that the baskets behind me always are there. I didn't just bring them up for this particular meeting, but I would have, because we are so proud of our Wabanaki basket makers, and you have just done an incredible job at expanding their reach and helping to build their national notoriety.

So much of the work that you do in your program is dependent on this apprenticeship, mentor, one-on-one interaction. And could you talk a little bit about how you have managed to navigate that during this really challenging year, and then maybe just a little bit about how the NEA money has been beneficial to the work that you do?

I think you are still muted.

Ms. MUNDELL. I was very glad to see the baskets behind you. It was like seeing friends back there.

Well, first, I just want to say that this program, the National Endowment for the Arts, does support apprenticeship programs throughout the country, and Maine is one of the oldest ones. And it was so instrumental in the resurgence of this basket-making tradition, because it really focused on elders passing on skills to a new generation, and it basically was almost 30 years this has been going on.

But I think, in COVID times, it was very difficult on a couple of levels. One was that sometimes the master student would live close to the apprentice and would know the person, but they didn't really want to risk it because the person was elderly, so they would do it virtually.

And I think one thing about the apprenticeship program is it really is about that one-on-one healing connection, where people have to meet, they have to go outside, they have to spend a period of time getting to know one another for it to really take hold.

So I think a lot of people got discouraged kind of early on and decided they were going to wait till they were vaccinated, which in many of the Tribal communities in Maine, they had early vaccination, so they were one of the first communities to be fully vaccinated. So some of those master artists are now starting their apprenticeships, which is great to hear.

Ms. PINGREE. Thank you. And thanks again for the work that you do.

Mr. Slaughter, it was fascinating to hear your testimony. And I wish you could talk a little bit more about the role that the arts play in revitalizing communities that have been economically challenged, as you have discussed.

Mr. SLAUGHTER. The role that the arts play in revitalizing the communities? So it is so important for people to be creative in

spaces that are restricted, and there is a lot of restriction that people have had to deal with.

Ms. PINGREE. Sure.

Mr. SLAUGHTER. And in places like Chester, in places in like Carlyle, people have had to figure new things out. And a lot of times, madam, people will say that they are not an artist. And what we find is that, in fact, it is the art that inspires people to think outside of the proverbial box. People are thinking very different than they used to. They are trying to figure out what is the answer, what is the way, and what is the strategy.

And so having arts as a model gives people an opportunity to say, well, you know what? I actually can figure out another road to take, or we can figure out another road to take.

So the fact that people don't see themselves as art in one context, it is interesting to see them in this new context, because everybody has to try to figure it out. And so the arts is a model for what everybody else wants to be now. They want to figure it out. And, you know, from people literally creating masks to doing whatever they have got to do, suddenly everybody is an artist. And it is a beautiful thing to see, because art will always find a way.

Ms. PINGREE. Great. That is a wonderful way to look at it.

I only have a few minutes left, so I will yield back and yield to Mr. Joyce for 5 minutes.

Mr. JOYCE. Thank you, Madam Chair. If you beg my forgiveness, I would like to yield to my dear friend, Mr. Amodei, so he can cross-examine—I mean, ask questions of Mr. Cage. I will pick up my time later on. Thank you.

Ms. PINGREE. Mr. Amodei.

Mr. AMODEI. Thank you, Madam Chair, and thank you to the yanking member. Nice slip, Madam Chair, but I think you hit the nail right on the head.

Anyhow, listen, I am very interested in hearing what Mr. Slaughter just said, and whether we are talking to Tacoma or Pennsylvania or the folks up in Maine, my experience with the National Endowment and the arts folks have been that they have always been very responsible with the money that they have got. And my impression is what we have done with the COVID moneys that they have been provided in these various forms of legislation, it is no different. They are trying to spread it wide. They are using transparent processes, all good, hats off, way to go.

But I think as we are talking about the arts, I would be interested, because it is almost like we have got a patient here who is sick and the arts, quote/unquote, "are the heart of the program," but there is problems with the lungs and the other organs, if you will, that need treatment too. And so what we are saying is, well, maybe shuttered venues got some help as a name specifically, and certainly they are worthy of help, but then when we look at the SBA and say, hey, basically if you have got chairs bolted to the floor and unless you have a stage and a curtain and fixed lighting, you are not eligible for any of this.

I don't think I need to tell anybody of the witnesses on this program—it is like, listen, there are all sorts of things that are intertwined with attending a performance, whether it is a play or whether it is a musical performance or if you are simply going to

a street fair—when Mr. Slaughter says, you know what, there is a lot of people who don't think they are artists, but art will find a way, whether that is balloon races, special events, all sorts of things that are part of our cultural heritage and our cultural life-line.

And so, Madam Chair, I would like to hear some thoughts from these folks in terms of—of course we continue to support who we have supported. But when we have agencies that are basically saying, oh, by the way, you haven't been impacted, when we think about those street fairs—the Boston Marathon, is that a cultural thing, you know? Or how about the St. Patrick's Day parade in Boston? Or we all have things in our—you know, we have got national championship balloon races in Reno.

Those things, in terms of supporting culture and the arts, which I think are pretty much intertwined, are all things that I think we need to take a look at in terms of trying to make sure that where those impacts are is where we are trying to make sure we look all the way around the neighborhood as opposed to just some narrow ones.

And I am not accusing anybody on this panel of doing that sort of thing, but I am looking for your recognition or disagreement that, quite frankly, arts and appreciating the arts often involves travel, whether that is in your car, or beyond that.

So anybody on this panel got any thoughts? And let me—and let me make it real objective. I mean, when you look at the U.S. Travel Association's coding on things, I mean, they talk about tour operators, destination and marketing organization, performing arts productions and festivals. You know, these are all things that, quite frankly, are in phenomenal need, and other than some programs for employment, unemployment, that sort of thing, because, look, they have all had losses and impacts.

So I would appreciate it if I could start with Mr. Slaughter, maybe you have some thoughts on that? Quite frankly, I think we need to treat the whole patient instead of just parts of it.

Mr. SLAUGHTER. I couldn't agree more, sir. And I think that one of the things that I have been saying is that we have to demystify what the arts are all about. There is this thinking that arts are over here and everything else is over there. And the fact of the matter is that art is integrated in everything that we do, and, therefore, we have to treat the whole system.

The whole system has to be re—it is almost like, you know, coming up, my grandmother was—she did a lot of sewing, and, you know, she had a jumpsuit back in the 1970s—dating myself here—had a jumpsuit. You know, the whole jumpsuit was connected. You slipped it on. The arms, the back, the legs, the whole thing had to be taken seriously or otherwise the jumpsuit didn't come off well.

So I think that we have to figure out a way to look at the whole thing artistically speaking and make sure that we are not saying, no, the hardware store is not an art place. Absolutely, it is an art place. It is where we get our tools from. The mechanic is an art place. The hair salon is an art place.

All these places are art places, and it is just a matter of switching our perspective on the arts that will make the difference in how we fund these different things.

Mr. AMODEI. I appreciate it.

I yield back, Madam Chair. Thank you.

Thank you, Mr. Joyce, for letting me take cuts.

I yield back, Madam Chair. Thank you.

Ms. PINGREE. Oh. Oh, sorry. I was not unmuted. You would think I, after I have to tell everybody else to unmute, could remember.

All right. I recognize Chair McCollum for 5 minutes.

Ms. MCCOLLUM. Well, thank you so much. And I want to thank all the witnesses for sharing your work in your communities and how the pandemic has impacted your organizations, as well as the creators and the performers and the audiences you all work with.

Chair Pingree, this is a fabulous hearing to start out with, and it is important, because sometimes people don't think of the arts and the humanities and their importance as job creators and economic development opportunities in our communities. The crisis that has been facing the arts and the humanities is just so important to our economy, and it is a job engine. It is one in my district.

So workers in the arts and the humanities sectors, you know, they range from everything from proud union members that I work with to independent artists, people in the academics, and our non-profit employees.

In normal times, these creative professionals in the arts power a sector that generates 4.5 percent of our country's GDP, and that is supporting 5 million jobs. But we know because of COVID-19, the arts sector has now lost over \$15 billion in economic activity, and a lot of people, our fellow Americans, are out of work.

And I just want to give a shout-out to our subcommittee, while I was chair, and our subcommittee worked very hard to include in the CARES Act a supplemental relief funding, and that was \$75 million to the National Endowment for the Arts and the National Endowment for the Humanities. And I am very proud that Congress continued those investments under Chair Pingree's leadership with an additional \$135 million in the American Rescue Plan.

But when it comes to this pandemic, we are going to need the arts and the humanities to be there for us in order to heal, in order to move forward. I can't tell you how many people are eager to take their first trip back to the theatre—I am ready to go to Penumbra—or an art class in a studio. I think my sister is ready to sign up. And then I hear from families all the time how they want to go to their favorite museum and cultural institution.

But I heard from all of you today of how many institutions are at risk of never opening their doors again. So that would leave a devastating hole, not only in our economy, but in the richness and diversity of our community life, especially for our artists of diversity who are struggling on a shoestring, most often, to begin with.

So I want to assure you I am going to be working hand-in-hand with Chair Pingree. I know we will all work together to build on the investments we made in the NEA and the NEH.

So building a little bit more on what Mr. Amodei said—and he went broad; I am going to go narrow again. I would like all of you to kind of take, in the next 2 minutes, what do your institutions anticipate needing to do to successfully reopen and reengage? And does the arts and humanities sector—do we need to do some addi-

tional flexibility in the use of funds or in language that is surrounding the use of these funds to help your communities through these tough times?

Ms. PINGREE. Any of you like to answer that?

Ms. LENK. I will jump in here if that is okay.

Ms. PINGREE. Absolutely.

Ms. LENK. You know, since we are right on the verge of reopening, if you will, we are looking at what we are excited about and what we are concerned about. And one of the issues is, as we were closed, we could really control our costs. And along with the funding we were getting, we could keep things balanced and not suffer huge losses.

But one of the keys for us is, as we reopen and we bring all the staff back to serve the community and we start up all of our programming, costs really will go back to pre-COVID levels, and there is a concern on how quickly our audience will return.

And we believe people, like you have mentioned, are eager to get back and see the arts, but there is a reality to how will that balance occur, and could there be funding that helps fill in those gaps while the visitorship numbers are increasing and improving and while we are getting our feet on the ground.

Ms. MCCOLLUM. Good.

Ms. PINGREE. Anyone want the last 30 seconds to reply?

Mr. CAGE. Chair Pingree, this is Caleb Cage from Nevada, if it is okay?

Ms. PINGREE. Absolutely.

Mr. CAGE. I think that it is a great question and one, of course, we are asking in every sector here in the State, from restaurants and our resort industry and everything else, is one of recovery. And I will just say that I believe that humanities councils are essential to that statewide recovery, and I think that the support that you are providing going forward—and I will end it there, but it will be critical.

Ms. MCCOLLUM. Well, thank you, Madam Chair. And as a social studies teacher, the arts and the humanities, for me, they go hand-in-hand.

Thank you. I yield back.

Ms. PINGREE. Thank you.

Mr. Kilmer, you are recognized for 5 minutes.

Mr. KILMER. Thanks, Madam Chair.

First, I just want to thank all of our witnesses. And I am pleased that Director Lenk is here from the Museum of Glass in Tacoma. I have the honor of representing that museum, and it really is just a crown jewel of our community.

I have to tell you, we have a lot of memorable moments in these jobs, and, to me, one of the most memorable was visiting the Museum of Glass and hearing from a veteran who participated in the museum's Hot Shop Heroes program, which provides access to arts programming for servicemembers and veterans often experiencing post-traumatic stress and other disorders.

And he said something to me that I will never forget. He said, I spent years in the Middle East learning how to break things, and now it means a lot that I have a chance to learn how to make things and create things.

And so I wanted to start off, Director Lenk, just asking you: How is the NEA funding advancing your museum's Hot Shop Heroes program for wounded soldiers and for veterans, and how can Congress be a partner in the continuation of this type of important programming?

Ms. LENK. Thank you. You know, participants in Hot Shop Heroes are different people when they leave the program from when they entered it. And they are much more social, they feel a greater sense of belonging to the community, greater self-efficacy.

And the NEA has been a partner with us all along that journey of developing this program. They helped us initially understand why glassmaking was therapeutic. And they have been a partner in creating the relationships that we have here with the bases, Joint Base Lewis-McChord, and the Veterans Affairs Medical Center here locally. Those therapists that work on base and at the center are key in providing participants that can benefit from the program.

We wanted to document and develop the curriculum for our program so that it could be expanded to other sites around the country where there is a military presence and glass-blowing capability. The NEA has supported that, and we were actually on the verge of just moving that to the next—this program to the next location when COVID hit.

And so it has just been very, very crucial to us to have this partnership and the funds, and then the recent CARES Act's funds, which allowed us to learn how to adapt the blowpipes and the classes so that we could resume doing this with the soldiers now that we are opening up again.

Again, without that funding, we wouldn't have been able to bring the team back ahead of opening and really get to the bottom of how to do that. So it has been very, very important for us.

Mr. KILMER. Thank you for that. And I know the impact that you are having.

I was taken by all of the witnesses' comments around just the financial strain that the pandemic has meant.

I know, Director Lenk, that your museum has—and like a lot of arts institutions, have really made the effort to reach out to underserved communities and make sure that these cultural institutions are serving everybody.

I am curious how the pandemic has impacted the museum's ability to engage with underserved communities. And I will start with Director Lenk, but if others want to weigh in on that, I would welcome that too.

Ms. LENK. Yeah, absolutely. I mean, initially, we were out working with community centers in neighborhoods and wanting to take more programs off site, but one of the silver linings of COVID was bringing back our education team and converting some of the key programs, like Science of Art, for instance, that connects scientific principles with the properties of glass, and being able to convert that to a video program and connect with our schools. And we piloted that with the underserved schools and the Tacoma Urban League, for instance, and made those connections. Glass Breaks, which are videos of great moments in the Hot Shop that we were able to develop.

One of the silver linings is that our reach will be extended even after COVID because of having programs that will endure and can reach into these neighborhoods that maybe can't visit our site or are not within driving distance.

So I think there has just been a lot—you know, that is one thing we can look to and say we will be better in the end for having done that.

Mr. KILMER. I see my time is up. So, with that, Madam Chair, I yield back.

Ms. PINGREE. Thank you.

Mr. Stewart, you are recognized for 5 minutes.

Mr. STEWART. Thank you, Madam Chair. I am not going to take 5 minutes. I actually had a few questions, but some of the previous members have already asked those questions.

I am going to make a comment, though, and it is a little bit outside of the intent of the hearing. But before I do, I would like to thank the witnesses. I know that they traveled here. They sacrificed their time. I appreciate what you do. I appreciate the community that you represent.

I don't consider myself an artist, although, in a way, perhaps I am in the sense that I have spent much of my life writing, made a living as a writer, and I guess that is a bit of an art in a way.

And I have an appreciation for the community that—the Utah Cultural Alliance is an organization I work with frequently. I consider many of them friends. I certainly support their goals. We do as much as we can to help them, and we have since I have been in Congress. And I would extend that same help to the witnesses and their organizations.

I would maybe make this comment. And this isn't directed towards the witnesses as much as it is towards the other Members of Congress, and that is: The money that we have appropriated for this—for these efforts, although I support, we also have to recognize that it is entirely unsustainable. The additional—and it is an additional \$135 million for NEH or for National Endowment for the Arts. I mean, at some point, we have to ask ourselves again, as Members of Congress: How much money can we spend? At what point do we say we think we have spent too much? And what are our priorities for that?

I know that that is another conversation, and it is not the point of this hearing, but to—again, to the witnesses, the people who have shared their arts and their talents, the Federal Government can't be the only source of revenue for these artists. We can help, and we should, but they have to be sustainable on their own as well.

And I think most of these artists, that is their goal. They want people to appreciate their art and to be willing to pay for the appreciation of that art. And, again, the Federal Government can have a role in sustaining them in some way, but it can't be the only source for them.

Again, the questions that I was going to ask related to the pandemic have already been asked. And I will yield back my time.

Thank you.

Ms. PINGREE. Thank you, Mr. Stewart.

And let's see. I recognize Ms. Kaptur for—or Chair Kaptur for 5 minutes.

Ms. KAPTUR. Thank you very much, Chair Pingree. This is just a fantastic hearing. I am having a good time. I hope that the wonderful witnesses are.

The first thing I want to say is, in my hometown of Toledo, Ohio, which is the [inaudible] Museums in the country, the Museum of Art has posted and is actively recruiting for a curator of American art, the first position of its kind in its 120-year history. The museum was able to move forward with hiring because of a grant opportunity awarded through the National Endowment for Humanities.

So I wanted to give a big salute to the endowment. I know this organization of the Toledo museum. They are—they are extraordinary.

I wanted to say, secondly, that I don't know, Mr. Slaughter, if I am allowed to steal your phrase of "What Chester Makes, Makes Chester," but I would like to apply that to every community I represent. And, frankly, what America makes, makes America, and one of our problems is we are not making enough anymore.

And so I don't know who invented that phrase, but I hope you have trademarked it. If you haven't, I will shamelessly steal it and probably put up billboards. I just think that is a way of capturing people's attention and thinking about how one creates real wealth—real wealth in this country. Every single individual who has testified this morning—or this afternoon is doing exactly that.

I wanted to mention the baskets. As I look at the baskets and listening to the—Ms. Mundell discuss some of the Maine work that is done, I keep thinking about artists I represent, and they are beautiful people, but they are not necessarily good businesspeople. In other words, they are creative. They don't think about the worth of what they do.

And I am wondering if any of our witnesses have found that the National Endowment for the Arts or the National Endowment for the Humanities creates a 10,000-village sale site or helps our artists go to that and breach the market they are in?

So, for example, in Chester, you probably have items that can be sold beyond Chester. Have you ever accessed that kind of opportunity? I have found that extremely difficult in my area. I have found it very difficult to provide trademarks and, for instance, artists that do—we do an arts competition of young people every year, the Congressional Arts Competition. And there are pieces submitted where we could design belt buckles. We could design fabric for Martha Stewart. We could do all these things, but they don't have the business advice.

So my question is: Have you found NEA, NEH helpful in breaching the boundaries of where you live, and should we be aiming more toward that? Boy, I have got more—more goods here that could be sold, but we can't breach our own market.

Do you have any comments on that?

Ms. MUNDELL. I would like to comment just in terms of one of the things that we have built into our work with Wabanaki basket makers through this nonprofit that was created was to do marketing and business development, so that each of these artists were

trained in how to present their work, how to get into shows, how to go to Santa Fe.

So that was built into working with the artists at the beginning so that, over a period of time, they became more self-sufficient.

And the previous comment about sort of the idea of always having to have grant funding, they actually are now sustaining their own incomes and get very good prices for their basket.

So I think if that becomes part of the training or the grant program, where artists are also skilled in marketing and promotion and business management—and I think there is a lot of that that is going on in the country. So—because to be a practicing artist today, you have to have those other skills too.

Ms. KAPTUR. Yes. I appreciate—let's see. Is this on? I appreciate your comments, because I have found that is a difficult hurdle. And many of these artists are businesses that are under stress, and they need to have a piece where they can produce or hire others to do their work, but then selling to a broader market. And I find that is really where there is a big problem.

We have individuals making little cards, you know, where they sell a stationery and so forth, but for them to sell outside their market is a step above where they are. They could be creating new enterprise, not just for our region, but, you know, exporting to different towns, to different places, obviously first in North America, but not necessarily only here.

So I just wanted to put that out there. Maybe you can give comments to the record also as we seek to—as the prior member mentioned, you know, create more business.

Oh, I just see a—it is like a volcano. It is there, we just haven't found a way to lift it further.

Thank you, all.

Ms. MCCOLLUM. Chellie, you are muted.

Ms. PINGREE. Yeah, I don't know why I can't get it straight now. Sorry. Thank you, though.

Marcy—Chair Kaptur yields back.

And, Mr. Joyce, you are recognized for 5 minutes.

Mr. JOYCE. Thank you, Madam Chair.

Mr. Slaughter, can you discuss how Chester Made was able to use support from the NEH to build new platforms and find creative ways to engage with people amid the pandemic? And, further, what impact did these platforms have on the community?

Mr. SLAUGHTER. I almost jumped out of my seat when the last speaker was talking about the things that we have been able to do through arts and humanities with NEH funding to help artists become businesspeople. I couldn't agree more. A lot of times, the best artists are not the best businesspeople.

So we actually started an entrepreneurial process in conjunction with some of our artwork. We have artists in the city of Chester that have taken what we would call junk and turned it into treasure. So we have got a concept we call Broken Pieces, where people have learned how to take pieces of throwaway stuff and create art out of it.

And I think it is extremely important for people to be able to use what they have got around them to make business out of that. And it is a strange thing, except when you look at, you know, the Picas-

sos and you look at some of the other things that some people would look at and go, that is just a piece of junk. The way that we are able to take some of these pieces of stuff, re-create it into a beautiful piece of art, is impressive.

And when we add the humanities to that—because there is a slight difference between the arts and the humanities, and the humanities is the talking forum part of this whole thing. We need to be able to talk this out. We need to be able to put it in a museum. We need to be able to get into the libraries with this stuff.

In Chester, we have been thinking constantly about “What Chester Makes, Makes Chester.” And that is just—that is not just the conversation of it; it is also the promotion of it. It is the things that we are building. It is the conversations. And it is the things that we convert from conversations to concrete stuff.

So we are looking at a—we are trying to figure out a continuity here that says build, promote, sell. That is very important to us. We want to make sure that people can make a living with this stuff, not just feel good. The feel good is good, but we actually have to be able to make this thing sustainable, and that is where the humanities, talking it out, becomes very important for us.

Mr. JOYCE. Thank you.

Mr. Cage, as humanities organizations have closed, delayed programs or canceled events due to the pandemic, what impact has this had on local economies and businesses across Nevada?

Mr. CAGE. Thank you, Ranking Member. Caleb Cage for the record.

You know, what impact it has had, you would have to really define what sort of metrics and measures you are looking at, and I think that I can talk about it as a whole in the State.

We have seen in the State of Nevada considerable—obviously, the public health crisis associated with an economic and fiscal crisis for State and local governments, but also a public mental health and behavioral health crisis that we have seen here throughout our educational institutions and throughout our communities here in the State that, you know, I don’t want to draw too sharp of a causal line between the closure of humanities organizations and these things, but I would say the fact that we have had to isolate and quarantine and reduce social interaction and social distance and all of those things seems to have had a direct impact on our ability as communities and otherwise to be resilient to the pressures that we would normally be able to endure or persevere through and be able to address.

If that answers your question, sir.

Mr. JOYCE. Yes. Thank you.

I yield back, Madam Chair.

Ms. PINGREE. Thank you.

Chair Cartwright, you are recognized for 5 minutes.

Mr. CARTWRIGHT. Thank you, Chair Pingree.

And, first off, I want to acknowledge our friend and my classmate, Congressman Stewart, and his comments about, you know, this program can’t go on forever. And I want to say, let’s not lose our nerve. We all recognize this is not going to go on forever, but COVID-19 is an emergency, and we need to keep all corners of our

economy alive—all corners, even parts that people don't think of frequently.

And this is not new either, the idea of supporting all parts of our economy, including the arts and humanities. During the depths of the Great Depression and into the early years of World War II, the Federal Government supported the arts in unprecedented ways. For 11 years, between 1933 and 1943, Federal dollars employed artists, photographers, musicians, actors, writers, and dancers, and that—in fact, the legacy goes on.

I made my living as a courtroom jury trial lawyer and tried a lot of cases in Federal courthouses that were built during that time. Federal courthouses at that time were filled with murals that still remain, and are amazing, sweeping things. I mean, anyone venturing into these courtrooms would see these murals and not fail to be struck by the enormity and the solemnity of the delivery of justice.

So this is not unprecedented that we do these things.

I want to invite the attention of Mr. Slaughter for a quick question. In your testimony, you briefly discuss one of the Pennsylvania Humanities Council's signature programs, Pennsylvania Community Heart & Soul, which applies a humanities-based approach to community and economic development.

Can you elaborate on the importance of incorporating the humanities into community and economic development, particularly as communities look to heal and rebuild after COVID-19?

Mr. SLAUGHTER. In Pennsylvania, the Heart & Soul project is a phenomenal project where people get an opportunity to discuss what needs to happen in their communities. These Heart & Soul—and we have got 14 of them across Pennsylvania. These Heart & Soul communities—and one is in your district.

These Heart & Soul communities are the place where people have an opportunity to evaluate their culture, to talk about what they are, where they have come from, where they want to be. And it is in these conversations, these symposiums, these forums, where people build the actual concrete stuff.

The money that we get gives us an opportunity to plan. That is what these conversations are. These are real planning conversations. You know, nobody wants to just try to do something without any consideration for the variety of cultures, the variety of people, the variety of ideas that there are in any given community.

So to be able to have funding to sit and discuss these things so that we can build the best communities possible is crucial. Without it, we get real sloppy. I just don't think that we can do our best if we don't have a certain kind of support that says, yeah, sit, take your time, and figure this thing out, because the future is depending on you figuring this thing out. So spend the time to talk it out, figure out how your differences can be complementary versus competitive, and let's move forward with some good ideas based off of a collective approach to getting things done.

Mr. CARTWRIGHT. Well, Mr. Slaughter, you read my mind about Community Heart & Soul being in Carbondale, Pennsylvania, in my district. It is one of the greatest places in northeastern Pennsylvania. It is home to the first commercially successful railroad in

the United States and one of the cities that fueled the industrial revolution. Carbondale is steeped in history.

And, if you would, tell me, how exactly would the Community Heart & Soul program in Carbondale work to incorporate this rich history and the other untold stories into that community's revitalization efforts?

Mr. SLAUGHTER. That community, like the others, sir, what they would do is they would get together, and I think getting together, whether it be virtual or whether it be face to face when that can happen, they are going to look at their historic assets and that history that you talked about as crucial—they are going to look at those historic assets. They are going to look at some of the emerging ideas, and they are going to figure out how can we package this stuff so that Carbondale might be a destination for people to show up to again.

I think that that is important. And so a lot of people are talking about, how can we get people to show up here? The first thing we have got to do is figure out who we are together, what our culture represents, and the value and richness that will have people coming our way.

Mr. CARTWRIGHT. Well, terrific. I thank you for your testimony. And I yield back, Chair Pingree.

Ms. PINGREE. Mrs. Lee, you are recognized for 5 minutes.

Mrs. LEE. Thank you, Chairwoman Pingree, Ranking Member Joyce, for this hearing, as well as all of our participants.

I am especially thrilled to welcome one of our own Nevadans here with us today, Mr. Cage. Although you are representing Nevada Humanities today, I want to—I would be remiss if I did not point out the important role you have taken during this past year as the response director helping Nevada navigate this horrific time for our State.

I also appreciate it—I think nothing to me exemplifies this year than the statement, absence makes your heart grow fonder, especially with respect to the arts and the humanities.

And so, you know, I appreciated how you mentioned the role of the humanities in helping nurture resilient communities, and I couldn't agree more. And I am happy to point out that there are some incredible programs in southern Nevada that really highlight this, one of them being the city of Henderson hosting a community performance and educational workshop celebrating Nevada's past, present, and future. And, you know, these workshops really foster community, especially during these difficult times.

Or even Boulder City, in my district as well, the Chautauqua, which is bringing history alive through the great American humorous performing arts community event. Those are just a few of the many that, you know, especially during these times, we have missed so much. But not only are these programs educational, they also—you know, they drive community activity and resilience.

And, Mr. Cage, can you tell us about the broad benefits of arts and humanities programming and how Federal funding for endowments multiplies far beyond individual organizations that initially receive those grants?

Mr. CAGE. Yes. Thank you very much for the question, and I agree with your comments introducing that.

So a couple—at least three kind of key points I would like to make in response to the various questions included there, and I will try to be brief. But we—as an emergency manager previous to my current role with the pandemic, we tend to look at emergency response and emergency disaster recovery in very engineering-based mathematical terms, which is very important. We know a bridge in a community is very important, and buying down the risk through FEMA programs and mitigation programs for that bridge is going to help sustain that community in the event of an earthquake or flood or otherwise. That is an extremely critical way of looking at this.

The resilience approach allows us to look at it from a human and community-based perspective as well and to look at what does it mean to not just allow people to continue to go to hospitals and grocery stores on the other side of that bridge, but how does this—how do crises, disasters, emergencies affect them on a very personal and human level? How do we work with them as a community in order to better understand what the vision of that community—a very bottom-up driven approach to recovery and resilience looks like?

And that is done through human interaction. That is done through making meaning. That is done through all of the aspects that I talked about previously with the humanities.

The dollars that were provided through the programs that we have talked about today have been absolutely critical in addressing the profound impact for local arts and—or—excuse me—humanities organizations that have—they have relied on these dollars in order to keep their doors open, and they have provided a lifeline to these organizations.

And I will point out—and I will stop here, but my final point will be, these dollars and programs are woven into State and nonprofit and other community support dollars that are provided to support the humanities, such as our university and college system here in the State, which is providing humanities education and training to tens of thousands of Nevada students.

Thank you.

Mrs. LEE. Thank you, Mr. Cage.

You know, what we have also seen during this time, many of our humanities organizations pivot to virtual programming. What is the importance of ensuring public humanities remain accessible in our community especially during these crises?

Mr. CAGE. In a State like Nevada, Congresswoman, you know, with its huge, vast geography, we have seen it in education, we have seen it in the humanities, but just the ability to have folks throughout the State, whether they are in our population centers like Hart County and Washoe County or throughout the remainder of the frontier and rural State, is absolutely critical just to make sure we are serving everyone and providing that access.

Mrs. LEE. Thank you. And, you know, I couldn't agree with you more on the human-to-human interaction that gets fostered through arts and the humanities and how it was so important in bringing our communities together, you know, whether it was setting up food banks to help people, you know, it is sort of weaving

that resilience in the community that really helped us get through this difficult time.

And, with that, I will yield. I don't have any time to yield, but I am finished. Thank you, Chair.

Ms. PINGREE. Thank you, Mrs. Lee.

Well, I want to thank this panel. You have really done a wonderful job of talking to us about the importance of the funding for the arts and some of the COVID relief funding, the challenges that your organizations are experiencing.

I know we all noted when, you know, Mr. Stewart expressed his concerns about what the future of funding can be and how we, you know, support the organizations in the future, but I think all of you have made some really important points about how you treat this as an emergency and really look to ways to make sure your organizations are sustainable for the long run and that you are supporting artists and communities in being sustainable in the long run.

It is a great privilege to serve on this committee and to have the interaction that we do with the NEA and the NEH and to both see what happens behind the scenes and also to understand how the funding is used.

And it is also occasionally a challenge, because I think it is our job as well to explain to our colleagues and to the taxpayers the importance of this funding, and it often takes extra explaining so that people understand the number of professions that are impacted, the number of employees, the importance to the economic sector in, you know, urban and rural areas across the country, and you certainly represent a broad range of that.

So I appreciate all of you helping us in helping to explain to our colleagues and to the taxpayers why this funding is so important, why it has been so critical during the pandemic to try to keep as many organizations afloat and artists working as we possibly can. And we look forward, like all of you, to seeing the end of this pandemic and making sure that you can put your organizations back together and people can get back to pursuing their work.

So thank you again to all of our witnesses. We really appreciate your time today.

And if there are no additional questions, this hearing is now adjourned.

Thank you.

THURSDAY, APRIL 15, 2021.

U.S. FOREST SERVICE

WITNESSES

VICTORIA CHRISTIANSEN, CHIEF, U.S. FOREST SERVICE, ACCOMPANIED BY ANDRIA WEEKS, ACTING DIRECTOR OF STRATEGIC PLANNING, BUDGET, AND ACCOUNTABILITY, U.S. FOREST SERVICE

Ms. PINGREE [presiding]. Good afternoon. This hearing will now come to order.

As the hearing is fully virtual, we must address a few house-keeping matters.

For today's meeting, the chair or staff designated by the chair may mute participants' microphones when they are not under recognition for the purposes of eliminating inadvertent background noise. Members are responsible for muting and unmuting themselves. If I notice that you have not unmuted yourself, I will ask if you would like the staff to unmute you. If you indicate approval by nodding, the staff will unmute your microphone.

I remind all members and witnesses that the 5-minute clock still applies. If there is a technology issue, we will move to the next member until the issue is resolved, and you will retain the balance of your time. You will notice a clock on your screen that will show how much time is remaining. At 1 minute remaining, the clock will turn to yellow. At 30 seconds remaining, I will gently tap the gavel to remind members that their time is almost expired. When your time has expired, the clock will turn red, and I will begin to recognize the next member.

In terms of the speaking order, we will follow the order set forth in House Rules, beginning with the chair and ranking member, then members present at the time the hearing is called to order will be recognized in the order of seniority, and finally, members not present at the time of the hearing is called to order. Finally, House Rules require me to remind you that we have set up an email address to which members can send anything they wish to submit in writing at any of our hearings or markups. The email address has been provided in advance to your staff.

So now, we can begin.

I would like to welcome back to the subcommittee the 19th chief of the USDA/Forest Service, Vicki Christiansen. We are very excited to have you here and look forward to hearing your thoughts on the fiscal year 2022 budget request for the Forest Service. Joining the chief today is Andria Weeks, acting director of strategic planning, budget, and accountability.

Our hearing today will address the President's 2022 budget request for the USDA Forest Service. While we do not yet have the full details of the President's budget, I am encouraged by the themes highlighted so far, including conservation and climate

science. To this end, the budget includes such items as \$1.7 billion for hazardous fuels and forest resilience projects, an increase of \$476 million over the 2021 enacted level, significant investments to encourage private forest conservation, and a major increase for USDA's climate hubs. I am confident this budget will change course from the budgets of the past few years, which proposed critical shortfalls in research and State and private forestry, which play important roles in maintaining the health of our forests across the Nation.

Our forests do and will play an important part in the fight against climate change, and the Forest Service plays a crucial role in ensuring the continued health of those forests so that we can depend on them to continue to store carbon. One of the keys to maintaining healthy forests is to reduce the amount of high-intensity fires which are affecting our landscapes. I look forward to hearing today how increased investments in preventing these fires are helping and what more needs to be done.

I would now like to yield to our ranking member, Mr. Joyce, for his opening remarks. Mr. Joyce.

Mr. JOYCE. Thank you for yielding, Chair Pingree. I appreciate you holding today's hearing with the U.S. Forest Service to learn more about the Administration's fiscal year 2022 discretionary budget proposal. I would also like to welcome Chief Christiansen back to the subcommittee, as well as Ms. Weeks for joining us this afternoon. I look forward to discussing the Forest Service's ongoing work to manage and protect our Nation's forests and grasslands. I regret that we cannot be together as we officially kick off this year's appropriations process, but I am hopeful that we will be able to hold a few budget hearings in person again soon.

Last week, the Administration released its initial fiscal year 2022 budget request, which proposes over \$1.5 trillion in discretionary spending. Over half of the proposal, \$769 billion, is for non-defense programs, including the Forest Service. Though the Administration has not provided a comprehensive budget proposal, today's hearing remains an important first step in the fiscal year 2022 process. It provides us with an opportunity to hear directly from the Forest Service about the Agency's initial funding priorities and goals outlined within the request. In the coming months, this information will be critical as the subcommittee works together to examine the programs under its jurisdiction to ensure that taxpayer dollars are spent most effectively to benefit our natural resources and the American people.

As a result of the COVID-19 pandemic, Congress has provided trillions of dollars in economic stimulus and relief to help Americans tackle unique challenges. On the heels of this unprecedented spending, it is essential that we, as appropriators, work together to restore fiscal responsibility when examining this request, which calls for more than a 15 percent increase in non-defense spending.

Chief Christiansen, I was pleased to see the Administration prioritize funding for high-priority hazardous fuels and forest resilience projects. Now that we are entering the 3rd year of the fire funding fix and have largely eliminated the need for fire borrowing, it is important to focus similar attention on non-fire programs that improve forest health. Effectively managing and treating our for-

ests helps improve wildlife habitat, mitigate the risk of catastrophic wildfires, and makes forests more resilient to diseases and invasive species. Though the details are limited, I am also interested in discussing how the fiscal year 2022 request will support and build upon prior year funding for State and Private Forestry programs.

In my home State of Ohio, 85 percent of the forest land is privately owned. Programs like the Urban and Community Forestry Program and Forest Stewardship Program are critical to keeping our State and private forests healthy so that we can continue to provide communities with clean air and water, recreation opportunities, mineral and energy resources, and jobs. Finally, I am sure many of us, especially Mr. Simpson, would like to discuss the Forest Service's efforts to implement the Great American Outdoors Act, particularly how the bill will help the Forest Service conserve public lands, tackle maintenance backlogs, and increase visitor access and recreational opportunities.

Chief Christiansen, thanks once again for joining us today. As more budgetary details become available, my colleagues and I anticipate working with you to move forward a budget, within reasonable spending caps, that provides the Forest Service with the necessary resources to protect our Nation's forests and help the communities who rely on them. I look forward to our discussion. Thank you, Chair Pingree. I yield back.

Ms. PINGREE. Thank you, Mr. Joyce. And, Chief Christiansen, before I yield to you for your opening remarks, I just want to apologize in advance. We have multiple votes this afternoon, and because of our voting schedule, we have to vote in groups, so it makes it a little more complicated for the members. I know they are all anxious to hear from you, but please don't be surprised if you see a lot of coming and going on the screen. And we will make sure that we fill anyone in who misses some part of the hearing because I know everything that you all have to say and all the questions will be important. So with that, Chief Christiansen, we would love to hear your opening remarks.

Ms. CHRISTIANSEN. Wonderful. Chair Pingree, Ranking Member Joyce, and members of the committee, thank you for the invitation to come before your subcommittee. Today, I would like to highlight the work we are doing to steward the Nation's forests and serve the American people. I will share how this work lines up with the new Administration's highest priorities. Specifically, I will detail how the Forest Service is backing the effort to end the COVID-19 pandemic. I will share our resolve to employ science to tackle climate change, fight wildfires, and sustain productive, resilient forests. We are also doing our part to spur job growth, and boost economies, and rebuild infrastructure. Lastly, I will touch on our staunch commitment to advance racial equity as we create an inclusive workplace where every employee at the Forest Service feels respected and valued.

So, I am proud to say that last year, despite the pandemic as well as historic natural disasters, the Forest Service, we rose to the challenge. We hosted three times the number of forest visitors and recreationists as they sought respite from the surge of the COVID-19 pandemic on their national forests. We continue to respond to

FEMA's request for emergency medical technicians and other incident management support for administering the vaccine. The Forest Service played a sizable role in helping all of USDA recently administer a million COVID-19 pandemic vaccines over the past two months.

For the long challenge, we must confront the crisis facing America's forests and grasslands. The crisis results from a changing climate, and it induces severe wildfires, droughts, insects, disease, and invasive species infestations. The severity and the frequency of wildfire seasons is increasing significantly, impacting our Nation's forests at an unprecedented rate and destroying homes and businesses. The 2020 fire year became a call to action. We saw the most acres burned on Forest Service lands since the Big Burn of 1910. In many places, forests will not come back on their own, which impacts the potential for carbon storage and limits the land's capacity to mitigate further climate change.

Despite the pandemic, the Forest Service sustained our hazardous fuels reduction work, but we know it is not enough. We need to conduct high-priority hazardous fuels reductions and forest resilience projects at a scope and scale to meet the challenges we face. We anticipate another long and arduous fire year in 2021, and we are prepared for it. With a focus on health and safety, preventing the spread of COVID-19 remains our highest priority for our employees and the communities we serve. We stand ready with over 10,000 firefighters, 35 air tankers, and more than 200 helicopters available for wildfire suppression.

Our infrastructure needs are pressing, as are the economic needs of Americans, and we are committed to job creation through improving our infrastructure. When we improve infrastructure of the national forests by upgrading trails and recreation sites, it spurs jobs and boosts economies and communities surrounding the national forests. And thanks to the Great America Outdoors Act, we expect to create an additional 4,400 jobs and contribute an estimated \$420 million to the Gross Domestic Product annually.

So, I understand the expectations that come with the fire funding fix, which went into effect in fiscal year 2020. I want to assure you that the Forest Service remains a good investment. We understand congressional expectations for increasing accountability and oversight for fire spending. And during fiscal year 2021, the Forest Service has transitioned to a new budget structure that will help us increase the transparency of our spending.

Finally, the national forests and grasslands belong to every American. There should be equal access, and every American must feel a personal invitation and connection to their land. Every American deserves to have a motivated workforce that reflects our values, provides exemplary service, and mirrors our population. We are committed to both, starting in our own house. The Forest Service continues to work hard to end harassment, manage conflict, and create a work environment where every employee feels safe, valued, and respected.

Thank you, and I look forward to your questions.
[The statement of Ms. Christiansen follows:]

**Statement of Victoria Christiansen, Chief of the USDA Forest Service
Before the House Committee on Appropriations
Subcommittee on Interior, Environment, and Related Agencies
Concerning the President's Fiscal Year 2022 Proposed Budget
For the USDA Forest Service
April 15, 2021, 2:00 p.m.**

Chair Pingree, Ranking Member Joyce, and members of the Subcommittee, thank you for inviting me here today to testify on the President's fiscal year 2022 Budget for the U.S. Department of Agriculture (USDA), Forest Service.

Over the past year, the coronavirus pandemic brought human loss and suffering to untold numbers of American families. Job losses, challenges with social distancing, separation of loved ones, telework, and virtual schooling, all impacted our society and agency workforce. In response, the Forest Service found new and imaginative ways of performing our mission-critical work, including suppressing wildfire with minimal risk of spreading the coronavirus (COVID-19); safely working with partners to improve forest conditions; and hosting unprecedented numbers of visitors on the National Forest System, enabling them to safely enjoy their public lands. All while keeping fiscal accountability and employee well-being as a foundation for our work.

Given the challenges of the pandemic, we were able to complete and sustain forest treatment work on the ground. The Forest Service continued its focus to improve forest conditions to reduce wildfire risk to communities on over 2.65 million acres. These actions included removing hazardous fuels like dead and downed trees, and combating disease, insect and invasive species infestations. We also improved more than 443,400 acres through watershed restoration, with many of these projects designed to improve climate resiliency, improve passage for aquatic wildlife, or protect sources of drinking water on National Forest System lands. The Forest Service moved nine watersheds to an improved condition by completing all the essential projects in the respective Watershed Restoration Action Plans. The Forest Service also focused on providing jobs and stability for local economies through a year of historic timber production, selling more than 3.2 billion board feet of timber, the second highest level in 20 years.

In fiscal year 2021, we have treated nearly 1.1 million acres to reduce wildfire risk and improve forest conditions. We have had great success in implementing prescribed fire projects thus far, and the agency is on track to meet the goal of 3.5 million acres treated by the end of the fiscal year. These prescribed burns are low-intensity surface fires that release substantially less carbon dioxide than wildfires of the same size.

The Forest Service is doing its part to support jobs and aid the economic stability of communities and municipalities where citizens have suffered significant economic downturns resulting from the ongoing pandemic. Specifically, the Forest Service has invested CARES ACT funding to create and sustain jobs in rural communities, including opportunities for university STEM students, hiring field crews and increasing funding in contracts and agreements with States to hire field crews to conduct catch-up surveys of Forest Inventory and plots. Plot surveys fell behind in fiscal year 2020 because of extreme wildfires in the West and because of the pandemic. This additional investment alone

created more than 50 jobs. Moreover, the Forest Inventory and Analysis program's data and analyses provide essential information to industry to inform mill location and to guide business planning in the forest products sector by monitoring and projecting wood volume and supply. This enhances the viability and profitability of the entire sector, directly affecting tens of thousands of jobs. Over 900 timber sale contracts have been extended, providing additional time for purchasers to harvest timber.

We are also working to sustain rural small businesses and industries by relying on local communities to fulfill logistical firefighting personnel needs rather than outsource to larger cities, keeping communities open by supporting lodging, restaurants, grocery stores, and hardware suppliers.

In a year where demand for outdoor recreation reached record levels during the pandemic, we expect a modest rise in spending from \$9.5 billion in 2019 to just under \$10 billion in 2020 and economic contributions to the Gross Domestic Product to rise from \$11.4 billion to ~\$12 billion with over 148,000 jobs supported. We have helped families that depend on firewood to meet both heating and cooking needs by issuing free firewood permits in times of public disaster or emergencies to assist those impacted by the COVID-19 pandemic.

I will now discuss how our ongoing work to implement the fiscal year 2021 budget aligns with the Biden Administration's priorities for fiscal year 2022, including helping to control the COVID-19 pandemic; tackle climate change; provide economic relief through job creation; advance racial equity; and further improve our work environment.

Controlling the COVID-19 pandemic

Last year, despite the coronavirus pandemic as well as historic natural disasters and civil unrest, the Forest Service rose to the challenge. Our responsibility as an employer, a service provider to the public, and a manager of federal recreation sites, is to ensure the safety of our employees, contractors, and the public. This is our top priority. That is why agency policy requires our employees, contractors and visitors to wear a mask, maintain physical distance, and have access to essential Personal Protective Equipment.

Our 2021 field work and fire seasons are currently underway. In accordance with the Administration's priority in Executive Order 13987 to halt the spread of COVID-19, by relying on the best available data and science-based public health measures, the Forest Service will continue to follow guidance in USDA's Workplace Safety Plan. This Plan is a detailed, data-driven COVID-19 workplace safety plan that prioritizes the health and safety of our federal employees and contractors—whether they work in offices or out in the field. National Forests are evaluating local conditions and mitigating risks ahead of reopening more visitor centers, recreation sites and other public venues. We are working to continue the successes achieved last year in wildfire suppression response in maintaining the safety of our employees, contractors and partners in shared quarters and fire camps.

Tackling Climate Change

Today, the need to address the climate crisis is more urgent than ever. Fire seasons are longer with wildfires occurring outside the span of historic fire seasons in different parts of the country. Other

climate change threats include regional drought, invasive species, and major outbreaks of insects and disease. The Forest Service stands ready to meet these challenges and advance the Administration's climate goals. These challenges include researching the vulnerability of water supplies and watersheds to a changing climate; conducting assessments and providing tools such as the National Insects and Disease Risk Map; and identifying optimal fuel treatment practices and accelerating the pace and scale of prescribed fire.

Wildfire Management. The 2020 fire year was unprecedented in many ways. Not only did we fight fire during a global pandemic, but more acres burned on Forest Service-managed lands than in any previous year since the historic Big Burn of 1910. The increased frequency of wildfires in the wildland-urban interface continues to impact more homes and communities than ever before, with more acres burned in California than in any previous year on record. In 2020, wildfires destroyed nearly 18,000 homes and outbuildings (structures).

In 2021, we are anticipating and are prepared for another long and arduous fire year. We continue to invest in pre-planned response using risk assessments and analytics to inform fire managers about resource allocations needed and used on fires. We are also investing in several key technology and modernization portfolios; including, Data Management, Enhanced Real Time Operating Picture, Decision Support Applications, and Modern Tools for a Modern Response. Additionally, implementation of the Large Fire Assessment process, as directed by the Consolidated Appropriations Act, 2021 (Fiscal Year 2021 Omnibus), is helping us better account for our actions while fostering a learning culture. Cooperation with partners at the federal, state, and local levels also ensures we have a strong workforce of firefighters and equipment to provide for safe and effective wildfire response throughout the year.

Climate Adaptation and Mitigation. In line with Executive Order (E.O.) 14008, *Tackling the Climate Crisis at Home and Abroad*, the Forest Service is using science to advance climate-smart land management, restoration, fire management, and science innovation and delivery for the benefit of current and future generations. We are building on past work by leading USDA's Climate Hubs. These Hubs provide practical, proactive tools informed by science for landowners and land managers. Maintaining climate-resilient landscapes is central to virtually all Forest Service research and land management activities and goals. For example, we are implementing acquisition of conservation easements on private lands and increasing capacity for carbon sequestration through reforestation and production of woody biomass for forest products. All these activities are furthering the goals of E.O. 14008 to conserve 30 percent of U.S. lands and waters by 2030. We are also coordinating with the Department of the Interior to support a strategy for creating a Civilian Climate Corps, drawing on the agency's unique expertise and history that builds on the legacy of the New Deal Civilian Conservation Corps. Through the Climate Conservation Corps, we will work to deliver forest and watershed health and resilience, carbon sequestration, wildfire risk reduction, innovation in science and science delivery, and improvements in sustainable operating infrastructure. In addition, a Civilian Climate Corps will provide career opportunities for a diverse generation of Americans in critical work to promote environmental sustainability.

Restoration and Reforestation. Natural resource challenges are best met with collective action. Stakeholders of the Forest Service broadly agree on the need for active measures to address the threats across many of the landscapes we manage. Congress is doing their part as well. The Forest

Service has plans for the reforestation of over 1.3 million acres of National Forest System land. These plans address only one third of National Forest System reforestation needs, which are estimated at 4 million acres. Wildfires create over 80 percent of reforestation needs, including approximately 1 million acres from the 2020 wildfire season. The Forest Service is also placing special emphasis on planting the right species, in the right place, under the right conditions, so forests will remain healthy over time.

Moving forward we will maintain our Shared Stewardship approach of working together in an integrated way to make decisions and take actions on the land. With this shared approach, the Forest Service is working more closely than ever with states, tribes, and other partners on priority projects across landscapes and across all land ownerships. We are sharing decisions and risks and achieving measurable outcomes that we mutually define. This strategy is dependent on our employees—our largest and most important investment. The successful delivery of services and work starts with a highly skilled, motivated workforce. They are essential to confronting the climate-related challenges facing America's forests and grasslands; they are integral to the services and experiences we offer to citizens, local communities, and our partners.

The Administration has also placed a priority to restore nature-based infrastructure including our lands, forests, wetlands, watersheds, and other natural resources. As part of the American Jobs Plan, the Administration is calling on Congress to invest in protection from extreme wildfires and the restoration of major water and land resources. To accomplish this, the plan empowers local leaders to shape these restoration and resilience project funds in line with the Outdoor Restoration Force Act.

Providing Economic Relief

The fiscal year 2021 Omnibus authorized the Secretary of Agriculture to use up to \$200 million to provide financial relief to timber harvesting and timber hauling businesses that have experienced financial losses due to COVID-19. Timber harvesters and haulers are critical to forest management across the country. COVID-19 relief assistance is a top priority of the Biden Administration, and Forest Service staff are coordinating with USDA Farm Services Agency staff to implement this provision and get financial assistance to timber harvesting and hauling businesses as soon as possible.

The Forest Service will also make positive impacts on state and local economies thanks to the innovative authorities Congress provided in the recently enacted Great American Outdoors Act. This significant legislation will enable us to repair and upgrade vital infrastructure and facilities in our national forests, and permanently funds the Land and Water Conservation Fund (LWCF), investing in conservation and recreation opportunities on public and private lands. Projects will enrich the lives of current and future generations by improving landscape resiliency and increasing access. Recent investments in these areas are an indication of Congress' expectations and trust in us, and I look forward to continuing to work with you to meet those expectations and trust. There is much more work to be done, and we are committed to doing the right work in the right places at the right scale.

Fiscal Accountability and the Fire Funding Fix

In fiscal year 2021, the Forest Service has transitioned to a new budget structure that will help us increase transparency of our spending over time. It also will result in enhanced budget discipline,

such as better planning to fund fixed costs and help overcome longstanding systemic challenges without negative impacts to programs that benefit the public. We are experiencing some growing pains and learning from them. Realignment of the budget structure is illuminating the need for changes to some of our business and cultural practices. We are stewarding the Forest Service through this change with strategic workforce planning and collaboratively managing all operations within our allocated budgets. This requires making difficult decisions and strengthening internal control to mitigate overspending.

At the beginning of fiscal year 2021, fire activity was at its peak with most resources committed throughout the country. In prior years the end of the most severe part of the fire season typically occurred in early to mid-September. This year, however, there were more than 24,000 firefighters engaged nationally on October 1, at the start of the new fiscal year, which is substantially more than the early October average of approximately 3,600. Pushing the severe part of the fire season more than a month later into fiscal year 2021 shifted the high spend rate the agency typically incurs in August and September into October and November. As a result, the agency transferred \$1.8 billion from the Wildfire Suppression Operations Reserve Fund (Fire Funding Fix), to fund wildfire suppression operations in fiscal year 2021. We understand congressional expectations for increasing accountability and oversight of fire spending that come with the Fire Funding Fix. We will continue to closely monitor and report on the status of spending to ensure judicious use of suppression funds during the fiscal year.

Advancing Racial Equity and Improving Our Work Environment

It is essential that we create a work environment that promotes the safety of our employees and fosters equity and inclusion for all people. USDA is committed to ensuring equity across its agencies, removing barriers to access, and building a workforce more representative of America. To that end, the Forest Service strives to maintain a work environment that is equitable, respectful, and free of harassment and bullying of any kind. The Forest Service has taken significant steps to improve policies, raise accountability, upgrade reporting systems, and conduct training focused on workplace environment to stop harassment, bullying, and retaliation. We are working to permanently change our culture. I am committed to ending discrimination in all its forms wherever it exists. The Forest Service is continuing the hard work that creates the work place our employees deserve and building an organization where every individual, inside and out of the agency, is treated with respect and dignity.

In closing, we are always mindful of the need to demonstrate to Congress and the public we are striving to do our part to spend taxpayer dollars as they are intended - to address the serious challenges facing our land managing mission today. The President's fiscal year 2022 Budget request for the Forest Service will position us to fulfill our mission and invest in the Administration's immediate priorities. I look forward to working with this Subcommittee to fulfill the President's goals and our key responsibilities for the long-term benefit of the Nation's forests and grasslands, and for all Americans. I welcome your questions.

Ms. PINGREE. Thank you, Chief Christensen. I really appreciate your outline of the coming year, and thank you so much. I am going to recognize myself for 5 minutes for questions and jump right into fire since I know that is an important part of what you are dealing with today, and it is always shocking to hear the magnitude of the fires in 2020. And my heart goes out to those members whose districts are severely impacted, have been, and really face some of the biggest challenges, particularly on the western side of our country.

So some fires have a natural role to play in keeping our forests healthy. However, the high-intensity forest fires we have experienced too many of in recent years are so detrimental to our forests, in addition to their cost in human lives and property. There is, as I said, an intense bipartisan interest on this committee in ensuring we are utilizing the best tools available for fighting these fires, whether it is utilizing predictive and machine learning tools in the initial planning stages, new technology to help prevent those fires, or tools for increased coordination and safety for those working to fight the wildfires. We know that technology can help with every stage of your efforts.

Last year, the committee directed increased investment in these technologies and other reforms called for in the Dingell Act, as well as a focus on this subject in future budget requests. So could you give us an update on the Forest Service's finding on what opportunities exist for increased investment in technology to predict and prevent, as well as to fight, fires?

Ms. CHRISTIANSEN. Thank you, Chair Pingree. Yes, you know, a contemporary fire response is very important for us to meet the complexities of what we call our wildland fire system across America, and the Forest Service is a major leader nationally. Thanks to your help and the additional investments, we are developing relationships and investments. For example, over \$8 million dollars were invested last year to begin a pilot program for tracking, how we for the safety of every firefighter.

We also have made good progress in standing up our unmanned aircraft systems program with the purchase of our first 20 UASes in the fleet. We flew, in partnership with the Department of the Interior, over 1,000 UAS missions for fire intelligence, post-fire recovery, and other natural resource missions, and we are learning, and we are getting great leverage out of the UAS programs. We have also invested funds in an agreement with the Department of Defense for satellite fire detection services and capabilities, which has already supported over 500 fires just this year alone, in 2021. We have launched a very important modernized National Inter-agency Dispatch System, which processed over 575,000 resource orders in 2020 alone. With the new system, it worked very efficiently.

Of course, there is always more to do, and we are always in a tradeoff with the amount of resources we have, so we are, you know, putting the right investments and incrementally improving our fire technology, and we really thank the committee for your support and look forward to working with you on these this important subject.

Ms. PINGREE. Thank you. I am going to yield back the balance of my time and let other people start asking their questions. I have

plenty, but I know I will get lots of opportunities. So I recognize Mr. Joyce for 5 minutes.

Mr. JOYCE. Thank you, Chair Pingree. The State of Ohio has prioritized improving water quality with focus projects in the Lake Erie Watershed, including a State-led program called H2 Ohio. These water quality efforts involve a multifaceted approach that includes agricultural incentive programs, land protection, wetlands restoration, and expansion of riparian forest buffers. Investments in the Forest Stewardship Program are directly tied to improving water quality through technical assistance to landowners on tree plantings and riparian forest buffer management. Chief, in a State like Ohio where 85 percent of the forests are privately owned, can you discuss how the Forest Stewardship Program provides downstream benefits, improving water quality for the rivers flowing into Lake Erie and potentially helping address harmful algal blooms?

Ms. CHRISTIANSEN. Yes. Congressman Joyce, thank you for that question. We just signed a shared stewardship agreement with the State of Ohio, and it is based on their State Forest Action Plan. I know that the greatest threat to forests identified in Ohio is soil and water quality impacts from poor land management practices, and, of course, urbanization, and the conservation of soil and water and smart growth is really a top goal. The Forest Stewardship Program, which is funding that, you know, comes through the Forest Service, it is a State-driven program to provide that technical assistance to private landowners. They are specific, which meets their interests, their own forest management plans, inclusive of protecting watersheds. The key strategy is to focus on keeping forests as forests so these landowners, you know, they have a choice to convert the land to other use. So keeping forests as forests is the number one water quality enhancement that you can do with 85 percent of Ohio being in a private forest.

So, the forest does help with the soil retention and the water quality, and, particularly, the use of riparian forest buffers. So, in addition to water quality and riparian management, restoration of our forests or good management through the Forest Stewardship Program helps impact the damages from flooding. We all know the benefits of wildlife habitat and for habitat in reducing stream temperatures.

So, I could go on and on about the benefits of the forests. There are public benefits that flow from private lands, so a way to assist private landowners in meeting their own goals is to continue the important public benefits that flow from those lands.

Mr. JOYCE. Great. Thank you. In fiscal year 2021—I am switching gears here a little bit—to foster additional production of wood utility poles that meet modern size specs of the U.S. electric industry, and ensure the ecological needs of local landscapes, Congress included language encouraging Forest Service to work within existing programs to foster additional production of wood utility poles. Recognizing the Agency doesn't typically design timber sales or manage for specific timber products, how could the Forest Service work to help meet this demand, especially in areas affected by wildfire?

Ms. CHRISTIANSEN. Yes, that is a really good question. We could look at a product mix, we could sell different products in a timber

sale. Now, that is a little bit of a heavy lift. When I was State forester in Washington State, that is what I would have done. We would do a product mix sale where we advertised the good utility poles so those could be taken and not just put into regular saw timber. So, we need to do some specific marketing, and I would be happy to work further with this committee on how we can best meet that need.

Mr. JOYCE. Former Chair McCollum and I went out to visit the beautiful areas in Derek's District. That was one of the things that they were discussing.

Ms. CHRISTIANSEN. Yes.

Mr. JOYCE. But how could the Forest Service help connect the utility pole industry personnel with particular National Forest System timber sale purchasers, to determine if there is material within a particular sale that could fit their needs?

Ms. CHRISTIANSEN. Yes, we work with the electrical energy sector very closely, obviously with the threat of wildfire, so we have those relationships, and it is really those purchasers. We need to get the purchasers of the Federal timber sales involved so that we could identify what the market needs are, and then we could establish our timber program according to those needs.

Mr. JOYCE. Thank you very much. I yield my non-existent time back, Chair Pingree.

Ms. PINGREE. It looks like abundant time to me. I now recognize Chair McCollum for 5 minutes for her questions.

Ms. MCCOLLUM. Thank you so much, Madam Chair. Well, welcome back to the subcommittee, Ms. Christiansen. It is a pleasure to see you again, even though it is through screens. And I have to say I am a lot more enthusiastic about the budget you are presenting us today than I was about the one at the last hearing.

So President Biden's plan to consider 30 percent of the land and water by 2030 is something that I am all supportive of. Conserving and increasing forest cover is important for not only reducing global warming, but for protecting our watersheds. We don't place a dollar value on water, we really don't, but life can't survive without water. And as you know, the Forest Service has the responsibility of protecting the priceless reserve of clean water located in the Boundary Waters Canoe Wilderness Area.

Yesterday, I had the opportunity to be with Secretary Vilsack, and he confirmed with me that the USDA is working with the Department of Interior to review the past Administration's actions and consider next steps. So I know you can't comment on that any further because you are in the process of working on that. But I just wanted to re-emphasize my support for the Forest Service retaining its ability to deny consent for mineral leases and other activities that you might feel threaten the land, especially the water you manage. And 20 percent of the water in the forest, it is, you know, going to be hugely impacted with this new type of mining that they want to do that is so toxic. So thank you for looking out for the water not only for today, but for future generations.

I also want to just take a second to commend you again for the work that you helped with in the Forest Service International Program. I have been in embassies. I have traveled around the world, and the Middle East, and Africa, and all around. And non-govern-

mental organizations and embassies, they are working to protect and clean up watersheds, fight climate change, reduce illegal logging and habitat destruction. That is the kind of soft power we need to be projecting, so thank you for doing that.

I just want to take a second to touch on the value of outdoor experiences, which many Americans have rediscovered during the pandemic, and you mentioned the Great American Outdoors in your remarks. But those experiences are not equally accessible to all Americans, especially many of our youth. Getting outdoors is good for your mental health, it is good for your physical health, and it also helps to build the next generation of conservationists. So I believe we need to invest in our outdoor opportunities in our national forests and wilderness areas for youth from diverse backgrounds. Especially I am going to speak to urban youth.

So I want to highlight the Forest Service program in Region 9, which includes Minnesota and Maine, Madam Chair, and it is doing that work of connecting our youth to forests. The Urban Connections Program creates relationships with urban youth leaders and organizations to create recreation and learning opportunities. Last year, I included language in our House report to increase funding for Urban Connections and to boost our regional-wide opportunities. Can you maybe tell the committee your feelings on how those increased funds were used?

Ms. CHRISTIANSEN. I would be delighted to, Congresswoman McCollum, and we really appreciate the acknowledgement of this important, we call it our Urban Connection Program, in the Northeast States that we call Region 9. It is really a region-wide youth engagement and activities, and it is to connect all peoples. We have a leadership intention here at the Forest Service to create a culture of inclusion that awakens and strengthens all people's connection to the land.

We have to start where people are, and sometimes it is connectivity to an urban open space or an urban park. But we want all people to have that full connection all the way into a national forest and a wilderness area. Through our Urban Connections Program, we have coordinators in these urban centers across the northeast, and we leverage great partnerships. It just takes a little bit of coordination to leverage, the synergistic approach on how we can build a future of natural resource professionals, natural resource advocates, or just an experience of life of connecting to the outdoors and what that means.

There is an incredible statistic of this past year during the pandemic that 81 percent of Americans had some kind of outdoor experience. That is a high number of all Americans because, you know, the alternatives weren't very great during this past year, but 31 percent of them were first-time experiences in the outdoors. Now, that is a huge opportunity, and it is a bit of a challenge because if they don't have a good experience, are they going to come back? Are they going to connect to their natural resources? So, we are laser focused, and the Great America's Outdoors Act, by the way, really helps us increase and improve the user experience and build our capacity to have connections for all Americans.

So, with additional funding from the 2021 Omnibus, we are developing a much deeper ladder of engagement where youth can,

again, incrementally gain that outdoor recreation experience all the way up to a wilderness experience, and where we can encourage them to think about what they care about and whether a career potentially in natural resources is working for them. And I am very proud to say we will be able to continue to increase our safety protocols of bringing youth into the national forests. The Boundary Waters is one of the most significant wilderness experiences for these youth.

So, more investment with our Urban Connections and more into our partnerships to leverage more. As we get deeper into investing these funds this year, we would be happy to continue to keep you updated. Thank you.

Ms. PINGREE. Thank you. Next, I recognize Mr. Simpson for 5 minutes for his questions.

Mr. SIMPSON. Thank you, Chairwoman Pingree, and Chief, Andria, welcome back to both of you. It is good to have you before the committee, and thanks for the job that you and the Forest Service have been doing. You mentioned in your opening statement, and I think Chairwoman Pingree followed up on it, the devastating forest fires that occurred last year. I think you said the worst since the Big Burn. It was devastating, particularly in the West, the communities. So I want to ask you a couple questions. You can answer each one of them, I guess. I know the Forest Service has been looking at the issues affected by these last year's forest fires. So, Chief, what would it take, say, over the next 10-year period for the Agency to make significant progress on this front, and how many acres would we need to be able to treat to reduce these wildfires? Are we going to see a 10-year plan so the committee knows what we can expect from year to year instead of reacting to the fires as they happen each year? If we have a year that is down in fires, we don't pay as much attention to it as we do a year like last year.

And along those same lines, this is the, I think, 19th year I have served on this subcommittee. Different Administrations, different chiefs, so forth. And one of the issues I have been dealing with and trying to address is the aviation assets of the Forest Service and where we are going with that, because it seems like we take one step forward and two steps back, or vice versa, and change directions all the time. Are we going to have a clear outline for the next, say, 10-year plan of what the Forest Service needs in terms of air assets, how the 5- and 10-year contracts that you are looking at will affect us and benefit us, and what we need to put into our budget so that the Forest Service has the necessary equipment to address these wildfires?

Ms. CHRISTIANSEN. All great questions. But I have to say, 16 years ago I was the new State forester of the State of Washington and the first time before this committee. You were ranking member with Mr. Dicks, so I remember it well, and you have always been very passionate and ask really good questions, Congressman.

So, we have to do a paradigm shift, quite frankly, and we have to get it right. There are two things. We have a scale mismatch in treating our lands, so we definitely have to treat more lands. We have to up our game, and we have really incredible scientists that are showing this. We call it fire shed modeling. But we also need to be strategic in where and how we treat those lands.

So, I did ask our scientists to give me a 10-year plan. Our researchers, through this modeling, showed how we need to strategically treat an additional 20 million acres of national forest system lands in the West, and 650,000 acres in the East just on the national forests alone to make significant progress in reducing risk. These treatments, as I said, need to be strategically placed at these large landscapes. We call them fire shed scales. And "Strategic" means we don't have to treat every acre, but we need to, for example, strategically treat and replace 40 percent of the fire shed, and that will reduce the 80 percent of the bad outcomes. So that is a pretty good investment when we can show we can get results if we treat 40 percent of these highest at-risk fire sheds.

So, we treat between two and three million acres per year on the national forests. So, to make this paradigm shift, we would have to add another 2.65 million acres a year for the next 10-years to execute this strategy, so that is obviously more than double what we are doing now. We also have done this modeling. Forest Service land certainly transmits a lot of significant catastrophic fire, without a doubt, but it is on all lands as well, and, as you know, we need to look at the whole landscape. So, I want to do a call-out to our State and private lands that we need to treat an additional 30 million acres in the next 10 years, so that would be 3 million additional acres per year, or 5.6 million acres per year for the next 10-years to execute a big difference in really putting resilience back into these fire sheds that are most at risk.

But there is a good side. I mean, it would create, we estimate, between 300,000 to 575,000 jobs, and, of course, protect significant communities and small businesses, and enhance local economies. So, I know it is a big lift, but the science is leading edge, it is real, and we can show we can make a difference.

Relative to your question about air tankers, the contracting air tanker community has really come online. They are meeting our needs of contemporary air tanker capacity for wildland fire in the U.S. We are studying the question about going to a 10-year contract, what the pros and cons are. We are nearly complete with that report. It will be going through clearance in a matter of a few days, and it will be coming to the committee here shortly. So we would be glad to discuss more about air tankers, but we think we really are on the right track with our air tankers, and I thank you for being such a help and an advocate for getting us the right resources.

Mr. SIMPSON. Thank you.

Ms. CHRISTIANSEN. Thank you.

Ms. PINGREE. Thank you, Mr. Simpson. Next, I recognize Mr. Harder for 5 minutes for his questions.

Mr. HARDER. Well, wonderful. Thank you so much, Madam Chair, for holding this hearing. Thank you to our witnesses for participating. This is a very important hearing for me personally since I represent a district in California that has been severely impacted by the California wildfires. We used to have a world in normal years where the fires wouldn't start until late summer or fall. We have, you know, all of May to pen the forests and clear the buffer zones, but not anymore. Now, dry winters are bleeding into the dry summers, we are having many times as many wildfires, and I am

very worried about the season that we have coming up this year, let alone what could be coming in in the future.

One thing that I have heard a lot from my community is about the need for reliable fire crews. I have heard from some of our local volunteer firefighters that in order for them to volunteer to go fight fires on Federal land, they have to take several weeks off of work. The State of California pays these volunteer firefighters for their time when they work on State fires, but the Forest Service currently does not. The demands of fighting fires for weeks on end have actually led to some of our volunteer departments having to ask if a fire is State or Federal before they agree to help in the first place, which I don't think makes a lot of sense given the need that we have for even more manpower to fight these fires.

So I guess the question is, you know, while I know a lot of volunteer firefighters are hired locally, what can we do in this budget to better support volunteer firefighters and hopefully reimburse them more for all the time that they are taking off, especially as the fire season continues to expand?

Ms. CHRISTIANSEN. Yes. Thank you, Congressman Harder, and I really appreciate that you recognize that, in this country, in America, we need all wildland firefighting resources. It takes a network of the rural, the municipal, the State, the tribal, and all the Federal in these, what we now call, a fire year. It is no longer a fire season when we think about the country.

The specifics of your question I am a little concerned about, and maybe we can dig into that offline. If a rural fire department is on a Federal fire, they certainly will get paid for that. There is probably more about the details of the agreement. Again, I would like to dig in in more detail with you. But at a big level, we do, thanks to Congress, have a program called Rural Fire Assistance, and that is to help the rural fire districts build the capacity, the training, the equipment, the resources that they need to be able to respond to ever-increasing wildfires in this Nation because, again, we need all the wheels and the boots on the ground to respond to the complexity of wildfire in the Nation. It is a very important program that, of course, has limited dollars, and so additional resources to help build the capacity of the rural fire districts has been very important.

Mr. HARDER. And specifically, Chief, it is volunteer firefighters. My understanding is currently, under Federal guidelines, volunteer firefighters are not being significantly reimbursed, unlike by some States, including California that do reimburse them, so it is not about a rural issue. It is about the volunteers.

Ms. CHRISTIANSEN. Yes, and I apologize. Rural is generally volunteers, but I am making an assumption. It is not always. My husband is a structural fire chief of a combination department where they have volunteers and paid, and they are generally on the border areas. But, I would glad to dig into that question more specifically about the agreement. They definitely should be getting paid for their services on Federal lands, no doubt. No question about that.

Mr. HARDER. Terrific. Well, we would love to work with you and explore some ways we can further incentivize that work. I never want anybody to be asking for fire State or Federal before they get

in a fire truck, and that is great to hear. And the last couple remaining points of your time, would love just to hear a little bit about what is limiting our ability to take some of the fuel away from these fires, to move towards more controlled burns. It feels like we are incrementally moving in that direction, but, you know, we need to go 100 times faster than we are going right now if we are going to limit these fires to hundreds of acres instead of hundreds of thousands of acres. Can you expand on using your budget to actually prevent these fires from escalating as fast as they are?

Ms. CHRISTIANSEN. Yes. Congressman Harder, it is strategically doing these fuel treatments across our shared boundaries, and fuels treatments certainly means prescribed fire. It means thinning the density out of the forests. We need markets for the low-value forest products because it costs so much money when we don't have a market for them. So, in California, we are working very aggressively on biomass-related infrastructure and markets. It is the cost of hauling the wood. There are several factors that we are breaking down.

I know that we are low on time, but, we are this close to the cusp of naming what the breakthroughs are in prescribed fire. We are working with the States on the air quality standards because of how do we take our smoke? Do we take it an incremental way, prescribed fire, or these massive, catastrophic wildfires? So, there are many things, and we would be glad to come brief you more about what those opportunities are.

Mr. HARDER. Sure. Great. Thank you so much, and I yield back.

Ms. CHRISTIANSEN. Thank you.

Ms. PINGREE. Thank you. Thanks, Mr. Harder, and I am happy to recognize Mr. Amodei for 5 minutes for his questions.

Mr. AMODEI. Thank you, Madam Chair. Hey, Chief. Good to see you again. I want to just hit a couple things quick. First of all, we are going to be hooking up with you just to ask you guys come in and brief us on what you are doing with the drones, you know, what missions they got, where they are centered, who your contractors are, stuff like that. Second of all, on the large air tankers, I think the news is pretty good. We want to circle back with your folks because I think they have been problem solvers. You know, just the usual stuff that you fight in terms of some specs that, quite frankly, nobody complies with or adheres to that are still in there. But the times we have had that happen, your folks have been pretty proactive, and I wanted to basically give them a thank you for that so it didn't go unnoticed or taken for granted.

Now, I want to kind of switch to what we talked about last year, and we will do it in the context of this year. When you talk about executing the strategy as far as fuels management and things like that, which means you have got to add X million acres a year and things like that, can you tell me, real generally, so how does this year's budget request compare to allowing you to execute that strategy in the context of a decade?

Ms. CHRISTIANSEN. In the context of, what was the last word?

Mr. AMODEI. Getting it done in a decade.

Ms. CHRISTIANSEN. In a decade. It certainly gets us a step closer, a big step closer.

Mr. AMODEL. Okay. So if I used, and this is my phrase, not yours. I don't want to get you in trouble with anybody. But we are still going to need some help in terms of resources if we are going to put you guys in terms of the medium lane, not the fast lane, in terms of fuels treatments. And I was listening when you said, hey, guess what, this amount will ameliorate 80 percent of the negative effects. If we want to start getting to the point for the national forest lands where we can say our stewardship is in the medium lane as far as fuels management, then you are going to need some more help in the resource department.

Ms. CHRISTIANSEN. You know, what I can speak to, Congressman, is the science. And, you know, it is a policy of Congress and the Administration on how fast we go, you know. We put—

Mr. AMODEL. No, I get that. I get that.

Ms. CHRISTIANSEN. Yes.

Mr. AMODEL. I am not trying to cut you off. Maybe I should pick on Ms. Weeks. But it is, like, as a budget reality, if this committee wants to help you with fuels, I am just going to tell you, and you can disagree with me, but we need to do better.

Ms. CHRISTIANSEN. We need to do better.

Mr. AMODEL. Okay.

Ms. CHRISTIANSEN. We need to do better.

Mr. AMODEL. I'll let you stop right there. I don't want to get you in trouble.

Ms. CHRISTIANSEN. As I said in my statement, we have more to do to make a significant difference on the landscape, no question about it.

Mr. AMODEL. Okay. The second thing I want to touch on is, does the Forest Service have, if you will, by national forest or by region, a list of infrastructure—that is everybody's new favorite word. Do you guys have a list of infrastructure projects or maintenance projects by region or by national forest?

Ms. CHRISTIANSEN. You bet we do, sir.

Mr. AMODEL. Can I get a copy of that?

Ms. CHRISTIANSEN. I am sure we can get it to you. Absolutely.

Mr. AMODEL. Thank you very much.

I yield back, Madam Chair.

Ms. CHRISTIANSEN. Thank you, sir.

Ms. PINGREE. Thank you. We are about to see Representative Lee I think, but I will just ask a quick question in the meantime since that is where we are. Can you talk to me quickly about carbon sequestration? The President's efforts to combat climate change are not only dependent on efforts to reduce the sources of greenhouse gas emissions, but also to preserve our resources which sequester carbon. These efforts include the 30 by 30 goal of conserving 30 percent of our national lands and waters by 2030. Our forests are one of the most important carbon sinks in the country. I don't have to tell you that or anyone in the State of Maine. They play a central part in our conservation plan.

I am interested in how you are working collaboratively with other land management agencies to give us a comprehensive picture of the state of carbon sequestration on public lands. It seems to me the data is extremely important.

Ms. CHRISTIANSEN. Oh yes, absolutely. I couldn't emphasize that more. The lands and waters of the United States are really important for carbon sequestration, but I am going to focus on the forest piece of it, 766 million acres of forest, all ownerships in this Nation, and every bit of forests and those areas that could be afforested are very important for carbon. The forests and the harvested forest products that store carbon and the urban trees in this Nation, they offset 14 percent of the CO₂ emissions annually in this Nation. So that is pretty important that we pay attention too. We could increase that by 50 percent more, so 20 percent to 28 percent more offsets if we really worked on afforestation where there are open spots that could support a forest, we reforest the areas that we are not reforesting at the pace we need to, and of course, we do the restoration and build the resiliency in the lands and the forests so they stayed healthy. I know my eyes light up when I talk about the importance of healthy forests just for carbon sequestration, let alone important water, watersheds, wildlife, outdoor experience, and the list goes on.

Relative to how we work with all landowners and across the Federal government, in our own house here at USDA, I am very proud of the last 7 years of the climate hubs. This is to support all landowners, from the agriculture sector all the way to the forest sector, on really helping them on building their plans for climate resilience and how they can do climate-smart practices. The hubs have really taken hold with all landowners, and the demand for services is higher than the needs we can meet. You will see the initiatives in the President's budget true, true to the goal of tackling climate change, is an increase to help with the science-based support of these hubs.

It also helps us connect to urban areas and underserved communities because sometimes these communities don't know what they don't know, and services like folks in their own community saying, hey, so you know trees store carbon, they improve health effects, et cetera, et cetera. So, it is really exciting. There are lots of opportunity in the climate hubs.

Ms. PINGREE. Chief Christiansen, I am going to stop you there. I have to run, and climate hubs are my favorite topic, so maybe I will get a chance to finish that one. But I am going to turn it over to Representative Cartwright to hold the gavel to ask Representative Lee to ask her question, and I will be back after I get a chance to vote. So I apologize for that.

Ms. CHRISTIANSEN. No problem. Thank you.

Mr. CARTWRIGHT [presiding]. Happy to step into the breach, Madam Chair. The chair recognizes the gentlelady from Nevada, Representative Lee, for 5 minutes of questions.

Mrs. LEE. Thank you. I want to thank the chair as well as the ranking member for hosting this hearing, and also thank you to Chief Christiansen for being here. While we haven't yet seen the specifics of the budget, I am pleased that the Administration has made a clear commitment to prioritizing climate, conservation, and wildfire prevention in the Forest Service.

In southern Nevada, where I represent, we don't have a significant forest presence—some, but not significant—but we are certainly feeling the impact of climate change, and we understand the

importance of national forests in that discussion. The chairwoman, believe it or not, asked my question for me, so we don't have to go into how the Forest Service is working on climate change. But I want to recognize, which has been recognized earlier, the record-breaking wildfires we have seen in recent years, obviously both the symptom of and a contributor to climate change. And I was pleased to see that the Administration has committed to investing in science-based measures to prevent wildfires and rectify the historical underfunding of forest resilience projects.

Chief Christiansen, could you just speak to the metrics that the Forest Service uses to evaluate its wildfire mitigation programs, and what those results have shown about the efficacy and the return on investment of those programs?

Ms. CHRISTIANSEN. I absolutely would, Congresswoman Lee. It is really a great question. So I am a person that stores numbers in my head, and these stick with me. If we are talking about wildfire prevention, now that is the unwanted starts to wildfire. Fire in mini-landscapes is not bad, but we want it on our terms, right, so just fire prevention alone, the human starts. When we invest \$1 in fire prevention, it saves \$35 in suppression costs and wildfire-related losses, so that is a pretty good return on investment. We have worked for years, and it is our researchers that have showed this cost benefit or return on investment.

We switched to treating the lands, okay, the hazardous fuels treatments. Wildfire in the right conditions is a necessary part of many of these landscapes, but we want more of the low-intensity fires, so we do treatments, whether they are usually prescribed fire and some thinning, and then they are tested by a wildfire. These thinnings are tested by a wildfire. We have had a program in place for over 10 years where we go out and then we evaluate that, and 86 percent of the time, the wildfire conditions are changed significantly into the right kind of wildfire, the low-intensity wildfire. So, it brings it down from a crown fire to what we call a ground fire, so that is an 86-percent efficacy in the treatments.

The thing we have to do now is to get enough of those treatments, i.e., on 40 percent of a fire shed, to really make the big-scale difference. So, we have shown that fire prevention has a return. We have shown that the actual field treatments, when it is tested by a wildfire, has a great return. Now what we need to show is to treat 40 percent of a fire shed and show the fire shed as a whole as back in balance of a regular, we call it a resilient forest.

Mrs. LEE. How realistic is it to be able to treat the 40 percent of a fire shed?

Ms. CHRISTIANSEN. Well, that is where we have to up our game 2 to 3 times what we are doing now.

Mrs. LEE. That is all I have. Thank you. I yield back.

Ms. CHRISTIANSEN. Thank you.

Mr. CARTWRIGHT. Thank you, Representative Lee, and I am going to recognize myself for 5 minutes of questions. Ms. Christiansen, thank you for being with us here today. My district in northeastern Pennsylvania is particularly interested in the Forest Service. My district was the home of Gifford Pinchot, who, together with Theodore Roosevelt, founded the U.S. Forest Service, and that is not a coincidence. Northeastern Pennsylvania has an

awful lot of forest land, including two State forests and thousands of acres of privately-owned forests used for recreation, forest products, and natural resource conservation. My constituents and I value the forests in the region, and we want to ensure that the Forest Service has the funding necessary to carry out the important work of maintaining and managing our Nation's forest resources.

The first question I want to get into is about President Biden's skinny budget that came out last week. It calls for the Forest Service and the National Resources Conservation Service to promote the health and resilience of public and private lands, including specific appropriations for the reclaiming of orphan oil and gas wells and abandoned mine lands. I recently reintroduced the Abandoned Mine Land Reauthorization Act to help, aid, and fund such efforts. While my legislation focuses on the programs and the Office of Surface Mining Reclamation and Enforcement at the Department of the Interior, it is the Forest Service that also has a role to play, and the proposed budget envisions expanding this role.

Many AML sites, abandoned mine land sites, border and interact with our Nation's forests, creating susceptibility to pollution and an opportunity for the Forest Service to be involved in restoration efforts. So question one is, what has been the Forest Service's historical role in AML reclamation, and how do you envision this role growing, and have you been partnering with other agencies to address the challenges posed by AML sites?

Ms. CHRISTIANSEN. Yes, great question. It is important that we work together with our State and other Federal partners, and we have been doing that for over 20 years, to mitigate thousands of hazards and abandoned mines located on the national forests, but certainly in the area of national forests. So, for example in the Eastern region where Pennsylvania is, we are working with State and private companies to address the legacies of the contamination and the dangerous hazardous materials to protect ecological health. So, it really does take all of us.

The Abandoned Mine Land Trust Fund, those funds go to States, but that gives States the capacity and the leverage so we can all work together. In the President's blueprint budget, there is a provision for \$100 million for the Forest Service to create good union wage jobs to address these orphan oil and gas wells and abandoned mine lands. So just to give you an example, on our natural forest lands, we have 40,000 abandoned mines across the whole system, and 20 percent of those do pose some level of human health and ecological hazard, and up to 70 percent of them have some kind of physical safety hazard. So, it is a priority. There is a lot of work that needs to be done, a lot of jobs that can be created.

Mr. CARTWRIGHT. I am glad to hear you share the concern, Ms. Christiansen. I want to talk about State forests very briefly. While my district is not home to any national forests, our State forests, Delaware State Forest and the Pinchot State Forest, named after Gifford Pinchot, are critical components of the economy and the lifestyle of our region. The State and Private Forestry organization is one of the smallest budget lines at the Forest Service. How do you utilize and maximize this modest funding with additional funding at the State and local level or through nonprofits?

Ms. CHRISTIANSEN. Yes, it is a really, really important synergistic effect. I was a State forester in two different States, and I can tell you the funding I received through the Forest Service and the State Private Forestry funds, quite frankly, helped me go to the State legislature and get them to match the funds to say, if the Feds are putting in for important public benefits that flow off of State lands or even private lands, we are all in this together. When you talk watershed, when you talk human health, when you talk wildlife and recreation economy, I mean, everybody knows the importance of that programming, and it is with that strong relationship through the States.

We call it "the little engine that could," and we could do more with more, but we make a lot happen marrying up the funds with the State funds and great, great partners in the nonprofit sector to really enhance the health of our State and private forests.

Mr. CARTWRIGHT. Well, that is a great answer. I like how you talk. But I am out of time, and at this point the chair recognizes the gentleman from Washington, Mr. Kilmer, for 5 minutes of questions.

Mr. JOYCE. I don't think he is here.

Mr. CARTWRIGHT. Hmm. Well, in that case, the chair recognizes the gentleman from Ohio, Mr. Joyce, who appears to be on my screen and ready to ask 5 minutes of questions.

Mr. JOYCE. Well, thank you, Acting Chair. I appreciate your studio-like facility there. Chief, I wanted to ask you about something else that is near and dear to Ohio. At last year's hearing, we discussed the important work the Forest Service is doing to fight the emerald ash borer, or EAB. Given EAB is responsible for the destruction of over 150 million ash trees in 35 States across the country, it is critical for the Forest Service to maintain its outreach, education, and research activities to reduce the harmful and costly effects of EAB. Does the fiscal year 2022 request support ongoing EAB research partnerships, like those with Ohio State University and other universities, to develop EAB-resistant ash trees and integrated pest management strategies? What EAB activities within State and Private Forestry does the request support?

Ms. CHRISTIANSEN. Thank you, Ranking Member Joyce, for remembering our interchange, and I wonder how many EABs you have detected with your detection kit, but I won't ask.

Mr. JOYCE. I can tell by the decimation of the ash trees in my woods.

Ms. CHRISTIANSEN. Okay. Well, I can't speak to the specifics in the fiscal year 2022 budget request. But I can speak to the importance of the joint work we do together, our State and Private Forestry program and our Forest and Rangeland Research program, with partners like the State of Ohio and Ohio State University in the early detection, and the outreach and the technical assistance for urban landscapes to individual landowners and quite frankly, the different treatments, whether they are the insecticide, the biological parasitic controls of the wasp that were on the leading edge with Ohio. The big game changer is the breeding, getting the ash-resistant trees, which we are in close partnership with Ohio State University. So, I suspect all of those programs will be able to con-

tinue. They are highly important, and we would be glad to talk further when the full budget comes out.

Mr. JOYCE. Okay. I appreciate that. Can you explain why these activities are critical to slowing the spread of the EAB?

Ms. CHRISTIANSEN. Yes. So early detection helps us jump on the treatments earlier. The Emerald Ash Borer (EAB) is in 35 States. We are not going to stamp out the EAB, but now, as you said appropriately, it is slowing the spread. It is how we can, in place of these beautiful ash trees and important ash trees that are now dead, we can replace them with EAB resistance. So, it is the early treatments to slow the spread, but it is being on the proactive side of establishing new ash-resistant trees that is the real game changer that we need to work on together.

So, the Forest Service is the funder behind the EAB website, ask EAB. It is to get every citizen to have awareness about what is around them and how they can report the emerald ash borer, and we work with partners. We give a little funding to partners, and they are the ones in communities doing the early detection to do the early treatments to slow the spread. So, it really has to pulse deep into the community, and it brings greater awareness of the importance of our trees in our urban areas, right?

Mr. JOYCE. Thank you, Chief. I yield back, Acting Chair.

Ms. PINGREE [presiding]. I guess I am back. Mr. Cartwright, thank you very much. I am not sure who is up next in the question lineup. Let's just go to you. Mr. Simpson, do you have a second question?

Mr. SIMPSON. Yeah, I do. Thanks, Chairwoman Pingree. Chief, let me ask you a question. This is kind of out of the realm of what I was going to ask and stuff, but maybe you will want to get back to me on this and stuff. But we have talked a little bit about abandoned mines and the safety hazard, the environmental hazard that some of them possess, and addressing those is very important. But the other side of that question is this: we are moving into more and more green technologies, whether it is wind, solar, batteries, et cetera, et cetera. All of those things, as well as even nuclear and stuff, require critical minerals, critical minerals that we are almost 100 percent dependent on adversaries that don't like us to deliver it, whether it is China, Russia, other places, and stuff.

Is Forest Service working with the USGS to map those deposits of critical minerals that we are going to need, because most of them are, at least a bit percentage of them, are on public lands, Forest Service, BLM lands, those types of things. We need to have an accurate assessment of what is available to us. And because of land withdrawals and other types of things, we are making it more and more difficult to get some of those critical minerals that we are going to need if we are moving into a greener society with, as I said, solar or batteries, and et cetera, et cetera, et cetera. It is easy to talk about just land withdrawal and not doing any of that kind of stuff, but, you know, mining today is not the same as it was 100 years ago. You can do it a lot safer and a lot more environmentally friendly, as I have talked with some mining companies and stuff. But the permitting and the access is a challenge.

So is the Forest Service working with USGS on this and coming up with any ideas of how we might access these critical minerals

and these rare earth minerals that we have an abundant supply of in the United States, but today, oftentimes we are 100 percent dependent on people who don't like us? And if that is not a question you want to address right now, you could get back to me with that. I know it was not on the radar.

Ms. CHRISTIANSEN. Well, in general, I can say yes, we cooperate with USGS and the layers of access across the whole Federal estate, but we would be glad to get you more information about that.

Mr. SIMPSON. I appreciate it. Thank you.

Mr. SIMPSON. I yield back.

[No response.]

Mr. SIMPSON. You are on mute.

Ms. PINGREE. Sorry. It is all the back and forth. Okay. Representative Kilmer, it is wonderful to see you back. I recognize you for 5 minutes.

Mr. KILMER. Thank you, Madam Chair, and thank you, Chief, for being with us. I want to start out by just renewing the invite I extended to you last year to come visit my neck of the woods to learn more about the challenges and the opportunities we are facing on the Olympic National Forest when it is safe to do so. We would love to have you. I know the last year has been very challenging, but the truth is, we were facing some real challenges and missing some great opportunities even before the pandemic started. First, let me talk about some of those challenges.

For years, the Olympic National Forest has really struggled to produce meaningful harvest levels necessary to improve forest health, to restore critical salmon spawning habitat, and, importantly, to support timber-dependent communities. I know that resource limitations have impacted operations service wide, and that is something our committee has been working to address. But we are experiencing some acute challenges on the ONF that I could really use your help on. I honestly can't remember the last time that the Olympic National Forest met its annual harvest target, and we have got to do better.

And that brings me to the opportunities. We have got the Olympic Forest Collaborative that has united folks from the conservation community and the timber industry around a common goal of increasing harvest levels on the ONF. I am proud to say that we have executed a few pilot projects that have helped the ONF produce additional board feet of timber, while also accomplishing some important restoration goals. And these projects have demonstrated the power of collaborative forest planning for meeting the goals of our region, but we need to scale up in order to achieve those benefits. So especially as rural communities throughout my district continue to take it on the chin, this is very important. I am very grateful for the partnership we found in the regional forester, Glenn Casamassa and our new forest supervisor, Kelly Lawrence, who both share my commitment to supporting the work of the collaborative, but there is only so much we can accomplish without dedicated support and resources.

So three questions. One, can you tell me how you plan to support our region's efforts to increase harvest levels and forest restoration projects on the ONF; two, what can I do, what can this committee do to support those efforts; and three, will the fiscal year 2022 re-

quest include dedicated resources to support new and established forest collaboratives like the Olympic Forest Collaborative, who don't qualify for the Collaborative Forest Landscape Restoration Program dollars?

Ms. CHRISTIANSEN. Thank you, Congressman Kilmer, and I would love to accept your invitation to get out to the beautiful Olympic National Forest. I hear you and I hear the concern, and we have been in limited tradeoffs of the investment in our timber program. I know the Olympic National Forest is still a concern, but our Pacific Northwest region, even in a very difficult year—that is, all the forests in Oregon and Washington, 25 of them—they did meet their timber target by 101 percent. I am absolutely committed, and I know that Glenn Casamassa and Kelly Lawrence are eager to work with you. I will be personally involved in how we can get some more directed resources to build that important leverage and collaborative capacity that is important on the Olympic National Forest.

You and I talked about the no-bid sales that were pretty high on the Olympic National Forest. I am pleased to report that there is good progress going on there. We were at 20 percent of the timber sales were no-bid, and that has gone down to 5 percent. We still want to get it to zero. We are meeting the needs of the local market conditions, but at least there is a good trajectory. We are in a really tough tradeoff right now. So much of the landscape was burned in that region and other regions, and we are using our regular appropriated dollars just to get the stabilization done on these landscapes.

So that is where conversations with this committee are important so you can really know the stark realities of the tradeoffs. We know that that every community matters, and the dependency, as you so well described, and I don't have to remind you that I grew up looking at the Olympics. I am from the Puget Sound. I was the Hood Canal District Manager that partnered with the Olympic National Forest when I was in State Natural Resources. The importance of those watersheds, and the salmon, and other fisheries resource and wildlife resources are absolutely critical. So, I want to affirm our commitment and affirm that we would be glad to work with you to figure out the good pathway forward for appropriate resourcing.

Ms. PINGREE. Thank you.

Mr. KILMER. I think I am out of time. Thank you, Madam Chair.

Ms. PINGREE. Thank you, Mr. Kilmer. I am going to recognize Representative McCollum for a second question.

Ms. MCCOLLUM. My co-host has unmuted me. Thank you, co-host. Now you can hear me? Kilmer can hear me. That is good. So going back to what Mr. Simpson was talking about with minerals, and what I was talking about with withdrawals in the BWCA area, which is in the Superior National Forest, that forest holds 20 percent of fresh clean drinking water. And the water flows north, and it is like a sponge. If you have ever been up in the Boundary Waters area, all our water is interconnected. And so the challenge is, is when people talk about safe mining, we have learned how to taconite mines safely. We didn't in the beginning, but we know how to do it now. This is new mining. Every single one of these sulfite

ore mines have failed, and when they fail, it is generation after generation after generation before there is any recovery of the land.

But my point was, you know, when we are looking at critical minerals, we also have to look at something else that is critical, and that is water. So I am all about protecting the wilderness, but this is water you can literally be in a canoe on, dip a cup, and drink straight out of there. And, you know, future generations and future wars will be fought over water. And with climate change, access to and having a potable, fresh water supply is going to be really critical. As the Federal government, we really don't, and as a people, we don't place a value on water. Yeah, we maybe go buy a bottle of water, but we look at water as disposable. It will rain. It will come back again.

So is not part of the charge when you are looking at what to do with some of these critical minerals and where they are located is also to take in the assessment and the quality of water? And then before you answer that, one other statement. I chair the Defense Committee. I am all about having strong national defense, but many of these mines that are being built and mined right now, they are owned by foreign companies, and the resource is being taken out of the United States. And what they are not telling you, it is going to China to be smelted. So if we are going to talk full circle national security, then let's have the full discussion and not just pick and choose what we want to talk about.

Ms. Christiansen, how does the Forest Service value the importance of water, and remind us again how important our forests are for water. And I will mute myself.

Ms. CHRISTIANSEN. You bet. I will go back to the Organic Act that established what were called the Forest Reserves at the time. They were for two purposes, and that was to create a sustainable supply of timber for this new Nation to be built, and it was to establish the critical watersheds to supply water for the Nation. So, the importance of water goes back to the origins of the national forests, and even before the Forest Service itself was created.

Fifty percent of the waters of this Nation depend on forests. Forests are at the head water of all of the water of this Nation, and one-fifth of the waters in this Nation are dependent on the national forests. So, water is an absolutely essential part of the Multiple Use and Sustained Yield Act and the origins preceding all of that for the national forests, without a doubt.

Ms. PINGREE. Representative Kaptur, did you have questions you would like to ask? I would recognize you for 5 minutes.

Ms. KAPTUR. Thank you, Madam Chair, very much. Thank you for a very interesting hearing. I haven't been able to be present for all of it, but my staff has informed me, and I just wanted to thank you for your leadership in this area. And I wanted to ask Chief Christiansen, I am a huge supporter of the Urban and Community Forestry Program at the Forest Service, and most of the bills that I have seen that deal with restoring the civilian climate core, or whatever, focus on our national forests and parks, which I support. However, I represent Cleveland, Lorraine, Sandusky, and Toledo, Ohio, and we have historic levels of asthma. And we have had 20 million trees removed from Michigan and Ohio, and we have been working with the Cleveland metro parks, the Cuyahoga Valley Na-

tional Recreation Area, the Lorain County metro parks, the Lucas County, Toledo metro park system to try to replant, including in those cities. So I am wondering what your thoughts might be about the potential of the Urban and Community Forestry Program to partner somehow with localities, and to do some of the tree planting that we know is so unnecessary after the devastation of the emerald ash borer and the Asian long-horned beetle. And I am concerned that local people living in these communities, in these urban areas will not be recruited, and they won't be able to work in their own areas to try to restore the environment. Could you help me understand how Interior thinks about this and the Forest Service?

Ms. CHRISTIANSEN. Yes. We are a part of USDA, and we are working daily with the Department of the Interior to bring some recommendations forward about President Biden's call for a Climate Conservation Corps. Let me just tell you the space and area that you named, Congresswoman Kaptur. So, the Forest Service has a huge footprint of working with the conservation corps. We go back to the origins of the original Civilian Conservation Corps, which now are the Job Corps centers, and we operate 24 of those Job Corps centers, which bring both rural and urban kids into these Job Corps centers and teach them skills. We are converting to a more natural resource base, and we have urban community forestry programming in a couple of these Job Corps centers.

But then we have nearly 100 Service Corps partners. These are the nonprofit partners that bring these Service Corps together, and we have nearly 1,000 agreements with these Service Corps to do work, natural resource work across the spectrum, and yes, a good portion of it is on the national forests. But what we have at the Forest Service is we have these broad authorities and networks through our State and private forestry authorities. We are working with our State forestry partners and the plethora of other partners that are in these urban areas.

So, we feel confident we could connect enhanced climate conservation corps capacity to needs in State and urban areas because one of the absolute essential pieces of a climate conservation corps would be that we would bring employment for underserved and underrepresented communities. And going to where the needs are is really essential, and we have these shared stewardship agreements with 26 States. I just signed the Great Shared Stewardship Agreement with the State of Ohio in December, and it names these kinds of priorities that we have to get beyond our own programming and cross boundaries for what is most important for natural resources, for employment, for climate, for equity. All the Administration's priorities fit right in.

Ms. KAPTUR. I would appreciate a copy of that agreement, and your openness to working with partners, if you could send me a list of who those partners are.

I will just tell you a recent experience I had anticipating Earth Day. I went to NRCS and I said to them, I want to hand out trees, and I want to go into each of my counties. And so they found me a location that is out in the 'burbs, not in the heart of the cities, and they wanted to give me sycamore trees. I said, I don't want sycamore trees. I said, find me trees that don't make such a mess in the city that are still good hardwoods, whether it is maple trees

that don't have so many twirlers or whether beech trees. And they said, oh no, we can't do that. No, no, we don't have that supply.

So this is the reality in Ohio 2021, and a member willing to go out of her way, right, to go to all my five counties and plant trees and pass them out, and a little bit of arteriosclerosis over at USDA, you know. And I realize you have only been in there a few months under Biden—thank God there is leadership—and things are going to change, but that is the continuing frustration of the inability to adapt to the urban metro areas. And so thank you for listening very, very much.

Ms. CHRISTIANSEN. You know, that is not USDA, and we will be glad to connect you with the great urban partners that we have there in your district, Congresswoman.

Ms. KAPTUR. Thank you.

Ms. CHRISTIANSEN. You bet.

Ms. KAPTUR. Thank you, Madam Chair. Thank you.

Ms. CHRISTIANSEN. You bet.

Ms. PINGREE. Thank you, Chair Kaptur. Representative Cartwright, would you like to ask another question or a question?

Mr. CARTWRIGHT. Yes, I would. Thank you.

Ms. PINGREE. You are recognized for 5 minutes.

Mr. CARTWRIGHT. Thank you, Madam Chair. Now, Chief Christiansen, we were talking about State forests the last time I was talking with you, and I want to finish that discussion up by asking you how can private owners and State forests obtain funding from the State and private forestry programs, and is there assistance in that process?

Ms. CHRISTIANSEN. Yes, sir. The funding flows through the State forestry agency, so the Pennsylvania DNR, your State forester, Ken Shellenberger, they oversee this programming, and they would put it out to the State for us and to the private forest landowners. There are several areas of opportunity. Forest stewardship is probably the gem. You are a private forest landowner. You have 20 acres, and you really don't know the best way to manage it. You really care about wildlife, but you don't know how to even go about thinning your forest appropriately, et cetera. You want to get some technical assistance, and you want it to lead to some other programs for financial assistance. Well, that takes a Forest Stewardship Plan.

So through the funding that the Forest Service would provide, and often the State puts in funding, too, they would bring out what we call a service forester to you and your property, and it was the best days of my career when I did that. Talk about the landowners' objectives, what they want to get from their land, and you would write them a specific forest stewardship plan, and you would help provide them pathways on how then they could get grants and funding to help manage their land.

There is forest health programming. You have an invasive pest. You don't know what to do about it. Again, from the funding the Forest Service provides through our Forest Health Program to the State forestry, you would get a consult from your State forestry organization about this pest and how to treat it or detect it.

Mr. CARTWRIGHT. Well, thank you. I read your resume, and I knew I was asking the right lady that question. I appreciate that.

You mentioned invasive species, and I want to bump over that really quickly. The plant and wildlife in our forests are in danger from invasive species that are reducing available habitat for native wildlife. Pennsylvania alone has 18 tree species, 39 herb species, and 17 vine species on its invasive species plant list, and according to the Forest Service's Invasive Species Research Model, invasions by plants, animals, and pathogens cost the United States \$137 billion every year. I know that we have an overabundance of Japanese knotweed in northeastern Pennsylvania, and I see that all over the place. It is further expected this number will only increase due to the change in climate and the increase in extreme storm frequency.

I recently introduced the Native Plant and Species Pilot Program bill that would aid in combating invasive species and reintroducing native species. I also have several bills focused on climate change, including the SAFE Act that would bring together Federal agencies that work on developing regional and local adaptation plans for our natural resources in the face climate change. The Forest Health Protection Program covers invasive species. It is a State and private forestry program, whose budget is one of the smaller of the accounts of the Forest Service. Do you feel that the Forest Service has taken appropriate measures to try to combat invasive species, and is there an increasing emphasis on this moving forward in the new Administration?

Ms. CHRISTIANSEN. Thank you, Congressman. You said what I would say, \$137 billion annually in economic damage in the U.S., it is a significant, and the environmental effects of invasive species they take up more water, the plant invasive species. The insect invasive species, we have talked quite a bit in this hearing about the emerald ash borer and the devastation, again, an invasive species and what that brings to community. So, it is significant.

In addition to our State and Private Forestry program, which we prioritize invasive species, but it is always a prioritization. Invasives are getting more acute, and we are learning more and more about the environmental effects. We do a significant amount of research with our Forest Rangeland Research program. We invest nearly \$8.5 million a year in research to these invasive insects, disease, and plants, and how we can combat them. So, what I can share with you, Congressman, is we will always prioritize to the highest need. With additional resources, it will be a good investment to work on in the next highest priorities.

Mr. CARTWRIGHT. Thank you, Chief, and I want to invite you to accompany me as well at some point to the Upper Delaware and look at all of this Japanese knotweed that is all over the place.

Ms. CHRISTIANSEN. I would be delighted to do that. You bet, and so many great flowers as well.

Mr. CARTWRIGHT. I yield back, Madam Chair.

Ms. PINGREE. Thank you, Mr. Cartwright, and thank you, Chief Christiansen. You have really been wonderful today. And we could ask you questions all day, but as you can see, it has been somewhat of a chaotic day with so many votes going on. So I apologize for that, all the comings and goings, but you guys have been wonderful, and I want to thank you so much for appearing before us today.

And if there are no additional questions, this hearing is now adjourned. Thank you.

Ms. CHRISTIANSEN. Thank you. I really appreciate it.

[Answers to submitted questions follow:]

U.S. House of Representatives
Committee on Appropriations
Subcommittee on Interior, Environment, and Related Agencies
The U.S. Forest Service's FY 2022 Budget Request Hearing
April 15, 2021

Questions from Chair Pingree

Hazardous Fuels

Chief Christiansen during the hearing you quoted a 10-year plan for reducing the intensity of wildfires by saying the Forest Service needs to treat an additional 20 million acres of National Forest System land in the next decade.

Pingree Q1: What level of increased funding resources would be required to increase the amount of acres treated by the 2.65 million acres of National Forest System land you cited in the hearing?

Answer. Treatment costs per acre can vary widely based on many factors such as location, treatment type, planning and implementation costs. A very broad average is derived from the Forest Activity Tracking System of \$1,000 per acre.

Technology Investments

Pingree Q2: Has the Forest Service encountered any obstacles in the initial rollout of the \$8 million invested in pilot programs for firefighter tracking? What amount of increased investment would be required for a more widespread adoption of these technologies?

Answer. The Forest Service was directed by the 2019 John D. Dingell, Jr. Conservation, Management, and Recreation Act (P.L. 116-9) to: 1) Implement a Resource Tracking/location system for wildland firefighters; and 2) Conduct two pilot projects within the first two years, evaluating the operations, management, and effectiveness of proposed systems. The Forest Service did not receive a specific appropriation for this work in FY 2021; however, the Forest Service has invested just under \$1 million to initiate the firefighter tracking pilot program and invest in contract services to begin the pilot program evaluation of tracking devices per Dingell Act direction.

Before deployment of the pilot program, the Forest Service coordinated with the USDA Chief Information Office to meet statutory requirements, including the Federal Information Technology Acquisition Reform Act (FITARA) which requires compliance with Information

Technology acquisition and budget authorities. The Forest Service conducted testing, evaluation, and implementation of tracking systems, including establishing the use of information technology and associated systems covered by the Department's Chief Information Officer, and identifying contracting capabilities.

There were several obstacles to overcome before the Agency could deploy the pilot program. These obstacles included timeframes to conduct market research and the Dingell Act requirement to procure the services and hardware for the pilot programs through a mandatory existing Blanket Purchase Agreement (BPA). The use of the existing BPA limited the field of vendors that could bid on the pilot program, since some were not already covered under the existing BPA. The vendors on contract did not have this type of capability within their organizations or lacked an in-depth understanding of the capacity needed to meet the Dingell Act requirements.

As of July 23, 2021, the agency is conducting the second stage of the Type 1 pilot on the Tamarack Incident near Lake Tahoe. Prior pilot testing occurred on the Tussock Incident (Type 1) and Coronado National Forest from approximately May-July 2021.

To date, the team has done initial testing of various tracking technologies and recognizes the magnitude of a widespread firefighter tracking system. The implementation of firefighter tracking will require a substantial investment as these technologies are currently not identified in a wildland fire investment or program. The investment will focus on the purchase and activation of devices and cover the subscription cost required to provide data services for tracking locations, messaging, and some data transfer. The final product is important and must provide interoperability to support the diverse, interagency environment of wildland fire management.

As part of the effort to identify the total cost of implementation and evaluation and to help understand the scope and scale, the California Department of Forestry and Fire Protection (CAL FIRE) provided an analysis of the system they deploy to track their firefighters. CAL FIRE estimates an investment of \$55 million over 5 years to stand up and maintain a firefighter tracking system. Given that the Forest Service is significantly larger and more dispersed than CAL FIRE, we would expect the Forest Service requirement to be larger than CAL FIRE estimates. The CAL FIRE program would be similar to the program needed within the Federal agencies for resources such as Engines, Interagency Hot Shot (HIS) vehicles, and dozers. Once the pilot programs are completed, the DART team will be able to provide a cost estimate for full implementation, including the need for Federal positions to provide support and deployment.

In addition to firefighter tracking pilots, the agency made other technology investments in accordance with the Dingell Act. These included the Rapid Response Erosion Database, a Wildfire Assessment System, a Firefighter Injuries Database, additional Unmanned Aircraft Systems and program development, Wildfire Decision Support, and the Interagency Wildland Fire Air Quality Response Program.

Pingree Q3: Does the Forest Service have a comprehensive plan regarding its intended adoption of unmanned aircraft and the potentially greater role they could have in the different stages of preventing, fighting, and recovering from wildfires? How has this increased adoption played into the Forest Service's overall aviation planning activities for the next decade?

Answer. The Forest Service continues to expand the use of the unmanned aircraft systems program for wildland fire, prescribed fire, and natural resource management use. The agency owns and currently uses 20 unmanned aircraft systems. We are building our program infrastructure and staffing in anticipation of increased agency demand for unmanned aircraft system use. After ensuring alignment with national security requirements and interagency cooperators, the Forest Service will begin acquiring additional unmanned aircraft systems. The Forest Service and the Department of the Interior's Office of Aviation Services have an agreement to exchange funds and personnel to collaborate on: training, policy, and operations for unmanned aircraft systems; and developing unmanned aircraft system policy and procedures to ensure interagency alignment. We are working with the Department of the Interior to evaluate and test U.S. manufactured small unmanned aircraft systems, with a focus on aircraft with larger payloads capable of aerial ignition missions to support hazardous fuel removal. We are also working with the National Aeronautics and Space Administration on an incident airspace management system which will track manned and unmanned aircraft.

Increasing Access to Green Space and Equity

I am extremely pleased that the President has prioritized environmental justice considerations in his budget. Every American should have equal access to clean air and water, and a healthy environment in which to live, work, and play.

Our country's history includes deeply racist practices, such as redlining, that denied many Americans equitable access. We can still see the harmful legacy of that and other discriminatory practices today. I know the Forest Service is aware of this and has been doing work in this space to deliver more equitable access to green space and healthy environments.

Pingree Q4: Can you describe some of the EJ-focused work being carried out by the Forest Service, including Urban Forestry? How are you bringing green space to communities that lack it?

Answer. The Forest Service is working with cities and conservation partners to address environmental justice issues affecting urban communities throughout the U.S. Through research, partnerships, and community engagement, the Forest Service is working to eliminate environmental disparities in urban places and help provide new opportunities to low-income and disadvantaged residents. The [FY21 Urban and Community Forestry Challenge Grant Program](#)

provides \$1 million to fund projects focused on increasing the resilience of vulnerable communities through creating green infrastructure in the right place and at the right scale. Additional examples include:

- ***Restoring a Degraded Forest and an Urban Community Through the Stillmeadow Partnership in SW Baltimore, MD.*** The Stillmeadow Peace Park and Forest is a 10-acre forest owned by the Stillmeadow Community Fellowship Church, situated within a predominantly African American neighborhood that is vulnerable to flooding and heatwaves. At the request of the pastor for help with the forest, the Forest Service worked with local partners on urban reforestation using climate and urban-adapted silviculture to remove invasive vines and hazardous dead/dying ash trees and improving understory growth. This project is also evaluating physical, mental, and spiritual health of local forest users; empowering citizen stewards; encouraging forest-based youth and arts engagement and learning; and facilitating knowledge exchange.
- ***Pilot of an Urban Forestry/Environmental Justice Coordinator*** - Minnesota Department of Natural Resources (DNR), Minnesota Tree Trust, and the Forest Service's Urban and Community Forestry (UCF) Program and Urban Connections Program are collaborating to advance social justice in the Twin Cities. Financial and technical assistance has been leveraged to hire a DNR Environmental Justice Coordinator who will address needs of traditionally underserved communities and identify where their needs and interests align with the UCF Program—greenspace and tree-related jobs. This position will work to create equitable access to urban and community forest benefits for disenfranchised and Black, Indigenous, and people of color communities, i.e. African American and Indigenous communities.
- ***Understanding food foraging activities in “food deserts.”*** The southern U.S. has experienced unprecedented growth in racial and ethnic diversity in recent decades, and the Forest Service is examining how these different racial and ethnic groups interact with nature. Results from a recent agency study suggest green space interventions, such as the agency-sponsored “Urban Food Forest” at Browns Mill in southeast Atlanta, has the potential to improve residents’ access both to cultivated and wild foods—which helps to establish food sovereignty¹ and environmental justice in a part of the city characterized as a “food desert.”
- ***Addressing Climate Risks and Adaptation in Urban Forests.*** Forest Service Research and Development has collaborated with American Forests to create resources for communities to adapt their urban forests to climate change while helping improve tree equity in cities. The Climate and Health Action Guide and “menu” of adaptation strategies help communities develop adaptation actions that address climate change impacts while also considering human health benefits of trees. The agency has worked

¹ A food system in which the people who produce, distribute, and consume food also control the mechanisms and policies of food production and distribution.

with communities across the country to assess the vulnerability of urban forests and integrate these tools into their management and planning.

- ***Affordable housing using mass timber construction.*** Out of 44 Wood Innovations grants funded in FY 2021, 7 focus on the development of affordable housing utilizing mass timber as a major building component to support equity, economic opportunity, and climate change priorities. These grants will be used to explore designs, create new innovations in volumetric manufacturing and provide engineering support for construction of several buildings across the country. The potential impact of this work will be to support improved housing through mass timber in both urban and rural locations.
- ***Applying Best Available Science to Map Location of EJ Communities.*** Forest Service researchers developed a method for mapping environmental justice populations in proximity to individual national forest units. The mapping allows forests to identify the location of environmental justice communities to ensure these communities are considered during development and implementation of management actions and to ensure these communities do not experience disproportionate negative impacts from these actions. The method generates maps identifying environmental justice "communities of place," which are low income or minority populations residing in proximity to specific national forest units. The method also provides a template forests could employ for ongoing monitoring of how these environmental justice communities are affected by specific management activities.

One of the prerequisites for success is having a strategy for meaningful engagement with the communities you are partnering with.

Pingree Q5: How is the FS soliciting and incorporating the insights and needs identified through its engagement processes? How are you coordinating with federal, state, and local government partners to achieve the best possible outcomes?

Answer. The Forest Service uses many avenues to work with partners and other stakeholders to set mutual priorities, work across jurisdictional boundaries, and seek outcomes that incorporate the needs of the communities in order to achieve meaningful impacts.

- The Agency's Urban and Community Forestry Program (UCF) partners with State forestry agencies to sponsor Urban and Community Forestry councils to provide regular input for identifying and addressing urban natural resources issues. Council guidelines require a diverse and inclusive set of partners so each State's council comprises a broad representation of stakeholders, including urban foresters and arborists; non-profits; community organizations; other State agencies; universities and colleges; municipalities; and allied professionals/industry groups such as urban planners, landscape architects, and utility companies.

- The Forest Service is a leader in the Urban Waters Federal Partnership, which assists overburdened or economically distressed communities with their waterways. Urban Waters Federal Partnership sites are located in 20 cities around the country and work to build collaboration among Federal agencies, State and local entities and community-led revitalization efforts. For example, in Northwest Indiana, the Forest Service funds an Urban Waters Ambassador to coordinate over 70 Federal, State, and local partners to align resources and accomplish mutual priorities.
- Funded by the Forest Service, the 3-year Growing Tree Canopy through Environmental Justice project focused on delivering in-depth community engagement in the heavily urbanized and impaired Anacostia watershed. The project brought together a robust, cross-boundary partnership to achieve tree canopy and community engagement goals and developed five case studies highlighting successful community engagement approaches in environmental justice communities² in Baltimore MD, Detroit MI, New Jersey, Oakland CA, and Portland OR.
- The USDA Climate Hubs, which are co-led by the Forest Service, work closely with over 200 Federal, State, Tribal and local government partners to understand local and landscape scale objectives and identify climate vulnerabilities. Working with partners, the Hubs convene, educate, and support stakeholders, especially underserved and vulnerable communities, through in-person events, virtual platforms, and publications, and provide technical support to help identify adaptation options.

While there are tremendous benefits to bringing green spaces to people where they live, we should also be thinking about new ways of bringing people to our national forests.

Pingree Q6: What is the USFS doing to make it easier for everyone, including those living in urban and suburban environments, to access our national forests? How can the Committee work with you to enhance that?

Answer. The Forest Service mission is grounded in connecting people to the land and to one another, no matter who they are, including people from every community and all walks of life. In support of the Administration's priority of Advancing Racial Equity and Support for Underserved Communities Through the Federal Government (Executive Order 13950), we are actively taking steps to improve access and ensure recreation opportunities are available on national forests and grasslands for ALL Americans.

We are dedicated to strengthening our programs for serving youth from urban and minority communities, such as Job Corps and our 21st Century Conservation Service Corps, and we will

² Also called overburdened communities; communities where there is disproportionate exposure to environmental hazards and increased vulnerability to those hazards.

increase our use of volunteers, partnerships, and other means of improving community collaboration. The Forest Service is meeting with numerous partner organizations, including affiliate groups like Outdoor Afro, Latino Outdoors, and Next 100 Coalition to discuss how to better engage underserved and underrepresented communities. The Forest Service is engaging new audiences through support of events like Naturally Latinos and Taking Nature Black to spotlight environmental leaders from Latinx and Black American communities.

The Forest Service hosts 1,500 youth through residential Youth Conservation Corps programming with partners uniquely qualified to outreach, recruit and help the Forest Service support urban and other underrepresented groups not in commuting distance of a forest in an immersive work, learning, and recreation summer experience on public lands.

In addition, as outlined in the FY 2022 President's Budget, USDA is coordinating with the Department of the Interior and other departments to support a strategy for creating a Civilian Climate Corps per Executive Order 14008 that will provide pathways to employment for a diverse generation of Americans to promote environmental sustainability. The Forest Service is drawing on the agency's unique expertise and history that builds on the legacy of the New Deal Civilian Conservation Corps, and will work to deliver forest and watershed health and resilience, carbon sequestration, wildfire risk reduction, innovation in science and science delivery, and improvements in sustainable operating infrastructure.

Urban Connections is an outreach effort aimed at expanding the Forest Service's engagement to those who may not live near a national forest. It is a unique conduit to work with urban leaders and other State and Federal agencies to connect citizens to the land. Urban Connections works in Boston, Minneapolis/St. Paul, Milwaukee, St. Louis, and Detroit to increase awareness of Forest Service activities through partnerships, formal and informal networks, and established relationships, while teaching urban residents about green spaces where they live.

In FY 2021, the Forest Service was the first land management agency to receive funding under the NATIVE Act (P.L. 114-221). The agency received \$1 million with the objective of enhancing and integrating Native American tourism in Federal agency planning. This Act and associated funding are meant to empower Native American communities, increase coordination and collaboration between Federal tourism assets, and expand heritage and cultural tourism opportunities in the United States. Each Forest Service region received a portion of the funds, and we hope that the success of the work in this fiscal year will result in continued support for these important community efforts.

The Forest Service and USDA Rural Development are collaborating to target the recreation economies of rural forest gateway communities. Rural Development field staff work with Forest Service field staff to identify new candidates for small business loans and services to businesses

that provide recreation opportunities or otherwise enhance the local recreation economy, improving quality of life for locals, and the level of services for visiting recreation enthusiasts.

The Forest Service is also partnering with the Environmental Protection Agency on the Recreation Economy for Rural Communities program to deliver planning assistance to help rural communities leverage the recreation potential of natural assets. In 2020, USDA released the second version of our toolkit, [Recreation Economy At USDA: Economic Development Resources for Rural Communities](#).

Forest Service research is helping the agency identify recreational demand and potential challenges to resources and infrastructure with increasing use and a changing climate³.

The Forest Legacy Program, funded by the Land and Water Conservation Fund (LWCF), also increases physical access, as appropriate, to the use and conservation purpose of each project. The 2.9 million acres of Forest Legacy projects include more than 5,000 miles of border with other conserved lands including more than 800 miles of National Forest Lands—in many cases creating physical access or safer access to adjacent public lands. In FY 2021, the Forest Legacy Program is providing \$94.3 million to support 28 projects that conserve private working lands to provide for forest products, wildlife, secure clean water, and (when appropriate) public access. The Land Acquisition program, also funded by the LWCF, increases public access and supports locally led conservation efforts for all Americans. In FY 2021, the Forest Service is investing \$79 million in National Forest System land acquisition projects, and more than \$30 million in additional funding for smaller projects to increase recreation access and protect critical lands.

In addition to LWCF, funding provided by the Great American Outdoors Act is helping us meet some of our greatest deferred maintenance needs on national forests and grasslands. However, as access to our nation's forests expands, there is still a need to continue to support the increasing necessity for the operation and maintenance of our recreation programs and services.

Effect of COVID on Trails and National Forests Assets

Over the last year, COVID-19 has affected all of our work, including those who work diligently to maintain our national forests, fight wildfires, and assist the public in accessing our public lands.

Pingree Q7: Can you please talk about the impact of COVID on the employees of the Forest Service including those who fight wildfires?

³ <https://www.fs.usda.gov/inside-fs/delivering-mission/sustain/national-vision-recreation-research>

Answer. Like all Americans, Forest Service employees have faced significant challenges, both personally and professionally, during the COVID-19 pandemic. The agency's top priority is employee safety and well-being. In many cases, including in wildland firefighting, recreation, timber harvest/sale activities, and other field-going jobs, we have had to learn how to get our work done in new and different ways. During the COVID-19 pandemic, the Forest Service expanded telework policies, implemented safe-travel standards, and adjusted the size of field teams to align with CDC guidelines. The Forest Service is operating under a COVID-19 Workplace Safety Plan that applies public-health best practices and is tailored to meet our unique mission needs for our employees and those who depend on us.

In advance of, and during, the 2020 fire season, Forest Service researchers provided risk management and decision-support systems to identify and mitigate the risk of COVID-19 spread in fire camps. The team developed models for incident commanders that improved logistics and helped ensure social distancing on dozens of fires across the U.S. Successful COVID-19 mitigation practices implemented during the 2020 fire year will serve as the foundation for our preparedness plans for 2021. These include issuing personal protective equipment such as masks and gloves, social distancing among firefighters wherever possible, dispersing fire camps, continuing to provide COVID-19 screening and testing of firefighters, and enhanced safety protocols in our logistical support contracts.

We implemented the "module of one" concept to keep field teams and work groups small to minimize risk. Field units were provided with additional support and flexibility to use digital technology to assist in developing timber sales. We also implemented safe traveling practices for Sale Prep and Sale Admin foresters as they travel to and from field projects, such as restricting employees to one person per vehicle by increasing the use of short-term rental vehicles. The agency has continued advertising and awarding timber sales using an outdoor, sealed, and socially distanced bid opening procedure while taking other COVID-19 precautions in closed offices, and we have moved most Forest Sale Prep and Sale Admin training and certification courses online or localized the training.

We took measures to limit employee-public interactions where possible and continue to work with our partners Leave No Trace, Tread Lightly!, National Forest Foundation, the Ad Council, and Recreation Responsibly Coalition to share outdoor ethics, fire prevention, and other safety messages with the public. This simultaneously reduced impacts on the land and limited employee contacts from increased visitor use driven by the pandemic.

The online sale of Christmas tree permits proved immensely popular and successful with both the public and our local employees, resulting in over 220,000 trees permitted and almost \$2 million dollars in recreation sales. Our recreation visit platform, Recreation.gov, offers several new and existing features to manage visitation, reduce in-field transactions, limit direct contact,

and enable better communication. These features include a mobile app, digital passes, and making campgrounds 100% reservable online.

The agency also accelerated the process to authorize full acceptance of e-signatures and electronic documents for timber sale contracts and continued to update our policies and practices to provide efficiencies in delivering forest products, some of which allowed analysis of timber stand data that was collected with digital technology or imagery rather than field data collection procedures. In addition, the agency maximized flexibility to facilitate continued grazing opportunities for livestock permittees while putting safety first through: holding annual meetings with permittees over the phone instead of in person, ensuring permittees had information and support on how to pay grazing bills online, through the mail or if needed, a drop box at local offices, and minimizing the need to count livestock onto allotments.

Pingree Q8: Please talk about how increased use by the public has led to accelerated degradation or increased maintenance needs for Forest Service assets including trails, roads, and facilities.

Answer. The year 2020 hit a visitation record for outdoor recreation, and in 2021 we expect the nation's forests and grasslands to again be a popular destination. In FY 2020, the Forest Service experienced 18 million more visits than the previous year, for an estimated total of 168.2 million visits to national forest and grasslands. Most of the increase occurred in dispersed settings (e.g., Wilderness and trails), and in the last half of the fiscal year, as Americans sought outdoor activities in response to the COVID-19 pandemic. This created a tremendous opportunity to connect with a diverse population of visitors.

The increase in visitation provides many opportunities for building connections, especially with new visitors. However, it also comes with greater need for planning, management, and additional field staff to address the associated social and environmental impacts. Overflowing parking lots, trailheads, trash receptacles, and toilets create resource damage, human health and wildlife hazards, and degrade outdoor recreational experiences. Increased visitation also creates an increased risk of human-caused fires, theft, and other user conflicts.

For FY 2021, we are expecting these same trends to continue with more anticipated use of recreational facilities. Already, most reservable campsites available on Recreation.gov are fully booked for the upcoming summer season. Continued elevated use of dispersed recreation settings and wilderness will put more pressure on sensitive resources and areas that may result in degradation of these special places. It is vital to continue to work with our partners such as Leave No Trace, Tread Lightly!, National Forest Foundation, the Ad Council, and Recreation Responsibly Coalition to continue to promote appropriate outdoor ethics, fire prevention, and other safety messages with the public.

Greater Sage-Grouse

The US Geological Survey issued a report in March which documents an 80% rangewide decline since 1965 and a nearly 40% decline since 2002 in the Greater Sage Grouse population numbers. In prior hearings we have discussed the Forest Service's work with the Bureau of Land Management, Fish and Wildlife Service, states, ranchers, and NGO's on a collaborative, science-based conservation strategy for the greater sage-grouse and its habitat on National Forest System lands and Bureau of Land Management administered lands. The land management plans for the Forest Service encompass 20 national forests and grasslands in six Western States.

Pingree Q9: With the sobering information from the USGS report about the documented decline in the sage grouse and the possible extirpation of this species in various projections, will the Forest Service reexamine and revise their land management plans to afford greater protections for the sage grouse?

Answer. Historical information used to produce the USGS report has prompted the Forest Service to proactively create protections and mechanisms for greater sage-grouse conservation in 2015. The Forest Service is currently reexamining and revising its land management plans to improve upon the efficiency and effectiveness of the 2015 plans.

Pingree Q10: How will the Forest Service use the monitoring framework developed by USGS to assess the effectiveness of Forest Service conservation efforts and analyze factors that contribute to habitat loss and greater sage-grouse population change?

Answer. The Forest Service has a monitoring and adaptive management framework that it has been using since 2015. The current adaptive management process is very similar to the USGS framework. The process has been developed and implemented in coordination with the States and is used to identify and respond to changes in greater sage-grouse populations and their habitats.

Pingree Q11: How will this information help make strategic management decisions?

Answer. Populations and habitats are evaluated using an adaptive management process. If monitoring indicates that triggering thresholds have been surpassed, the Forest Service, BLM, and States determine causal factors for declines and make necessary adjustments to agency priorities and activities.

Pingree Q12: Under the Biden Administration has there been a renewed effort at reinvigorating a collaborative, science-based conservation strategy for the greater sage-grouse and its habitat?

Answer. The Forest Service has renewed its efforts and interactions with the States and other agencies. Communication is achieved through collaborative and science-based strategies developed during frequent ad hoc interactions as well as formal meetings with the Western Governor's Association's Sage-Grouse Task Force and the Western Association of Fish and Wildlife Agencies' Sagebrush Executive Oversight Committee.

PFAS

In February of this year E&E News published a series of stories spotlighting the usage of PFAS chemicals in the turnout gear of firefighters. PFAS chemicals are linked to a range of health concerns. At a time when firefighters are already battling increasingly intense wildfires while also taking precautions during a pandemic, this is a concerning finding. Materials used in turnout gear to protect firefighters may need to contain components beyond what we may expect to find in normal clothing to ensure they are carrying out their primary function of protection from fire. However, it is my hope that when the Forest Service and other parts of our federal government are equipping those who are fighting wildfires we are also monitoring the characteristics of those items for other adverse health effects.

Pingree Q13: Is this an issue that the Forest Service is currently doing further research into either independently or in coordination with other relevant agencies?

Answer. PFAS compounds are related to durable water repellent coatings and textiles, which is primarily an issue in structural turnout gear but could also be present in wildland firefighting clothing. The Forest Service is working with the National Institute for Occupational Safety and Health National Personal Protective Technology Laboratory to test our protective clothing materials to confirm whether PFAS compounds are present.

Pingree Q14: What steps should we be taking to ensure the health and safety of those fighting forest fires and conducting any further research needed into issues like these?

Answer. Once National Institute for Occupational Safety and Health testing is completed, the Forest Service will evaluate the results and, if needed, take appropriate action to ensure that protective clothing issued to our employees does not contain PFAS chemicals.

Wood Products Innovation

Last month we held a hearing on innovative new wood products and the potential they have for providing alternative climate-friendly products while promoting rural job growth. In the hearing, the panelists discussed the need for sustainability in the sourcing of these products, but also about their potential. We heard from Dr. West about the great work the Forest Products

Laboratory is doing as well as work across the Forest Service in this area, such as wood innovation grants.

Pingree Q15: Can you expound upon the areas you see for growth in research or other Forest Service activities related to sustainable innovations in the wood products industry? And can you talk about what tangible returns the American public would see from increased investment in programs like these.

Answer. While we have seen growth in the mass timber industry, there are significant opportunities to expand construction of wood buildings through research, education, and technology transfer. The opportunity exists to capitalize on converting a significant portion of the 17,000 buildings that are built annually with other materials but could be constructed with wood. Research into high performing products is essential to support this opportunity, and education, project assistance, and market development work funded in our Wood Innovations program can stimulate and accelerate. Mass timber is at the beginning of a revolution of how we construct buildings in the U.S., but continued investment is essential for U.S. producers to thrive.

Low-value wood and biomass are vital renewable energy sources for heat in many States, the United Kingdom, other European nations, South Korea and Japan⁴. Programs like the National Wood Energy Technical Assistance Team support the assessment and implementation of the use of forest and industrial residues, and the team has identified the potential for expansion of wood energy for heat. Emerging products like biochar, biofuels and biochemicals, cellulosic nanomaterials and wood fiber products will benefit from increased investments to accelerate product and market development. Biochar has potential to also use low-value wood materials to create new industries, but additional work to support application research, demonstration, and market development is critical to move biochar from a promising product to an industry segment. Our partnership with the U.S. Biochar Initiative can help capture the promise of this emerging product. Advances in cellulosic biofuels are expanding, which would be supported through increased participation in the Renewable Fuel Standard.

Fire Fix

In the questions for the record from the Forest Service budget hearing last year you were asked about the management of additional suppression funds provided in the “fire fix.” As yet another year begins with historically high wildfire suppression costs, it is again important to revisit what efforts the forest service is making to manage this money judiciously.

⁴ <https://www.statista.com/statistics/477057/imports-of-wood-pellets-volume-by-key-country/>

Pingree Q16: Now that the Forest Service has had another year with the Fire Fix in effect, can you update us on how it has affected the rest of the Forest Service's functions and how the fire fix has continued to allow the Forest Service to refocus on other budgetary priorities?

Answer. The fire funding fix creates greater stability and predictability in the annual Forest Service budget. This allows for greater flexibility in managing non-fire programs and substantially decreases the possibility of transferring funds from non-fire programs when suppression funds are exhausted. The fire funding fix also froze the rising 10-year average for which the agency was responsible for covering its Suppression costs.

Pingree Q17: Also, can you update us on the management and cost control methods the Forest Service is undertaking to manage this money.

Answer. The Forest Service understands the expectations that come with the fire funding fix, and just like our stewardship of all agency funding, will ensure transparency and responsible use of these funds. The Agency has exhausted all its available FY 2021 Suppression funds due to prolonged fire activity that occurred in October and November. We transferred funds from the Wildfire Suppression Operations Reserve Fund in March after we notified the House and Senate Committee of Appropriations as required by the Further Consolidated Appropriations Act, 2020 (Public Law 116-94). The cap funds transferred to the Wildland Fire Management Account were utilized for suppression to sustain our operational response efforts. Administrative cost controls are in place to ensure accurate and timely reporting on their use.

Wildland fire costs are an outcome of decisions and actions that occur both before and after the fire. The Agency has cemented several efforts to improve the overall decision making on fires to ensure we implement actions that have a high probability of success and are commensurate with values at risk. We are working to prioritize our hazardous fuels investments so that we treat only the highest priority acres that will have the most significant impact on the behavior of wildfires. These combined actions will help create the kinds of outcomes we want related to firefighter safety, protecting high-value resources, and controlling costs.

Implementation of the Large Fire Assessment process, as directed by the 2018 Omnibus, is also helping us better account for our actions while fostering a learning culture. Congress will receive the first annual report from the agency in 2022. The report will summarize the findings of all Large Fire Assessments, outlining an accountable oversight process around the use of the Fire Funding Fix funding. Information will be responsive to the 2018 Omnibus Bill language including how funds were utilized, what we learned about the wildland fire system, and where we can improve. This report will identify systemic issues across all fire suppression and response activities and make recommendations for improvements. It will also highlight the agency's

adoption of pre-season fire planning tools and how we are leveraging real-time fire analytics to inform risk-based, effective firefighting decisions.

Climate Hubs

The recently released skinny budget described an increased investment of \$40 million in the USDA Climate Hubs. The Climate Hubs are supported by both the Forest Service and other parts of the USDA including the agricultural research service.

Pingree Q18: What would this increase mean for the Forest Service, its research priorities, and its ability to make improved land management decisions and outreach to private forest owners based upon the best available science?

Answer. Increased funding for the Climate Hubs would advance the Forest Service's capacity to leverage expertise from various disciplines to address climate change using cutting-edge strategies, tools, and technology. Through enhanced science and science delivery, the Hubs can extend the Forest Service's reach to help build climate awareness and enhance the productivity and resilience of the National Forest System and working lands across the nation. Increased funding would allow the Hubs to help additional land managers and private forest owners consider and adopt practices to optimize land management objectives in the face of drought, flooding, extreme storms, wildfire, and other climate-related threats. In brief, additional funding would help the Hubs meet the increasing demands for their technical assistance and services; demands which currently exceed their capacity.

The FY 2022 President's Budget specifically requests an increase of \$5 million to Forest and Rangeland Research to support the USDA Climate Hubs. Regarding Forest Service research priorities, science to inform natural resource management for climate-resilient landscapes is central to the agency's scientific pursuits. Forest Service research priorities include applied science to improve forest and grassland conditions, to inform adaptation to climate change, to mitigate greenhouse gas impacts through forest management, to aid carbon management, and to enhance the wildland fire system to address more uncharacteristically severe fires. Increased investments in these priorities would accelerate the pace of climate science advances.

Pingree Q19: Can you share any more details about how this increase would be implemented?

Answer. The proposed investment in Climate Hubs would expand workforce capacity and increase program delivery to improve engagement with land managers and private forest owners. The additional workforce capacity would include stationing Forest Service coordinators in all Hubs and adding staff in Hawaii and Alaska to enhance local partnerships, education, and outreach. The agency would also expand capacity by re-establishing the Climate Hubs Fellows

Program. These fellowships provide entry-level, high-impact green jobs for university graduates in STEM subjects. With the proposed increase in funding, the agency would also increase project-specific funding for State, municipal, tribal, or National Forest climate vulnerability assessments and adaptation planning efforts, particularly those that address the needs of underserved communities. Another key investment would be a regional disaster preparedness and post-disaster initiative to communicate lessons learned from natural disasters and to design enhanced preparedness and resilience guidance to reduce recovery costs. The proposed investment would also increase opportunities for Climate Hubs to assist partners and cooperators with continuing education modules and outreach programs that build climate literacy and enhance STEM education for USDA employees, the broader working lands workforce, and forestry students.

Civilian Climate Corps

In your testimony before the Subcommittee you stated you were working daily with the Department of the Interior to put forward recommendations on the President's proposed Civilian Climate Corps. You also discussed the Forest Service Job Corps Civilian Conservation Centers which trains eligible youth to assist with conserving our Nation's public natural resources, including our urban forestry resources.

Pingree Q20: How do you see the new Civilian Climate Corps building upon and expanding what you are already doing with the Jobs Corps Civilian Conservation Centers?

Answer. The Forest Service operates 24 Job Corps Civilian Conservation Centers in fifteen States under an Interagency Agreement with the Department of Labor. With a capacity to serve up to 3,800 students, these centers help young people ages 16-24 improve the quality and satisfaction of their lives through a residential education and vocational training program⁵. Students participate in entry-level firefighting, carry out wildfire risk reduction activities to protect communities, and implement conservation and community service projects on public lands. Prior to the pandemic, the students contributed over 380,000 service hours at a value of \$ 9.6 million.

The Forest Service also engages 7,800 conservation corps members every year through Service Corps programs, including the Youth Conservation Corps and Public Land Corps, leveraging \$11.7 million in outside funds through partnership and organizational agreements.

A Civilian Climate Corps offers the opportunity to engage a broader, more diverse group of participants in conserving our Nation's natural resources and supporting communities. Corps work could engage the next generation of conservation stewards in climate-smart practices, build

⁵ <http://www.jobcorps.gov/About/JobCorps.aspx>

civic engagement, and provide employment and training in climate solutions. It also creates a conservation connection with urban and rural communities across the country.

USDA is looking to expand Corps engagement in community service and natural resource conservation activities to include urban agriculture to help broaden access to fresh food, energy efficiency improvements to reduce the impact of fossil fuel consumption, community outreach and education efforts to build climate awareness, and implementing practices that reduce climate risks and increase the productivity and resilience of working lands. The USDA Climate Hubs would work closely with the Civilian Climate Corp to ensure program activities support climate adaptation and/or mitigation.

Pingree Q21: How will you ensure there is no duplication of effort?

Answer. The Administration is taking a government-wide approach to the climate crisis. The National Climate Task Force, chaired by the National Climate Advisor, provides a forum for high-level interagency planning and coordination, so that all parts of the Federal government are working together. The recent interagency report on *Conserving and Restoring America the Beautiful* reflects that work. USDA is collaborating with the Department of the Interior and the heads of other relevant agencies to develop the Civilian Climate Corps Initiative. USDA Climate Hubs and Stewardship Agreements with Tribal and State governments offer additional opportunities to work together across government.

Pingree Q22: How will the Civilian Climate Corps focus on underserved and underrepresented communities?

Answer. The Administration is focused on racial equity and inclusion throughout its work to serve all Americans, including a historic commitment to ensure 40 percent of overall benefits from relevant Federal investments flow to disadvantaged communities. The *American Jobs Plan* envisions a Civilian Climate Corps that will mobilize the next generation of conservation and resilience workers and maximize creation of training opportunities and good jobs, including more opportunities for people of color and women in occupations where they are underrepresented. To bring this vision to reality, USDA will focus on underserved and underrepresented communities.

Pingree Q23: How will you structure the outreach to these communities to inform youth about this new or expanded opportunity?

Answer. USDA is committed to equity as a cornerstone of our values. As the Secretaries of the Interior and Agriculture develop the Civilian Climate Corps Initiative with the National Climate Task Force, we will ensure that underserved youth have full access to participate. USDA's

longstanding partnerships with Historically Black Colleges and Universities and land grant colleges could provide strong leadership development opportunities.

Pingree Q24: How will you ensure the jobs created will assist these communities in preparing for and addressing the impacts of climate change?

Answer. The principles of the *Conserving and Restoring America the Beautiful* report connect collaboration, conservation, local leadership, and Tribal sovereignty to jobs and healthy communities. A locally driven, nationally scaled conservation campaign, including the Civilian Climate Corps, can lift America's economy, address environmental justice, and improve quality of life in communities preparing for and experiencing the impacts of climate change. Additionally, the USDA Climate Hubs connect communities, youth, and conservation corps members with the latest in climate science, so that their work can be targeted to address climate risk through regionally appropriate activities.

Pingree Q25: When do you anticipate the recommendations you are developing with the Department of the Interior will be finalized?

Answer. We expect the National Climate Task Force to release a proposed strategy for the Civilian Climate Corps Initiative soon.

Pingree Q26: How quickly can this effort be stood up?

Answer. The Forest Service is well positioned to stand up this effort in a timely manner. Tribal, State, Federal, and non-governmental conservation corps already operate on public lands and in communities across America. Working with USDA Climate Hubs, a Civilian Climate Corps can expand this existing network and build on work already underway.

Land and Water Conservation Fund – Recreational Access

The Great American Outdoors Act created a permanent funding stream for the Land and Water Conservation Fund, and there are requirements for the Service to submit project lists of potential acquisitions and supplemental projects under law. There is also a requirement under Section 200306 of Title 54 that you develop a priority list for Recreation Access projects.

Pingree Q27: Will you be submitting this list, or otherwise incorporating this information into, the proposed project lists you will be submitting with the FY 2022 budget?

Answer. In the past, the agency has provided these lists once the total amount available for recreation access projects is known, and we plan to do so again for the FY 2022 appropriations cycle. The FY 2022 President's Budget proposes \$10.4 million for recreation access projects.

Questions from Mr. Joyce

Water Quality/Forest Stewardship Program

The State of Ohio has prioritized improving water quality with focus projects in the Lake Erie watershed, including a state-led program called H2Ohio. These water quality efforts involve a multi-faceted approach that includes agricultural incentive programs, land protection, wetland restoration and expansion of riparian forest buffers.

Investments in the Forest Stewardship Program are directly tied to improving water quality through technical assistance to landowners on tree plantings and riparian forest buffer management.

Joyce Q1: In a state like Ohio where 85 percent of the forests are privately owned, how does the Forest Stewardship Program provide downstream benefits, improving water quality for the rivers flowing into Lake Erie?

Answer. In its State Forest Action Plan, Ohio identified the greatest threat to forests as soil and water quality impacts of poor land management practices and urbanization. The conservation of soil and water resources is a top goal. The Forest Stewardship Program helps private landowners develop forest management plans that protect watersheds. Strategies focus on keeping working forests as forests and encouraging owners to protect water by adopting best management practices. An important tool to address soil retention and water quality is the use of riparian forest buffers. Riparian forest buffers intercept sediment, nutrients, pesticides and other materials in surface runoff so that these materials do not get into streams, lakes and wetlands. In addition to improved water quality, riparian forest management and restoration reduces impacts from flood damage and increases wildlife habitat by creating habitat diversity and reducing stream temperatures.

Joyce Q2: More broadly, how could increased funding for the Forest Stewardship Program help state forestry agencies, cooperative extension services, certified foresters, conservation districts and other partners connect with and support more forest landowners and provide better technical assistance?

Answer. The Forest Stewardship Program supports State-delivered technical assistance and forest management plans to help landowners achieve sustainable forest management objectives. The program helps small landowners qualify for conservation assistance to restore forest health, promote wildlife habitat, improve water quality, and more. In FY 2020, Ohio's Forest Stewardship program reported 212 new or revised stewardship plans covering 17,330 acres. In addition, 1,453 landowners were provided forestry technical assistance and 8,104 landowners participated in education programs to encourage sustainable forest management practices.

The program allows the Forest Service to engage more private landowners in strategic conservation practices that produce public benefits. It supports collaborative approaches to land management in the Lake Erie Basin and other critical watersheds across the country. This support results in a host of public benefits from private lands including clean water, reduced non-point source pollution, support for rural economies and forest products industry, and improved resilience of forests. Because of these benefits, "Keeping Forests as Forests" is our goal. Additionally, the Forest Stewardship program helps small landowners, including minority and historically underserved landowners, keep their land working for future generations.

Trillion Trees Initiative

Despite best efforts to care for and plant more trees across Northeast Ohio, the tree canopy continues to decline at an alarming rate. Unfortunately, this is not unique to Northeast Ohio. Across the country, in urban and community areas, we are losing approximately 36 million trees per year due to pests, diseases, and human activity.¹

That is why I have been a proud cosponsor of Congressman Bruce Westerman's bill, the Trillion Trees Act, to help reverse this trend in forests across the country and worldwide. The Trillion Trees Act seeks to conserve, restore and grow one trillion trees globally. And, it promotes sustainable forest practices to improve the health of our forests and help make them more resilient to diseases and wildfires, while also reducing carbon in the atmosphere.

From what I understand, a goal of the Administration's American Jobs Plan is to restore nature-based infrastructure, including forests, given families and businesses throughout the U.S. rely on this infrastructure for their lives and livelihoods.

Joyce Q3: Given the Administration's goal, is it possible the fiscal year 2022 request will include robust funding for the Forest Service to collaborate with states and partners to plant more trees, restore landscapes, and promote sustainable forest practices, consistent with the Trillion Trees Act?

Answer. The Forest Service partners closely with State agencies to ensure that Federal assistance – across a broad suite of programs – is targeted and prioritized to make a difference to areas of highest ecological, social, and economic value. Each State prepares a State Forest Action Plan that is an assessment of forest resources and strategies for conserving and sustainably managing forests across all land ownerships. Our goal, in partnership with State and local partners, is to make a difference at a landscape scale to keep rural working forests working and enhance urban green infrastructure. Examples of our work:

- Through the Forest Stewardship Program, the Forest Service supports reforestation, nurseries and genetic resources to supply people who grow forest and conservation seedlings with the very latest technical information. Our nurseries and genetic resources network curates a repository of 12,000 research articles relevant to nursery production, seedling quality, reforestation, tree improvement, germplasm conservation, and native plant restoration. Staff experts provide technical assistance workshops, conduct field visits to consult with growers, and undertake applied research to make reforestation efforts more effective.
- In combination with the Forest Stewardship program, the Forest Service has Rural Forestry Assistance authorities that enable us to partner with State Forestry Agencies to deliver projects to reforest and restore forests on State and private lands.
- Our Urban and Community Forestry Program provides funding and technical support to State forestry agencies and non-profit partners, to help American communities maintain and protect about 12 billion trees. It also works with cooperators to leverage private funding to maintain tree canopy, resulting in about 1 million trees planted annually in American communities. This program is well positioned to scale up and advance the goals and objectives of the Trillion Trees Initiative through its Ten-Year Strategic Plan and ability to deliver technical and financial assistance to nearly 8,000 communities nationwide to better manage and benefit from urban trees. Currently, Urban and Community Forestry staff are participating in the Trillion Trees Urban Forestry Working Group in collaboration with American Forests, co-lead of the Trillion Trees Initiative in the U.S., and Arbor Day Foundation.
- The Forest Service's National Agroforestry Program also provides tech transfer materials to producers to support the establishment of trees on farmlands and is currently developing a guidebook to support climate-smart planting practices to ensure that trees planted will survive over the long term.

The FY 2022 Budget requests an increase of \$6 million from the FY 2021 enacted level for the Forest Stewardship Program. This funding will enable State Foresters to engage directly with private forest landowners in areas of high priority for climate resilience management activities on private forests. The budget requests an increase of \$7 million for the Landscape Scale Restoration Program and an increase of \$6 million for Forest Health Cooperative Programs to promote forest health and resilience at a landscape scale, across State and private lands. The budget also requests funding for the Urban and Community Forestry program equal to the FY

2021 enacted level which will allow the agency to maintain our current level of funding and technical assistance for communities to protect and enhance trees across jurisdictional boundaries.

Joyce Q4: What other strategies is the Forest Service looking at to improve reforestation with native plants across the country and to enhance urban forests?

Answer. Targeted tree planting is critical to mitigating climate change, providing resilience in the face of invasive pests, and crucial at the landscape level to create, maintain, or enhance ecological services vital to this nation. Not acting now can increase subsequent management costs and reduce potential for carbon sequestration and other public benefits.

Forest Service nurseries and seed extractories have a long-standing front-line role in reforestation, restoration, and conservation projects. They produce 25 million tree seedlings a year, along with other native plants, such as shrubs, grasses, and wildflowers. These plants support forest and rangeland restoration on national forests as well as public and tribal lands. The Forest Service is developing a strategy for reforestation that addresses existing reforestation needs and future reforestation requirements. We are also looking at how to increase current nursery capacity for producing both containerized and bare root seedlings.

In addition, State-operated tree nurseries in 29 States and Guam produce about 120 million native tree seedlings per year. State-run seed orchards provide seed stock tree nurseries in 30 States for planting across both rural and urban landscapes. With technical assistance provided by the Forest Stewardship Program, the Forest Service is partnering with the National Association of State Foresters to develop plans for enhancing nursery capacity. Needs include increasing seedlings available for planting, securing planting supplies and equipment; developing and expanding planting contractors, labor, and technical expertise; and surveying and identifying acres available for planting. Opportunities to leverage government resources with private interests will also be identified, including private corporations and conservation impact financial investors.

Urban forests are 20% of all forests in the U.S. and provide an important opportunity to increase carbon sequestration and mitigate climate change. We will be looking for opportunities to increase reforestation in urban forests and on State, Tribal, and private lands across the country. Our 2021 national cost share grant program for Urban and Community Forestry is focused on improving urban tree species resilience through reforestation and management. The program will fund innovative grant proposals that establish climate resilient tree species that are resistant to impacts of invasive pathogens, pests, and severe weather events and incorporate native tree species propagated from genetically diverse local seed sources.

Emerald Ash Borer (“EAB”)

At last year’s hearing, I discussed the important work the Forest Service is doing to fight Emerald Ash Borer – or “EAB.” Given EAB is responsible for the destruction of over 150 million ash trees in 35 states across the country, it is critical for the Forest Service to maintain its outreach, education, and research activities to reduce the harmful and costly effects of EAB.

Joyce Q5: Does the fiscal year 2022 request support ongoing EAB research partnerships, like those with The Ohio State University and other universities, to develop EAB resistant ash trees and integrated pest management strategies?

Answer. Yes, the FY 2022 Budget request would allow the Forest Service to direct over \$1.8 million in Forest Health Management and Forest and Rangeland Research funds toward addressing emerald ash borer, an increase of about \$400,000 over FY 2021.

The Forest Service remains committed to working with States and communities to provide outreach, expertise, and technical assistance on EAB management and treatments. Forest Service Research and Development supports resistance breeding of ash trees and assessments of genetic variation and resistance to EAB.

Joyce Q6: What EAB activities within State and Private Forestry does the request support? Why are these activities critical to slowing the spread of EAB?

Answer. The Forest Health Management Program will continue to support activities to slow the spread of EAB from infested areas. Although EAB is currently in 35 States and has killed hundreds of millions of ash trees, it still has the potential to impact urban and rural forests within infested and uninfested States. We will continue to work with States to develop EAB and ash management plans at the State and local levels and provide technical assistance on survey tools, insecticide treatments, and wood utilization. One of the greatest challenges that EAB has presented is slowing human-assisted movement of EAB. As the USDA Animal and Plant Health Inspection Service shifts its focus from regulatory actions to biocontrol, the Forest Service will increase efforts to inform the public, arborists, and the wood products industry of the dangers of moving infested ash material. We will continue to support the [EAB information network website](#), which has become the source of information on EAB biology and management. Education and outreach efforts are critical components of national, State, provincial, and municipal EAB programs. The EAB website has more than 400 subscribers and hosts the EAB University webinar series; more than 2,500 users had viewed one or more of the recorded webinars as of December 2020. We also will continue to work with States and the *Don’t Move Firewood* campaign to make campers and others aware of the danger of moving EAB-infested firewood.

The Urban and Community Forestry Program also provides funding and technical assistance for EAB activities such as: inventorying urban forests, developing EAB management plans, treating ash trees to maximize benefits from their canopy and reduce pressure on the remaining ash tree population, removing and utilizing the wood from trees killed by EAB, pre-planting (in areas where EAB has not been found) and replanting after ash tree loss with a diverse species mix, engaging citizens in early detection, tree planting, and stewardship, and building overall community capacity to apply best management practices.

In 2020, appropriated funding for the Urban and Community Forestry Program included \$2.5 million to address threats to urban forest health and resilience. Working collaboratively with the National Association of State Foresters, Forest Service funded competitive projects that improved the health and resilience of urban forests, removed hazardous trees to improve resident safety, and provided access to green spaces and urban canopy for diverse communities. Eleven of the 23 selected projects specifically helped communities respond to and recover from EAB.

In 2021, the Forest Service is again working with the National Association of State Foresters to deliver a \$2.5 million grant program for State projects on EAB Urban Reforestation and State Pest and Disease Challenges. This grant program allows the Forest Service and partners to work on all areas of management of EAB, from prevention in States that are just starting to see the impacts of the pest, to recovery through reforestation and hazard tree removal in states such as Ohio that have seen substantial ecological and economic impacts.

State and Private Forestry Programs/Great Lakes Forests

Four hundred forty-one million acres – or nearly half of the forest land in the U.S. – is privately owned.

Joyce Q7: How do State and Private Forestry programs – like the Forest Stewardship Program, also known as the Working Forests Lands program – help ensure responsible and productive management of private forests?

Answer. Over half of U.S. forests are managed by more than 10 million private owners. The majority are ‘family forest landowners’ who own less than 25 acres. Family forest landowners are stewards for critical public benefits, including clean water, wildlife habitat, and carbon sequestration. The Forest Stewardship Program is an important tool to help private landowners manage and improve their forests. The Forest Stewardship Program supports State-delivered technical assistance and forest management plans to help landowners achieve sustainable forest management objectives. The program helps small landowners qualify for conservation assistance to restore forest health, promote wildlife habitat, improve water quality and more.

In addition, the Landscape Scale Restoration Program helps States engage family forest landowners in active management to improve the health and resilience of forests in partnership with other adjacent property owners. The Wood Innovations Program actively supports markets for wood products, a key driver in helping private landowners manage their forests.

Joyce Q8: What are the environmental and economic benefits of sustaining the productivity, health, and resilience of private forests? Are there other benefits as well?

Answer. The Great Lakes is an excellent example of where strategic conservation partnerships and targeted assistance to engage private landowners is key to protecting water quality. Support for the Forest Stewardship Program enables the Forest Service to engage private landowners in strategic conservation practices that produce public benefits. These benefits include water quality improvement, forest health and reforestation, habitat protection, carbon sequestration and jobs for rural economies.

Given over 85 percent of the forests in my home state of Ohio are privately owned, I was proud that in fiscal year 2021, Congress provided \$600,000 specifically for the Forest Service and its partners to educate private woodland owners in the Great Lakes on effective land stewardship practices.

Joyce Q9: How is the Forest Service planning to use this funding? Does the Administration's request support and build upon these efforts – and broader State and Private Forestry Program activities – in fiscal year 2022?

Answer. The agency will use authorities in the Landscape Scale Restoration, Urban and Community Forestry, and Forest Stewardship programs to direct \$600,000 to work with partners and educate natural resource professionals and private woodland owners on effective land stewardship practices in the lower Great Lakes native forests. Specifically, these Landscape Scale Restoration projects, located in the lower Great Lakes region, will be funded at \$315,000 (split between the projects):

- Making a Young Landscape Old: Landscape-scale forest restoration to promote biodiversity and resilience to environmental change - OH - Holden Arboretum
- Enhancing Climate Adaptability of Lake Michigan Coastal Forests & Shoreline Habitats WI Glacierland Resource Conservation & Development Council, Inc

Forest Stewardship (\$60,000) and Urban and Community Forestry (\$210,000) program funds that are granted to States will support the following work:

- FY 2021 Forest Stewardship Direction adding funding to IN, MI, NY and OH

- FY 2021 Urban and Community Forest Direction adding funding to OH, IL, IN, NY, PA, WI, MI
- Supplement to Core UCF funds to Ohio – Western Lake Erie Basin Urban Waters Federal Partnership (\$15,000)

The President's FY 2022 budget request for Cooperative Forestry and Forest Health Management (Cooperative) programs will enable continued support for Great Lakes programs that enhance tree canopy, engage woodland owners, restore private working forest lands, and contribute to forest health and resilience of state and private forests.

Forest Health/Fiscal Year 2022 Request

I was pleased that the fiscal year 2022 discretionary request prioritizes funding for high-priority hazardous fuels and forest resilience projects.

Joyce Q10: Does the Forest Service have an estimate for the total cost of forest management work – including thinning, fuels treatments, and timber sales – needed to fully restore the landscape to make it more resilient to wildfires?

Answer. About 63 million acres, or 32 percent of the 193 million acres of the National Forest System, are at high or very high hazard for wildfires that would be difficult to contain. Scenario planning provides us the capacity to develop plans that are illustrative of the pace and scale in focused investment areas. These focused investment areas are strategic and result in leverage. For example, treating 40 percent of the landscape results in 80 percent reduction of the risk transmission to communities. In addition, to significantly reduce wildfire risk exposure in the West, 20 million acres of National Forest System lands need to be treated over the next 10 years to maintain our investment in areas previously treated and keep risk low in those areas. Treatment costs per acre can vary widely based on many factors such as location, treatment type, planning and implementation costs. A very broad average is derived from the Forest Activity Tracking System of \$1,000 per acre.

Land and Water Conservation Fund – Recreational Access

The Great American Outdoors Act created a permanent funding stream for the Land and Water Conservation Fund and nearly doubled the annual funding amount. Included in the statute is the requirement that acquisitions to improve recreational access total not less than three percent of the appropriation. The Congressional Research Service reports that the extent to which agencies prioritize acquisition funding for recreational access might vary among agencies and from year to year.

Joyce Q11: How will the Forest Service define recreational access under the new Administration? How much of a factor will it play in the agency's prioritization of annual acquisition projects?

Answer. In FY 2021, allocations for Forest Service land acquisition included \$17 million for line-item Recreation Access projects – 14% of the overall \$124 million program. There are several criteria we are legally required to consider in prioritizing projects, including recreation access. It is one of nine scored criteria in selecting core projects and is weighted more highly than any other criterion. Recreational access has been, and will continue to be, a significant factor in prioritizing annual acquisition projects. Projects will be evaluated on their potential to create or enhance opportunities for recreation. The Forest Service evaluates projects based on whether they provide significantly new or improved recreational opportunities, including whether the public has indicated a need for increased access in the area; whether the project would open or increase access to other public lands; whether the project would solve a specific access problem or overcome a barrier; and whether the project is located in or would serve an underserved community, including underserved rural communities.

Wood Utility Poles

In fiscal year 2021, to foster additional production of wood utility poles that meet modern size specs of the U.S. electric utility industry and ensure the ecological needs of local landscapes, Congress included language encouraging the Forest Service to work within existing programs to foster additional production of wood utility poles.

Joyce Q12: Recognizing the agency typically does not design timber sales or manage for specific sawtimber products, how could the Forest Service work to help meet this demand, especially in areas affected by wildfire?

Answer. The Forest Service is planning on releasing a dashboard later this year that will allow industry to view Forest Service timber sales. As part of the development of this dashboard, we will explore the opportunity to include some information from our sale prospectus relating to the species and size of the trees. However, not all sales will have the appropriate species and sizes for utility poles.

Joyce Q13: How could the Forest Service help connect utility pole industry personnel with particular National Forest System timber sale purchasers to determine if there is material within a particular sale that could fit their needs?

Answer. The Forest Service will work with the utility pole industry to provide contacts with industry organizations familiar with the purchasers of Forest Service timber. In addition, we would suggest interested utility pole industry members contact the National Forests that had significant fire damage last year and ask to be added to the prospective bidders list. This will facilitate them receiving notices of upcoming timber sales.

Budget Restructuring/Forest Inventory and Analysis (FIA)

The Forest Inventory and Analysis program – or “FIA” – provides crucial information to federal and state forestry agencies, industry, academic and conservation organizations on a wide range of forestry-related topics.

Last year, following a multi-year effort to improve Forest Service’s accounting and management practices, Congress appropriated fiscal year 2021 funding for the Forest Service in a new budget structure. The new structure established a Forest Service Operations account – to consolidate agency-wide costs – and modified several existing appropriations accounts by including budget line items for salaries and expenses.

In fiscal year 2021, Congress intended for FIA to be funded at no less than the historical equivalent of \$77 million.

Joyce Q14: Would a budget line item for FIA salaries and expenses help the agency better understand the staffing needs for the program and ensure it is adequately staffed?

Answer. Ensuring adequate staffing for the FIA program is an essential part of our strategic workforce planning. The agency is monitoring salaries and expenses on a monthly basis to understand FIA staffing levels and to ensure we are on track to achieve the investments in FIA directed by Congress. As required by the 2014 Farm Bill, the 2014 FIA Strategic Plan describes multiple levels of FIA program delivery. Due to inflation, the cost of meeting FIA’s current commitment for program delivery has increased approximately 10% from what was reported in 2014; this applies to all levels of delivery in this program. We would be happy to provide specifics on the costs of delivering other FIA elements described in the Farm Bill, such as timber products monitoring, carbon accounting, and urban inventory, if asked.

Joyce Q15: What is the agency doing to ensure that agreements with states and other cooperators are being fully funded?

Answer. The Forest Service maintains close communication with the National Association of State Foresters and other cooperators in relation to the FIA program and works collaboratively with States and other cooperators to ensure program success. In FY 2021, the agency invested an

additional \$5.6 million above the historical \$77 million FIA funding level to fund agreements with states and other cooperators. This \$5.6 million amount consisted of \$2.3 million of Forest and Rangeland Research funds, \$2 million of agency priority carryover funds, and \$1.3 million of CARES Act supplemental funds allocated to Forest Service Research & Development.

Forest Service Firefighting Efforts

Within the funding outlined for the U.S. Department of Agriculture in the fiscal year 2022 budget request, there is \$1.7 billion for the Forest Service's wildfire fighting efforts, a \$476 million increase above the enacted level.

Joyce Q16: How does this requested increase impact the Forest Service's aviation strategy?

Answer. The increase will allow the Forest Service to continue to modernize the contract aerial firefighting fleet, as well as implement technology that can increase safety and effectiveness.

Joyce Q17: Will the requested funding provide the Forest Service with the opportunity to replace current aviation assets with new, modern technology that may improve the agency's ability to combat wildfires?

Answer. The additional funds may allow the agency to replace some contract aircraft with new and modern aircraft, as well as invest in technology that can increase safety and effectiveness when responding to wildfires. Modernizing the contract aircraft fleet and investment in technology also supports the use of aviation resources for prescribed fire, another key tool used to reduce wildfire risk.

This funding can also be used to increase the unmanned aircraft systems fleet, both agency-owned and contracted, that are used extensively for both wildfire and prescribed fire.

Joyce Q18: Has the Forest Service considered whether to use 10-year aviation contracts?

Answer. The Forest Service is planning to use 10-year aviation contracts in certain circumstances, structured in such a way to ensure safety and fiscal feasibility. These contracts will be structured as one base year and nine option years for the Multiple Award Indefinite Deliver, Indefinite Quantity (IDIQ) type contracts for Type I and II helicopters. Structuring contracts this way allows for the introduction of new technology, as well as allows new vendors to enter the market to maintain competition.

The FY 2021 Omnibus Appropriations Bill directed the Forest Service to evaluate 10-year aviation contracts, and we anticipate the report will be submitted to Congress this summer.

Joyce Q19: Could the Forest Service provide an operational analysis for the 2018, 2019, and 2020 wildfire seasons by Forest Service region? The analysis should include the deployment of rotary wing and fixed wing assets, the average age of the fleet for each category, maintenance down time, rate of attacking fires in the first 30 minutes, and overall effectiveness of these assets.

Answer.

CY 2018-2020 Total Agency Flight Time

Calendar Year	Flight Hours
2018	76,230
2019	42,570
2020	83,324
3-Year Average	67,375

CY 2018-2020 Total Agency Non-Availability⁶

Calendar Year	Non-Availability Hours	Non-Availability % of Availability Hours
2018	6420	8.1
2019	6284	3.7
2020	5408	3.3
3-Year Average	6037	3.36

⁶ Aircraft not available when order request made.

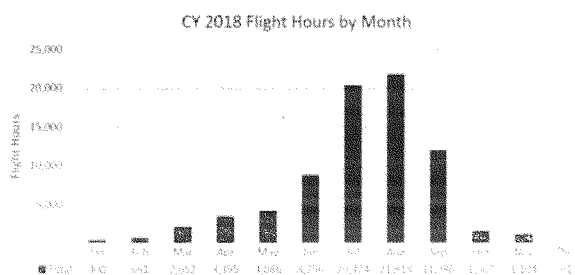
2018**CY 2018 Aircraft Use by Region/Agency**

Region/Agency	Flight Hours	Percent of Total Flight Hours
FS Region 1	6,593	8.6%
FS Region 2	3,614	4.7%
FS Region 3	3,457	4.5%
FS Region 4	10,255	13.5%
FS Region 5	12,697	16.7%
FS Region 6	7,871	10.3%
FS Region 8	2,370	3.1%
FS Region 9	1,405	1.8%
FS Region 10	1,253	1.6%
FS Region 13 (WO)	1,768	2.3%
FS Region Other (Northeastern Area, Research Stations, CIO)	576	0.8%
FS Total	51,859	68.0%
BIA	1,551	2.0%
BLM	5,205	6.8%
FWS	92	0.1%
NPS	1,396	1.8%
DOI Total	8,244	10.8%
Non-Fed Fire (State)	15,646	20.5%
Non-Wildland Fed Fire (DoD)	34	0.0%
NRCC	385	0.5%
Unknown	62	0.1%
Grand Total	76,230	100%

Percent of CY 2018 Flight Time by Aircraft Type

Aircraft Type	Number of Hours	Percent of Total
Contract Rotor-Wing	39,892	52%
Contract Fixed-Wing	24,522	32%
Contract Airtankers	6,082	8%
Contract Scoopers	1,609	2%
Agency Owned Rotor-Wing	698	1%
Agency Owned Fixed-Wing	3,246	4%
Agency Owned Airtankers	182	0%
Totals	76,230	100%

CY 2018 Flight Hours by Month



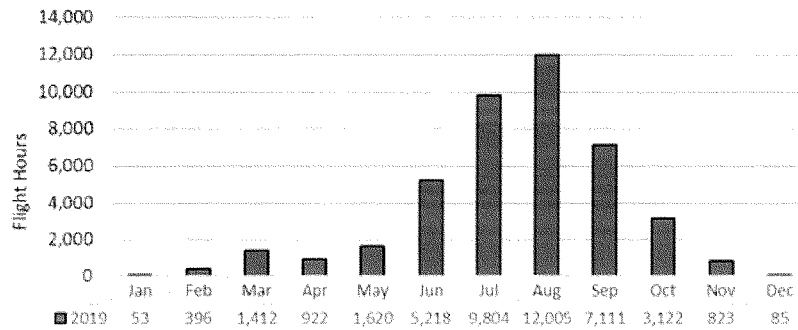
2019**CY 2019 Total Agency Flight Time by Region/Agency**

Region/Agency	Flight Hours	Percent of Total Flight Hours
FS: Region 1	3,486	8.2%
FS: Region 2	1,867	4.4%
FS: Region 3	4,037	9.5%
FS: Region 4	4,385	10.3%
FS: Region 5	6,361	14.9%
FS: Region 6	3,933	9.2%
FS: Region 8	1,949	4.6%
FS: Region 9	1,213	2.8%
FS: Region 10	1,527	3.6%
FS: Region 13 (WO)	2,277	5.3%
FS: Region Other (Research Stations, CIO, etc.)	573	1.3%
FS Total	31,608	74.3%
BIA	614	1.4%
BLM	3,863	9.1%
FWS	155	0.4%
NPS	202	0.5%
DOI Total	4,835	11.4%
Non-Fed Fire (State)	5,987	14.1%
Other	140	<1%
Grand Total	42,570	100%

CY 2019 Total Agency Flight Time by Aircraft and Contract Type

Aircraft Type	Flight Hours
Contract Helicopters	20,064
Contract Fixed-Wing	14,883
Contract Airtankers	3,485
Contract Scoopers	679
Agency Owned Helicopters	515
Agency Owned Fixed-Wing	2,944
Total	42,570

CY 2019 Total Agency Flight Time by Month



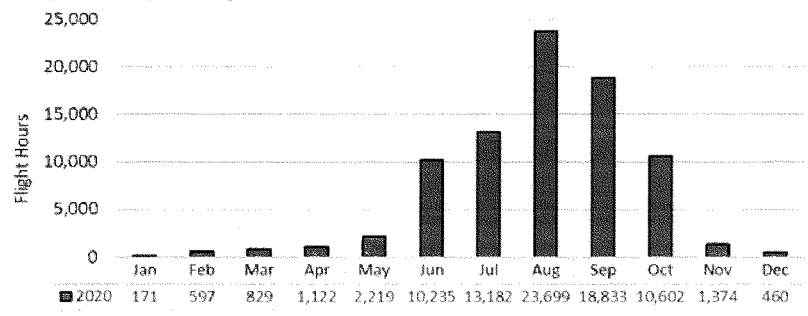
2020**CY 2020 Total Agency Flight Time by Region/Agency**

Region/Agency	Flight Hours	Percent of Total Flight Hours
FS: Region 1	4,169	5.0%
FS: Region 2	8,495	10.2%
FS: Region 3	8,315	10.0%
FS: Region 4	7,083	8.5%
FS: Region 5	20,550	24.7%
FS: Region 6	4,603	5.5%
FS: Region 8	1,317	1.6%
FS: Region 9	1,132	1.4%
FS: Region 10	384	0.5%
FS: Region 13 (WO)	2,839	3.4%
FS: Region Other (Research Stations, CIO, etc.)	223	0.3%
FS Total	59,110	70.9%
BIA	2,976	3.6%
BLM	7,537	9.0%
FWS	72	0.1%
NPS	721	0.9%
DOI Total	11,306	13.6%
Non-Fed Fire (State)	12,800	15.4%
Other	108	<1%

CY 2020 Total Agency Flight Time by Aircraft and Contract Type

Aircraft Type	Flight Hours
Contract Helicopters	42,667
Contract Fixed-Wing	24,504
Contract Airtankers	9,449
Contract Scoopers	1,432
Agency Owned Helicopters	581
Agency Owned Fixed-Wing	3,691
Total	82,324

CY 2020 Total Agency Flight Time by Month



Firefighting Aircraft Age

Airtankers

Several of the existing next generation airtankers on contract with the Forest Service are almost fifty years old. The average age of the airtanker fleet on contract is more than 30 years. The average age of the five airtankers proposed for the Next Generation Airtanker Contract 3.0 was less than 30 years.

Helicopters

The current fleet of exclusive use contracted heavy (Type 1) firefighting helicopters have some airframes that are 60 years old. The oldest airframes were built in 1961. Twenty-five percent of the fleet was built in the 1960s. The exclusive use contracted medium (Type 2) helicopter fleet averages over 40 years old. The oldest airframe was built in 1968. The exclusive use contracted

light (Type 3) helicopter fleet is the most modern helicopter fleet averaging less than twenty years old. The oldest airframe was built in 1996.

Multi-engine Water Scoopers

The four Viking (Bombardier) CL-415 multi-engine water scoopers currently on contract are the newest make and models of the CL-415. They were manufactured between 2013 and 2015. CL-415 EAF multi-engine water scoopers recently awarded a contract were originally manufactured in 1985 and 1986 but have been converted to CL-415EAF by Viking. The current CL-415 EAFs were converted in 2020.

Diverse Mission Fixed-wing

The light fixed-wing aircraft used for resource and diverse missions on call-when-needed contract average 45 to 50 years old. The exclusive use twin-engine air tactical fixed-wing fleet averages over 45 years old. The leased twin-engine aerial supervision fixed-wing fleet averages less than twenty years old and are current production aircraft. The Forest Service owns one aerial supervision aircraft which is less than five years old.

Smokejumper Aircraft

The Forest Service owns two light twin-engine aircraft, and they average 44 years old. Several other light twin-engine aircraft are contracted. They average 44 years old, with the oldest on contract manufactured in 1973. The Forest Service owns ten operational large fixed-wing Shorts SD3-60 Sherpa aircraft, averaging 28 years old. CASA 212 and Dornier 228 large aircraft are contracted for smokejumper operations and average 38 years old.

Rate of attacking fires

Contract language for airtankers, helicopters, aerial supervision aircraft and multi-engine water scoopers states, "the aircraft shall be airborne within 15 minutes."

Questions from Rep. Marcy Kaptur

Urban Reforestation

Chief Christiansen, I am a huge supporter of the Urban and Community Forestry program at the forest service. This program provides urgently needed assistance to communities working to address tree cover shortfalls and related public health, economic, and quality of life concerns.

I was pleased that in FY 21, the committee increased funding for U&CF for a modest but important with an emphasis on invasive pests. Recognizing the Administration's stated commitments — which I share — to address both climate responses and equity investments in underserved communities, I believe the U&CF program can provide critical additional

assistance to these communities, with trees that reduce urban surface temperatures, energy use, economic inequities, and heat-related illness and loss of life.

In addition, I recognize that growing, planting, and conserving these vital urban trees can provide much needed, family-wage paying jobs.

Kaptur Q1: Can you share your thoughts about the potential of the U&CF program to enhance urban tree cover and bring climate benefits to communities that desperately need them?

Answer. The Urban and Community Forestry Program provides funding and technical support to 63 State and territory forestry agencies, more than 20 national partners, and over 150 community tree groups to help American communities maintain and protect about 12 billion trees and works with cooperators to leverage private funding to maintain tree canopy, resulting in about 1 million trees planted annually. Urban and Community Forestry authorities enable States to deliver technical and financial assistance to nearly 8,000 communities nationwide to better manage and benefit from urban trees. Urban trees provide tremendous social, public health, economic and environmental benefits to the public. In addition to the physical and mental health benefits of urban tree canopy enhancement, direct climate benefits include: 1) **Reduced summer peak temperatures** - due to a tree's ability to absorb radiation and transpire, trees can lower air temperature by as much as three to seven degrees Celsius compared to asphalt or concrete; 2) **Improved air quality** - a tree's ability to remove air pollutants such as sulfur dioxide, ozone, carbon monoxide, nitrogen oxides, cadmium, chromium, nickel, lead and small particulates (less than ten microns) is a particular benefit to urban areas; 3) **Reduced storm water run-off and improved water quality** - it is estimated that trees can absorb the first thirty percent of most precipitation events through their leaves and another thirty percent can be absorbed through the root system.

A study by the non-profit, [American Forests](#), estimates that 31.4 million trees need to be planted every year in order to address the deficit of trees in socioeconomically disadvantaged neighborhoods, create jobs, and slow the effects of climate change. UCF funding and authorities are critical to supporting climate mitigation and adaptation for vulnerable communities.

[EcoTrust's Report on Jobs and Equity in the Urban Forest](#) focused on Portland, Oregon and found that for every \$1 million of direct economic activity generated by the Portland-based green infrastructure company, 16 direct jobs and 23 total jobs were created. EcoTrust's report was funded through the UCF Challenge Cost Share Grant Program.

Emerald Ash Borer

The FY 21 Interior Appropriations bill included \$2 million to assist communities recovering from the drastic impacts of Emerald Ash Borer in the Urban and Community Forestry Program. This funding announcement closes early next week, and rest assured that a well-developed and community supported proposal is forthcoming from Ohio.

In Ohio and in many states across the nation have been truly devastated by EAB infestations. Urban tree canopies protect at risk populations, decrease health costs and improve a community's sense of self.

Kaptur Q2: In general, can you discuss ways in which urban tree reforestation can benefit underserved communities?

Answer. Underserved communities are disproportionately burdened by environmental factors that urban tree reforestation can improve. Some of the direct benefits that result from urban tree canopy enhancements are reduction in summer peak temperatures, improvement in air quality, reduction in storm water run-off and improved water quality. The Urban and Community Forestry Program (UCF) is finding innovative ways to help our most vulnerable communities plan, plant, and maintain urban forests and quantify their benefits for policymakers.

- Recognizing the safety concerns of dead standing ash and the high costs associated with tree removal, in FY 2019 the UCF Program funded 3 pilot programs to test creative means of helping communities remove dead standing ash in high use public areas. For example, in the City of Gary, Indiana, 80 high risk dead and dying ash were removed and 66 replanted.
- An outgrowth of the Northwest Indiana Urban Waters Federal Partnership, *CommuniTree* is an alliance of non-profits, government agencies, universities, and businesses. The initiative was spurred by the impact of emerald ash borer and the importance of trees to stormwater management and community revitalization. Since 2016, over 40 communities have benefited from over 8,000 trees planted through the collaboration.
- UCF funding in Virginia is being targeted to support community-based tree planting and maintenance in formerly redlined, vulnerable neighborhoods in Richmond, identified through a 2017 urban heat mapping project. In FY 2021, the heat mapping partnership will be expanded to nine other communities across Virginia to help prioritize urban forestry investments. Mitigating the effects of urban heat islands through enhancement of tree canopy is a high priority for the program and represents a significant need for vulnerable communities.

Kaptur Q3: Can you provide a breakdown of the urban tree canopy reforestation projects the Forest Service has supported with pass through money provided by the Great Lakes Restoration Initiative in the last several years?

Answer. From 2018-2020, the Forest Service awarded 49 grants to non-Federal partners for urban reforestation totaling more than \$6 million, with funding from the Great Lakes Restoration Initiative. The purpose of these projects was to mitigate emerald ash borer impacts and/or reduce runoff and nonpoint source pollution from degraded sites. When completed, projects are expected to plant nearly 80,000 trees and add nearly 800 acres of tree canopy (at an average of 100 trees per acre). These projects would result in approximately 4.5 million gallons of stormwater intercepted while trees are young, and more than 10 times that value as trees reach maturity. (See detailed project table in Appendix 1).

Civilian Climate Corps

For the last several Congresses, I have introduced a CCC bill. I strongly believe that during a time of instability and uncertainty, a 21st Century CCC is needed to help our nation grow and evolve. I was pleased to see that President Biden proposed \$200 million for a 21st Century CCC in the FY 22 budget request. Budget details are still being fleshed out, but as the year unfolds, I am particularly interested in understanding how the Forest Service and the urban and community forestry program can be a key CCC partner.

Kaptur Q4: Can you outline for us the benefits of a modern 21st century CCC for engaging, recruiting, and empowering urban communities as CCC partners?

Answer. A Civilian Climate Corps offers the opportunity to engage a broad, diverse group of participants in conserving our Nation's natural resources and supporting communities. Corps work engages the next generation of conservation stewards in climate-smart practices, builds civic engagement, and provides employment and training in climate solutions. It also creates a conservation connection with urban communities across the country. Underserved urban communities are disproportionately affected by loss of nature, climate change, and inequitable access to the outdoors. A Civilian Climate Corps will further enable these communities to enjoy the benefits of conservation, access to parks, and environmental justice.

Service crew members with the Forest Service work in communities from Maine to California on projects that help people and natural resources while gaining important job skills and learning about environmental stewardship and civic responsibility. A modern 21st century CCC could include urban forestry and engagement with urban communities to meet present day challenges. Urban forestry is a fast-growing field, with high demand for workers and good wages. An analysis by the organization American Forests shows that an investment of \$1 million will result

in 25.7 jobs in the industry. Partnering with community-based organizations can introduce youth to a wide variety of careers in natural resources, supplement limited municipal budgets to increase local capacity, better maintain park and natural area infrastructure, and increase socioeconomic and health benefits in underserved urban communities. The Urban and Community Forestry Program works in several cities with urban youth corps programs and is well positioned to manage the urban component of the proposed CCC. Our locally based partners are in cities nationwide. Examples include Greening Youth Foundation's Urban Youth Corps in Atlanta, GA and The Greening of Detroit in Detroit, MI, which runs a [Green Corps Summer Youth Program](#).

Kaptur Q5: Can you flesh out some of the goals that a modern CCC would have in rebuilding urban canopies and empowering communities not typically USDA partners?

Answer. Through a modern CCC, the Forest Service would build future capacity in the recreation and natural resource economies by engaging diverse and minority communities to create green infrastructure and enhance tree canopy in socioeconomically disadvantaged urban communities. The CCC would also help communities adapt to climate change and mitigate its impacts by maintaining and managing existing green spaces, trees, and natural areas in cities. Through the CCC, the Forest Service would engage youth in underserved communities by connecting them with our public open spaces and train the next generation of leaders in the natural resources and conservation fields.

Human Health and Forest Health

One of the reasons I am so supportive of the CCC and the cooperative efforts to plant trees is the dramatic, and clear public health benefits of urban tree canopies. A 2014 Forest Service study on Environmental Pollution concluded that trees and forests removed over 17.4 million tons of pollution with a human health value of \$6.8 billion. These trees provided \$4.7 billion in human health benefits in urban areas alone. Nationally, our trees reduced 670,000 incidences of acute respiratory symptoms. And at a time when our nation is working to restore our confidence in our system of justice, and the destroy deeply rooted racial inequalities, the forest service plays a critical role in rebuilding communities so often left behind.

Kaptur Q6: Could you elaborate on how can the Forest Service is partnering with communities in need to restore these tree canopies, and to serve underserved communities that face the most severe human health impacts of respiratory diseases like child asthma?

Answer. Research, including work done by Forest Service Research and Development, shows that people living near parks and green space have less mental distress, are more physically active, and have extended life spans. People in cities who walk by green space have lower heart rates, an indicator of stress, and report lower levels of anxiety than those who walk by buildings

or vacant lots. In New York City, lower tree canopy has been associated with higher childhood asthma rates, and for every 340 additional trees per square kilometer, those rates dropped by 25 percent.

The Forest Service provides technical, financial, and educational support to communities to help them identify tree canopy extent, prioritize locations for tree plantings to maximize benefits, and manage threats to canopy loss. For example, the Forest Service Urban and Community Forestry Program, in partnership with the City of Los Angeles and numerous community partners, is guiding the development of the city's Urban Forest Management Plan. By conducting tree canopy analysis through the lens of equity and human health, we create a strategy for urban tree canopy expansion that can positively impact underserved areas and improve health metrics on a meaningful level.

During the COVID-19 pandemic, natural areas in urban settings saw unprecedented use—a trend that is expected to continue. A partnership between the Forest Service and the Natural Areas Conservancy is exploring the health benefits of forests in cities across the country and their value in providing physical, emotional, and mental support. Despite increased visitation to natural areas, long-term impacts on municipal and organizational budgets remain uncertain. These uncertainties could be a turning point for urban greenspace, and leadership, coordination, and collaboration are needed. The Forest Service hopes to continue this partnership to promote and advance healthy forested natural areas in urban areas where vulnerable communities are most at risk.

Appendix 1.**Breakdown of USDA Forest Service Great Lakes Restoration Initiative (GLRI) Urban Reforestation Projects, 2018-2020**

<u>Recipient Organization</u>	<u>Project Title</u>	<u>GLRI Funding</u>	<u>Year</u>	<u>Project State</u>
Openlands	Openlands TreePlanters Program III	\$ 100,000	2018	Illinois
Morton Arboretum, The	Increasing tree canopy and resilience after Emerald Ash Borer in Lake County in Illinois	\$ 99,430	2018	Illinois
Student Conservation Association, Inc., The	Timberland Urban Greening Crew	\$ 100,000	2018	Illinois
Niles, Village of	Tree Planting Program - FY2018-2019	\$ 50,000	2018	Illinois
Northwestern Indiana Regional Planning Commission	Continued Implementation of The Northwest Indiana CommuniTree Program	\$ 100,000	2018	Indiana
Wildlife Habitat Council	Urban Forestry Actions at the Port of Indiana	\$ 99,979	2018	Indiana
Friends of Grand Rapids Parks	Southern Grand Rapids Emerald Ash Borer Mitigation and Urban Forest Revitalization	\$ 100,000	2018	Michigan
St Clair Shores, City of	2018 Urban Tree Canopy Restoration in St. Clair Shores, Michigan	\$ 100,000	2018	Michigan
Greening of Detroit, The	Emerald Ash Borer Mitigation and Urban Canopy Restoration	\$ 100,000	2018	Michigan
Delta Institute, The	Oceana City Tree Planting to Reduce Stormwater Runoff/Build Capacity for Forestry Stewardship	\$ 99,994	2018	Michigan
Superior Watershed Partnership	Three Communities Partnering to Reduce Runoff to Lake Superior and Lake Michigan	\$ 99,985	2018	Michigan
Marquette County Conservation District	Coastal Restoration in the City of Marquette	\$ 51,451	2018	Michigan
Greening of Detroit, The	Reforestry to Reduce Runoff	\$ 100,000	2018	Michigan
Releaf Michigan, Inc.	Improving Water Quality through Community-Based Tree Planting	\$ 99,500	2018	Michigan

<u>Recipient Organization</u>	<u>Project Title</u>	<u>GLRI Funding</u>	<u>Year</u>	<u>Project State</u>
Community Action Duluth Inc	Stream Corps Restoration in the Lake Superior Watershed	\$ 99,420	2018	Minnesota
Saint Regis Mohawk Tribe	Akwesasne Ash Loss Canopy Restoration Project	\$ 99,998	2018	New York
Onondaga County Soil & Water Conservation District	Onondaga County Parks Emerald Ash Borer Mitigation Tree Planting	\$ 100,000	2018	New York
Atlantic States Legal Foundation Inc	Tree Planting on Degraded Sites to Manage Stormwater Runoff in Oswego County	\$ 99,983	2018	New York
Cleveland Metroparks	Great Lakes Restoration Initiative - Emerald Ash Borer Mitigation in Tinker's Creek Watershed - Phase II	\$ 100,000	2018	Ohio
Cleveland, City Of	Mitigating Emerald Ash Borer in Cleveland	\$ 80,696	2018	Ohio
Geauga, County of	Orchard Hills Coldwater Streams Protection	\$ 72,000	2018	Ohio
Sandusky, City of	City of Sandusky Runoff Reduction Through Strategic Tree Planting	\$ 100,000	2018	Ohio
Northeast Ohio Regional Sewer District	Trees for Stormwater Management in Cuyahoga County	\$ 61,020	2018	Ohio
Milwaukee, City Of	Beyond Ash Mitigation to a Sustainable Urban Forest	\$ 100,000	2018	Wisconsin
Milwaukee Metropolitan Sewerage District	Increasing Community Resilience Through Improved Tree Canopies	\$ 100,000	2018	Wisconsin
1000 Friends of Wisconsin	Legacy Communities Green Infrastructure	\$ 70,000	2018	Wisconsin
The Morton Arboretum	Improving canopy in under resourced neighborhoods in the City of Chicago	\$ 152,000	2019	Illinois
Calvin College	Trees to Heal the Plaster Creek Watershed	\$ 176,647	2019	Michigan
Releaf Michigan	A Community Based Approach to Improve Water Quality in the St. Joseph River Watershed of Michigan and Indiana	\$ 130,000	2019	Michigan

<u>Recipient Organization</u>	<u>Project Title</u>	<u>GLRI Funding</u>	<u>Year</u>	<u>Project State</u>
Grand Valley Metro Council	Grand River Green Schools	\$ 125,428	2019	Michigan
Muskegon Conservation District	Tree Planting to Reduce Runoff in the White River Watershed	\$ 105,179	2019	Michigan
The Greening of Detroit	Reduce Runoff from Degraded Sites through Green Infrastructure	\$ 273,132	2019	Michigan
City of Milwaukee	Improving Resiliency of Milwaukee's Street Trees	\$ 200,000	2019	Wisconsin
Lakeshore Natural Resource Partnership	EAB Mitigation in Sheboygan County, Wisconsin	\$ 200,000	2019	Wisconsin
Milwaukee Public Schools	Milwaukee Public Schools Vincent High School Hardwood Forest	\$ 350,000	2019	Wisconsin
Green Bay Metropolitan Sewerage District	A NEW Water Partnership to Reduce Stormwater Runoff in Brown County, WI	\$ 171,122	2019	Wisconsin
Openlands	Openlands TreePlanters Program IV	\$ 199,569.00	2020	Illinois
Morton Arboretum, The	Reforestation in Under-Resourced Communities After the Emerald Ash Borer	\$ 142,306.00	2020	Illinois
Wildlife Habitat Council	Calumet Industries and Communities Working Together to Reduce Runoff	\$ 118,613.00	2020	Illinois
Morton Arboretum, The	Increasing Green Infrastructure in the Little Calumet River Watershed	\$ 260,758.00	2020	Illinois
Greening of Detroit, The	EAB Mitigation and Urban Canopy Restoration in Detroit	\$ 130,000.00	2020	Michigan
Alliance of Rouge Communities	Reducing Runoff in the Rouge River AOC	\$ 261,780.00	2020	Michigan
Michigan Department of Natural Resources	Prioritizing Urban Forest Systems as Green Storm-Water Infrastructure in Southeast Michigan	\$ 100,000.00	2020	Michigan
Lake Superior State University	St. Marys River Green Stormwater Demonstration Project	\$ 250,000.00	2020	Michigan
Metropolitan Park District of The Toledo Area	Lucas County Reforestation Initiative	\$ 200,000.00	2020	Ohio

<u>Recipient Organization</u>	<u>Project Title</u>	<u>GLRI Funding</u>	<u>Year</u>	<u>Project State</u>
Western Reserve Land Conservancy	Reforestation of the Forest City - Reducing Runoff from Cleveland to Lake Erie	\$ 110,035.00	2020	Ohio
Cleveland Metroparks	Euclid Creek Soil Decompaction and Green Infrastructure Project	\$ 193,500.00	2020	Ohio
Ozaukee, County of	Native Tree Planting in the Ozaukee County Hawthorne Hills County Park Project Area	\$ 200,000.00	2020	Wisconsin
Milwaukee, City of	Replacing Ash Trees to Fight Climate Change	\$ 100,000.00	2020	Wisconsin

TUESDAY, APRIL 20, 2021.

**FISCAL YEAR 2022 BUDGET REQUEST FOR THE
DEPARTMENT OF THE INTERIOR**

WITNESSES

**HON. DEB HAALAND, SECRETARY, DEPARTMENT OF THE INTERIOR
RACHAEL TAYLOR, PRINCIPAL DEPUTY ASSISTANT SECRETARY OF
POLICY, MANAGEMENT, AND BUDGET, DEPARTMENT OF THE INTERIOR**

Ms. PINGREE. Good morning. This hearing will now come to order.

As the hearing is fully virtual, we must address a few house-keeping matters.

For today's meeting, the chair or the staff designated by the chair may mute participants' microphones when they are not under recognition for the purposes of eliminating inadvertent background noise. Members are responsible for muting and unmuting themselves. If you notice that you have not unmuted yourself, I will ask you if you would like the staff to unmute you. If you indicate approval by nodding, the staff will unmute your microphone.

I remind all members and witnesses that the 5-minute clock still applies. If there is a technology issue, we will move to the next member until the issue is resolved, and you will retain the balance of your time.

You will notice a clock on your screen that will show how much time is remaining. At 1 minute remaining, the clock will turn to yellow. At 30 seconds remaining, I will gently tap the gavel to remind members that their time is almost expired. When your time has expired, the clock will turn red, and I will begin to recognize the next member.

In terms of the speaking order, we will follow the order set forth in the House rules, beginning with the chair and ranking member, then members present at the time the hearing is called to order will be recognized in order of seniority, and finally members not present at the time the hearing is called to order.

Finally, House rules require me to remind you that we have set up an email address to which members can send anything they wish to submit in writing at any of our hearings or markups. That email address has been provided in advance to your staff.

Okay. That is the end of the technical part, so let us go ahead and start our hearing.

I am so excited to welcome Secretary Deb Haaland to her first hearing since being confirmed as the 54th Secretary of the Interior and the first ever Native American to serve as a Cabinet Secretary. We are all very happy to congratulate our former colleague on assuming this important new role, and we are really looking forward to hearing your thoughts on the fiscal year 2022 budget request for

the Department of Interior and other initiatives that the President has introduced.

I want to mention that joining the Secretary is Rachael Taylor, Principal Deputy Assistant Secretary of Policy, Management, and Budget. So just to note for our colleagues on the committee, Ms. Taylor was the Senate Appropriations clerk for the Interior Subcommittee. And, of course, as appropriators, we think that was an excellent move that Interior appointed her to this important position.

So thank you so much and welcome, Rachael.

Today's hearing will primarily focus on the President's fiscal year 2022 budget request for the Department of the Interior. As we all know, the administration is still developing their full request, but this budget blueprint makes it clear that President Biden is committed to long overdue investments in being good stewards of our planet and fighting the climate crisis.

I am very encouraged about what has been outlined, specifically the return of science as the foundation for decisionmaking, the focus on climate change, and maintaining healthy ecosystems, all through the lens of environmental justice. I am also heartened by the executive orders in the American Jobs Plan that the President has initiated.

From my perspective, this budget is a refreshing change from the draconian budgets the committee has received over the last 4 years. I am looking forward to learning more details about how the Department plans to get us back on the right track and to advance the important work of being a good steward of our Nation's natural and cultural resources for future generations. I am also interested in how you will strengthen collaboration across the Interior's bureaus and with other Federal agencies, NGOs, and stakeholders.

We recognize the interrelatedness between health and well-being of our species and habitats, the impact that anthropogenic actions have on clean air and clean water, the need to preserve biodiversity, and the other important ecosystem services we rely upon to ensure the economic prosperity and the American public's health and well-being.

The President has laid out an ambitious agenda, and I hope today's discussion will be an opportunity to discuss the goals and objectives that you have established for the Department to support that agenda.

I would now like to yield to our ranking member, Mr. Joyce, for his opening remarks.

Mr. JOYCE. Thank you, Madam Chair.

It is truly a privilege to join you in welcoming our distinguished witness, a former colleague, a member of the Pueblo of Laguna, and 54th Secretary of the Interior, the Honorable Deb Haaland. For many of us on this subcommittee dedicated to upholding the Federal Government's trust and treaty responsibilities to Native American Tribes, today is a special day. So glad to have you here.

Let me also extend a warm welcome to your Principal Deputy Assistant Secretary, Ms. Rachael Taylor. Ms. Taylor is a highly respected former staffer to the Senate Interior's Appropriations Subcommittee, with a knack for finding bipartisan solutions to problems. Welcome.

Secretary Haaland, conserving our Nation's natural resources, preserving our diverse cultural heritage, and upholding our trust responsibilities are goals we all share. While we will disagree on many of the details, we remain united in pursuit of these goals. May we begin this new working relationship united in the recognition of this shared commitment and as our disagreements are amplified in the media and threaten to divide us, I hope we can remember that we are in this together and that only by working together can we achieve long-lasting solutions.

We worked well together during your time in Congress, and I am committed to continuing to do so. You have already begun to demonstrate the same commitment to me and my Republican colleagues here today, and I want to thank you for that.

Former Interior Secretary Gale Norton recently said, "Every Interior Secretary takes office saying, 'I want to do more for Indian Country.'" And every Interior Secretary leaves office saying, I wish I had been able to do more for Indian Country.

I am not sure yet, but I can imagine the same holds true for those who have held the gavel of this subcommittee. Because, as the U.S. Commission on Civil Rights has reported, there is so much more to do. Madam Secretary, your proposal for a \$600 million increase certainly does more. And I am guessing you would have done even more if you could have.

Still, I think it is fair to say that you will find that several of us on this subcommittee are willing partners ready to follow your lead in Indian Country. I think what Secretary Norton was saying, though, is that the Interior Department, like this subcommittee, faces the reality of budget allocations handed down from above that force us to make choices with finite funding.

Lately, the Federal Government has been spending money it does not have at such a rapid clip that I fear the term "finite funding" may lose its meaning. Though much of it was justified to overcome the pandemic and subsequent economic devastation, my concern is that the spending has gotten so out of hand that people will begin to think it is normal.

As we continue to restore our way of life and reignite our economy, it is imperative that the Federal Government finds a way to live within its means so that we do not have to saddle future generations with even more economic burden than what already awaits them.

To do that, this Congress and this President must return to the practice of evaluating and funding programs based upon their performance. We must be willing to make the difficult but responsible choices as stewards of taxpayer dollars. The initial fiscal year 2022 Department of the Interior budget proposal before us today is at \$17.4 billion, a \$2.4 billion or 16.3 percent increase. Because the administration has not yet released a comprehensive request, there is no indication of any program evaluations or offsets and it is unclear how much of the Department's \$17.4 billion proposal is within this subcommittee's jurisdiction.

In the absence of budget details, today's discussion will instead likely focus on the Department's policies. So, let me take a moment to focus on a few.

Thursday marks another Earth Day. I count myself among Leader McCarthy and many other House Republicans who recognize that human activity is contributing to the changing climate. I believe we should be doing everything we can to help our constituents mitigate climate risk in their everyday lives, while we pursue realistic, free market, and innovative solutions to climate change that protect the interests of the American people, our communities, and our country's economic well-being.

The U.S. and most of the world are dependent upon fossil energy for the foreseeable future, whether people like it or not. So, I urge you not to lock America out from the domestic energy and minerals it needs for a smooth transition to a cleaner energy future.

Top-down policies that force hardship on Americans never works when the costs outweigh the benefits in their everyday lives, and we need only to look at the pandemic for recent examples. The President set a goal "to encourage broad participation" in "conserving at least 30 percent of our lands and waters by 2030." I am concerned by what I am hearing from outside interests about locking up Federal lands from sustainable, responsible use. I am also concerned that a singular focus on acreage shifts the conversation to open lands out West and misses the broader point.

All of us can participate in conservation. Programs like Homegrown National Park and others show that an increasing number of people in urban and suburban areas want to be part of the solution. I urge you to invite them into the 30-by-30 initiative.

Finally, in northeast Ohio, the Great Lakes are our lifeblood. From preventing the spread of invasive carp to preventing harmful algal blooms to restoring resilient coastal habitats, there are several important programs within your purview that are of vital importance to my district. I hope we can work on these together. I invite you to come visit and see how these programs are making a difference.

Thank you again for being here today, Secretary Haaland. I look forward to our discussion. And I also want to pass on greetings from Representative Davis, who I had breakfast with this morning, who also said that he is honored that you are in your position as Secretary.

With that, thank you, Chair Pingree. I yield back.

Ms. PINGREE. Thank you, Ranking Member Joyce.

And I would now love to recognize Secretary Haaland for her opening remarks.

Secretary HAALAND. Thank you very much.

Chair Pingree, Ranking Member Joyce, Members of the Subcommittee, it is an honor and privilege for me to be here with you today on behalf of the Department of the Interior.

It is deeply meaningful for me as the first Native American Cabinet Secretary to be here on the ancestral homelands of the Anacostan and Piscataway people, speaking before this subcommittee. It also means a tremendous amount to me that the first hearing since my confirmation is before you, my former colleagues from the House of Representatives. I understand the important role that all of you play in the success of the Department of the Interior and our many programs.

I want to particularly recognize the work that you have done on a bipartisan basis to lead the way on priorities like the Great American Outdoors Act and funding Tribal programs. Your leadership has made a real difference in the lives of Native Americans and Alaska Natives in communities across our country.

I am here today to roll up my sleeves to work with you as a partner now on this side of the legislative process and help to build upon your passion and hard work. I want us to work together to make sure that the Department is ready to meet the challenges we have in front of us, like the existential threat of climate change and the effects it has on our country. The President has laid out a clear vision for a whole-of-government approach to addressing the ongoing climate crisis and challenged the Department to play a leadership role in meeting this moment.

On Friday, I issued two secretarial orders, one to prioritize action on climate change and establish a departmental climate task force, the other to rescind a number of policies from the previous administration that favored energy production at the expense of other priorities. My hope is that these orders will begin to restore balance to how the Department makes land management decisions, elevate the role of science, and reaffirm the importance of stakeholder engagement and environmental justice.

Addressing the climate crisis is also a recurrent theme in the President's discretionary request for 2022. The budget before the subcommittee today reflects the President's ambitious vision to lift up the Nation in this unprecedented time. By addressing the climate crisis, we will provide much needed resources to Tribal nations, invest in conservation of public lands and waters, advance environmental justice, recognize the important role of science, and chart a path toward a clean energy future for all Americans.

The President's 2022 budget request proposes a total of \$17.4 billion for the Department of the Interior, a \$2.4 billion or 16 percent increase above current funding levels. Specifically, the President's proposal invests in America with \$4 billion, a \$600 million increase to honor and strengthen our commitments to Tribal nations; more than \$450 million to remediate orphaned oil and gas wells and reclaim abandoned mines on Federal and non-Federal lands, bringing thousands of jobs to communities across the country; investments to promote racial justice inequity in underserved communities, including a National Park Service voting rights center project at the Selma Interpretive Center, honoring the legacy of civil rights leaders including the late, dear Representative John Lewis; a \$550 million increase to accelerate clean energy deployment and expand climate adaptation and ecosystem resilience on our public lands; \$200 million in climate-related science to better understand climate impacts and how best to mitigate, adapt, and increase resilience in our communities; a \$200 million increase for science-driven conservation to manage the Nation's natural resources in line with America's climate biodiversity and clean energy needs; and a \$100 million increase to address the growing threat of wildfire through our Hazardous Fuels and Burned Area Rehabilitation Programs, which is especially important as we face drought in the West like we will during this fire season.

Complementing this request is the American Jobs Plan, a longer-term strategy to create millions of good-paying jobs, rebuild our country's infrastructure, and position America to outcompete others on the global stage.

We must use every lever at our disposal to make necessary progress. This Nation has the opportunity of a lifetime to strengthen our country, fight climate change, and improve our way of life for generations to come. To build back better, we need both a strong annual budget for the Department and the President's jobs plan. I look forward to working with each of you to achieve these important goals. I commit to you that I will continue to honor and respect the role of this Subcommittee with a confident expectation that, working together, we can accomplish great things on behalf of the American people.

And just like you, Madam Chair and Ranking Member Joyce, I am pleased to be joined this morning by Rachael Taylor, Principal Deputy Assistant Secretary of Policy, Management, and Budget. She is here to help out with some details, if necessary.

This concludes my opening remarks. Thank you again for having me, and I am very happy to answer any questions that any of you have.

[The statement of Secretary Haaland follows:]

**STATEMENT OF DEBRA HAALAND
SECRETARY
U.S. DEPARTMENT OF THE INTERIOR
BEFORE THE SUBCOMMITTEE ON
INTERIOR, ENVIRONMENT AND RELATED AGENCIES
COMMITTEE ON APPROPRIATIONS
U.S. HOUSE OF REPRESENTATIVES**

APRIL 20, 2021

Chair Pingree, Ranking Member Joyce, Members of the Subcommittee, thank you for the opportunity to testify in support of the President's Discretionary Request for fiscal year 2022 and discuss other matters of importance to the Department of the Interior.

I would like to start by telling you what an honor and privilege it is for me to be here with you today to represent the Department of the Interior. It is also deeply meaningful for me, as the first Native American Cabinet Secretary, to speak to you from the ancestral homelands of the Anacostan and Piscataway people.

This is my first hearing since my confirmation, and the month I have now spent at the Department of the Interior has provided me with a sincere appreciation for the mission and the work of its tens of thousands of dedicated professionals. One of the most important tasks for me as Secretary is lifting up the voices and the expertise of the Department's dedicated career employees to inform the decisions that we make. I only wish every American could see the hard work and the singular focus on results that I see on a daily basis from our workforce.

I also take great pride that the Department is also focused on listening to the people we serve—from conducting extensive Tribal consultations on how to strengthen our government-to-government relationships, to engaging a diverse group of industry, labor, environmental justice, natural resource advocates, and Indigenous organizations about the need to reform our outdated fossil fuel leasing system.

This spirit of listening, outreach, and collaboration is the same approach I intend to take in my relationship with the Appropriations Subcommittees. I will honor Interior's long tradition of working closely and collaboratively with this Subcommittee, and I understand the important role you play in the success of the Department and our programs. I commit to you I will continue

that tradition with the confident expectation that working together we can accomplish great things on behalf the American people.

I am proud of all the work this Administration has already done in a short period of time to address the unprecedented challenges we face as a Nation, including the need to address the COVID-19 pandemic, strengthen the economy, address the existential threat of climate change, and make real and tangible progress on racial justice and equity in all facets of American life.

This includes the passage of the historic American Rescue Plan, which includes billions of dollars in investments to help Tribal Nations weather the pandemic and stabilize their economies, support Tribal schools, as well as address wildlife-related pandemic concerns. After conducting extensive consultation with Tribal Nations on how to distribute funds, the Department is fully focused on implementing the plan and ensuring these funds reach the communities who need them as expeditiously as possible. This is in addition to our daily contributions to the whole-of-government response to the COVID-19 pandemic, which we implement diligently to keep our workforce and the people who visit Federal lands safe.

That said, there is so much more work to do. That's why I am pleased to come before you today to talk about the President's 2022 Discretionary Request. This proposal makes a significant down payment to implement the President's ambitious vision to lift up the Nation by addressing the climate crisis, providing much-needed resources to Tribal Nations, restoring balance on public lands and waters, advancing environmental justice, and investing in a clean energy future.

The President's 2022 Discretionary Request lays out the important role the Department of the Interior will play to accomplish the Administration's goals. The proposal for Interior totals \$17.4 billion, a \$2.4 billion or 16 percent increase from the 2021 enacted level. This request stands in stark contrast to the proposals for Interior during the last four years, which were on average, \$2 billion below the actual amounts appropriated by this Subcommittee.

The President has released his discretionary funding priorities for 2022 which include a range of targeted investments across government to move our country forward. Within Interior, the President's Discretionary Request invests \$4.0 billion, more than \$600 million above current funding, to honor and strengthen our commitments to Tribal Nations across a range of programs.

The request invests in teachers and students in Bureau of Indian Education funded schools, and Tribal programs in clean energy development, and law enforcement and court programs to improve safety. These investments will directly enhance the educational opportunities of over 46,000 K-12 students in Bureau of Indian Education funded schools, support the effective management of the 56 million acres of lands held in trust for the benefit of Tribal Nations – the largest land trust in the world – and strengthen self-determination and self-governance programs to bolster Tribal sovereignty. These investments will complement the American Rescue Plan’s substantial investments in Indian Country, as well as other investments in the Discretionary Request, to support and strengthen Tribal communities.

The Discretionary Request invests in jobs and the environmental quality of energy communities across the country, proposing over \$450 million for Interior to remediate many of the thousands of orphaned oil and gas wells and reclaim abandoned mines on Federal and non-Federal lands. This funding, which more than doubles the enacted 2021 discretionary level, builds on the goal of creating 250,000 good-paying union jobs.

The Discretionary Request promotes racial justice and equity in underserved communities by embedding environmental justice and racial equity goals into programs across the Department, with discrete investments in key areas, such as an additional \$20 million to expand access to the over 70 national park units that preserve and tell the story of historically underrepresented and marginalized groups, and to increase support to local and State efforts to preserve sites that document the struggle for equal opportunity. The investments include funding for a voting rights center honoring the legacy of Civil Rights leaders, including that of the late Representative John Lewis, at the Selma Interpretive Center.

Through the 2022 Discretionary Request, and other means, the Administration is taking decisive action to address the existential threat of climate change. The Discretionary Request provides an additional \$550 million over 2021 enacted levels to decrease climate pollution, accelerate clean energy deployment, and expand efforts around climate adaptation and ecosystem resilience among all the Department’s land management agencies. These investments will directly benefit Americans by helping to limit climate-induced disruptions, including for coastal communities,

the outdoor recreation economy, and people whose lives and livelihoods are intertwined with Interior-managed lands and resources.

These efforts will be supported by an investment of \$200 million in climate-related science to improve our understanding of climate impacts and how best to implement mitigation, adaptation, and resilience efforts. The Discretionary Request also provides an additional \$200 million for science-driven conservation to align management of the Nation's natural resources with America's climate, biodiversity, and clean energy needs. These investments support the goal of conserving 30 percent of land and water by 2030, including through voluntary actions and incentives that support the stewardship efforts of farmers, ranchers, and other private landowners. The funding request will also support the Civilian Climate Corps to develop the next generation of conservation workers and create a new pathway to good-paying jobs.

To address the growing threat of wildfire to public health and community safety, the Discretionary Request proposes a robust increase of \$100 million in Interior's hazardous fuels and burned area rehabilitation programs. This funding will support efforts to manage vegetation and reduce the intensity, severity, and negative effects of wildfire, in line with the Administration's science-based approach to risk management, and complementing our other efforts to improve land health and resilience to climate change and reduce carbon emissions. As we head into what is likely to be a very challenging wildland fire season due to historic levels of drought in the West, these important investments in risk reduction continue to be top of mind.

The 2022 funding request proposes to rebuild core functions and capacities within Interior which have diminished in recent years with investments in USGS science and staffing, and the core operations of parks, wildlife refuges and public lands.

The President's 2022 Discretionary Request recommends investments for Congress to consider as part of the appropriations process, but I also want to take a moment to discuss how this proposal complements the recently released American Jobs Plan. The investments in the 2022 request provide a key opportunity for the Administration and Congress to work together to restore levels of investment in programs at the Department and across government, and to lay a foundation for core programs that improve the life of everyday Americans. At the same time, the

American Jobs Plan lays out the President's comprehensive, long-term strategy to create millions of good jobs, rebuild our country's infrastructure, and position America to out-compete others. They both play a critical role in the President's vision to Build Back Better.

Interior also plays an important role in the America Jobs Plan. The Plan proposes a \$16 billion investment to address orphan wells and abandoned mine lands, which will put hundreds of thousands to work in union jobs plugging oil and gas wells and restoring and reclaiming abandoned coal, hardrock, and uranium mines. At the same time, this investment will reduce the methane and brine that leaks from these wells. The Plan invests \$10 billion in the Civilian Climate Corps, to put a new generation of Americans to work conserving and restoring public lands and waters, increasing reforestation, increasing carbon sequestration in the agricultural sector, protecting biodiversity, improving access to recreation, and addressing the changing climate.

The American Jobs Plan's inclusive investments will support our Nation's rural and Tribal communities through targeted funding as part of broader efforts to expand broadband coverage and improve roads, bridges, and water systems. The Plan also calls for a \$5 billion Rural Partnership Program for economic development in rural regions, including Tribal Nations. These historic investments will help to revitalize rural and Tribal communities and address environmental injustices.

The President believes we must use every lever at our disposal to meet the moment and make necessary progress. I firmly believe we have the opportunity of a lifetime to strengthen our country, protect our environment, and improve our way of life for generations to come.

I look forward to working with you to achieve these goals. Thank you again for having me, and am pleased to answer any questions you may have.

Ms. PINGREE. Well, thank you so much, Madam Secretary. We are so pleased to have both of you in front of our committee, and thank you for your opening remarks.

I will now recognize myself for 5 minutes to begin the questions.

So I just want to reiterate, we are so pleased to have you in this role, and we are really looking forward as a committee in a bipartisan way working together with you in this partnership. So this relationship between the committee and your department is a high priority for us, and thank you for being with us today.

I am going to dig in on biodiversity and climate change and let you talk a little bit more about that. You have certainly taken on an awesome responsibility at a very challenging time for our country and for our planet, and we know the enormous challenges that are confronting us with climate change, the impact on our air, our water, our land, and our communities in particular and that there is a lot of work to be done.

I have also been very concerned and, frankly, just shocked when I read the May 2019 United Nations report about the decline in species, over 1 million species facing extinction. Scientists have also told us that 2.9 billion birds have been lost over the past five decades. I know that the President's budget includes another \$550 million over the 2021 enacted level to decrease pollution, accelerate clean energy development, expand efforts around climate adaptation, and ecosystem resilience.

So I would love to hear a little bit more about the work that you intend to do to protect and sustain biodiversity on our public lands, to mitigate for those changes, and also how you are thinking about an inclusive, equitable climate and conservation agenda.

So that is a lot of stuff to cover, but go for it.

Secretary HAALAND. Thank you, Chairwoman.

And absolutely this problem is big. It is—it is so big that it is going to take a lot of different programs and tools to tackle it. And I think that it would be an important investment in the long-term resilience of our economy and well-being for communities across the country.

And basically, we know that we need to strengthen the health and resilience of our land, water, and ecosystems, the habitats that those species that you are talking about rely on. That is absolutely important with drought in the West. As I mentioned in my opening remarks, some of those habitats are disappearing as we speak.

So, we are working hard to deploy clean energy alternatives. The President's plan to create jobs through the Civilian Climate Corps will be an amazing opportunity for folks to enter this space, if they haven't had opportunities like that before, creating benefits for generations to come. We are empowering folks who will care about our environment and carry this work on into the future, and the big investments in science, applying science to help communities plan and respond to drought, floods, extreme weather, and all of those issues.

A proactive forest and rangeland management program to reduce the wildfire risk is also in the plans. And wildfire, of course, in and of itself destroys that habitat again.

So, we have many, many opportunities with the budget, with the President's Jobs Plan to make these things a reality, and we are going to get to work to make sure that it happens.

And, of course, always happy to continue this conversation with you anytime.

Ms. PINGREE. Great. Thank you. I think this will be an ongoing conversation as we tackle the budget for these many important issues.

Last week, you issued a secretarial order establishing a climate task force, which seems like an important component. How do you envision the task force operating? How is it going to help the Department meet its commitments under the executive order that the President signed? Can you tell us a little more about that?

Secretary HAALAND. Of course. Part of the President's priorities since he came into office is an all-of-government approach. Yes, the DOI has important obligations to our climate, to our land and waters, but we also feel that many other departments can do their part in ensuring this. We will be happy to have more conversations with you about that as well, but I think it is an exciting time in this administration to put priorities like climate and science at the top.

Ms. PINGREE. Thank you very much, Madam Secretary.

I will yield back the small balance of my time, and happy to recognize Ranking Member Joyce for 5 minutes for his questions.

Mr. JOYCE. Thank you, Madam Chair.

As a former prosecutor and cofounder of the Bipartisan Task Force to End Sexual Violence, I am encouraged by your recent announcement to form a new unit within the Bureau of Indian Affairs Office of Justice Services to provide leadership and direction for work involving missing and murdered American Indians and Alaska Natives.

While serving in the House, you provided the task force with critical insight on steps Congress should take to address the persistently high rates of violence experienced by Native women and men. I was also proud to cosponsor your legislation, the Not Invisible Act, during the 116th Congress. That bill, now law, increases the coordination of efforts to reduce violent crime within Indian lands and against Indians.

Under the bill, the Department must designate an official within the Bureau of Indian Affairs to coordinate prevention efforts, grants, and programs related to missing Indians and the murder and human trafficking of Indians. I am pleased to see that you have continued doing this important work at the Department, given it remains a shared priority and this subcommittee has been supporting the Operation Lady Justice initiative started during the previous administration.

What parts of Operation Lady Justice have been working well, and where do you see room for improvement that led you to establishing this new unit?

Secretary HAALAND. Thank you, Ranking Member Joyce. And thank you so much for your attention, and I am grateful for the support that you gave me on this issue when I was in Congress and I know that your experience can help us to move forward in this space.

Operation Lady Justice turned attention to this important program. And there has been a lot of engagement across the government. We felt that it was important for this unit to provide leadership so that everyone is moving in the same direction. The new unit will improve coordination within and outside of the BIA to make sure that we are not missing anything, that we are making a bigger tent to ensure that we are not missing a thing on this issue.

As you know, this is an issue that has been going on for 500 years, since Europeans came to this continent. And I think that it's going to take a lot more effort. You know, we've started to scratch the surface and will continue digging deeper. And so, thank you again for your support.

Mr. JOYCE. Thank you.

What is the proposed fiscal year 2022 budget for this work, and are there other pieces in the FBI or other agencies budgets that we should be funding to help you succeed?

Secretary HAALAND. Well, I know that when Operation Lady Justice was first created, there was a \$1 million budget, and I believe we are increasing that by \$5 million this year. We will absolutely get you all the details you would like for the record. And, yes, I feel like with that added budget and the leadership of the Justice Services that we will be able to make some inroads and really make a difference for communities across the country.

Mr. JOYCE. That is great.

Another question. The opioid epidemic has been affecting every person in households across the country, and the COVID-19 pandemic has made the situation worse, unfortunately. That is why Representative Kilmer and I are working hard together to pass our bill, H.R. 654, the Drug-Free Communities Pandemic Relief Act. The situation is perhaps more dire in Indian Country than anywhere else, which is why the subcommittee has strongly supported the Department's Joint Opioid Reduction Task Force begun under the previous administration and led by the Bureau of Indian Affairs.

Last year, the task force led 14 operations across seven States, resulting in more than 313 arrests and the seizure of more than 2,600 pounds of illegal narcotics with an estimated street value of near \$20 million, more than double the price tag from the previous year.

Do you intend to keep the task force going during your tenure? And if so, what additional recourses are needed to build on last year's success?

Secretary HAALAND. Absolutely. The task force is part of the government-wide efforts targeting this problem. And we know that in terms of successes, the BIA's K-9 teams, for example, have been very effective in disrupting drug trafficking routes. We are going to keep up the work on this issue and appreciate your support on that as well.

This terrible problem continues to plague our community. So we will keep building on the efforts of the task force and make sure that we are doing everything we need to.

Mr. JOYCE. Thank you, Madam Secretary.

And, Madam Chair, I have no time to yield back.

Ms. PINGREE. You timed that so exquisitely well, just to the last second.

So I am pleased to recognize Representative Kilmer for his 5 minutes for questions.

Mr. KILMER. Thank you, Madam Chair.

And thank you, Madam Secretary, for being with us today, and congratulations on your confirmation. It is a humbling moment to recognize our Nation's first Native American Secretary of the Interior and someone many of us are pleased to and proud to consider a friend.

It should come as no surprise that I want to touch on a subject that I know we share a deep commitment to and that is ensuring that the Federal Government finally fulfills its unmet treaty and trust responsibilities to Native American communities. I am so grateful for your longstanding partnership on advancing this essential priority, certainly as my colleague in the House and throughout your leadership as the former co-chair of the Congressional Native American Caucus. And I know this will remain a key priority for you in your new role.

As you know, in 2003, the U.S. Commission on Civil Rights issued a report titled "A Quiet Crisis: Federal Funding and Unmet Needs in Indian Country," that documented the failures and outlined clear actions the Federal Government needs to take in order to meet its obligations.

In 2015, I led an effort in Congress, along with several of my colleagues on this subcommittee, to call on the Commission on Civil Rights to publish an update to this report to determine whether any progress had actually been made. And 3 years later, the Commission published its update, and to ensure that there was no confusion about their findings, they titled the report "Broken Promises: Continuing Federal Funding Shortfall for Native Americans." Indefensibly, almost nothing had changed.

When the Broken Promises report was published, I made a commitment to then-president Fawn Sharp with the Quinault Indian Nation, who first drew my attention to the Quiet Crisis report and called for leadership in updating this report, as well as the 10 other Tribal leaders that I have the honor of representing, that I would not let those recommendations fall on deaf ears again.

In my view, Congress has a moral and a legal obligation to fulfill the promises made to Indian Country, and I am so grateful for your shared commitment to achieving that goal. In fact, my colleague, Representative Simpson, and I led a letter signed by many of the members sitting here today to President Biden last month, calling on him to ensure his fiscal year 2022 budget reflected these priorities. And I am encouraged to see that the President's budgets blueprint includes \$4 billion, a more than \$600 million increase over current levels, to honor our Nation's commitment to Native American communities.

But I know the decades-long pattern of systemic funding shortfalls outlined by the Commission on Civil Rights can't be resolved in a single fiscal year. So I would love to hear from you, one, about how your agency and the Biden administration plan to work with Congress toward fulfilling these long overdue promises. And, two, I am especially eager to hear how your agency will support Tribal

efforts to combat the growing threat caused by climate change, including sea level rise and more frequent and severe coastal hazards, which are already forcing many Tribes certainly in my region to abandon sacred sites and homelands that they have occupied since time immemorial in order to move to higher ground.

Secretary HAALAND. Thank you so much, Congressman, you championing these issues for such a long time. It means a tremendous amount to me personally as well.

So, yes, we have a more than \$600 million increase to uphold U.S. treaty and trust responsibility and to empower Tribal Nations to govern their own communities. I think one of the biggest issues of President Biden is his priority to ensure that Tribal consultation is an all-of-government approach. It is not checking the box. It is not texting a Tribal leader 2 hours before a big decision is made. It is sitting down. It is meeting them in their space to make sure that we are talking about the issues that they care about, and there is no other way to do this than to truly engage.

And I am very proud to be a part of this administration who has made that commitment to Indian Country like never before. And I feel very confident that if we are talking to Tribes, if we are talking to them about sacred sites, about funding, about education and healthcare and broadband internet service and water, for heaven's sake, running water to some of these places, that there is no doubt we are going to know fully what Indian Country needs to move forward. They deserve opportunities like every community in this country, and we are committed to that.

I appreciate you and the work you have done. And we realize that it is not just going to be one administration that essentially cures this issue once and for all, but we are going to do our best to make sure that we document what it is that Tribes need and move in that direction and move in that direction for a very long time. So, we are going to do our best.

Mr. KILMER. Thank you, Madam Secretary.

And thank you, Madam Chair. I yield back.

Ms. PINGREE. Thank you.

I am pleased to recognize Mr. Simpson for 5 minutes for his questions.

Mr. SIMPSON. Thank you, Madam Chairman.

I had to jump out of my chair there to get ready for this.

Madam Secretary, thank you for being here today. And thank you for our conversation that we had yesterday. I find that there are many things that we agree with and will work together in harmony, trying to enact, whether it is, as you have heard, this committee's commitment to trying to meet our treaty obligations with our Indian brothers and sisters. Whether it is on Indian Health Services or Indian education or Tribal justice, this committee has worked in a bipartisan fashion, regardless of the chairman, over the last—as long as I have been on this committee now I guess for 20 years, 21 years, something like that. We have worked in a bipartisan fashion, as I said. And I look forward to working with you on those issues.

Also, the Great American Outdoors Act, the implementation of that act, we have talked about wildfires and the need to try to reduce these rangeland wildfires that are the biggest threat to sage-

grouse habitat in the West, and as well as giving the 11 States in the West the chance to have their conservation plans work with sage-grouse—they are working with sage-grouse—and trying to prevent the listing of that, because the States want sage-grouse not to be listed and to be healthy populations as much as anybody does. So working with States and the private landowners is very important.

But much of the conversation that we have had so far has been on climate change and rightfully so, something I agree with, something that needs to be addressed, that we have been working on for a number of years. But there are—and you mentioned it will direct our land management decisions and decisions we make in this department.

One of the things that hasn't been talked about when we talk about climate change is this, and I am going to bring this up. I apologize for not having brought it up yesterday when we had our conversation, and maybe you will want to comment on it or maybe it is something that you will take for advice and we can work on together, but I look forward to working with you on this.

And that is the fact that, as we move toward a greener economy, if you will, bringing in—or reducing our dependence on fossil and fossil fuels and moving to things like solar and wind and battery technologies and so forth, as we green our economy and try to reduce carbon emissions, it also brings up some challenges. And one of those that I have been studying over the last while is the fact that these new technologies require access to critical minerals and rare earths. The fact that we import many, many, in fact, far too many of our rare earth and critical minerals from sources overseas and oftentimes from countries that don't really care for us, that we are trade advisor—they are our trade adversaries and as well as others. But these rare earths and critical minerals are vital to our national defense, as well as greening this economy.

We have sufficient supplies of these rare earths in the United States but, unfortunately, because of restrictions, making it difficult to get permitting for mining some of these resources, we have made it almost impossible to access these minerals in the United States and, consequently, we are dependent on foreign countries for supplying a lot of these critical materials.

I want to work with you to make sure that we can have—we can improve our access on our public lands, because with the Federal estate and the millions of acres that you are going to be managing, many of those rare earths are found on Federal lands, but to make sure that we do it in an environmentally responsible manner. When you talk about mining, you know, everybody kind of goes, oh, mining is not a good thing. We have kind of gotten away from it in the United States. I would tell you that it is vitally important economically to this country.

And so you can—you know, the old days of mining where you take a firehose and blow away the side of a mountain and then sort out the minerals, those are gone. Mining today is much different than it was in years past and we can do it environmentally, safely, but we have to have access to some of those mineral deposits in this country and on our Federal lands.

So that is an issue I want to work with you on to make sure that we can improve our mining laws and our permitting access for mining, to access these critical minerals that are going to be depend—that are going to be critical as we move into a greener economy.

So if you want to comment on that, fine. You have got 2 seconds left.

Secretary HAALAND. Thank you. Thank you very much, Congressman.

First, I want to thank you for your leadership on the Great American Outdoors Act. Second, the Department and the President recognize the importance of critical minerals. And, yes, we have to have development. And as you said, it needs to be environmentally responsible. We need to have an eye toward protecting workers and all of those issues that we know we are good at. I would love to visit with you more, and our door will be open. I look forward to further conversations about it and happy to go into detail on the record.

Mr. SIMPSON. I appreciate it. Thank you.

Ms. PINGREE. Thank you, Mr. Simpson.

Pleased to recognize Representative Lee for her 5 minutes for questions.

Mrs. LEE. Thank you, Madam Chair. I want to thank you and the Ranking Member Joyce for this hearing.

And it is an honor to be with my colleague, former colleague, Deb Haaland, as the Secretary of the Interior. It is great to see you again, and thank you and Ms. Taylor for being here today.

As you know, over 80 percent of my home State of Nevada is Federal lands. This is the highest proportion in the Nation, and of that land, the vast majority of it is managed by the Bureau of Land Management. And the budget request submitted today mentions rebuilding the core functions and the capacity at the Department of Interior as a top priority. But more specifically, the prior administration's move to move the BLM headquarters from Washington, DC to Grand Junction resulted in the loss of 287 out of 328 headquartered employees. That is an 87 percent loss of staff, significant loss of institutional memory and experience for the Bureau.

Secretary Haaland, are you able to provide an update on the current number of vacancies both at the BLM headquarters and at field offices around the country?

Secretary HAALAND. Thank you very much, Congresswoman. Yes, close to 300 positions were impacted during that move, and we know that it was an upset. And, first of all, I should also say that, in light of that, 90 percent of those positions for BLM were actually outside of D.C. So we know that it has been an issue. We are assessing the impacts of the structural changes that were made to BLM. And I want you to know that since I have been here, career staff have been a priority for me, their morale, making sure that we express our appreciation. We have an amazing team of professionals here at the Department.

And we will identify those positions. Actually, less than half of the positions of the 300 were vacated, and some remain vacant to this day. So we are working on rectifying the institutional memory and experience losses. And just know that it is a priority for us,

especially during this time of drought and climate change and all the other issues that are happening specifically across the West.

We have had a townhall already with BLM employees. I am committed to treating them with respect, and we are happy to continue this conversation with you as we move forward and make the changes that we need.

Mrs. LEE. Thank you. Yeah, this is an incredibly important issue in my home State, given that BLM sort of is the gatekeeper for any type of land use decisions being made there. So appreciate the focus on that.

You know, during your hearing, your confirmation hearing, you said that you were examining whether or not to move the headquarters back to D.C. Have you developed any criteria to facilitate your decision on—or facilitate that decision?

Secretary HAALAND. We are still gathering information currently, Congresswoman. And when we begin to answer those hard questions, we will absolutely loop you in on those decisions as they are being made. You know it was sort of an upset when they moved across the country, and the last thing we want to do is cause that again. So we are being very careful about how we are approaching it. But certainly the first step was ensuring that we are communicating with the career staff to assess how they feel about it, and we will get some of that information in soon and certainly be in touch with you about that.

Mrs. LEE. Great. Thank you.

Just one other thing. As you know, the Southern Nevada Public Land Management Act—it is also called SNPLMA in its short form—has been a success story of Federal-State collaboration on land use management. Since its inception in 1998, SNPLMA has generated \$4.1 billion for the preservation, acquisition, and maintenance of precious Federal lands in Nevada. It has been responsible for protecting lands around Red Rock Canyon, creating visitor-friendly walking trails in our wilderness area, and providing critical capital improvements.

Can you commit to keeping the SNPLMA fund dedicated as a special account in the Treasury, and can you speak to your expectation on the next opening of the next round of money?

Secretary HAALAND. I appreciate that question. We will absolutely include this in our details in the record. We appreciate your leadership on this issue. It is working. And so I don't intend to upset anything that is working. So we appreciate that, and we will provide more details as we move forward.

Mrs. LEE. Thank you.

And I am over my time. Thank you.

Secretary HAALAND. Thank you.

Ms. PINGREE. Thank you, Ms. Lee.

Pleased to recognize Mr. Stewart for 5 minutes for his questions.

Mr. STEWART. Thank you, Madam Chair.

And, Madam Secretary, again, thank you for being with us. Thanks for your leadership. We are proud and want to support you.

Thank you for coming out to Utah last week. It was great to see you in one of the most beautiful parts of our Nation. And thank you for your commitment to working with a delegation and with

the governor's office as you look at the monuments. We appreciated your time there.

Very quickly, I know that Mrs. Lee has concerns or at least I suppose that she does based on her question about the location of the BLM headquarters, and I would just add very quickly that, I mean, my view and I think this is—I am not the only one that feels this way, but I think that BLM is best served when the leadership is living in the location of which they have great responsibility. And we think there is real advantages in having that leadership out West, as they have such stewardship over enormous swaths of land in the West, as you know from your own State, and has already been expressed for Nevada and Utah as well.

One thing I want to mention, and I am not going to have a question, at least not directly, but just to give you some background. When I came to Congress, I didn't know that I would become involved with the Wild Horse and Burro as much as I have. I have become kind of the horse guy, among other things, and I am a little bit of a one-trick pony on this, if you will, in the sense that—no pun intended, by the way. It is just this has become very important.

And, Secretary, I know that you know this, because Nevada has a huge problem with overpopulation of horses. We have got, you know, we think 80,000 of these animals out on the range. The range is designed to support or able to support about 27,000. We know the number this year is going to be over 100,000 wild horses, and that doesn't include the 35,000 or so that are kept in pastures.

And I wish I could show you this coalition that we have put together over the last 5 years. I want to read you just a few of them: Humane Society, the Return To Freedom-Wild Horse Conservation, the national Horse and Burro management group, the National Cattlemen's, the American Mustang, National Farm Bureau. I mean, we have got an incredibly diverse coalition here of people who have decided there is one thing we hold in common, and that is we love these animals and we want to protect them, and to starve them to death on the range is not compassionate, nor is it humane.

And we, after an intense effort, got \$35 million from Department of Interior, BLM last year, to actually fix this problem. We are hoping for \$50 million this year.

And I would just ask briefly if you would be willing to support that budget request and help us with actually fix these—this problem on the range with our wild horses and burros.

Secretary HAALAND. Congressman, thank you. And thank you again for your hospitality when I was in Utah.

I really want to thank this Subcommittee for the leadership on this issue. I know that so many of you care deeply about this. We are also, agreement with the plan of the previous administration. We know that there is not enough habitat for that many animals when they are sharing it with many, many other species. And so we are going to absolutely let the science guide us, as well as understanding the ecological impacts to all the animals.

So thank you. We will absolutely be in touch with you. Know that it is a priority for us as it is for you.

Mr. STEWART. Thank you, Secretary. I really appreciate that.

And I am going to mention one other thing and then ask one more question. In the 30 by 30 rule, I mean, that scares the life out of those of us from the West. Again, Madam Secretary, as I know you will appreciate, coming from the West, and our fear is that 440 million acres in the next 10 years, and if history proves, you know, any guide, we know that much of that land is going to be taken from the West. And, again, I am not going to ask a question. I would like to hit one other topic, but just ask for your consideration of the disproportionate effect that that has on western States.

One final question, if I could, Madam Secretary. And you are aware in the 116th Congress we passed a great piece of legislation named after someone that I think we both admire, the John D. Dingell Conservation, Management, and Recreation Act. To review what it does, it sets forth so you have an expanded access of opportunities for hunting, recreational shooting, fishing, the things that we enjoy who live in the West.

Please share with us, if you would, how the President's fiscal year 2022 budget demonstrates his commitment to this bipartisan and important piece of legislation. How can we assure that that legislation will be implemented in—it is historic and, again, bipartisan, but it is no good unless it is implemented. Could you share how that—your administration or the President's administration will do that?

Secretary HAALAND. Well, first of all, I will just say that we are absolutely in support of outdoor recreation of that nature. I am from New Mexico. I am from a Pueblo household. I understand that, and we want to absolutely support it.

I would really love to just give Rachael Taylor an opportunity to provide some details on this, if I may.

Ms. TAYLOR. Thank you, Madam Secretary.

And thank you so much for the question. I think the importance of the legislation passed through the Dingell Act and other major pieces of legislation, like the Great American Outdoors Act, speak to the need of the Department to balance multiple equities when it is allocating funds, and that includes recreation access the Secretary mentioned, the respect for hunting and angling, the importance of access for backcountry, for all kinds of important work to be outside.

We are going to be looking at our land acquisition budget, and the Secretary will be submitting that as part of the President's budget request. That would include both Federal land acquisition and grants for States. We are very excited to be able to tell a bigger story when the President submits his budget and expect to be back with you to fill in some of the details very soon.

Thank you.

Mr. STEWART. All right. Ms. Taylor, thank you.

And my time has expired. But, Secretary, whether New Mexico, Utah, Nevada, I mean, the western States, we have much in common, much of the same concerns, we look forward to working with you. And thank you.

Ms. PINGREE. Thank you, Mr. Stewart.

Mr. HARDER, you are recognized for 5 minutes for your questions.

Mr. HARDER. Thank you, Chair, for holding this hearing.

And thank you to Secretary Haaland for attending it. I can't tell you how much it warms my heart to see you sitting in that chair. We miss you in the House, but I am so excited to see your work in your new role.

I want to focus on the importance of water storage across the western United States, especially in a year like this one when we are dealing with a drought. The last 7 years are the seven hottest years on record for California. Many of our reservoirs are currently below historical averages due to a lack of strong winter storms and below average snowpack at only 61 percent of the historical average in the Sierra Nevada mountains.

According to the U.S. Drought Monitor, 77 percent of California, including Stanislaus and San Joaquin counties that I represent, are experiencing severe drought where conditions expect a fire season that is longer and more intense, increased water and decreased river flows, impacting reservoir capacities. The reality is drought is here. We no longer have the option of preparing for it. We must address it. And in the boom-and-bust cycle of water, the best way to prepare for the dry years like this one is to store water in the wet years.

In my district, we have a particularly important water project which was authorized in the WIND Act, the Del Puerto Canyon Reservoir, as well as the conveyance project that is also essential. It is my top priority in office to help advance these desperately needed projects.

So, Secretary Haaland, I would love to hear from you, how will your department's budget support investments in water infrastructure especially in water storage in the western U.S.?

Secretary HAALAND. Thank you so much, Congressman. And, yes, this is an important issue for us too. And we recognize that this drought year is like no other. There is just not enough water to go—to go around. And so I appreciate that you championed the science initiative on snowpack measurement to better predict these water supplies. That is very important, and I feel all of us need to work together and we are happy to take your ideas and see how we can work with them.

It is going to take a lot of coordination. We are in close touch with States, western States, regarding the drought and water issues, and I would be so happy to provide details on this issue at a later time on the record and certainly want to continue to have conversations about your ideas and how we can better prepare for months or years when we don't have enough water.

Mr. HARDER. Thank you.

While I understand the purpose of this hearing is to discuss the fiscal year 2022 budget, I want to register my strong interest in the Department's submission of storage projects and the respective funding levels in wind. Do you have a sense of how your recommendations differ from the previous administration's, and when do you expect to submit those recommendations?

Secretary HAALAND. Thank you so much. As Rachael mentioned earlier, the President's budget details are not quite out yet, but they will be very soon. And as soon as they are out, you will absolutely know about those. And we appreciate all of your support on those issues.

I believe very strongly that President Biden is working in his request to have an eye on the future while also keeping our other eye on the fact that we have to do catch-up on a lot of things. And not only that, climate change is wreaking havoc in so many areas on wildlife habitats and everything imaginable.

So I look forward to submitting that full budget when the time comes and know that the issues that you have mentioned today are issues that we care about as well and look forward to working with you as time goes on.

Mr. HARDER. Wonderful. Well, thank you so much for that.

I will just say in closing that I really look forward to following up, to briefing you on two projects that are very critical to my district, the Del Puerto Canyon project, as well as the Patterson conveyance project. I think those will go a long way towards helping us mitigate some of the drought conditions that we are facing in California, and I look forward to working with your office and hope that they are reflected in the budget submissions.

Thank you so much for coming. It is so good to see you.

And with that, I yield back to Chair Pingree.

Ms. PINGREE. Thank you for your questions, Mr. Harder.

I am going to recognize Mr. Amodei. And I see the full committee chair has joined us, and we will go to Representative DeLauro after Mr. Amodei.

So, Mr. Amodei, you are recognized for 5 minutes.

Mr. AMODEI. Thank you, Madam Chairman.

Good to see you, Madam Secretary. Look forward to working with you, and I—as we discussed yesterday, I have got some areas that I want to kind of go through your liaison and talk with you directly about that are kind of major jurisdictional areas.

So I would kind of like to just say the first one I would—my request is, is that we make the Bureau of Indian Affairs realty operations a secretarial priority. And you say, well, what are you saying? We have been working at it for a while to cure the situation where members of Tribes are given property and then it takes years—and I am not talking 2 or 3—for that to grind through the BIA realty process so those people can treat the property as their own.

For instance, if they want to build a house on that property, to get a loan, they have to prove that they own it. And that requires action from BIA's realty division.

I will just say that in preparation for this, our experience has been that that is a subject which needs secretarial authority so that Native American people who are granted property through the appropriate processes actually get the title, in some cases, you know, sooner than a decade and beyond. So I will leave it at that for that.

Also, I want to follow up on my colleague from Nevada's discussion about personnel, and that is it is kind of a ground-level operations thing but, quite frankly, realty staffing at BLM is something that needs some attention from your incoming director in terms of just keeping existing slots filled so that they can process in accordance with whatever the applicable rules and regulations are, requests and those sort of actions, which, quite frankly—and I know COVID's had an effect on that. So I am, you know—but when the

positions are empty and you have a State, for instance, like Nevada, which is one of the most urbanized States in the Nation, your Las Vegas district office and your Carson City district office's realty sections are kind of busy places to work.

And so when there are slots—and it is not like you just go out and hire somebody. It takes a while to bring those people on and train them. Anyhow, that needs—that is another area that is in need of pretty constant—or it needs some attention where it hasn't had it perhaps in the past. And that is not your State directors' or your district managers' fault. I think they need some more tools to do that, which also brings us to my colleague, Congresswoman Lee's, comments.

The previous administration, when it comes to the Southern Nevada Public Land Management Act, had a habit of sweeping the SNPLMA accounts for purposes of budget submission. So Ms. Taylor might want to take a note of this. It would sure be nice, since it is against the current law to do so, if this administration did not do what the last administration did, which is at least on a budget submittal, in order to make the budget balance, they swept the SNPLMA BLM Interior accounts for purposes of balancing them.

Also, there has been much talk about abandoned mines, which is a legitimate thing. I would hope that when that subject comes to Nevada, that perhaps you take a scalpel instead of something larger and might even use that as a model because, quite frankly, we have got a very successful program in Nevada. And so I would submit it ain't broke. It has been supported by the industry, and the State is working well. So I would ask that before we write a prescription for Nevada and public lands, that we probably ought to take a close look at what the patient really looks like in Nevada.

And then finally on the issue of fuels, everybody talks about fuels, which they should, and even in Nevada where a lot of people go, well, you know, you are a little short on trees there, even the sagebrush steppe ecosystem is at least a 50-year ecosystem which it takes to regenerate after it has been burned.

So when we talk about endangered species and habitat loss and stuff like that, it is no secret to anybody that it has been a pretty tough neighborhood in the Great Basin in general with wildfires lately. And so I think to concentrate on restoration of those lands, because it is a long process, but we need to start talking about how we put those lands back in the inventory, if you will, and then that has an impact on what we are doing for our ecosystems for endangered species.

All of these things are things that I appreciate your gracious offer to take up with on—with you, not on committee time, and so I will look forward to that. We will be reaching out to you on those various topics to schedule those, and thank you for your graciousness in the offer.

I yield back, Madam Chair.

Ms. PINGREE. Thank you, Mr. Amodei.

We will now recognize the full committee chair, Representative DeLauro.

Chair DeLauro, thank you so much for joining us.

The CHAIR. Thank you. Thank you to you, Chair Pingree, and to Ranking Member Joyce.

And what music to our ears. Madam Secretary Haaland, how wonderful it is to welcome you to the Appropriations Committee. And we are all so excited about your historic nomination, 54th Secretary of the Interior, and really your passion on so many issues—you know, honoring the commitment to Tribal nations, looking at global climate change, resiliency to our country's food system. What a pleasure it was to work with you in the House, and I treasure that friendship and look forward to continuing our work together in the administration.

I am going to try to get in two questions.

Your testimony talked about an additional \$550 million included for discretionary requests for tackling climate change with our Nation's public lands. The Department manages 500 million acres, a fifth of our country's total lands. Given the scale of that, I am particularly interested in how we can better utilize the lands in the fight against climate change as crucial carbon sinks.

In what ways is the Department working to increase the ability of public lands to naturally sequester carbon from the atmosphere?

And then my second question would be: Where is the greatest need and in what ways can the Congress and the committee provide the resources and investments necessary to support our Tribal communities and help them rebuild from the pandemic?

Brookings Institution recently found that the COVID-19 age-adjusted death rate among racial and ethnic groups was highest for Native people.

So those are my questions.

Secretary HAALAND. Thank you very much, Madam Chair. And it is wonderful to see you as well, even if it is virtually.

So, we know that we need to accelerate clean energy deployment, and we are working on that with respect to addressing climate impacts on public lands. And, if we have healthy ecosystems, that is the best way to tackle so many of these crises that we are dealing with, right? Habitat loss due to the loss of species and drought issues and all of those things.

So we feel very confident that, with a budget that can help us to achieve those goals, we can absolutely unleash science in our department and make sure that the career staff who are here who have been trained to do that work have the opportunities to just get out there and do everything that they need to.

I also appreciate your championing of Native-American issues in everything that you do. I have always appreciated that, and we are so grateful. You probably know that President Biden is committed to Indian Country and, with respect to COVID, wants to make sure that Tribes have what they need.

One of the big issues with this administration is ensuring that broadband internet service is actually a reality for these communities. I know you know there are still Tribal governments who are still using dial-up because they don't have broadband. Imagine that, if our government had to use dial-up in the work that we do every day.

So, with broadband that gives Tribes opportunities to run their governments effectively, for children in Tribal communities to have opportunities for education—because we know that they didn't have those opportunities during the pandemic, in many cases.

Imagine if rural Tribal communities had opportunities for telehealth, what a difference that would have made in the ways that they suffered through this pandemic.

I also am proud of that the President's priority for Indian Country has helped Tribes across the country to lead in vaccinations across their communities. And, as you know, the President feels that when we are a healthy country again that we will be able to address every other issue that is important to us.

And so I appreciate your questions. And I would defer to Rachael very quickly, she might have a few details to add. And thank you very much, Madam Chair.

The CHAIR. Thank you.

Ms. TAYLOR. Thank you, Madam Secretary.

I think you hit the high points, but I would just like to emphasize with respect to your question about carbon sequestration, the Secretary mentioned that the investments that we have in the budget request for science are top of mind for the Department, and I would emphasize that we are very focused on science-driven conservation.

So, when we talk about going into ecosystems and landscapes and making sure we are doing the most effective work on the ground, we need the science and the data collection and the resources to back that up and make the best decisions. And so we are very proud of the investments not just in conservation but also in science put forward by the President.

Thank you.

The CHAIR. Thank you.

And my time has run out, and I am going to dash back to the Labor-HHS Subcommittee, which I chair, but I want to again welcome you, Madam Secretary.

And I am sorry to go over my time. And I want to say a thank you to the chair of the Interior Committee, Congresswoman Pingree, and Ranking Member Joyce.

Thank you very, very much, and look forward to working with you.

Ms. PINGREE. Thank you for joining us, Chair DeLauro.

I am pleased to yield 5 minutes to Chair McCollum, who I think is probably also in two or three other hearings at the same time.

So thank you for joining us.

Ms. MCCOLLUM. Just one other one, but this is a very important hearing, Madam Chair.

Secretary Haaland, you know, I am absolutely thrilled that you are here with us today in your new role leading the Department of the Interior. And I am so excited about the opportunity of working with you in this new direction that President Biden has moved us forward on, because we share these priorities, including honoring our trust and treaty responsibilities in Indian Country, the conservation of our public lands and ecosystems, and the science-based approach to addressing climate change.

And I was so pleased to see that President Biden proposed an additional \$200 million for climate science in the U.S. Geological Survey. This is a dramatic change from the previous administration, when I had to fight attempts to slash climate change research, including the new Midwest Climate Adaptation Science Center.

After years of delay, I am grateful to see the USGS is finally accepting applications for that center, which will be vital for our understanding so we can protect our region's, the Great Lakes region's, freshwater and other resources that we are facing during an ever-changing climate.

I am also looking forward to working with you closely to better the fulfillment obligations of our Federal Government to provide health, safety, and education and well-being for our Native-American brothers and sisters. This is a profound responsibility that our Nation has failed to meet. Your leadership hails a new era of government-to-government relationships with Tribal nations.

You have the hopes of all of Indian Country resting on your shoulders, and I hope you know that you have nonpartisan allies in this subcommittee who are shouldering that responsibility alongside you and look forward to working with you.

In addition to increasing DOI's Tribal programs, I would like to work with you on legislation that we will be reintroducing with advance appropriations for the Bureau of Indian Health Services, the Bureau of Indian Affairs, and the Bureau of Indian Education. It is wonderful to see that the President's budget will include a request for advance appropriations for his, but I would like to know what more you are going to be doing in your agency to prepare the same option for BIA and BIE schools.

So you mentioned broadband. I think it would be helpful for the committee to know, either now or later, if there are other areas that this committee doesn't have direct responsibility for but that are severely impacted in our ability to move forward, like broadband, which is in other committees, so that we can work with you to inform our colleagues of those interconnections in order for Native-American programs to be successful.

I want to take a second to just follow up with the discussion I had with Cabinet Secretary Vilsack last week on the protection of the priceless reserve of clean water which is in our Nation's most visited wilderness area, the Boundary Waters.

The Trump administration, as you are well aware, took multiple actions that placed the watershed in the BCA area at risk of pollution from toxic copper sulfide ore mining. Secretary Vilsack confirmed to me that the USDA is working with the Department of the Interior to review past administration actions and consider next steps.

I know you cannot comment on that, but I didn't want this opportunity to go forward without me bringing it up with you.

So, Madam Secretary, if you could, things that we can work together on to build on the ability to take the success Indian Country has shown in COVID when given the resources to improve the health and well-being of its community and what we can do more to support the future of our country, Native-American children, attending our schools.

Thank you.

Secretary HAALAND. Thank you so much, Vice Chair McCollum, and thank you for always being a champion of Indian Country. I am so grateful and was always proud to work with you on these issues.

So the President, of course, understands this responsibility. He understands the trust and treaty obligations of the Federal Government and is working very hard to make those a reality. Tribal consultation, as I mentioned earlier, is going to be critical in moving forward to make sure we are capturing what we need to do.

The President includes strides for the Indian Health Service, and even though that is not under our purview, we feel and he feels that the all-of-government approach is going to be critical to moving Indian Country forward as well.

And I appreciate you for everything that you mentioned here today. We are going to look at all those issues. We want to work with you moving forward. We will take your ideas and be happy to support the issues that we know will help Indian Country. So thank you so much.

With respect to BIE schools, we are especially grateful for the Great American Outdoors Act, for their part in helping to make those schools viable places of learning for children across the country. And happy to provide any details on any issue that you would like moving forward.

So thank you.

Ms. MCCOLLUM. Thank you. Miigwech.

Ms. PINGREE. Thank you, Chair McCollum.

I see we have been joined by Chair Cartwright.

You may have 5 minutes to ask your questions.

Mr. CARTWRIGHT. Thank you, Madam Chair.

And thank you, Secretary Haaland, for appearing before the committee today. It is a pleasure to see you. We miss you in the House.

Secretary HAALAND. Thank you.

Mr. CARTWRIGHT. Look, from managing national parks, reclaiming abandoned mines, working with Tribal communities, and protecting endangered species, the Department of the Interior impacts my constituents on a daily basis.

My district is home to the Delaware Water Gap National Recreation Area, which last year saw over 4 million visitors, last year alone, placing it among the top 10 most visited parks in the country.

We are also home to over 300 of the thousands of abandoned mines that desperately need remediation. President Biden—I am so thankful for him highlighting this need in both his skinny budget and the American Jobs Plan.

I recently reintroduced two bipartisan, bicameral abandoned-mine-focused bills, one to extend the Abandoned Mine Land Trust Fund for another 15 years and, second, the RECLAIM Act, to accelerate the spending of the AML, abandoned mine land, funds to reclaim abandoned mines faster and spur economic development. There is no reason to wait. The need is there now, and the money is there now.

These are bills that are soon to be marked up by the Natural Resources Committee, a committee that I believe you are somewhat familiar with, Madam Secretary. RECLAIM also passed out of the full House last year, you will remember, as part of a larger package, but was dropped in conference, unfortunately.

With crushing reclamation needs across the country and the AML fee set to expire on September 1 of this year, passing these

bills and focusing on reclamation is an urgent priority. And I am glad the President's budget reflects this reality.

These abandoned mines pose a serious risk to the health of our constituents, to our environment. They impede economic development. Parts of the Susquehanna and Lackawanna Rivers are stained orange from the iron oxides in abandoned mine drainage. The towns of Nanticoke, Swoyersville, and the area surrounding Hazleton, Pennsylvania, have to deal with abandoned-mine issues on a daily basis: coal refuse leaks; harmful chemicals like arsenic, lead, and mercury that go into the surrounding land and the surrounding water.

The Office of Surface Mining Reclamation and Enforcement estimates it will cost at least \$10 billion to reclaim the remaining high-priority abandoned mines across the country.

As I discuss these issues, I also have to remember the greatest champion I know for abandoned-mine issues, my friend, Louise Dunlap, who passed away a few days ago. Louise was a pioneering environmental advocate, a good friend, and an inspiring force for everybody who knew her and worked with her.

My team and I are deeply saddened by her passing this week. She continued engaging with us and building support for our legislation up until her final days, fighting for this cause as she fought for her life. She will be deeply missed, not only as an advocate but as a friend as well.

Madam Secretary, my question is: What are the long-term impacts on the ability of the Office of Surface Mining Reclamation and Enforcement to address the huge demand for reclamation projects if SMCRA, S-M-C-R-A, and the AML Trust Fund are allowed to expire?

Would it even be possible to remediate all of the Priority 1 sites, defined as protection of public health, safety, and property from extreme danger of adverse effects of coal mining, if AML is not reauthorized?

What is going to happen, Madam Secretary, if you don't do these things?

Secretary HAALAND. Congressman, thank you so much for the question.

Let me first offer my condolences for the loss of your dear friend and champion. I am sorry for that loss.

Building capacity is job one for us. And, of course, I have mentioned this before, that extending the AML program is a priority for me, it is a priority for the President, and along with the funding in the budget and the American Jobs Plan.

So I thank you so much for your leadership on the abandoned mine lands issue. Your constituents deserve to have clean water, clean land, clean air. We all deserve that.

And so I really feel like we can support each other on this issue and hopefully see a brighter future and not one where we are struggling to get by. So I am happy to talk with you more about this and do whatever we can to help with you on the funding and the reauthorization.

Mr. CARTWRIGHT. Well, thank you, Madam Secretary. It is a comfort to have a Cabinet official of your expertise weigh in on these

questions. And I appreciate the budget's reflection of abandoned mine lands.

I yield back, Madam Chair.

Ms. PINGREE. Thank you, Chair Cartwright.

I am pleased to see Chair Kaptur and happy to recognize you for 5 minutes for your questions.

Ms. KAPTUR. Thank you, Madam Chair. And I apologize to you, members, and the witnesses. We had a concurrent Defense hearing this morning which I had to attend.

And I want to say to Secretary Haaland, we are just so proud of you. I almost forget my questions just because I am just so thrilled to see you in your position.

Obviously, I come from a part of the country where we have a lot of freshwater in the Great Lakes and, for many years, have had a bill called "America's First Frontier, the Northwest Territory." I would like to send the Secretary information on that. The Cuyahoga River at the eastern end of my district used to be the boundary of the western United States, but, as the Nation expanded after the original colonies, there is not much interpretation for the next rung of settlement.

So, for example, when we commemorated the War of 1812 and what is called the Battle of Lake Erie, I had to fight like the dickens to try to get Native Americans included in the program. The Department of the Interior told me that it really wasn't proper because we had no Tribal lands in Ohio. But I said, I represent Lake Erie, I represent Cuyahoga County, I represent Ottawa County, I have the Maumee River, we have Seneca County. There is a history here that is untold.

And so my first question really—and we have pow wows in our region that thousands of people come to. And the Tribes were pushed west. Well, that is a part of our history. Why can't we commemorate that?

And I just want to present that to you as a challenge I have had in my own career, and would very much appreciate the help of the Department of the Interior in reviewing my bill, America's First Frontier, and trying to enhance departmental interpretation across our region, starting at the Cuyahoga Valley National Recreation Area, one of the most visited parks in the country, one of the top 10, but then extending across the coast and way over to Minnesota, all of the States that were a part of the Northwest Territory.

So I don't expect you to say, Madam Secretary, that, you know, you will absolutely do it, but I would just tell you, the difficulty in getting the Park Service to work with the Federal wildlife refuges that exist across our fresh lakes system is really hard, and I think that there is the opportunity for enhanced interpretation there.

So that is one issue.

The second issue I wanted to bring up: With the Civilian Conservation Corps, or the Climate Corps, I am struggling because I represent heavily urbanized communities. And I am worried that the CCC, whatever it is, will focus and bring volunteers from rural areas and that whatever they will do will be important in planting trees and so forth and retrofitting relative to climate change but that the people that live in the cities won't be encouraged to become members and that, if they do, they will be shipped out to

Denali and they won't work in areas like ours, where, just in Ohio and Michigan, we have to replant 20 million trees because of the emerald ash borer and the Asian long-horned beetle and the destruction of our cover.

Cleveland, Ohio, used to be known as the forest city. It is no more because we have high asthma rates, we have issues all along the lakes related to urbanization and neglect and poverty.

And so I just wanted to say that I would hope that perhaps in your work you and Secretary Fudge over at HUD and Secretary Granholm might have a good cup of coffee together someday and think about what all this means for regions like I represent. Again, you don't have to comment. I will send you a note on that.

And just wanted to tell you that at a place called the Ottawa National Wildlife Refuge and the Cedar Point National Refuge we have had historic visitation levels, 360,000 visitors. And this is really exciting for us. When I was first elected, we had about 4,000 acres that were Federal wildlife refuge; we now have over 10,000. And birding has become a major tourist draw across our region. We are so proud of that. On Mother's Day, people come from all over the world.

And I would love to meet with you at some point and some of your staff to think about regions like this and how we can enhance environmental tourism for economic growth.

So those are issues I wish to bring to the table and will send you more. And if you wish to comment, I just have a few minutes left in my time. But thank you so much.

Secretary HAALAND. Thank you, Congresswoman. And everything you mentioned I care about, so thank you so much.

I am happy to work with you and take a look at your legislation for America's First Frontier, and thank you for thinking of that. Yes, there were people here on this continent before our country was the United States. So thank you for recognizing that and feeling that it is important enough to create legislation over.

Just quickly, the Civilian Climate Corps, it is important everywhere, every single—

Ms. KAPTUR. Yes.

Secretary HAALAND [continuing]. Place in our country, and absolutely includes urban and suburban areas. That is where we need more trees. That is where we need to pay attention to parks and make sure that kids have places to go where they can recreate.

So I am happy to just be in touch with you. Feel free. We will reach out to you, you can reach out to us, and we are more than happy to continue this conversation. And I thank you so much.

Ms. KAPTUR. Thank you.

Ms. PINGREE. Thank you, Chair Kaptur, for joining us today and for your great questions.

We have completed one round of questions, and we are going to go for two. I don't know how many members will be able to participate, but thank you, Madam Secretary, for sticking with us here.

I will recognize myself for the first 5 minutes.

I want to just bring up again something that has actually been discussed a little bit, but I am just so pleased to have both of you there, and if you want to weigh in on this any more—and this is really about this war on science.

Having been on this committee for the last 4 years, I can't really describe it in any other way except a certain level of disdain and discrediting of science. We have seen it in our budget requests in the past 4 years—reductions in science funding, elimination of significant climate change and conservation science programs.

So we are so pleased to see the President's budget proposing over \$4 billion across multiple agencies, including the Department of the Interior, and specifically the support for science at the USGS and other bureaus by investing another \$200 million to obtain information about the impacts of climate change and how best to implement mitigation, adaptation, and resilience efforts.

I know, as I said, this came up earlier, and I think Deputy Assistant Taylor talked about it a little bit. But can you elaborate any more—or should we wait until we have the full budget—about how you will allocate this additional funding, for what purposes you will use it, and also the steps you see yourself taking to elevate science and its importance as a foundational way to inform our decisions going forward?

Secretary HAALAND. Thank you. I am going to ask Rachael to provide some details as well.

But what I will say is I had a meeting with some folks from the USGS the other day, and we just talked about unleashing science, right? Unleash science. That is what the scientists are here to do. And we have to give them the opportunity to put all of their experience, knowledge, and passion into this moment in our country, when we have an opportunity to do so much. And we need that, because we know with climate change that we are on a precipice, and it is going to take all of us to work together to pull us back from that.

So I would really love to give Rachael an opportunity to provide a few details. And, of course, this is not our last conversation. I want to speak with you more and more about this. And I appreciate your passion about this, Chairwoman.

Rachael.

Ms. TAYLOR. Thank you, Madam Secretary.

And thank you so much, Madam Chair, for the question.

As we said earlier, I think the details for the budget, when it is released, will promote a more detailed conversation. But, I think investing in the scientific capacity at the agency, which the subcommittee has also championed, is a huge priority of this budget.

And you can imagine that to get into the effective climate change policies that the Department will need to do, we are going to have to have better tools at our disposal. And that is going to include modeling. That is going to include satellite technology. That is going to include things like better hydrology information. We have to have stream gauges. We are going to have to have different tools to model potential future impacts of climate science.

So exactly how the funds will be allocated, we will be more than happy to follow up with the subcommittee once the budget is out. But, as I said earlier I think we feel really good already at the story that the President's budget is telling on the importance of science in land management responsibilities.

Thank you.

Ms. PINGREE. Yeah. Thank you both for that. And I just can't say how excited I am to be able to discuss science again, to look at actual data, and the importance of retrieving the data that has been lost, continuing to preserve important information, because we just can't make good decisions without adequate science.

I only have a minute, but just quickly, on the National Park System, we are so excited about the Great American Outdoors Act. We had an opportunity to talk to the Chief of the Forest Service, and she talked to us about some of the positive impacts.

And for all of us who have parks in our home States, deferred maintenance is really a significant issue, but there are a lot of critically important projects that don't fit under the deferred maintenance umbrella, and I think some of those may be possible under the American Jobs Plan.

So do you want to just quickly touch on where you see the opportunities there to put our important national parks whole again, make them whole again?

Secretary HAALAND. Thank you, Chairwoman.

And, once again, I am going to thank the committee so much for enacting the Great American Outdoors Act. It was something I was, of course, proud to support when I was there. And we need that, absolutely, to reduce our deferred maintenance backlog.

So what is not covered, essentially? Deferred maintenance in bureaus outside the scope of the Great American Outdoors Act, including the BIA and USGS. And we have heard where those shortfalls are now, and we will work to move those forward. And basically projects that don't primarily address deferred maintenance. It leaves out infrastructures associated with relatively new designated areas.

So that leaves a lot of space for us to move those other funds into creating the best possible public lands that we can have.

Ms. PINGREE. Great. Well, thank you. We are going to look forward to working with you on that.

My time is long overdue, and I will recognize Ranking Member Joyce for his 5 minutes.

Mr. JOYCE. Thank you, Madam Chair.

Secretary Haaland, as I mentioned earlier, I see my dear friend Marcy Kaptur has joined the hearing. The Great Lakes are especially vital to both of our districts, and we have fought together to protect them for a long time.

The Lakes are the largest freshwater system in the world, providing drinking water for 48 million people and generating more than 1.5 million jobs and \$60 billion in wages annually. Given the environmental and economic importance of the Great Lakes, I have made it, and together we have made it, a top priority to fight for their protection in Congress.

That is why I was pleased to see the administration's infrastructure plan recognizes the need to invest in the protection and restoration of major water resources like the Great Lakes and the continuing work to prevent the spread of invasive carp, harmful algal blooms and why it is important to the long-term health and economic vitality of the Great Lakes ecosystem.

Does the fiscal year 2022 budget request support ongoing Great Lakes restoration projects that your bureaus, including Fish and

Wildlife Service and the U.S. Geological Survey, are carrying out in partnership with EPA through the Great Lakes Restoration Initiative?

Secretary HAALAND. Yes. The Great Lakes remain an extremely important issue to all of us here at the Department, and we are really happy to make sure that we are continuing our conversations about this issue.

Yes, invasive carp is an issue. We appreciate the partnership and really want to make sure that we continue conversations. When the budget actually comes out, we will contact you. We can talk about more details then. But, absolutely, we will want to include your priorities for this area.

Thank you.

Mr. JOYCE. Well, thank you. I am the nice guy. You do not want to incur the wrath of my friend Marcy Kaptur, because she will make sure you understand the priority.

Madam Secretary, as I mentioned in my opening, market-driven development of energy and mineral resources on Federal lands and waters remains essential to our Nation's security, our economy, and a smooth transition to a clean-energy future.

I am deeply concerned that the President's so-called "pause" on new oil and natural gas leases on public lands and waters may be the first step of a larger strategy to price domestic fossil energy out of the market and force Americans to pay more for less reliable, less secure, and less clean sources of energy. And I know my colleague Ms. McCollum had brought up the interest that she had in a project in her State.

I want to know if, as you review these, whether you are going to do so in an open and transparent way, so we can have buy-in from everyone and get input.

And could you update us on the Department's comprehensive review and reconsideration of oil and gas permitting and leasing and what changes you are looking at and why and the transparency that will be used through that process?

Secretary HAALAND. Thank you, Ranking Member.

And, of course, energy independence is absolutely important. It is a priority of the President. As you know, the leasing pause only paused new leases. Existing leases were not paused at all. And, in fact, permitting continues right now in this department, so our department is signing off on permits regularly. So I want you to know that that industry continues to roll.

The energy review is still ongoing, and we have been taking input from diverse stakeholders. We will continue to take input from diverse stakeholders. In fact, we would be happy to sit down with you and talk more about this, if you would like. But, you know, we had a gas and oil forum last month. We are reaching out to various States and communities across the country to make sure that we are capturing everyone's input into this important issue.

We want to make sure that the review is complete. We want to make sure that it is done correctly. And just know that we know and believe that the fossil fuel industry will continue for years to come. It is not going to get shut off like a faucet.

So we thank you for bringing this up and, of course, I always welcome your input into this important issue.

Mr. JOYCE. Well, thank you very much.

And, as you can see, once again, Madam Chair, I am right there at my 5-minute timeline for you, so I can't give you any time back. Thank you.

Ms. PINGREE. It is truly brilliant how you are able to do that down to the last second. I don't know that any of us could achieve that as well as you do.

I am pleased to recognize Representative Kilmer for 5 minutes.

Mr. KILMER. Thank you, Madam Chair.

And, Madam Secretary, I wanted to start where I ended in the first round, which was discussing some of the Tribes around the country but certainly in my region that are in the process of trying to move to higher ground because of persistent challenges related to climate change.

And, to some degree, I guess I want to use my time to ask for your partnership. I am hoping that something can be done in a more comprehensive way for Tribes in these circumstances. Because right now it is nearly impossible for Tribes to piece together the resources to fund everything from water systems to fire halls, to new housing, to—you name it.

And to the credit of this subcommittee, you know, I was very grateful that Chair McCollum and Ranking Member Joyce visited our region. We heard from one of the leaders of the Quinault Indian Nation, who said, you know, when I was a kid, the ocean was a football field's length away from our village, and now it is our front porch, and every time we have a severe storm, you know, our community is below sea level, and it just fills up like a bowl.

Now, we heard from a leader from the Hoh Tribe, who said they were able to build a new fire hall. And former Chair McCollum asked what resources were made available and did the Federal Government help. And they said, well, we don't have water yet at the fire hall, but the Federal Government helped provide body bags. And it just strikes me, we need to do better than that.

And I would love to get a sense from you of: One, I would just obviously appreciate your partnership; two, I would gleefully invite you out to the region to see for yourself some of these challenges; and, three, would just love a sense from you of, you know, whether a roadmap can be provided to these communities that desperately need the Federal Government to step up to its obligations in a way that it hasn't so far.

Secretary HAALAND. Thank you, Congressman. And, of course, the minute I can get out to see you, I would love to come and would consider it an honor to meet with the Tribes in your State, in your district.

And my goodness, thank you for raising those issues. Indian Country is a priority for us; it is a priority for the President. I just want you to know that I feel like it is a new era. This administration has committed to that partnership with Tribes and committed to living up to our trust and treaty obligations. And I feel very confident about the team I am on right here at the Department. Everybody here is committed to that charge.

And I just know that, with your partnership and that of this subcommittee, the full committee, and so many dedicated Members of Congress right there, Indian issues were always bipartisan because

everybody always rallied around to do the right thing. And so we will continue to just make sure that we are all working together. You have my commitment for that.

And I am not sure if Rachael would like to add any details.

Ms. TAYLOR. I think you addressed the situation well.

I mean, I appreciate the question from the Congressman. I mean, there is no doubt that Tribes are being impacted by the effects of climate change in addition to other capacity issues.

And I think, to the Secretary's point, this administration is totally committed to looking at all programs, and so that would include building capacity more generally as well as addressing the climate crisis. And so I think when you see our budget request we will be able to have a more fulsome discussion.

But we are looking forward and all committed, to a person, at the Department. Thank you.

Mr. KILMER. Thank you, Madam Chair. I yield back.

Ms. PINGREE. Thank you.

I am pleased to recognize Mr. Simpson for 5 minutes if he has a question.

Mr. SIMPSON. Thank you, Chairwoman.

I just had to leave for a second from the hearing because we were doing a press conference on a bill that Senator Bennet and Representative Crow and I just introduced called the Outdoor Restoration Partnership Act, which will help restore some of our forest lands and other lands that have been destroyed by wildfires and, I think, would help the Department of the Interior greatly in this.

But I hope that the Secretary would take a look at this. It was just being introduced, and, as I said, we just had a press conference on it.

But, as has been mentioned by both you, Secretary, and others, the bipartisan Great American Outdoors Act was signed into law last year, and with it came resources to address our public land maintenance backlog as well as permanent funding for the LWCF.

Can you give us an update on the rollout of the Great American Outdoors Act and what we can expect to see and how the projects funded by the LWCF and other things will be rolled out so that we can see exactly what we are funding now with the Great American Outdoors Act?

Secretary HAALAND. Thank you so much. And I will continue to thank you all so much for making sure that we have those resources at hand to do the work we need.

I would love to just pivot to Rachael, because she has all the details in front of her. And, of course, many more conversations to be had, and always welcome your input, Congressman.

Rachael.

Ms. TAYLOR. Thank you so much for the question.

The Department is fully committed to implementing the act and working with Congress to make sure that it is done the right way, that it is done effectively, and that we are making the progress that the investments demand, because this was a huge trust placed in the Department and the Forest Service to do this work.

With respect to the fiscal year 2021 projects, the ones that were articulated in the Interior bill last year, the projects are moving forward. There is a full list of both the deferred maintenance

projects and the Land and Water Conservation Fund projects available on the Department's website. And we are committed to transparency and to providing Congress with regular updates on the progress that we are making.

With respect to the fiscal year 2022 budget, we would expect that the full budget request, when it is delivered by the President, would include the detailed information on projects and where they will be. And then, at that point, we are happy to engage the subcommittee and have further discussions on how the bill will be implemented as part of the fiscal year 2022 appropriations process.

Thank you.

Mr. SIMPSON. Well, thank you. I appreciate that response.

As you know, a lot of people look at the Great American Outdoors Act as just funding the LWCF on a permanent basis and full funding for it. But one of the really important aspects of it, to me, was addressing the backlog of maintenance that we have in our national parks.

Everybody knows, that has been to our national parks, knows that we love them to death. And they are really facing some backlog of maintenance in these national parks, and we need to do a better job.

As this pandemic has hit, more and more people are discovering America, where they are not traveling abroad and so forth, and I think you are going to see vast increases in the numbers that go to our national parks. As I understand it, RVs are the number-one-selling item in terms of vehicles and stuff, because people have decided that they want to see America again. And that is going to put pressure on our national parks and other public lands, and we need to make sure that we can address this backlog of maintenance.

So I appreciate the work you are doing on that. I look forward to working with you on it, as we see how this is going to be implemented. Because it was passed with a great deal of hope, and I think it is our job to make sure that we fulfill those hopes.

Thank you. I yield back.

Ms. PINGREE. Thank you, Mr. Simpson.

Mr. Cartwright, you are recognized for 5 minutes.

Mr. CARTWRIGHT. Thank you, Madam Chair.

And, Madam Secretary, I do have some more questions for you.

We were talking about abandoned land mines before. And we are incredibly excited in Pennsylvania that both your budget and the American Jobs Plan propose significant increases in funding for AML projects. And we want to get to work right away.

So the first question I have in this round is, what support will you give to the States to ensure that they have the administrative resources to get this money allocated quickly and efficiently?

Secretary HAALAND. Well, of course we are always happy to work with the States. And we will just do whatever it takes, Congressman. I will be honest with you, if you—and we would love to meet with you more on this issue—if you have ideas, if there is something that is important to you, we would like to hear about it.

Mr. CARTWRIGHT. Secretary Haaland, this is Matt Cartwright here, and I know how to take “yes” for an answer.

Next question is: How will your Department balance the allocation of these funds and resources between certified and uncertified

States and Tribes? And how will you balance environmental remediation and economic development?

Secretary HAALAND. Congressman, if it is okay, I would love to take this question and answer it in detail for the record. We would be happy to do that. And if that is all right with you, that is what we will do.

Mr. CARTWRIGHT. Perfect.

I want to bounce over to national parks. We touched on that earlier.

Over the past year, citizens in my district and those in surrounding communities have flocked to the Delaware Water Gap, very much along the lines that Mr. Simpson was just talking about. People want to get out, they want to see the country. And they have gone to the Delaware Water Gap more than ever, more than usual, with nearly a million more visitors in 2020 than in 2019, largely due to COVID restrictions for other activities.

So, as you know, for over a decade, there has been consistently a roughly \$12 billion repair backlog at our national parks. Now, much of this backlog is tied to aging infrastructure, as many of the buildings, roads, and bridges were built in the 1930s and the 1950s and the 1960s, and obviously they now need repair and renovation.

The Delaware Water Gap National Recreation Area alone faces \$63 million in deferred maintenance costs. The implementation of the Great American Outdoors Act, which Mr. Simpson was talking about, will help provide funding to start addressing many of these maintenance and repair concerns. But the Delaware Water Gap, the past month, has already shown some improvement, with the new Watergate Wetlands Restoration Project and a bridge and culvert repair project on U.S. Route 209.

Question is: How is the Department beginning to put the Great American Outdoors Act into action to address this backlog? And how are they leveraging other agencies and other funding streams to aid in overcoming what is really a mountainous backlog?

Secretary HAALAND. Thank you. That is a definitely good way to describe it, a mountainous backlog.

And, I mean, yes, we are working hard to have a list of priorities for this issue. And it sounds like the Delaware Water Gap is definitely a priority for you.

We know that the Great American Outdoors Act covers a really large portion of backlog, but, of course, we still need strong regular maintenance budgets to make sure that we can take care of it all. And, actually, if we were able to prevent some things, that helps it from turning into a backlog issue.

So we are working on this. You know, there are tools we are using to gauge the projects and whether they should fall into a list of priorities. And I'm certainly willing and happy to speak with you further on the priorities that you have.

We know that these backlog issues are important, especially in light of the fact that more people are visiting our open spaces.

Mr. CARTWRIGHT. Terrific. Thank you, Secretary.

Last question: What preventive measures is the National Park Service taking to prevent a growing backlog developing in the future and, you know, nip it in the bud and get to the root causes of the backlog?

Secretary HAALAND. Of course. And this hearing today is actually one of the best tools that we have to nip some of those things in the bud. That is making sure that we have a very strong budget to address the issues ongoing.

Mr. CARTWRIGHT. Well, I thank you, Secretary Haaland.

And I yield back, Madam Chair.

Ms. PINGREE. Thank you, Mr. Cartwright.

I don't see Mr. Amodei, so I will yield to Ms. Kaptur, Chair Kaptur, for 5 minutes for her questions.

Ms. KAPTUR. Thank you very much, Madam Chair.

I just wanted to go back again, and I will follow up with a letter urging the Secretary to think about the CCC and which instrumentalities will be used to link to our urban communities.

I think there is an opportunity to do phenomenal work with the urban park systems, our metro park systems, even engaging some of our National Guard transport companies—because they have trucks and they can haul dirt and they can haul stone, they can do a lot of things—establishing relationships across government to make the CCC work in urban areas, particularly those that are noted for having high incidences of poverty.

And, in those neighborhoods, I can guarantee you the tree cover is quite limited. And we have to pay attention, partnering with many of our urban healthcare systems. They are very, very worried about pulmonary issues. And I think whether you are talking Milwaukee, Detroit, Cleveland, Toledo, we have quite a few communities in the Great Lakes that could use that kind of cross-government partnership.

I know President Obama tried that during his career, and in some cases it worked, in some cases it didn't. But I think with the Department of the Interior we have a real opportunity.

And I wanted to thank Congresswoman Joyce, someone I have such great respect for, the work that we do together on the Great Lakes. We should have named them the Great Seas, because if you emptied out Lake Superior, it would cover both North and South America 1 foot high. Most of our membership does not understand how vast the Great Lakes really are and many of the enormous challenges we face there right now.

So I would just say to the Secretary, I will reiterate my plea for greater cooperation between the National Park Service and the Fish and Wildlife Service and working with us across the Great Lakes to have an interpretation that is worthy of their history. That does not exist within the Park Service now, nor within, obviously, the Fish and Wildlife Service. They are a little bit of a different—but, in our region, it is what we have. So we have to use what we have.

I think I represent the second-smallest national park, at Perry's Victory Memorial. And so we don't have a huge park system that attends to Lake Erie, but we do have the Cuyahoga Valley National Recreational Area, which is our anchor.

So I just wanted to point out that, sort of, the Great Lakes got shortchanged in the past by the Department of the Interior, and we can do so much better. And I know with Congressman Joyce in position as the ranking member, working together, we can figure this out.

Finally, I wanted to just mention the World War II Memorial. I worked for 16 years from the original introduction to its construction. And we are now minting coins. We have a coin bill to raise additional money, working with the Friends of the World War II Memorial.

But the part of the memorial that remains incomplete, we want it to explain the “why” of the war. And I was very afraid to turn the memorial from the American Battle Monuments Commission over to the Department of the Interior, because I didn’t see the Department of the Interior as having, kind of, historical underpinning that was necessary.

If one looks at the memorial at Normandy in France that was built by our country, we can bring some of those collections back, virtually and even onsite. And, again, this is a long conversation, but I really think the—it is the second most popular memorial in the country. And so we could do a lot to teach the younger generation that doesn’t even know that World War II occurred, and what the transatlantic alliance is, and the sacrifices that were made for us to be able to have a free Nation ourselves, despite all of our challenges.

But I think the World War II Memorial site could do a little bit better job on historical interpretation of why we fought that war and the sacrifices attendant to it. Because people do leave the site, and if they don’t really understand what it was about—they like the beauty of it, but they don’t understand the history. And for future generations, I think it is really an imperative that we do that.

I hope I haven’t run over my time, Madam Chair. I don’t see the clock on my screen here.

So I don’t know if the Secretary, you want to comment on any of those points, but I look forward to, again, sending a letter and kind of going through some of this so it is completely clear.

Secretary HAALAND. Thank you, Congresswoman. And we will welcome your letter and any future conversations.

I just want you to know that we are working on a report right now to the President on the Civilian Climate Corps regarding that issue and the program that we want to start. And we are looking at leveraging many existing programs. And I know there are a lot of organizations that will want to help out with this.

And, also, you might know that President Biden has made environmental justice a hallmark of his administration. That means that we want to include underrepresented communities, poor communities, neighborhoods that haven’t had opportunities to get out and be a part of something like the Civilian Climate Corps. So we are going to do everything we can to engage those communities every step of the way.

And so thank you so much for caring about all of these issues, for your thoughtfulness. And we really do look forward to continuing our conversations with you.

Ms. KAPTUR. Thank you, Madam Secretary.

Thank you very much.

Ms. PINGREE. Thank you, Chair Kaptur.

I feel confident, between your involvement in the committee and Ranking Member Joyce, we will be reminded of the importance of the Great Lakes. And I do think it is very important that you con-

tinue to do that for us, because those of us who represent ocean coastal districts often forget about the vast presence of the Great Lakes and the significant role that they play. So thank you for that.

Thank you so much, Secretary Haaland and Principal Deputy Assistant Secretary Taylor. It has really been a pleasure to have you before our committee today. We appreciate your testimony, your answers to our questions. We look forward to partnering with you with the full budget and the many challenges that we have before us, but we know we are going to work with a great team at Interior.

And, assuming there are no additional questions, the hearing is now adjourned. Thank you.

[Answers to submitted questions follow:]

U.S. House of Representatives
Committee on Appropriations
Subcommittee on Interior, Environment, and Related Agencies
Department of the Interior FY 2022 Budget Request Hearing
April 20, 2021

Questions for the Record – Department of the Interior

Questions from Chair Pingree:

Greater Sage-Grouse

The US Geological Survey issued a report in March which documents an 80% range-wide decline since 1965 and a nearly 40% decline since 2002 in the Greater Sage Grouse population numbers. In prior hearings we have discussed the Bureau of Land Management's work with the U.S. Fish and Wildlife Service, Forest Service, states, ranchers, and NGO's on a collaborative, science-based conservation strategy for the greater sage-grouse and its habitat on Bureau of Land Management and National Forest System administered lands. There is currently litigation on amendments by the previous Administration to some of Bureau of Land Management land management plans and grazing in priority habitat.

Pingree Q1: With the sobering information from the USGS report about the documented decline in the sage grouse and the possible extirpation of this species in various projections, how does the Department plan to reexamine and revise Bureau of Land Management land management plans to afford greater protections for the sage grouse?

- How will the Bureau of Land Management and the U.S. Fish and Wildlife Service use the monitoring framework developed by USGS to assess the effectiveness of Bureau of Land Management conservation efforts and analyze factors that contribute to habitat loss and greater sage-grouse population change?
- How will this information help make strategic management decisions?

Response: The U.S. Geological Survey's (USGS) findings are alarming and point towards the need to further enhance our collaborative efforts to conserve greater sage-grouse and its habitat. The BLM's 2015 greater sage-grouse land use plans, which are currently in effect, provide a strong framework for improving habitat conditions, appropriately managing land uses, and collaborating with our partners to conserve and restore this species. In each of these land use plans, there are commitments to adapt our management based on the latest population and habitat trends in collaboration with our partners. The BLM relies on science and research provided by our partners, including USGS' monitoring framework, to inform our management decisions. The BLM has also recently confirmed its intent to assess and update the governing management plans, including taking into account the most recent information. The BLM will coordinate with USGS, the U.S. Fish and Wildlife Service, and the U.S. Forest Service to assess the best

available science and what actions are needed to conserve greater sage-grouse and the sagebrush habitats on which they depend.

Pingree Q2: Under the Biden Administration has there been a renewed effort at reinvigorating a collaborative, science-based conservation strategy for the greater sage-grouse and its habitat?

Response: The Administration is strongly committed to science informed conservation of our Nation's lands and waters, particularly important ecosystems. The conservation of sagebrush ecosystems warrants a landscape-scale approach to conservation, restoration, and management, as guided by the best available science and latest data. The BLM has maintained its focus on collaboration with our Federal, State, Tribal and non-governmental partners to collectively ensure the long-term resilience of this iconic species. In addition, the BLM has recently confirmed its intent to assess and update the governing management plans, including taking into account the most recent information.

Wild Horse and Burro Management

The Wild Horse and Burro issue is one of the most difficult issues confronting the Department. With approximately 98,000 animals on the range today when the Appropriate Management Level is 26,715, this is a problem that impacts the health of the land, the potential for wildfires due to the increased incidence of cheatgrass replacing native grass species, the health of the animals and other species on the range, and the ability for the land to sequester carbon.

Pingree Q3: Just in outlining the problem it is very apparent there is a nexus to the missions and goals of other Interior bureaus. Have you considered approaching this issue at a Departmental level so you can leverage resources and expertise to address this problem?

Response: The Department and the BLM agree that the management of wild horses and burros is a Department-level challenge; moreover, we see this challenge as an all-hands issue, in partnership with other Federal agencies; States; and local governments; Tribal governments; and non-governmental sectors. While only those wild horses and burros managed by the BLM and USFS are under the protection of the 1971 Wild Free-Roaming Horses and Burro Act, we recognize this is a complex issue that transcends the BLM and USFS as these animals move across National Park Service, Tribal government, State-managed and private lands.

Within the Department, the BLM works closely with the USGS to develop increasingly effective population survey methods and research into long-lasting humane population growth suppression methods; the U.S. Fish and Wildlife Service to consult and coordinate where threatened and endangered species habitat overlaps Herd Management Areas; and the National Park Service when wild horses and burros move onto their lands.

Orphaned/Abandoned Oil and Gas Wells and Mines

EPA's latest Draft Inventory of U.S. Greenhouse Gas Emissions and Sinks estimates that there are approximately 3.2 million abandoned onshore wells and only around one third of the abandoned well population in the U.S. is plugged.

The total universe of orphaned wells on federal land is not well established. The Bureau of Land Management has identified more than 200 orphaned wells, the U.S. Fish and Wildlife Service has identified more than 400 orphaned wells, and the U.S. Geological Survey has identified 30 wells that need to be plugged.

With less than 1,000 identified wells out of an estimated universe in the millions, it is evident that a complete inventory is necessary. Nevertheless, we know orphaned wells can leak greenhouse gases into the atmosphere and negatively impact the quality of the air we breathe, the water we drink, and the ecosystem services we depend on.

President Biden's American Jobs Plan includes \$16 billion to plug orphaned oil and gas wells and restore and reclaim abandoned mines. These efforts will create natural carbon sinks, reduce pollution, and provide employment.

Pingree Q4: What portion of that \$16 billion is estimated for the Department of the Interior?

- The FY 2022 President's budget provides over \$450 million to remediate thousands of orphaned oil and gas wells and reclaim abandoned mines on Federal and non-Federal lands. Which is estimated to create 250,000 good paying jobs.
 - How will this funding be allocated among the Bureaus?
 - What plan has been developed to coordinate this program among the Bureaus?

Response: The 2022 budget proposes to invest over \$450 million in increased funding to support reclamation jobs to address environmental and safety risks while bringing new jobs to hard-hit communities. The Reclamation Jobs initiative supports jobs plugging oil and gas wells and reclaiming and restoring abandoned coal, hardrock, and uranium mines on Interior lands as well as supporting similar work on non-Federal lands through States and Tribes.

The FY 2022 President's Budget includes a total of \$461.3 million, an increase of \$300.0 million from FY 2021 for the Reclamation Jobs Initiative. This includes \$93.7 million for BLM oil and gas well cleanup and \$24.2 million for the reclamation of abandoned hard-rock mine sites on BLM lands. The request also includes \$30.0 million for BSEE to address offshore oil and gas decommissioning needs, and \$165.0 million for Abandoned Mine Land and Economic Revitalization program grants. The budget also includes \$169.2 million for a new Energy Community Revitalization Program will provide additional funds to support reclamation

activities within Interior and \$90.0 million to support reclamation work on State and Tribal lands.

Pingree Q5: How do you envision this effort employing fossil fuel workers and newer recruits from the proposed Civilian Climate Corps?

Response: The President's Budget outlines discretionary funding for science-driven conservation which includes support for a Civilian Climate Corps. The objectives of the CCC — to develop the next generation of conservation workers and create a new pathway to good-paying jobs may complement the Reclamation Jobs initiative. The CCC program will build upon existing programs and partnerships that share the same objectives—to tackle climate change on the ground, provide a living wage, provide skills and a pathway to employment, and reflect the diversity of America.

Pingree Q6: Is the Department in the process of developing a verifiable inventory of the wells located on public lands?

Response: The Department's inventory of reclamation requirements varies bureau by bureau and a comprehensive inventory has not been completed. The budget includes funding in a new Energy Community Revitalization Program to inventory reclamation requirements on Interior-managed lands and lands managed by States and Tribes.

Pingree Q7: The Idle and Orphan Oil and Gas report documents on average it costs \$18,940 for states to plug an orphan well. A 2019 GAO report (GAO-19-615) states that the average value of bonds held by BLM for oil and gas wells was only \$2,122, which is a reduction from 2008 when the average value of bonds held was \$2,207.

- This bond is clearly not sufficient to plug a well. Is BLM currently analyzing what would be a more appropriate amount to require as a bond for oil and gas wells on public lands to provide sufficient financial assurance to reclaim orphaned oil and gas wells and make sure the American taxpayer is not bearing the cost of reclamation?

Response: The BLM recognizes the importance of operators providing adequate bonds to protect taxpayers from paying cleanup costs if an operator fails to properly plug and reclaim oil and gas sites. Current bond levels were established in 1960 – 61 years ago. The Department is currently undertaking a comprehensive review of its oil and gas program to evaluate whether the current bonding requirements reflect expected reclamation costs for wells today – this analysis

and any recommended changes will be intended to ensure that taxpayers are not unfairly burdened with the responsibility of cleaning up these sites.

President Biden recognizes the importance of cleaning up abandoned and often hazardous sites that are contaminating the air and water and causing ongoing public health and environmental damage. His commitment to this issue is reflected in the American Jobs Plan, which proposes \$16 billion to address orphaned wells and abandoned mines, and the President's FY 2022 budget request of over \$480 million, including in a new Energy Community Revitalization Program, which is more than double the FY 2021 enacted discretionary level. The BLM is currently engaged in a comprehensive review of known orphaned and idled (nonoperational) wells to verify orphaned well inventory on BLM-managed lands and is updating its policy regarding the orphaned well review process.

Pingree Q8: What Interior base resources will you devote to addressing this problem?

- What timeline are you assuming for the completion of this work?

Response: The FY 2022 budget request will provide additional details on base resources being devoted to addressing this issue. There are thousands of wells and mines that require reclamation on and off Federal lands. The Office of Surface Mining Reclamation and Enforcement estimates that remediation of abandoned coal mine sites will cost more than \$10 billion so it will take quite some time.

Within BLM Oil and Gas Management's FY 2022 request of \$120.1 million, there is an \$8.6 million increase for Orphan Wells and an \$18 million increase for Alaska Legacy Wells.

Timely Reports

Since Fiscal Year 2020 the Committee has been waiting for a report from the U.S. Fish and Wildlife Service outlining how the Cooperative Landscape Conservation program deviates from that which was presented to Congress in the annual budget justifications. I note the Department also never formally requested a reprogramming. It has been two years and we are still awaiting this information.

Pingree Q9: Can I have your commitment that you will send this report immediately?

- Will you also commit to more timely responses to Committee directives and adhere to the timelines directed by Congress for receipt of this information?

Response: The Report on the Cooperative Landscape Conservation program is currently being reviewed and will be provided shortly to the Committees. The Department is working to adhere to the Committee's timelines.

Civilian Climate Corps

Last week the Chief of the Forest Service testified before this Subcommittee that she was working daily with your Department to put forward recommendations on the President's proposed Civilian Climate Corps.

Pingree Q10: When do you anticipate the recommendations you are developing with the Forest Service will be finalized?

- How will you ensure there is no duplication of effort with other programs?
- How quickly can this effort be stood up?

Response: The Interior Department, in collaboration with the Agriculture Department and other relevant agencies, are working to finalize and share the initial principles for a Civilian Climate Corps in the coming months. We are engaging key agency program staff in relevant bureaus. They have been essential in providing input to ensure existing programs are supported and strengthened by the initiative, not duplicated.

Completing Hurricane Sandy Restoration Work

The House report accompanying the Interior bill has carried report language for the past two years encouraging the U.S. Fish and Wildlife Service to prioritize maintenance and restoration of units within the refuge system that were damaged by Hurricanes Sandy and Irene. This work is important as we seek to tackle climate change and reduce the impact of greenhouse gases on our atmosphere because coastal ecosystems capture carbon and when they are damaged or destroyed, they lose their capacity to sequester carbon.

Pingree Q11: When do you anticipate all the Hurricane Sandy repair and restoration work will be completed?

- To ensure your efforts were effective and lasting you undertook monitoring studies. Those studies are examining projects through 2023. Can you share any information you have to date regarding ecological and socioeconomic benefits and the cost effectiveness of your resilience and restoration efforts?

Response: The remaining Hurricane Sandy Restoration work includes three projects located at Chincoteague NWR, Prime Hook NWR and a multi refuge hydrologic modeling project.

- The Chincoteague NWR wetland restoration project will be completed by December 31, 2022. Sea level rise is a constant management concern to the natural salt marsh habitats of the refuge, with marsh submergence having a major negative impact on marsh-nesting species such as clapper rails, black rails, saltmarsh sparrows, seaside sparrows, American oystercatchers, and the American black duck. Restoring the tidal flow to the impounded salt marsh system will improve habitat quality, restore marsh transgression corridors, create salt marsh, and benefit salt marsh dependent species through the removal of impoundment dikes. Sediment from impounded wetlands will be used to restore elevation to existing over grazed salt marsh through elevation enhancement and revegetation. The removal of these impoundments is expected to provide additional storm buffering capacity (wave attenuation, flood attenuation and shoreline stabilization) for the island. Salt marshes are important in coastal hazard mitigation and climate change adaptation. The reestablishment of elevation in these systems is key to their storm buffering capacity and improvements to these systems are expected to provide for a landward transgression corridor to facilitate low and high marsh establishment as sea level increases.
- The Prime Hook NWR project will complete their adaptive management actions by December 31, 2021. Prime Hook National Wildlife Refuge accomplished the largest tidal marsh restoration project in the eastern U.S. The project restored a highly damaged tidal marsh/barrier beach ecosystem covering about 4,000 acres within the former freshwater impoundment system on the refuge. The result is a functioning beach/dune/salt marsh system with a restored hydrology that can keep pace with sea level rise, i.e., it is sustainable. This restored complex provides benefits to fish and wildlife resources by providing functioning habitat, provides storm surge and flood protection to local communities, as well as other ecosystem services such as carbon sequestration and enhanced recreational opportunities. Since completion of the project the marsh has continued to recover, with acres of marsh increasing each year since completion. The refuge has become a regionally important nesting areas for piping plovers and least terns, both of which are species of conservation concern. In addition, water quality has improved, river herring, hickory shad, and American eels have returned, and record numbers of horseshoe crabs are using the beach habitat. A noticeable reduction in flooding to access roads and communities has also been observed.
- The multi refuge hydrologic modeling project will be completed by December 31, 2022. This project will focus on collection of hydrologic data and development of a hydrologic model for the 575-acre East Pool impoundment at E.B. Forsythe National Wildlife Refuge. This work will assist the Refuge in the long-term management of the impoundment, which was constructed in a former tidal salt marsh in the 1950s and 1960s. The hydrological model will help in answering questions such as how much sediment would need to be added to the pool to allow full revegetation. Options to be considered

include a scenario with fully unrestricted tidal flow. In addition, to the E.B. Forsythe project, 3-5 other refuges that fall within the footprint of the Hurricane Sandy Recovery Grant work area will be evaluated.

The Department of the Interior's Hurricane Sandy Coastal Resilience program, administered through both the Department of the Interior (DOI) and the National Fish and Wildlife Foundation (NFWF), invested more than \$302 million, funding 160 projects primarily through the U.S. Fish and Wildlife Service and competitive grants administered by NFWF. Projects focused on: habitat restoration (rivers, marshes, beaches, and dunes); green infrastructure (living shorelines, water control structures); new science and tools (data collection, modeling, mapping); and community resilience planning. The program made significant achievements in all focus areas, including: 373 miles of river habitat restored; 190,000 acres of marsh habitat restored; 80 acres of beach and dune habitat along 11 miles of shoreline restored; 10 miles of living shoreline, mostly oyster reefs, installed at 29 sites; 160 rain structures installed, such as, gardens, basins and permeable paving; more than 500 science tools developed, e.g., models of storm impacts, tools to identify vulnerable areas, analyses of storm surge dynamics, maps of elevation changes; and 289 resilience plans, assessments, tools or engineering designs provided to communities. Projects were implemented in 12 States and collectively benefitted residents in more than 220 communities.

A key component of the Hurricane Sandy Coastal resilience program was to have an independent, third party evaluation, on the effectiveness of projects to improve resilience and provide ecological and community benefits. The evaluation includes a main report as well as six in-depth case studies, each of which is focused on understanding the impacts and effectiveness of projects. The evaluation has documented that the Hurricane Sandy Program has improved ecological and human community resilience in the region affected by Hurricane Sandy.

Initial findings are that projects have reduced flood risk and improved human safety through the removal of dams, including dams categorized as hazardous; culvert improvements; restoring and protecting coastal habitats that reduce storm surge; and provide for better management of stormwater. Additionally, projects have been found to improve water quality and provide habitat that is benefitting fish and wildlife species, in particular, migratory bird and fish species and species of conservation concern either at the State or federal level. Links to the main evaluation report and the in-depth case studies are provided below.

The program has successfully moved through the stages of project planning and implementation, funding a wide range of projects that have provided direct on-the ground benefits as well as catalyzed future resilience activities through better science and planning. Recognizing the need for long-term, systematic data collection to assess restoration success, NFWF and DOI supported additional, long-term monitoring at 38 projects through 2023. This phase of the program will provide the ability to measure and evaluate additional ecosystem services or benefits that can be realized through implementing natural and green infrastructure approaches, such as habitat

restoration and living shorelines, to improve coastal resilience. This monitoring work is intended to further advance and inform decision-making regarding how best to achieve sustainable coastal resilience at local, State, and national levels. Plans are underway to conduct another third-party assessment of resilience projects following completion of the monitoring program in December 2023. This evaluation will more fully characterize the resilience of restored ecosystems and document ecological and community benefits. As such, remaining resilience (mitigation) funds will be obligated by December 31, 2023.

1. Main Report: Evaluation of Hurricane Sandy Coastal Resilience Program

<https://www.nfwf.org/hurricane-sandy-coastal-resiliency-competitive-grant-program/hurricane-sandy-monitoring-and-evaluation>;

<https://live-nfwf-2019.pantheonsite.io/sites/default/files/hurricanesandy/Documents/hurricane-sandy-evaluation-final-report.pdf>

2. Case Study: Improving Marsh Resilience through the Hurricane Sandy Coastal Resilience Program - findings suggest that investments the Hurricane Sandy Program has made in restoring marshes are generally on track to providing enhanced ecological resilience to marsh and nearby ecosystems.

<https://live-nfwf-2019.pantheonsite.io/sites/default/files/hurricanesandy/Documents/hurricane-sandy-marsh-restoration-case-study.pdf>

3. Case Study: Cost-Effectiveness of Reducing Coastal Erosion through Living Shorelines in the Hurricane Sandy Coastal Resilience Program - Hurricane Sandy Program investments in living shorelines appear to be a cost-effective and ecologically sound approach for reducing coastal erosion and improving resilience.

<https://live-nfwf-2019.pantheonsite.io/sites/default/files/hurricanesandy/Documents/hurricane-sandy-living-shoreline-case-study.pdf>

4. Case Study: Restoration of Aquatic Connectivity in the Hurricane Sandy Coastal Resilience Program -findings suggest that Hurricane Sandy Program investments in improving aquatic connectivity have increased the resilience of natural and human communities close to restored areas.

<https://live-nfwf-2019.pantheonsite.io/sites/default/files/hurricanesandy/Documents/hurricane-sandy-aquatic-connectivity-case-study.pdf>

5. Case Study: Restoring Beaches and Dunes through the Hurricane Sandy Coastal Resilience Program - Hurricane Sandy Program investments in restoring beaches and dunes are generally on track to improve ecological and community resilience in nearby areas.

<https://live-nfwf-2019.pantheonsite.io/sites/default/files/hurricanesandy/Documents/hurricane-sandy-beach-dune-restoration-case-study.pdf>
6. Case Study: Community Resilience Planning in the Hurricane Sandy Coastal Resilience Program - findings suggest that investments in the Hurricane Sandy Program have catalyzed resilience benefits by attracting additional funding for on-the-ground resilience activities and promoting resilience activities to a broader set of communities.

<https://live-nfwf-2019.pantheonsite.io/sites/default/files/hurricanesandy/Documents/hurricane-sandy-community-resilience-planning-case-study.pdf>
7. Case Study: Advancing Coastal Resilience Science through Data, Mapping, and Modeling in the Hurricane Sandy Coastal Resilience Program - Hurricane Sandy Program investments in coastal resilience science projects have filled key knowledge gaps and helped to directly improve resilience-related decision-making.

<https://live-nfwf-2019.pantheonsite.io/sites/default/files/hurricanesandy/Documents/hurricane-sandy-coastal-science-case-study.pdf>

Office of Navajo and Hopi Indian Relocation

The Office of Navajo and Hopi Indian Relocation Commission was established to implement the settlement of a land conflict between the Navajo and Hopi Indian tribes. To fulfill its mission, the Commission assists with the relocation of Navajo and Hopi citizens off certain lands belonging to the other tribe. While many citizens are still eligible to appeal their denial of relocation benefits, there are only three families deemed eligible for relocation benefits remaining to be relocated. Consequently, Congress needs to determine next steps for the closure of the Commission and how to ensure any remaining Commission duties are fulfilled. One option considered under the Trump Administration was transferring any remaining duties to the Office of the Special Trustee, assuming a clean audit.

Pingree Q12: What are your thoughts on the potential for the Office of the Special Trustee or another Interior Department entity assuming the remaining Commission duties?

Response: The Department of the Interior recommends entering into consultation with the Navajo Nation and Hopi Tribe of Arizona to allow the Tribes to inform options for next steps regarding the functions of ONHIR. Interior is willing to assist with coordination of the consultation process, including producing a summary of recommendations that are communicated during consultation. The consultation summary can be used by the Administration and Congress to inform a transition plan for ONHIR responsibilities, including any statutory changes necessary to implement a transition.

Office of the Special Trustee of American Indians

In fiscal year 2019, Congress did not object to the prior Administration moving the Office of the Special Trustee (OST) from under the Office of the Secretary to under the Assistant Secretary of Indian Affairs. We made clear, however, that this move was not to make the Special Trustee permanent. At some point, the prior Administration decided that OST could not be moved under Indian Affairs. Instead of consulting with Indian Country or discussing with Congress, the prior Administration decided to, and began taking steps to, create a new bureau under Indian Affairs.

The Trump Administration then included a proposal to create a new bureau in its fiscal year 2021 budget request. Both the National Congress of American Indians and the Affiliated Tribes of Northwest Indians objected to the creation of this new bureau. The House of Representatives passed its version of the fiscal year 2021 bill in July 2020 noting concerns with the proposal to create a new bureau. Despite the House' concerns, the Trump Administration proceeded to begin creating a new bureau. In December 2020, Congress rejected the proposed budget structure for a new bureau and continued funding for the OST, rather than a new bureau, in fiscal year 2021.

Both Tribes and Congress are concerned that transferring all duties and functions of OST to a new bureau is an attempt to circumvent the sunset provision of the 1994 Indian Trust Reform Management Act. In addition, Congress, along with Tribal leaders, expressed concern about potential fragmentation and duplication of functions between OST and the Bureau of Indian Affairs. Specifically, there are serious questions about whether OST needs to continue performing any duties unrelated to its financial and accounting functions. As a result, in the fiscal year 2021 appropriations bill, Congress noted that it expects you to conduct your own analysis of the Department's trust responsibilities under the 1994 Trust Reform law and subsequent laws by the end of June.

Pingree Q13: Do you intend to engage in Tribal consultation when conducting an analysis of the trust responsibilities under the 1994 American Indian Trust Reform Act and subsequent laws?

- Some Tribes indicated they believe the last Administration did not truly consider their concerns on the future of OST's duties and functions. If you decide to propose moving forward with the creation of a new bureau in fiscal year 2022, how will you ensure

meaningful and sufficient weight is given to Tribal concerns and ideas on how to sunset the Special Trustee given the opposition already stated on creating a new bureau?

Response: The American Indian Trust Fund Management Reform Act of 1994 set forth certain statutory trust duties. The requested legal analysis will be performed within the Department. The Department does not consult on legal analysis. The Department engaged in extensive Tribal consultations in 2016 and 2017 on the future of OST, and the creation of the Bureau of Trust Funds Administration (BTFA) was, in part, a response to the feedback received in those consultations. If the Department contemplates any future Departmental actions with Tribal implications, we will conduct Tribal consultations as appropriate.

The transfer of duties and functions from OST to BTFA was not intended to circumvent the sunset provision of the American Indian Trust Fund Management Reform Act of 1994, but to facilitate the eventual termination of OST. The Department has permanent financial trust management duties which predate the creation of OST in 1994 and those duties must be performed after OST ceases to exist. One of the lessons learned over the past 20 years is that the Department cannot go back to managing Indian trust funds as it did prior to the 1994 Act. It was the Department's judgment that returning to the status quo ante (BIA control of the accounting functions) was untenable and, therefore, a separate entity was created to perform those functions going forward.

Climate Crisis in Indian Country

The President's fiscal year 2022 budget proposes an increase of more than \$450 million to address the climate crisis in Indian Country. While the budget indicates this investment is to facilitate climate mitigation, resilience, adaptation, and environmental justice projects in Indian Country, there are not many details provided.

Pingree Q14: Please explain in more detail the type of activities included and how you propose to allocate these funds throughout Indian Country in a fair and efficient manner.

Response: The FY 2022 budget includes \$395.8 million for critical trust natural resources activities, a \$136.9 million increase over the 2021 enacted level. The increases affect nearly all natural resource programs to support Tribal communities in sustainable resource management and in preparing and responding to the impacts of climate change, such as drought, wildfires, changes in the plants and animals important to subsistence and culture, rights protection, coastal erosion, and sea level rise. Funds will support Tribes to develop science, tools, training, planning, and implementation of actions to build resilience into resource management, infrastructure, and community development activities.

The request for the Tribal Climate Resilience program increases from \$17.0 million in 2021 to \$61.0 million in 2022. This funding will be used to fund Tribal Climate Adaptation Grants,

Alaska Village Relocation Grants, and a Tribal Civilian Climate Corps (CCC). The budget also requests an additional \$10.0 million for Tribal land acquisition efforts on and off current reservations to support sustainable land practices. Meaningful and robust Tribal consultation to determine the formula for distribution of the additional funding will be conducted with respect for Tribal sovereignty and a commitment to the trust and treaty responsibilities, which are the Administration's priorities.

The budget includes a \$6.0 million increase for the Forestry Projects program. This program supports forest development, inventory and planning, woodlands management, and timber harvest. The increase supports the application of science to provide tools and technical assistance to advance adaptive resource management. Specifically, the increase will support resource planning and management by applying technology to spatially illustrate the effectiveness of forestry and fuels projects and to deliver geospatial capacity, tools, training, and technical support to Tribal forest managers for climate change vulnerability analysis and for adaptation planning tools.

The 2022 budget funds Minerals and Mining activities at \$67.0 million to support Tribal energy and economic development. The budget includes a \$40.0 million increase to focus investment on the deployment of clean energy in Tribal communities. Through the Minerals and Mining activity, the 2022 budget continues the Department's commitment to the Indian Energy Service Center, which coordinates Indian energy development activities across Interior's bureaus.

Indian Loan Guarantee Program

The Indian Loan Guarantee Program is widely supported by Indian Country and is responsible for generating Tribal economic development. Due to a high rate of loan defaults, the total dollar value of loans that BIA may insure through this program decreased by approximately \$100 million in fiscal year 2021.

Pingree Q15: How do you propose to turn this program around to decrease the volume and dollar amount of loans going into default and to ensure more robust oversight to limit future loan defaults?

Response: The Division of Capital Investment continues to exert strong management and oversight over the Indian Loan Guarantee Program to serve the access-to-capital needs for Indian Country. The program's overall loss rate has improved in recent years due to the creation of the Collections Coordinator position in 2016. That official is charged with making certain defaulted loans assigned to the program after a paid claim for loss are pursued for maximum recovery through negotiated settlements with borrowers, or assignment to the Department of Justice or the Department of the Treasury for enforced collection when necessary. As of the second quarter of FY 2021, that person has helped collect over \$4 million in old, unpaid loans assigned to the

program from lenders after guarantee or insurance payment. Some of the debts on where a recovery has been secured, go back decades. And since March 31, 2021, another \$1.1 million has been secured from a loss attributed to a 2004 loan.

The program has implemented new policies specifically requiring additional program review and protection whenever a loan guarantee application is for a very large loan, or one in an unfamiliar field of endeavor. The outsized losses experienced in those years are therefore far less likely to be repeated going forward.

Tribal Lease payments

Federal court decisions appear to create an entitlement to compensation for 105(l) Tribal lease payments under the Indian Self-Determination and Education Assistance Act. In fiscal year 2021, Congress established an indefinite appropriation account for these costs in the same manner as contract support costs. Congress also directed both the Bureau of Indian Affairs and the Indian Health Service to develop guidelines regarding lease costs and encouraged both agencies to engage in dialogue with one another and with Tribes to develop policy guidance. Finally, Congress encouraged both Departments to discuss the funding classification of 105(l) Tribal lease payments.

Pingree Q16: What is the status of the directive in the fiscal year 2021 report? Has the Department engaged in conversations with the Department of Health and Human Services on 105(l) policy guidance? Has the Department initiated discussion with Tribes? If none of these activities have started, when do you expect discussions to begin?

Response: On March 3, 2021, Indian Affairs published 80 Indian Affairs Manual (IAM) Chapter 7 that documents Indian Affairs policy and procedure for executing a lease under the authority of the Indian Self-Determination Education and Assistance Act (ISDEAA), 25 U.S.C. § 5324(l) (“105(l) lease”). This followed Indian Affairs Tribal Listening sessions on June 29 and July 1, 2020. The Department of the Interior and the Indian Health Service have begun discussions regarding a joint consultation with Tribes and Tribal organizations regarding agency regulations and policies that determine the amount of space and other standards necessary to carry out Federal programs under a section 105(1) lease. The desired approach is to participate in a joint opening session followed by separate sessions. We anticipate holding those sessions this summer.

Pingree Q17: What is your position on whether 105(l) and/or contract support costs should be classified as mandatory, rather than discretionary?

Response: I will do everything I can to fully support Tribal self-government which includes making sure Tribes have what they need to administer programs. These costs are legal obligations which must be funded. Thanks to the work of this Subcommittee to make this funding an indefinite appropriation, there is now flexibility to address the lease requirements as they are identified.

Contract Support Costs—The President’s FY 2022 budget reflects the Administration’s support for the principles of Tribal self-determination and strengthening Tribal communities across Indian Country by fully funding Contract Support Costs. Contract Support Costs enable Tribes to assume responsibility for operating Federal programs by covering the costs to administer the programs. The 2022 budget for the Contract Support Costs account is \$346.5 million, which fully supports estimated needs at the 2022 request level. The 2022 budget continues to request funding for Contract Support Costs in a separate, indefinite current account to ensure full funding for this priority. The budget also includes a proposal to reclassify Contract Support Costs funding needed to meet legal requirements to Tribes from discretionary to mandatory funding starting in 2023.

Payments for Tribal Leases—The President’s FY 2022 Budget proposes \$36.6 million to fully fund costs for signed lease agreements under section 105(l) of ISDEAA. The 2022 budget continues to request funding for Payments for Tribal Leases in a separate, indefinite current account to ensure full funding for this priority. The budget continues to propose this funding in one account, Payments for Tribal Leases, within the Indian Affairs budget structure, which would be used to administer both BIA and Bureau of Indian Education (BIE) section 105(l) leases. The budget also includes a proposal to reclassify the Payments for Tribal Leases funding needed to meet legal requirements to Tribes from discretionary to mandatory funding starting in 2023.

Land and Water Conservation Fund – Recreational Access

The Great American Outdoors Act created a permanent funding stream for the Land and Water Conservation Fund, and there are requirements for the Department to submit project lists of potential acquisitions and supplemental projects under law. There is also a requirement under Section 200306 of Title 54 that you develop a priority list for Recreation Access projects.

Pingree Q18: Will you be submitting this list, or otherwise incorporating this information into, the proposed project lists you will be submitting with the FY 2022 budget?

Response: Yes. The Department will be providing information on proposed Federal land acquisition projects that support Recreational Public Access, as required by Section 200306 of Title 54. *[The FY 2021 LWCF Recreation Access project list was sent to Congress on July 29, 2021]*

Questions from Ranking Member Joyce:**Missing and Murdered Indigenous People**

As a former prosecutor and co-founder of the Bipartisan Task Force to End Sexual Violence, I am encouraged by the Department's recent announcement to form a new unit within the Bureau of Indian Affairs Office of Justice Services to provide leadership and direction for work involving missing and murdered American Indians and Alaska Natives.

I am pleased to see that the Department is continuing this important work, given it remains a shared priority, and this subcommittee has been supporting the Operation Lady Justice initiative started under the previous administration.

Joyce Q1: What parts of Operation Lady Justice have been working well?

Response: Currently, we are implementing Operation Lady Justice components in advanced training and evidence response teams that are strengthening BIA's functional role in the Missing and Murdered American Indians and Alaska Natives Task Force set up in 2019. This better positions BIA to marshal law enforcement resources across Federal agencies and throughout Indian country.

Joyce Q2: Where do you see room for improvement that led you to establish this new unit?

Response: The Missing and Murdered Unit (MMU) incorporates the 2019 Task Force focused on the same types of incidents. The MMU will provide leadership in our law enforcement program to get everyone within and outside BIA on the same page. Duties will include directing and coordinating interagency work involving missing and murdered American Indians and Alaska Natives, as well as putting the weight of the Federal Government behind investigations across agencies throughout Indian country.

Joyce Q3: What is the proposed fiscal year 2022 budget for this work?

Response: Secretary Haaland formed a new Missing & Murdered Unit (MMU) within the BIA OJS to provide leadership and direction for cross-departmental and interagency work involving missing and murdered American Indians and Alaska Natives. The MMU will help put the full weight of the Federal government into investigating those cases and marshal law enforcement resources across Federal agencies and throughout Indian Country.

The FY 2022 budget proposes to invest \$16.5 million, an increase of \$5.0 million, for Law Enforcement programs and Special Initiatives to increase coordination of investigations and resolution of those cases and ensure accountability. The MMU will coordinate with other Federal agencies in addressing the underlying causes behind those numbers, including—among others—sexual violence, human trafficking, domestic violence, violent crime, systemic racism, economic disparities, and substance use and addiction. Federal partnerships to address the number of missing and murdered Indigenous peoples will be governed by the Nation-to-Nation foundation of our relationship with Tribal governments and respect for Tribal sovereignty and self-determination. The challenges in Tribal communities will be met by solutions that are informed and shaped by Tribal leaders and Tribal governments.

Joyce Q4: Are there other pieces in the FBI or other agency budgets that we should be funding to help you succeed?

Response: Historically, the Department of Justice (DOJ) has funded liaison positions that proved valuable in collaborative efforts with the United States Attorneys' Offices. The FY 2022 DOJ budget provides details on those positions.

Opioids / Indian Country

The opioid epidemic has been affecting every person and household across the country, and the COVID-19 pandemic has made the situation worse. That is why Representative Derek Kilmer and I are working hard together this year to pass our bill, H.R. 654, the Drug-Free Communities Pandemic Relief Act.

The situation is perhaps more dire in Indian Country than anywhere else, which is why this subcommittee has strongly supported the Department's Joint Opioid Reduction Task Force, begun under the previous administration, and led by the Bureau of Indian Affairs.

Last year, the Task Force led 14 operations across seven states, resulting in more than 313 arrests and the seizure of 2,607 pounds of illegal narcotics with an estimated street value of \$19.6 million, more than double the price tag from the previous year.

Joyce Q5: Does the Department intend to keep the Task Force going? If so, what additional resources are needed to build on last year's success?

Response: As long as opioids continue to plague our communities, we will keep up our efforts. The Task Force is part of a government-wide effort targeting opioid and other substance abuse prevention. In terms of successes, BIA's canine teams have been very effective in disrupting drug trafficking routes.

30x30 / Private Landowners

I mentioned in my opening remarks some of the concerns that I and others have with interpretations of the President's so-called "30-by-30" goal. His Executive Order does not say federal lands—it says our lands. It also does not say preserving or protecting—it says conserving.

The Secretary has been leading an effort to solicit input and send recommendations to the President's National Climate Task Force by April 27.

Joyce Q6: Does the Department agree that urban and suburban residents can play a vital role in conservation for pollinators and other small critters that do not depend on large acreages, and have you found a way to include them in the 30-by-30 goal?

Response: Yes, President Biden has encouraged Americans to join in the conservation of at least 30 percent of our lands and waters by 2030. Rather than simply measuring conservation progress by national parks, wilderness lands, and marine protected areas in the care of the Federal government, the vision includes conservation efforts by private and non-Federal landowners, and the vital importance of investing in conservation in urban and suburban areas where over 80 percent of Americans live. The suburban and urban conserved areas include playgrounds, trails, and open spaces. These urban and suburban greenspaces improve public health, increase property values, and strengthen communities, as well as improving biodiversity, ecosystem services such as air quality and reduced storm water runoff, moderating local climate and provide aesthetic and recreational values to communities.

Great Lakes Restoration Initiative

The Great Lakes are especially vital to my district in Northeast Ohio. The Lakes are the largest freshwater system in the world, providing drinking water for 48 million people and generating more than 1.5 million jobs and \$60 billion in wages annually.

Given the environmental and economic importance of the Great Lakes, I have made it a top priority to fight for their protection in Congress. That is why I was pleased to see that the Administration's infrastructure plan recognizes the need to invest in the protection and restoration of major water resources, like the Great Lakes.

Joyce Q7: Does the fiscal year 2022 budget request support ongoing Great Lakes restoration projects that the Department's bureaus – including the Fish and Wildlife Service and the U.S. Geological Survey – are carrying out in partnership with EPA through the Great Lakes Restoration Initiative?

Response: The FY 2022 Budget includes a total of \$103.2 million to support the restoration of the Great Lakes, an increase of \$13.0 million, which include programs in the U.S. Geological

Survey, the Fish and Wildlife Service, and the National Park Service. This funding is in addition to the joint work with EPA and other agencies through the Great Lakes Restoration Initiative.

Joyce Q8: Why is continuing work to prevent the spread of invasive carp and harmful algal blooms important for the long-term health and economic vitality of the Great Lakes ecosystem?

Response: The Great Lakes provide drinking water, transportation, power, and recreational opportunities to the 30 million people and holds 95 percent of the surface fresh water in the United States. The lakes are the heart of industries responsible for more than 1.5 million jobs and \$62 billion in wages. Environmental degradation has left the Great Lakes imperiled. USGS and FWS work alongside partners to protect, restore, and maintain the Great Lakes ecosystem.

More than 180 non-native species are established in the Great Lakes. The most invasive of these reproduce and spread so quickly that they out-compete native species. The addition of invasive carp to the ecosystem would further degrade habitat and disrupt food webs. Early detection, risk assessment, and development of control tools and strategies are intended to prevent the establishment of invasive carp in the Great Lakes and to reduce their impacts in the Mississippi River Basins and elsewhere.

An algal bloom may be called harmful because of resulting reductions in dissolved oxygen concentrations, alterations in aquatic food webs, unsightly scums along shorelines, production of taste-and-odor compounds that cause unpalatable drinking water and fish flesh, or the production of toxins potent enough to poison aquatic and terrestrial organisms. Harmful algal blooms have been confirmed in inland reservoirs and lakes in Ohio, Kentucky, and Indiana, in the Ohio River, and in Lake Erie. Economic damages related to HABs include loss of recreational revenue, decreased property values, and increased drinking-water treatment costs.

Land and Water Conservation Fund – Recreational Access

The Great American Outdoors Act created a permanent funding stream for the Land and Water Conservation Fund and nearly doubled the annual funding amount. Included in the statute is the requirement that acquisitions to improve recreational access total not less than three percent of the appropriation. The Congressional Research Service reports that the extent to which agencies prioritize acquisition funding for recreational access might vary among agencies and from year to year.

Joyce Q9: How will the Department define recreational access under the new Administration? How much of a factor will it play in the agency's prioritization of annual acquisition projects?

Response: Because each bureau seeks to address recreational access challenges unique to their lands, the Department employs a broad definition or approach to encompass and reflect the

diverse nature of its portfolio. Recreational access continues to be an important factor in the Department's prioritization of annual acquisition projects.

National Park Service – Replacement of GPS Devices

Over the last two years, Congress has provided \$6 million to help the National Park Service replace its GPS data collection devices because roughly 25 percent of them were reliant on an outdated operating system.

Joyce Q10: What percentage of the devices have been updated?

Response: The NPS appreciates the funds provided by the Subcommittee and is investing them to ensure we have a lower-cost, more robust system that will be easier to maintain in the long-term. The NPS will have replaced a majority of the devices with the funding provided in FY 2021.

Joyce Q11: Does replacing these devices help the Park Service improve visitor safety, facilities planning, and lands administration?

Response: The funding provided helps the NPS modernize its capabilities. This modernization supports all operations, including visitor protection, facilities planning, and lands administration.

Joyce Q12: How does this effort align with the Department's IT security requirements?

Response: Modernization of NPS mobile data collection devices supports DOI IT security efforts by ensuring that the operating system for these devices and the way in which they are used in the field is consistent with security requirements for other mobile devices, smartphones, laptops, desktops, and servers.

Increased Federal Spending / Stewardship of Taxpayer Dollars

As a result of the COVID-19 pandemic, Congress has provided trillions of dollars in economic stimulus and relief to help Americans tackle unique challenges.

On the heels of this unprecedented spending, the President's fiscal year 2022 budget request calls for over \$1.5 trillion in discretionary funding, which includes a \$2.4 billion increase for the Department.

Joyce Q13: Given it is essential that we as appropriators work to restore fiscal responsibility when examining the fiscal year 2022 request, can the Department explain why these funding increases are necessary in the wake of record-breaking deficit spending?

Response: The FY22 Budget Request will provide additional supporting detail demonstrating why these funding increases are necessary.

Joyce Q14: Should Congress enact the fiscal year 2022 budget request, as well as the President's proposed infrastructure plan, does the Department have the financial controls in place to protect such a significant amount of funding from waste, fraud, and abuse?

Response: Interior takes its stewardship of taxpayer dollars seriously and actively works to prevent waste, fraud, and abuse through implementation of bureau and office administrative control of funds systems, as prescribed in OMB A-11 Appendix H.

Interior's Financial Business Management System (FBMS) is a significant tool in each bureau's/office's Administrative Control of Funds system and is designed to be used in conjunction with other funds control tools and processes. FBMS has built-in system tools that assist bureaus and offices with monitoring execution against OMB-approved apportioned funding levels. In addition to the built-in controls in FBMS, there are a number of reporting tools and monitoring activities bureaus and offices incorporate into their Administrative Control of Funds systems to achieve positive funds control. For example:

- FBMS includes separation of duties as a general management control tool to ensure proper management of funds and which enables multiple staff members to review funds availability during the execution process.
- Administrative Control of Funds systems require bureaus/offices to assign staff to conduct periodic reconciliation of funds control records with accounting records or other fund status reports available in FBMS used to determine availability of funds.
- Quarterly certification of the SF-133 execution report to Treasury. DOI bureau budget offices are required to review and provide concurrence on quarterly SF-133's. This process also allows bureaus/offices to validate sufficient apportionment of the amount of budget authority realized.
- The OMB Apportionment system, which is available to all bureaus and offices, provides a comparison report between apportioned and executed amounts using the latest published SF-133 (execution) data.
- FBMS includes a robust reporting tool (EMIS) that allows bureaus and offices to develop recurring status of funds reports to provide daily (or any frequency desired) snapshots of execution at any level of the hierarchy. These reports allow bureaus/offices to review nearly real-time execution (data updates each night) against apportioned levels.
- Bureau budget personnel are annually invited to participate in a 3-hour apportionment training course conducted by the Department. The course covers the apportionment

process and discusses recommended monitoring activities (such as review of posted recoveries, regular review of SF-133/SF-132 levels, posting sequestration reductions throughout the fiscal year for SF-133 validation, etc.)

Deployed under the full-scale funds control system of each bureau and office, tools, and processes such as these enable Interior to successfully execute and monitor appropriated funds while vigilantly guarding against waste, fraud, and abuse.

Energy and Mineral Development

Market-driven development of energy and mineral resources on federal lands and waters remains essential to our nation's security, our economy, and a smooth transition to a clean energy future. I am deeply concerned that the President's so-called "pause" on new oil and natural gas leases on public lands and waters may be the first step of a larger strategy to price domestic fossil energy out of the market and force Americans to pay more for less reliable, less secure, and less clean sources of energy.

Please update the subcommittee on the Department's comprehensive review and reconsideration of oil and gas permitting and leasing, specifically:

Joyce Q15: Besides whether to adjust royalties, what other changes is the Department looking at and why?

Response: Section 208 of Executive Order (EO) 14008 — Tackling the Climate Crisis at Home and Abroad — directs the Secretary of the Interior to conduct "a comprehensive review and reconsideration of Federal oil and gas permitting and leasing practices." This provides an important opportunity to look critically at our programs to ensure that they best meet the needs of our Nation. As part of the review, the EO calls for the Secretary to consider adjusting royalties and other actions to ensure a fair return to the American taxpayer and account for the climate costs of oil and gas resources extracted from offshore waters. The comprehensive review of the agency's oil and gas programs will focus on and advance efforts to improve stewardship of public lands and offshore waters, create good paying jobs, and build a just and equitable energy future.

Joyce Q16: Does the fiscal year 2022 President's Budget propose any changes associated with preliminary findings of the Department's comprehensive review?

Response: The FY 2022 President's Budget requests for BOEM and BLM will not propose any changes associated with the comprehensive review findings because the review remains ongoing.

Joyce Q17: When does the Department anticipate completion and release of the comprehensive review and reconsideration?

Response: At this time, there is no timeline for the completion of the comprehensive review. The Department is working to develop an interim report, which will be released later this year, that will include initial findings on the state of the Federal conventional energy programs and outline analyses and proposals to better ensure these programs align with the Administration's broader effort to transition to a clean energy future.

Land and Water Conservation Fund – GrantSolutions

The Ohio Department of Natural Resources has been struggling with funding some projects through the Land and Water Conservation Fund (LWCF). Their most recent understanding of the status is that the grant awards are in process by the Department of the Interior using the new system, GrantSolutions. However, there has been an issue as the new system requires a new format for the grant agreement, which is not yet final and available to states.

Joyce Q18: When does the Department expect the LWCF agreement template to be available so that the awards can be processed?

Response: The template is almost complete, and the NPS expects it to be released to the States soon.

Question from Representative Kilmer:

Permits for Trophy Hunting of Threatened and Endangered Species

Madam Secretary, as you are aware, the United States forbids the trophy hunting of threatened and endangered species in our country that are listed under the Endangered Species Act (ESA). For example, the hunting of grizzly bears or Florida panthers is prohibited under the ESA.

However, the U.S. Fish and Wildlife Services is able to grant import permits for trophy hunters who killed foreign species—such as African elephants and African lions—which are also listed as protected species under the ESA. This appears to be a disparity in wildlife conservation strategy that the House of Representative has previously attempted to rectify through recent Department of Interior spending legislation.

Kilmer Q1: Madam Secretary, how does the Department intend to address this inconsistency in the application of the ESA, and does the Department intend to impose new restrictions on imports of threatened and endangered species trophies that are protected under the ESA?

Response: The Department is reviewing this topic and will provide additional information to the Committees when a decision is made.

Questions from Representative Cartwright:**USFWS MOU with NRA**

Cartwright Q1: Just a week before the end of the previous administration, the U.S. Fish and Wildlife Service (USFWS) signed an MOU with the National Rifle Association (NRA), seeming to signal a collaborative effort to promote hunting and hunter safety. However, this MOU has created confusion among State fish/game/wildlife agencies and appears to indicate that the NRA is the preferred vendor of hunter safety education. Has the USFWS or DOI conducted a review of this document to ensure that the policy positions of the USFWS and DOI, as guided by the Biden Administration, are accurately and appropriately represented in the MOU with the NRA?

Response: The Fish and Wildlife Service is currently reviewing this MOU and expects to make a decision soon.

Cartwright Q2: What steps are being taken by the Agency or Department to ensure a level playing field for all qualified providers of hunter safety education?

Response: The Service's rules allow States to implement hunter education programs in a myriad of ways to best address the needs of the State and their users. States may carry out their training programs by partnering with a wide range of partners to include individuals, nonprofit groups, or vendors in the delivery of their hunter education training. These flexibilities allow States to design their programs based on their priorities. States rely heavily on volunteers and nonprofit organization donations of goods and services to secure a large portion of their required cost share for their hunter education programs. Financial assistance regulations and Service rules recognize the market value of these contributions and permit States to claim these donations as in-kind costs in their hunter education programs. States may also contract with vendors that provide high quality online training solutions. Those vendors may elect to provide part of their services as donations to States and the value of those donations may be counted as cost share toward the required match. The purpose of the Hunter Education program is to develop safe and ethical hunters, there are a multitude of strategies the States may employ to accomplish the program objectives. Service rules do not inherently favor one approach or one provider over another. Ultimately the program implementation decisions rests with the individual State.

Native and Invasive Species

Cartwright Q4: According to government agencies and outside experts, promoting the use of native plants on federal lands is beneficial to wildlife, human health, and the environment.

Unfortunately, of the 20,000 known native plant species in North America, approximately 30 percent are at risk of extinction because of habitat loss, invasive species, temperature shifts, and pesticide use. What is the Department's current plan to mitigate the effect of invasive plant species and promote native plants?

Response: To mitigate the effects of invasive plant species and promote native plants, the Department of Interior's bureaus are guided by the Invasive Species Policy (Policy, 524 DM 1) updated in 2020, and Invasive Species Strategic Plan (Plan) developed in 2021 pursuant to the John D. Dingell, Jr. Conservation, Management, and Recreation Act (Public Law 116-9).

It is the policy of the Department to cost-effectively prevent the introduction, establishment, and spread of invasive species; detect and rapidly respond to invasive species; eradicate or control populations of invasive species that are established; and implement these actions in collaboration with states, tribes, territories, and others as appropriate. Where consistent with applicable laws and regulations, the Department prioritizes invasive species management that benefits human health and safety and the economy or reduces the need to list native species under the Endangered Species Act.

The Department's Invasive Species Strategic Plan 2021-2025 (Plan) is a public document that establishes the goals, objectives, and strategies, as well as crosscutting principles that guide mitigation efforts for non-native plants over the next five years. The strategies reflect both work that is ongoing and opportunities to focus on emerging priorities. Recognizing that the bureaus often have their own invasive species management plans, the Plan outlines a comprehensive approach across the Department that builds upon an existing and overarching strategy.

Additionally, to promote native plants, the Departmental bureaus participate collaboratively in the National Seed Strategy for Rehabilitation and Restoration (National Seed Strategy). The National Seed Strategy, led by the Bureau of Land Management (BLM), charts a course for a coordinated supply of native seeds with 12 Federal agencies and over 300 non-Federal partners from Tribal, State, local and private affiliates.

Cartwright Q5: How would native plants on federal lands improve flora, fauna, and climate health for our communities?

Response: Native plants on Federal lands generate habitat for wildlife and ultimately improve health outcomes for American communities. Greater biodiversity across landscapes with resilient species richness leads to greater environmental stability. Plant species with greater levels of genetic diversity that are adapted to a wide variety of conditions are more likely to be able to withstand environmental disturbances, stress from wildland fire, disease, insect herbivory, and climate change. Ultimately, Departmental efforts to conserve native plants will result in benefits

for American public health, providing clean air, fresh water, medicines, food security, and stabilizing or reducing the effects of climate change.

Cartwright Q6: Recently the predatory northern snakehead was caught in the Upper Delaware River for the first time. What is the Park Service doing to address these issues and to educate the public?

Response: NPS officials, the New York State Department of Environmental Conservation, and the Pennsylvania Fish and Boat Commission are monitoring the Upper Delaware River for the northern snakehead. The Upper Delaware Scenic and Recreational River continues to conduct public outreach by issuing press releases and has developed materials and signage instructing anglers not to re-release snakehead, and to report any specimen that are caught to the NPS or state authorities. In conjunction with partners, the NPS continues to conduct sampling and assessments to determine quantity and distribution of the northern snakehead in the river. More robust data from the continued research will allow the NPS and its partners to evaluate and assess the threat to area resources and options for control/eradication.

Chesapeake Bay Program

Cartwright Q7: Last year, with overwhelming bipartisan support, Congress passed the America's Conservation Enhancement Act. Among many other conservation measures, Congress established a new program at the Fish and Wildlife Service, the Chesapeake Watershed Investments for Landscape Defense (WILD) that supports habitat restoration throughout the Bay region. Unfortunately, although the WILD Act's funding authorization began in FY 2021, it was signed into law too late in the year to be included in the appropriations process and the program is now a year behind. Are you considering supporting funding for this program and how are you prioritizing getting it up and running quickly?

Response: The U.S. Fish and Wildlife Service (FWS) moved swiftly to begin developing the Chesapeake WILD program authorized by Congress. After enactment, FWS connected with the Chesapeake Conservation Partnership (CCP), a well-known regional partnership representing Federal, Tribal, State, and non-profit entities, to inform the process for developing shared priorities and strategies for the Chesapeake WILD program. Representatives of the EPA Chesapeake Bay Program (Bay Program) and the tristate legislative body Chesapeake Bay Commission are among the key leaders of the CCP Steering Committee. Because of its unique structure and governance, and the diverse cross-section of partners and stakeholders it represents, the CCP is an ideal forum for convening and engaging the agencies and organizations called for in the Chesapeake WILD legislation.

Together with CCP, FWS convened more than 120 partners and stakeholders for a series of stakeholder sessions on March 23, 2021. These sessions identified ideas, actions, and strategies

to inform the Chesapeake WILD program. Information generated in facilitated breakout groups was organized into themes associated with five “pillars”: 1) habitat conservation; 2) climate adaptation; 3) outreach, education, and civic engagement; 4) access for outdoor recreation; and 5) clean water for wildlife and people. The sessions also reinforced a universal commitment that collaborative efforts will emphasize diversity, equity, inclusion, and justice practices and policies that foster a safe, diverse, equitable, and inclusive work environment that allows for new and impactful partnerships.

While there are no supporting appropriations with which to establish a grant program at this time, FWS and our partners are developing the infrastructure needed to effectively distribute grant funds once Congress makes them available. Chesapeake WILD will complement, not replace, existing work and associated funding in the watershed, by increasing coordination between partner agencies and organizations, and identifying conservation and restoration priorities with unmet funding needs that would be eligible to compete for program funds, as appropriated. In this context, Chesapeake WILD will enhance the successes of the Bay Program, with a coordinated emphasis on the living resources and habitats, and climate change considerations prioritized by the Bay Program and Executive Order 13508 Chesapeake Bay Protection and Restoration. FWS is preparing a high-level Chesapeake WILD Framework document that will be sent to Congress later this year.

Questions from Representative Stewart:

Bonneville Salt Flats Restoration

The Utah Department of Natural Resources and the BLM have entered into a cooperative agreement for the restoration of the Bonneville Salt Flats in Wendover, Utah, which are managed by the BLM. Bonneville has provided dramatic landscapes for photography, film, recreation, and it has played a dramatic role in land speed racing. Unfortunately, the salt crust at Bonneville has diminished over many decades, as it was once measured there in feet and is now less than a few inches. Stakeholders have crafted a broadly supported strategy for restoring the Salt Flats and Congress provided funding that was intended for this project in the Consolidated Appropriations Act, 2021 (Public Law No: 116-260), which has yet to be released. The law also included report language stating that the Appropriations Committees “expect the Department to implement cooperative agreements with the State of Utah to restore the Bonneville Salt Flats. The Committees direct the Department to brief the Committees on this effort within 45 days of enactment of this Act.”

Stewart Q1: When will the BLM provide Congress the report, which was due by mid-February?

Response: BLM briefed House Interior Appropriations staff and Representative Stewart’s personal staff on Monday, May 17, 2021.

WEDNESDAY, APRIL 21, 2021.

**FISCAL YEAR 2022 BUDGET REQUEST FOR THE
ENVIRONMENTAL PROTECTION AGENCY**

WITNESSES

**MICHAEL REGAN, ADMINISTRATOR, ENVIRONMENTAL PROTECTION
AGENCY**

**DAVID BLOOM, DEPUTY CHIEF FINANCIAL OFFICER, ENVIRON-
MENTAL PROTECTION AGENCY**

Ms. PINGREE. Good morning. This hearing will now come to order.

As the hearing is fully virtual, we must address a few housekeeping matters.

For today's meeting, the chair or staff designated by the chair may mute participants' microphones when they are not under recognition for the purposes of eliminating inadvertent background noise.

Members are responsible for muting and unmuting themselves. If you notice you have not unmuted yourself, I will ask you if you would like the staff to unmute you. If you indicate approval by nodding, staff will unmute your microphone.

I remind all members and witnesses that the 5-minute clock still applies. If there is a technology issue, we will move to the next member until the issue is resolved and you will retain the balance of your time.

You will notice a clock on your screen that will show how much time is remaining. At 1 minute remaining, the clock will turn to yellow. At 30 seconds remaining, I will gently tap the gavel to remind members that their time is almost expired. When your time is expired, the clock will turn red and I will begin to recognize the other member.

In terms of speaking order, we will follow the order set forth in House rules, beginning with the chair and ranking member, then members present at the time of the hearing is called to order will be recognized in order of seniority, and finally members not present at the time of the hearing is called to order.

Finally, House rules require me to remind you that we have set up an email address to which members can send anything they wish to submit in writing at any of our hearings or markups. That email address has been provided in advance to your staff.

Okay. That is the end of the housekeeping rules. So now I will begin the hearing.

Today, the Interior-Environment Subcommittee will examine the President's fiscal year 2022 budget request for the Environmental Protection Agency. Joining us this morning is Administrator Regan. With him is Deputy Chief Financial Officer David Bloom.

I believe this is Administrator Regan's first appearance before the House of Representatives since being confirmed in March.

Welcome and congratulations, Mr. Administrator, and welcome back, Mr. Bloom.

Earlier this month, the President outlined some of his priorities for the EPA. In fiscal year 2022, the President is requesting \$11.2 billion for the EPA, a \$2 billion increase over the enacted level.

Some of the highlights that we expect to see when we receive the Agency's detailed budget request later this spring include increasing core operating programs by \$110 million to rebuild the Agency's capacity to carry out its mission to protect public health and the environment; tackling the climate crisis head on with the urgency that this existential threat requires; placing values like equity and equal access to justice for all at the heart of the Agency's policy agenda; and recognizing that advancing economic prosperity and environmental protection are not contradictory objectives but, in fact, are two sides of the same coin.

From my perspective, compared to what we have seen these past several years, this is a breath of fresh air. After 4 painful years, we will once again have senior leaders at the Environmental Protection Agency who see environmental protection as part of the Agency's job. We will have new leaders who view scientific data as a tool to guide decisionmaking, not as an obstacle to be overcome in pursuit of an ideological agenda, and will use the authority of the Federal Government to serve the public interest, rather than as a means to funnel benefits to political allies or to intimidate critics and opponents.

I would like to commend the Administrator for the actions he has already taken in restoring scientific integrity to the Agency's processes, his commitments to act transparently and fairly with all stakeholders, and his efforts to reset the Agency's relationship with this subcommittee.

The budget request, combined with the investments proposed in the American Jobs Plan, position us well to address the numerous environmental and public health challenges we currently face. They are a welcome indication of the work this administration is planning on getting done. I look forward to working closely with the Administrator and President Biden in achieving our shared vision for a safer, more prosperous, and more just Nation.

I would now like to yield to the ranking member of the subcommittee, Mr. Joyce, for any opening remarks he would like to make.

Mr. Joyce, you are recognized for 5 minutes.

Mr. JOYCE. Good morning, and thank you for yielding, Chair Pingree. I appreciate you holding this important hearing on the administration's fiscal year 2022 budget request for the Environmental Protection Agency.

I would also like to take a moment to welcome our witnesses, EPA Administrator Michael Regan and Deputy Chief Financial Officer David Bloom.

Thank you both for joining us this morning. I hope our next meeting together can be in person.

Administrator Regan, welcome to your first hearing before the Interior Subcommittee, and congratulations on your historic con-

firmation to serve as the 16th Administrator of the EPA. No doubt you have a tough job ahead, but given your deep understanding of EPA's programs and extensive experience in North Carolina, I expect you are up for the challenge and will serve the Agency well.

My colleagues and I look forward to working with you over the coming months to move forward a budget that provides EPA with the necessary resources to continue fulfilling its mission to protect human health and the environment. Our collaborative work starts today as we begin to discuss the Agency's initial funding priorities and goals for the year ahead.

In a recent speech you noted that, "every one of us has a stake in the health of our environment, the strength of our economy, the well-being of our communities, and the legacy we leave to the next generation." Administrator, I couldn't agree more.

That is why I take this committee's role seriously. As appropriators, it is critical that we work together to examine the programs under our jurisdiction to ensure taxpayer dollars are spent most effectively to benefit our environment and the American people. I am proud of the key investments we have made on a bipartisan basis to help improve our air, clean our water, revitalize our land, and support a strong economy.

Unfortunately, though, based on the scale of the increases included in the administration's initial fiscal year 2022 request, I have some concerns about the debt we may leave to the next generation. The fiscal year 2022 request proposes over \$1.5 trillion in discretionary spending, in addition to the \$1.9 trillion COVID relief package and the \$2.3 trillion infrastructure proposal.

For EPA, the request asks for an additional \$2 billion, a 21.3 percent increase above the fiscal year 2021 bipartisan agreement.

Spending at this rate is unsustainable and unaffordable. As we continue to restore our way of life and reignite our economy following the pandemic, the Federal Government must be cautious to live within its means so that we don't saddle future generations with unnecessary economic burdens.

Administrator Regan, I was pleased to see that the request prioritizes funding to improve our Nation's aging water infrastructure and to counter current and potential sources of water contamination. And the budget request invests in the Superfund and Brownfields programs to accelerate the cleanup of our Nation's lands to protect public health and return sites to beneficial use.

I look forward to working with the Chair to move a bill within reasonable spending limits that supports these programs, along with other EPA programs that communities, States, and Tribes rely on to mitigate environmental threats, bolster their recycling programs, protect their citizens, and meet Federal mandates.

Given the programmatic details of the request are still limited, I am sure we will spend a good bit of today discussing the Agency's policy initiatives, regulatory agenda, and staffing plans.

I was supportive of the prior administration's commonsense reforms and efficiencies developed to reduce regulatory burdens, promote American businesses, and support an all-of-the-above energy strategy.

I hope, on the heels of the pandemic, this administration thinks twice about undermining these efforts, which helped protect American jobs, reduce energy costs, and spur economic growth.

Finally, it comes as no surprise, but I am interested in discussing the administration's plans for the Great Lakes. The lakes are one of the country's greatest natural resources and economic powerhouses, and that is why I have made it a top priority in Congress to fight for their continued restoration and protection.

The Great Lakes provides more than 1.5 million jobs, supplies 90 percent of the Nation's fresh surface water, supports over 3,500 species of plants and animals, and generates over \$60 billion in wages annually.

I am very proud of the bipartisan work we have done on this subcommittee, especially under the leadership of the former chair, Ms. McCollum, to provide sustained, robust funding for the Great Lakes Restoration Initiative.

The GLRI is critical to bringing together all the Great Lakes stakeholders to mitigate the impacts that human activity has had on the lakes and to address threats like invasive species, harmful algal blooms, and shoreline erosion.

Administrator Regan, I am hopeful that the fiscal year 2022 request continues our investments in the GLRI and that we can find ways to work together to protect the Great Lakes for current and future generations.

When your schedule allows, I invite you to come and visit Lake Erie. It would be a great opportunity to show you the difference EPA-led GLRI restoration projects have had on the lakes' long-term health and vitality.

Thank you again for joining us this morning, Administrator. My colleagues and I look forward to working together and engaging with you further once we receive the administration's comprehensive fiscal year 2022 budget proposal.

With that, I look forward to our discussion.

And I yield back.

Ms. PINGREE. Thank you, Mr. Joyce.

You had us all in suspense, leaving the Great Lakes till the very end of your opening remarks. But always glad to have them in there.

So, Mr. Regan, thank you so much for being before us. We would love to hear your opening statement.

Mr. REGAN. Well, thank you, Chairwoman Pingree and Ranking Member Joyce and members of the subcommittee. I am grateful for the opportunity to be able to appear today to discuss EPA's discretionary funding request for fiscal year 2022. I am also delighted to begin this partnership and collaborative effort.

For half a century, EPA has helped provide the American people with clean air to breathe, clean water to drink, and safe, healthy land.

EPA's dedicated public servants at our headquarters in Washington, D.C., and throughout our ten regions, including seven staff members who have been with the Agency since its inception, work every day to improve the lives of people across our great Nation and have risen to meet the challenges presented to us as a result of the COVID-19 pandemic.

Earlier this month, President Biden sent to Congress a discretionary funding request for the EPA at \$11.2 billion. We believe this request will help ensure EPA can continue to meet its essential mandate, set the stone for our Nation's economic recovery, and provide the resources necessary to confront our environmental challenges, especially in our most overburdened communities.

The President has seized this moment to reimagine a new American economy that leads the world in advancing clean energy, modernizes our infrastructure while enabling it to withstand impacts from climate change, and rights the historic wrongs of past environmental injustices that have held back generations of Black, Latino, Indigenous, and low-income communities.

This funding request reflects the understanding that a healthy environment and a healthy economy are not mutually exclusive. They actually go hand in hand. These investments will provide tremendous opportunity to leverage American innovation, put people back to work, and protect our communities, families, and children from environmental hazards and harm.

In short, this request recognizes the profound urgency and the existential threat of the climate crisis and provides EPA with the resources essential to fulfilling our mission to protect public health and protect the environment.

Ensuring access to clean and safe water for all Americans impacts our Nation's climate resilience and is integral to advancing environmental justice. At EPA, we have seen that investing in water infrastructure is a win-win for public health and economic development. EPA's Water Infrastructure and Finance Innovation Act loan has helped finance \$19.4 billion in water infrastructure, creating 47,000 jobs nationwide.

The 2022 funding request of \$3.6 billion for EPA rebuilds our water infrastructure and is an increase of more than \$600 million over the fiscal year 2021 enacted level. This includes targeted increases to the State Revolving Loan Fund to assist States, Tribes, and territories with infrastructure projects that help provide safe drinking water and clean water in communities across the country.

Water infrastructure investments, however, represent only one side of ensuring clean and safe water. The Agency will invest resources and expand efforts to address PFAS, pervasive and persistent chemicals found in our drinking water.

As part of the President's commitment to tackling PFAS, the funding request provides approximately \$7 million to accelerate toxicity studies and funds research to inform the regulatory development designating PFAS as a hazardous substance, while setting enforceable limits for PFAS under the Safe Water Drinking Act.

Under the President's leadership we are also heeding our calls of the youth who courageously urge world leaders to fight the climate crisis with the innovation, fortitude, and resolve that it demands.

This budget invests in programs that will help reduce greenhouse gases, including an additional \$100 million for air quality grants to States and Tribes to tackle emission levels at the local and regional scale.

An additional \$30 million will help improve the knowledge of the impacts of climate change on human health and the environment through our research and development programs.

Much like climate change, environmental justice underpins all of our work. The pandemic ignited a perfect storm for communities of color and low-income communities who already bear the highest burden of pollutions, suffer the highest rates of mortality from heart and lung disease, and now COVID-19, too.

In the 40 years since the Comprehensive Environmental Response, Compensation and Liability Act, CERCLA, was signed into law, we have made significant progress, but much work needs to be done.

Under my leadership, EPA will do everything in its power to hold bad actors accountable for environmental degradation and return land to safe and productive use for communities.

Our budget provides \$882 million for the Superfund remedial program, nearly \$300 million more than our current budget, to clean up America's most contaminated land and reduce toxic substances and greenhouse gases from existing abandoned infrastructure.

These funding requests lay down a marker that EPA is ready to meet these challenges.

Thank you for the opportunity to testify today, and I look forward to our continued partnership and welcome any questions you might have.

[The information follows:]

TESTIMONY OF
MICHAEL S. REGAN

ADMINISTRATOR
U.S. ENVIRONMENTAL PROTECTION AGENCY

BEFORE THE
U.S. HOUSE COMMITTEE ON APPROPRIATIONS
SUBCOMMITTEE ON INTERIOR, ENVIRONMENT, AND RELATED AGENCIES

April 21, 2021

Thank you, Chairwoman Pingree, Ranking Member Joyce, and members of the Subcommittee. I am grateful for the opportunity to appear before you today to discuss the U.S. Environmental Protection Agency's discretionary funding request for Fiscal Year 2022.

Before I get to the funding request, I would like to discuss the bold vision laid out by President Biden in the American Jobs Plan. This plan is a transformational investment that puts working people first and will help ensure we reduce pollution and help create good quality jobs.

The American Jobs Plan

In March, President Biden released the American Jobs Plan. This plan recognizes that now is the time for a bold, once-in-a-generation investment in America to put millions of people to work and lay the foundation for economic growth for decades to come by investing in infrastructure.

Infrastructure in the 21st century extends far beyond just roads and bridges. It means investing in our electrical grid and building more resilient transmission. It means revitalizing digital infrastructure to expand access to reliable, high-speed broadband internet in every pocket of the country, especially rural areas and underserved communities. And it also means investing in our drinking water and wastewater infrastructure, cleaning up and restoring our land, and investing in programs to reduce air pollution for our kids.

Guaranteeing clean water for all

The American Jobs Plan proposes a \$111 billion investment in water infrastructure, including a \$45 billion investment to replace 100% of lead service lines and pipes through the Environmental Protection Agency's (EPA) Drinking Water State Revolving Fund and Water Infrastructure Improvements for the Nation (WIIN) Act grants. Replacing lead service lines is vital for public health and yet EPA estimates that six to 10 million homes in the United States and up to 400,000 schools and daycare centers have lead service lines. The impact of lead exposure, including through drinking water, is a serious public health issue and its adverse effects on children are all too well known. In children, lead can cause irreversible and life-long health effects, including decreasing IQ, focus, and academic achievement.

The plan also would invest \$56 billion in grants and low-cost flexible loans to states, Tribes, territories, and disadvantaged communities across the country to upgrade and modernize America's drinking water, wastewater, and stormwater systems, tackle new contaminants, and

support clean water infrastructure across rural America. The American Jobs Plan also provides \$10 billion in funding to monitor and remediate PFAS (per- and polyfluoroalkyl substances) in drinking water and to invest in rural small water systems, and household well and wastewater systems, including drainage fields.

In total, these investments will create millions of good paying jobs, including union jobs.

We know from experience that water infrastructure investments not only improve public health—they also create good-paying jobs. Through our State Revolving Funds, EPA has already provided more than \$189 billion in financial assistance to nearly 43,000 water quality infrastructure projects and 16,500 drinking water projects. This has created over 300,000 jobs in the last two years alone. Through the Water Infrastructure Finance and Innovation Act (WIFIA) loan program, EPA has provided \$9 billion in credit assistance to help finance more than \$19 billion for water infrastructure while creating nearly 47,000 jobs and saving ratepayers \$4 billion.

Investing in clean buses for kids

When I was a kid growing up in Eastern North Carolina I had to use an inhaler, an experience familiar for far too many kids. That is why the American Jobs Plan proposes to electrify at least 20 percent of our yellow school bus fleet through a new Clean Buses for Kids Program at EPA. We know this type of investment works and that it is important to protect kids on their way to and from school. Since 2008, Congress has provided funding through EPA's Diesel Emissions Reduction Act (DERA) for more than 28,000 school bus upgrades, including more than 4,000 school bus replacements. The Clean Buses for Kids Program is a new program, which would build on the lessons learned from DERA while leaving the existing program intact.

Reducing emissions from school buses has demonstrated positive health benefits for the children who ride them, the drivers, people around school bus loading areas, and the communities in which they operate. These investments will also boost market demand to create jobs, build out infrastructure and support U.S. manufacturing.

Cleaning up and restoring our land

In the 40 years since the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) was signed into law, we have significant progress on cleaning up and restoring our land, but the work is far from over. Under my leadership, EPA will do everything in its power to hold bad actors accountable for environmental degradation and return land to safe and productive use for communities. Communities located within one mile of Superfund sites are disproportionately communities of color and low-income. Remediation of these sites will strengthen climate resilience, improve public health, and expand job opportunities both in these communities, and the nation at large.

The American Jobs Plan proposes a \$5 billion investment in the remediation and redevelopment of Brownfield and Superfund sites, as well as related economic and workforce development programs. Cleaning up contaminated sites so they can be returned to productive use can be an engine for economic development across the country. Since Congress started the Brownfields

program, federal investments have leveraged \$34.6 billion, supported over 176,000 jobs, and thousands of properties have been cleaned up or made ready for reuse.

The FY2022 Discretionary Funding Request

President Biden's proposed FY2022 discretionary request for the Environmental Protection Agency of \$11.2 billion advances key EPA priorities, including tackling the climate crisis, delivering environmental justice, and rebuilding core functions at the Agency. The FY2022 discretionary funding request prioritizes working with and supporting state, local and Tribal leaders in expanding capacity in community development, cleaning up toxic waste, and investing in water infrastructure projects that create good paying jobs. Within the EPA topline, \$1.8 billion will support investments related to tackling the climate crisis, with more than half supporting environmental justice work. In addition, the request dedicates resources to restoring scientific integrity at the Agency and ensuring the foundation of our decision-making process is grounded in science.

EPA is also seeking additional resources and staff to enforce the environmental laws that Congress has passed so that all companies play on a level playing field and our communities share in public health benefits.

Restoring the Agency

Responding to the environmental crises at hand requires a systemic approach in expanding the Agency's capacity. EPA lost nearly 1,000 dedicated staff over the past four years, and it has affected the Agency's ability to carry out its core duties and functions to protect public health and the environment. The discretionary request invests over \$110 million to restore EPA's staff capacity and to rebuild programmatic capabilities that focus on protecting clean air, land, and water.

Restoring capacity across the Agency will strengthen our ability to tackle multiple priorities, from clean air and water, to cutting edge research at the Agency. Restoring the voice of our employees and supporting their efforts—through the best available science—to advance the mission of the Agency has never been more important.

Tackling the climate crisis

Under the Biden-Harris Administration, EPA is reprioritizing addressing climate change with the urgency the crisis demands. The discretionary request invests \$1.8 billion in programs to tackle the climate crisis while also delivering environmental justice to marginalized and over-burdened communities, growing the economy, and creating good paying jobs.

This request invests in programs to reduce greenhouse gas emissions, including an additional \$100 million for air quality grants to states and tribes to tackle emission levels on a local and regional scale. An additional \$30 million is included to improve knowledge of the impacts of climate change on human health and the environment through our research programs—more than doubling EPA's climate change research while providing additional investments to decrease emissions of methane and hydrofluorocarbons.

Prioritizing environmental justice

The communities hardest hit and struggling the most under the weight of the pandemic are often communities of color, lower income communities, and Tribal nations. For decades, many of these same communities have been overburdened with air pollution and other environmental hazards. An individual's skin color or their zip code shouldn't determine whether they have clean air to breathe and water to drink.

This request invests \$936 million towards a new Accelerating Environmental and Economic Justice Initiative that will help secure environmental justice for communities who too often have been left behind while creating jobs, cleaning up pollution, and implementing the Justice40 Initiative to advance racial equity. Like climate change, environmental justice underpins the work of the Agency and is an integral part of this national conversation surrounding equality and equity in the nation's communities.

The environmental justice initiative invests in a new community air quality monitoring and notification program, provides additional funds to enforce existing laws meant to protect communities from hazardous pollution, and allocates resources to hold polluters liable in civil and criminal suits. As part of the Justice40 Initiative, \$100 million will support development and implementation of a community notification program to monitor and provide real-time data to the public on current environmental pollution. These investments build on the funds provided by the American Rescue Plan, which will help address disproportionate environmental or public health risks in minority and low-income populations resulting from exposure to pollution and the COVID-19 pandemic.

American Rescue Plan

I also want to acknowledge and thank Congress for recognizing EPA's critical role in addressing human health and environmental disparities through the American Rescue Plan. Polluted air, contaminated water, and hazardous waste continue to threaten public health, and the COVID-19 pandemic has compounded the seriousness of such inequities for communities for color and low-income communities across the nation. The American Rescue Plan provides \$100 million for the EPA to address these issues; \$50 million targeted specifically to advance environmental justice and \$50 million to help states, Tribes, and localities improve air quality for their communities. As we work to implement programs and projects to best maximize the use of this funding, I am focused on ensuring these vital funds have the highest and best impact on the ground.

Conclusion

In closing, I want to thank you for the opportunity to be here today. I look forward to our continued partnership and welcome any questions you may have.

Ms. PINGREE. Thank you so much, Administrator Regan. It is great to have you here, and it is great to hear you outline some of the important goals that the EPA will be taking on.

I now recognize myself for 5 minutes to begin the questioning.

You started out or you did some talking about climate change, but I would like to follow up on that a little bit. I am very enthusiastic that the President has about \$14 billion above the fiscal year 2021 level across the Federal Government in his budget to support climate change investments, and of this about \$1.8 billion is going to the EPA.

You have talked a little bit about some of the work that you are doing. Could you go further on that to talk about how you see the EPA's role in tackling the climate crisis, and perhaps a little bit about how you see coordinating with Federal, State, and local agencies so that we can move forward together and as quickly as possible.

Mr. REGAN. Well, thank you for that question, Chairwoman.

The \$1.8 billion represents both climate change and environmental justice. There are resources in there to enhance our air quality grants for our States and our Tribes to help them with the reduction of greenhouse gas emissions under the Clean Air Act, but also the reduction of traditional pollutants as well that threaten our health and well-being.

There are also resources there that will enhance the Agency's knowledge and ability to quantify and address climate change pollutants on both health and in the environment. And so this will double our ability to look at research and development on the topic of climate change.

There are also resources in there, though, for environmental justice and accelerating environmental and economic justice in communities that have been hit the hardest, our communities that have been disproportionately impacted by climate change, as well as our Tribal partners as well. So there is a combination there in that \$1.8 billion that focuses on climate change, air quality impacts, and environmental justice.

Ms. PINGREE. That is great. Well, we certainly look forward to working with you on that.

You also brought up the important topic of PFAS contamination, which is such a critical issue, and we continue to discover more and more about the impacts of PFAS contamination in food and water and other areas as well.

So as you mentioned, there is money, a significant amount of money, to address research; also to support regulatory standards for drinking water. And that has been an important issue for this committee. We have invested a little over \$100 million at EPA towards those efforts.

Can you talk a little bit more—I know you mentioned it—but about how you intend to use these resources, but also specifically what you have planned for drinking water infrastructure?

Mr. REGAN. Absolutely.

The PFAS pollution is something that I have personal experience with. In North Carolina this was an issue that we fought for 2 or 3 years, looking at the impact that PFAS had in North Carolina for over 30 years based on the source that we tracked it back to.

It was such a pervasive issue in terms of health and human impact, but the economic impact that was caused by the uncertainty in drinking water was tremendous in the State as well.

We want to use these resources, these precious resources, to do more scientific evaluation and quantification of PFAS so that we can move forward with the right regulations for our drinking water. We also want to use these resources to help assist States in the cleanup.

You know, when there is uncertainty in drinking water, communities go on bottled water for months, if not years. There are things that we need to do to help expedite the cleanup and remediation.

That is what these resources are dedicated to, research and development to set drinking water standards, but also health and safety and well-being for our States and our communities.

And by the way, the \$75 million, it is just a drop in the bucket. The State of Minnesota estimates that it could cost \$250 million to \$1.2 billion to clean up in its area. North Carolina has some similar numbers as well.

So this is just a tip of the iceberg and we hope to do more.

Ms. PINGREE. Yeah, and I certainly concur. I think every State is already starting to understand the cleanup issues that they have, but also the drinking water standards.

I don't want to put you on the spot. Luckily there are only a few seconds left. But how long do you think it is going to take us to get to a Federal drinking water standard?

It is such a challenge for States now trying to deal with this on the individual basis. It seems important that eventually we arrive at that. How long do you think that will take?

Mr. REGAN. It is a top priority for this administration. We are building on some of the work that the previous administration did, quite frankly, did not move fast enough.

So we will have staff circle with you on the specific timeline. But we are moving in an expedited fashion, because the States need some certainty and, quite frankly, our military and companies need some certainty as well.

Ms. PINGREE. Great. Well, I have used up more than my time. But thank you so much for your answers.

And happy to yield to Mr. Joyce for 5 minutes for his questions.

Mr. JOYCE. Thank you, Chair Pingree. I will not leave you in suspense with my questions.

Administrator Regan, when I travel around my district in northeast Ohio, or all throughout Ohio and the Great Lakes, I consistently hear concerns about the increasing water levels in Lake Erie and their contribution to the ongoing erosion damage to shoreline communities.

To provide relief to our coastal communities, over the last year I have worked with various Federal agencies to try to address this problem. In doing so, I have discovered that it is going to take coordination and collaboration at the local, State, and Federal level to identify long-term solutions that will help us protect our critical infrastructure, prevent further loss of land and restore coastal habitat due to erosion.

Given EPA will play a key role in these efforts, in fiscal year 2021, I was proud Congress included language encouraging EPA to

make GLRI funding available to expand breakwaters and advance local shoreline mitigation measures.

Can you discuss EPA's plans in fiscal year 2021 to make GLRI funding available to protect Great Lakes shorelines that are threatened by rising lake levels and how this funding will help coastal communities?

Mr. REGAN. Well, thank you for that question, Congressman. Absolutely, we will continue funding to protect the Great Lakes.

You know, the Great Lakes are a national treasure. I think that 20 percent of the world's surface freshwater resides there. We really need to protect the ecological integrity, as well as the economic stimuli that the Great Lakes provides to so many communities. So we have prioritized that. We are aligned there.

It is my belief that climate change impacts and other impacts are altering the topography, geography, and et cetera, and we are seeing the shorelines expand. We believe that there are a number of natural remedies to accentuate some of the manmade remedies to prevent some of the erosion.

Staff is focused on that. We look forward to partnering with you and your team, and I look forward to accepting the invitation that you extended earlier to take a closer look.

You know, when I was Secretary of the Department of Environmental Quality in North Carolina, I visited 90 out of my 100 counties. I don't believe we can make these decisions sitting behind a desk. We need to get out and visit and see things firsthand, and I look forward to accepting your invitation.

Mr. JOYCE. Thank you.

I ask myself what we could do manually, by man, to do this. And my understanding from the Army Corps of Engineers is the safety valve is the Niagara Falls. So it is not like we have got a hell of a lot of room to reduce the water levels.

Now, they fluctuated down on their own this year, thank God. But they chewed up a lot of land in the process.

Does the fiscal year 2022 request provide GLRI funding for the Agency to continue this work? Beyond GLRI, are there other EPA programs, like Clean Water SRF, that may help constituents like mine address these coastal erosion issues?

Mr. REGAN. Yes, we want to continue the work and build on the work. There are other revenue streams at the Agency that we hope, in concert, we can collaborate with, like SRFs and others, to continue the great work that we have been doing in the Great Lakes.

I think that it would be a travesty to take our foot off the gas right now. So, we need to continue to lean in. The Army Corps has been a great partner to EPA on this effort.

And, again, I think that we see that there are some natural remedies there that we found through research and data that are longer lasting than some of the manmade remedies and are more cost effective.

So we believe we want to continue to work on the resiliency aspect of that, as well as the economic aspect of that.

Mr. JOYCE. Thank you.

Last Congress, I toured the Lake Guardian, EPA's largest research vessel, tasked with monitoring trends in the Great Lakes ecosystem. I saw firsthand how critical it is to prevent waste, par-

ticularly plastics, from getting into our waterways, given some areas of the Great Lakes are already experiencing high densities of microplastics.

That is why I have been supportive of EPA's Trash-Free Waters program which provides resources to help communities keep trash out of U.S. waterways and prevent microplastics from entering our food supply and drinking water sources.

The program is especially important now, given we have seen an uptick in pollution from disposable face masks and gloves due to the pandemic.

Administrator Regan, does the Agency plan to continue the Trash-Free Waters program in fiscal year 2022?

Mr. REGAN. Yes, we do.

And The Lake Guardian is EPA's science at its best, on the ground, looking at what is happening with the Great Lakes in real time. We are seeing the same thing that you are seeing and we want to continue to invest there.

You and I have talked about the CERCLA economy and the role that plastics play there. And I will tell you, whether it be the younger generation who have been pressing me on more action on plastics or whether it be States like yours and mine who see the impacts of marine debris, we want to spend a lot more time there and a lot more effort on those issues.

Mr. JOYCE. I know I am out of time, but Chair Pingree has already held a hearing on plastics in the oceans, and I have got to admit I was very surprised to find from the young scientists that it was actually getting into the food chain already in the Great Lakes. It is being absorbed into the meat of the fish.

And with my being completely out of time, I yield back.

Ms. PINGREE. Such an important topic. I am glad you took up all the time you needed.

Happy to yield to Representative Kilmer for 5 minutes for his questions.

Mr. KILMER. Thank you, Madam Chair.

And thank you, Mr. Administrator, for being with us today, and congratulations on your confirmation.

I recognize all of the critical work that your Agency accomplishes for our country. But as folks on this committee know perhaps all too well, my first and highest priority on this subcommittee remains the critical role that the EPA plays in protecting and restoring Puget Sound.

Puget Sound is our region's most iconic body of water, a place on which generations of Washingtonians and Native Americans have built their lives and made their livelihoods. The sound supports more than 150,000 jobs in fishing and shellfish harvesting and maritime industry.

There are 19 federally recognized Tribes that have made Puget Sound their home since time immemorial, including 17 with Tribal treaty rights to harvest fish and shellfish. And the Federal Government has a trust responsibility to support Puget Sound recovery and uphold those treaty rights.

I believe that now more than ever there is real opportunity for Congress and the Federal Government to adopt policies that will protect our planet for future generations. And as our Nation con-

tinues to adjust to our new normal, it is clear that major Federal investments will be needed to restart our economy and get folks back to work.

And I see Puget Sound restoration, from addressing persistent flooding and stormwater runoff to improving nearshore habitat and removing culverts that affect water quality and fish passage, as being a key component of that effort. These projects can get folks back to work and promote much-needed economic activity while also accomplishing long-term goals to recover the sound. That is a win-win.

So I am hopeful that we will see some progress on this front as part of the economic recovery effort.

I would also like to extend a standing invitation to you to come out and visit my neck of the woods so that you can see firsthand all of the outstanding needs, as well as the opportunities that our region has.

If future generations are going to have these opportunities, we have got to step up our efforts to protect and restore the sound, and we need a strong Federal partner in those efforts.

So can you speak to some of the opportunities you see to strengthen EPA's partnership role in Puget Sound recovery?

Mr. REGAN. Well, thank you for that question.

And absolutely, for the reasons that you outlined, I think that EPA has a strong history in working on the Puget Sound. That is work that we will continue to do for the reasons you laid out.

First and foremost, we believe that the work that we are doing there will enhance water quality, which is a critical part of our mission.

The economic vitality of the sound is important to you, important to us, to demonstrate that environmental protection and economic prosperity are not mutually exclusive. They go hand in hand.

And in this case, there is a direct connection to the work that we want to do in terms of our investments in water infrastructure, especially in the area you identified. If we are going to improve in the area of stormwater and flooding, we have got to take a look at what we are doing on the side of working with Puget Sound and looking at some of the natural remedies that we can begin to invest in.

So we look forward to continuing to partner there.

Mr. KILMER. I appreciate that.

And I recognize that if we are going to effectively recover the sound, we need a coordinated approach that includes more Federal resources and more authorities to complement the efforts of our State and of our Tribes.

I am proud to lead a bill here in Congress called the PUGET SOS Act to ensure that the Federal Government steps up to be a better partner that State and Tribal and local entities need to save our sound and to assist some of those regional efforts to restore salmon and orca populations, to ensure that future generations can dig for clams, and to uphold Tribal treaty rights.

That bill passed the House with strong bipartisan support last Congress. So I hope that we can count on your partnership and your support for getting it across the finish line this Congress.

Also, I want to just add, I know my State is petitioning the Biden administration to ensure that funding from the American Rescue Plan can be used to fix culverts. And again would certainly invite you to weigh in favorably there, because that can help the sound and it can grow a bunch of jobs.

So I guess I would love to just tee up those issues for you. And on top of that, if there are other EPA funding streams that could help there, we would certainly welcome that help with an eye towards saving the sound and saving some of the species that depend on it.

Mr. REGAN. Absolutely. I will assure you and commit to you that we look forward to the partnership.

As a former State secretary, I know that State and locals know their communities much better than the Federal Government ever could. We have to have an effective partnership.

And I look forward to thinking through how we can leverage State, Federal, and local resources so that we are using the resources and the investments in the most impactful way to preserve the environment but grow the economy and create economic stimuli at the local level.

Mr. KILMER. Thanks very much.

I see I am out of time.

We would welcome you up in our neck of the woods.

And with that, Madam Chair, I yield back.

Ms. PINGREE. Thank you very much.

I am pleased to recognize Mr. Simpson for 5 minutes for his questions.

Mr. SIMPSON. Thank you, Chair Pingree. I appreciate the opportunity.

And welcome, Administrator Regan. You come highly recommended, and I look forward to working with you.

I have had a great relationship with the EPA over the years, and we have actually worked with local communities to find solutions to solve some of the problems.

If you look at the city of Boise, they had to reduce their phosphorus levels going into the Boise River and they came up with a plan that was different than what the EPA had originally recommended and much cheaper, and the EPA looked at it and said, you know, this might work.

So the EPA got behind it, and they created what was called a Dixie Drain, which is doing a great job in cleaning up the river.

So working with the EPA and local communities, I think we can find solutions to some of these problems.

But let me just say, as long as everybody else is inviting you, I would invite you to visit the Great Lakes of Idaho. We have some Great Lakes there, too. So I would invite you to do that.

And I am certainly happy to hear that Congressman Kilmer is interested in saving orca and salmon, because there are some proposals to do just that.

But let me ask you, I have often heard from mayors and city officials who come to me in need of help because their cities are out of compliance with the Safe Drinking Water Act or the Clean Water Act or both due to the age of the water utility infrastructure.

And the cost of replacement and repairs is crippling to these small municipality communities, not only in Idaho but in North Carolina and other places. I am sure you are well aware of that. Even with the STAG grants and stuff, they have a really difficult time trying to do their match to repair their water infrastructure.

What can the administration do to assist these small communities in their pursuit of compliance with the Safe Drinking Water Act and the Clean Water Act?

Mr. REGAN. You have hit the nail on the head. So many of our local communities are struggling in this area, because we have not invested in our water infrastructure in such a long time.

Part of the strategy for the increase in our 2022 budget and in looking at the President's American Jobs Plan addresses exactly this. We need to have some investments in these communities directly, financially, in terms of low-interest loans, but also there are a lot of communities that cannot afford the loan route and that we need some grant economic stimuli as well.

But it is more than financial, as you know. What we do at EPA and what we did in the State of North Carolina, along with the financial help, there are also educational tools that many of these managers need in terms of how to train the workforce and recruit the appropriate workforce to manage these new systems. They are facing threats from cybersecurity just as much as they are from climate change.

And so we need to build a healthy water infrastructure for economic development reasons, as well as safe drinking water, and that is what we want to do with these resources.

Mr. SIMPSON. Well, I appreciate that. I look forward to working with you.

And, of course, the Rural Water Program is very important across this country, because they help these small communities develop the personnel to work in these facilities and water treatment facilities and wastewater treatment facilities and stuff. So the Rural Water Program is vitally important, I am sure, all across the country, not just in Idaho. But I look forward to working with you on this.

One other question I have is, during the Obama administration we always heard consistent concerns from farmers and ranchers and businesses and governors and many others about the extremely broad definition of Waters of the United States under the Clean Water Act.

I was pleased when the EPA and the Corps took note of these concerns and rewrote the rule in a way that maintains critical protections under the Clean Water Act.

The future of this rule is now uncertain. I am hoping you can shed some light on what the administration plans regarding the Navigable Waters Rule and how you plan on hearing the concerns of Idaho farmers and ranchers as you make these decisions.

Mr. REGAN. Absolutely. I spent a lot of time on this topic in North Carolina as the DEQ secretary, and I have met with a lot of the ag industry CEOs on this topic since I have been EPA Administrator. We all believe that the courts weighed in on the Obama rule and that the courts have weighed in on Trump's Navigable Waters Rule. We have learned from both instances.

What I am pledging to do is begin a stakeholder engagement process involving our ag-community, Farm Bureau, our ag CEOs, our environmental community, to look at the lessons learned and how we can move forward.

I am interested in moving forward, not in a ping-pong way, but a way that we can provide some certainty to the ag industry where we don't overburden the small farmer, but we also balance the protection of our wetlands and our sounds and estuaries.

And so I believe we can do it. I just think we need to have more touch points and conversations. Secretary Vilsack and I are attached at the hip in terms of a strategy to get this done.

Mr. SIMPSON. Well, thank you. I look forward to working with you on this and many other issues that come before the EPA. And, as I said, you come highly recommended and I look forward to working with you. Thank you.

Mr. REGAN. Thank you.

Ms. PINGREE. Thank you, Mr. Simpson.

I am pleased to recognize Mr. Harder for 5 minutes.

Mr. HARDER. Wonderful.

Well, thank you so much, Administrator Regan. Congratulations on your appointment. Very much excited to work with you.

I wanted to talk about air quality. My region, the Central Valley of California, has the highest rates of childhood asthma in the entire country. I had childhood asthma as a kid and my brother did. It is incredibly common in our neck of the woods. We live in a valley where much of the air pollution that exists all over California sort of settles in our neck of the woods and even some from overseas.

I know the administration is proposing a new project, \$100 million for improvements in air quality, and I would love to hear a little bit from you how you view that as working out in practice and, more generally, how you see the EPA's rules in not just setting high standards for air quality, which I agree we need to be doing, but even more, helping local communities like ours come into compliance with those standards and actually remediate in communities like ours which have challenges with air quality stemming decades in the past.

Mr. REGAN. Well, thank you for that question. And, regrettably, I grew up using an inhaler as well. So I know all too well what that feels like and the implications of that.

What the administration wants to do is program resources to focus on air quality monitoring, but do it in a way where we are not rebuilding the Federal air quality monitoring system solely, that we are leveraging resources and passing through grants and investments to State and Tribal entities so that we can provide some flexibility in terms of what we are seeing on the ground and how States and Tribes can help on the compliance end.

A lot of times we spend a lot of resources on enforcement. And the reality is, that enforcement mechanism is only as good as the rule. Many of our rules may or may not be as transparent as possible and/or may be harder from an administrative burden standpoint. So we are not achieving the environmental goals we are looking for.

The resources in the fiscal year 2022 budget, as well as the American Jobs Plan, focus on where those air quality needs are the most.

And by the way, I have to say, climate change is an important issue. But in tackling climate change, in leveraging technology, and looking at the monitoring we are talking about, you get the air quality benefits. The public health component of this is so important and I think is lost in the discussion.

So the short answer to your question is these resources are dedicated to more air quality monitoring, technical assistance to comply with our regulations, and the ability for EPA to rely more on our local partners to help us with the environmental goals we are looking for.

Mr. HARDER. Thank you for that. I would love to dig in further as you continue to develop the budget proposal and figure out exactly where those dollars end up going. Especially in a big State like California, having those dollars go to California is great, given there are 53 congressional districts. We want to make sure that it is going to the communities that are hit hardest by the challenges in air quality today, and we look forward to working with you.

I would also just mention a quick plug for a bill that we have developed called the FARM Act which is all around the intersection of air quality and agriculture, how do we actually help farmers and give them tools to alleviate some of the challenges that we are seeing in communities like mine.

I believe it is one of the only bills, if not the only bill in Congress endorsed by both the Farm Bureau and the League of Conservation Voters. And it actually, I think, is somewhat similar to some of the efforts that you are talking about when you are talking about environmental justice and some of the efforts that you are trying to do to clean up pollution.

Can you talk a little bit about the Diesel Emissions Reduction Act grant program and how you think some of the money going into that will help communities and address especially some of the marginalized communities that we are seeing?

Mr. REGAN. Absolutely. We are spending a lot of time looking at where technology is going and where the markets are going in terms of electric vehicles. But there is a stark reality here that we are making progress on technological advancements using biofuels and better technologies around diesel emission reduction strategies as well.

In order to reach our goals, it is an all-hands-on-deck approach. There are electric vehicles, there is advanced diesel technology, and there are biofuels in the mix.

I am spending time not only with the agriculture community, but also with the auto makers, to think about how we make this shift in a way that benefits the environment but the jobs follow the transition as well.

It is a very important conversation, and look forward to having many more with you on that very topic.

I am sorry. You are muted.

Mr. HARDER. With that, I yield back.

Thank you.

Ms. PINGREE. Now I am muted.

Thank you for your questions.

I am pleased to recognize Mr. Stewart for 5 minutes for his questions.

Mr. STEWART. Okay. Thank you. My phone just fell over. So if I am sideways, hopefully my phone resets.

Administrator, welcome. We look forward to working with you.

You know, one of the fun things to do is to review people's biographies when they come before us. And there are a couple of things in yours that I would like to mention.

One is Goldsboro. It is one of the most beautiful towns in the country. My first assignment in the Air Force was at Langley Air Force Base, and we spent a lot of time in Tarboro, and Goldsboro was one of the places, communities we visited.

We have a background as well similar. Your father was a colonel. My father was as well, although they fought in different wars. My dad was World War II and your father was Vietnam. But both from military families, and I think that gives us something in common as well.

You love hunting and fishing, as do I. That is one of the reasons that many of us live in the West, is because we love the outdoors. I love to ski and rock climb and to enjoy the things that both of us are trying to protect.

And so we look forward to working with you as we do try to find bipartisan and effective ways that we can protect the environment and things that we love.

I would like to ask you something, and it goes back to the previous administration, but it is a policy that I know you are familiar with, and that is the Obama's administration Waters of the U.S., which became a very troubling and actually very controversial issue, particularly in the West.

Salt Lake City, which represents a core part of the city, we get maybe 12 or 14 inches of rain a year. I mean, in North Carolina that is a month's worth of rainfall for you, maybe a couple of bad storms even. And to us, as you know, water rights in the West, I mean, they are as precious as gold, and we preserve every drop of water that we can. And we share that goal. Both of us share that interest.

But the Waters of the U.S. claims Federal jurisdiction, as I know that you know, over virtually every pool of water there was. I mean, there was actually an argument that you could have a pool of standing water in your backyard and that because it would have some kind of being a nexus for a waterway, a navigable waterway, that the Federal Government could claim jurisdiction over that. And we saw them do that under the previous administration.

So I am asking you please, please, for those of us who share this concern, tell us that you are not going to go back and reenforce or try to resurrect the Waters of the U.S. policy and that we can find another way to accomplish the same goal, and that is protect our waterways, protect the precious water, but not have to have such an extreme Federal overreach.

I would appreciate your views on this.

Mr. REGAN. Well, thank you for the question, and thank you for the commonalities in the introduction. I think you hit the nail on

the head, which is there is more that unites us than divides us, and there is always a way we can find move forward.

Listen, we are committed to moving forward, learning from the lessons of the past. We don't have any intention of going back to the original Obama Waters of the U.S. verbatim, and we don't necessarily agree with everything that was in the Trump administration's version as well. We have learned lessons from both. We have seen complexities in both. We have determined that both rules did not necessarily listen to the will of the people.

I think, as I have traveled the State and as I have talked to people all across the country, our agriculture community is not monolithic. We don't look the same all around this country. So we have got to think about what the appropriate way to move forward is.

I have pledged to the environmental community, the ag community, and the like that we will chart a path forward on Waters of the U.S. that will be inclusive and forward-looking.

Mr. STEWART. Administrator Regan, you have made my day to hear you say that. So thank you.

And I think you are taking a fair approach in the sense that we can learn from the previous administration, and we can learn from President Obama's administration as well, and that there are probably lessons there that we can move forward with together. And, again, thank you for that.

In the just a few seconds, I won't ask you a question. I will just maybe highlight something for you.

The White Mesa Mill in Utah is the only uranium mill in the United States; important to know. It is one of the most challenged economic counties in the entire country. Half of the employees at this mill are Native Americans, a population that desperately needs our help in economic opportunities.

This critical earths is incredibly important from a national security and an intelligence perspective. Sitting on the Intelligence Committee, as well as Appropriations, I understand and work on that intensely.

And we look forward to working with the EPA as well trying to protect the U.S. ability to have access to these rare earths, knowing that they are important economically and from a national security perspective, but we can do so in an environmentally friendly manner. And we look forward to working with you on that as well.

Thank you, sir.

Mr. REGAN. Thank you.

Ms. PINGREE. Thank you, Mr. Stewart.

I am pleased to recognize Mrs. Lee for her 5 minutes of questions.

Mrs. LEE. Thank you, Madam Chair. I would also like to thank the ranking member and welcome the Administrator here.

It is a pleasure to meet you virtually, and as my first job out of grad school was working as a contractor for the Department of Justice and the EPA. So it is good to see you. And this is obviously an area of concern for me, which is why I am happy I am on this committee.

You know, I was encouraged to see that the administration is committed to modernizing our drinking water, wastewater, stormwater systems, as well as tackling new contaminants.

I come from Nevada, a rather arid, dry State, and we are facing obviously severe challenges with water resources, as we are across the arid Southwest.

So we are grateful for the Agency's support in protecting Nevada's critical and scarce water resources by providing funding for projects that will help us to manage nonpoint source pollution in our watershed and partnering with local entities like we have with the Las Vegas Wash.

Mr. Regan, as you mention in your testimony, water infrastructure projects are a major creator of jobs. Can you speak to the connection between the EPA's water infrastructure investment plan and what you foresee with the creation of new jobs?

Mr. REGAN. Absolutely. I would like to say that, luckily, we have a proven track record here, where with our water infrastructure grants and loan programs and our State revolving loan funds we have pushed billions of dollars out and created hundreds of thousands of jobs or helped stimulate hundreds of thousands of jobs over our track record here.

What the President is wanting to do in this 2022 budget and with the American Jobs Plan is to help expedite repairing our crumbling infrastructure.

But it will put a lot of people to work. Electricians, pipe fitters, contractors, engineers. There are so many jobs associated with this need. And by the way, economic development relies on certainty in their drinking water.

We really see a strong combination of managing our drinking water and creating jobs. But more importantly, with our wastewater systems, we are seeing lots of pollution in our natural streams and rivers, especially during times of storms.

So this is a win-win-win here. We can protect the environment, we can improve public health with clean drinking water, and we can put a lot of people to work with the investments in our water infrastructure.

Mrs. LEE. Well, we are, as a State that has been decimated by this pandemic, we are looking forward to hopefully seeing some of those jobs in Nevada.

I want to just turn now to the administration's plans for tackling the climate crisis with respect to national carbon standards for cars.

As I am sure you are aware, that emissions from—are the single largest source of U.S. greenhouse gas emissions. But I do want to say, in my home State of in Nevada in June of 2020, the Nevada Division of Environmental Protection announced a rulemaking process to evaluate the adoption of low-emission and zero-emission standards for light-duty vehicles.

In your testimony you highlight several ways in which the EPA is reprioritizing addressing climate change with the urgency the crisis demands. Nevada is now one of 17 States and the District of Columbia that has clean car standards pending or adopted.

Can you speak to how the EPA incorporates lessons learned from carbon standard implementation at the State level to inform your similar efforts at the Federal level?

Mr. REGAN. Absolutely. We respect the statutory authority that we have and that States have. States like California have histori-

cally the right to lead the way. The Federal Government can indeed learn from States, and that is what we plan to continue to do.

We are putting out a notice of proposed rulemaking on tailpipe emissions for cars and light-duty trucks, and that will come mid-July. It will be informed by the great work that the States have been doing, but it will also be informed by the conversations we have had with the auto industry and where we are headed with technological advancements. I mean [audio malfunction].

Mrs. LEE. A little connectivity issue here.

Ms. PINGREE. Hopefully we will have the Administrator right back again.

Mr. JOYCE. It is too bad Derek cut off, because before this we were just on the Modernization Committee hearing and the one common complaint from nearly everyone is internet connectivity issues. Having this happen—oh, there he is.

Mr. KILMER. The Modernization Committee is going to be hard at work on fixing the WiFi, you guys.

Ms. PINGREE. I think it is probably just because too many people in the building use the WiFi, which is what you are supposed to do, but we have such limited capacity.

Mr. JOYCE. I found at the start of the pandemic when the girls came home and they are spread out through the house, not only are they on their iPad for work, but then they are on their phone, and I am down in the basement cutting out like this. So finally I went up, I said, you can have one, the iPad or the phone, but get off the house WiFi on the other one.

Ms. PINGREE. Hazards of being a Member of Congress.

Mr. JOYCE. Well, Betty can fill in for him while he is off.

Ms. PINGREE. Representative McCollum, we are happy to have you here, but we are waiting. The Administrator has a WiFi issue going on right now.

Ms. MCCOLLUM. Oh, no.

Ms. PINGREE. I am being informed that he should be back in a couple of minutes, I think.

Ms. MCCOLLUM. Well, I want to thank my fellow committee members for understanding. With all the committee hearings going on and people being on them, we have all been in this boat. So I have got defense hearings going on and Democratic and Republican members in other committees. So we are shuffling the chairs.

Ms. PINGREE. Okay. I am going to recess the committee for 5 minutes just to give him a little time to catch up. So we will look forward to seeing you all back here in 5 minutes.

[Recess.]

Ms. PINGREE. The subcommittee will come to order once again. And we are happy to recognize Chair McCollum for 5 minutes for her questions.

Ms. MCCOLLUM. Thank you very much, Chair Pingree.

And to my fellow committee members, I look forward to when we can all be together again in person.

Administrator Regan, thank you for joining us here today to present a bold budget for the Environmental Protection Agency. It is a welcome change from the previous administration who repeatedly proposed more than a quarter of the EPA's budget to be cut and eliminating environmental justice programs.

I am proud that we won that fight, and, in fact, we increased the EPA's funding during my 2 years as chair when Ms. Pingree was the vice chair. So I am just thrilled that Chair Pingree will be working with you to get a hefty increase after looking at the President's budget.

Administrator Regan, I was especially pleased to see that President Biden is proposing \$936 million for a new Accelerating Environmental and Economic Justice Initiative. The communities that have been marginalized have borne the burden of pollution and climate change, and they need the support. So thank you.

I have already seen the commitment happening in my home State in Minnesota where the EPA Region 5 is requiring our Clean Water Act impaired waters list to include Wild Rice Lakes and Rivers that are impaired by higher levels of sulfate and, dangerously, have even more sulfate.

So I hope that we can count on you, especially in working with Tribal consultation, honoring their trust and treaty obligation, because that is essential for the EPA's implementation of the Biden administration's environmental justice initiative.

So I am just assuming that is a big yes, and I want to thank you for that.

Mr. REGAN. It is a big yes.

Ms. MCCOLLUM. Another issue I wanted to put on your radar screen is an effort to have the EPA take a lead on the Mississippi River Restoration and Resiliency Strategy. I included language last year in the subcommittee providing \$2 million to the EPA to put the agency in the driver's seat in this initiative in coordination with five other Federal agencies.

My staff has discussed the importance of developing this strategy with the White House and CEQ. And I will soon be introducing the corresponding legislation to create a geographic program for the Mississippi River, our national river, which is known internationally all around the world.

This initiative will create the same sort of coordination and bipartisan investment that the Mississippi River Corridor, that we have seen in the Great Lakes and other regional initiatives.

So I would like to be working with your staff as soon as possible to be able to brief my office on the Agency's work in response to the report language on the Mississippi River Restoration and Resiliency Strategy that was in the House language last year. So we look forward to working with your staff.

The big question I have is to ask you for a little bit of an update on the Agency's work on PFOS. As chair of this subcommittee, I was proud to provide the EPA with the increased funds for the scientific and regulatory work to establish drinking and clean water standards for PFOS.

That work continues to be incredibly important to me as the chair of the Defense Subcommittee, because I want to ensure that the DOD is cleaning up its PFOS contamination to levels that fully protect the health of our servicemembers, their families, and surrounding communities.

Can you give me an update on the EPA's work on PFOS and how it will guide cleanup actions at the DOD, as well as State, local,

and private industry responsibilities? We want one great standard, and I don't want the DOD to have a weakened standard.

Mr. REGAN. Well, thank you for that question. Coming from North Carolina, one of the most military-friendly States in the country, I recognized from the beginning that EPA needed to have a positive relationship with DOD.

Secretary Austin and I have already committed to meet on this topic. We have had some conversations, some general conversations, but we are getting together soon to discuss how EPA and DOD can work together to tackle the PFOS issue.

We are forging ahead, leveraging the expertise that we have at the Agency to look at setting a drinking water standard. The importance of this fiscal year 2022 budget and the increases that we are seeing there is to give us the resources to continue the scientific work that we need to conduct, as well as the resources to help spearhead remediation and cleanup as well.

And so remediation, cleanup, scientific integrity to help inform the drinking water standard, and partnerships and proactive conversations with the Secretary of Defense is where we are headed.

Ms. MCCOLLUM. Well, thank you for that. I think that you are going to see a lot of activity starting to percolate up again on PFOS, and it tends to be very—almost nonpartisan with some Members. And I know Ms. Pingree and I have talked about this. We have sent a letter to the Biden administration, along with the Oversight chair of Energy and Commerce, Ms. DeGette, and the three of us are going to work together on this. So we look forward to working with you. And in my case, I look forward to working with Secretary Austin.

So, Madam Chair, thank you for the indulgence. And I will let you get back to your great work, Madam Chair.

Ms. PINGREE. Thank you so much for your questions.

And thank you, Administrator Regan. And if you are willing to stick around, I think there are a few members who would like to ask a second question. So I will recognize myself for the first 5 minutes.

I want to go back to the topic of environmental justice. It is something that Chair McCollum just talked about a little bit. It has come up in the conversation. And it is certainly a great concern.

And so we are very pleased to see the Biden administration and your Agency put a focus on this. This has been a priority for the subcommittee. We made advancing environmental justice a priority, increasing the funding for the EPA's Office of Environmental Justice by 75 percent over 2 years, and also boosting funding for programs like Brownfields remediation and DERA.

It is certainly a discriminatory practice. We find these industrial corridors and landfills being located in low-income communities and communities of color. And particularly with this administration's focus on the environment and on climate change, we have to have a new lens.

So I would love to hear your perspective on how we best tackle this. And I want to talk a little bit in more detail about the 936 million for the EPA's new Accelerating Environmental and Economic Justice Initiative.

Can you just talk about it in a little greater detail? I think it is an important thing for us all to understand better and to know how important it is to tackle it.

Mr. REGAN. Absolutely. This is a central piece of our work, environmental justice and equity. The big part of it is we have so many communities all across the country that have been disproportionately impacted and left behind, disproportionately impacted from a health impact standpoint just as much as an economic standpoint.

The resources that we plan to use will focus on grant opportunities, education, outreach, and ways that we can think about helping these communities as we bolster the protection for water quality and air quality.

But also many of the very industries that are disproportionately impacting these communities are the lifeline economically for these communities.

So we are wanting to work together, hand in hand, to be sure that the polluters don't get away, but also that we think about how these industries coexist better with these communities. So there is an environmental transition that we are looking at, but we are also looking at an economic transition.

I believe that these go hand in hand. I believe that we need to spend time in our States with these communities, with these industries, and we can prove that environmental protection and economic prosperity are not mutually exclusive but go hand in hand and everyone can be treated fairly.

Ms. PINGREE. That is great. And I think that is such an important perspective. So thank you for that.

One other aspect about this. One of the defining characteristics of economic justice communities is they often bear a disproportionate pollution burden compared to other communities.

It seems to me that we have limited mechanisms within our environmental laws to factor in the cumulative health effects of multi-pollutant exposures in a community, and I think that is an important thing to change.

Could you outline some of the ways that the Agency would be addressing cumulative impacts in its work? And how can we partner with you to give you the tools to make sure we are able to do that?

Mr. REGAN. That is an excellent question. I have instructed every office at EPA to take a look at how environmental justice inequity fits within their program, not just from a rhetoric standpoint, but in terms of the very DNA of the work that EPA does here.

I think we do have tools that we can better leverage to look at the multiple impacts that multiple industries may have each and every time the Federal Government or a State makes a decision in terms of permitting these entities.

But we need to do more. We need to do more in terms of enforcement on our side. We need to do more in terms of technical assistance that we provide to local economic developers so that they can take these cumulative impacts into consideration when they recruit industries. We need to do more partnering with our legislative bodies to think through, if we don't have all of the statutory authority we need to address cumulative impact in a most expedient way, we are working with you to develop the laws that will govern that.

Ms. PINGREE. Great. Well, I really do appreciate that, because I think that all too often we look at a single impact of a toxic chemical, or of bad air, bad water, but don't understand that in certain communities people are being bombarded by multiple levels of toxicity. And we often have such a rigid standard or a limited ability to understand that.

So I am thrilled that it is an important issue to you, and I really look forward to the committee and this Congress giving you the tools that you need to deal with that.

So I will yield back. And happy to recognize Mr. Joyce if he has a second round of questions.

Mr. JOYCE. Thank you, Madam Chair.

Administrator, given that education is a proven tool to increasing recycling participation, strengthening recycling streams and reducing pollution, as co-chair of the House Recycling Caucus, I have been proud to also co-lead H.R. 5906, the RECYCLE Act, to help protect our invaluable natural resources.

The RECYCLE Act would create a new EPA grant program to help States, Tribes, local governments, nonprofits, and public-private partnerships educate households and consumers about their residential and community recycling programs.

In fiscal year 2021, Congress provided up to \$1.5 million to support these efforts at the Agency. Can you describe how the Agency plans to use this funding in fiscal year 2021? How will these efforts also benefit the environment and the economy?

Mr. REGAN. Yes, thank you for that question. It is such an important question. We are spending a lot of those resources focused on education, outreach, and partnering with our States and Tribes and local communities to educate them, not only on the environmental disbenefits of plastics, but the economic opportunities, the circular economy aspects of this.

I just sat down with a group of young people 2 weeks ago, and second to climate change, plastics in the circular economy were top of their list. I spent time with my Japanese counterparts on an international call and this was top priority for Japan as well. There are so many advantages here.

What EPA wants to do is do a better job partnering with our State and local and international partners to reduce the impact that we see plastics having on our marine life, on our food sources, but thinking about how in a circular economy fashion we can begin to tackle this as well.

Mr. JOYCE. Can you explain what recycling challenges these entities currently face? Could additional funding broaden community outreach, awareness, and education on recycling to increase recycling participation?

Mr. REGAN. We are taking a very close look at that. I can tell from you my experience in North Carolina, a lot of it is access in our rural communities in terms of where to drop off the recycling materials, how you aggregate those recycling materials so that it makes sense from a cost-effective standpoint for local municipalities to invest in these programs.

We really have to take a look at how we empower our local communities to see the leverage points and the economic opportunities for pulling plastics out of circulation.

I believe that education and outreach is a significant way we can provide technical assistance and resources to our State and local partners to tackle this challenge.

Mr. JOYCE. Well, thank you. Despite increased GLRI funding, significant work to reduce nonpoint source pollution and efforts to mitigate impacts that human activities have had on the Great Lakes, we continue to hear reports about the growing threat of harmful algal blooms in the Great Lakes, as well as down in the Everglades and other areas throughout the country.

How could adjusting the allocation of GLRI funds to the various focus areas, like nutrients and habitat, potentially help accelerate harmful algal bloom reduction efforts?

Mr. REGAN. It is a very critical question. One of the things that we want to do a better job at EPA is not operating in silos, but having all of our programs leverage their expertise and resources to tackle this.

I think as we think through how we engage our agricultural partners and look at the efficiencies in terms of ag management, pesticide application, fertilizers, and the like, that is one example of where the ag community sees more efficient management of farming as an opportunity for us to quantify a significant water quality impact that we are looking at as well.

I think we have to look across our program, leverage our resources, and really focus on nutrient management in a way that that balances our overall goal.

Mr. JOYCE. I have a little bit of time left, but I don't want to have you sit around for another round. So let me just finish quickly.

Could additional restoration progress be made by investing in innovative projects, like natural infrastructure project designs, like wetlands, technologies or approaches that yield nutrient and harmful algal bloom reduction benefits at landscape scales?

Mr. REGAN. Absolutely. That is a critical piece of why we want to take a look at how to have a stakeholder engagement process that reevaluates Waters of the U.S. in a way that, again, doesn't overly burden the small farmer, but looks at the important role wetlands play in filtering pollutants.

There is such a strong connection there. These natural approaches to protecting water quality are critical because they are more resilient to storms and they are more cost-effective than some of the manmade solutions like terminal growings and others.

Mr. JOYCE. I certainly believe that wetlands are nature's kidneys, and we need to continue work on them as best we can.

I realize I am well out of time. Thank you very much for allowing me these questions today, Madam Chair.

Ms. PINGREE. Absolutely. Thank you for your questions. And that important metaphor about nature's kidneys, that is a good way to describe it.

So, Chair Kaptur, we are very pleased to see you and happy to yield to you for 5 minutes for your questions.

Ms. KAPTUR. Thank you, Madam Chair, very much.

And I want to add my word of congratulations to the new Administrator of EPA. We look forward to working with you.

And the district that I represent is out in a mud puddle, out in the middle part of the country. And this is western Ohio. This is Michigan up here. Indiana over here. And here is Lake Erie. Congressman Joyce, my dear friend, lives somewhere over here.

But I wanted to show you this because Congressman Joyce, Ranking Member Joyce, indicated the problem with the nutrient runoff into Lake Erie.

And our problem is also political in that one of the poorest cities in the country, Toledo, which sits about here, and their wastewater treatment plant, the bill for cleaning up water and sewage in the region is placed on Toledo. And Toledo has to draw its clear water from Lake Erie, but the pollution comes from a region much bigger than Toledo.

And my first question really goes to a Clean Watersheds Needs Survey that was done that talks about wastewater infrastructure across our country and what the backlog has grown to, creeping toward a half a trillion dollars.

In Ohio, they say we need about 14 billion in wastewater infrastructure. The largest county in my district, which is Cuyahoga County, Cleveland, has a \$2.9 billion unmet construction need.

As we look forward toward a Build Back Better agenda, how can our country confront a reckoning with race and poverty without addressing the unfairness of the massive financial obligations placed on communities like Cleveland, like Toledo, like Detroit, where they had to shut off the fresh water to people, and more people caught COVID-19 because of that?

It is really—EPA is great. And I am a city [audio malfunction] Money that we need to do this. So we either have to innovate our way out of this or you have to get more power somehow. But you put obligations on communities, and then what happens is people can't afford their water bills and their utility bills.

So what they have done in the city of Toledo, because people can't pay the bills, rather than sending the bills quarterly, they are now sending them every month. So people are getting a utility bill every month because it is a smaller bite, but over a year, it is a bigger total.

This is really a system doomed to fail—and it is failing. And I hope that EPA will be a really big voice in the Build Back Better, and that we will figure out a way to lift some of this burden off of communities, billions of dollars in unpaid bills due for infrastructure improvements. They simply don't have the money. They have lost out millions of jobs in our region. So how are communities supposed to do this?

So I think we need your vision to place responsibility where it belongs. And how do you do that when there is no political boundary for the watershed that is causing the problem? And then how do you help the poor cities that are being asked to clean everything up, and their taxpayers and ratepayers are being sent these bills to a point where we are shutting off thousands of people's because they can't afford the bills? This is not a workable solution.

Do you have any thoughts about how you are being included in the Build Back Better discussions at the White House? I think the Federal Government should lift this bond of indebtedness off these communities.

Mr. REGAN. Well, thank you for that question. I did not see the visual, but I have it in my head, imagining it.

Listen, we are front and center in the American Jobs Plan. We are front and center in the 2022 budget that we are requesting. The President's wisdom has shown that the \$111 billion that we are asking for to help improve the country's water system, wastewater, stormwater, replacement of lead pipes, is an aggressive and an ambitious number.

But the facts are that out of that \$111 billion, it is a small down payment because there are \$743 billion worth of needs in this country.

So we have got to move forward in a very aggressive way to begin jump-starting the infrastructure repair that needs to occur for not only water quality needs, as you have laid out, and environmental justice needs, but to put jobs in those same communities as well.

So we want to use the \$111 billion from the American Jobs Plan, we want to use the increases from the 2022 budget, but we also want to use the environmental justice and equity dollars that are in both of these requests to marry this so that those who are most impacted will see the benefits of water quality and jobs first.

Ms. KAPTUR. Well, thank you, Administrator Regan.

I wanted to suggest, if you haven't visited the D.C. water facility here, I was absolutely fascinated with my visit there because I have been wondering how can I reduce these bills on the communities I represent and, frankly, for the whole country. And I think we need a different business model.

They have a new business model. And their business model is they are turning the biggest consumer of energy in the city of Washington, which is the treatment of water and sewage, into an energy utility. And they are doing it by not just drawing down power from the grid, but they are producing power.

And they are producing power through a thermal heat exchange system where they will then replicate kind of what we have done in the old steam systems that existed across cities, connect every building adjacent to them, and use the differential in temperature to actually produce power for the first time from sewage and water reclamation. And they are on task to become an energy utility.

I chair an Energy and Water Subcommittee in the Congress. When I saw that I thought, whoa, how do I get that to Cleveland, how do I get that to Lorain, how do I get to Toledo, to Buffalo, to all these place that are struggling under these gigantic debt loads? And I would encourage your staff to look at the bonded indebtedness across the Great Lakes and other regions of the country.

But I think this DC group has really—they are on to something transformational. And they are turning their wastewater treatment facility into an energy utility. They are adding solar, they are adding—they have already got the geothermal. I am sure they are going to add more.

I think it is revolutionary. It doesn't exist anyplace else in the United States. I think other cities, Denver and others, are looking at it.

But I just commend it to your attention because we have got to break the mold on 20th century thinking, we just can't achieve the objective, and appropriated dollars aren't enough.

Mr. REGAN. Right.

Ms. KAPTUR. But I think if we can look at these generators of power, including these water and sewage treatment plans, I think we are into a different era.

So I just wanted to share that vision with you. And also to say in terms of, I am sure, Mr. Joyce has talked many times about the Great Lakes Restoration Initiative, on the committee that I chair, every year the Bureau of Reclamation for 17 Western States gets a billion dollars off the top of appropriated dollars to help with the dry up, the drying West, right?

We are lucky in the GLRI if we get 250 million, sometimes 330 million. I think one time they got 500 million, maybe back when President Obama was in office.

But we are not on the same playing field. And we got the water. We got 95 percent of the fresh surface water in the country. Somebody better be thinking about it for future generations. So help us get on a level playing field.

And I thank you very much for listening.

I don't have that clock on my—I can't tell if I have gone over time. So I don't know where it is on the screen, but I apologize if I have gone over time. And I thank you very much for listening.

Ms. PINGREE. It is fine, Chair Kaptur. You have gone over time, but it was well worth it. And it is always good to wrap up with talking about the Great Lakes.

And you have mentioned that facility in D.C. a couple of times, and I think we are going to just have to have a field trip to see it because it definitely sounds impressive.

So thank you so much, Administrator Regan and Deputy Bloom, for appearing before our committee and answering our questions. We really appreciate that. Look forward to partnering with you.

And if there are no additional questions, this hearing is now adjourned.

[Answers to submitted questions follow:]

U. S. House of Representatives
Committee on Appropriations
Subcommittee on Interior, Environment, and Related Agencies
The Environmental Protection Agency's FY 2022 Budget Request Hearing
April 21, 2021

Questions Submitted for the Record by Chairman Pingree

LINKS BETWEEN POLLUTION EXPOSURE AND CORONAVIRUS
HEALTH OUTCOMES

Several public health studies have found links between exposure to air pollution and increased mortality and morbidity in patients with coronavirus infections. This has been postulated to be one of the factors why we have seen disproportionately high mortality and morbidity rates in disadvantaged communities of communities of color, which routinely experience greater pollution burdens compared to other communities.

Question: What work has EPA been doing to investigate these potential links? How is this informing the Agency's Environmental Justice strategy?

Answer: EPA is conducting research on air pollution and respiratory diseases, including investigating the relationship between air pollutant exposure and non-COVID-19 respiratory viral disease. EPA also funds the Health Effects Institute, which supports grants that investigate how air pollution exposure may impact the COVID-19 disease course, as well as differences in health outcomes by race, ethnicity, and socioeconomic status.

EPA is committed to the Biden-Harris Administration's mandate of a central reliance on science as a fundamental part of all of its work, including advancing environmental justice. Any results from academic or scientific research into the disproportionate impacts of threats to health such as COVID-19 outcomes and exposure to air pollution would be an important element in how EPA considers and integrates environmental justice responses, priorities, and commitments into our current activities and longer-term strategic planning efforts.

APPROVAL OF ELECTRIC PATHWAYS II APPLICATIONS

In fiscal year 2020 and 2021, the conference agreements included directives to the Agency to make final decisions on Electric Pathways II applications, and in FY 2021, dedicated funds was provided for this work to occur. Applications that had been pending for longer than one year were to be acted upon within 90 days of enactment. As of today, however, there has still been no final action taken on these pending applications.

Question: Please describe what work has been undertaken on these applications since the FY 2021 appropriations was signed into law in December 2020.

Answer: EPA staff are actively working to resolve the complex technical and regulatory issues associated with the electric pathway of the Renewable Fuel Standard program. The Agency continues to engage with stakeholders regularly and must consider conflicting input on the complexities associated with implementing the electric pathway. In 2016, EPA sought and received comments on an appropriate program structure for generating RINs for renewable electricity. Among other technical and regulatory issues discussed in the proposed Renewables Enhancement and Growth Support (REGS) rule preamble, under the existing framework, EPA cannot ensure that parties registering to generate RINs will be able to demonstrate that the electricity was used as a transportation fuel and not for some other purpose. There are significant technical and regulatory issues that must be addressed prior to facilities being able to demonstrate that the electricity is not claimed by multiple parties attempting to demonstrate transportation use. EPA believes these issues are best addressed through a public rulemaking process. In addition, to properly implement any eRINs program, EPA must develop critical infrastructure (for new and different information than the Agency currently collects) to be able to verify the validity of the eRINs.

Question: When should a final decision be expected on these long-pending applications?

Answer: EPA will keep you and your staff informed as we develop a path forward.

AGENCY BUILDING FOOTPRINT

The budget request includes substantial increases to EPA's core programmatic work, and notes that the Agency feels it is essential to rebuild the size of the Agency's workforce in order to successfully carry out its mission. Meanwhile, the Agency has been undertaking a series of office consolidations and relocations which have reduced the Agency's footprint very substantially over the past five years.

Question: Given your desire to increase size of the Agency's workforce, how have you modified your current physical consolidation plans?

Answer: EPA uses workforce planning and master planning to guide the consolidation and reconfiguration of EPA's workplaces. The Agency's goal is to reduce long-term rent costs while increasing EPA facility resiliency and sustainability to combat the effects of climate change and ensure a space footprint that accommodates a growing workforce. As EPA expands to support the administration's priorities, the Agency will evaluate cost-effective solutions to support staff while limiting the agency's footprint in line with the Federal Assets Sale Transfer Act (FASTA) and avoiding rent costs so the Agency can direct its appropriated resources to programmatic work.

Question: Does the Agency have the physical space it needs to onboard these staff? If not, how quickly can it acquire the necessary space?

Answer: The Agency assesses its space needs and focuses on space reconfiguration on an ongoing basis. This enables EPA to manage its footprint to create an efficient, collaborative, and technologically sophisticated workplace while accommodating a growing workforce. If the Agency determines additional space is needed, EPA will work with GSA to procure space in a timely manner and at the lowest possible cost to the Agency.

Question: Will EPA be suspending its current consolidation activities pending the approval of the FY 2022 budget?

Answer: EPA continuously reviews its federal infrastructure and operations in line with FASTA. EPA's FY 2022 budget request will grant the Agency important flexibility to modify space, as appropriate, to support a growing workforce.

HEALTH IMPACTS OF CAFOS ON NEIGHBORING COMMUNITIES

Many communities that are in close proximity to Concentrated Animal Feeding Operations are deeply concerned about the potential cumulative health, air quality, and water quality impacts they face from lagoon and sprayfield waste management systems.

Question: What cumulative impact studies has EPA undertaken or have underway to evaluate the health and environmental impacts of CAFOs on their surrounding communities?

Answer: The Agency has not conducted cumulative health impact studies specific to the animal agriculture industry. The Agency is continuing its work to improve emission estimation methods for animal agriculture sources, a necessary first step toward understanding the specific impacts of these emissions.

Question: Has EPA evaluated methods or technologies that can be deployed at CAFOs to mitigate these harmful impacts? If such methods and technologies exist, what is the Agency doing to promote their adoption?

Answer: The Environmental Protection Agency and the United States Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) collaborated to publish the "Agricultural Air Quality Conservation Measures: Reference Guide for Poultry and Livestock Production Systems." This EPA/NRCS collaboration provides a broad set of conservation practices for poultry and livestock operations that may address air resource concerns with a focus on NRCS conservation standards and other demonstrated practices.

As a follow-up to the 2012 guide, "Agricultural Air Quality Conservation Measures: Reference Guide for Cropping Systems and General Land Management," this new document proposes a variety of tools and standards for creating effective air standards in the agricultural industry. Developed as a technical tool, the guide describes different conservation measures that

have been successfully demonstrated to reduce emissions of various air pollutants on farms. In addition, it provides information on the applicability of the measures to different types of farms and ranges of potential emission reductions.

The Agency also sponsors programs that focus on encouraging more efficient production of food or agricultural products with less pollution:

- AgSTAR: a collaborative program sponsored by EPA and USDA that promotes the use of biogas recovery systems to reduce methane emissions from livestock waste.
- The Diesel Emissions Reduction Act (DERA) Program: funds grants and rebates that protect human health and improve air quality by reducing harmful emissions from diesel engines.

ENERGY STAR

The ENERGY STAR program has been extremely successful in moving energy efficient technology into the marketplace by helping to better educate consumers. However, there are many opportunities to continue to build on the program's success to drive in greater adoption of energy efficient technologies, especially in the context of commercial building systems, and through partnerships with state and local governments and code-writing bodies.

Question: What role will ENERGY STAR and other voluntary efficiency programs play in the Agency's efforts to curb carbon pollution?

Answer: ENERGY STAR and EPA's other climate partnership programs play a critical role alongside the Agency's regulatory programs. These programs are well positioned to deliver on-the-ground action in support of our nation's climate goals, such as upgrading homes, buildings, and schools; achieving a carbon-free power sector; and accelerating low-carbon manufacturing. These programs will focus on evolving and adapting to new technologies and priorities, such as electrification of appliances, homes, and buildings; energy performance standards for buildings; and managing electricity demand. These programs also will work to ensure that all sectors of society benefit from and participate in the clean energy economy.

ENVIRONMENTAL JUSTICE

Too many front-line communities are overly burdened by corporate pollution and environmental degradation. These burdens have a disproportionate negative impact on the health of those community members. However, the Agency currently lacks a definition for a disproportionately exposed community, which negatively impacts the ability of policymakers to incorporate environmental justice considerations into their decision processes.

Question: Does the Agency believe it would be of benefit to develop a definition for disproportionately exposed communities? If so, what factors would the Agency seek to include in its definition? When does EPA think such a definition would be available?

Answer: EPA agrees that a consistent definition for disproportionality of exposure and impacts is important for the integration of equity and environmental justice considerations throughout EPA's and other federal agency's programs, policies, and activities. Such a definition could include past, current, or potential environmental risk, environmental exposure and impacts, vulnerability of community members, other socioeconomic factors related to exposure and health outcomes, as well as quality of life impacts. The development of definitions for disproportionality and related terms are currently being considered as elements of President Biden's all of government approach to advance equity and justice in Executive Orders 13985 and 14008. EPA is an active supporter and participant in the implementation of those orders, along with Executive Order 12898, and looks forward to their full implementation.

REDUCING WASTE AND PROMOTING RECYCLING

Question: An area of bipartisan interest and concern for this subcommittee has been plastic waste in the environment, and the economic opportunities and environmental benefits that could be realized by transitioning towards a circular economy. The Agency has a very important role to play in facilitating that transition, through data collection, standard setting, education programs, and sharing of best practices. In FY 2020 and FY 2021, the subcommittee directed the Agency to take on some of this work and provided funding resources to support those efforts. Please provide an update on the Agency's efforts on expanding recycling and increasing supply chain circularity.

Answer: Strengthening the U.S. recycling system is an EPA priority that will benefit the environment, the economy, and communities that have borne the brunt of poorly run waste management facilities and transfer stations. With the funding provided by Congress, in FY 2020 EPA worked collaboratively with stakeholders to develop a draft National Recycling Strategy and set a new national goal to increase the recycling rate to 50 percent by 2030. A draft of the National Recycling Strategy was released for public comment in October 2020 and EPA received 156 public comment letters. EPA also briefed EPA's National Environmental Justice Advisory Council in June 2021, enabling the public and stakeholders to weigh in on the development of the final document. In FY 2021, EPA will release the final National Recycling Strategy as an initial step toward creating a circular economy, creating jobs, and reducing environmental and social impacts. EPA anticipates that future versions of the Strategy will address source reduction and reuse. EPA continues to advance recycling education and outreach through public-private partnerships, sharing recycling program best practices, compiling and sharing data and information on recycling programs at the state level, and developing new digital tools to support recycling.

In FY 2021, EPA began a comprehensive data collection effort to strengthen residential recycling in the United States, including data on single-use plastics. EPA also is developing estimates of the investment required to modernize the material recovery infrastructure to achieve consistent collection across the nation and to provide all citizens with access to recycling services

on par with access to disposal. EPA anticipates initiating the data collection and financial needs assessment in late summer/early fall of 2021.

In the FY 2022 President's Budget, EPA is requesting \$10 million to implement a new solid waste infrastructure financing grant program (SWIFR) to help reduce waste, reduce greenhouse emissions, and create good-paying jobs. This investment will use the new authority provided in the Save our Seas 2.0 Act (Pub. L. 116-224). This new grant program will focus on improving solid waste management infrastructure and post-consumer materials management.

Question: Many jurisdictions have put in place policies that disincentivize or that prohibit the use of some materials that are of low-value and that significantly impede recycling efforts. Some examples include bans on Styrofoam food containers or bag fees on plastic bags. Has EPA done any analyses on the efficacy of such policies? If so, what was its conclusions?

Answer: In response to the December 2020 GAO report, "Recycling: Building on Existing Federal Efforts Could Help Address Cross-Cutting Challenges", EPA is currently conducting a study and developing recommendations for actions that can be taken regarding the types of local public policies referenced in the question, and the likely effect of modifying or eliminating such existing public policies upon the reuse, recycling, and conservation of materials. The study is expected to conclude in FY 2022. EPA will continue its efforts to work with stakeholders to provide data, tools, information, and other resources to support recycling efforts.

Question: Please provide estimates for the impacts on waste if such policies were applied at the national scale.

Answer: EPA is currently conducting the study and does not have estimates for the impacts on waste if such policies were applied at the national scale. The study is expected to conclude in FY 2022. EPA will continue its efforts to work with stakeholders to provide data, tools, information, and other resources to support recycling efforts.

EXTENDED PRODUCER RESPONSIBILITY

Question: Many states, including the state of Maine, and many stakeholders in the public and private sector are embracing the concept of extended producer responsibility (EPR) as a strategy to address waste generation and to reduce the amount of plastic and other types of waste in the environment. Does EPA believe that EPR is a useful policy tool to promote material circularity?

Answer: EPR is one of several strategies to address waste generation and to reduce the amount of plastic and other types of waste in the environment. EPA is currently conducting a study and developing recommendations for actions that can be taken regarding the types of local public policies referenced in the question, and the likely effect of modifying or eliminating such existing public policies. The study is expected to conclude in FY 2022.

Question: Has the EPA done any work to examine different EPR models to evaluate their relative efficacy? If so, what has been the Agency's findings?

Answer: EPA is currently conducting a study and developing recommendations for actions that can be taken regarding the types of local public policies referenced in the question, and the likely effect of modifying or eliminating such existing public policies. The study is expected to conclude in FY 2022.

Question: How has EPA been supporting efforts by stakeholders to develop efficient and effective EPR proposals?

Answer: EPA provides information and data to stakeholders about trends in municipal solid waste generation and management as well as the environmental and economic benefits of recycling.

Question: Have there been needs expressed by stakeholders that EPA has been unable to meet?

Answer: Stakeholders continue to indicate the need for federal investment in waste management, recycling, and organics infrastructure to support efforts to increase recovery of materials. The Save Our Seas 2.0 Act, passed in December 2020, provides EPA with authority to act on waste management through new grant programs. Using the Save Our Seas 2.0 Act authority, in FY 2022, EPA is requesting an additional \$10 million to pilot a new grant program to help address these needs. The Solid Waste Infrastructure for Recycling (SWIFR) financing program will help reduce waste, reduce greenhouse emissions, and create good-paying jobs.

ENFORCEMENT AGENDA

One of the most distressing things about the previous Administration's environmental policies were changes that were made with respect to environmental enforcement. While enforcement numbers at the EPA began been trending downwards over the past decade as the Agency was starved for resources, enforcement activity plummeted beginning in 2017. EPA also sought to weaponize enforcement for political gain, by selectively threatening enforcement actions against critics, as was done to California and New York in 2019 and 2020. Recently, the EPA Inspector General released a report detailing how a senior Trump Administration political appointee within the Office of Air and Radiation interfered with one of the regional office's efforts to monitor for illegal emissions of a toxic and carcinogenic pollutant at an industrial facility. Given everything else we know about the Agency's enforcement policies and practices, it is likely this was not an isolated incident.

Question: Are there any policies, or policy changes, you are contemplating to ensure that EPA's enforcement program remains a fair and effective tool by which the Agency ensures compliance with our environmental laws, and is not used as a cudgel against political opponents?

Answer: EPA's enforcement program relies on long-standing policies and guidance to ensure consistent and fair results that achieve compliance with environmental statutes and regulations. These long-standing policies and guidance help deter future violations while ensuring that enforcement discretion is exercised appropriately and in ways that benefit human health and the environment. The Agency's enforcement program continuously reviews its policies and guidance to ensure its enforcement and compliance programs are effective and consistent. This ensures that actors subject to environmental requirements are treated fairly, and that communities see the protections provided by those requirements.

Question: What types of guardrails can the Agency put in place to ensure that enforcement discretion authority is not abused now and in the future?

Answer: Continuous Agency review of enforcement and compliance policies and guidance ensure they remain effective and consistent achieving fair results and compliance with environmental statutes and regulations.

Questions Submitted for the Record by Representative Joyce

LAKE ERIE

When I travel around my district in Northeast Ohio, I consistently hear concerns about the increasing water levels in Lake Erie and their contribution to ongoing erosion damage to shoreline communities.

To provide relief to our coastal communities, over the last year I have worked with various federal agencies to try to address this problem. In doing so, I have discovered that it is going to take coordination and collaboration – at the local, state and federal level – to identify long-term solutions that will help us protect our critical infrastructure, prevent further loss of land, and restore coastal habitat due to erosion.

Given EPA will play a key role in these efforts, in fiscal year 2021, I was proud that Congress included language encouraging EPA to make GLRI funding available to expand breakwaters and advance local shoreline mitigation measures.

Question: Please describe EPA's plans in fiscal year 2021 to make GLRI funding available to protect Great Lakes shorelines that are threatened by rising lake levels. How will this funding help coastal communities?

Answer: EPA understands the challenges that recent high lake levels and associated coastal erosion have caused for Great Lakes communities. GLRI funding can play an important role in addressing this issue through projects that improve ecological conditions of the Great Lakes and that enhance, restore, or protect habitats for important species. Coastal wetland projects (many of which have occurred on the Lake Erie shoreline) help make the shorelines more resilient to the impacts of high lake levels. These projects can also provide economic and recreational benefits to local communities. Thankfully, lake levels seem to be decreasing this year, but we will need to anticipate high water again in the future.

Question: Will EPA use this funding to collaborate with other Federal agencies, like the Army Corps of Engineers, on coastal erosion projects? If so, can you describe some of these efforts?

Answer: Through the GLRI, EPA partners with federal, state, tribal, and local agencies, including the Army Corps of Engineers, to protect and restore coastal and nearshore habitats for purposes of ecological restoration and is committed to continuing to work collaboratively with these partners moving forward. These restoration efforts will enhance the resiliency of the Great Lakes shorelines.

Since 2020, GLRI funds have been supporting a multi-year \$3.5 million interagency study, led by the U.S. Army Corps of Engineers, to enable the planning, design, and implementation of resilient and sustainable projects along the Great Lakes coast. The study will not only support

GLRI but will also inform the appropriate design and placement of shoreline mitigation measures that may be taken by non-federal partners.

Question: Does the fiscal year 2022 budget request provide GLRI funding for the Agency to continue this important work?

Answer: The FY 2022 budget requests \$340 million for the GLRI, which will support a broad portfolio of critical environmental work including projects to restore, protect, and enhance coastal habitats.

Question: Beyond GLRI, are there other EPA programs, like the Clean Water SRF, that may help constituents like mine address coastal erosion issues?

Answer: Yes. EPA is collaborating across EPA's Program Offices and Regional Offices to develop creative solutions that advance waterbody restoration and protection, improve water quality, and increase the resilience of our nation's water resources. EPA is currently working on a consolidated guide to the various types of assistance that are available to state, tribal, and local water program managers when planning or implementing water-related resiliency or climate projects, including projects that mitigate erosion. These types of assistance may include Wetlands Program Development Grants, the Climate-Ready Estuaries Program, the Nonpoint Source Program, the National Estuary Program, the Water Infrastructure Finance and Innovation Act (WIFIA), and the Clean Water State Revolving Fund (CWSRF).

For example, the CWSRF may be a source of financing for projects that address coastal erosion issues in the Great Lakes if those projects implement the state's nonpoint source management program plan or are considered cooperative ways to address nonpoint sources of pollution. In addition to CWSRF, WIFIA can fund similar projects that have a cost of at least \$5 million.

RECYCLE ACT

Question: Given education is a proven tool to increasing recycling participation, strengthening recycling streams, and reducing pollution, as co-chair of the House Recycling Caucus, I have been proud to co-lead H.R. 2159, the RECYCLE Act, to help protect our invaluable natural resources. The RECYCLE Act would create a new EPA grant program to help States, Tribes, local governments, nonprofits, and public private partnerships educate households and consumers about their residential and community recycling programs. In fiscal year 2021, Congress provided up to \$1.5 million to support these efforts at the Agency. Please describe how the Agency plans to use this funding in fiscal year 2021. How will these efforts also benefit the environment and the economy?

Answer: Recycling is an important part of a circular economy, which refers to a system of activities that is restorative to the environment, enables resources to maintain their highest values, and designs out waste. With the funding provided by Congress, EPA expects to spend

approximately \$1 million in FY 2021 on advancing recycling education and outreach through public-private partnerships, sharing recycling program best practices, compiling and sharing data and information on recycling programs at the state level, and supporting innovation through the development of new digital tools to support recycling. In Summer FY 2021, EPA anticipates releasing a final National Recycling Strategy that will focus on advancing and enhancing the municipal solid waste recycling system to lessen the nation's impacts on climate change and support the national goal to increase the recycling rate to 50 percent by 2030.

Question: What recycling challenges do these entities currently face?

Answer: EPA's 2019 *National Framework for Advancing the U.S. Recycling System* articulated a number of challenges facing municipal solid waste recycling, including: confusion about what materials can be recycled, which often leads to placing recyclables in the trash or throwing trash in the recycling bin or cart; recycling infrastructure that has not kept pace with today's diverse and changing waste stream; reduced markets for recycled materials; and varying methodologies to measure recycling system performance. To help address these challenges, in the FY 2022 President's Budget, EPA is requesting \$10 million to pilot a new grant program focused on improving solid waste management infrastructure and post-consumer materials management. As the U.S. solid waste management infrastructure is struggling to maintain pace with rapidly evolving waste streams, leading to inefficient use of domestic resources, this federal investment will seek to identify critical technology to help the nation enhance the resilience of our recycling system.

Question: Could additional funding broaden community outreach, awareness, and education on recycling to increase recycling participation?

Answer: With new funding, EPA could produce and distribute to state, local, and tribal governments additional outreach and educational materials emphasizing the environmental, social, and economic benefits of recycling. These materials should be inclusive and translated into multiple languages to support broad outreach including consumers, industry, elected officials, students, and other stakeholders. This public education effort will help reduce recycling contamination and increase the rate of recycling.

GREAT LAKES TRASH-FREE WATERS PROGRAM

Last Congress, I toured the *Lake Guardian* – EPA's largest research vessel tasked with monitoring trends of the Great Lakes Ecosystem. I saw firsthand how critical it is to prevent waste, particularly plastics, from getting into our waterways given some areas of the Great Lakes are already experiencing high densities of microplastics.

That is why I have been supportive of EPA's Trash-Free Waters program, which provides resources to help communities keep trash out of U.S. waterways and prevent microplastics from entering our food supply and drinking water sources. This program is especially important now

given we are likely to see an uptick in pollution from disposable face masks and gloves due to the pandemic.

Question: Does the Agency plan to continue the Trash-Free Waters program in fiscal year 2022?

Answer: Yes, the Agency plans to continue the Trash-Free Waters program in FY 2022, including continued support for trash capture and prevention programs across the country that support water quality and waste management goals.

This year, EPA issued its 2nd Great Lakes Trash-Free Waters Grant Program Request for Applications (RFA). EPA intends to assess the success of projects funded under the first RFA in 2020 and the quality of the applications submitted per the second RFA in 2021 to guide EPA's next steps.

Question: Why is it important for EPA to work with communities, States, and Tribes to prevent trash and other pollution from entering our Nation's waterways? What are the environmental, economic, and recreational benefits?

Answer: Aquatic trash is a significant environmental issue that has substantial economic and environmental consequences on states, tribes, and communities throughout the country. EPA engages in both domestic and international partnerships to support trash pollution prevention programs, recycling efforts in rural and suburban communities, trash capture efforts, and waterfront revitalization. In 2016 (latest figures available), the United States alone contributed up to 1.45 million metric tons of plastic waste to coastal ecosystems. Aquatic trash issues include decreased aesthetic, recreational, and economic values of rivers, beaches, and marine resources; animal entanglement or ingestion, sometimes resulting in the death of dolphins, whales, turtles, sea birds, and more; pollutant and virus transport; habitat destruction; and more taxpayer dollars spent on cleanup. Trash removal has a positive impact on tourism, fisheries, housing prices, human health, aesthetics, and communities.

GLRI FUNDING

Given the environmental and economic importance of the Great Lakes, I was proud that in fiscal year 2021 Congress was able to provide \$330 million – an increase of \$10 million – to continue restoring and protecting the Lakes through the Great Lakes Restoration Initiative.

Question: Given the Administration's infrastructure plan highlights the need to invest in the protection and restoration of major water resources, like the Great Lakes, does the fiscal year 2022 budget request include sustained funding for GLRI?

Answer: Yes. The FY 2022 budget request increases funding for GLRI at \$340 million for FY 2022.

Question: Why is continued EPA support for the GLRI critical to the long-term health and vitality of the Lakes?

Answer: The Great Lakes are the largest system of surface freshwater on earth, containing 20 percent of the world's surface freshwater and 95 percent of the United States' surface freshwater. The Lakes have suffered from decades of pollution, habitat reduction, invasive species, and other impacts. Only through a concerted, coordinated long-term effort will the Lakes be restored.

GREAT LAKES AND LAKE CHAMPLAIN INVASIVE SPECIES PROGRAM

Over the last two years, Congress has included direction for EPA to provide a report on its efforts to implement the Great Lakes and Lake Champlain Invasive Species Program, as authorized by the Vessel Incident Discharge Act.

Question: Please provide an update on EPA's efforts to implement the program to reduce the risk of introduction of invasive species into the Great Lakes and Lake Champlain.

Answer: EPA, along with our federal, state, tribal, and local partners, plans to continue to utilize GLRI funds (~\$50M annually) and Lake Champlain Geographic Program funds (~\$1M annually) on projects to prevent the introduction of new aquatic invasive species; control established aquatic invasive species; and develop and refine invasive species control technologies and management techniques. These projects directly support the commitments and measures of progress in the GLRI Action Plan III or the goals and objectives of the Lake Champlain Basin Program. These projects also support the stated purposes of the Great Lakes Lake Champlain Invasive Species Program. Further, many of these projects result in substantial benefits for both Lake Champlain and the Great Lakes through sharing of best management practices and jointly preventing and controlling priority species and vectors.

Question: Given this information is useful as we carry out our annual appropriations work, can the Agency work with my staff to provide that report to the Committee and assist with any follow-up questions?

Answer: Yes. The Agency will work with Congress and staff to respond to any follow-up questions.

HARMFUL ALGAL BLOOMS

Despite increased GLRI funding, significant work to reduce nonpoint source pollution, and efforts to mitigate impacts that human activities have had on the Great Lakes, we continue to hear reports about the growing threat of Harmful Algal Blooms in the Great Lakes.

Question: How could adjusting the allocation of GLRI funds to the various Focus Areas, like nutrients and habitat, potentially help accelerate HAB reduction efforts?

Answer: EPA, along with our federal partners, continues to review the allocation of GLRI funds to the various Focus Areas in order to optimize progress on cleaning up areas of concern, controlling invasive species, and reducing nonpoint source pollution that contributes to HABs. These are all long-term problems with long-term solutions.

Question: When allocating GLRI funding, does EPA consider projects that yield multiple benefits to more than one Focus Area?

Answer: Yes.

Question: Could additional restoration progress be made by investing in innovative projects like natural infrastructure project designs, like wetlands, technologies, or approaches that yield nutrient and HAB reduction benefits at landscape scales?

Answer: To resolve a problem as large and complex as excessive nutrient loading and the resultant harmful algal blooms in the Great Lakes, EPA pursues a balanced approach of reducing non-point source loads and investing in innovative and natural nutrient reduction approaches, such as two-stage ditches and wetlands. EPA continues to look for and invest in projects that will yield the best results, including projects using proven technology and innovative approaches.

FINANCIAL CAPABILITY ASSESSMENT (FCA) GUIDANCE

Earlier this year, after several years of bipartisan work across multiple Administrations, EPA signed its final pre-publication 2021 Financial Capability Assessment (FCA) Guidance to update the Agency's long outdated methodology for helping communities calculate the ability of low-income households to pay rising water and wastewater bills. This is a critical step forward in addressing affordability concerns over the cost of clean water services and meeting compliance obligations.

Question: Please provide a status update on EPA's ongoing efforts to publish this final guidance in the Federal Register.

Answer: The 2021 Financial Capability Assessment (FCA) for Clean Water Act Obligations is undergoing review in accordance with the "Regulatory Freeze Pending Review Memorandum" that the Administration issued on January 20, 2021. EPA anticipates completing the review in FY 2021.

INTEGRATED RISK INFORMATION SYSTEM (IRIS)

In 2016, Congress approved on a bipartisan basis, amendments to the Toxic Substances Control Act (TSCA) requiring EPA to conduct chemical assessments utilizing the best available scientific evidence. The National Academy of Sciences (NAS) has concluded on multiple occasions that the Integrated Risk Information System (IRIS) program, which is not authorized or mandated by statute, does not utilize a weight of evidence process to identify, evaluate, and integrate all available scientific evidence to reach conclusions regarding human health risk from chemical exposures. The NAS has further noted persistent problems in the program's ability to produce high quality assessments.

Question: What is the justification behind EPA's recent decision to revive IRIS risk assessment of certain chemicals, especially for those chemicals currently undergoing a risk evaluation under the amended TSCA process?

Answer: EPA's Research and Development Program develops IRIS assessments to address the science needs of the Agency. IRIS assessments are different from TSCA risk evaluations and provide hazard and dose response information, which are then used by other Agency programs that complete the risk assessment to inform decisions. TSCA risk evaluations are developed specifically to address decisions under TSCA and may not necessarily meet the needs of other programs. To ensure the scientific integrity of any Agency actions based upon these risk assessments, EPA decided to revive some IRIS assessments to address the continued needs by several offices in the Agency.

INTEGRATED RISK INFORMATION SYSTEM (IRIS)

The bipartisan Frank Lautenberg Chemical Safety for the 21st Century Act (LCSA), enacted in 2016, requires EPA to comply with specific requirements in Section 26, including using the best available science in undertaking risk assessments and making decisions based on the weight of the scientific evidence. The IRIS program, which is not authorized in statute, does not meet the requirements of Section 26 under LCSA.

Question: Given that EPA is statutorily bound to meet the standards of applicable statutory programs, including utilizing the best available scientific evidence in its risk assessments, would EPA consider a peer reviewed analysis of the science employed, specifically how the requirements in Section 26 of the LCSA were applied on risk assessments undertaken by the Agency?

Answer: EPA conducted robust, independent external peer reviews of the science that informed the first 10 risk evaluations conducted under the revised TSCA, meeting both the spirit and the letter of section 26. EPA's Chemical Safety and Pollution Prevention Program uses systematic review processes to ensure the TSCA section 26 requirements are met. Additionally, if a peer reviewed analysis was identified as relevant and underwent systematic review for TSCA,

then it may be used in TSCA risk evaluations, as legally and scientifically applicable and appropriate.

CARBON SEQUESTRATION

As part of the Executive Order, *Tackling the Climate Crisis At Home and Abroad*, President Biden stated that “America’s farmers, ranchers, and forest landowners have an important role to play in combating the climate crisis”, and the Administration charged the U.S. Department of Agriculture with determining the best ways to expand on U.S. agriculture’s carbon sequestration potential. As part of this effort, programs at EPA – including the AgStar program – seek to partner with agricultural producers to develop on-farm carbon capture technology.

Question: In capitalizing on the agriculture industry’s sequestration potential to reduce emissions, does the Agency believe it is more effective to work in partnership with agricultural producers to develop these new technologies or to regulate them?

Answer: EPA has a long history of working together successfully with USDA and the agricultural community via partnership and other programs. For example, since 1994, our AgSTAR partnership program has contributed to significant progress in reducing methane emissions in the agriculture sector. Based on AgSTAR’s Livestock Anaerobic Digester Database, in 2020 anaerobic digester projects in the United States reduced 5 million metric tons of CO₂ equivalent (MMTCO₂e).

EPA will continue to work closely with stakeholders and federal and state partners to leverage the Agency’s expertise and tools related to greenhouse gases (GHG) reporting, accounting, and mitigation potential estimation within the agricultural sector, including work to support the President’s Executive Order on *Tackling the Climate Crisis at Home and Abroad* and related climate smart agriculture and forestry initiatives.

NEW APPROACH METHODOLOGIES AND THE GOAL OF ENDING ANIMAL TESTING

The Environmental Protection Agency has a history of embracing and accepting new approach methodologies (NAMS) that do not involve the use of animals, including for testing the safety of pesticides and industrial chemicals. In 2019, EPA demonstrated its commitment to these approaches by setting a goal to end mammalian testing for its regulated products by 2035 (including those the Agency commissions in-house as well as those that it requires businesses to conduct), with a goal of reducing mammalian testing by 30% by 2025. This commitment followed the passage of the Frank R. Lautenberg Chemical Safety for the 21st Century Act, signed into law in June 2016, which included statutory language to reduce and ultimately end the use of animals in toxicity testing for risk assessments of chemicals under the Toxic Substances Control Act (TSCA).

The Agency furthered its commitment by devoting \$4.25 million to the development of NAMS at five universities. These non-animal approaches include organ-on-a-chip technologies, cell cultures, computer modeling, and other methods that are often faster, more cost effective, and more predictive of human health concerns in comparison to animal tests. For example, separate species can respond differently when exposed to the same chemicals, and even differing sexes or sub-species can react inconsistently. Consequently, results from animal tests may not be relevant to humans or can under- or over-estimate health hazards. Alternative methods, based on human biology, are much more likely to provide results predictive of human responses.

Additionally, because animal testing is time-consuming and expensive, it limits the number of chemicals and products that can be tested. Thousands of new chemicals are created every year with tens of thousands more already in use in the world around us. Using animal testing to evaluate the human and environmental safety of all these chemicals would take decades to complete, not to mention millions of animal lives. A strong commitment from EPA scientists to apply the best available science in chemical safety assessment will enable the Agency to prioritize those chemicals that are most likely to cause harm to humans or the environment. Not only is this commitment important to furthering scientific advancement within the EPA, but it also ties closely to the Biden-Harris Administration's priority of applying the best available science when making policy decisions, as evidenced by the "Memorandum on Restoring Trust in Government Through Scientific Integrity and Evidence-Based Policymaking," which notes that it is the Biden-Harris Administration's policy to make evidence-based decisions guided by the best available science and data.

In the FY21 Omnibus Appropriations bill, Congress approved EPA's budget request to expand EPA's Student Services Contracting Authority beyond the Office of Research to the Offices of Water and Chemical Safety and Pollution Prevention. Congress also authorized up to \$2 million in funding to allow the program to recruit recent graduates and early career scientists to temporary contract positions to support those offices within EPA. This funding runs through the

end of the current Fiscal Year to benefit those offices. EPA has faced a significant reduction of scientific talent and the agency has identified this expansion as an avenue to address that issue.

Question: What is the status of EPA implementing this new authority for this Fiscal Year?

Answer: EPA appreciates this new authority granted in the Consolidated Appropriations Act, 2021 (Public Law 116-260) and is working to implement the new Student Contracting authority. In so doing, the Agency discovered the authority is for one fiscal year. Timeframes associated with federal acquisition requirements are anticipated to extend beyond the fiscal year, which poses a challenge to fully implement the authority in FY 2021. To remedy this, as part of the FY 2022 budget request, the Agency is requesting an extension of the authority from FY 2022 through FY 2026.

Question: Will EPA propose or support a permanent expansion of the authority to the Offices of Water and Chemical Safety and Pollution Prevention beyond the current Fiscal Year?

Answer: In EPA's FY 2022 Congressional Justification, EPA proposes to continue this authority from 2022 through 2026 to provide the Agency with sufficient time to implement and evaluate this authority.

Questions for the Record Submitted by Representative DeLaro

EPA BUDGET AND PFAS

The American Rescue Plan included a critical \$10 billion in resources for the Agency to combat PFAS, and I am pleased to hear that EPA has begun to implement this work. However, more action is needed to be proactive in preventing PFAS contamination across our country.

Question: What is the Agency's timeline to undertaking Administration action to limit PFAS discharges into air and water?

Answer: In the early days of this Administration, EPA took some important steps. EPA pulled down a toxicity assessment that had been politically compromised and issued a new assessment backed by career scientists. EPA also began to develop a national primary drinking water regulation, to collect new data critically needed to improve the EPA's understanding of 29 PFAS, and to solicit data on the presence and treatment of PFAS in wastewater discharges.

In late April, EPA created a council of senior EPA career officials from across the agency and tasked them with strategizing the best way to use the EPA's authorities, expertise, and partnerships to mitigate and reduce PFAS pollution and protect public health and the environment. This newly established EPA Council on PFAS (ECP) will collaborate on cross-cutting strategies; advance new science; develop coordinated policies, regulations, and communications; and engage with affected states, tribes, communities, and stakeholders. To address the PFAS challenge and meet the needs of our partners and our communities across the United States, the council will, among other duties, to develop a multi-year strategy to deliver critical public health protections to the American public. The ECP will make initial recommendations within 100 days of its establishment.

Question: Will there be a phase-out of non-essential PFAS usage in pesticide containers and cleaning products?

Answer: EPA is currently engaged in information-gathering activities to determine the extent of PFAS presence in pesticide containers and in the packaging of other products. That information will inform an ultimate strategy for addressing this issue. EPA's Pesticide Program also recently began an active laboratory testing process involving samples from products that have been identified by external testing laboratories. This involves evaluating PFAS contamination in the products themselves as well as the packaging of those products. Preliminary results indicate that the treatment of packaging via fluorination is believed to be a potential source of observed PFAS contamination, but investigations are ongoing.

EPA also is beginning to investigate the issue of PFAS presence in the packaging of other industrial chemical products, which could include cleaners. EPA will determine the appropriate next steps once we have better understanding of the extent of the issue.

LONG ISLAND SOUND PROGRAM

The EPA's Long Island Sound Geographic Program is an important environmental initiative in my district, as well as many other Members from the Connecticut and New York delegations. This program was under threat during the previous Administration, but I look forward to working with you to ensure their program continues to improve the Sound and the surrounding ecosystem.

Question: How can the Agency continue working with state level stakeholders to continue to improve the watershed and wildlife habitats, while preserving the Sound for future generations?

Answer: EPA worked cooperatively with Long Island Sound stakeholders to update the Comprehensive Conservation and Management Plan for Long Island Sound with actions covering the period 2020-2024. Consistent with that plan, in FY 2021, the Program is working to increase technical and financial assistance to state and local agencies and community-based organizations to improve the health of Long Island Sound. In FY 2022, EPA plans to work to further expand investments and partnerships for clean water, healthy habitats, and resilient communities. EPA is also committed to assessment and reporting of environmental progress to Congress and all stakeholders to continually evaluate and improve efforts.

Questions for the Record Submitted by Representative Kilmer

NEW APPROACH METHODOLOGIES (NAMs) AND THE
GOAL OF ENDING ANIMAL TESTING

The Environmental Protection Agency has a history of embracing and accepting new approach methodologies (NAMs) that do not involve the use of animals, including for testing the safety of pesticides and industrial chemicals. In 2019, EPA demonstrated its commitment to these approaches by setting a goal to end mammalian testing for its regulated products by 2035 (including those the Agency commissions in-house as well as those that it requires businesses to conduct), with a goal of reducing mammalian testing by 30% by 2025. This commitment followed the passage of the Frank R. Lautenberg Chemical Safety for the 21st Century Act, signed into law in June 2016, which included statutory language to reduce and ultimately end the use of animals in toxicity testing for risk assessments of chemicals under the Toxic Substances Control Act (TSCA).

The Agency furthered its commitment by devoting \$4.25 million to the development of NAMs at five universities. These non-animal approaches include organ-on-a-chip technologies, cell cultures, computer modeling, and other methods that are often faster, more cost effective, and more predictive of human health concerns in comparison to animal tests. For example, separate species can respond differently when exposed to the same chemicals, and even differing sexes or sub-species can react inconsistently. Consequently, results from animal tests may not be relevant to humans or can under- or over-estimate health hazards. Alternative methods, based on human biology, are much more likely to provide results predictive of human responses.

Additionally, because animal testing is time-consuming and expensive, it limits the number of chemicals and products that can be tested. Thousands of new chemicals are created every year with tens of thousands more already in use in the world around us. Using animal testing to evaluate the human and environmental safety of all these chemicals would take decades to complete, not to mention millions of animal lives. A strong commitment from EPA scientists to apply the best available science in chemical safety assessment will enable the Agency to prioritize those chemicals that are most likely to cause harm to humans or the environment. Not only is this commitment important to furthering scientific advancement within the EPA, but it also ties closely to the Biden - Harris Administration's priority of applying the best available science when making policy decisions, as evidenced by the "Memorandum on Restoring Trust in Government Through Scientific Integrity and Evidence-Based Policymaking," which notes that it is the Biden-Harris Administration's policy to make evidence-based decisions guided by the best available science and data.

Question: Administrator Regan, what steps do you anticipate taking to see that the Agency accelerates its public commitment to reduce mammalian testing by 30 percent within the next four years and end mammalian testing altogether by 2035, if not sooner?

Answer: EPA is proud to be a leader in developing methods and technologies that drastically reduce the need for the use of vertebrate animals in research and testing. EPA is working closely with scientists from academia, other governmental agencies in the United States and around the world, industry, and non-governmental organizations to build confidence in NAMs. Researchers within EPA's Research and Development Program are developing faster and more cost-effective ways to test and screen thousands of chemicals using computational and non-animal tests, which could reduce the need for animal studies and which, when fully developed and evaluated, could provide the high-quality scientific information needed to protect human health and the environment. For human health, progress is being made in areas such as endocrine disruption, carcinogenicity, and the respiratory system. However, as with more traditional approaches, it will be necessary to characterize the performance of these methods prior to their adoption into regulatory decision making. EPA's Chemical Safety and Pollution Prevention Office has already incorporated NAMs for several regulatory decisions where possible (e.g., acute toxicity testing, biosolubility testing, and skin sensitization testing).

Question: In 2021, what steps will the Agency take to prioritize increasing the development and implementation of NAMs at the Agency?

Answer: Numerous EPA Offices are engaged in on-going activities related to research, training, and implementation of NAMs. Many of these activities have been highlighted at the 2019 and 2020 EPA conferences on "State of Science on Development and Use of NAMs for Chemical Safety Testing," presentations to federal advisory committees, and numerous scientific professional meetings. EPA's website also describes many of these activities. EPA also is sponsoring an *ad hoc* committee of the National Academies of Sciences, Engineering, and Medicine on *Variability and Relevance of Current Laboratory Mammalian Toxicity Tests and Expectations for New Approach Methods (NAMs) for Use in Human Health Risk Assessment*. Additional information on this effort may be found at: <https://www.nationalacademies.org/our-work/variability-and-relevance-of-current-laboratory-mammalian-toxicity-tests-and-expectations-for-new-approach-methods--nams--for-use-in-human-health-risk-assessment>.

WITNESSES

	Page
Brinkmeyer, Marc	87
Cage, Caleb	135
Christiansen, Victoria	157
Collier, Nicole	27
Haaland, Deb	234
Lau, Winnie	4
Lenk, Deborah	121
MacKeith, Peter	80
Mundell, Kathleen	115
Regan, Michael	302
Shaler, Stephen	74
Slaughter, Ulysses	128
Spencer, Ginger	20
West, Cynthia	66