

Senate Hearings

Before the Committee on Appropriations

Commerce, Justice, Science, and Related Agencies Appropriations

Fiscal Year 2023

117th CONGRESS, SECOND SESSION

H.R. 8256/S. 4664

DEPARTMENT OF COMMERCE
DEPARTMENT OF JUSTICE
DEPARTMENTAL WITNESSES
FEDERAL BUREAU OF INVESTIGATION
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
NATIONAL SCIENCE FOUNDATION
NONDEPARTMENTAL WITNESSES
OFFICE OF THE U.S. TRADE REPRESENTATIVE

Commerce, Justice, Science, and Related Agencies Appropriations, 2023 (H.R. 8256/S. 4664)

COMMERCE, JUSTICE, SCIENCE, AND RELATED
AGENCIES APPROPRIATIONS FOR FISCAL YEAR
2023

HEARINGS

BEFORE A

SUBCOMMITTEE OF THE
COMMITTEE ON APPROPRIATIONS
UNITED STATES SENATE

ONE HUNDRED SEVENTEENTH CONGRESS

SECOND SESSION

ON

H.R. 8256/S. 4664

AN ACT MAKING APPROPRIATIONS FOR THE DEPARTMENTS OF COMMERCE AND JUSTICE, AND SCIENCE, AND RELATED AGENCIES FOR THE FISCAL YEAR ENDING SEPTEMBER 30, 2023, AND FOR OTHER PURPOSES

Department of Commerce
Department of Justice
Departmental Witnesses
Federal Bureau of Investigation
National Aeronautics and Space Administration
National Science Foundation
Nondepartmental Witnesses
Office of the U.S. Trade Representative

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COMMERCE, JUSTICE, SCIENCE, AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 2023

TUESDAY, FEBRUARY 1, 2022

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 2:30 p.m., in room SD-192, Dirksen Senate Office Building, Hon. Jeanne Shaheen (Chair) presiding.

Present: Senators Shaheen, Leahy, Reed, Coons, Schatz, Manchin, Van Hollen, Moran, Murkowski, Collins, Boozman, Capito, Hagerty, and Braun.

DEPARTMENT OF COMMERCE

OPENING STATEMENT OF SENATOR JEANNE SHAHEEN

Senator SHAHEEN. Good afternoon, everyone. Hopefully you are all awake. Madam Secretary, so nice to have you join us today.

And let me just point out that we are going to be taking questions in order of seniority. We have got a hybrid, so we may have some folks coming virtually, but we are going to do it in order of seniority. And that way we don't have to worry about when people signed on to the virtual screen. So very nice to be here with my Ranking Member, Senator Moran; and with the Chairman of the Appropriations Committee, Senator Leahy, and my neighbor, so nice of you to join us this afternoon.

The Subcommittee on Commerce, Justice, Science, and Related Agencies will officially come to order. And we welcome everyone to today's hearing.

I had a chance last week, when I was in New Hampshire, to meet with the New Hampshire Municipal Association, to hear from towns all over the State about their pressing infrastructure needs. And I am sure it will come as no surprise to anyone here that the list communities have is very long, but at the top of that list is access to reliable, affordable Internet.

And New Hampshire, like in every other State around the country, you can't fully participate in American life without reliable, high-speed Internet. Just ask the parent of any school-aged child about navigating schools during the pandemic, ask any small business owner, or anyone trying to schedule a visit with their local doctor.

The pandemic lay bare what has been true, that broadband, like water and electricity, is a necessity. And I know that we all heard

stories from families in our States about having to go to McDonald's to get access to the Internet because their kids couldn't get access for school.

By some estimates, more than 40 million Americans don't have access to broadband. Those without access are disproportionately low-income individuals, and in a country like the United States, this just should not be the case.

In November, the President signed into law the Infrastructure Investment and Jobs Act, a landmark bill that invests \$65 billion to expand broadband in our country. And of that amount, nearly \$50 billion will be administered by the National Telecommunications and Information Administration, or NTIA, within the Department of Commerce, and under the jurisdiction of this subcommittee, a fortunate occurrence for all of the Members of the subcommittee, and one that my Ranking Member pointed out to me very early.

Together, these programs will be used to deploy broadband to unserved and underserved locations, create more low-cost broadband service options, install middle-mile infrastructure, and address the digital equity and inclusion needs in our community. I think it is worth pausing to note that this bill's passage is due in no small part to the tireless work of many of the Members of this subcommittee. In particular, our Ranking Member, Senator Moran, as well as Senators Manchin, Collins, Coons, Murkowski, Graham, and Capito, I think all deserve recognition as they all participated in the group effort to negotiate this law.

I especially like to thank Senator Collins who led the bipartisan broadband working group with me.

And also would be remiss not to thank you, Madam Secretary, because without your leadership, and your consistent engagement with us, we would not be here today. So thank you very much.

There is still so much more work to do, as we all know, and as you can expect, my colleagues and I on the subcommittee are eager to see this money get out the door and to our States. We know the release of the Federal Communications Commission's broadband maps. I recognize that is not within your direct control, but we look forward to hearing an update from you about the mapping process and when you think those will be ready.

Beyond questions of timing, I have also heard questions from my State about the difficulty in navigating so many Federal and State broadband initiatives. These programs often overlap and they have different requirements. Cities and towns across New Hampshire are looking for assurances that there will be effective coordination amongst States and the various Federal agencies administering broadband programs. That coordination will be very important to serve more people and stretch our dollars further.

We also know that creating low-cost options for reliable, high-speed Internet is crucial. We look forward to hearing how the Department plans to work with States to develop these proposals as mandated by the Bipartisan Infrastructure Law.

These challenges are just the tip of the iceberg, but I would like you, Madam Secretary, to know that we on the subcommittee stand ready to assist the Department as it executes these investments. We all know the stakes. Effectively managed it is no exaggeration

to say that these investments will transform the lives of tens of millions of Americans. Madam Secretary, we know you understand the stakes as well, and we very much look forward to your testimony this afternoon.

With that, let me recognize the Ranking Member, Senator Moran, for his opening remarks.

OPENING STATEMENT OF SENATOR JERRY MORAN

Senator MORAN. Senator Shaheen, thank you. Thank you very much for convening this hearing. It is timely. I am pleased that we are doing this in advance of the decisions that NTIA and the Department of Commerce will make, as they execute the authorities that we have granted them in the bipartisan bill. And I appreciate, always, when I see an appropriation subcommittee and an appropriations committee engaged in overseeing the activities of the agencies in departments that we fund.

And Secretary Raimondo, I welcome you to this, your first appearance before the CJS Subcommittee in 2022, and I look forward to working with you in this New Year. I think your insight as a Governor, a former Governor, is something that will be of great value in this particular arena. But in many aspects of the job you hold at the Department of Commerce.

The Infrastructure Investment and Jobs Act gives the Department authority over \$48 billion in taxpayer dollars for broadband programs. These programs cover everything from enabling States to connect unserved areas, to furthering connectivity for Tribes, to strengthening the backbone of infrastructure that will make our goal of increasing access possible.

The Department is at the forefront of this once-in-a-generation investment. And I really do hope that this is the time in which we are done saying, this is the moment in which we are going to get speed and interconnectivity to places that are underserved and unserved in this country. We cannot continue to have new programs, additional billions of dollars over, and over, and over again, while our constituents, while America waits for the valuable use of the Internet.

Despite the significant funding allocated for broadband deployment, it will still be a challenge to meet those goals. We must make certain that Federal funds are well coordinated, and do not contribute to overbuilding of existing networks while some Americans would continue to lack access to broadband altogether. I hear often from Kansas broadband providers about the various challenges facing them when it comes to deployment.

One provider told me recently that a group of 19 families in rural Ellsworth County, Kansas, have been asking for service to be built out to their farms for years, with the promise that they would subscribe to that service. Unfortunately, the area remains a “pending” location under the FCC’s Rural Digital Opportunity Fund. The RDOF highlights the challenges that when we pass legislation, it still doesn’t mean that broadband shows up in places across our States.

It highlights the challenges that States face on working to plan to reach the unserved, and they wait upon updated maps and at-

tempts to navigate the myriad of broadband programs that the Chair mentioned.

I recently had a conversation with Stanley Adams, he is the director of the Kansas Office of Broadband Development. Implementation of these programs is going to be an enormous challenge. My goal in having a conversation with him, and our conversation with you today, is to see if we can't get those on the ground involved with those who are making decisions about how the deployment should occur.

Having said all those challenges, I am excited about this opportunity. A significant reason I asked Kansans to give me the chance to represent them was a belief in rural America. And one of the components of taking care of rural America to see that it has a bright future is the access to broadband.

Fundamentally, the Department needs to be a partner, and NTIA must work to understand the situation on the ground in Kansas, and in each State. NTIA will play a significant role in certifying that families across rural Kansas, and other rural areas, maybe, those are words that are written on a piece of paper; it is rural Kansas, but it is also many other places that we wouldn't consider rural. The core parts of cities in Kansas and across the country are in desperate need of broadband as well.

We know that each State will have its own unique problems. The challenges in Kansas might be different than the challenges in New Hampshire, but whatever those differences are, Senator Shaheen and I will overcome. And we will see that our goal of broadband access is the same.

Both NTIA and States will need to ensure they have the right people to provide expertise, ensure an effective, complete build out, and oversee the significant investments for the day. A lot of work to be done, NTIA I am sure will be challenged by the scope and scale, but all of this must be done right, and that resource is applied appropriately and effectively.

Please know that I stand ready to work with you as we connect the Nation. I thank you for being here today.

Senator SHAHEEN. Thank you, Senator Moran.

Chairman Leahy, would you like to make any remarks before I call on the secretary?

Senator LEAHY. No. I am just—I am interested in hearing it. I am one of those who live in a rural area, on a dirt road, 5 miles from our State Capitol Building. And through our days of my broadband, I pay the highest amount, now that there is—there are actually some days it works, not often, but some days, and are mainly because the company doesn't give a damn about "last-mile" stuff. But we will get into that.

Senator SHAHEEN. Okay. I thought maybe you were here to give us an update that we have an agreement on Omnibus. No.

Senator LEAHY. I will tell you about that after.

[Laughter.]

Senator SHAHEEN. Okay. All right; Secretary Raimondo.

STATEMENT OF GINA RAIMONDO, SECRETARY, DEPARTMENT OF COMMERCE

Secretary RAIMONDO. Good afternoon. Good afternoon, Chair Shaheen, Ranking Member Moran, Members of the Committee, thank you for having me. I am looking forward to this discussion, and it is nice to see you all in person.

As the Chair said, very eloquently, too many families all across America can't afford the cost of broadband service, or as the Chairman just said, they live in areas that don't have access to high-speed Internet. And gaps in broadband mean gaps in opportunity, fewer opportunities to learn, and work from home, to visit the doctor, to stay connected with family and friends.

Achieving an equitable future means ensuring that all homes, all businesses, have high-quality connections at affordable prices, and that users have the devices and digital skills they need for meaningful use. The truth is, our economy cannot fully recover unless all Americans can fully participate.

That is exactly why President Biden set an ambitious goal when he entered office. That goal is crystal clear. Connect every American through affordable, reliable, high-speed broadband.

I, too, would like to thank the Members of this Committee, both Democrat and Republican, who worked with us to negotiate the broadband provisions of the Bipartisan Infrastructure Law.

I specifically want to thank you Madam Chair, Senator Manchin, Senator Collins, Senator Murkowski, and every member of the Committee. I have worked with each and every one of you to negotiate this. And I cannot thank you enough for your cooperation, and making this a reality, because of your work and your commitment, bipartisanship, this law provides \$65 billion to deliver reliable, high-speed Internet to every American, lower the cost of Internet, and close the digital divide.

Of those funds, as Ranking Member Moran said, \$48.2 billion are allocated to the Commerce Department's National Telecommunications and Information Administration, NTIA. Specifically, that law provides: \$42.5 billion for the Broadband Equity, Access & Deployment Program, which I will refer to as BEAD in this testimony; \$2 billion for Tribal broadband grants; \$2.75 billion from the Digital Equity Act, and \$1 billion specifically for middle-mile connections to build the high-speed backbone.

Our goal at the Commerce Department is to make certain, that at the end of our work, every single household, small business, farm, family, and student in America has access to affordable, reliable, high-speed broadband. And we are focused on getting this done right, and giving States the flexibility they need to ensure that this benefits everyone in their State.

As the Ranking Member mentioned, I am a former Governor, and I live this. I live this. The needs of Rhode Island for broadband are different than Kansas or New Hampshire, or Maine, or Vermont, or Delaware, or West Virginia, it is different. And so, we have to have flexibility to get the job done. In many rural communities there is no broadband, no fiber, it doesn't exist. So, in that case, our task ahead is to lay the infrastructure and ensure people, in even the most rural corners of the country, can get online.

In urban areas, it is a different set of challenges. On Tribal lands, a different set of challenges. So the way we are administering this program is with great flexibility, and the law, as conceived, has built-in flexibility to allow us to address each State's specific needs. If I deliver no other message today, I want to be clear there is—we do not have a one-size-fits-all approach, because I don't believe that would be successful.

We are going to work hand-in-glove very closely with your States to fund projects that will make the greatest impact and achieve universal broadband access and affordability. This unprecedented investment, in closing the digital divide, requires input from a wide range of voices to assist our design and implementation of the new grant programs. I cannot say this enough, stakeholder engagement is absolutely vital to getting this done.

And thanks to the historic and bipartisan investments that you have made and enabled, we are moving towards our goal of connecting all Americans to affordable, high-speed broadband. We all know that for our economy, businesses, and workers to be competitive in the 21st century economy, we have to get this done.

So, like many of you, I am eager to work with you. That Ranking Member Moran is exactly right; this will not be easy, this is detail-oriented, this is a complicated implementation hurdle. We, together, in partnership with States, and Tribes, and stakeholders we will get this done, and fundamentally close the digital divide in America. So thank you.

[The statement follows:]

PREPARED STATEMENT OF SECRETARY GINA RAIMONDO

Chair Shaheen, Ranking Member Moran, and members of the Subcommittee, thank you for the opportunity to discuss the broadband funding in the Infrastructure Investment and Jobs Act, better known as the Bipartisan Infrastructure Law.

Too many families can't afford the cost of broadband service, and too many families live in areas where they can't access high-speed Internet.

Gaps in access mean gaps in opportunity: fewer opportunities to learn and work from home, remotely visit doctors, or stay connected with family and friends. Achieving an equitable future means ensuring that all homes and businesses have high-quality connections at affordable prices, and that users have the devices and digital skills needed for meaningful use.

Our economy cannot fully recover unless all Americans can fully participate.

This is why President Biden set an ambitious goal when he entered office: connecting every American through affordable, reliable, high-speed broadband.

I want to thank the many members of this committee—both Democrat and Republican—who worked with us to negotiate the broadband provisions of the Bipartisan Infrastructure Law, specifically you, Madam Chair, Sen. Manchin, Sen. Collins, and Sen. Murkowski.

I'm proud that the broadband provisions of the bill ultimately helped it to pass with significant bipartisan support.

Thanks to your work, the Bipartisan Infrastructure Law provides \$65 billion to deliver reliable, high-speed Internet to every American, lower the price of Internet service, and help close the digital divide.

Of those funds, \$48.2 billion is allocated to Commerce's National Telecommunications and Information Administration.

Specifically, the law provides:

- \$42.45 billion for the Broadband Equity, Access & Deployment Program (BEAD). The program will award grants to states and territories to fund high-speed affordable broadband for households and businesses that currently lack access to such services.
- \$2 billion for Tribal broadband grants, tripling the funding for NTIA's existing Tribal Broadband Connectivity Program.

- \$2.75 billion to fund the Digital Equity Act. This provides NTIA with funding for three grant programs to promote digital inclusion and equity for communities that lack the skills, technologies, and support needed to take advantage of broadband connections.

- \$1 billion for middle-mile connections to build a high-speed backbone to help reduce the cost to serve households, businesses, and anchor institutions.

Today, I'm grateful for the opportunity to update you on our progress as we prepare to launch these programs in a little more than 100 days.

We want to ensure that broadband deployment is successful and affordable in every corner of the country, in every type of community, and for your constituents.

Our goal at the Commerce Department is to make sure that every small business, farm, family, and student in America has access to affordable, reliable, high-speed broadband.

We're focused on getting this done right and giving states the flexibility they need to ensure this benefits everyone.

In Rhode Island, where I come from the challenge there is less about physical broadband infrastructure and more about ensuring affordability. It does no good to live in a location where broadband is available if you can't afford to get it.

Many rural communities, on the other hand, have no broadband. Our task ahead is to lay the infrastructure and ensure people in even the most rural corners of our country can get online.

Essentially: it doesn't make sense to address Kansas challenges with Rhode Island solutions. That's why the law has built-in flexibility to address each states' specific needs.

Under the law, each state will get a minimum of \$100 million, and the remaining money will be allocated by need, based primarily on the number of unserved households.

States will be given initial planning funds that they can use to develop a five-year action plan, in collaboration with local and regional entities, to cover everyone in their state.

We're going to work with your states to fund projects that will make the greatest impact and achieve universal broadband access.

This unprecedented investment in closing the digital divide also requires input from a wide range of voices to assist our design and implementation of the new grant programs.

Stakeholder engagement is critical to getting this right.

Over the past 2 months, NTIA has held three virtual, public listening sessions to help inform the development and implementation of the broadband programs in the law. We've met with state and local governments, non-profit and civic organizations, higher education institutions, and industry.

Last month, NTIA issued a request for comment to gain further input into the program design, policy issues, and other implementation considerations for the programs launching this year. Comments are due on February 4.

This work builds on prior broadband programs, including the three grant programs funded by the bipartisan Consolidated Appropriations Act for fiscal year 2021.

The largest of these is the Tribal Broadband Connectivity Program (TBCP), which will award nearly \$1 billion to expand broadband access and adoption on Tribal lands.

We received nearly 300 applications from across the country ? from large infrastructure projects to small Internet-adoption programs. The requests amount to more than \$5 billion in funds—a strong signal of the intense need for broadband investments in Native American, Alaska Native, and Native Hawaiian communities.

As I mentioned, the Bipartisan Infrastructure Law appropriated an additional \$2 billion for the TBCP. Last month, NTIA conducted a Tribal Consultation to receive input on this funding.

The Connecting Minority Communities Pilot Program will direct \$268 million toward expanding broadband access and connectivity to eligible Historically Black Colleges or Universities, Tribal Colleges or Universities, minority-serving institutions, and nearby anchor communities.

NTIA has received over 200 applications, resulting in more than \$833 million in funding requests for the purchase of broadband Internet service and equipment, among other project goals.

Finally, the Broadband Infrastructure Program will direct \$288 million in grant funding toward the deployment of broadband infrastructure.

NTIA received over 230 applications, totaling more than \$2.5 billion in funding requests across 49 states and U.S. territories.

We expect to make the awards for this program later this month.

Thanks to the historic and bipartisan investments you have made, we're moving towards our goal of connecting all Americans to affordable, high-speed broadband. We know that for our economy, businesses, and workers to be competitive in the 21st century economy, we need to get this done.

I'm eager to work with you in the months ahead and look forward to answering your questions about the vital work being done at the Department of Commerce to close the digital divide.

Thank you.

Senator SHAHEEN. Well, thank you very much, Madam Secretary. We will now have a round of 5-minute questions. And as I said, we will go in seniority order on the Committee, with some people coming virtually. I will begin.

As we all referenced in our opening statements, this is funding that we want to see get out the door. And the timing is really going to be dependent on a number of things, but you mentioned the Broadband Equity Access and Deployment, the BEAD Program, which is really dependent on the creation of those FCC maps. And the concern that we have in New Hampshire is not just when that is going to happen, but also how accurate those maps are going to be.

And I can tell you, previous maps that we have seen in our State, and I am sure everybody has a similar story, have not been accurate. They have not shown where the dead spots are, and where the coverage really needs to be.

So can you speak at all—recognizing that this is not your direct area of responsibility—but can you speak to what is happening with the FCC, in completing those maps, because so much of what needs to happen depends on when we get those and how accurate they are going to be?

BROADBAND EQUITY ACCESS DEPLOYMENT (BEAD) MAPPING

Secretary RAIMONDO. Yes. So as you say, the maps are vital. I mean, Senator Moran mentioned over-building. The mission here, as explicitly laid out in the statute, is to prioritize the unserved. At the end of this, shame on us, on me, if there is any one unserved left. So, the maps will tell us who is unserved and who is underserved. And that is why we can't deploy any of this money until we have the accurate maps.

As you say, this is in the purview of the FCC. I will tell you we are in constant communication with the FCC. I have spoken with the Chairwoman myself, I have met with her. Alan Davidson, newly confirmed—thank you—is already in contact with her.

They represent that probably summer, you know, this summer, they will have the maps. I will say this, I do have confidence they will be, more accurate than in the past. The past, they have been broad by census tract, these are down to the household, and we are incorporating our census data from the Commerce Department into the maps. But for a more detailed answer, I would refer you to the Chairwoman of the FCC.

Senator SHAHEEN. Thank you. I appreciate that. Obviously one of the other aspects of that is what the challenge process might be, if there is concern about accuracy. Can you speak to what the Department is thinking about in terms of any kind of a challenged process for those?

Secretary RAIMONDO. I think that—you know, again, that this really is in the FCC's purview. Our role is take the maps, run it through the statutory formula, get the State allocation, and then run the program. But I think there will have to be some, you know, challenge process simply because, as I said before, we do have to listen to every stakeholder, and it is \$65 billion.

Senator SHAHEEN. Mm-hmm.

Secretary RAIMONDO. Like, I have told my team yes, you have to go fast, but you really have to get it right.

Senator SHAHEEN. Well, thank you. I appreciate that. As I said in my opening remarks, sort of jokingly, but it was serious, because in drafting this legislation we did choose the NTIA to lead the program because of its crucial coordination role with other Federal agencies, and particular with the FCC, with the USDA, NTIA maintains regular contact with States through their State broadband offices.

So how does the NTIA plan to address those coordination issues? And can you assure States that there will be some opportunity for input as you are developing these plans?

Secretary RAIMONDO. Yes, absolutely. So a few thoughts: It is true, as you say, the USDA has some money here, Interior does, Treasury does, we do. Our goal is to the extent possible, have NTIA be like a one-stop shop. We cannot be asking Governors, and mayors, and Tribal leaders to deal with the alphabet soup of government. We have to make it easy. So the way we plan to do this is we are going to have a single-point person at NTIA in charge of every State, one person. So I know when I want to know everything about New Hampshire, I go to the New Hampshire person.

Right now we are in the middle of intense stakeholder engagement. In fact, we have a request for comment, which is open right now. I spent the weekend with the Governors at the Governors Association, the weekend before with the mayors at the Conference of Mayors, we are doing everything we know how to do to encourage robust stakeholder engagement. The last thing I will say is, the way this is going to work is every State has to give us a State plan, which will be made public. We are requiring them in that plan to lay out all the Federal monies they are using for broadband so we can see it all in one place.

Senator SHAHEEN. Great. Thank you. I am out of time; I have lots more questions, but I know that many of my colleagues will get to those.

So Senator Moran.

Senator MORAN. Chair, thank you.

Secretary Raimondo, let me talk about the funding formula. The initial Broadband Equity, Access, and Deployment (BEAD) Program has an initial \$100 million to each State, followed by an amount to be determined by unserved areas in the State, the purpose of the formula is to provide the States with the most unserved areas with the most funding, something I fully agree with.

One issue that I foresee is the uncertainty regarding whether currently unserved areas are still going to be considered unserved, if a separate Federal broadband program like the FCC's Rural Digital Opportunity Fund has awarded funding for those areas, but a network has not yet been built out, creates the risk that some

States could lose out on a significant of money as RDOF awards cover broad swaths of some of those—some of our States.

The risk is compounded if previously identified projects ultimately fail—fails to deliver the money, RDOF money. So a concern I raise with you is: Does RDOF, where they intend to go but have not gone, does that eliminate that area from being unserved? Will there be—maybe there is a response from you before I go on. Maybe it is just an issue to raise with you.

Secretary RAIMONDO. Yes. Yes. So you are saying RDOF is supposed to have covered these areas hasn't yet, will they be counted as served in the map?

Senator MORAN. Right; if those areas or those States get left out, because RDOF may do something.

Secretary RAIMONDO. Yes.

Senator MORAN. And hasn't done something. And I guess if the—if the word is they may do something, it is also they may not do something.

Secretary RAIMONDO. Right, right.

Senator MORAN. We need to make sure that those broad swaths of areas of States across the country are not excluded.

BEAD FUNDING

Secretary RAIMONDO. I understand. First of all, I agree fully and completely. Again, my job is to make sure everyone is covered at the end of this. By the way, this is exactly why we are doing so much stakeholder engagement, and why we are obsessed with getting to people on the ground, which is what I told the Governors. I have to look into this and talk to the FCC and get back to you. And I promise you I will do that. My staff will follow up with you.

By the way, it is exactly the sort of excruciating detail that we are in the middle of figuring out, which is why these engagements and request for comment are so important.

Senator MORAN. It is a reason I am so pleased Senator Shaheen has called this hearing now.

Secretary RAIMONDO. Yes. Yes, yes.

Senator MORAN. Instead of after the fact.

Secretary RAIMONDO. Yes. I would say many of the policy decisions, of which there are many, we are in the process of figuring out how to implement, and that is why we are doing this request for comment now. So I will follow up.

Senator MORAN. Somewhat related to that, my comment and your follow up is, does the Department plan to calculate the funding allocations to States using any criteria beyond the size of the unserved population?

Secretary RAIMONDO. So the formula is, as you know in the statute, unserved, there is a 10 percent set aside for places that are hard to reach, and that are expensive, so that is additional on top of—on top of the formula. And then we have the digital equity grants on top of that, and then the middle mile on top of that.

Senator MORAN. I think my—my question just to plan in your mind is, do I need to be concerned, or that there is some definition of unserved beyond unserved, and maybe we will see how that, I mean—

Senator MURKOWSKI. Alaska.

Senator MORAN. Alaska, just totally unserved, right?

Senator MURKOWSKI. But it is one State, you know. Okay, yes.

FUNDING ASSISTANCE TO STATES

Senator MORAN. So we want to make sure that unserved means that really it is unserved. Let me, before I lose my time, and I hope to have an opportunity to ask some additional questions. I am going to tell you the Kansas Broadband Development Office—and that is the person that I think will be your point person in Kansas—they have a staff of two, and their ability to have the resources necessary early on to do their job is important.

The law outlines that—how these offices can receive an initial amount of funding, and dictates that the Department aids these offices throughout the process of applying for a grant and executing the program. Any explanation on what the department already plans to do to support State broadband offices during deployment? And how can NTIA allocate its resources to prepare to meet what will be a significant demand for technical assistance from the States?

Secretary RAIMONDO. Yes. Thirty-six States have broadband offices, and they vary significantly in quality. The good news is NTIA has a long history of working with these States, and has a pretty good feel for who needs more technical assistance. The way we are going to do this program is we are aiming towards a May 16 Notice of Funding Opportunity. After that the State has to give us a letter of intent that they want to participate. Then there is a \$5 million planning grant, and that will then begin heavy technical assistance. And if you are telling me, Kansas only has a couple of people I would think that \$5 million and heavy technical assistance will help shore them up.

Senator MORAN. But they are very high quality people.

Secretary RAIMONDO. I am sure they are. Yes.

Senator MORAN. Thank you. Thank you, Madam Chair.

Secretary RAIMONDO. I will be happy to follow up. And we are out of time. I would like to visit with you, and get the details of this.

Senator MORAN. Wonderful. Thank you.

Senator SHAHEEN. Thank you. Senator Leahy.

Senator LEAHY. Thank you, Chair Shaheen.

Governor—I keep finding myself calling you governor. Madam Secretary, I am delighted to have you here. I think you heard that—in your State, and actually every one of us heard in our States during the pandemic, with schools being closed, work being done remotely, and all that. Then we had in just 1-year's time, we had probably a 10- or 15-year change in society on how we needed broadband.

We have a system in Vermont called Communications Union Districts, CUDs, which allows communities near each other to band together, so they can identify, they can finance, and fulfill local broadband infrastructure needs. And currently 206 Vermont municipalities belong to one or more of these CUDs, which is 64 percent of the State's populations, and is 91 percent of the unserved locations.

And it has been seen as a pretty good model of how you create a community-owned entity to deliver broadband. Now, how can these Vermont CUDs benefit from the broadband provisions in the infrastructure law? And I ask that because you have rural areas that do not have extensive financial histories. How can they plug in and be able to use these new programs?

BEAD FUNDING TO VERMONT

Secretary RAIMONDO. Thank you. So as I said in the beginning, the reason this program is structured this way is because there is no one size fits all. And in rural Vermont we are going to have to have a different solution than in urban Rhode Island. Nonprofits, municipally-owned co-ops or utilities are all eligible for these funds.

So your State will have to put together a State plan, which we will have to approve, and based on what you are saying, it sounds like though the Communications Union Districts would be included in the State plan, and depending on the details, could be eligible for funding.

We are trying to encourage competition, so we are asking every State to have a competitive process. We are requiring every provider who gets money to deliver an affordable plan. And I think in a lot of rural places, it will be the, you know, co-ops and municipalities that get the money.

Senator LEAHY. Yes. I look at the fact. On the many, many, many, many, many times that my broadband service is not working, I can get in the car and drive 5 miles to my office in Montpelier and have perfect broadband. But not everybody can do that. If you are a child home from school, you can't. Inaccurate broadband maps have hindered our ability to build out our broadband infrastructure for years, if not decades.

We tried to update our data map. Would your Department consider devising a mechanism that allows States to harmonize data maps? So States like Vermont don't lose any strategic advantage, use money with confidence by utilizing State maps that already exist?

Secretary RAIMONDO. Well, I would say this. Now States should be looking at their maps, you know, getting ready, getting their teams ready, making sure the permitting in the State doesn't get in the way, but the maps that we have to use will be the FCC-produced maps.

Senator LEAHY. Well, we should talk more about that, because I want to make sure that these are accurate everywhere. I mean, whether it is obviously in Rhode Island, in New Hampshire, or Vermont, or Kansas, or anywhere else, because you have the last-mile broadband infrastructure that is a significant obstacle. And most our rural areas lack adequate access.

The \$65 billion made broadband available, including \$42.5 billion for State broadband deployment, we need coordination of maps. I don't expect you to have the magic answer right now, but coordination of maps that work, and everything else, and some way of facilitating this last mile.

Secretary RAIMONDO. Mm-hmm.

Senator LEAHY. As I said, I can drive five miles from my office, and have something that works every time. But if you are a child

in school, and what not, or an employee or something like that, you can't do that.

Secretary RAIMONDO. Yes. I agree fully and completely. And hopefully, you know, the reality is in a lot of these places it hasn't made economic sense for the ISPs to do that, and that is the whole point of using this money to make sure the last mile is covered everywhere. So I will look forward to following up with you.

Senator LEAHY. Thank you. Well, we will continue to work with your office. And again, it is a delight to see you here. Thank you very much.

Secretary RAIMONDO. Thank you.

Senator SHAHEEN. Thank you, Senator Leahy.

Senator Murkowski.

Senator MURKOWSKI. Thank you, Madam Chair.

Welcome Madam Secretary. Good to see you. Thank you for all you are doing, and for being so responsive on so many of the issues that we have had discussions about. So you are talking about the mapping and the last mile, as we have had many discussions in Alaska. So much of our concern is with the middle-mile infrastructure.

Secretary RAIMONDO. Mm-hmm.

BEAD FUNDING TO ALASKA

Senator MURKOWSKI. And you know, we have got good support within the infrastructure bill, a billion to deploy middle-mile projects. So we are excited about that. But a couple of questions on that, one specific to the mapping. I have got a little bit of concern about the mapping requirements versus the timeliness of getting funds out the door.

Everyone wants to get the money out the door, but making sure that we have actually accurate maps I think is going to be critical, particularly for us in ensuring the intent of the law to serve the unserved before the underserved is met.

And so it is going to take a little bit of time to do it right. We understand the urgency, but what I am hoping is that we can get some assurance that NTIA is going to be sensitive to the diverse needs that we have in different States to get to the right solutions here. And you know, maybe this requires a little bit of flexibility, a little bit of interagency coordination, but we would hope that you are understanding some of the challenges that we face in a State like Alaska.

Secretary RAIMONDO. Yes, I do. I mean, you and I have spoken about this. Alaska is unique, having said that most of all these States are, but I understand the massive geography, the difficult topography, not that many people. We are not going to put the money out before we have the maps.

Senator MURKOWSKI. Okay.

Secretary RAIMONDO. We won't, we can't. You know, as I said, there will be the \$5 million planning grant, and we will get to work, but we can't let the money flow until we have the maps.

Senator MURKOWSKI. And I appreciate what you have shared, but I also know that I am going to have people back home that are going to be panicked, because they are going to see other regions of the country that might be receiving awards first and figure,

wait, we are going to get left behind again. What we want to be able to assure is, we are moving with urgency, we are doing—we are getting the accuracy that we need for this mapping, and again, we are paying attention to this middle mile.

Secretary RAIMONDO. Yes, I understand. Well, we will do more stakeholder engagement. I mean, I think there is no substitute for communication, and continuing to communicate with the message that you say. I will say that, you mentioned there is the billion dollar set aside for middle mile, which is true, but Alaska can choose to spend its BEAD money on middle mile as well. So if the Alaska broadband plan identifies middle mile as the biggest problem, I would expect they will use much of their BEAD money to build out middle mile. Plus, like you said, the middle mile.

Senator MURKOWSKI. Yes. Let me turn to Tribal broadband, and the connectivity program. I am going to submit for the record, a letter that the Alaska delegation sent to you, Madam Secretary, regarding the Alaska-based projects that are under consideration for the Tribal Broadband Connectivity.

[The information follows:]

United States Senate
WASHINGTON, DC 20510

April 7, 2022

The Honorable Gina M. Raimondo
Secretary
U.S. Department of Commerce
1401 Constitution Ave NW
Washington, DC 20230

Dear Secretary Raimondo,

We are writing to follow up on our letter dated October 6, 2021, and to express our strong support of the Alaska applicants for the National Telecommunications and Information Administration's Tribal Broadband Connectivity Program (TBCP) to deliver broadband connectivity to our unserved and underserved communities throughout the State. We encourage speedy approval of grant funding so we can bring digital equity to all Americans.

Rural Alaska faces great need for federal funding for broadband deployment. Our state's vast size, highly dispersed population, challenging topography, and extreme weather create unique obstacles to deploying broadband infrastructure. Many places in rural Alaska found it especially difficult to adapt to living during the COVID-19 pandemic due to the lack of broadband service that urban, suburban, and even rural places in other parts of the United States take for granted. Without adequate broadband some Alaskans could not work remotely, learn remotely, or use telehealth services.

Today, providers are poised to leverage private capital and other federal and state funding opportunities to connect Alaska's communities, many of which are some of the smallest and most remote in the nation. Those plans are contingent upon confirmed funding for the initial infrastructure through hub communities in the state. We appreciate the care that is being taken to issue funding in a thoughtful manner to ensure that the promise and benefits of high-speed broadband can be realized by citizens across the nation. However, we also note that while projects will be awarded on a rolling basis, only ten projects have been awarded according to information on the NTIA TBCP website. We strongly encourage you to address the delayed rollout and announcements of these awards. We request you provide information on your department's ongoing efforts to administer this program, the reasons you are experiencing delays, and any assistance you may need from the legislature in this regard.

Consistent with applicable law, policy, and guidance, we respectfully request that you give all due consideration to these applications and keep our offices apprised of the timeline for and outcome of decisions.

Sincerely,



Lisa Murkowski
United States Senator



Dan Sullivan
United States Senator

Congress of the United States
Washington, DC 20515

October 6, 2021

The Honorable Gina Raimondo
Secretary of Commerce
U.S. Department of Commerce
1401 Constitution Avenue, NW
Washington, D.C. 20230

The Honorable Evelyn Remaley
Acting Assistant Secretary of Commerce for Communications and Information
National Telecommunications and Information Administration
U.S. Department of Commerce
1401 Constitution Avenue, N.W.
Washington, D.C. 20230

Dear Secretary Raimondo and Acting Assistant Secretary Remaley:

We write in support of Alaska's applicants for the Tribal Broadband Connectivity Program, administered by the National Telecommunications and Information Administration (NTIA). The program was established in the December 2020 Consolidated Appropriations Act to expand broadband access and deployment for Tribal communities. Native American, Alaska Native, and Native Hawaiian communities have long been overlooked regarding broadband infrastructure investment, and this program provides a unique opportunity to help close this aspect of the digital divide.

Alaska faces significant and unique challenges to deploying broadband infrastructure. Our state has vast expanses—areas larger than most other states—devoid of interconnected roads, an electric grid, or water and sewage systems. These challenges are even more pronounced in our Tribal communities, which are often extremely rural and remote. These expansive distances and unique topography make it essential for all solutions to be given due consideration, regardless of the specific technology.

Despite the lack of basic infrastructure that other states take for granted, the people who live and work in these communities need broadband to succeed. Our tribal health clinics need broadband to power telemedicine services, our tribal village schools need broadband to connect their students to critical education resources, and the businesses in our villages need broadband to compete in a global economy. Deploying further broadband infrastructure to serve these communities will be truly transformational—providing opportunities not only for telehealth, distance learning, and economic development but also, greater independence, self-sufficiency, and opportunity.

A number of Alaskan Native entities have submitted applications for support in this inaugural round. We encourage you to review those applications carefully and consider Alaska's unique situation and needs. Importantly, we encourage you to consider that communities in Alaska with the greatest need may not have large populations. They are likely some of the

smallest villages where Alaska Natives live a rural lifestyle making them difficult and expensive to reach. Overly weighing the total number of people served may disadvantage Alaskan applicants compared to other easier to reach areas in other states.

Consistent with applicable law, policy, and guidance, we respectfully request that you give all due consideration to these applications, and keep our offices apprised of the timeline for and outcome of decisions.

We applaud the Department's leadership on expanding access to this critical infrastructure for Tribal communities. We look forward to working with you to continue this work in Alaska.

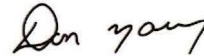
Sincerely,



Dan Sullivan
United States Senator



Lisa Murkowski
United States Senator



Don Young
Congressman for All Alaska

Senator MURKOWSKI. You mentioned that there was \$980 million in funding. This program had over \$5 billion in application by the deadline last September. We have got an additional \$2 billion in funding through the infrastructure bill, but obviously the need is extraordinary out there.

So I am hoping that you can answer just a few procedural questions here: With the additional \$2 billion that is coming for the Tribal Broadband Connectivity Program (TBCP), do projects that have already been approved for funding that haven't yet received any money, do they need to resubmit their applications? And if so, how are you communicating that with folks? Do you additional staff that you have added? How are you—how are you letting people know about the availability here?

TRIBAL CONNECTIVITY FUNDING PROCESS

Secretary RAIMONDO. So we are still figuring out the specific answer to your question, which is: Do they have to reapply?

Senator MURKOWSKI. Right.

Secretary RAIMONDO. I think there is a lot of sense in making them not reapply, for the reasons that you said, but we are going through it, and I will have an answer shortly. We think we are going to have to hire over a hundred people at NTIA to administer all of these programs. And as you said, there will be a single point person on Alaska. So we will have to stay in close touch with them.

But you are right. I mean, I will say this. The \$2 billion maps with the \$1 billion. So the money is for the same kinds of things.

Senator MURKOWSKI. Right.

Secretary RAIMONDO. And so we are looking hard at saying, you don't have to reapply, and doing it on a rolling basis, which is what we are doing with the \$1 billion.

Senator MURKOWSKI. That would be helpful if we can just be in contact on that. And I am assuming that you are coordinating with other Federal agencies, whether it is USDA, or others.

Secretary RAIMONDO. Yes.

Senator MURKOWSKI. Or others, who have also got broadband funding. As again, we had a lot of Tribal set aside, so how we are working to make sure that everybody is in sync, is important.

Secretary RAIMONDO. Yes. Yes. Thank you. We have, so you know Mitch Landrieu is working in the White House. We have a task force on exactly this. I meet regularly with Tom Vilsack and Deb Haaland, our teams do, to do what you are saying.

Senator MURKOWSKI. Super, thank you. Thank you, Madam Chair.

Senator SHAHEEN. Thank you. Senator Reed.

Senator REED. Thank you, Madam Chair. Welcome, Madam Secretary.

Along with the funding for broadband programs themselves, in the Infrastructure Act, we set aside funds for administering the programs. In fact, your response to Senator Murkowski about how many people you are going to have to hire, underscores that. But if we have to live under a full year continuing resolution, how might this affect the roll out of the program?

FUNDING UNDER A CR

Secretary RAIMONDO. Yes, thank you for the question. So in this particular program I don't think that there will be huge disruption because the program has been funded, \$45 billion for the entire program. I will say, though, I appreciate the question because it would be very significantly disruptive to much of the rest of the work that the Department does, and work that you all care about.

So—we wouldn't receive additional funding to support next-generation of weather, climate, and space, weather satellites, I know you all care about climate change deeply. We wouldn't have additional money for the desperately needed cybersecurity upgrades that the Department needs, and to mature cybersecurity practices across the Department, we wouldn't have the money to support the 2022 economic census, the absence of which could reduce the census quality, which has great impact. We wouldn't have the money to improve the National Weather Service's Integrated Dissemination Program, which delivers forecasts, watch, and warning information for public emergencies.

So it would be very significant and disruptive to things that, in some cases are, you know, lifesaving, when it comes to predicting these severe weather events.

Senator REED. Well, thank you, Madam Secretary. There are multiple aspects of broadband. One is the technical aspect of having access to it. The other issue is being able to pay for it. And we realize in communities like Central Falls, and Olneyville, and I could list too many more.

AFFORDABLE CONNECTIVITY PROGRAM AND DIGITAL EQUITY GRANTS

Secretary RAIMONDO. Now he is talking my language.

Senator REED. I know, I know. So how can programs like the Affordable Connectivity Program, and the Digital Equity grants cre-

ated by the Act help low-income families get connected, and make the most of these connections?

Secretary RAIMONDO. Thank you for asking the question. Affordability is just as important as access, because what good is it to have broadband in your neighborhood if you can't afford it? What good is it, if it is in the Community of Central Falls, but there is no hookup to your, you know, housing subsidized high rise? It is no good.

So we are very serious about affordability. First of all, every plan, every single ISP who receives any money from this must certify to us that they offer a low-cost plan. And we are going to define low-cost plan in a way to make sure it is really low cost. Now, the FCC has the affordability program that you mentioned, which is a \$30 voucher.

Senator REED. Mm-hmm.

Secretary RAIMONDO. So as we define low cost, we know that means "free" for some people, so we are going to be looking at that \$30 number. We are going to work very closely with the FCC to get that affordability program working, or encouraging States to advertise it. And then on top of that, as you say, there are the Digital Equity grants, I think in a place like Rhode Island, which I happen to know very well, pretty much everyone has fiber. You know, there is no rural Rhode Island, so—

Senator REED. Block Island.

Secretary RAIMONDO. Okay, Block—fair enough, fair enough. But, you know, relative to Maine or Kansas. But in any event, I think the money will be used for providing hookups to the apartment building, providing computers for kids, providing laptops, providing digital literacy skills; and so, I think all of that goes to affordability in a way that will make sure this is not just accessible, but affordable.

STATE PREPARATION FOR FUNDING

Senator REED. Finally, quickly, what should the States and other entities that are going to be beneficiaries to the program, what should they be doing now for successful applications?

Secretary RAIMONDO. Yes. They should be shoring up their broadband offices. You know, every State should be looking at their broadband office. They should be looking at their permitting policies to make sure that we can smoothly lay the fiber and do the construction work we need to, they should be thinking about job training programs. We are going to have to train a lot of people.

We think we are going to create over 100,000 jobs across the country with this. They should be doing stakeholder engagement, you know, going to Block Island and finding out what really are the issues. And they should be talking to us, calling us to ask questions so we can provide technical assistance.

Senator REED. Thank you, Madam Secretary. Thank you, Madam Chair.

Senator SHAHEEN. Thank you, Senator Reed.

Senator COLLINS.

Senator COLLINS. Thank you. Madam Chair. First of all, Madam Secretary, welcome.

Secretary RAIMONDO. Yes.

Senator COLLINS. And I want to reiterate my appreciation for your extraordinarily hard work with Senator Shaheen, and myself, as well as other Members of the Committee, as we finalized the broadband provisions of the Bipartisan Infrastructure Bill last year. I think the three of us spent endless hours negotiating, and it was indeed a pleasure to work with you.

The State of Maine is ready to go. And the obstacle is an issue that is already been brought up by Senator Shaheen, and others. And that is that the FCC must complete its overhaul of the broadband coverage maps. And that is really important because the current, woefully inadequate FCC maps, would lead to an inaccurate allocation of funding, and overbuild building.

The reason I am concerned, and signed a letter that the Ranking Member, Senator Moran, circulated is that the Treasury Department, which has jurisdiction over of the American Rescue Plan broadband money recently issued a final rule that removed a requirement that the funds be targeted to unserved and underserved areas. Can you give us an insurance today that Federal funds that we provided through the Bipartisan Infrastructure Bill will be prioritized to unserved, and then underserved areas?

FUNDING PRIORITY: THE UNSERVED AND THE UNDERSERVED

Secretary RAIMONDO. I can. The Bipartisan Infrastructure Law which, as you say, we worked hard to negotiate, provides a crystal-clear framework to prioritize unserved then underserved. And so, yes, that is the way we will do it. Also, I share, you know, you mentioned overbuilding. I mean, it is vital that we first get broadband to everybody, and we are going to do that so that we don't run the risk of, quote/unquote, "overbuilding and running out of money."

Senator COLLINS. Thank you. There are two other issues not directly related to this hearing, but under your jurisdiction, that you probably will not be surprised that I am going to bring up to you today. One has to do with the duties and tariffs on softwood lumber. In November of last year the Commerce Department, approximately, doubled the final duty rates on imported softwood lumber from Canada, increasing the rate to 17.9 percent. And that applied to sales made in 2019.

Just yesterday, Commerce announced an 11.64 preliminary duty rate for sales made in 2020. Now, that is a reduction in tariff rates, but I am still concerned that these high rates will hurt a lot of home building in Maine, and Maine businesses, many of which work very closely with their Canadian partners at sawmills right across the border.

And it obviously also affects the availability of affordable housing for millions of Americans. We used to have a Softwood Lumber Agreement with Canada. It expired in 2015. What is the Commerce Department doing to restart those negotiations to bring stability to this market, help make homebuilding more affordable for Americans, and reduce tensions with Canada?

Secretary RAIMONDO. Yes. Thank you for the question. I am not surprised. I admire your advocacy. So, in this regard, the Commerce Department's role is relatively limited in so far as the assessment of these duties is largely, you know, formulaic and math-

ematical. And we operate in a quasi-judicial capacity, applying the formula to assess the duties.

I have, you know, reached out to USTR after our last conversation. And you know, do support efforts to find a more lasting solution to this problem, because as you say, you know, whatever we do with the AD/CVD cases, it is temporary.

Senator COLLINS. I know my time has expired. I do hope we will do a second round.

Senator MORAN. I don't have control over that but I, too, hope we do, because I have some tariff questions to ask myself. And maybe, Senator Collins, we can talk to the Chairwoman and see if we can have our trade ambassador in front of the Committee before long as well.

Senator Coons.

Senator COONS. And thank you, Senator Moran. As you can tell, Madam Secretary, this is a wonderfully collaborative Committee that has gotten a lot of good work done under the leadership of both parties. Over the last couple of years, it has been a real joy to serve on this subcommittee. I am grateful for your focused and effective leadership of the Department at this moment of historic investment, in making sure that Americans, Delawareans, Rhode Islanders, many others, have access to broadband. Like the State of Rhode Island, Delaware has areas that, I would argue, are genuinely rural, like Block Island.

We have about 11,600 Delaware families that have no access to Internet services broadband at all, but we also have significant urban areas where affordability is the key issue. I look forward to staying in contact with you. You raised a number of issues, permitting, and the permitting process in rural areas, skills for installers, servicers, and so forth, and how we are going to update that, and making sure that between what the Department does, and what FCC does, that we produce a result that is genuinely affordable.

Let me just briefly ask. Do you think making structural investments that reduce cost, rather than providing monthly value vouchers is going to be important to ensuring affordability for the long term?

ENSURING LONG TERM AFFORDABILITY

Secretary RAIMONDO. I do. I think it is a combination. As I said, affordability is non-negotiable because if it is \$100 a month for broadband, it might as well not exist. You can't afford it. I think it is hard to generalize because it is different in every place.

Senator COONS. Yes.

Secretary RAIMONDO. So in some places affordability, fundamentally means laying the fiber and, you know, subsidizing the companies to lay the fiber in places that it doesn't exist, so that it will be affordable.

Senator COONS. I look forward to working with you on that. I couldn't agree more with our President's statement that the economy can't fully recover until all Americans can fully participate. As you know, developing a critical technology like broadband, making progress towards 5G, and some day 6G, requires voluntary standard-setting activities, and the patents, and robust IP protection that underlie them to encourage investment in R&D.

I want to make sure we aren't taking steps that would weaken the patent system. We have worked well together on advancing a balanced nominee to run the patent and trademark office. USPTO, NIST, and DOJ Antitrust have recently published a proposed revision to the existing policy on remedies for standard essential patents that I think harms our national security interest, global competitiveness, and threatens to harm the patent system.

I hope you can commit that we will ensure participation by Senate-confirmed leadership at NIST and PTO, and adequate consideration of these sort of balance of equities moving forward. Is that your inclination, Madam Secretary?

Secretary RAIMONDO. Absolutely. You and I have discussed this. These are complicated and vital issues. I am hopeful very soon we will have the Senate-confirmed Head of the USPTO.

Senator COONS. Me too.

Secretary RAIMONDO. And I think she will be terrific engaging with us to figure this out.

Senator COONS. Thank you, Madam Secretary. Let me, last point if I can. I am really excited that the House is taking up their version of the U.S. Innovation and Competition Act. I think getting the Innovation and Competition Act out of the Senate with a robust bipartisan vote was one of the most significant things we did last year.

Secretary RAIMONDO. Mm-hmm.

Senator COONS. And I am particularly pleased, the House version includes \$52 billion in the CHIPS for America Fund, which would be a key boost to manufacturing, and our capacity to do advanced manufacturing for semiconductors. Can you just briefly help us understand, in a concrete and direct way, how the passage of that bill by the Congress, and the enactment of it, by signing into law by the President, will actually improve our ability to compete with China and strengthen our manufacturing base here at home?

CHIP MANUFACTURING IN AMERICA

Secretary RAIMONDO. Yes. Thank you. I cannot overstate how important it is. Right now the United States of America does not produce on our shores, any leading edge, more sophisticated semiconductors, zero. We rely upon Taiwan for 65 percent of those.

I mean, need I say more? Those are the CHIPS we need in military equipment, high-end computing, communications equipment, and we are utterly dependent on one company in Taiwan.

Senator COONS. Mm-hmm.

Secretary RAIMONDO. So I am out of time. We could go on extensively. I won't. It is a huge national security need, and I am very hopeful the House passes it this week.

Senator COONS. I appreciate your clarity.

Secretary RAIMONDO. And I hope it is bipartisan.

Senator COONS. I hope so too. I look forward to working with you on it. And I appreciate your clarity. Thank you.

Senator MORAN. Senator Boozman is next, followed by Senator Capito, but I would guess that they are—I don't think they are on—appearing by technology. So I call on Senator Hagerty.

Senator HAGERTY. Well, thank you, Ranking Member Moran. I appreciate that. And Secretary Raimondo, it is good to see you here; thank you for being here today.

Broadband deployment is very important to my home State of Tennessee, particularly in our rural areas. And I know that my colleagues have had many discussions with you about that. I would like to shift then to another area that is related to that, and it has to do with our competitiveness with respect to chip technology. And I hear a great deal about our chip shortage at home.

I think that you are an advocate of making certain that we are competitive in that arena. And what I would like to speak with you about is the Federal regulatory burden that has to do with permitting chip manufacturing here in the United States. My colleagues have passed legislation that has put a significant amount of money in place to support manufacturing, but the process itself is something that is quite concerning to me.

When I learned about the chip manufacturing shortage, I actually undertook to call the leaders of chip manufacturers around the world. Some of them came to see me, others just spoke with me by phone, but when I asked them what stands in the way of manufacturing here in the United States, one of the greatest obstacles is the timeline for permitting here in America.

And as I talked to them about it, they underscored the fact that the rate of technology development in their industry is so rapid that they can't accommodate a long Federal regulatory permitting timeline. And I have a feeling that you probably feel the same way about this, that you would like to see us have a more concise, predictable, and effective regulatory process. Is that correct?

Secretary RAIMONDO. Yes. So I certainly agree with you that we need to have a hard look at permitting, because in many cases for these sophisticated projects, it could take years and we don't have years.

Senator HAGERTY. Mm-hmm.

Secretary RAIMONDO. So I am interested to learn more and do more on how we can, as you say, streamline the process.

Senator HAGERTY. I think we have a great opportunity to work together. I heard the same thing about the process being denominated in years, and again, the rate of technology development just doesn't accommodate that. It makes us not competitive with these projects here in America.

Secretary RAIMONDO. Exactly.

Senator HAGERTY. So I have very recently introduced legislation with Senator King, and with Senator Portman, to expand the existing FAST-41 permitting process. It is a Federal permitting coordination program, and we expanded it to cover key technologies, including semiconductors, chips.

I think that the FAST-41 Program has been successful improving the Federal agency permitting process for infrastructure projects. And it was recently made permanent in the infrastructure bill just passed. And my bill will allow for key technologies, like semiconductor manufacturing, to fall into that same framework, and using the existing Federal program that is in place to help then, deal with the permitting process.

That bill just recently passed the Senate unanimously, 99 of my colleagues joined me; so I am hopeful that it will pass the House very soon, and that we will get it to the President's desk for signature.

So I would love to get your commitment, Secretary, to take a look at the legislation that we are—that we are passing, and hopefully get your involvement in making it effective.

Secretary RAIMONDO. Yes. I do commit to looking at it. It sounds very interesting. I share the concern for the problem, and I will look at it and get back to you.

Senator HAGERTY. Yes. I appreciate that. And I think we will find some great opportunity to make some real improvements here for America. On a related topic, in December of 2020, the Commerce Department took an important step to protect our U.S. national security, and our economic security. When it added China's Semiconductor Manufacturing Corporation, SMIC is how it is usually called, to the Commerce Department's entity list.

COMMERCE DEPARTMENT ENTITIES' LIST

That is the list that restricts foreign entities from accessing certain key U.S. technologies, as you know. The Chinese Communist Party considers SMIC to be one of China's national champion companies. SMIC has got very close ties to the Chinese Military, moreover SMIC and Huawei, reportedly, maybe teaming up to build a \$10 billion chip fab facility.

Other Federal departments have noted that companies continue to export important U.S. technologies to SMIC, because the entities' list restrictions on SMIC are phrased too narrowly.

In October of 2021, Reuters reported that the Commerce Department disclosed to Congress 188 licenses valued at nearly \$42 billion that were green-lighted for semiconductor manufacturing were for SMIC.

And yesterday, Senator Cotton and I sent a letter to you urging your department to close the loophole, to broaden the parameters so that we can shut this loophole down. And I would look forward to working with you on getting those loopholes closed, to ensure that the entity listings really accomplish their intended purpose, and prevent Chinese Military access to our key technology. So I would ask you to work with us to deal with these foreign suppliers that may be undercutting the situation.

Secretary RAIMONDO. May I reply, yes?

Senator SHAHEEN. Please.

Secretary RAIMONDO. So I haven't seen the letter, but I will read it.

Senator HAGERTY. I understand. Yes.

Secretary RAIMONDO. And get back to you.

Senator HAGERTY. Mm-hmm.

Secretary RAIMONDO. I share your deep, deep concern with doing everything we can to deny China our technologies; in fact, since I have been Secretary, we have added 81 new Chinese companies to the entity list, and they are effective. You know, in the time that we have put Huawei on the entity list, their revenue has been down by 30 percent.

Senator HAGERTY. Mm-hmm.

Secretary RAIMONDO. So I am out of time. I will look at it, your letter, and you know, get back to you.

Senator HAGERTY. Thank you for looking at that with us. I think we have some room to improve there. And I think if you look at these two steps that we have discussed, making it easier to permit chip manufacturing here in America, and making it tougher for China to access our technology will have a very significant impact on the national security.

Secretary RAIMONDO. Excellent. Thank you.

Senator HAGERTY. Thank you.

Senator SHAHEEN. Thank you. Senator Schatz.

SUBMARINE CABLES FOR CONNECTIVITY

Senator SCHATZ. Thank you, Chair. Thank you, Secretary, for being here. I know that you understand the unique communications challenges that Hawaii, in particular, faces. We are the most isolated, populated place on the planet. And of course we rely on submarine cables for connectivity to the rest of the country, and the rest of the world. But also we rely on submarine cables for connectivity within the State. And that is an important distinction to make, as we think about definitions in the infrastructure bill and elsewhere.

And that is why Congress made sure that submarine cables are an eligible expense for middle-mile broadband in the Infrastructure Bill. Can I count on you to work with NTIA and my office to meet Hawaii's broadband needs, which are understandably different, but sometimes take 3 or 4 extra minutes to explain?

[Laughter.]

Secretary RAIMONDO. Absolutely, yes. In fact, I was with Governor Ige this weekend. I spoke to the Governors about broadband, and he brought this up specifically, and I expect that this will be in Hawaii's plan through the BEAD, you know, process. But absolutely we will work with them.

TRIBAL CONNECTIVITY FUNDING

Senator SCHATZ. Thank you very much. As Chairman of Indian Affairs, I appreciate that the department has been working hard to implement the first round of funding for the Tribal broadband connectivity program, but there are still challenges in pushing the money out quickly enough, and with the flexibility needed for the unique needs on the ground. What have you learned from the first round? And what can Congress do to ensure that funds in this coming round are issued as quickly as possible?

Secretary RAIMONDO. Yes. Thank you for the question. And I acknowledge that we are a little bit behind on those Tribal deadlines, but as I said to the Chair, our mantra is, "Get it right." What have we learned? We learned that we had to cure about 70 percent of the initial applications from Tribal communities, which means a lot of technical assistance, and that takes time.

And so, we do that, we have learned how to do it, but it does take time, and we want to make sure if everyone is going to participate, we want to give the Tribes a chance to get the money, which means we have to help them improve their proposals.

Secondly, we have learned that you have to really do stakeholder engagement because the needs and conditions in Tribes are just different. And so, we have to get out in front of it and listen even more. I will also say, on a personal level, I have learned just how heartbreaking this is. 50 percent of people on Tribal lands have no broadband, and I have heard people tell me stories of a teacher having to get in her car and drive school worksheets once a week to the kids, because otherwise they couldn't go to school at all. So we are very deeply committed to it.

Senator SCHATZ. Thank you. And I think a couple of thoughts. First, Tribal consultation, consultation with native peoples, because the people of Hawaii are not a federally recognized Tribe, but still have trust obligations under—under Federal law. But Native consultation is the key principle here, and it could be turned into a kind of TA, and that is fine. But it does seem to me that the consultation on the frontend is both logistically smart, but it is also consistent with Federal policy, which is to enable Tribal consultation, and the sort of, “nothing about me without me” and understanding that some of these Tribes have extraordinary resources, and no problem to apply for a Federal grant.

Secretary RAIMONDO. Yes, yes, yes.

Senator SCHATZ. Some of them don't. Some of them, the librarian is the sheriff, is the—you know, and people are trying their very best to do multiple jobs in extraordinarily difficult circumstances. So I appreciate your attention to that.

COASTAL RESILIENCE AND HABITAT FUNDING

Let me finish with NOAA. I really appreciate your passion for oceans. We share that passion, only one of us is from the Ocean State. And so I really appreciate the work you are willing to do. The Infrastructure Bill has \$1.3 billion over 5 years for Coastal Resilience and Habitat Funding.

If you can just give me a couple of thoughts about how you are thinking about that? And then specifically, to the extent that it is infrastructure, how you are going to work with DOT, and the Army Corps, and think through, you know, green infrastructure, not as a slogan but as, for instance, a better coastal inundation prevention strategy, than some of the stuff that the Army Corps is doing in the first instance.

And that this idea of ecosystem services is not some pie-in-the-sky, you know, conservationist term, it is actually a pretty smart way to manage risk if we do it right. So could you give me your thoughts on that?

Secretary RAIMONDO. I mean, you said it much better than I ever could. And in this respect, we have the 18 programs related to coastal resiliency, which are vastly oversubscribed, well run through our existing NOAA offices, hugely oversubscribed. So, this additional money we plan to run through the existing NOAA program offices and meet the need that previously has gone unmet.

We are targeting, you know, summer to start getting this money out the door, but it is intended to do what you said. You know, and I did see this in Rhode Island. Like, resiliency, and adaptation, and planning is—you know, communities know how to do it. They do—they need our help and our money to do it.

Senator SCHATZ. Thank you very much.

Senator SHAHEEN. Thank you, Senator Schatz.

Senator Manchin would like to ask questions, right now he is still in an energy hearing, but both Senators Collins, Moran, and myself have expressed an interest in a second round. So we will go ahead with that. And when Senator Manchin comes on, we will go to him for questions.

JOB CREATION FOR INFRASTRUCTURE PROGRAMS

I would like to pick up first on the workforce question, because you pointed out you are going to need to hire over a hundred people just in NTIA to administer the infrastructure programs. So I have heard that in New Hampshire, as we are—as communities are thinking about how to make better use of the funding that is coming in from the infrastructure proposal. And as we think about how do we get all of the workers who are going to execute the BEAD Program: How are we going to get the small businesses that are going to provide the ISP companies that we are going to need?

So can you talk a little bit about your thinking on this? And how you see us being able to ramp up to do that; because in States like New Hampshire, that is a huge challenge?

Secretary RAIMONDO. So let me try to answer it and make sure I am answering that question. As I said earlier we—our number suggests, we think we can create between 100,000 and 200,000 jobs in deploying the \$65 billion. And that is across the map, you know, construction jobs, technician, technical jobs, everything that you have said.

As a result, we are allowing for flexibility for States to use their BEAD money to do, for example, apprenticeships, job training, recruiting, for exactly this reason. So we are encouraging States, and the digital equity money as well, the additional money. So we are encouraging States when they are putting together their plan, it is not just about laying fiber, it is about: What are the workforce needs that you will have? And what are the, you know, worker training and other initiatives that you are going to invest in, in order to meet those needs?

Senator SHAHEEN. And are you going to be providing any kind of guidance, modeling, examples, and how do you envision working with the SBA, for example, who is going to be important, I would think, in helping some of those small businesses to develop, who can actually be in charge of hiring the workers to do the deployment.

Secretary RAIMONDO. Yes. So again, I keep saying technical assistance, but I can't say it enough. I mean, this is going to be very important. We are hiring 120 people in NTIA to do just this program. That is in addition to what they already have, that is in addition to the other resources in Commerce. We are going to have to really, in a very hands-on, granular way, work with States, absolutely provide them support. We are having community of practice meetings, we are sharing best practices, we are going to loop in the Labor Department, and offer guidance and help with, how to do apprenticeship programs, et cetera. We have already started to do that, but it is that, that will be a huge—that is what we have to do.

Senator SHAHEEN. I am really pleased to hear that because I think that is going to be one of the biggest challenges of this program.

Secretary RAIMONDO. Yes. By the way, I will say, I think there is a huge opportunity here for women and people of color, because if you look at who traditionally does these kinds of jobs—

Senator SHAHEEN. Oh, absolutely.

Secretary RAIMONDO. It is disproportionately, not women and people of color. And so deploying this much money, and creating over 100,000 jobs, it is also about equity, and I am passionate about this piece of the work.

MAXIMIZING FUNDING EFFICIENCY FOR LOCAL GOVERNMENTS

Senator SHAHEEN. Great. That is great to hear. I talked about talking to our Municipal Association in New Hampshire, and one of the questions that I got was, and I think maybe you and I talked about this a little bit, but that is how States local governments can maximize efficiency as they are looking at the funding that is coming in.

For example, we have a lot of communities that are going to be using the water and sewer money, they are going to be looking for the broadband money, they are going to be looking for transportation funding. And for a lot of those, they are going to traverse the same route.

Secretary RAIMONDO. Mm-hmm.

Senator SHAHEEN. So their question was: How can we coordinate those activities so that we know the money is coming so we can plan to do? If there are pipes and lines going to a certain area so that we can plan to do that digging all at once.

Secretary RAIMONDO. Yes. So this is a real challenge. As I said, the President has a task force which is led by Mitch Landrieu. We meet weekly trying to coordinate on our end to avoid exactly what you are talking about. And you know, as I say, we are already meeting weekly, we are reaching out, we are trying to make it one-stop shop, I don't think there is a silver bullet on this. I think it is about being vigilant and in constant communication with these States.

And now, somebody asked: What can Governors be doing now? This was my message to Governors: Like, figure out how we change permitting now. Or we don't want to be ripping up the same road 3 times in a year. You live that as Governor too. So we are asking Governors to start planning now to avoid some of these issues.

Senator SHAHEEN. Thank you.

Senator Braun.

GOVERNMENT SPENDING

Senator BRAUN. Thank you, Madam Chair. Good to have this discussion. I know when I travel, all the 92 counties in Indiana, I hear three themes constantly, workforce, we are not here to talk about that, affordable housing, and rural broadband. And that is not to mention what I think is probably the biggest issue we should be grappling with. And it is the high cost of health care, because in running my own company, it was the thing that ended up coming into the C-suite because it never seems to get any better.

I think that is because we got a very uncompetitive health care industry. Let us focus here. Let us focus on appropriations. Let us put a little context into the whole idea of appropriating.

Since I joined the Senate we have appropriated more dollars outside of the appropriations process in this Committee than within it. This includes more than \$3.8 trillion we spent on a bipartisan COVID bill, \$1.9 trillion on ARPA. Additionally, the Infrastructure Bill increased discretionary spending by \$415 billion over the previous highway funding baseline, adding a net deficit of \$256 billion.

Put this in context, when it came through '08/'09, we spent \$800 to \$900 billion. And that was a real systemic, economic issue. And that seems like chump change in this day and age. I think the process is broken. We don't do regular order. I mean, we are talking about continuing resolutions because we have not had the ability and the political will to get this done by September 30 of 2021.

I mean, it is a system that has just gone completely out of control. And I will put one other doozy in there. Just a little over 3 years ago, we were \$18 trillion in debt, now we are nearly 30. And I think the American public needs to realize that coming out of World War II, the highest percentage of debt we had ever taken on as a country. We were savers. We were investors. We paid all of that off and built the interstate highway system.

That seems like a big story of fiction now when we have built in a trillion, now close to \$1.5 trillion structural deficits, largely driven by the gimmick of the biggest things we spend money on here, would be not on discretionary, but non-discretionary. Social Security, Medicare, Medicaid, other things we so kind of ingeniously put on autopilot and don't do budgeting regular order anymore.

What do you think needs to be done? We need rural broadband. We would be much smarter block-granting that to the States, because do you know what they do? They have balanced budget amendments. Do you know what they do? I was on the Budget, or on Ways and Means, and Roads and Transportation in Indiana for 3 years, you always make your ends meet because you are either statutorily, or by constitution, have to do it.

I would like your opinion, not on broadband. How do you get this back into balance, when in my 3 years here, so many people come to this institution wanting more, and don't even realize that the worst news is down the road? When the Medicare Trust Fund goes completely bust in 4-and-a-half years, after paying into it since the '60s, Social Security in 10 or 11 years, actuarially we have known it all, we have no political will.

I think someone in this room told me that in one of our first budget meetings that is what we lack mostly. I would like your opinion. You are in the midst of it. We are feeling no current pain. How do we get this institution back into a respectable place where people can count on it in the long run?

Secretary RAIMONDO. Well thank you, Senator. I would say, as a Governor, I had to balance the budget every year, and run a State every year, and balance the budget. And so I have had that experience. I will also say 2008/2009, the economy struggled, people really struggled for 10 years after that. I was a Governor in the wake of that. And for years we had to make cuts because that stim-

ulus wasn't quite big enough. And so that is why President Biden has really been leaning forward to say let us make investments.

The issue that I am here to talk about, broadband, I don't think of it as spending money, I think about it as investing. I used to run a business too. These are investments, whether you are investing in roads, or bridges, in broadband, childcare so women can work. These are productivity-enhancing GDP, improving worker, enabling investments. I am all for accountability, I am all for responsibility, I am all for transparency, but I do think we need to invest in growth.

Senator BRAUN. Real quickly, because time has expired, not by much, we generally go beyond this. But you are correct, a return on a tangible investment makes sense, but you have got to remember what it is driving our current deficits would not be for tangible investments like infrastructure that you are referring to.

When you start making the argument that an intangible investment is somehow part of what we need to do. That is more what I would call, spending. You need to do some of that. The thing that kept your State's finances in order was probably your good stewardship along with some really good guardrails. And until we have that here, your job is going to be very tough. Future generations, I think, have a lot to worry about, about what this looks like 5 to 10 years down the road. Thank you.

Secretary RAIMONDO. Thank you.

Senator SHAHEEN. Thank you, Senator Braun.

Senator VAN HOLLEN.

COMPETITION AND AFFORDABILITY

Senator VAN HOLLEN. Thank you, Madam Chair.

Welcome Madam Secretary, and thanks for your good work.

Secretary RAIMONDO. Nice to see you.

Senator VAN HOLLEN. Nice to see you. And we appreciated in Maryland, Deputy Secretary Graves' recent visit to Baltimore.

Secretary RAIMONDO. Yes.

Senator VAN HOLLEN. Where he met with Maryland's four HBCUs. All of them have applied for the Connecting Minority Communities Pilot Program, and we are working with them on those applications. We are also pleased that he joined us in Howard County where their Economic Development Authority put together a consortium that is a finalist in the Build Back Better Regional Challenge, to create a cybersecurity focused workforce pipeline. So thank you for the Department's attention on all of these ongoing efforts.

And I was listening to your testimony, thank you for the work you are doing on the broadband front, high speed Internet. The State of Maryland is already using \$300 million from the American Rescue Plan for that purpose around the State, as are a number of our municipalities, including Baltimore City.

But the additional funds in the Infrastructure Modernization Program will help us all finish the job. And I wanted to delve a little bit more into the affordability part of access to high-speed Internet, because we know you need a tablet, you need a reliable connection, but you need to be able to afford it.

Secretary RAIMONDO. Mm-hmm.

Senator VAN HOLLEN. And in many places in Maryland, a community might have a single provider where services are just unaffordable at the end of the day. You have monopoly provider, no competition, and the prices are too high for many families. And the middle-mile program can, I think, help relieve that issue. And I heard you in response to Senator Murkowski's question; make the point that a State could choose other resources in the BEAD Program for that purpose. Is that right?

Secretary RAIMONDO. Yes, absolutely, yes.

Senator VAN HOLLEN. Right. And would you agree that if we are going to invest billions of dollars in building out our broadband infrastructure, that at the end of the day it does have to be affordable for everybody so that we are not having to come back, and provide new, fresh subsidies so people can afford the service?

Secretary RAIMONDO. Absolutely. Yes. As I have said earlier, affordability is core, it is of no use to you or your family to have Internet for \$80 a month, \$100 a month, and we are going to have to look at this. We are requiring competition in every—in every State plan—in every State they have to have competition. We are hoping that the money we are providing, which could be to utilities, co-ops, middle-mile providers, nonprofits will encourage more competition.

We are requiring everyone—every ISP provider who gets any of this must provide an affordable plan. So that is key. You are not going to get anything if you don't prove to us you have an affordable plan. And then finally we will be working with the FCC and their affordability program. It used to be the EBB, the Affordable Connectivity Program, which is \$30 a month to, you know, combine our efforts with their efforts.

Senator VAN HOLLEN. Well thank you, Madam Secretary. Your response sort of anticipated my next question. So these funds will be available to all entities, to nonprofit entities, to public entities, the private entities in order to create competition. And what, for example, let us say a private entity was going to receive some of these funds, a condition of receiving these funds would be to agree upfront to affordable prices being charged?

Secretary RAIMONDO. Yes. They will not be eligible to receive any of this money unless they first prove to us, NTIA, that they are going to be offering an affordable plan.

GRANT AND STAKEHOLDER ENGAGEMENT

Senator VAN HOLLEN. Thank you, Madam Secretary. My last question just relates to the NTIA grants, and the BEAD Grants. As you know, they are channeled through States. You were a Governor. You know that sometimes municipalities or counties in Maryland feel that they are not at the table when the State makes those decisions.

Secretary RAIMONDO. Mm-hmm.

Senator VAN HOLLEN. Can you provide some assurances that the monies that flow through the States, and sub-granted to counties that—that counties and municipalities will be engaged up front in that process. That it is to say, a coordinated process, not a top-down process.

Secretary RAIMONDO. Yes. Yes, I can. I have also lived that. We are requiring a lengthy, extensive stakeholder engagement, and requiring States to prove to us, and show us exactly what that stakeholder engagement was. So first they get a planning grant, and with that planning grant, they have to do a certain amount of stakeholder engagement, including with municipalities, including with consumer advocates, including with ISPs. And we are going to be the arbiter of whether it was enough engagement.

Senator VAN HOLLEN. Thank you. Thank you, Madam Secretary.

Senator SHAHEEN. Thank you. Senator Capito.

Senator CAPITO. Thank you, Madam Chair. And thank you for being with us here today, and thank you for your constant communication with me. Personally, as this was developing, I am obviously really excited about it.

SERVICE CONCERNS

About 10 days ago, I launched a project through my office called Share Your Story. And I asked, in anticipation of all the money coming into the State, and some of the misspent funds from the BTOP Program in 2009.

Secretary RAIMONDO. Mm-hmm, mm-hmm.

Senator CAPITO. Don't want to make that mistake again. I think you and I talked about that. So amazingly, I have got 902 stories.

Secretary RAIMONDO. That is great.

Senator CAPITO. These are from people all over the State of West Virginia that are talking about where their issues are with their broadband service. We have heard from schools, we have heard from a school superintendent who can't even conduct business at his own home. He has to go back to the school in the middle of the night if something comes up with the school system; businesses, but mostly individuals. They fall into a packet of unserved, yes, so you think: Well, how are they contacting you? Maybe the service at work, or something like that.

Secretary RAIMONDO. Mm-hmm.

Senator CAPITO. Underserved or service promised undelivered, you know, certain speeds promised, you are paying for this but you are not getting it. And other things are sort of regional, where certain areas that are more rural, or less populous, have less service, or less availability. And then some providers, who will remain unnamed, were highlighted in this. So I am planning to use this to——

Secretary RAIMONDO. You can tell me later who they were.

Senator CAPITO. Pardon.

Secretary RAIMONDO. You could tell me later who those providers were.

Senator CAPITO. I can tell you. And so I am planning to use this data that we are re-contacting everybody, and use this with my Broadband Council to help them fulfill their mapping as they are moving out, because I was surprised, it was such an overwhelming response, and very pleased. So it is called www.capito.senate.gov/shareyourstories.

TIMELINE FOR SERVICE MAPS

And so I want to talk about something just really detail here, oriented. You said maps by the summer, in your comments—your written statement—you said that: We are prepared to launch these programs in a little more than 100 days, because as we get to share our stories, people are saying: Yes, you have talked about how you are going to get us broadband, when is this coming, because there is such an appetite?

Secretary RAIMONDO. Mm-hmm. Yes, yes, yes.

Senator CAPITO. So could you line out a little bit more of the timeline?

Secretary RAIMONDO. Yes.

Senator CAPITO. Just briefly. Yes.

Secretary RAIMONDO. So first of all, we would like to get the info from you to Share Your Stories.

Senator CAPITO. We will.

Secretary RAIMONDO. Because as I said, we are deep into stakeholder engagement at the moment.

Senator CAPITO. Good.

Secretary RAIMONDO. So listen, this will be a challenge because this is the way it is going to work. Right now we are doing our request for comment trying to get what we can.

Senator CAPITO. Yes.

Secretary RAIMONDO. We are charging towards the goal of second week of May, third week of May, to put out the Notice of Funding Opportunity. So that is kind of the starting gate for the States.

Senator CAPITO. Okay.

Secretary RAIMONDO. Mid-May starting gate, apply. They will let us know if they want to apply. I am sure they all will. Then we are going to provide them with a \$5 million planning grant, but the—and then they start working on their State plan. And it will take them time, it will take them months to do their State plan. They have to do stakeholder engagement that takes months. I was with the Governors the other day—

Senator CAPITO. Does the stakeholder engagement have to begin in May? Can they be doing that now?

Secretary RAIMONDO. They should be doing it now, but they can do it now. They can do it now, yes, they can and they should.

Senator CAPITO. Okay. Forms the document and—

Secretary RAIMONDO. Exactly, exactly. But, you know, I was with the Governors on Saturday, and they are like: We are ready to go now. We want our money now. I am like—

Senator CAPITO. Right.

Secretary RAIMONDO [continuing]. Respectfully you're not. Have you checked this box on permitting? Have you checked this box on building out your broadband office? Have you really done consultation with the Tribes, and the ISPs, and the municipalities; but here is the nut of it, Senator. We need the FCC to produce the maps—

Senator CAPITO. Right.

Secretary RAIMONDO [continuing]. Before we can even run the formula to figure out how much money every State has.

Senator CAPITO. Right.

Secretary RAIMONDO. And I don't know. I mean, the FCC Chairwoman testified to June, they are telling us summer. I hope it is summer, and if it is, then we can get to work thereafter.

Senator CAPITO. Yes. I mean, obviously sooner, and the sooner the better, you know that. I mean, you know the—but we want to do it right. We want to do it accurately.

I know there have been a lot of questions on this, and certainly in the Share Our Stories I saw this, and I alluded to it. There are areas that are sort of in the fine line of underserved and unserved. They may have availabilities but it is a—you know, a \$200 a month satellite availability that in the mountains of West Virginia, a lot of times people are getting kicked off or other things.

Secretary RAIMONDO. Mm-hmm.

Senator CAPITO. So I was supposing that you were going to be planning for those gray areas. I think Senator Moran was sort of getting to that in his question.

Secretary RAIMONDO. Yes. So you know, we look at the speeds, below 25/3 is unserved.

Senator CAPITO. Right.

Secretary RAIMONDO. Below 120 is underserved. We are also going to rely on the Governors in the local broadband offices.

Senator CAPITO. Mm-hmm.

Secretary RAIMONDO. I mean, they know. They know.

Senator CAPITO. Right.

Secretary RAIMONDO. In West Virginia, you know.

Senator CAPITO. Right.

Secretary RAIMONDO. Where is it spotty? Where is it insufficient? And so that is why we are asking these States to put together plans. And we are relying on the States to tell us: Hey, I don't care what your maps say. I am telling you this cluster has poor service. And that is why we want to use our money to connect this cluster, or run fiber there.

Senator CAPITO. Yes.

Secretary RAIMONDO. And a lot of what you are talking about, those technologies, they probably need fiber—

Senator CAPITO. Right.

Secretary RAIMONDO [continuing]. Which is what we are doing here so it is high quality.

Senator CAPITO. Right. All right; I think my time is up, unfortunately. I had about 20 more questions.

Senator SHAHEEN. Thank you. Senator Moran.

Senator MANCHIN. Hello.

Senator SHAHEEN. Senator Manchin.

Senator MANCHIN. Right. I think it is my turn.

Senator SHAHEEN. We didn't know you were—

Senator MANCHIN. Is it?

Senator SHAHEEN. We didn't know you were on.

Senator MANCHIN. I just left the other meeting to come here to be on this, and it is such an important issue. And I heard Shelley talking some things, and I can take it at the same level, but you know, we have a lot of concerns. So is it my turn?

Senator SHAHEEN. Yes.

Senator MANCHIN. Okay.

Senator SHAHEEN. Wait a minute, before you start. Let us see if we can figure out what is going on with the system.

[Discussion off the record.]

Senator SHAHEEN. Joe, you are on.

Senator MANCHIN. Okay. Okay, Jeanne, thank you so much. I appreciate. I know, I know that we thought we had hooked up, but anyway.

INSUFFICIENT MAPPING AND COVERAGE

Let me just, Secretary Raimondo, thank you for being here. Let me take you back a ways, on how this all came about. In October 2016, I brought Chairman Wheeler, because they kept telling us we were covered. I know Shelly has gone over. We both have been on top of this and trying to make this work because I couldn't figure out why they were saying: Oh no, your maps are covered, your maps are good. You are covered in this area.

So I brought Chairman Wheeler to Tucker County and we were brought at the vocational school and he said—he was there, and it was showing that we had good coverage in this area with the maps that the FCC had.

So I told him at that time, I said: Why don't you go back to your office and check to see if you have any message, or whatever, and just use any phone you want to, or any carrier, because it is shown that we have good coverage here. And it brought to light that he knew something was wrong. And I said—I said, Mr. Chairman, this is happening all over our State.

So we started these tests, and we started challenging every school, every area, and it was unbelievable. I know Shelly's office has done the same. It is just unbelievable the response that we received. And we start pushing, and pushing, and pushing these maps. Then they said they couldn't pay for the maps, and they didn't. Really it was reluctant to fix—to upgrade these maps.

Well, rural America was getting left behind, rural West Virginia and Appalachia was definitely left behind. So we put some things in this piece of legislation as we were working the Infrastructure Bill, the Bipartisan Infrastructure Bill, to make sure that we wouldn't get left behind this time. And we said that these areas that have no coverage whatsoever ought to be the highest priority. And I just wanted to make sure that we are on track, and that you are all coordinating it with the FCC, is on track to make sure that is where the first assistance is going to go, and the highest need that there is in the country is in the areas that have no coverage whatsoever.

And Secretary, it came more to light during the—basically this pandemic, than any time before. I had kids that couldn't do their homework, they fell behind. Rural America fell behind faster and further than any part of our country. We had, basically, our veterans who couldn't do telehealth. We had doctors who weren't getting reimbursed because they couldn't do telehealth. They were doing everything by normal landlines or cell service. So we had to get a waiver in order for them to get reimbursed for telephone health, if you will.

So it has been a cadre of problems that we have had, but it is said that basically there are at least 258,000 West Virginians with-

out broadband access, but we have had estimates as high as 900,000, which is 50 percent of our population does don't have connectivity, or not dependable connectivity.

So the only thing I can say: What steps are you taking in the short term to make sure that these needs are going to be met? And how can I help you?

Secretary RAIMONDO. Yes. Thank you, Senator. Okay, shall I just go?

Senator MANCHIN. I have you, yes. Secretary, you are on, I have you. I have you clear.

Secretary RAIMONDO. Okay. Well, it is great to see you, albeit on a screen.

Senator SHAHEEN. Senator Manchin, I think you need to mute. Try it again.

Secretary RAIMONDO. Okay. It is nice to see you. And it is heart-breaking to listen to you talk. It is outrageous and heartbreaking, and I am determined to work with you to make sure every single person in West Virginia, every household, every small business has high quality broadband, when we are done with this work.

Yes, I will commit to you that this is an initiative by its design, which is prioritizing unserved and underserved; you know, underserved is maybe technically they have service, but it is poor quality service. That is the explicit focus. That is the priority. And that is where we are going to go, to the unserved and the underserved.

And the reason we are setting this up so that the States are in the lead is I am a firm believer that the States know, in some cases, address by address, school by school, where the dead spots are. And so, we are relying upon State broadband offices, and mayors, and county commissioners, and Governors to put together a plan to, you know, tell us what they think is required in their State to provide excellent, high quality, affordable broadband.

I also will say, and I mix that—

Senator MANCHIN. And if I can just—

Secretary RAIMONDO. Oh. Go ahead.

FCC MAPPING COMPLETION

Senator MANCHIN. Can I just chime in one time, real quick? Basically, the FCC, Chairman Rosenworcel, how are you all connected with her making sure, and what timeline does she have on her maps? How are they doing on the maps, because we have been speaking, and everything, trying to stay on top, and make sure she has the necessary funds, and also the resources, and help in the urgency that needs to be done, because we can't do a thing without that?

Secretary RAIMONDO. Yes. No, no, believe me, she hears from me often. I have met with her. Alan Davidson has met with her. We are in constant, constant communication. She is saying summer we will have the maps, and so we are going to continue to work with her to make sure we get them as soon as we can, but even more important that they are accurate.

Senator MANCHIN. Do you know what I would ask you to do? It might help, help you all determine where the need is the greatest, and how you can best deliver the services there, and funding is—as for best practices, every State has some areas that have an area

of best practice. We have a co-op that is probably one of the better ones, not only in our State, but probably in the country.

And if we can mimic that, and use their expertise in what they have found, we could, hopefully, be a little bit quicker in getting the services to the people in West Virginia. We have a higher cost of getting service in a rural area. So basically we have 10 percent, I think there was a 10 percent upcharge on that.

Secretary RAIMONDO. Mm-hmm.

Senator MANCHIN. That would allow for the higher cost in the more expensive, mountainous areas, the more rugged terrain, if you would. These are the type of things I think we can accelerate that. And if the State could let us know how they are cooperating with you, and if our State of West Virginia is working with you with their Broadband Council, using the best practices, giving you some ideas of how we can accelerate that. But until the maps come back, they can tell you what is not covered right now, but I am hoping the maps are going to be accurate enough to show you where the need is.

Secretary RAIMONDO. Yes, absolutely. We will work with your State. I will keep all of you apprised as to how it is going with your States. I would ask you to keep me apprised, how you think it is going. You are correct, there is a 10 percent set aside for high-cost areas, which are areas which are more expensive than the average unserved area.

And I expect, whether it is West Virginia, Alaska, a lot of your communities will be eligible for that plus-up, to take into account just how expensive it is to lay fiber in these areas.

Senator SHAHEEN. Thank you very much, Senator Manchin.

We will now, I think the status is we are into the second round of questions. Everyone has had their first round. And I have had my second round. So I will turn it over to Senator Moran for his second round.

Senator MORAN. Chair, thank you.

Secretary Raimondo, thank you for the conversation we had earlier. I welcome the chance to have further discussions, as you suggested, in regard to RDOF, and what FCC may be doing that may eliminate or reduce the likelihood of many States accessing the funds from the Department of Commerce.

And I think you have said this, but I am going to ask this question just so that you can say yes one more time and then I can find it in the record, if I have to come back to it.

[Laughter.]

COMMITMENT TO UNSERVED AREAS

Senator MORAN. Will you commit that the Department of Commerce will ensure unserved areas have access to quality broadband service before investments are made in areas with existing service?

Secretary RAIMONDO. I will. Here is my commitment. I commit that at the end of this, every person in Kansas will have access to high quality, affordable broadband. And so I commit to ensuring that we are not going to spend money adding duplicative service in places before making sure that everyone who is unserved and underserved is covered.

Senator MORAN. A more useful answer than a yes or no response. Thank you.

Senator SHAHEEN. Be careful, Madam Secretary, because that means every State in the country is going to want that same commitment.

Senator MORAN. I believe that commitment was made to Kansans.

[Laughter.]

Secretary RAIMONDO. No, look. I can hear my staff saying, be careful, but here is the situation. This money is explicitly prioritizing unserved and underserved. That doesn't mean some of the money won't go to places that already have coverage. And by the way, that competition will bring down prices, and that is not a bad thing. But what I will commit to you is, we are not going to spend money, quote/unquote "overbuilding" until, first, we are certain that everyone who is unserved and underserved has coverage. That is the whole point of the program.

Senator MORAN. I might point out to my colleagues, any of them who care on this topic the way I do, the legislation that we passed altered the formula for the U.S. Department of Agriculture, it used to be 90 percent, some RAN provision in previous legislation that 90 percent had to be spent in places that there were no service. And we lowered that to 50 percent which troubled me, but we were unsuccessful in altering it, to return it.

OPERATIONS AND MAINTENANCE

Let me ask just a couple of questions beyond this topic. Operations and maintenance, it has become clear to me. I think I was slow to recognize this. The money that we generally spend, almost without exception is to build out the infrastructure for broadband, but there is very few resources, maybe some at the FCC that are for operations, and maintenance. So what I have discovered with my rural carriers, my rural telephone companies, when they build out these subsidy dollars, this assistance to help them accomplish that, gets the infrastructure in place, but still it is too expensive to provide the service on an ongoing basis. And I don't think anything in this legislation directs the Department of Commerce to assist in those operation and maintenance costs.

But I would just raise this issue for you, Madam Secretary, there is still something else that may get us the infrastructure in place, but then it be still unaffordable on an ongoing basis. And there may be something between what—I think it is at USF that may be helpful in this regard, but that may take some coordination between rural development, FCC, and the Department of Commerce to pay attention to one more—it would be sad if we got the infrastructure in place, but still remained unaffordable to provide the service throughout the future years.

Secretary RAIMONDO. Yes. I will look into that, and I appreciate it. I mean, obviously the hope here is that we are providing an enormous amount of money to help defray the cost of laying the broadband and the infrastructure. And we are requiring the providers who receive the money to guarantee a low-cost plan.

Having said that, I hear what you are saying. I will also say this, please be involved in creating your State's plan. So whether it is

overbuilding, or making sure we get to everybody who is, you know, not covered, or has poor service that is why we are designing this. You and your Governor, and you know, the mayors know Kansas better than we ever will. So I will come to you before we approve the plan, and we will welcome your feedback?

Senator MORAN. That is good advice for all of us to get fully engaged in what is going on in our home States. As I said, we had outreach to our Director of Broadband Services at our Department of Commerce, and we need to make sure that we stay engaged, not just with that moment.

Secretary RAIMONDO. Yes.

Senator MORAN. But into the ongoing process. As Senator Collins led the way, let me mention tariffs. You and I, and you have been very care—kind in your hosting an event for us to bring folks who are having difficulties as a result of the tariffs, and high lumber prices, steel price is another example. I want to add a third one to the list that I have talked to you about previously.

And I certainly share Senator Collins' concern about softwood lumber, and housing prices, and the consequence, at a time in which supply chain is so limited, it seems to me that tariffs ought not to be one more burden in the cost or availability of materials in this country.

RISING COST OF FERTILIZER

The one I would raise for you is fertilizer. AG commodity prices are higher, as everything is higher these days, so the price of wheat, cattle, corn, soybeans, and all the things that we produce in Kansas are up, but so, in an overwhelming way, are the input costs necessary to produce that wheat, cattle, and corn. One of the most important components is fertilizer, and fertilizer is generally made from phosphates, and from natural gas, both which are skyrocketing in price.

So there is not profitability in agriculture, despite what you might see about the price that a farmer or rancher might receive for what he or she raises, but we have placed, the previous administration, placed tariffs, countervailing duties on phosphate imports from Morocco.

And its preliminary decisions, you have continued that, and I would again, highlight that a time in which the demand for fertilizer and feeding the world, we just met with the U.S. Food Service Ambassador today. The demand for food, the need for food around the globe is huge and compelling. And what we can do to make sure that we produce more and feed more people is really important. And we also need to see something in the line of profitability for those who produce that food.

Secretary RAIMONDO. Yes.

Senator MORAN. Thank you. My time has expired.

Secretary RAIMONDO. So I hear you, and I am very sensitive to this, and it is exacerbated now, like with the overall inflation, and then the supply chain challenges, generally, so I will look at that. I will look at that. As I say, I have very little degrees of freedom on these countervailing duty cases.

I have been—I am very pleased that I was able to negotiate the end of the steel and aluminum tariffs, the 232 tariffs with the EU,

and I am hard at work trying to do the same with Japanese, and the U.K., because I agree with you, the tariffs on these imports, at an inflationary time can be difficult. But I owe you a better answer and that will—

Senator MORAN. Excuse me for not complementing you, thank you for the—with regard to steel and aluminum.

And Madam Secretary, I need to depart to speak on the Senate Floor.

Secretary RAIMONDO. Yes.

Senator MORAN. I thank you for your time today.

Secretary RAIMONDO. Thank you, Senator.

Senator SHAHEEN. Thank you, Senator Moran. Senator Collins.

Senator COLLINS. Thank you very much, Madam Chair.

RIGHT WHALE REGULATIONS

Madam Secretary, Secretary, I know that you realized that you would not be leave here today, without us having yet another discussion about NOAA's right whale regulations. As you are well aware the entire Maine delegation, our Governor, the Maine Department of Marine Resources, all agree that his rule is overly burdensome, unfairly targets the Maine lobster industry, and will not achieve the goal of saving the right whale.

In fact, NOAA's own data show that Maine's lobster industry has never been linked to the death of a right whale. A Federal judge in Maine was able to block the NOAA regulations for a time, and remarked that the regulations were based on what he called markedly thin evidence.

And that certainly summarizes how we feel. Yet, NOAA proceeded to close more than 950 square miles of productive ocean area to lobster fishing. And that closure went through until yesterday, it just reopened today. And now we are finding that the gear conversion that is required is simply not available.

An AP story entitled, "Worries grow as deadline for whale-friendly gear draws near", quotes the Maine Department of Marine Resources as receiving numerous complaints that there simply isn't a sufficient supply of approved ropes, or plastic links that are required by the new NOAA regulations.

I would mention that over the years the Maine lobster industry has greatly reduced the amount of rope that it uses, and they have always been great stewards of the environment, and that is why this is particularly frustrating. So the Maine delegation along with the Governor has asked for a delay in the implementation of the gear conversion requirements from May 1 to July 1.

That would save the industry more than \$7 million in lost fishing time, and we believe it would have no, or negligible impact on risk reduction. The overall scarcity of this gear is making it virtually impossible for many lobstermen to find it.

It is just simply not available. So with the implementation date still at May 1, and that is coming up quickly, lobstermen are struggling to find the compliant gear in the marketplace. Will NOAA reconsider delaying the requirement?

Secretary RAIMONDO. So thank you for the question. And as I have said to you before, I take this very seriously, and I admire the way you keep with it. We have thousands of people in Rhode Island

who make a living as commercial fishermen, and I know it is more than just a living. It has often been in their family for generations. They did it, their father did it, their grandfather did it, so it is a culture, it is a way of life, and it is a living. And I understand that, and want to work with you to find the solution.

I wish I had an easy solution here. NOAA is not permitted on its own to change the date from May 1 to July 1. I have looked into it, and under the APA we don't have that ability to, on our own, change the date.

I will tell you my Head of Fisheries, Janet Coit, I have directed her to be on this, and she is talking to the Commissioner in Maine almost daily. She spoke with him today, I received an update. She will be speaking with him tomorrow. We are trying to help locate the gear, as well as provide as much flexibility and assistance as we can.

So let us continue to work on it, a bit more, to see if we can alleviate the supply chain issues, and just continue to kind of work on that problem in the weeks ahead. And I will call you and keep you apprised.

Senator COLLINS. Thank you. This is a terrible problem for our State, and it just seems so unfair when our lobster men and women are not the problem. Ship strikes are a problem. There are some problems with Canadian snow crab gear, for example. But were not the problem, and as you have rightly said, lobstering is an iconic industry in our State, it is a way of life, it is multi-generational, our lobstermen and women have always been extremely sensitive to the environment, and good stewards of the resource, and is extremely frustrating.

Secretary RAIMONDO. I share the frustration. It is complicated as you know, with the subject of a lawsuit, and there is not a simple solution, but I will commit to you to stay on it, and see if we can do everything we can to help the lobstermen.

Senator COLLINS. Thank you. Thank you, Madam Chair.

Senator SHAHEEN. Thank you, Senator Collins. The New Hampshire lobster industry also appreciates that.

Madam Secretary, today we had 14 Members of our Committee here. That is, I think, a record for a hearing, and it speaks to the interest and urgency people feel about broadband and how that funding gets done, and how we get help for our community. So thank you for your commitment, and for your efforts to ensure that this program works as well as humanly possible.

Secretary RAIMONDO. Mm-hmm.

ADDITIONAL COMMITTEE QUESTIONS

Senator SHAHEEN. If there are no further questions this afternoon, senators may submit additional questions for the official hearing record. We request the Department of Commerce responses to those questions within 30 days.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

QUESTIONS SUBMITTED TO HON. GINA RAIMONDO

QUESTIONS SUBMITTED BY SENATOR PATRICK LEAHY

Question 1. Under Section 60102 of the Infrastructure Investment and Jobs Act (IIJA), which establishes a grant program for broadband deployment, any actions or decisions taken by the Assistant Secretary of Commerce for Communications and Information are exempt from the requirements of certain laws. That includes the entirety of Chapter 5 of the United States Code, which contains the Freedom of Information Act (FOIA). This is problematic, as this effectively means that tens of billions of taxpayer dollars are not subject to the public scrutiny and transparency provided by FOIA.

Do you agree it is problematic to entirely exempt such a significant program supported by billions in taxpayer dollars from the requirements of the Freedom of Information Act? Would the Department be receptive of legislative amendments to address this exemption as currently written in the law? Does the Department have any justification for requiring such a sweeping exemption, which clearly runs afoul of the intent of Congress in enacting the Freedom of Information Act?

Answer. The Department and NTIA intend to run the Broadband Equity, Access, and Deployment (BEAD) Program transparently and with accountability, including making information publicly accessible so that the public can track how each State is spending BEAD funding and monitor their State's progress. We, along with States and subgrantees, each have a critical role to play in ensuring that the BEAD Program is implemented in a manner that reflects transparency, accountability, and oversight sufficient to, among other things, minimize the opportunity for waste, fraud, and abuse; ensure that grant recipients under the Program use grant funds to further the overall purpose of the Program in compliance with the requirements of the Infrastructure Investment and Jobs Act (IIJA), the Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards set forth at 2 C.F.R. Part 200, and other applicable laws and regulations; and to allow the public to understand and monitor grants and subgrants awarded under the Program. We take these responsibilities seriously and are happy to work with the Committee on this matter.

QUESTIONS SUBMITTED BY SENATOR JERRY MORAN

Question 1. There are many different broadband programs already in existence across the Federal government, including those at the FCC and the Department of Agriculture. Because of this, many states have a patchwork of ongoing projects. Coordination between Federal agencies is critical to help maximize the return on broadband investments. Coordination with the FCC is particularly important, as it is currently preparing the maps that will determine the allocation of funds. This coordination is essential to reach the unserved, and to ensure that we do not overbuild where broadband already exists.

How often are you in touch with the FCC and other Federal entities to coordinate efforts, and to ensure the funds will go to the communities the law intended them to go?

Will you commit to me that you will work to prevent the overbuilding of existing networks to the greatest degree possible?

Answer. Last June, NTIA, FCC, and the Department of Agriculture (USDA) signed a Memorandum of Understanding (MOU) that commits our respective agencies to coordinate resources and leverage data to appropriately identify areas of need. I have personally spoken with Chairwoman Rosenworcel, and my staff, NTIA Administrator Alan Davidson, and the staff at NTIA are in regular communication with leadership and staff at the FCC, Treasury, USDA, and other agencies that fund broadband deployment.

The IIJA lays out a clear framework for states to fund broadband infrastructure projects, which requires prioritizing unserved locations, then underserved locations, and then community anchor institutions.

Question 2. You know as well as anyone, given your Department's work on supply chains, that companies in every corner of the economy are struggling to acquire critical materials. This issue will be even more acute for broadband deployment. Given the significant amount of funding that will be going out the door in a short time-frame, many companies will be competing for the same materials and equipment.

That concern is particularly important with respect to electronic processors, or semiconductors. The Department of Commerce has taken the lead on the issue of

semiconductor shortages, and has recently completed a comment period regarding ongoing semiconductor shortages.

What can the Department do to alleviate broadband equipment availability concerns in advance of these programs dispersing funding?

Do you believe that semiconductor shortages will impact the deployment of broadband, and what can be done to mitigate any potential shortages in the broadband space specifically, to ensure there are not deployment delays?

Secretary Raimondo, does the Department envision offering supply chain waivers, similar to those offered under BTOP?

Answer. In the short term, we will work with industry to explore options for alleviating broadband equipment availability concerns. In the long term, we must take steps to ensure a resilient and secure supply chain for critical materials and semiconductor chips, including continued assistance to firms expanding their semiconductor manufacturing investments in the United States. The microchip supply chain is a concern across many sectors. I continue to strongly support the Bipartisan Innovation Act, including appropriations for the CHIPS for America Act to establish programs that incentivize competitive U.S. semiconductor manufacturing and contribute to U.S. economic and national security.

The Administration is committed to faithfully implementing the IIJA, including the law's Build America, Buy America provisions. Since his first day in office, President Biden has relentlessly focused on an industrial strategy to revitalize our manufacturing base, strengthen critical supply chains, and position U.S. workers and businesses to compete and lead globally in the 21st century. The Commerce Department will consider waiving these requirements only where the acquisition of domestic components would be inconsistent with the public interest, their cost would be unreasonable, or the relevant materials or products are not mined, produced, or manufactured in the United States in sufficient and reasonably available commercial quantities and of a satisfactory quality.

Question 3. I believe that Federal programs should not fund overlapping networks. However, I am also concerned that some states may lose out on funding, based on how prior Federal programs cover currently unserved areas of those states.

The IIJA lays out a methodology for allocating funds to states under the BEAD program: an initial \$100 million, followed by an amount determined the number of unserved areas in a state. The purpose of the formula is to provide the states with the most unserved areas the most funding, something I agree with.

However, one issue that I foresee is uncertainty regarding whether currently unserved areas are still going to be considered "unserved" if a separate Federal broadband program, like FCC's RDOF, has awarded funding for those areas, but a network has not yet been built out. This risk is compounded if a previously-identified project ultimately fails to deliver. This creates a serious risk that some states could lose out on a significant amount of funding, as RDOF awards cover broad swaths of some states.

Will the Department of Commerce consider areas that are "covered" under another Federal program, but do not currently have access to broadband, as unserved, for the purposes of the funding calculation and allocation?

Will the Department have a process by which states can revisit the number of unserved in their states if other broadband Federal programs fail to build out their commitments and then leave people and communities behind?

Answer. NTIA will allocate funds according to the statute which provides that the determination of whether a location is unserved for allocation purposes is determined in accordance with the broadband DATA maps. Section 60102(h)(2) does, however, require eligible entities to "ensure a transparent, evidence-based, and expeditious challenge process under which a unit of local government, nonprofit organization, or other broadband service provider can challenge a determination made by the eligible entity in the initial proposal as to whether a particular location or community anchor institution within the jurisdiction of the eligible entity is eligible for the grant funds, including whether a particular location is unserved or underserved." NTIA has the opportunity and the obligation to review the results of that challenge process.

NTIA is also working with other Federal agencies to coordinate broadband investment programs (e.g., the FCC's Rural Digital Opportunity Fund and the Capital Projects Fund), to best ensure that affordable, reliable, high speed broadband is deployed to every serviceable location in the United States.

Question 4. During the hearing, you expressed an understanding that flexibility, when it comes to the type of broadband technology used in deployment, will be necessary to make certain all unserved areas of the country ultimately are served.

Can you please confirm this understanding, and explain the necessity of ensuring technology neutrality when it comes to covering all unserved areas with broadband?

Answer. There is no “one-size-fits-all” approach to broadband deployment given each state’s unique challenges, and NTIA will ensure that the states have flexibility in identifying technical solutions. In many cases, the best solution will be fiber. But we will consider any technology that will meet America’s broadband needs, consistent with the requirements set out in the IIJA.

Question 5. The IIJA mandates that states certify to the Assistant Secretary that they will ensure coverage of unserved areas prior to any investment in underserved or other areas.

How will this certification work, and how will the Department of Commerce ensure that all unserved areas within a state will be served prior to further investments in other areas?

Answer. The IIJA lays out a clear framework for states to fund broadband infrastructure projects, which requires prioritizing unserved locations, then underserved locations, and then community anchor institutions. NTIA will adhere to that framework, including by requiring each state to certify that the state will ensure coverage of broadband service to all unserved locations within the state or territory.

Question 6. In addition to equipment supply chain issues, telecommunications workers will also be in extremely high demand. There is an existing shortage of telecommunications workers now, so this increased demand could also lead to delays in deployment.

The Telecommunications Skilled Workforce Act, which I helped introduce with Senator Thune, was incorporated into the IIJA and would establish an interagency group—led by the Federal Communications Commission (FCC) and Department of Labor—to analyze the shortage and make official recommendations for increasing the number of telecommunications workers.

What is the Department of Commerce doing to help address this need?

Answer. In order to build out broadband to every corner of the country, we are going to need a highly skilled, diverse workforce that can safely do their jobs. The Department of Commerce is participating in the Telecommunications Workforce Interagency Group, as established in the IIJA, along with the FCC, the Department of Labor, and the Department of Education. The working group held its first meeting in March and the Department looks forward to collaborating with our agency partners to identify the current and future needs of the telecommunications industry workforce.

In addition, NTIA will engage in outreach and technical assistance activities to help states, territories, and their political subdivisions prepare to seek funding and plan for use of funds through the BEAD Program, by encouraging coordination with states’ telecommunications workforce development plans.

Question 7. The IIJA and the American Rescue Plan provide significant funding for broadband deployment and other infrastructure investments. Those bills also encourage the use of Advanced Digital Construction Management Systems to expedite the utilization, execution, and oversight of projects funded under those acts. It is my understanding that the Route 6/10 Interchange Reconstruction project in Providence, which is the largest in RIDOT history, is using this technology.

What steps has the Department has taken to facilitate the utilization of these project management technologies?

Answer. NTIA is developing a robust technical assistance plan to allow states to learn from each other about best practices. NTIA will evaluate whether to include Advanced Digital Construction Management Systems as one element of the project management technical assistance.

Question 8. The need to address ever-evolving cybersecurity threats as part of every state broadband plan is critical.

Can you assure me that broadband funding applications that are submitted to you will demonstrate they have taken cybersecurity considerations into account with details on how grant funds will secure these connections?

What steps will NTIA take to ensure the proposed cybersecurity measures in each plan are adequate?

Answer. I agree that addressing cybersecurity challenges in the state broadband plans is critical. Supporting industry’s capabilities to respond to cybersecurity and privacy risks is one of my top priorities as Commerce Secretary.

Section 60102(b)(4)(B) of the IIJA requires NTIA to provide technical and other assistance to states “regarding cybersecurity resources and programs available through Federal agencies, including the Election Assistance Commission, the Cyber-

security and Infrastructure Security Agency, the Federal Trade Commission, and the National Institute of Standards and Technology.” Further, section 60102(g)(1)(B) of the IIJA requires that every BEAD Program subgrantee “shall comply with prudent cybersecurity and supply chain risk management practices, as specified by the Assistant Secretary, in consultation with the Director of the National Institute of Standards and Technology and the Commission.” NTIA staff has engaged with colleagues at NIST and the Commission and will ensure that the BEAD Program incorporates appropriate and prudent cybersecurity and supply chain risk management practices.

In addition, in the Request for Comment issued on February 4, 2022, NTIA asked stakeholders what guidance or requirements should be required for network reliability and availability, cybersecurity, resilience, and other related topics. Based on those responses, we are reviewing existing guidance—including those developed by the Department through NIST—to ensure that cybersecurity practices are addressed through the Notice of Funding Opportunity.

Question 9. USDA’s latest rules for their ReConnect program includes changes to how they will score applications to their program, including awarding more points to broadband providers who commit to “net neutrality” standards. Reflecting the lack of bipartisan agreement on net neutrality, IIJA includes nothing regarding favoring broadband providers who adhere to net neutrality commitments in the law.

Please describe the metrics that NTIA will use to assist in evaluating the plans that States will submit to be approved.

Will you commit to me that the Department of Commerce will not take it upon itself to issue rules that are contrary to the bipartisan spirit of the IIJA, and specifically that the Department of Commerce will not favor providers who commit to adhere to net neutrality provisions?

Answer. The IIJA requires the Assistant Secretary to determine whether the initial and final grant proposals filed by the states propose to use BEAD Program funds for the purposes listed in section 60102(f) of the IIJA and in a manner that is in the public interest and effectuates the purposes of the IIJA. My focus is on deploying reliable, affordable high-speed broadband to all Americans.

QUESTIONS SUBMITTED BY SENATOR LISA MURKOWSKI

Question 1. Middle Mile: In Alaska, middle mile infrastructure—the network that connects local networks to high speed network service providers—is one of our biggest obstacles to ensuring reliable and affordable Internet throughout the State. For example, we’ve had folks visit in the past promising Wi-Fi access to every student throughout an entire school—but access for an entire school in a remote area isn’t usually the problem. We have made big strides in securing the equipment for end-users—like laptops in schools—but the middle mile is what we lack.

I advocated for substantial funding in IIJA—\$1 billion in total—to deploy middle mile projects. How will this program be administered and what is your expected timeline to start receiving public input on this issue?

Answer. NTIA intends to issue a Notice of Funding Opportunity by May 16, 2022, that will provide guidance to applicants on how to participate in the Middle Mile Grant Program. NTIA expects to complete its review, selection of successful applicants, and award processing early in 2023.

Question 2. Grants to States: Alaska has incredibly unique challenges when it comes to large distances, difficult terrain, challenging topography, extreme weather, and small populations in remote areas. As a result, it is essential that there not be a one size fits all approach to deployment and that States be given flexibility in determining how grants are awarded.

Do you agree that proposals should be evaluated without a preference for a certain technology, but rather on their affordability, speed, reliability, capacity, and the amount of people that will be reached?

Answer. There is no “one-size-fits-all” approach to broadband deployment given each State’s unique challenges, and NTIA will ensure that the States have flexibility in identifying technical solutions. In many cases, the best solution will be fiber. But we will consider any technology that will best meet America’s broadband needs now and in the future, consistent with the requirements set out in the IIJA.

You stated that out of over \$42 billion, each State will receive \$100 million and then the rest of the funds will be distributed “primarily on the number of underserved households.” This concerns me because Alaska has a small population, yet broadband deployment to our underserved populations is prohibitively expensive

due to our large State and challenging environments. How will you ensure that Alaska is fully covered and not left out due to having a small population?

Answer. The IIJA incorporates a 10 percent set aside for high-cost areas in the BEAD Program that should help address this concern. Specifically, to support high-cost deployment areas, \$4,160,100,000 will be allocated among the States by dividing the number of unserved locations in high-cost areas in the State by the total number of high-cost areas in the United States; and multiplying the quotient by the amount made available for the set aside.

Question 3. I would like to follow up on my question I asked during your testimony regarding the Tribal Broadband Connectivity Program (TBCP). You stated that your Department, and more specifically NTIA was still working out the details for how it will administer the additional \$2 billion in funding from IIJA. Whether or not applicants will need to re-apply or if new projects will be eligible. Or if applicants can re-apply to be more competitive. I would like an update on your thoughts on this and your timelines for making a decision and implementing this next tranche of funds for TBCP.

Additionally, some projects may be less competitive in one program, such as this one, but more competitive in, say, the provisions for middle mile. As NTIA reviews Tribal connectivity grant applications, how are you coordinating with other Federal agencies, such as USDA, that also received broadband funding? How is NTIA participating in a whole-of-government approach to broadband deployment and adoption on tribal lands? Should people submit for more than one of these programs?

Answer. Meeting the goal of connecting everyone in America with reliable, affordable, high-speed Internet will require a “whole of government” approach that includes close coordination among Federal, State, and community actors. We are in regular communication with our interagency colleagues and the White House Infrastructure Task Force to ensure full coordination. NTIA, FCC, and USDA signed an MOU in June 2021 that documents their commitment to coordinate resources and leverage data from each to appropriately identify areas of need, including on Tribal lands.

NTIA anticipates using a portion of the \$2 billion to ensure that the stronger applications submitted in response to the first TBCP Notice of Funding Opportunity (NOFO) get funded. NTIA then anticipates using the remaining funds to issue a second NOFO that will provide an opportunity to Tribes, Alaska Native Corporations and other eligible applicants that did not have an opportunity to file an application during the first NOFO, as well as providing an opportunity for applicants that were not funded under the first NOFO to reapply.

Can you speak to projects being granted on a truly “technology neutral” basis? Especially in more remote areas, we need to ensure we’re getting creative with how to affordably and efficiently get more broadband access to the most people in the most remote areas in the most rapid manner. Communities in extreme rural Alaska should not continue to be left completely behind.

Answer. As noted in answer to your earlier question, there is no “one-size-fits-all” approach to broadband deployment given each State’s unique challenges, and NTIA will ensure that the States have flexibility in identifying technical solutions. In many cases, the best solution will be fiber. But we will consider any technology that will meet best America’s broadband needs now and in the future, consistent with the requirements set out in the IIJA.

QUESTIONS SUBMITTED BY SENATOR JOHN BOOZMAN

Question 1. One of the challenges with updating the national broadband maps is that existing providers report advertised speeds instead of actual speeds to the FCC. An issue that, at present, seems likely to be carried over to the new FCC broadband data and maps. However, simply advertising 100/20 is not sufficient to be able to claim that 100/20 is actually being provided to the customer.

Advertised speeds are likely to be the basis of the new FCC data, which can be challenged but may be a lengthy process. Will NTIA work to ensure states have the flexibility to utilize state broadband data or to seek verification or challenge claims of existing levels of service where necessary to ensure communities are not left behind? How will NTIA evaluate applicants’ speed delivery capabilities?

Answer. NTIA, in implementing the BEAD Program, will be required to use the FCC’s updated broadband maps that the Commission is creating as part of the Broadband DATA Act. These first of their kind maps will show which locations have broadband service and will be used to determine which locations are unserved.

Section 60102(h)(2) of the IIJA requires states to establish a process to challenge deficiencies in those maps. It requires that each state “ensure a transparent, evidence-based, and expeditious challenge process under which a unit of local government, nonprofit organization, or other broadband service provider can challenge a determination made by the eligible entity in the initial proposal as to whether a particular location or community anchor institution within the jurisdiction of the eligible entity is eligible for the grant funds, including whether a particular location is unserved or underserved.” NTIA has the opportunity and the obligation to review the results of that challenge process.

In addition, NTIA is already working with states to help them understand and participate in the FCC mapping processes, share mapping best practices, and provide other mapping support. The objective is to get states thinking about how best to leverage their state process to ensure that communities are not left behind. This type of technical assistance will continue throughout the BEAD Program.

Question 2. The USDA Reconnect broadband grant program includes criteria against which grant applicant ISPs are scored. However, in that program, no consideration is given (or points awarded in the “scoring” system) for the cost of the build proposed by an applicant. For example, Applicant A may propose to build an area for \$12 million, whereas Applicant B may propose to build the same area for \$10 million. If Applicant A scores higher than Applicant B, it’s likely that the government will spend \$2 million more than necessary to subsidize broadband availability in that area. Does Commerce/NTIA plan to adopt the same scoring rules as the USDA, or will it adopt different rules to ensure the most efficient use of taxpayer dollars?

Answer. My objective is to make sure these Federal dollars go as far as possible and help to accomplish the President’s goal of connecting all Americans. As a result, we will be working with the states to ensure that we are maximizing the value of Federal support for these projects. Each state faces unique circumstances—there is no “one size fits all” solution to broadband deployment. As such, successful execution of the BEAD Program demands close collaboration between NTIA, as the program administrator, and the states who will have significant flexibility when choosing how to fund broadband deployments. I have directed NTIA to engage in early and clear communication during all phases of the process to help the states ensure that the subgrantees they choose are well equipped to deliver affordable, reliable, high-speed broadband at every location within their jurisdictions.

Question 3. Madam Secretary, I’m interested in how you are prioritizing investments in “future proof” broadband networks, especially those that use optical fiber. The magnitude of funding warrants serious consideration of how each grant applicant will contribute or fit in to the larger telecommunications ecosystem. We want to encourage diverse participation amongst a level playing field. We must also prioritize deployment of networks and technologies that will deliver the highest value broadband performance to Americans—that means fast, low latency, reliable, scalable, stands the test of time, something that has cost effective maintenance.

As you shape and administer broadband funding through the Broadband Equity, Access, and Deployment program, what can you do to ensure that the applicants and technologies being prioritized are of the highest quality and value for the American people?

How are you considering the long-term viability of these broadband investments?

Answer. There is no “one-size-fits-all” approach to broadband deployment given each State’s unique challenges, and NTIA will ensure that the States have flexibility in identifying technical solutions. In many cases, the best solution will be fiber. But we will consider any technology that will meet America’s broadband needs, consistent with the requirements set out in the IIJA.

Question 4. Some previous Federal broadband programs have awarded support to serve rural areas at speeds/levels of latency never before made available in real-world conditions.

Congress made clear that NTIA must properly vet applicants. Will NTIA adopt objective standards by which applicants for funding will be vetted, before being invited to participate in the Broadband Equity, Access, and Deployment program, to ensure that they have the capability necessary to perform?

Answer. Section 60102(g)(2) of the IIJA obligates states to, among other things, ensure that any prospective subgrantee is capable of carrying out activities funded by the subgrant in a competent manner in compliance with all applicable Federal, State, and local laws; has the financial and managerial capacity to meet the commitments of the subgrantee under the subgrant, the requirements of the Program, and such requirements as may be further prescribed by the Assistant Secretary; and has

the technical and operational capability to provide the services promised in the subgrant in the manner contemplated by the subgrant award. NTIA will work with the states regarding specific showings that states must, at a minimum, require from prospective subgrantees.

Question 5. Recently, the Treasury issued final rules for distribution of ARPA funds that States are required or encouraged to incorporate into their downstream rules for issuing grants. One of those rules encourages that the States, in turn, require ISP grantees to include at least one low-cost service option without data usage caps and at “sufficient” speeds (not defined any more specifically). Isn’t it likely that this rule will negatively affect ISPs if existing customers downgrade to the new “affordable” plan? Further, isn’t this effectively rate regulation through executive branch rule-making? Will there be a similar rule in the BEAD program? Does Commerce/NTIA endorse this sort of coercive rate regulation by executive fiat?

Answer. The IIJA expressly provides that nothing in the BEAD statute should be construed to authorize NTIA to regulate the rates charged for broadband service. The IIJA does require subgrantees selected to deploy broadband networks with BEAD Program funds to offer not less than one low-cost broadband service option for eligible subscribers and requires that this low-cost option is to be defined by each state in consultation with NTIA and subject to the Assistant Secretary’s approval.

Question 6. In addition, Treasury rules require the states to require ISP grantees to opt-in to the ACP program which as defined by the FCC is a voluntary program for ISPs to participate in. The Final Rules recently released for the ACP program requires ISPs to enroll all eligible customers into the program without regard for any previous credit history, or unpaid past-due balance, the participant may have with the carrier. An ISP is allowed to disconnect an ACP customer for non-payment after 90 days but as stated previously, the provider cannot deny a household re-enrollment on past or present past-due balances. Simply put, a provider will be required to re-activate a customer—potentially on day 91—regardless of whether they have resolved their past due balance. Why should a carrier have to agree to carry past-due balances, carried forward or incurred in the future, and do so indefinitely in order to participate in closing the digital divide through a Federal grant? Does Commerce/NTIA believe this is a reasonable burden to place on ISPs who we’re relying on to deploy these dollars and get the fiber in the ground?

Answer. The Affordable Connectivity Program (ACP) is administered by the FCC and is an important component of the overall effort to ensure that all Americans have access to affordable, reliable, high-speed broadband service.

QUESTIONS SUBMITTED BY SENATOR SHELLEY MOORE CAPITO

Question 1. While the broadband programs authorized and funded under the IIJA represent the greatest one-time investment ever in closing the digital divide, we still have the monumental task of making sure the money is spent in the right places.

To ensure that we direct dollars to where they are needed most, rather than overbuilding in already well-served areas, are you committed to using updated, verifiable maps that will help ensure that initial project awards aren’t directed to areas that already have broadband service?

On that same note, multiple Federal agencies, such as the Federal Communications Commission, the Department of Agriculture, the Treasury Department, and your own agency, also spend billions of dollars to support broadband deployment. What steps will the Commerce Department take to ensure that monies from the recently passed infrastructure law are not allocated to projects that would just overbuild on existing broadband networks?

Answer. NTIA, in implementing the BEAD Program, will be required to use the FCC’s updated broadband maps that the Commission is creating as part of the Broadband DATA Act. These first of their kind maps will show which locations have broadband service and will be used to determine which locations are unserved.

The IIJA lays out a clear framework for States to fund broadband infrastructure projects, which requires prioritizing unserved locations, then underserved locations, and then community anchor institutions. NTIA will require that States faithfully adhere to that framework.

Question 2. Recently I, along with Ranking Member Moran and a number of my senate colleagues, sent letters to both the Department of Treasury and USDA to express concern over steps they have made to give “extra points” to non-profit, municipal, and cooperative providers when deciding on broadband funding recipients. My

concern is that these measures could hurt commercial-community-based providers with a proven track record of successfully deploying Internet in rural areas.

Does the Department of Commerce plan to adopt a similar “points system” in their decisionmaking in disbursing funds?

Answer. Each State faces unique circumstances—there is no “one size fits all” solution to broadband deployment. As such, successful execution of the BEAD Program demands close collaboration between NTIA, as the program administrator, and the States, who will have significant flexibility when choosing how to fund broadband deployments. I have directed NTIA to engage in early and clear communication during all phases of the process to help the States ensure that the subgrantees they choose are well equipped to deliver affordable, reliable, high-speed broadband at every location within their jurisdictions.

Question 3. In your written testimony, you said that the National Telecommunications and Information Administration (NTIA) has held three virtual, public listening sessions to help inform the development and implementation of the broadband program in the law over the past 2 months.

Can you provide some examples of the entities you have already met with and provide what information is exchanged during these sessions from the Department?

Are you willing to provide a list of all entities to the subcommittee that have participated in the listening sessions you refer to in your testimony?

Answer. We are committed to a robust outreach engagement and outreach strategy to ensure we hear from diverse stakeholders from across the country. We are also leveraging strong relationships with State broadband leaders to gather State input to inform our program design. NTIA is meeting twice a month with the State broadband leaders cohort and convened 108 participants representing 50 States and territories on March 1–2 for a robust two-day summit. NTIA had 1,250 people registered for its first public listening session, which was held in December. It provided an overview of the new broadband grant programs authorized and funded by the IIJA. The second session focused on the Request for Comments on broadband programs in the IIJA. Over 800 people registered for this session. The third session focused on the BEAD Program. Nearly 700 people registered for this session. Each of these sessions are posted on the BroadbandUSA website. Since the hearing, two additional listening sessions occurred, on the Enabling Middle Mile Broadband Infrastructure program (664 registrants) and Digital Equity Act programs (636 registrants). Each of these sessions provided the opportunity for attendees to provide live feedback and input regarding the session topic via verbal or written comments. The full recording, transcript, and PowerPoint presentations for each of these sessions are on the BroadbandUSA website under Events-Past Events. Registrants included a broad cross-section of stakeholders such as: local and State governments; Tribal governments; regional councils and organizations; colleges and universities; private-sector companies; community and public interest organizations; national associations representing a variety of stakeholder types; and members of the general public.

In addition, NTIA’s Office of Internet Connectivity and Growth is holding weekly office hours to meet with both large and small organizations, including individual States and territories, community and public interest groups Internet service providers, local government staff and officials, regional councils, colleges, individual Internet service providers (ISPs) as well as national associations representing ISPs, State and local government, etc.

Question 4. Your written testimony seems to emphasize affordability over connectivity.

Are you prioritizing connections over affordability or affordability over connections regarding the Broadband Equity, Access, and Deployment Program (BEAD)?

Answer. The BEAD Program seeks to provide access to affordable, reliable, high-speed broadband service to all Americans. The IIJA lays out a clear framework for States to fund broadband infrastructure projects, which requires prioritizing unserved locations, then underserved locations, and then community anchor institutions. NTIA will require that States faithfully adhere to that framework.

Question 5. The Broadband Technology Opportunities Program (BTOP), an approximately \$4 billion grant program administered by NTIA in 2009, was a disaster in West Virginia. You are ultimately responsible for distributing \$42 billion in broadband funds—just over ten times the BTOP amount.

How do you plan to ensure that the funds from the infrastructure bill will successfully deploy high-speed broadband with no fraud, waste, or abuse to the American taxpayer?

Answer. The Department, NTIA, States, and subgrantees each have a critical role to play in ensuring that the BEAD Program is implemented in a manner that ensures transparency, accountability, and oversight sufficient to, among other things, minimize the opportunity for waste, fraud, and abuse; ensure that recipients of grants under the Program use grant funds to further the overall purpose of the Program in compliance with the requirements of the IIJA, the Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards set forth at 2 C.F.R. Part 200, and other applicable laws and regulations; and to allow the public to understand and monitor grants and subgrants awarded under the Program. We take these responsibilities seriously.

I also recognize that each State faces unique circumstances—there is no “one size fits all” solution to broadband deployment. As such, successful execution of the BEAD Program demands close collaboration between NTIA, as the program administrator, and the States, who will have significant flexibility when choosing how to fund broadband deployments. I have directed NTIA to engage in early and clear communication during all phases of the process to help the States ensure that the subgrantees they choose are well equipped to deliver affordable, reliable, high-speed broadband at every location within their jurisdictions.

Question 6. Secretary Raimondo, what is your understanding of the NTIA and FCC’s roles in spectrum management?

Answer. NTIA and the FCC have important and complementary roles in managing the nation’s use of spectrum. NTIA is responsible for Federal Government spectrum use, while the FCC regulates non-Federal use, including State and local government. Naturally, this requires extensive coordination and cooperation between the agencies, ranging from routine matters to significant spectrum allocation and reallocation decisions. The history of success from their joint work is impressive, and is a large reason why the United States has led the world in introducing innovative spectrum management frameworks, from commercial auctions to advances in spectrum sharing. Most recently, our emphasis on spectrum for 5G has resulted in 530 megahertz of contiguous mid-band spectrum being made available with more likely to follow. The FCC has similarly freed up large swaths of spectrum for unlicensed uses such as Wi-Fi, a true U.S. success story.

At the same time, we are working to make this relationship even stronger. The NTIA Administrator and the FCC Chairwoman announced in February a new Spectrum Coordination Initiative that aims to meaningfully boost this relationship. The Initiative will include more regular meetings at both the leadership and staff levels, reviewing and updating the existing MOU between the agencies, working together to inform a whole-of-government national spectrum strategy, recommitting to decisionmaking based on sound engineering and science, and increasing proactive technical exchange and collaboration including participation in each other’s advisory bodies.

QUESTIONS SUBMITTED BY SENATOR JOHN KENNEDY

Question 1. Secretary Raimondo, I have heard concerns from some providers about the low-cost option element of the infrastructure broadband grant program. The legislation forbids NTIA and Commerce from regulating the rates of service—and many argue that prohibition should extend to states as well. But even aside from rate regulation, there are worries that imposing excessive burdens on providers through the low-cost option will result in those providers not participating in the grant program.

Will you commit that NTIA and the Department will approach the requirements for the low-cost option in a measured, standardized way, and encourage the states to do the same?

Answer. The IIJA expressly provides that nothing in the BEAD statute should be construed to authorize NTIA to regulate the rates charged for broadband service. The IIJA does require subgrantees selected to deploy broadband networks with BEAD Program funds to offer not less than one low-cost broadband service option for eligible subscribers and requires that this low-cost option is to be defined by each state, in consultation with NTIA and subject to the Assistant Secretary’s approval. The Assistant Secretary will seek to ensure that the low-cost option is implemented consistent with the requirements of the IIJA.

Question 2. At the White House briefing in November where you spoke about the IIJA’s broadband provisions, you said, “the whole name of the game here is to focus on the underserved and the unserved.” The unserved areas are the hardest to serve areas that really need the most attention and help getting broadband.

Will you commit to maintaining that focus on unserved areas? What can you do to make sure that funds don't stray from this priority before accomplishing this most important goal of getting broadband to those who still don't have it?

Answer. The BEAD Program seeks to provide access to affordable, reliable, high-speed broadband service to all Americans. The IIJA lays out a clear framework for states to fund broadband infrastructure projects, which requires prioritizing unserved locations, then underserved locations, and then community anchor institutions. NTIA will require that states faithfully adhere to that framework.

Question 3. Many States have indicated the need to establish a robust challenge process. Once the FCC's maps are complete and NTIA can begin disbursing funding, there will inevitably be inaccuracies in the maps. This could be due to error or inaccurately reported data, the fact that broadband networks are constantly in flux and data is out of date nearly immediately, or that a provider has a Federal or State commitment to build a network that meets BEAD speed standards, but it has not been completed at this time. I have heard from constituents in my State that NTIA needs to make sure there is adequate opportunity for interested parties to comment on areas that NTIA and the States deem eligible for BEAD funding.

Will you commit to allowing ample time for the FCC maps to be reviewed and, potentially, challenged?

Answer. Pursuant to section 60102(e)(1)(C) of the IIJA, the Assistant Secretary can begin approving and distributing funding for State broadband planning purposes after a State files a letter of intent to participate in the program. The IIJA further directs the Assistant Secretary, in coordination with the Commission, to allocate the remaining BEAD funds amongst the States once the broadband DATA maps are made public. Mapping data is vital, and we are working closely with our colleagues at the FCC to determine how best to balance the need to provide certainty regarding the amounts to be allocated to the states and territories in a timely manner against the need to allow the FCC, states, and providers to validate the content of the maps.

Question 4. Do you agree that it is important for your Department to take a balanced approach to the program rules so experienced providers are incentivized to participate for grant funding?

Answer. Yes

Question 5. Would you also agree that experience in building, operating, and maintaining broadband networks should be taken into consideration in grant application reviews?

Answer. Section 60102(g)(2) of the IIJA obligates States to, among other things, ensure that any prospective subgrantee is capable of carrying out activities funded by the subgrant in a competent manner in compliance with all applicable Federal, State, and local laws; has the financial and managerial capacity to meet the commitments of the subgrantee under the subgrant, the requirements of the Program, and such requirements as may be further prescribed by the Assistant Secretary; and has the technical and operational capability to provide the services promised in the subgrant in the manner contemplated by the subgrant award. NTIA will provide guidance to States regarding specific showings that States should require from prospective subgrantees.

Question 6. Will Commerce abide by the requirement that the broadband grant program will remain technology neutral, and require that States do the same?

Answer. There is no "one-size-fits-all" approach to broadband deployment given each State's unique challenges, and NTIA will ensure that the States have flexibility in identifying technical solutions. In many cases, the best solution will be fiber. But we will consider any technology that will meet America's broadband needs now and in the future, consistent with the requirements set out in the IIJA.

QUESTIONS SUBMITTED BY SENATOR BILL HAGERTY

Question 1. The National Telecommunications and Information Administration (NTIA) currently operates a budget of \$45.6 million dollars a year—a budget that this subcommittee carefully and deliberatively crafts each year. Yet, the Bipartisan Infrastructure legislation has now provided the NTIA with management of nearly \$50 billion dollars in broadband grants. That is an astronomical budget increase of more than 100,000 times. Secretary Raimondo, how will the NTIA effectively manage such an enormous large increase in responsibility?

Answer. The Department, NTIA, states, and subgrantees each have a critical role to play in ensuring that the BEAD Program is implemented in a manner that ensures transparency, accountability, and oversight sufficient to, among other things, minimize the opportunity for waste, fraud, and abuse; ensure that recipients of grants under the Program use grant funds to further the overall purpose of the Program in compliance with the requirements of the IIJA, the Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards set forth at 2 C.F.R. Part 200, and other applicable laws and regulations; and to allow the public to understand and monitor grants and subgrants awarded under the Program. We take these responsibilities seriously. NTIA is partnering with NIST for grant support and is augmenting its current capacity with a significant number of additional hires with significant grant administration experience to help administer the programs Congress tasked NTIA with in the IIJA.

Question 2. Secretary Raimondo, NTIA has very little experience in the grant making process. What is the, is there a plan to ensure that grant recipients are held accountable?

Answer. NTIA has run in the past and is running several large grant programs. In addition, the Department has significant grant making experience which NTIA is leveraging. The BEAD Program, which is the largest program NTIA is implementing, will require states to submit multiple plans for review and approval by NTIA. States will also be required to implement their own programs to minimize waste, fraud, and abuse. NTIA will be monitoring these processes as the program is being implemented and executed to ensure that states and subgrantees are meeting their obligations. In addition, Congress included clawback provisions in the IIJA for entities that fail to meet their obligations, NTIA will use these provisions as necessary to ensure that the program meets its overall goals.

Question 3. The Bipartisan Infrastructure Act details that, in calculating the allocations for the Broadband Equity, Access, and deployment (BEAD) program, the NTIA will rely on the FCC's broadband maps to determine and understand the gaps in service and where Federal dollars can make the biggest difference. Secretary Raimondo, how are the FCC maps coming along? Is there a timetable of when those maps will be released? Has your Department been working in coordination with the FCC as they develop these maps?

Answer. I have personally spoken with Chairwoman Rosenworcel, and my staff, NTIA Administrator Alan Davidson, and the staff at NTIA are in regular communication with leadership and staff at the FCC. On February 22, 2022, the FCC announced that the window for providers to file their initial Broadband Data Collection (BDC) data—the data that will populate the new FCC maps—will open on June 30, 2022, and close September 1, 2022. On March 4, 2022, the FCC published data specifications related to the biannual submission of subscription, availability, and supporting data for the BDC. These are important steps toward the first publication of the maps.

Question 4. In many cases, official data is not regularly maintained and misidentifies coverage gaps that would inappropriately render certain localities ineligible for these funds. Often, data held by local communities better represents the reality of coverage gaps. So, in making funding decisions, will NTIA limit itself to the FCC maps, or will Governors and local officials have discretion to determine how best to use those dollars?

Answer. Pursuant to section 60102(e)(1)(C) of the IIJA, the Assistant Secretary can begin approving and distributing funding for state broadband planning purposes after a state files a letter of intent to participate in the program. The IIJA further directs the Assistant Secretary, in coordination with the Commission, to allocate the remaining BEAD funds amongst the eligible entities once the broadband DATA maps are made public. I agree that accurate mapping data is vital, and we are working closely with our colleagues at the FCC to determine how best to balance the need to provide certainty regarding the amounts to be allocated to the states and territories in a timely manner against the need to allow the FCC, states, and providers to validate the content of the maps.

Section 60102(h)(2) of the IIJA will help to address your concern, as it requires that each state “ensure a transparent, evidence-based, and expeditious challenge process under which a unit of local government, nonprofit organization, or other broadband service provider can challenge a determination made by the eligible entity in the initial proposal as to whether a particular location or community anchor institution within the jurisdiction of the eligible entity is eligible for the grant funds, including whether a particular location is unserved or underserved.” NTIA has the opportunity and the obligation to review the results of that challenge process.

Question 5. As you said in your opening statement, a solution for New York or California may not work in Tennessee. For example, Tennessee maintains provider and technology neutrality, and consequently they have had good participation from many different types of providers. That neutrality has allowed Tennessee to partner with whoever would best serve an area. In fact, the Bipartisan Infrastructure bill provides for states to use an all-of-the above approach to broadband deployment. Secretary Raimondo, will eligible applicants for these funds be required to demonstrate the ability and expertise to build and maintain a broadband network before receiving funds?

Answer. Section 60102(g)(2) of the IIJA obligates states to, among other things, ensure that any prospective subgrantee is capable of carrying out activities funded by the subgrant in a competent manner in compliance with all applicable Federal, State, and local laws; has the financial and managerial capacity to meet the commitments of the subgrantee under the subgrant, the requirements of the Program, and such requirements as may be further prescribed by the Assistant Secretary; and has the technical and operational capability to provide the services promised in the subgrant in the manner contemplated by the subgrant award. NTIA will provide guidance to states regarding specific showings that states should require from prospective subgrantees.

Question 6. Will the Department of Commerce or individual states oversee the vetting and application process?

Answer. States will design their own programs in accordance with guidance provided by NTIA. These programs will include processes for subgrantee selection and application evaluation. The IIJA requires states submit both their initial and final plans to NTIA for approval. In approving state plans, NTIA will carefully review the vetting and application processes established by states, in addition to the other required elements, to ensure these processes are in compliance with guidance NTIA has provided and the overall goals of the BEAD Program. In addition, NTIA will provide substantial technical assistance to the states throughout the program to assist states in establishing and executing their own state programs.

QUESTIONS SUBMITTED BY SENATOR MIKE BRAUN

Question 1. In the fiscal year 2021 appropriations bill, Congress directed the Department to “track the use of, and access to, any broadband infrastructure . . . in a central database,” and to provide an annual report to Congress. In December, NTIA provided its first report, in which it identified 65 Federal programs across 13 agencies. The report also notes that NTIA was only able to “Reflect only those programs that responded and should not be treated as a comprehensive view.”

While some of these programs have differing objectives, they often share nearly identical priorities, like the RDOF, the ReConnect Program, and Commerce’s BEAD program, which all fund broadband construction programs.

Do you do you support Congressional efforts aimed towards consolidating the number of Federal broadband programs?

Answer. Meeting the goal of connecting everyone in America with reliable, affordable, high-speed Internet will require a “whole of government” approach that includes close coordination among Federal, state, and community actors. We are in regular communication with our interagency colleagues and the White House Infrastructure Task Force to ensure full coordination. NTIA, FCC, and USDA signed an MOU in June 2021 that documents their commitment to coordinate resources and leverage data from each to appropriately identify areas of need, and work to avoid duplication of efforts where feasible.

Question 2. How can the Commerce Department assist lawmakers in identifying duplication across Federal broadband programs?

Answer. As you note in your prior question, section 903 of the Consolidated Appropriations Act, 2021, also known as the ACCESS BROADBAND Act, established the Office of Internet Connectivity and Growth within NTIA and required it to, among other things, “track the construction and use of and access to any broadband infrastructure built using any Federal support in a central database.” Additionally, section 60105 of the IIJA directs the FCC, “in consultation with all relevant Federal agencies, [to] establish an online mapping tool to provide a locations overview of the overall geographic footprint of each broadband infrastructure deployment project funded by the Federal Government.” This online mapping tool “shall be . . . the centralized, authoritative source of information on funding made available by the Federal Government for broadband infrastructure deployment in the United States.”

We are working closely with our colleagues at the FCC to ensure that these tools will help lawmakers, regulators, providers, and the public to identify where Federal broadband funding has been committed.

Question 3. My constituents are particularly worried that in implementing these funds, the Federal government will instruct States to target more densely populated areas. By doing so, the Federal government would be abandoning the most at-risk communities, where the private-sector is least able to derive an investment return. This is a particular issue that has been raised with me regarding FCC auctions, as the most rural census blocks are often the most difficult to serve. Do you expect to insert suggestions into your rulemaking driving states to focus on population dense areas over rural America?

Answer. The BEAD Program seeks to provide access to affordable, reliable, high-speed broadband service to all Americans. The IIJA lays out a clear framework for states to fund broadband infrastructure projects, which requires prioritizing unserved locations, then underserved locations, and then community anchor institutions.

Question 4. Today, over-the-top content—“video streaming”—is exploding in its use like never before. These services can place serious strain on telecommunications network owner, ISP’s, who are tasked with delivering this data-heavy content to customers. These problems are particularly serious in high cost rural areas. It would appear their resources must be devoted to constantly adding capacity rather than expanding their network to reach more unserved. But the Federal government doesn’t appear to have great data on the costs these services add to rural network operation. I’ve introduced a bill to have the FCC study this question.

Are you familiar with the costs associated with transmitting large amounts of video data to small, rural ISPs in the rural areas of this country?

Answer. NTIA will work with our colleagues at the FCC to explore the issue.

Question 5. How will the Commerce Department consider these added costs when the NTIA and the States award Federal dollars to ISPs throughout the country to build broadband networks where they are needed the most?

Answer. NTIA will work with our colleagues at the FCC to explore the issue.

Question 6. The Infrastructure Investment and Jobs Act, as well as the American Rescue Plan, encourage the use of Advanced Digital Construction Management Systems to expedite the utilization, execution, and oversight of projects funded. It is my understanding that the Route 6/10 Interchange Reconstruction project in Providence, which is the largest in RIDOT history, is using the technology. Please provide for the record the steps the Department has taken to require and facilitate the utilization of these project management technologies?

Answer. NTIA is developing a robust technical assistance plan to allow states to learn from each other about best practices. NTIA will evaluate whether to include Advanced Digital Construction Management Systems as one element of the project management technical assistance.

QUESTIONS SUBMITTED BY SENATOR RICHARD SHELBY

Question 1. Secretary Raimondo—During the hearing, you mentioned that the Federal Communications Commission would likely complete its updated broadband mapping data by the summer of 2022. Given that the new FCC mapping data will be vital in determining each states’ allocation of remaining Broadband Equity, Access, and Deployment (BEAD) funds, it is important that the FCC mapping data is accurate and that a process is established to reconcile potential differences between the new FCC mapping data and existing state mapping data prior to the Department’s disbursements of BEAD funds.

Therefore, at what point will the Department determine that BEAD funds should begin to be distributed for state broadband planning purposes if challenges between state mapping data and the new FCC mapping data occur?

Answer. Pursuant to section 60102(e)(1)(C) of the IIJA, the Assistant Secretary can begin approving and distributing funding for state broadband planning purposes after a state files a letter of intent to participate in the program. The IIJA further directs the Assistant Secretary, in coordination with the Commission, to allocate the remaining BEAD funds amongst the states once the broadband DATA maps are made public. I agree that accurate mapping data is vital. We are working closely with our colleagues at the Federal Communications Commission (FCC) to determine

how best to balance the need to provide certainty regarding the amounts to be allocated to the states and territories in a timely manner against the need to allow the FCC, states, and providers to validate the content of the maps.

SUBCOMMITTEE RECESS

Senator SHAHEEN. And the hearing is adjourned.

[Whereupon, at 4:30 p.m., Tuesday, February 1, the subcommittee was recessed, to reconvene subject to the call of the Chair.]

COMMERCE, JUSTICE, SCIENCE, AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 2023

TUESDAY, APRIL 26, 2022

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10:00 a.m., in room SD-192, Dirksen Senate Office Building, Hon. Jeanne Shaheen, (Chair) presiding.

Present: Senators Shaheen, Leahy, Schatz, Manchin, Van Hollen, Moran, Murkowski, Collins, Graham, Capito, Kennedy, Hagerty, and Braun.

DEPARTMENT OF JUSTICE

OPENING STATEMENT OF HON. JEANNE SHAHEEN

Senator SHAHEEN. I am delighted to call to order the Subcommittee on Commerce, Justice, Science, and Related Agencies, and welcome the Attorney General, Merrick Garland, who is today's witness for the hearing to Review the President's fiscal year 2023 funding request. It's very good to see you again and I'm sure, as you know, we will have lots of senators coming in and out, as the first real hearing day back after a 2-week break. There's a lot going on. So, I hope you will be patient.

This year, the President's fiscal year 2023 budget request for the Department of Justice is \$39 billion. That's an 11 percent increase compared to the fiscal year 2022 enacted level for the Department.

This budget provides a new focus in critically important areas, like protecting civil rights, including a request for increased resources for the Civil Rights Division and Community Relations Service, to provide for more attorneys and mediators, as well as supporting grant programs that address hate crime prevention.

Funding increases are also requested for agencies and programs that strengthen national security, including additional resources to investigate domestic terrorism, combat foreign threats, and prevent gun violence.

It was also good to see the Department's request for increased funding for many grant programs, including nearly double the resources for the Office on Violence Against Women programs.

Funding requested for newer programs, including those in the Office of Juvenile Justice and Delinquency Prevention, seem to be much needed in order to help youth and families, especially after this pandemic. I hope to receive an allocation that allows us to

fund longstanding, as well as newer, programs, at as high a level as possible.

Increased grant funding also means increased support for our police departments. This budget request does include that, particularly for Community Oriented Policing Services, or COPS, grants. But I would like to note that this Subcommittee has included strong funding for law enforcement grants over the past several years, and I think that is a commitment of this Committee.

One area that Senator Moran and I have worked closely on is to ensure that Byrne JAG funding receives steady increases annually. For my State of New Hampshire, the majority of Byrne JAG funding supports our State's drug task force, which works to keep illegal narcotics, including fentanyl, out of our communities. And as we know, that epidemic of opioid misuse has dramatically increased during the pandemic.

We've also worked together, on a bipartisan basis, to increase funding for programs and improve relations and strengthen trust between police and the communities they serve. Last year, we provided a total of \$201 million for these programs. This also includes overhauling the COPS development program to have dedicated funding for mobile crisis teams, police department accreditation, and officer training.

I'm pleased to see that the Department seems to also like the way we restructured this COPS program and repackaged it as the Just Policing program in your budget request this year.

Now, before I close, I want to thank the 120,000 career employees of the Department of Justice, including law enforcement personnel and attorneys, for their work to keep Americans safe. I know it's been a challenging year with our country facing unprecedented threats from those that are newer and rapidly changing, like cybercrime, and those that are sadly familiar, like terrorism. Your employees are meeting these challenges while continuing to work through a global pandemic, and we all very much appreciate their work.

I also want to thank all of those at the Department who investigated and prosecuted the ISIS terrorists known as The Beatles, including El Shafee Elsheikh, who murdered four Americans, James Foley, Kayla Mueller, Steven Sotloff, and Peter Kassig. The hard work of the U.S. Attorney's Office for the Eastern District of Virginia recently resulted in a guilty verdict for Elsheikh, and I think that not only sends a message to terrorists around the world that those who commit heinous crimes against Americans are going to be prosecuted, but it provides some level of closure and justice for the families of those murdered.

So, Mr. Attorney General, I look forward to our discussion today. And with that, I'd like to recognize our Subcommittee Vice Chair, my colleague, Senator Moran.

OPENING STATEMENT OF SENATOR JERRY MORAN

Senator MORAN. Senator Shaheen, thank you for convening this hearing. Before turning to the subject matter of the hearing, I want to express my sincere appreciation for your stewardship of our fiscal year 2022 appropriations process and thank my colleagues who are Members of this Subcommittee. This Subcommittee held seven

hearings, including a broadband hearing in January that, I believe, was one of the best we've had in our tenure.

Senator SHAHEEN. Absolutely.

Senator MORAN. We produced a strong, bipartisan bill in the Senate, even with complicated dynamics that were outside of our control. And in conference, despite a very tough allocation, Senator Leahy, a very tough allocation, we secured a final bill that makes critical investments in scientific research, law enforcement, space exploration, economic development, and U.S. competitiveness. It is a bill this subcommittee can be proud of.

Senator Shaheen, thank you for your leadership. I am excited to continue to work with you and my colleagues as we kick off the 2023 appropriation process.

General Garland, welcome to this hearing. This budget that is being presented supports DOJ grant programs under the newly re-authorized Violence Against Women Act, which I was a proud—which I was proud to co-sponsor, and for programs that support local police and sheriff's departments. I want to highlight these programs as a critical tool to address the shocking increase in violent crime, including a 30 percent surge in U.S. murder rate, the largest single year increase in 50.

Unfortunately, violent crime continues to lack the attention it requires. It is absolutely critical the Department of Justice support State and local law enforcement, both through grant programs and through joint law enforcement operations. The budget includes an increase for fiscal year 2022 enacted—to fiscal year 2022 enacted levels for DOJ. However, rhetoric and behavior from the administration too often send a different signal. If law enforcement officers are not respected, or shown respect, from our leaders, they will not be respected within the community.

We've also seen an appalling increase in attack on police officers. It is no surprise that the police departments and sheriff's offices are short-staffed and having issues recruiting new police officers.

The budget request would undermine the Board of Prison—excuse me, the Bureau of Prisons' ability to maintain suitable, modern facilities that are capable of delivering educational, vocational, and fellowship programming.

In addition, request proposes new, unauthorized grant programs intended to inhibit America's exercise of their Second Amendment rights.

A budget request is, ultimately, a proposed allocation of scarce resources, and it's disappointing that these messaging programs were prioritized over the budget's critical missions in fully addressing the surge in violent crime.

The budget request is a first step in the appropriations process, and I look forward to working with you, Attorney General, and with Senator Shaheen, as we craft the fiscal year 2023 Appropriations Bill. Thank you.

Senator SHAHEEN. Thank you, Senator Moran. And I realize that the Chair of the Appropriations Committee, Senator Leahy, is here. And I forgot to ask if he would like to offer some opening remarks.

Senator LEAHY. No, I just appreciate you and Senator Moran holding this. I'm delighted that the Attorney General is here. I'm

delighted the country has the Attorney General. And I'll leave it to everybody else.

Senator SHAHEEN. Thank you, Senator Leahy. I will now turn it over to you, Attorney General Garland.

STATEMENT OF HON. MERRICK GARLAND, ATTORNEY GENERAL, DEPARTMENT OF JUSTICE

Attorney General GARLAND. I'm on? Is this working? Yes. Good morning.

Senator SHAHEEN. Maybe you can pull it closer.

Attorney General GARLAND. Yes. Better.

Senator SHAHEEN. Much.

Attorney General GARLAND. Okay. Good morning, Chairwoman Shaheen, Ranking Member Moran, and distinguished Members of the Subcommittee. Thank you for the opportunity to appear before you today.

Over the past 411 days that I have been Attorney General, three co-equal priorities have guided the work of the Justice Department—keeping our country safe, protecting civil rights, and upholding the rule of law. These priorities reflect the Justice Department's mission, and our mission is reflected in the President's fiscal year 2023 budget.

Our first funding priority is keeping our country safe from all threats, foreign and domestic, whether from hostile nation States, terrorists, or common criminals. As our country's chief law enforcement officer, I am committed to supporting members of law enforcement at all levels of government as they work to protect our country, while also safeguarding civil liberties and ensuring our own accountability to the American people.

To these ends, the President's fiscal year 2023 budget requests more than \$20.2 billion to support the work of the Justice Department's law enforcement components and U.S. Attorney's offices nationwide as they carry out their complex mission sets. These resources will strengthen the Justice Department's efforts to reduce violent crime and gun violence, to counter the multitude of serious and evolving threats to our country from terrorists, cyber criminals, and hostile nation States, to combat the violent drug trafficking networks that are fueling our Nation's overdose epidemic, and to protect our Nation's democratic institutions, including the one we sit in today, from violent attack.

In addition, the President has proposed a total of more than \$30 billion in new investments over the next decade, to support law enforcement by funding the police, preventing crime, and accelerating criminal justice reform. In fiscal year 2023 alone, the President's budget requests more than \$8 billion in grants for States and localities nationwide to fund the police, including by putting more police officers on the beat, and to implement community-based strategies to prevent crime and gun violence.

The President's fiscal year 2023 budget also prioritizes the protection of civil rights. We are seeking a 32 percent increase in funding for the Civil Rights Division, as well as additional resources for our U.S. Attorneys, the FBI, the Community Relations Service, and our Office for Access to Justice. Our Civil Rights work remains

vital to safeguarding voting rights, prosecuting hate crimes, ensuring constitutional policing, and addressing unlawful discrimination.

Another area of departmental focus is safeguarding economic security, fairness, and opportunity. This is reflected in our request for resources to protect the American people from intellectual property crimes, to reinvigorate antitrust enforcement and consumer protection, to combat corporate crime, and to bring to justice those who seek to profit unlawfully from the COVID-19 pandemic. In particular, the Department requests a total of \$273 million, an increase of 41.6 percent, for the Antitrust Division to carry out its critical mission of promoting competition in the American economy and protecting workers, consumers, and businesses alike.

Finally, we are requesting \$11.7 billion to ensure the just administration of our Nation's immigration courts and Federal correctional systems. This includes \$1.35 billion for the Executive Office for Immigration Review, which I'll be referring to as EOIR, to reduce the immigration court backlog by hiring more than 1,200 new staff, including approximately 200 immigration judge teams over the fiscal year 2022 enacted level.

Our request for \$8.18 billion for the Bureau of Prisons will help ensure the health, safety, and well-being of more than 150,000 individuals in Federal custody, as well as the officers who protect them. This request will allow BOP to hire 1,300 new correctional officers and First Step Act staff and would be used to support rehabilitative programming and improve conditions of confinement.

I respectfully ask for your support for our budget, as the Justice Department works to uphold the rule of law, to keep our country safe, and to protect civil rights for all. Thank you for the opportunity to speak with you today.

[The statement follows:]

PREPARED STATEMENT OF MERRICK B. GARLAND ATTORNEY GENERAL OF THE UNITED STATES

Good morning, Chairwoman Shaheen, Ranking Member Moran, and distinguished Members of this subcommittee. I appreciate the opportunity to appear before you today on behalf of the United States Department of Justice to discuss the President's funding request for fiscal year 2023.

In the face of a range of evolving and complex challenges, the Justice Department remains committed to its mission of upholding the rule of law, keeping our country safe, and protecting civil rights. I am pleased with the progress the Department has made on each of these fronts since I appeared before you last June.

The Justice Department's success depends upon the trust of the people we serve. That trust must be earned every day. Over the past year, we have worked every day to uphold the norms and principles that are essential to the rule of law and upon which that trust depends. We have worked to counter the foreign-based threats from nation states, terrorist groups, radicalized individuals, and cyber criminals that seek to undermine our democratic and economic institutions and to sow fear among our people. And we have worked to counter persistent domestic-based threats. Those include domestic violent extremist acts aimed at undermining our democratic institutions, violent crime and gun violence that undermines our communities' trust in the rule of law, and corporate crime that threatens our economic institutions. We have worked to protect civil rights, stepping up efforts to deter, prevent, and prosecute hate crimes, and to foster trust between law enforcement and the communities we serve.

To continue and expand this important work in fiscal year 2023, the Justice Department requests a total of \$37.65 billion in discretionary resources. Our top funding priorities are:

I. Keeping our Country Safe. Every person living in this country expects and deserves that their government protect them from a wide range of threats—from inter-

national and domestic terrorism to cybercrime and violent crime. As our country's chief law enforcement officer, I am committed to supporting members of law enforcement at all levels as they work to protect our country from these threats, while also safeguarding civil liberties and ensuring our own accountability to the American people. In total, the President's fiscal year 2023 Budget requests more than \$20.2 billion to expand the capacities of our law enforcement components and U.S. Attorneys' Offices to keep our country safe. This includes:

- A total of \$10.80 billion for the Federal Bureau of Investigation (FBI) to carry out its complex mission sets, including keeping our country safe from a multitude of serious and evolving threats, ranging from foreign terrorism to espionage and cyber threats and from violent crime to the proliferation and potential use of weapons of mass destruction.
- A total of \$2.77 billion for the United States Attorneys' offices, including resources to prioritize the prosecution of violent crime.
- A total of \$3.10 billion for the Drug Enforcement Administration (DEA) to prevent the flow of deadly drugs into our communities.
- A total of \$1.81 billion for the U.S. Marshals Service (USMS) to assist local law enforcement in apprehending violent fugitives from our neighborhoods and to protect our nation's judges and courts.
- A total of \$1.73 billion for the Bureau of Alcohol, Tobacco, Firearms, and Explosives (ATF) to enhance the National Integrated Ballistic Information Network (NIBIN), modernize the National Tracing Center, and expand multijurisdictional gun trafficking strike forces with additional personnel.

In addition, to keep our country safe, the President's fiscal year 2023 Budget requests a total of \$133.5 million for the National Security Division, an increase of 10.6 percent above the fiscal year 2022 enacted level.

II. Protecting Civil Rights. The President's fiscal year 2023 Budget requests robust support for the Justice Department's core civil rights components. This includes:

- A total of \$215.2 million for the Civil Rights Division—an increase of \$52.7 million or 32.4 percent above the fiscal year 2022 enacted level—to expand its efforts to deter and prosecute hate crimes, safeguard fair elections, and combat discrimination.
- A total of \$81.4 million to bolster the civil rights work of the FBI and a total of \$42.4 million to bolster the civil rights work of the United States Attorneys' offices.
- A total of \$25 million for the Community Relations Service—an increase of 19.2 percent above the fiscal year 2022 enacted level—to provide mediation and conciliation services to communities impacted by conflict.
- A total of \$10 million for the Office for Access to Justice to expand equal access to justice for all.
- A total of \$106.3 million in new funding to strengthen trust and accountability in law enforcement by expanding, formalizing, and managing Body Worn Camera programs for the FBI, DEA, USMS, and ATF, and \$7.9 million in new funding for the Environment and Natural Resources Division's efforts to advance environmental justice and combat the climate crisis.

The Justice Department's fiscal year 2023 request also prioritizes significant investments in grants for state, local, Tribal and territorial law enforcement partners nationwide. The President has proposed a total of more than \$30 billion in new investments over the next decade to support law enforcement by funding the police, preventing crime, and accelerating justice system reform. In fiscal year 2023, the President's Budget includes the following resources for our law enforcement and community partners nationwide:

- A total of \$6.24 billion in discretionary and mandatory resources for the Office of Justice Programs (OJP) to support critical longstanding Justice Department grant programs, including Byrne Justice Assistance Grants and Project Safe Neighborhoods, as well as new programming that will provide state, local, Tribal, and territorial governments with additional resources to prevent crime, reduce gun violence, and accelerate criminal justice system reform.
- A total of \$2.83 billion in discretionary and mandatory resources for the Community Oriented Policing Service (COPS) to support the hiring of police and sworn law enforcement personnel nationwide and the implementation of community-based strategies to combat violent crime. Specifically, the Department is seeking a total of \$537 million in discretionary resources for the COPS Hiring Program—an increase of 118 percent above the fiscal year 2022 enacted level.

—A total of \$1 billion—an increase of \$425 million or 74 percent above the fiscal year 2022 enacted level—for the Office on Violence Against Women (OVW) to support longstanding Violence Against Women Act (VAWA) programs, including programs that provide critical resources to local, state, Tribal, and territorial partners across the country to fund police, prosecutors, courts, and victim services as well as resources to provide legal assistance for victims, transitional housing, and homicide and domestic violence reduction initiatives.

III. Safeguarding Economic Security, Fairness, and Opportunity. A fair economy is foundational to the American dream. To safeguard economic security, fairness, and opportunity for all, the President's fiscal year 2023 Budget requests a total of \$273 million, an increase of 41.6 percent, for the Antitrust Division to carry out its critical mission of promoting competition in the American economy and protecting workers, consumers, and businesses alike. In addition, the Department is committed to using every available Federal tool—including criminal, civil, and administrative actions—to combat and prevent fraud. The President's fiscal year 2023 Budget request renews the Department's request for critical funds for our United States Attorneys, the Criminal Division, and the Civil Division to protect consumers and combat and prevent fraud, including by bringing to justice those who seek to profit unlawfully from the COVID-19 pandemic.

IV. Administering Just Immigration Court and Correctional Systems. The Department's fiscal year 2023 budget requests critical resources that will allow us to carry out our responsibilities for administering our nation's immigration court system and the Federal detention and correctional systems. The requested funds for the Executive Office of Immigration Review (EOIR) will increase the number of immigration judges and broaden the availability of legal representation in immigration court. And the requested resources for the Federal Bureau of Prisons (BOP) will help improve staffing levels in BOP's 122 facilities nationwide while also maintaining an investment of \$409.5 million for First Step Act implementation.

Greater detail on each of these priorities is provided below.

I. KEEPING OUR COUNTRY SAFE

The Justice Department is committed to doing everything in its power to protect the American people from all threats, foreign and domestic, while also protecting our civil liberties. Our country continues to face a multitude of serious and evolving threats, ranging from foreign terrorism to domestic extremism and from cybercrime to violent crime. These threats are as complex as at any time in our history. And the consequences of not responding to them have never been greater.

In the recently enacted fiscal year 2022 Omnibus, Congress provided critical resources for the Department to strengthen its national security and law enforcement capacities, to focus our efforts on disrupting threats to our country, and to build deeper and even more effective partnerships, both here at home and around the world. Moving forward, enhancements are needed in order to keep pace of current and emerging case demands and public safety priorities in the 94 U.S. Attorneys' offices. The Department's fiscal year 2023 request reiterates the need for these resource enhancements.

Today I would like to highlight five significant areas of focus to keep our country safe: (A) reducing violent crime and gun violence; (B) protecting national security, including by countering terrorism and fighting cybercrime; (C) combating drug trafficking and preventing overdose deaths; (D) protecting vulnerable communities; and (E) protecting our democratic institutions.

A. Reducing Violent Crime and Gun Violence

Last May, the Justice Department launched a comprehensive strategy aimed at mobilizing our Federal prosecutors, agents, investigators, and criminal justice experts to disrupt and prosecute violent crime. To these ends, we directed all 94 United States Attorneys' offices across the country to work with our state and local partners to address the violent crime problems specific to their districts. We strengthened Project Safe Neighborhoods, our cornerstone initiative to reduce violent crime at the community level. We launched five cross-jurisdictional strike forces to disrupt illegal firearms trafficking in key corridors across the country. We finalized a new rule to curb the proliferation of unserialized ghost guns. We published model gun safety legislation for states. We established a new policy to hold rogue gun dealers accountable for willful violations of the law. And the Department's law enforcement components—including ATF, DEA, FBI, and the U.S. Marshals Service—continue to operate force-multiplying task forces with state and local law enforcement agencies.

The Department's fiscal year 2023 funding request includes more resources for our law enforcement components to embed agents in homicide units in departments across the country, trace crime guns, recover illegal firearms, pursue violent fugitives, and disrupt violent drug trafficking. The Department's request also includes critical resources for our U.S. Attorneys' offices to prosecute those who commit violent crimes. In addition, the Department's request includes a variety of increases to address the problem of violent crime and murdered and missing indigenous persons in Indian Country. These enhancements include additional resources for the Department's law enforcement components and U.S. Attorneys' offices in light of the Supreme Court's decision in *McGirt v. Oklahoma*, 140 S. Ct. 2452 (2020).

In addition to expanding the capacity of Federal law enforcement to make our communities safer, the President has proposed a total of \$30 billion in new mandatory investments to support law enforcement and crime prevention over the next decade. In fiscal year 2023, the President's Budget includes significant investments in grants for state and local law enforcement partners nationwide. A total of \$6.24 billion is requested in discretionary and mandatory resources for OJP to support critical longstanding Justice Department grant programs, including Byrne Justice Assistance Grants and Project Safe Neighborhoods, as well as new programs that will provide state, local, Tribal, and territorial governments with additional resources to prevent crime, reduce gun violence, and accelerate justice system reform. In addition, a total of \$2.83 billion in discretionary and mandatory resources is requested for the COPS Office to support the hiring of police and sworn law enforcement personnel nationwide and the implementation of community-based strategies to combat violent crime. Specifically, the Department is seeking a total of \$537 million in discretionary resources for the COPS Hiring Program—an increase of 118 percent above the fiscal year 2022 enacted level.

B. Protecting National Security

Countering Foreign and Domestic Terrorism. The Justice Department remains committed to countering terrorism and keeping pace with emerging terrorist threats while protecting civil rights and civil liberties. Our whole-of-Department commitment to countering terrorism is reflected in our request for more resources for our 94 U.S. Attorneys' offices; our law enforcement components, including the FBI; our grant-making offices; and our litigating divisions, including the National Security Division, the Civil Rights Division, and the Criminal Division. This request also includes resources to sustain and strengthen the FBI's counterterrorism efforts, including its Joint Terrorism Task Forces (JTTFs), the essential hubs for both international and domestic counterterrorism cooperation across all levels of government nationwide.

Enhancing Cybersecurity and Fighting Cybercrime. Keeping our country safe also requires countering cyber threats—whether from nation states, terrorists, or common criminals. One year ago, the Justice Department launched a comprehensive strategic cyber review aimed at improving our ability to investigate and prosecute state-sponsored cyber threats, transnational criminal groups, infrastructure and ransomware attacks, and the use of cryptocurrency and money laundering to finance and profit from cyber-based crimes. Over the past 12 months, the Justice Department has developed and implemented improvements on several fronts, including with respect to ransomware attacks and the criminal misuse of cryptocurrency. The President's fiscal year 2023 Budget requests nearly \$150 million in critical enhancements to support the Department's cyber efforts, including investments that support efforts to build cyber investigative capabilities at FBI field divisions and U.S. Attorneys' offices nationwide. These investments also further enhance the cybersecurity posture of the FBI, DEA, and Department more broadly. The Justice Department requires these significant investments to protect its own data and cyber infrastructure and to build on its efforts to combat the latest cyber threats.

Countering Nation-State Threats. The Justice Department is committed to taking a comprehensive approach that draws on the full extent of our tools and authorities to address the alarming rise in illegal and nefarious activities from hostile nations. The Department places a high priority on countering threats to our country posed by the governments of the People's Republic of China (PRC), Russia, Iran, and North Korea. Nefarious activities from hostile nation-states are increasingly brazen and threaten to undermine core American values and institutions—from unlawful and malicious cyber campaigns to the theft of technology and intellectual property to the use of espionage tools and tactics against American companies and workers alike.

To address these threats, the Justice Department is taking a variety of actions, including aggressively prosecuting state agents for espionage; preventing hacking campaigns; preventing the repression of dissidents; addressing efforts to manipulate

public discourse in the United States; and fully enforcing violations of economic sanctions and export restrictions. The Department appreciates the \$59.4 million in supplemental funding for our efforts to respond to Russia's military invasion of Ukraine, which, among other things, is supporting the work of the Department's KleptoCapture Task Force. And we ask for your support for the President's fiscal year 2023 funding request, which seeks critical resources for Justice Department attorneys, agents, and intelligence analysts to continue the vital work of countering threats from hostile nation- states.

C. Combating Drug Trafficking and Preventing Overdose Deaths

The Justice Department is committed to keeping our country safe from violent drug trafficking gangs and cartels. These criminal networks are fueling the overdose epidemic in our country. In the twelve months between September 2020 and September 2021, more than 104,000 Americans died due to drug overdose. The overwhelming majority of these deaths involved opioids.

In 2021, DEA seized more than 15,000 pounds of fentanyl and more than 20.4 million counterfeit pills, many of which contained lethal amounts of fentanyl, marketed by criminal drug networks. The Department remains vigilant in addressing the evolving nature of the illicit drug threat and continues its work to dismantle illicit online drug marketplaces and to detect, limit, and deter illegal prescriptions, distribution, and diversion offenses that result in patient harm. We are committed to using all available resources to combat drug trafficking and prevent overdose deaths in the United States.

The President's fiscal year 2023 budget requests critical resources to combat dangerous drug trafficking gangs and cartels and to prevent the flow of deadly drugs into our communities. This includes our request for a total of \$3.10 billion for DEA's investigations, counterdrug efforts across 241 domestic offices and 92 foreign offices in 69 countries around the world, and diversion control. The Department's funding request also includes more than a half a billion dollars in opioid-related grants, including increased funding for drug courts and locally driven responses to opioids and substance use.

D. Protecting Vulnerable Populations

The Department is committed to protecting and supporting all communities, including the most vulnerable among us. That includes our special obligation to protect children from crime and exploitation. Likewise, elder abuse, fraud, and neglect remain urgent problems in our country, particularly as the COVID-19 pandemic ushered in a new wave of exploitative practices targeted at seniors. The Department also has a unique legal relationship with, and responsibility to, federally recognized Tribes. Gender-based violence, including domestic violence, dating violence, sexual assault, and stalking, cuts across socioeconomic, racial, and geographic lines. In addition, low-income communities, LGBTQ communities, communities of color, people with disabilities, non-citizens, and victims of human trafficking face disproportionately high rates of victimization. The Justice Department is dedicated to protecting these communities.

The President's fiscal year 2023 requests seeks to make investments in all of these areas. For example, the Department seeks an additional \$21 million for OJP's Missing and Exploited Children Program and requests additional funds for the Criminal Division's Child Exploitation and Obscenity Section. The Department seeks to invest a total of \$1 billion in the Office on Violence Against Women, an increase of \$425 million or 74 percent above the fiscal year 2022 enacted level. This funding request supports longstanding Violence Against Women Act programs, including programs that provide critical resources to all states and territories to fund police, prosecutors, and courts, as well as resources to provide legal assistance for victims, transitional housing, and homicide and domestic violence reduction initiatives.

E. Protecting Our Democratic Institutions

Finally, keeping our country safe requires protecting its democratic institutions, including the one we sit in today, from violent attack. The Department will continue to work closely with state, local, Tribal, and territorial law enforcement to protect public servants—from local election officials to Members of Congress—from violence and threats of violence. Among other things, the President's fiscal year 2023 Budget seeks critical resources for the U.S. Attorneys as well as the U.S. Marshals Service to safeguard the security of Federal judges nationwide, including an increase of more than \$32 million to support judicial and Federal courthouse security.

II. PROTECTING CIVIL RIGHTS

Protecting civil rights was a founding purpose of the Justice Department in 1870. We began our work during Reconstruction to enforce the rights promised by the Thirteenth, Fourteenth, and Fifteenth Amendments. This required confronting the racist conduct of the Ku Klux Klan and others who used terror and violence to keep Black Americans from exercising their civil rights. Today, nearly 152 years after the Department's founding, far too many still face discrimination in voting, housing, and the criminal justice system; and disproportionately bear the brunt of the harm caused by pandemic, pollution, and climate change. Among a variety of investments, the Department's top civil rights funding priorities include:

A. Reinvigorating Civil Rights Enforcement

The Civil Rights Act of 1957 created the Justice Department's Civil Rights Division with the mission of upholding the civil and constitutional rights of all Americans. Today, the Division's work remains vital, including bringing cases to safeguard voting rights, prosecute hate crimes, and end unlawful discrimination. The Department's request seeks a total of \$215.2 million for the Civil Rights Division, an increase of \$52.7 million, or 32.4 percent, over the fiscal year 2022 enacted level.

The Department's dedication to civil rights enforcement is not limited to the Civil Rights Division, and the fiscal year 2023 request reflects this broader commitment. The Department seeks a total of \$81.4 million—an increase of 28 percent—for the FBI's investigations into alleged violations of the Federal civil rights laws, and a total of \$42.4 million—an increase of 24 percent—for the civil rights work of the U.S. Attorneys' offices.

B. Fostering Trust and Accountability in Law Enforcement

The Justice Department's budget request seeks \$106.3 million in new funding to strengthen trust and accountability in law enforcement by expanding, formalizing, and managing Body Worn Camera programs for the FBI, DEA, USMS, and ATF. These cameras would be used not only by our state and local law enforcement and task force partners, but also by Federal agents.

The Department's budget request also includes a total of \$25 million for the Community Relations Service to provide mediation and conciliation services to communities impacted by conflict. The Department's requested grant funding also supports these efforts and includes \$23 million for the COPS Just Policing Program, which will expand upon current, effective approaches within law enforcement agencies that can reform organizational culture, practices, and recruitment.

C. Expanding Access to Justice and Reforming Criminal and Juvenile Justice Systems

The Department's fiscal year 2023 request includes \$10 million to fund the newly re-established Office for Access to Justice to broaden the scope of its programs and activities, including through improving language access coordination and improving pro bono services.

The Department's request also seeks to leverage the capacity of the Federal justice system to advance innovative criminal justice reform initiatives and serve as a model for reform that is not only comprehensive in scope, but evidence-informed and high-impact. For example, the Department's fiscal year 2023 request seeks a total of \$760 million for juvenile justice grants. The Department also requests a total of \$409.5 million for First Step Act implementation, including \$100 million for a collaboration between the Justice Department and the Department of Labor for a national initiative to provide comprehensive workforce development services to people in the Federal prison system, both during their time in BOP facilities and after they are transferred to community placement.

D. Advancing Environmental Justice and Tackling the Climate Crisis

The Justice Department is committed to implementing Executive Order 14008, Tackling the Climate Crisis at Home and Abroad (January 27, 2021), which establishes a whole-of-government approach to addressing the climate crisis and formalizes the Federal government's commitment to environmental justice. To these ends, the Department's request includes a total of \$142 million—an increase of \$22 million or 18.2 percent above the fiscal year 2022 enacted level—for the Environment and Natural Resources Division. Among other things, this funding would support the Division's efforts to combat the climate crisis, launch an Office for Environmental Justice, and execute a comprehensive environmental enforcement strategy.

III. SAFEGUARDING ECONOMIC SECURITY, FAIRNESS, AND OPPORTUNITY

A fair economy is foundational to the American dream. Fraud, theft, corruption, bribery, and anticompetitive agreements threaten the free and fair markets upon which our economy is based. They decimate the assets of individuals, organizations, and governments alike, and they increase costs for every American. Corporate crime also weakens our economic institutions by undermining public trust in the fairness of those institutions. In its pursuit of fair markets, the Justice Department will ensure that everyone in our economy competes by the same rules; that tax dollars flow to their intended recipients; and that corporate crime is deterred, detected, and prosecuted.

A. Preventing the Theft of Technology and Intellectual Property

Protecting the American people from intellectual property crimes is a priority for the Department of Justice. These crimes threaten our national security and economic security as well as public health and safety. The Justice Department is committed to deploying a whole-of-Department approach to enforcing intellectual property rights and the President's fiscal year 2023 Budget seeks critical resources for the Criminal and the National Security Divisions, as well as the FBI and our United States Attorneys, to pursue complex intellectual property crime investigations around the world.

B. Reinforcing Antitrust Enforcement and Consumer Protection

Antitrust and consumer protection laws are the charter of our economic liberty. The Justice Department is committed to the vigorous enforcement of these laws. Anticompetitive practices hurt the American people—producers, consumers, and workers alike. And they hurt the American economy. Too many industries have become too consolidated over time. Too many companies have pursued corporate conduct and more aggressive mergers that have made all of us vulnerable. Against this background, our antitrust enforcement efforts cannot and will not slow down. No matter the industry and no matter the company, the Justice Department will vigorously enforce our antitrust laws. We will aggressively protect consumers, safeguard competition, and work to ensure economic fairness and opportunity for all.

The Department's Antitrust Division has been underfunded for too long and has nearly 400 fewer staff today than it had in 1979. That is why we are seeking critical resources to reinvigorate our enforcement efforts and ensure a competitive economy for all Americans. In particular, the President's fiscal year 2023 Budget seeks a total of \$273 million, an increase of \$80.2 million or 41.6 percent over the fiscal year 2022 enacted level, for the Antitrust Division. These additional funds will allow the Antitrust Division to meet the challenges of its growing civil and criminal enforcement programs, including by hiring additional attorneys and support staff, and by modernizing the Antitrust Division's information technology infrastructure to support litigation against sophisticated defendants.

In addition, the Justice Department is committed to using criminal, civil, and administrative actions to protect consumers. The Department will work to ensure the safety of food, medicines, and consumer products, and will safeguard consumer information from unlawful acquisition and use. Using our full array of civil and criminal enforcement tools, we will hold accountable those who make fraudulent or misleading representations in the marketing of goods, especially where such conduct risks consumer harm.

C. Combating Corruption and Financial Crime

Another critical focus of the Department's budget request is investing in combating corruption and financial crime that weakens our economic institutions. The Department's request seeks significant investments in the Consumer Protection Branch, our U.S. Attorneys' offices, the FBI, and the Criminal Division to promote economic competition and prevent the theft of intellectual property, deter and prosecute corporate crime, protect the government against fraud, and combat corruption. The Department is specifically focused on prioritizing the prosecution of COVID-19 related fraud through its COVID-19 Fraud Enforcement Task Force.

D. Promoting the Integrity and Efficiency of the Bankruptcy System

Congress established the United States Trustee Program in 1977 to serve as the "watchdog" of our nation's bankruptcy system. In that role, United States Trustees oversee nearly one million ongoing bankruptcy cases annually, undertake tens of thousands of civil enforcement actions, and refer thousands of criminal matters to U.S. Attorneys' offices for investigation and prosecution each year. The President's fiscal year 2023 Budget requests a total of \$260 million for this important program to protect the interests of all stakeholders in the bankruptcy process by advocating

for strict, equitable compliance with the law and addressing violations by debtors, creditors, and professionals alike.

E. Revitalizing Tax Enforcement

The integrity of our tax system is vital to maintaining public confidence. Honest taxpayers must be able to trust that they will not bear an undue share of the Federal tax burden. The President's fiscal year 2023 Budget requests \$121.3 million, an increase of 4.4 percent above the fiscal year 2022 level, for the Department's Tax Division to support its vital mission of enforcing our tax laws fully, fairly, and consistently.

IV. ADMINISTERING JUST IMMIGRATION COURT AND CORRECTIONAL SYSTEMS

The President's fiscal year 2023 Budget requests a total of \$11.7 billion for the Department to carry out its responsibilities for administering both our nation's immigration court system and our Federal correctional system.

A. Administering an Equitable and Efficient Immigration Court System

The Justice Department is responsible for equitably and efficiently administering our nation's immigration court system. The Department's fiscal year 2023 request would strengthen our ability to apply the immigration laws justly, consistently, and in a timely fashion, while ensuring due process under the law. The Executive Office for Immigration Review (EOIR) needs more resources to address the case backlog, which has been growing for over a decade. For fiscal year 2023, the Department requests a total of \$1.35 billion for EOIR to reduce the backlog of immigration cases. This request will allow EOIR to hire more than 1,200 new staff, including approximately 200 new immigration judges above the fiscal year 2022 enacted level. The President's fiscal year 2023 Budget also expands EOIR's virtual court initiative and invests new resources in legal access programming.

B. Maintaining a Safe and Humane Correctional System

Administering the Federal detention and prison systems are also critical parts of the Justice Department's responsibilities. The fiscal year 2023 funding request seeks a total of \$2.13 billion for the U.S. Marshals Service for Federal prisoner detention. In addition, the Federal Bureau of Prisons (BOP) is currently responsible for the custody and care of more than 150,000 Federal inmates. It is critical that prisons, detention centers, and community-based facilities are safe, humane, cost-efficient, and secure.

Adequate staffing is a prerequisite to safe and secure facilities, and we must ensure that even facilities in hard-to-recruit areas are fully staffed. To this end, the Department requests a total of \$8.18 billion for BOP to ensure the health, safety, and wellbeing of incarcerated individuals and correctional staff, and to ensure transparency, accountability, and effective oversight of all Federal prisons and detention centers. This request would allow BOP to hire more than 700 new correctional officers and nearly 600 new First Step Act staff. These funds would also be used to support rehabilitative programming and improve conditions of confinement.

I respectfully ask for your support for the President's fiscal year 2023 funding request as the Justice Department works to uphold the rule of law, keep our country safe, and protect civil rights for all.

Thank you.

Senator SHAHEEN. Thank you very much. For those who came in a little later, let me just point out, we will have a 5-minute questioning period and senators will be called on in order of arrival rather than seniority, because we are no longer doing any virtual hearings in this Committee. So, I will begin.

Last month you announced the establishment of Task Force KleptoCapture, which was described as an interagency effort dedicated to enforcing sanctions, export restrictions, and economic countermeasures against Russia. As I understand, this includes targeting the crimes committed by Russian officials, oligarchs, and others, who aid or conceal unlawful conduct. I know that the country is watching very closely what's happening in the war—the unprovoked war of Russia against Ukraine, and that one huge element in that is being able to reduce the amount of funding for that war that Russia has. So, can you talk a little bit about where you

are, in terms of the interagency effort and the kind of cooperation you're getting internationally?

Attorney General GARLAND. Yes. And I second what you said about what we're all seeing on the news, almost everyday—incredibly graphic videos of horrible atrocities that are going on in Ukraine. It's not just the war, it's the way in which the war is being prosecuted by the Russian government. Pictures of dead bodies of civilians in the streets, some bound with their hands behind their backs, intentional bombing of civilian residential apartments, of a theater in Mariupol. All of those pictures are just horrific and are the kind of things anybody growing up in the 20th century never expected to see in the 21st again—a land war in Europe.

So, every part of this government is doing its part. The Justice Department's role, right now, is to investigate and prosecute sanctions violations. So, we have, as you said, the KleptoCapture Task Force. Its purpose is to go after the assets that the Treasury Department has sanctioned, as well as to go off—to go after assets that have been laundered against the money laundering statute for criminal behavior by the Russian oligarchs.

So, in addition, we are participating in the Treasury Department's REPO task force, which is the international task force, where I have met with, unfortunately virtually, the Home Secretaries, Attorneys General, and Treasury Secretaries of the participating countries. The international cooperation has been superb, really superb, and heartwarming for law enforcement officers who often have to twist arms and beg for extraditions and other sorts of cooperation abroad. There is no resistance at all, now.

Senator SHAHEEN. Can you talk about how the Department is going to be dealing with the proceeds from any recovered assets?

Attorney General GARLAND. Yes. So, the money would go into the Asset Forfeiture Fund. First thing we have to do is freeze the assets. Second thing is we have to get a forfeiture. Third is it has to go in the Asset Forfeiture Fund. The gov—we would support legislation that would allow some of that money to go directly to Ukraine. That's not the current circumstance, with respect to the Fund. But under the current circumstances, like all forfeited assets, these assets would go into the Asset Forfeiture Fund.

Senator SHAHEEN. Well, thank you. We will take that under advisement in the committee.

Let me also just editorialize a minute and say, I hope that these efforts will allow for future follow up that will take a look at how corrupt money is being laundered in the West, and produce a real effort to shut that down, not just in Russia but anywhere it's occurring.

One of the issues that you and I discussed on the phone, in advance of this hearing, was my concern about how long it's taking to get some of the nominees approved, for U.S. Attorney, for U.S. Marshals. And I understand that there are two problems. One had been the challenge of getting the background checks done on those nominees. And I guess I would be interested in hearing whether there are more resources that need to be put toward that. We need to take a look at that process and see if there are changes that need to be made. And then, of course, the other challenge is here in the Senate, with individuals who are holding up those nominees.

So, can you speak, first, to what happens when we have U.S. Attorneys—in New Hampshire, our U.S. Attorney nominee, it's been over a year—almost, I think, over a year now that she has been forwarded to the White House and is on hold. Can you just speak to the challenge with addressing crime around the country when we have U.S. Attorneys who are taking that long to get approved?

Attorney General GARLAND. Yes. So, the United States Attorneys, as well as the United States Marshals, are the tip of spear of our effort to fight violent crime. They are the ones who convene the task forces in every one of the 94 U.S. Attorney office districts. The task forces are combinations of all of our Federal law enforcement, the four law enforcement agencies of the Justice Department, as well as the law enforcement agencies of the Department of Homeland Security and other Federal agencies, combined with State, local, territorial, and Tribal law enforcement. These cooperative task forces then, also, cooperate with the local communities.

And that is the way in which the best attack on violent crime is possible. To look at what's needed in the local area, to identify the primary drivers, that is, particularly, the repeat shooters, to get them off the streets and to get them in jail. And to organize those things, we need confirmed United States Attorneys. The work of the actings is excellent but, as everyone knows, in order to establish policies and programs in any office, it's important to have a permanent head.

So, I couldn't—I couldn't urge more strongly for the Senate to approve, as swiftly as possible, the U.S. Attorney nominees and the Marshals nominees.

Senator SHAHEEN. Well, thank you very much. Is it fair to say that the hold up in—when people are holding these individuals up for other purposes, that that has a negative impact on our ability to fight crime?

Attorney General GARLAND. Yes, I don't want to get into the inner workings of the Senate, but what I will say is that any time we're not getting confirmed law enforcement officers it does have a negative effect on our ability to fight violent crime, cybercrime, all the responsibilities that the United States Attorneys and Marshals have.

Senator SHAHEEN. Well, thank you. I won't quote you at that. I will say it myself. Senator Moran.

Senator MORAN. General Garland, thank you. You're aware, and we've talked about even yet this morning, the tremendous increase in levels of violent crime. The murder rate has surged 30 percent in 2020. It's the largest increase in over 50 years, in any single year. But overall violent crime, which includes assaults, robberies, and rapes increase by 5 percent.

Joint operations between Federal law enforcement and local and State law enforcement seem to be successful. We've had Operation Legend and Operation Triple Beam in our State. Director Wrasby joined me in Kansas earlier this year. We met with our local State law enforcement officials. During that conversation, the Chief Karl Oakman, of the Kansas City, Kansas Police Department, expressed his desire—first of all, how valuable those joint operations were and his desire to see more of them. And of course, that's not unique to the Kansas City region of our State.

To what extent are joint law enforcement operations a part of the DOJ's plan to combat violent crimes?

Attorney General GARLAND. Well, they are the center of our strategy. In May of 2021, after I'd been in office just a couple of months, I saw the same statistics that you're referring to now about the rise in violent crime—the startling rise in 2020, which continued into 2021. And so, I launched our first violent crime strategy for the Department. That really includes three pillars, all of which are the ones you're talking about, which is joint task forces among Federal law enforcement, joint task forces between Federal and the State and local law enforcement, and involvement of the community because it is essential that the community let us know where the bad guys are and who the bad guys are. So, it is the core of what we do.

So, the money that we're asking for comes in, I would say, two buckets here. We're asking for more than \$20 billion—that's an increase of 8.2 percent—for our Federal law enforcement in the Justice Department, all of whom participate in these task forces. So, that includes the U.S. Attorney's offices, the FBI, the ATF, the DEA, the U.S. Marshals Service.

Then, we're asking for \$8.2 billion, which is an increase in \$5.48 billion, for grants for State and local law enforcement, for the sheriffs you're talking about, for the police you mentioned in your opening, as well. This includes money for COPS hiring, for the Byrne JAG grant that the Chair spoke of, which are used for these task forces, for OVW grants, some of which are also used for investigative task forces. That's the way we are able to create these joint task forces. And so, that's—I completely agree with your assessment.

Senator MORAN. General, thank you. I—you mentioned the U.S. Marshals. I, too, would mention the U.S. Marshals Service's Regional Fugitive Task Force as another valuable combination of local and Federal law services.

Let me turn to—in 2021, the DOJ Office of the Inspector General released a report that revealed multiple agents at the FBI had mishandled the investigation into former U.S.A. gymnastics physician, Larry Nasser, and subsequently, lied about their misconduct. I want to take this moment, in your presence, to again raise my strong concerns with the fact that it seems these agents have not been held fully accountable for, what you described as, an institutional failure.

I understand that DOJ is reviewing its earlier decision. This is an issue that Senator Blumenthal and I pursued in the Commerce Committee. But you are reviewing the decision not to criminally charge these agents. Could you provide me a status update as to where this issue lies?

Attorney General GARLAND. Yes. So, you are right. This is a horrible institutional failure. I—it's almost unspeakable—it is unspeakable, what happened to those gymnasts, and also unspeakable, the way in which the investigation failed to proceed. We have created institutional changes, in that regard, to make sure it doesn't happen again. The FBI has revised its procedures and the Deputy Attorney General has issued memoranda to the field so that, whenever a U.S. Attorney's office or Federal law enforcement

decides not to follow up, that they immediately advise State and local law enforcement, so that they can continue.

Your description of—so, the question of the investigation—so, the FBI's internal disciplinary work is still in progress. The question of reopening the earlier declination is in the hands of the Assistant Attorney General for the Criminal Division, Kenneth Polite, who is continuing to review the matter.

Senator MORAN. Does that mean that the FBI made a report to the—to that official who is now reviewing that report?

Attorney General GARLAND. I think—it is the—the referral came from the Inspector General's report. So, it's the report that you are aware of that was given to the Criminal Division to review the earlier decision to decline.

Senator MORAN. Thank you.

Senator SHAHEEN. Thank you, Senator Moran. Senator Leahy.

Senator LEAHY. Thank you, Chair. Attorney General, as I mentioned earlier, I'm glad you're here this morning. Time is short, so I'll get right to the questions.

I'd like to start with the VOCA Fix Act, VOCA, signed into law last year. We passed this legislation to give a much needed, steady stream of deposits into the Crime Victims Fund. As you know, that fund helps crime victims all over the country. A major piece of the legislation requires funds collected under deferred and non-prosecution agreements to be deposited in the Crime Victims Fund.

Now, I understand that there was a sizable deposit in the first month of implementation, but the collection's been deferred, and non-prosecution agreements have actually been quite low. Across October and November, for example, the actual total deposited in the Crime Victims Fund was around \$1 million. What accounts for such starkly low deposits from what it used to be? Is the Department concerned that this may end up with a zero balance in the Crime Victims Fund?

Attorney General GARLAND. So, this is going to be a complicated answer. I'm going to do the best I can. I may have to refer to Assistant Attorney General Loftus, who knows the details of the numbers far better than I. But I'll see if I can walk you through where we are here.

The VOCA Fix, which we greatly supported and are greatly appreciative, allowed the money to include the deferred prosecution agreements, which were not available before. The Deputy Attorney General sent a memorandum to all United States Attorneys' offices and to the FBI and law enforcement, to ensure that the money that comes from deferred prosecution agreements is tagged for the Victims of Crime Fund. So, we are making those changes.

Senator LEAHY. Is it making clear that's a priority?

Attorney General GARLAND. Yes. That—the money there must be put in and it's a priority to make sure that that happens. And you are right that, in September—my figure is \$254 million was deposited, which was the largest monthly deposit in the last 4 fiscal years. That was immediately after the VOCA Fix came into effect. In fiscal year 22 the numbers I have for the first 6 months are \$409 million in the fund.

You know, these are cyclical. They go up and down. It depends on whether there was a deferred prosecution agreement, whether

there were forfeitures and other seizures during that time. So, I don't think we have enough information, yet, to know what the numbers—

Senator LEAHY. I would ask only the Department make it clear that it is a priority that it goes there. And because of time, let me mention another thing. There's been a lot of bipartisan support in the Violence Against Women Reauthorization Act. But what we, the Appropriations Committee, determined to do was put it as part of the fiscal year 2022 Omnibus Appropriations Package because we're concerned, in the normal course of events, it might not have gotten up for a vote. But the President's fiscal year 2023 budget doesn't account for some of the new programs that were included in Violence Against Women Act.

Many of us had worked across the aisle to improve that Act, to enlarge it. I know that, when I was Chair of Judiciary, we added Native Americans, the LGBTQ community, sexual exploitation of minors. So, is the Department going to support the new programs enacted by VAWA, and will you make sure that your budget shows that?

Attorney General GARLAND. The answer is yes. I'm not sure which programs, I'd like to have our staffs talk about them, didn't make it in.

Senator LEAHY. Okay, I will, because we came together to get VAWA through the way we did. But I also want to make sure that we have the funding and that you have what you need there.

And lastly, and I'll just submit this for the record, because I see my time is up, you recently issued Freedom of Information Act guidelines. And I'm pleased with that. But I'm concerned about the enforcement of it. So, I will also submit a letter for the record on that and appreciate your answer, Attorney General.

[The information follows:]

CLERK'S Note: A question for the record on FOIA was submitted rather than an actual letter.

Attorney General GARLAND. Thank you.

Senator SHAHEEN. Thank you, Senator Leahy. Senator Collins.

Senator COLLINS. Thank you, Madam Chair. Welcome, Mr. Attorney General. The administration has taken conflicting positions on whether or not the COVID pandemic constitutes a public health emergency. Could you please explain to the subcommittee how the Department can justify arguing in court that the pandemic has subsided enough to warrant the termination of Title 42, which will worsen the problem of tens of thousands of unvaccinated migrants illegally entering the country, while at the same time arguing in a separate case that the public health consequences are dire enough to warrant compelled mask usage by Americans on public transportation?

Attorney General GARLAND. Yes. Thank you, Senator. It's just, I think, important to—for me to explain the role of the Justice Department, which is not to make judgments about the public health and, really, not to make judgments about policy in either of the two areas that you're—that you're raising, but rather to make determinations of whether the programs and requests of the agencies that are responsible for those are lawful.

So, with respect to the mask mandate on the planes, I think this is quite transparent. The CDC announced its assessment that this was a program that continued to be necessary in the confines of airplanes and public transportation. The only question for us is, is that a lawful—and they asked us to appeal. The Solicitor General concluded it was lawful and so we have appealed.

With respect to Title 42, it's the same analysis from our side, from the Justice Department's side. The only question here is the CDC's program. It's the—CDC's announcement and its assessment and we defend that program as long as it's lawful. We don't make the public health determinations that you're speaking of.

Senator COLLINS. And I understand that. I think that the CDC has put the Justice Department in an untenable position of arguing one position in one case, and a completely conflicting position in another case. But I understand that you don't make the public health determination.

Let me switch to another consequence of the uncontrolled southern border. In the year between September 2020 and September 2021, more than 104,000 Americans died from drug overdoses. In Maine, we set a horrific new record, 636 people died from drug overdoses. That was a 23 percent increase from the previous year. In 2021, the Maine Drug Enforcement Agency seized more than 10,000 grams of fentanyl. That's a 67 percent increase from the previous year. Just 3 months into this year, agents tell me that they have already seized half of last year's total.

Law enforcement officials in Maine and elsewhere, tell me that these drugs are largely entering the United States through the southern border, where resources that could be targeting drug interdiction are instead being diverted to help with the influx of migrants illegally crossing the border. Do you agree that the government's inability to secure the southern border has led to more drugs coming into our country?

Attorney General GARLAND. Look, I—the opioid epidemic, and particularly the influx of fentanyl, is just horrifying and extraordinarily sad for the large numbers of Americans who are becoming addicted and who have become addicted. We—the job of the Justice Department is to fight the large-scale drug trafficking organizations that are bringing this money—these drugs into the country.

And that's the reason we have asked for large increases for all of our anti-drug programs. The DEA has asked for a \$102 million increase, which is for a total of \$3.1 billion, to fight the very issues that you're speaking of. The U.S. Marshal's Service has asked for \$1 billion for drug trafficking fugitive capture. The U.S. Attorney's offices \$106 million, the FBI \$161 million, the Criminal Division \$446.9 million, including regional opioid task forces, and the COPS grants. The money that we're giving includes the money for the anti-heroin and anti-meth task forces.

So, we are doing—we are asking for all the money we can get, and we are not stopping here. As you no doubt know, I announced the indictment and extradition of the former President of Honduras to the United States to face justice for organizing drug trafficking coming out of the Northern Triangle. We will be persistent in that effort.

Senator COLLINS. Thank you.

Senator MORAN. Senator Manchin.

Senator MANCHIN. Thank you, Mr. Chairman. Thank you, Honorable Merrick Garland. I want to thank you for your continued support of public service. It's been wonderful and we appreciate very much your position.

Let's start on voting rights. I've always believed that healthy democracy depends on a voting system that is accessible, free, fair, and secure. While history is going to tell us that we've come a long way in ensuring all individuals, regardless of their race, sex, or political affiliation have the ability to cast their vote, we can all agree that we still have a lot of work to do.

I'm particularly concerned about the recent opinions and rulings that seem to undercut decades of established legal precedent under the Voting Rights Act. Specifically in February, a Federal district court in Arkansas ruled that only the U.S. Attorney General has standing to enforce Section 2 of the Voting Rights Act. The court found that it would be inappropriate to imply a private right of action to enforce Section 2 of the Voting Rights Act.

So, your opinion on that, sir, with that interpretation? You agree, disagree, and what impact, if any, could this ruling have on voting rights, if this was adopted across the country.

Attorney General GARLAND. Yes, very good question, Senator. On the first question, normally I don't, sort of, opine.

Senator MANCHIN. I understand.

Attorney General GARLAND. In this case, I've already opined, so I don't think it hurts any to do that. We have filed—across the country, in a number of these cases, we believe there is a private right of action to enforce the Voting Rights Act. It has always been assumed that that was the case, since the Act was passed in the mid-60s. No one has ever questioned it, I think, until this year.

To the second point, the consequences of the Justice Department being the only one who can bring voting rights cases, I'm going to be blunt. You're going to have to give us a lot more money. If the Justice Department has to bring every single case to enforce voting rights, we're going to have—

Senator MANCHIN. You know, the argument about that, sir—I'm sorry to interrupt you, but the argument about that—you hear the pros and cons on that. They're saying, well, there'd be too much litigation. That, you know—and if you had everybody being able to declare that they've been infringed upon. And we don't see that going any further than that. We're having all these discussions in our committees, but we're trying to get a clarity on that. But it seems like, to me, that the person has that right, but it hasn't been exercised if it's been frivolous. I haven't seen it go any further, so I don't know how it's been a strain on the court system.

Attorney General GARLAND. So, I—you know, I haven't done an analysis of the court system, but this has been the rule that we've had all the way since the mid-60s. I've never heard any complaints that it is taxing the court system in any—

Senator MANCHIN. Yes, we haven't either.

Attorney General GARLAND. Any way.

Senator MANCHIN. Sir, if I could switch a little bit on that, and that's very helpful. We're working on that. On the price gouging—we hear a lot about price gouging right now. And we saw that with

a—when we first had the—when we first had COVID brought to our attention, horrible epidemic, back in May of 2020—March of 2020. We saw that with N95 masks, Clorox wipes, toilet paper at the beginning of the pandemic, and now, we're going to—we're seeing it again, this time with fuel prices and food prices and things of that sort. Should there be a criminal price gouging statute?

Attorney General GARLAND. Well, this is a matter of huge debate and antitrust and economics. I'd like to hold off on that, but our staff would be happy to work with—

Senator MANCHIN. Right now, what constitutes you all, basically, taking it under your surveillance, if you will, acceptable prices for scarce products? What constitutes the acceptable prices for scarce—

Attorney General GARLAND. So—right—

Senator MANCHIN. Market demands, things of this sort, global pricing.

Attorney General GARLAND. So, for us, the questions are unlawful agreements to fix prices and exclusionary behavior by monopolists and near monopolists. So, if we're in either of those circumstances, if they exclude competition, that falls under the antitrust laws and, likewise, agreements on prices between competitors.

Senator MANCHIN. And I want to follow up, also, on Senator Collins' concerns on the opioid epidemic. Myself and Senator Capito, in the State of West Virginia, we've been number one as far as getting slammed with this. Can you speak to the status of DOJ's current efforts to curtail the opioid crisis, including the Appalachian Regional Prescription Opioid, or what we call the ARPO Strikeforce?

Attorney General GARLAND. Yes, so I think that's a—and I hope you agree, I think that's a very effective task force. That money is included in our request for funds. I think it—I'm not sure whether that's the one that comes under the Office of Justice programs or under the Criminal Division, but those task forces, both the meth and heroin ones that Senator Collins was concerned about the last time we spoke, and the opioid one that you're talking about—

Senator MANCHIN. We need your support for that, sir.

Attorney General GARLAND. We support, and we support expanding those and, if we get the money requested in the budget—

Senator MANCHIN. Very quickly, I want to follow up with, I introduced the DEA Enforcement and Authority Act that would amend the immediate suspension order standard of review from a substantial likelihood of an immediate threat standard to a probable cause standard. That's, again, order standard of a review from a substantial likelihood of an immediate threat to a probable cause standard. So, what additional authorities do you believe DOJ or FBI need in order to effectively stop the flow of prescription opiates and other illegal drugs? Because the substantial likelihood is pretty darn broad and probable cause, we know exactly what their intent are.

Attorney General GARLAND. So, I haven't been directly involved in the question of the standard here. Our Consumer Protection branch does the work on—

Senator MANCHIN. If you could look—we have that piece of legislation. I think all of us have been—our States have been ravaged by this—

Attorney General GARLAND. Yes.

Senator MANCHIN. Horrible addiction that we have, and drugs continue to flow. It might give us a better chance to fight this opioid onslaught or drug onslaught. But if you could look into the language, if you all could support, that's the DEA—it's the Enforcement and Authority Act.

Attorney General GARLAND. All right.

Senator MORAN. Senator Manchin, thank you.

Attorney General GARLAND. We'll be happy to do that, Senator.

Senator MORAN. Senator Kennedy.

Senator KENNEDY. Thank you, Mr. Chairman. Thank you, General, for being here. Could you pull that mic closer to you, please, sir.

Attorney General GARLAND. Oh, I'm sorry. Is that better? Yes.

Senator KENNEDY. Yes, sir. General, I think the Justice Department is losing. I think you're losing on crime. I think you're losing on drugs. I think you're losing on immigration. I think you're losing on Chinese espionage.

Let me start with crime. What percentage of cops in America do you think are bad cops?

Attorney General GARLAND. A very small percentage.

Senator KENNEDY. Like, how small?

Attorney General GARLAND. I don't have a number. I think most police—

Senator KENNEDY. Well, you're the country's chief—one of the country's chief law enforcement officers.

Attorney General GARLAND. Yes, but—

Senator KENNEDY. Is it less than 10 percent?

Attorney General GARLAND. Yes. Let me just be clear. We believe that most police officers follow the Constitution in their practices. Most police departments do. And all police officers, I believe, want to work in police departments that follow constitutional policing requirements.

Senator KENNEDY. Is it less than 5 percent?

Attorney General GARLAND. I don't have the numbers. I think it probably is, but again, I don't have any numbers for you.

Senator KENNEDY. Okay. Do you think most cops are racist?

Attorney General GARLAND. No, I do not.

Senator KENNEDY. What percentage of cops do you think, in your judgment—I know you can't give me an exact figure—do you think are racist?

Attorney General GARLAND. I'm sorry. I'm not resisting because I have a number that I can't give you. I just really—I don't have any way of making that valuation.

Senator KENNEDY. What's your gut tell you, less than 5 percent?

Attorney General GARLAND. One thing I've learned is to not give answers from my gut.

Senator KENNEDY. Right. Well, you think it's less than 5 percent?

Attorney General GARLAND. I don't know the answer. I'm sorry.

Senator KENNEDY. Okay. You don't know?

Attorney General GARLAND. I don't know, no.

Senator KENNEDY. Okay. Why doesn't the Justice Department support "Stop, Question, and Frisk"?

Attorney General GARLAND. I'm not sure what—you mean, "Stop and Frisk"? Is that what you mean?

Senator KENNEDY. Some call it "Stop and Frisk" (indiscernible).

Attorney General GARLAND. Yes, yes, look—yes, we—I don't know that the Justice Department has a position. This is a State and local role, normally. Look—

Senator KENNEDY. Do you think it works?

Attorney General GARLAND. I'm sorry.

Senator KENNEDY. Do you think "Stop, Question, and Frisk" works?

Attorney General GARLAND. I think, in some circumstances it can work but, of course, it can be abused.

Senator KENNEDY. Right.

Attorney General GARLAND. Yes.

Senator KENNEDY. What—but why doesn't the Justice Department aggressively encourage law enforcement officials to use that technique? It's been declared constitutional, as you know.

Attorney General GARLAND. Yes, the Supreme Court has affirmed the constitutionality of "Stop and Frisk". That's—in the Terry case. That's exactly right. But we don't do—that—Federal Government doesn't do patrolling. This is work for patrol.

Senator KENNEDY. I know you don't, but this you're one of the country's chief law enforcement officials—maybe the chief—and what you say matters. And suppose—here's what I'm asking. Let's take Chicago, where you haven't—we haven't made any end roads in stopping the killing. I mean, Chicago is now the world's largest outdoor shooting range. We know that a lot of the shootings come from gangs. Why wouldn't you want to call the police chief and the mayor in Chicago and say, "Look, you know who these gang members are. When you have reasonable suspicion, under Terry v. Ohio, an objective standard, more than just a hunch, why don't you aggressively stop, question, and frisk these gang members?" You'll get guns off the street. You'll get drugs off the street. And you'll get a lot of gang members off the street, and you'll stop people killing each other. Why won't you do that?

Attorney General GARLAND. The best way for the Federal Government to stop violent crime is to work at each local level and determine—and let the State and locals determine what the best use of their own resources is.

Senator KENNEDY. Judge, I'm sorry for interrupting you but I'm trying to get some answers.

Attorney General GARLAND. You're—I'm sorry—

Senator KENNEDY. Why won't you do that? Just tell me why you won't do that.

Attorney General GARLAND. Because—

Senator KENNEDY. Your opinion matters.

Attorney General GARLAND. Because there is no one solution fits all that the Federal Government can suggest to State and local law enforcement. We believe State and local law enforcement knows best as to what to do there. We provide—

Senator KENNEDY. Well, it's not working.

Attorney General GARLAND. We provide our technical expertise. We put lots of resources into joint task forces. We pick up—

Senator KENNEDY. Well, General, it's—I know I've got to shut this down. I've only got 15 seconds. Is that why you're asking, in the middle of a raging inflation, for 7 percent more money, \$2.36 billion to provide technical increase—or technical advice? I mean, we're going backwards here on crime, General. You're the State's—or the country's chief law enforcement officer and you won't even answer my question about how you feel about “Stop, Question, and Frisk”.

Attorney General GARLAND. I think it—

Senator KENNEDY. Why should we give you more money?

Attorney General GARLAND. I think it's a resource allocation issue for each local police department. I believe that the Justice Department does the best by putting the money that we're asking for as an increase in law enforcement that can assist the State and locals in the best way.

Senator KENNEDY. But, General, is that what we're supposed to tell the mothers of those kids getting killed in Chicago? “You don't understand. It's a resource allocation issue.”

Attorney General GARLAND. No, what you're supposed to tell the mothers in Chicago, and what I told them when I was there, was the Justice Department was there to provide all the resources that this subcommittee will give us, to stop violent crime.

Senator KENNEDY. But yet, you won't try—

Attorney General GARLAND. The more resources you can give—

Senator KENNEDY. “Stop, Question, and Frisk”.

Attorney General GARLAND. That is a question for the State and the local—I'm sorry, for the State and local law enforcement.

Senator KENNEDY. I didn't go over as much as Manchin did, Madam Chair.

Senator MORAN. That's not the standard by which we judge behavior.

Senator KENNEDY. Thank you, General.

Attorney General GARLAND. You're welcome.

Senator MORAN. Now, Senator Van Hollen.

Senator VAN HOLLEN. Thank you, Senator Moran, and welcome, Mr. Attorney General.

Attorney General GARLAND. Thank you.

Senator VAN HOLLEN. I want to start with some thanks to you and President Biden and your team at the Justice Department for implementing something that many of us have pushed for a long time, which is a final rule with respect to ghost guns. These are, of course, are weapons. You can buy them over the Internet in pieces, quickly assemble them, and they shoot and kill people just like a regular firearm. But one major difference, they do not have serial numbers, which is why they're becoming more the weapon of choice by criminals in my State of Maryland, places like Baltimore City, and around the country.

So, I want to applaud you for moving forward on that effort and, also, applaud the President for nominating a Director of ATF, Steven Dettelbach, a good candidate. I hope the Senate will confirm that nomination expeditiously. The ATF has gone headless for way too long, as you know. And we need a strong ATF to crack down on illegal gun trafficking, among other issues.

As you know, you know, Congress has brought back congressionally-directed spending, so that we can try to target resources where our communities say they're needed the most. And Senator Cardin and I worked with this Committee to channel important resources to address the really serious violent crime problem in Baltimore City. And there's no one solution, but we provided a series of resources for community-based crime violent prevention programs, community policing.

So, my question to you, Mr. Attorney General, Baltimore City's waiting on those funds. How quickly can we get them? Can you give us your commitment that you can get those out the door quickly?

Attorney General GARLAND. If you give us the money, we can get them out the door quickly. You know, an important part of our ability to fight violent crime in Baltimore and other locations, where it is a very serious problem, is having more Assistant U.S. Attorneys to prosecute these cases. The Federal Government has stronger—

Senator VAN HOLLEN. So, Mr. Attorney General, just one clarification here. So, I'm talking about, in this question, monies we've already have appropriated. These are monies that we've provided. They're in the custody of either the Department of Justice or Treasury, and we'd just—

Attorney General GARLAND. I see. I see.

Senator VAN HOLLEN. Like to get the money out the door.

Attorney General GARLAND. What we will do—as far as I know, that—our priority is to get the money out the door. It doesn't do us any good to keep it in main Justice, I assure you.

Senator VAN HOLLEN. Yes.

Attorney General GARLAND. So, if—

Senator VAN HOLLEN. Well, we'd like—we'd like to encourage your team to get it out because it is a serious situation there.

Now, to the broader issue you're raising, with respect to resources for the U.S. Attorney in Maryland, for the ATF in Maryland, for U.S. Marshal Service in Maryland, we have seen some increases over the last couple years. And I want to thank you and your Deputy Attorney General Monaco, who's had a serious of phone calls with Senator Cardin and myself. But can you—we do need more resources. I mean, we have a very serious problem in Baltimore City. And we do have good cooperation between the Federal Government, State and local jurisdictions.

But can you talk about, specifically, how resources you're requesting here can strengthen our ability to get more resources to Baltimore City?

Attorney General GARLAND. Yes, so, through no fault of this Subcommittee, we did not get the amount of money for the United States Attorneys that was in the budget request, and it was in the marks of the Subcommittee as a consequence of the omnibus. We received \$120 million less than the fiscal year 2022 request. So, for that reason, we're asking for increases for the U.S. Attorney's offices, to allow us to hire 157 more Assistant U.S. Attorneys. Obviously, the more Assistant U.S. Attorneys we have, the easier it is to allocate them around the country to the places that are in need.

Same is true with respect to ATF. We're asking for an increase of 122 agents. Again, the more that we have, the more we're able to expand the locations in which we can put people.

Senator VAN HOLLEN. Thank you, Mr.—I look forward to supporting that budget request for the reasons you've laid out. I hope the Committee will as well.

My final—I just have a statement here, Mr. Attorney General. The Congress, on a bipartisan basis, has recognized that the FBI needs a new consolidated headquarters that meets its security requirements. And before the previous administration, three sites had been located. And in the last bill passed by the Congress, Appropriations Bill, we directed the General Services Administration to select one of those three earlier identified sites for the new fully consolidated FBI Headquarters. So, as the chief law enforcement officer, we expect you to work with us to make sure that the law is followed, and I'm confident that you will do that.

Thank you. Thank you, Madam Chair.

Senator SHAHEEN. Thank you, Senator Van Hollen. Senator Hagerty.

Senator HAGERTY. Thank you, Senator Shaheen, and thank you, Ranking Member Moran, for holding this hearing. Thank you, Attorney General, for being back with us today.

I want to touch on something that's a great concern to my constituents and I think, frankly, to the confidence of many people in our system that you control, through the Department of Justice, and that's the matter of the Hunter Biden investigation. It received a great deal of press, but I want to ask you a bit about how the communications have worked, within your Department, with the White House, on this.

First, have you been briefed on the Hunter Biden investigation yourself, General Garland.

Attorney General GARLAND. So, the Hunter Biden investigation, as I said even in my own nomination confirmation hearing, is being run by and supervised by the United States Attorney for the District of Delaware. He's—

Senator HAGERTY. I'm aware of that, but he reports to you.

Attorney General GARLAND. He is supervising the investigation and I'm—you know, I'm not at liberty to talk about internal Justice Department deliberations. But he is in charge of that investigation. There will not be interference of any political or improper kind.

Senator HAGERTY. And are any senior officials in your Department being briefed or—

Attorney General GARLAND. Again, he is the supervisor of this investigation and, you know, the normal processes of the Department occur. But he is the supervisor of this investigation.

Senator HAGERTY. Well, if you won't be able to say whether there have been communications there, I'd like for you to tell me—or answer this question, if you would. Would you think it would be appropriate for the President of the United States to call you into the Oval Office and tell you that his son didn't break the law regarding this matter?

Attorney General GARLAND. Absolutely not. And the President has not done that, and the President has committed not to interfere, not only in that investigation, but any other kind of—

Senator HAGERTY. Well, I agree with you, but—

Attorney General GARLAND. Investigation.

Senator HAGERTY. But—but I do wonder this, then, why the President is resorting to TV and having his surrogates go on TV to say just that message. Earlier this month, White House Chief Of Staff Ron Klain stated on national television that, “The President is confident that his son didn’t break the law”. And the White House Communications Director said that, “President Biden maintains his position that his son did nothing that was unethical”. This was on national television.

The President’s already told his subordinates, clearly, these are people that he can fire at will, that he and his family did nothing wrong. How can the American people be confident that his administration is conducting a serious investigation?

Attorney General GARLAND. Because we put the investigation in the hands of a Trump appointee, from the previous administration, who’s the United States Attorney for the District of Delaware. And because you have me as the Attorney General, who is committed to the independence of the Justice Department, from any influence from the White House, in criminal matters.

Senator HAGERTY. Well, I think the observation here is terribly critical because there’s an obvious conflict of interest here, because of those who are investigating the Biden family and their enterprise can be fired by the head of the family who’s being investigated. That is Joe Biden can fire the attorney general in Delaware. He can have an impact on all of your staffing.

And I want to ask you this. Under what circumstances do you consider, or how do you evaluate whether you would appoint a special counsel?

Attorney General GARLAND. I think this is a fact and law question in each case, determining—depending upon how cases go forward and a question of whether the Justice Department, with its normal processes, should continue. I want to be clear, though, special counsels are also employees of the Justice Department. We don’t have an independent counsel statute anymore. Both the Democrats and the Republicans experimented with this, and I think, probably in the end, neither side liked it. And that’s why we ended with the law not being reauthorized. But in any event, the special counsel is also an employee of the Justice Department.

Senator HAGERTY. Have you had any consideration about whether to do this, or—

Attorney General GARLAND. Again, I think our internal deliberations have to stay within the Department.

Senator HAGERTY. Again, I’ll just restate that there’s an obvious conflict there that raises concerns amongst my constituents.

I’d like to turn to some public evidence, though. There are emails and photographs that show that President Biden, while he was Vice President, met several of Hunter Biden’s business associates, including a Burisma executive—that’s the energy company that paid Hunter Biden \$1 million per year to sit on its Board—and a Russian billionaire, who paid Hunter’s firm \$3.5 million, around the same time. All of this is while President Biden was running portions of the United States Foreign Policy, including Ukraine.

There's evidence that Hunter Biden paid for Joe Biden's living expenses while he was Vice President. A Hunter Biden email from 2010, entitled "JRB Bills", Joe R. Biden Bills, discusses paying for the upkeep of Joe Biden's large lakefront home.

There's another 2010 email from a Biden confidante to Hunter Biden saying, "Your dad just called me. He could use some positive news about his future earnings potential." To me, this suggests that Joe Biden's \$231,000—his taxpayer funded salary—and lifestyle as Vice President of the United States weren't enough to support his lifestyle. That same confidante of—and, also, Hunter Biden's business partner, made nine visits to the White House between 2009 and 2013, and met with Joe Biden in the West Wing, while Joe Biden was Vice President.

And we have a text message from Hunter Biden to his daughter, stating that, "Don't worry. Unlike Pop—", meaning Joe Biden, "I won't make you give me half your salary".

So, it seems President Biden was serving as Vice President and running U.S. Foreign Policy, at the same time that his son, Hunter Biden, was raking in money from shady foreign business deals. And this was money that was being diverted to benefit Vice President Biden.

So, General Garland, do you have any reason to dispute the evidence that indicates that President Biden was involved with, and using money from, Hunter Biden's business deals?

Attorney General GARLAND. Senator, following the long-standing rule of the Justice Department, we don't discuss investigations or evidence that may or may not be relevant to investigations. That's a matter for the United States Attorney's office that's investigating the case.

Senator HAGERTY. Well that's great—thank you.

Senator SHAHEEN. Thank you, Senator.

Senator SHAHEEN. Attorney General Garland has requested a break at 11:15. So, what we are going to try and do is to get Senator Schatz and Senator Capito in and then, we will break—have a 10-minute break, and then, we will take up the rest of the questions. Senator Schatz.

Senator SCHATZ. Thank you very much, Chair Shaheen, and Vice Chair Moran. Attorney General, thank you for being here.

I have—I'm going to try to get through five questions. So, if I can have quick answers, that'd be great.

What, if any—

Attorney General GARLAND. I'll try to talk fast.

Senator SCHATZ. Are the DOJ's plans to reinstate Federal prosecutorial discretion for non-interference in States, territories, and tribes where marijuana is legal?

Attorney General GARLAND. So, as I understand our role, with respect there, it's really the same as it is with respect to States. You're talking about marijuana prosecutions—

Senator SCHATZ. Yes.

Attorney General GARLAND. Right. And I think I—you know, I laid this out, actually, also, in my confirmation hearing and my view hasn't really changed since then. And that is that the Justice Department has almost never prosecuted use of marijuana and it's

not going to be—it's not—that's not an efficient use of the resources given the opioid and methamphetamine epidemic that we have.

Senator SCHATZ. That's good enough for me. Let's move on.

Attorney General GARLAND. Okay.

Senator SCHATZ. I want to talk a little bit about PREA oversight. There have been a number of recent sexual abuses case at FCI Dublin and other Federal prisons across the country. What's the Department going to do to address these PREA violations?

Attorney General GARLAND. Yes, so, this is a, you know, another really terrible set of events. We have prosecuted a number of the individuals responsible now, at Dublin, for this. We have put into place a new warden at Dublin, I think, within the last three weeks. We've—the Deputy Attorney General has set up a task force to investigate and determine what the procedural failures here were, and how these kind of failures can be prevented in the future. And the matter's been referred to the Inspector General for an internal investigation.

Senator SCHATZ. Thank you. Will the DOJ at least consider—I don't want you to commit to it now, but consider supporting the re-establishment of an interagency law enforcement equipment working group to oversee and provide recommendations for Federal programs, that include the transfers or sales of controlled equipment to law enforcement? We know this issue comes up periodically. This is a space where this can be done intelligently. I think we've seen the various—1033 and other programs, where equipment is transferred to local departments, and it can be very useful, or it can be overkill. And the point of a working group like this is to, sort of, suss out what departments need and what seems to be over arming local police forces.

Attorney General GARLAND. I appreciate your not asking for a commitment, but of course, any consideration of that issue requires interagency discussion, because some of the equipment you're talking about is Defense Department equipment. So, certainly, I would be happy to consider that.

Senator SCHATZ. This is a Hawaii-specific question. We don't have a halfway house in Hawaii, since October of 2019. So, does the Department have an interim or emergency set of measures to ensure that Hawaii's halfway house eligible individuals still have access to services?

Attorney General GARLAND. Yes, so, as you know, Senator, I think we have discussed this before. We've had—the Bureau of Prisons has had problems expanding a residential re-entry center in Hawaii, for a number of reasons, not the least of which is the providers are very scarce. BOP, I understand, has made progress on a day reporting center contract and hopes to make an award within the next few months.

Senator SCHATZ. Great. Final question, easy one. What is your position on clemency for Leonard Peltier?

Attorney General GARLAND. So, this is a matter that goes into—applications go to the Pardon Attorney. The Pardon Attorney makes recommendations through the Deputy Attorney General to the President. And so, I'm not going to comment on that, now.

Senator SCHATZ. Can you comment on where we are in the process?

Attorney General GARLAND. I don't—I assume, but don't know, that an application has been made. I actually don't even know whether—I mean, I've read about this in the press, so I don't know anything more about it than what I've read in the press.

Senator SCHATZ. And this doesn't cross your desk?

Attorney General GARLAND. Certainly not as an initial, or even secondary, matter. This goes to the Pardon Attorney and then, the Deputy Attorney General. I'm not saying I wouldn't be involved, but it certainly has not crossed my desk.

Senator SCHATZ. Thank you very much.

Senator SHAHEEN. Thank you, Senator Schatz. Senator Capito.

Senator CAPITO. Thank you, Madam Chair, Ranking Member, and thank you, Mr. Attorney General, for being with us today.

I'm not going to ask you a question on this. I just wanted to begin with expressing my deep concern about the flow of fentanyl into the country, from the southern border. Senator Manchin mentioned West Virginia's at the tip of the spear, as you know. Senator Collins brought this up as a big issue. We've had meetings over the last two weeks, being at home, and fentanyl is the killer. I mean, it is what's coming up through the southern border. So, I would impress upon you how absolutely critical it is that the situation at the southern border has got to get better. I understand the demand side is what's driving this, in a lot of ways. But if we can cut the supply, I think we can cut a lot of tragedy out of a lot of people's lives. And I know you understand that, as well.

Let me ask a question. According to—over the pandemic, we've seen a significant increase in first-time gun owners, with almost 60 percent increase in African-American gun owners, 50 percent increase in Hispanic gun owners, 43 percent in Asian-American gun owners. I guess I would ask you if you have a perception as to why this is. But the reason I'm asking the question, and I'm interested in it, of course I want to see our Second Amendment rights protected, but also, the NICS system, which runs the background checks, goes through West Virginia, as you know.

So, do you have a—any kind of perception as to why gun ownership is up among different groups and, during the pandemic? I know it's been bigger in all groups. What would you attribute that to? And what kind of strain is this having on our NICS system?

Attorney General GARLAND. So, I don't know the answer, I'm sorry, to the first question. This is the kind of analysis that I, you know, can't make up and I can't even guess at. I don't know what the causes are.

The second question I can answer. You know, the more gun sales, the more difficult it is for the NICS system, but that's the job of the NICS system. So, that's why we're asking for an increase in \$6.2 million for the NICS system, in the President's budget here, to take into account the increase in the number of sales.

Senator CAPITO. Right. And they can certainly use it. And we know we want accurate records, we want good records, and, I mean, they're working 24/7, as you know.

Recently, FBI Director Christopher Wray stated, during an interview, that there is a 59 percent increase in police officer killings. That is, officers being killed at a rate of almost one every five days. This is alarming to me. We had one of these incidences in our

hometown. It's occurring at ambushes and attacks. You're asking for more money in \$30 billion in mandatory spending for law enforcement help. What are you looking at, in this area, to protect—I know hiring is an issue, but protecting our force? And this is very concerning to me.

Attorney General GARLAND. Well, it's extraordinarily concerning to me and to all of the 120,000 members of the Justice Department, most of whom are involved in law enforcement. So, these are our brothers and sisters who are, sometimes being targeted directly, sometimes being killed in the line of duty, and sometimes, as a consequence of suicide. So, we have an overall task force involved in investigating threats, which includes, in particular, threats against law enforcement and local police.

Senator CAPITO. Are you seeing the threats go up?

Attorney General GARLAND. Yes, extraordinarily so. And you're right about—I think what—I don't know the number that Director Wray cited, but I'm—it sounds exactly right to me. The number is extremely worrying.

Senator CAPITO. Well, I'd like to see the focus of some of this new funding go into this precise issue. The suicide issue, obviously, is something that's deeply troubling, as well. I think a lot of it is the lack of respect for law enforcement in certain areas of the country, around the country. We're having trouble hiring in. We tried to do—we tried to do reform, couldn't get it across the finish line to try to help our local law enforcement recruit, train, you know, do bias training, and all kinds of things that we see are issues within our police department. But I'm very, very concerned about this.

Let me ask you another question. I noticed in your statement that you're going to create a division to combat climate crisis. The reason I'm interested in this is, I'm on the EPW Committee. I'm the Ranking Member there. There is a lot of enforcement at EPA and other places on environmental justice. You're going to create a new Office for Environmental Justice. I mean, are these directives coming from the White House? Why now, and why, with all of the other efforts that are going on, throughout all the different Cabinet positions in the government, is this something that you're putting a high priority on, right now?

Attorney General GARLAND. So, I think you rightly noted, it's not a division. It's an office within an already existing Environment Division. The reason is that there are responsibilities, both in the Environment and Natural Resources Division and in the Civil Rights Division, and so, coordination on the environmental justice issue is required.

Senator CAPITO. Is that not being handled in other areas? Like, for instance, in the EPA Enforcement, in their Environmental Justice Office.

Attorney General GARLAND. Well, to be honest, I don't know about their Environmental Justice Office. But we have a Civil Rights Division, which does prosecutions for civil rights violations. We have the Environment and Natural Resources Division, which does the affirmative cases. And we wanted to have some coordination between the two, that's the reason for having this office.

Senator CAPITO. Well, thank you. I think I've mentioned about three things I would put in front of this. And thank you so much.

Attorney General GARLAND. Thank you.

Senator SHAHEEN. Thank you, Senator Capito. We will now take a break. We will reconvene at 11:30.

Attorney General GARLAND. Thank you.

Senator SHAHEEN. Thank you.

[Recess]

Senator SHAHEEN. This hearing will come back to order, and I will call on Senator Murkowski who is next.

Senator MURKOWSKI. Thank you, Madam Chair. Mr. Attorney General, welcome. Before I begin asking my questions, I wanted to note that, when Senator Leahy was asking you about the VOCA Fix, know that that's something that we're monitoring very, very, very carefully. We worked hard to make sure that we had \$5 million for the Victim's Service Organizations in Alaska, to help. That was a real panic cry that we heard from the State. And I am concerned—Senator Leahy has emphasized making this a priority, but I want to make sure that we're not in a situation where we're looking again, realizing we're not measuring up here. There's a gap. So, if there is any kind of alternative funding line items to ensure that our victims' organizations are able to receive this, I certainly hope that the Department is looking at that.

And he also raised an issue with regard to some of the new grant programs in VAWA that, for reasons known or unknown, have not been reflected in the President's budget. And you indicated, you know, you weren't sure that those might be. Some of the ones that we have looked at are those grant programs, the new grant programs focused on expanding access to SANEs, as well as to medical forensic examinations. So, my hope is that—is that this was just a matter of timing, not a deliberate choice to overlook those very important programs, certainly in rural States like Alaska. So, I just underscore that when Senator Leahy raises these issues, I am right there with him.

So, to the issue of VAWA. And as you know, this was something that I've been working on for a long period of time and was very pleased that we were able to advance this, get it signed into law, contained within the VAWA reauthorization is the Tribal title, the Alaska Public Safety Empowerment Pilot. What we're really trying to do here, is to be able to provide a level of justice in areas in my State, where they simply have none. We want to get to these remote, rural villages, not necessarily those on the road system.

What we want to do is supplement, basically, the work that the State is doing, with regard to public safety. We're not creating Indian country. We're not taking jurisdiction away from the State. But as you know, the Attorney General, in consultation with the Secretary of Interior, is directed to establish a process to designate those Indian Tribes that can participate in the pilot. So, the question to you this morning is, what do you anticipate, in terms of the Department of Justice plan to begin this process? How do you see this moving forward?

We also direct the creation of an Alaska Tribal Public Safety Advisory Committee, not later than a year. So, I'm just asking this morning, if you can share how the President's budget will support the Alaska Public Safety Empowerment Pilot, as well as the Public Safety Advisory Committee.

Attorney General GARLAND. Yes. So, I'm very grateful for everything that you did, with respect to getting VAWA reauthorized. Of course, the Justice Department has been full on in support of this all along. So, we are a lock step on this. We support the pilot program. We think it's an important ability of authority to bring these and to prosecute these and investigate these matters. We can't just leave them undone.

So, I'm very eager to get the pilot going, to get the villages decided. Likewise with the commission. So, I don't see any reason why we won't be able to be on time on our marks for this.

Senator MURKOWSKI. Well, know that we would like to be working with you to understand what those timelines are to help with the expectations of folks back home.

Last question for you relates to the Bureau of Prisons. Currently, Alaska does not have any Federal facilities to house our Federal inmate population within the State. We have seen considerable growth over the years. The number of Federal inmates has grown from just a few hundred to over 1,000. And what happens then, is many of these individuals are sent to serve their sentences at facilities outside the State, sometimes 2 to 5,000 miles away from their homes.

I have sent you a letter—sent it back in March of this year, asking that you consider working with the Bureau of Prisons to conduct a new feasibility study. It hasn't been done for a period of time. It was, apparently, about two decades ago. A lot has changed in Alaska since then. But I would ask that you look at this. We've not heard a response back, so if you can take a look at this and, again, try to work with us on a new feasibility study. But also, working with the Bureau of Prisons to obtain additional halfway house bed space in Alaska. Currently, we have only 39 beds for the entire State of Alaska. All of them are located in Anchorage. So, if you could, perhaps, follow up with me on those two asks, it would be greatly appreciated.

Attorney General GARLAND. I would be happy to have our team speak to yours, or the two of us speak directly. I'd be very happy to.

Senator MURKOWSKI. Very good. Thank you. Thank you, Madam Chair.

Senator SHAHEEN. Thank you, Senator Murkowski. Senator Braun.

Senator BRAUN. Thank you, Madam Chair. As I was going to another Committee hearing, and I just talked to Madam Chair—we had three of them at the same time today. Seems like we could organize ourselves a little better.

I was listening to your conversation with Senator Hagerty, and I did not hear the end result. And I'm assuming he probably asked, do we need a special prosecutor to look into the Hunter Biden, you know, affair. Do you think we need to, and I would then have one follow up question to that? So, do we need a special prosecutor to look into that?

Attorney General GARLAND. So, as you know, the investigation is being run and supervised by the United States Attorney in Delaware, who is an appointee of the previous administration, and continues on as the United States Attorney. The question of whether

to have a special counsel is one that—it's an internal decision making in the Department, so I don't want to make any judgments one way or the other. But I'm quite comfortable with the United States Attorney for that district continuing in the role that he's playing.

Senator BRAUN. So, a follow up question to that would be, of course Special Prosecutor Counsel Mueller, you know, was assigned in that whole Steele dossier issue, which now has been debunked. If you had been in that capacity then, do you think a special counsel was needed there, as well?

Attorney General GARLAND. It's hard to put myself back into that circumstances. And then, of course, there would be a different—for me to be in that position, there would've been a different president. So, I'm not sure I can answer that hypothetical.

Senator BRAUN. Well, it's obvious that that would be a question that many would wonder about, in terms of what that standard is, what that consistency is. And it seems like it would be the same from one administration to the next.

Got a question that really is probably more pertinent, in the sense that what's happening on our southern border is confusing, in the sense that the administration says we don't have enough resources. It's done things, from the beginning, that has—I was down there with 17 other senators, roughly a year ago. And to give you a description of the immensity, it had gone from record low illegal crossings—and I'm one that believes we need to secure the border and roll our sleeves up and fix all the issues associated with it. We were—had risen from, I think, 40,000 to 70,000. This last month, it was 212,000. I think 60-some thousand got away. I mean, it has exploded beyond anybody's imagination. I think self-induced.

And then, there are conflicting statements that part of it's due to not having enough resources. Are we resourced at the border, properly? And that would be how we address any illegal crossings. That seems to be delegated to lower levels of authority. Isn't that confusing? And in light of the issue, in terms of where it's at, do we to do something differently? And does your office need to be outspoken about trying to fix it?

Attorney General GARLAND. So, I want to be careful about explaining what our role is, because we do need more resources. I think most of the resources you're referring to are Department of Homeland Security resources. So, I'll leave that for that Secretary to express what they need. But we have asked for \$1.35 billion for our immigration courts, \$1 billion of which is to reduce the immigration court backlog. So, the thing that's our job is to run the immigration courts after we get referrals from DHS.

So, we have already onboarded everyone we can, as immigration judges. We asked, in fiscal year 2022, for 100 more. Again, no fault of this Committee, because you gave us the right mark. But as a consequence of the Omnibus, that was not funded. So, we're asking for 200 new immigration judge teams, a total of 1,200 new staff for that purpose. That's the—we've also asked for money for a virtual court initiative, so that we can run these court proceedings more efficiently and more effectively and from whatever area. If we get the additional immigration judges, we will move them to the border. We're already going to be moving them to the border, as it is.

Senator BRAUN. And can you describe what your request is, compared to what it was in prior years? What magnitude of difference?

Attorney General GARLAND. So, yes. It's an additional 1,200 staff for—

Senator BRAUN. In addition to how much before, so we can—

Attorney General GARLAND. It will bring us to a total of 834 IJs. The staff includes all their clerks, etc. So, with 200 more we'll get to 834. So, 834 minus 200 is 634 was what we had before.

Senator BRAUN. And just with the arithmetic I put out there earlier, the problem has quadrupled—

Attorney General GARLAND. Yes.

Senator BRAUN. Or quintupled. So, it would beg the question, are we putting enough resources to it, or is it, kind of, lip service because we know it's become a big issue? I would advise, maybe, that might not be adequate, given the magnitude of the current problem, it's still predicted to go up by even 50 percent more.

Attorney General GARLAND. So, that's a fair question, Senator. Of course, we didn't get what we asked for the last time, so we're trying to be realistic about what we can ask for. But resources are not the only thing we're doing. We've also adopted a new asylum officer rule with DHS, so that asylum decisions are made by the asylum officers, not by the IJs. So, they—IJ is immigration judges. So, they won't have to do that. And then, if there are denials, there will be a streamlined process, which should reduce the amount of time from current 4 years to 6 months. We also have a dedicated dockets, in order to be able to better distribute the work among our IJs.

So, it's a combination of things. We want more resources and we're trying to streamline the whole process and put more of the work—

Senator BRAUN. I don't think in the—

Senator SHAHEEN. Thank you, Senator Braun.

Senator BRAUN. Okay, thank you.

Attorney General GARLAND. I'm sorry.

Senator SHAHEEN. I know that Senator Moran and I both have a second round of questions that we would like to do. It's not clear that anyone else is interested. I don't know, Senator Braun, if you also have another round. But mine are relatively brief, so I will go ahead.

You were discussing with Senator Capito the horrific issue of police being targeted and, also, suicides. As I'm sure you're aware, there's no comprehensive national data collection regarding police suicides. So, in fiscal year 2020, we directed the Bureau of Justice Statistics to maintain a data set and report on police suicides for Federal, State, and local law enforcement. Unfortunately, BJS has not moved forward on collecting this data. We've provided stronger directives, as well as \$3 million for that data collection effort, in the fiscal year 2021 bill, but still nothing.

So, were you aware of the delays with this project? And what can we do to try and collect this data? Because it's, as you know, it's really critical to figuring out how we respond. We need to have information so we can think about what we can do to address what is becoming more and more of a challenge nationwide.

Attorney General GARLAND. I am aware. I understand that BJS will be submitting its report within the next couple of months. I'm not sure exactly how many months is it? In about 8 weeks I'll have an update for you on this—on where they are on this.

Senator SHAHEEN. Good. Well, I look forward to getting that. And we've had—sadly, we've had some high-profile suicides in New Hampshire. And I also look forward to working with the Department on what we can do to address the challenge of suicide within our law enforcement agencies. So, thank you. I'm pleased to hear that we should expect something soon.

Unfortunately, I missed a couple of the discussions around what's happening with fentanyl, because I had to step out. But I know that on Thursday, the administration released their National Drug Control Strategy. Like so many States, New Hampshire is one that has had way too many overdose deaths because of fentanyl. And I wondered if you could give us a little insight into how resources are being shifted within the Department to respond to that strategy and how that might impact small States, like New Hampshire, which are struggling with this challenge?

Attorney General GARLAND. Yes, so of course—there—we have been involved in the development of the strategy in its most simple form. There's two sides to this. There's the enforcement against the drug trafficking organizations and there's the health challenges for those who are addicted, to try to get them off of the addiction and to take care of them.

So, on the drug trafficking side, you know, we're asking for \$9.8 billion across DOJ, to counter drug trafficking. The principal agency for us, of course, is the DEA, for \$3.1 billion, which is a \$102 million increase for countering drugs. Fentanyl's at the very top of the list of the concerns. When I was at the border, I saw the same problems that everybody else is reporting of. These are very tiny pills, and as the DEA administrator makes clear, one pill can kill. And the odds—you know, it's like playing Russian Roulette because some of these pills are overdose pills. So, that's an extraordinary part of what we're doing.

We've asked for money for Marshals and for the U.S. Attorneys and for the FBI. The FBI is particularly targeting fentanyl and opioid trafficking on the dark web. And as we announced within the last two weeks, we took down the largest dark web drug marketplace, to prevent the way in which some people are getting it, which is online, at this point.

So, there's a number of different things here. Criminal Division has money in the budget for the Regional Opioid Strike Forces. And then, there are COPS grants, under the COPS program, for anti-heroin and anti-meth task forces. So, that's on the enforcement side.

On the overdose/addiction side, we've asked for \$418 million for the Comprehensive Addiction and Recovery, the CARA Act grants. We've asked for \$190 million for the COSSAP program. That's Comprehensive Opioid Stimulant and Substance Abuse grants. And another \$75 million for mental health and substance use grants. Money for drug courts, \$95 million for veterans' treatment courts, and for our Consumer Protection Branch, which tries to stop those who are oversubscribing and improperly overdispensing opioids.

So, it's a—you know, it's a two-pillar issue here for us. I can't think of anything more important or anything more tragic than what fentanyl is doing to the American people.

Senator SHAHEEN. Well, thank you. I certainly agree with that and hope that, as the strategy is rolled out that, considerable thought will be given to rural parts of the country and small States, like New Hampshire, which may appear positively on lots of scales, with respect to income level and resources, but in fact, have been very hard hit and really need help.

Thank you very much. Senator Moran.

Senator MORAN. Chairwoman, thank you. General, thank you for your presence today.

Just a couple more questions, perhaps a follow-up to a couple of my colleagues questions. But first of all, I'd like to start with Title 42 and your conversation with Senator Braun. I think your answer to him was more prospectively might transpire and the need for additional resources in the future.

I would like to highlight or focus on this year, your budget request that's in front of us now. I know there's some uncertainty with a Federal judge in New Orleans and a decision, but it seems to me that—my view, this is a pretty reckless decision because the estimates are about 14,000 migrants could begin crossing the border per day, after Title 42 ends on May the 23rd. That has to have enormous resource consequences for the Federal Government. I think Homeland Security is already talking about additional—running out of money and needing additional dollars. ICE and Border Patrol, it's estimated, could be out of funds by July of this year.

What about the impact on DOJ components, Marshals, immigration courts, U.S. Attorney's offices? Have you prepared any estimates, has the Department prepared estimates, as to what the increasing expenditures may be this year, unaccounted for in your budget request?

Attorney General GARLAND. I don't know that we have. I don't think we have those numbers now, but we can—I think our staff can work with yours. There's no question that there will be an increase in U.S. Attorney resources needed along the southern border. We've hired, with respect to the IJs, as I was telling Senator Braun, we've hired all the way up, under the current appropriations. So, without more we won't be able to increase the numbers. We are doing everything we can to streamline the system and to move people, the IJs, to the borders to assist there. But look, we're always happy for more money and I'll be happy to have our staff speak with the subcommittee's staff about that.

Senator MORAN. Well, General, I mean, the crux of my conversation with you earlier in today's hearing, generally revolved around violent crime. And my view is that consequence of what the administration is determined to do, with Section 42, can't be compensated for by removing resources going to fight violent crime. The border and violent crime are clearly related, significantly related, but you—

I remember visiting the border and what stood out to me is that, when we were housing the juveniles on the border, 40 percent of the border patrol agents were then in the housing business, not in the border patrol business. And I think there's an analogy there of

something the Department of Justice must avoid, which is to take resources away from something that is a crisis already, to address the crisis that is going to occur with the removal of 42. Does that make sense?

Attorney General GARLAND. Yes, and I assure you we don't want to remove the money that we need to fight violent crime to put it anywhere else.

Senator MORAN. Has the Department either volunteered or been tasked with providing DOJ personnel to support DHS during this crisis?

Attorney General GARLAND. I don't know what the—

Senator MORAN. U.S. Marshals.

Attorney General GARLAND. Well, yes. But to be clear, we don't do border patrolling. None of our law enforcement is able to do—is trained for that, or anything else. The Bureau of Prisons is going to make buses available and—for the transfers that the Border Patrol needs assistance for. And the Marshal Service is going to be providing additional Deputy U.S. Marshals to assist CBP at the border. But I don't want to overstate how much that is, because our ability to make those contributions is not large.

Senator MORAN. Thank you. Senator Shaheen visited with you about drugs, in particular, rural and small States. You and I had a conversation, probably as you were being confirmed, about rural law enforcement departments. And I asked you, and you agreed, and I think you've pursued making certain that rural agencies, small agencies in particular, have a fair shot at getting the Federal resources. Anything that you can do to update, or anything that you would request of me to make that more—less ownersome and more likely?

Attorney General GARLAND. I think we have been doing that. We've made it easier to make—for small law enforcement agencies, in particular the rural ones that you're speaking of, to make the applications for the grants.

I will tell you that on my recent trip to U.S. Attorney's offices to talk to joint law enforcement task forces, in Colorado and Louisiana, in particular, I met with the rural sheriffs and, you know, I wanted to make sure that these task forces were not only focused on the cities, but were focused on helping the rural sheriffs, as well. And in both of those circumstances, at least, we got considerable affirmation that that is working well.

That—you know, this is—the rural law enforcement provides the boots on the ground who know the people in the community. And the Federal law enforcement, DEA, FBI, ATF, Marshals, are able to provide the technology and the skill sets necessary to, you know, find people who cross the border from one jurisdiction into another and to bring them back. So, this is anecdotal, but my anecdotal work suggest very good cooperation in these joint task forces.

Senator MORAN. Thank you. My time is more than expired. I just would mention one other thing and, perhaps there could be a follow up by you or your staff. I'm surprised that the DOJ is only requesting—your budget request is only an additional \$68.6 million to investigate and prosecute cybercrime, including \$52 million at the FBI and \$15 million at the U.S. Attorney's office. The magnitude

of the problem is—I can't imagine can be addressed with that—with that minimal or modest amount.

Attorney General GARLAND. My numbers are—look at little different than yours.

Senator MORAN. All right.

Attorney General GARLAND. Mine show more than \$1.2 billion to address cybersecurity and cybercrime across the country. The increases are \$15 million for 50 more U.S. Attorneys to bring these cases. Another \$88 million for additional 75 FBI personnel to bring these cases. And then, for our own cybersecurity for the Justice Department and all the law enforcement agencies, \$115 million. So, I'm not sure why the numbers are different.

Senator MORAN. No, I may have—I may have misspoken or, certainly at minimum, was confusing. Those are the increases, not the total amount—

Attorney General GARLAND. We did get—

Senator MORAN. Over enacted levels.

Attorney General GARLAND. No, we did get more money in the recent supplemental because of Ukraine. I can promise you, we expect to ask for more money and part of the money we're going to ask for is cyber defense, because we're quite worried, obviously, about that. Other money in there will be for—I'm trying to decide whether to call it KleptoCapture or just our Sanctions task force. But it's the KleptoCapture Task Force. So, we'll be asking for additional money, but you did give us more money in the supplemental on this, as well.

Senator MORAN. General, thank you. Thank you for joining us. And I did agree with Senator Shaheen to help her, or work together with her, to see that we get the U.S. Attorney process back under a fashion in which we get some confirmations concluded.

Attorney General GARLAND. That would be great. Thank you.

Senator SHAHEEN. Thank you, Senator Moran, on both counts. Senator Graham?

Senator GRAHAM. Thank you. Good morning. So, on the Russia front, we had lunch and I really—I appreciate what you and your team are doing. There's a lot on your plate. You know, you wanted money in the supplemental. Is there any additional authority you need from Congress to be more aggressive, in terms of going after the oligarchs and kleptocracy? Do you need any legal changes?

Attorney General GARLAND. Yes, so—thank you for asking about that. We have been very carefully examining that question and I expect that there will be requests for legislative changes. These could go, particularly, in the way in which we do the forfeitures, to make it easier for us to do the forfeitures. I think I mentioned earlier, also the possibility of taking money out of the Forfeiture Fund that we collect this way and sending it to Ukraine. So, the answer is yes—

Senator GRAHAM. Okay.

Attorney General GARLAND. And we are hard at work on it. And I expect, very soon, within days, probably, that the administration will be able to present some requests.

Senator GRAHAM. Well, good. Mr. Attorney General, I think there will be a receptive audience to give you more money, if that's what

it needs to go after the people who've profited from destroying the Russian economy.

Along that line, there's articles in the paper about family members that have been used by Putin to, sort of, launder money, and talk of a girlfriend in Sweden. Do you know anything about an effort to bring sanctions against her?

Attorney General GARLAND. First answer is no and the second answer, I guess is, if I did know I wouldn't be able to discuss it.

Senator GRAHAM. Okay, fair enough.

Attorney General GARLAND. This is a Treasury Department issue—

Senator GRAHAM. Yes, I just—right. I just—I would encourage you to put everything on the table.

When it comes to Afghanistan, have you been briefed, recently, about the possibility of terrorism emanating from Afghanistan, into the United States? Has that threat level gone up or down or do you know?

Attorney General GARLAND. We are—the details of that I'd have to defer to a classified briefing.

Senator GRAHAM. Okay, all right. That's fair.

Attorney General GARLAND. But I think it is fair to say that we are constantly concerned about the risk that ISIS-K will try to mount something in the United States, likewise, continuing with respect to Al-Qaeda. But the FBI is putting all its enormous amount of resources into preventing that, as are—as is the intelligence community outside the United States.

Senator GRAHAM. Okay. Well, let's stay in touch on that.

Sort of, back to the border. This idea of taking Title 42 out of the toolbox, in terms of a way to deal with illegal immigrant crossings, do you believe that if Title 42 is repealed, there would be a surge at the border?

Attorney General GARLAND. I think it's important for me to explain our role in this, and the Justice Department's only role is, when the CDC makes its assessment, as it did, and asks us to appeal, for us to determine whether that would be lawful. And the Department concluded that the CDC's—

Senator GRAHAM. But you—but you're in charge—I'm sorry, go ahead. Finish your thought.

Attorney General GARLAND. Yes, and so, that was so. I think—to answer the other part of your question, I think that all intelligence suggests that there will be a large increase in the border, yes—

Senator GRAHAM. Now, when it comes to drugs—

Attorney General GARLAND. Migrants, yes.

Senator GRAHAM. Right. When it comes to drugs coming into the United States from the southern border, in the last year, has that problem gotten better or worse?

Attorney General GARLAND. I don't know what the numbers are. I mean, it is obviously the case that the transportation of fentanyl, particularly, has increased. Fentanyl is much easier—it's much more compact, much smaller, goes a longer way. The smugglers, particularly in the trucks, have developed ways to hide it, even from our x-rays.

Senator GRAHAM. Yes.

Attorney General GARLAND. So, that problem, of fentanyl crossing the border, has definitely increased, in a way that makes all of us very worried.

Senator GRAHAM. Okay. So, when it comes to your role in all this, if Title 42's repealed and we get a surge, there's an increase in fentanyl coming across the border, and the leading cause of death for Americans from 18 to 45, they tell me, is fentanyl overdose, do you think this budget and the game plan for the Biden Administration is—will be effective against this increase?

Attorney General GARLAND. I think that the budget we've asked for for drug trafficking and drug interdiction, which is \$9.8 billion, is a huge amount and an enormous allocation of America's resources, in this respect. But again, our job is different than the Department of Homeland Security's job.

Senator GRAHAM. No, I got you.

Attorney General GARLAND. And I can't speak to their resources.

Senator GRAHAM. And I'll try to wrap up here. But drug interdictions are dramatically less than they were in fiscal year 2021. We had 913,000. That's how much drugs were interdicted. Now we're at 340,000. It seems to be that interdiction's going down. So, my basic question is, do you consider the border in a state of crisis?

Attorney General GARLAND. I think, as you rightly pointed out, there's going to be a lot—and intelligence suggests, there will be a lot of people—a lot more people migrating over the border.

Senator GRAHAM. Well, the reason I mention that, as I believe it is. I believe the amount of drugs coming across are unprecedented. The amount of people coming across the border illegally is unprecedented. Seems to be every train line is getting worse. And to be honest with you, Mr. Attorney General, I think we need to go all in, all hands-on deck, of controlling our border. And do you believe that what we have in place, through this budget and the system as a whole, that we can expect to turn this around?

Attorney General GARLAND. I think that the money—with respect to the Justice Department, which is the only thing I can speak to, I think that if you give us the increased resources that we're asking for, we can do our job.

Senator GRAHAM. Okay. So, 6 months from now we'll see. Thank you.

Senator SHAHEEN. Thank you, Senator Graham.

Senator SHAHEEN. Thank you very much, Mr. Attorney General, and to all of your staff.

Attorney General GARLAND. And thank you.

ADDITIONAL COMMITTEE QUESTIONS

Senator SHAHEEN. If there are no further questions, this afternoon, senators can submit additional questions for the official hearing record. We request the Department's responses within 30 days of receiving those. And the Subcommittee stands in recess until Tuesday, May 3rd, when we will hold a hearing on the budget requests of NASA and the National Science Foundation.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

QUESTIONS SUBMITTED BY SENATOR PATRICK LEAHY

QUESTIONS SUBMITTED TO HON. MERRICK GARLAND, ATTORNEY GENERAL,
DEPARTMENT OF JUSTICE

Question 1. Victims of Crime Act (VOCA) Fix Act of 2021 Implementation: I would like to follow up on our discussion during your live testimony regarding the VOCA Fix Act. I mentioned to you that despite a sizeable deposit in the first month of implementation, the deposits into the Crime Victims Fund from deferred and non-prosecution agreements have actually been quite low. Across October and November, for example, the total deposited from those two new categories was only \$1 million.

A. What do you think accounts for such starkly low deposits resulting from deferred and non-prosecution agreements?

Answer. Signed into law on July 22, 2021, the VOCA Fix Act requires monetary penalties from Federal deferred prosecution and non-prosecution agreements to be deposited into the Crime Victims Fund. The Office for Victims of Crime reports that the Fund received \$262.3 million from deferred prosecution and non-prosecution agreements from July 22, 2021, to December 31, 2021, and \$227.2 million from deferred prosecution and non-prosecution agreements from January 1, 2022, through April 30, 2022.

Because this Act has been in effect for less than a year, the Department does not yet have sufficient information to make long-term projections on future deposits from deferred and non-prosecution agreements. The Department will continue to monitor receipts closely and educate US Attorneys' offices and Department litigating components about the importance of the Fund.

B. Is the Department concerned such low deposits may soon result in a zero dollar balance in the Crime Victims Fund?

Answer. The balance of the Fund as of April 2022 is \$2.934 billion. The Department is hopeful that the VOCA Fix Act will generate substantial increases in receipts to keep the Crime Victims Fund solvent and offset the fall-off in receipts in recent years. Receipts will continue to be monitored closely. The Department will work with Congress to ensure the Fund remains solvent.

C. What more can the Department be doing to educate its attorneys and other litigating components about the impacts of their prosecutorial decisions on the Crime Victims Fund?

Answer. The Department has issued a memorandum to U.S. Attorneys' offices, Department litigating components, and the Office of Justice Programs regarding the purpose of the Crime Victims Fund; how the Fund supports and benefits hundreds of thousands of survivors every year; and how criminal fines, and not Federal taxpayer dollars, are what sustains the Fund. In addition, the Office for Victims of Crime reports that it will brief attorneys in the Antitrust Division about the VOCA Fix Act and the Fund later this summer.

Question 2. Freedom of Information Act: I am pleased that you recently issued Freedom of Information Act (FOIA) guidelines directing all agencies to comply with the requirements of FOIA. During a FOIA hearing I chaired in March, however, I was disappointed by the Department's answers regarding its willingness to enforce these guidelines. I did not come away from the hearing with a clear sense of what the Department is ready to do if agencies ignore or violate the guidelines you issued.

A. Will you commit to utilizing the full powers of your office to enforce the Department's FOIA guidelines and ensure compliance with FOIA?

B. Will you commit to working with the Director of the Justice Department's Office of Information Policy to establish remedial or enforcement actions for the Department to take should other agencies fail to comply with the recently issued FOIA guidelines?

Answer to Questions 2A and 2B:

As the new FOIA guidelines I issued on March 15, 2022, make clear, "[t]ransparency in government operations is a priority of this Administration and this Department." The Justice Department takes very seriously our government-wide role to encourage compliance with FOIA, and we are fully committed to utilizing all of the tools available to us to ensure agencies are faithfully and effectively applying the law with a presumption of openness.

Question 3. Voting Rights: The wave of efforts across the country to suppress access to the ballot box is alarming. Legislation like the John Lewis Voting Rights Advancement Act are essential to ensuring that Americans can fulfill their constitu-

tional right to vote. I am alarmed that the John Lewis Voting Rights Advancement Act continues to be blocked from even debate in the Senate.

A. Do you agree that voter suppression poses a fundamental threat to our democracy?

Answer. Yes. As I described in speeches I delivered on May 29, 2022 and June 11, 2021 and in a Washington Post op-ed I wrote on August 5, 2021, the right of all eligible citizens to vote is the cornerstone of our democracy and the source from which all other rights ultimately flow. Since the Shelby County decision in 2013, there has been a dramatic rise in legislative efforts that make it harder for millions of citizens to cast a vote that counts.

B. While the Department waits for Congress to act, what steps are you taking to ensure that Americans' access to the ballot box is protected, everywhere in the country?

Answer. The Department is taking a wide range of steps to protect the right to vote, including:

- The Department has doubled the Civil Rights Division's Voting Section's enforcement staff.
- The Department has issued guidance on Federal voting rights laws as they relate to redistricting and methods of election for governmental bodies, methods of voting, and post-election audits.
- The Department has brought lawsuits against Georgia and Texas regarding recently enacted measures that impact the right to vote.
- The Department has undertaken a number of steps to protect the right to vote of deployed servicemembers and Americans residing overseas, including entering into an agreement with Ohio.
- The Department has brought a lawsuit and reached an agreement under the National Voter Registration Act with New Jersey.
- The Department has brought a lawsuit and reached an agreement under the National Voter Registration Act and the Help America Vote Act with Oneida County, New York.
- The Department has set up a task force to address threats against election workers and officials.
- The Department has also filed numerous amicus briefs and statements of interest regarding issues under the Federal voting rights laws.

C. What additional resources would be helpful for the Justice Department to improve and expand its efforts to protect Americans' access to the ballot box?

Answer. The Department has supported Congress' efforts to enact new legislation to protect the right to vote, including but not limited to the John R. Lewis Voting Rights Advancement Act, the For the People Act, and the Freedom to Vote Act. The Department has also sought increased funding for the Civil Rights Division's enforcement work in its fiscal year 2023 budget request, including to support its voting rights work.

Question 4. Preventing Gun Violence (Need for Permanent ATF Director): I was pleased that President Biden nominated Steve Dettelbach to be the Director of the Bureau of Alcohol, Tobacco and Firearms (ATF). The ATF remains at the forefront of protecting our communities from violent criminals and the preventing the illegal use and trafficking of firearms. Unfortunately, the ATF has had only one permanent director since 2006; this must change. Steve would make an effective and fair-minded ATF Director.

A. Why is it so important that the ATF have a permanent director? What ATF actions are inhibited in the absence of a Senate-confirmed director?

Answer. As your question notes, in March 2006, Congress passed and President Bush signed into law the USA PATRIOT Improvement and Reauthorization Act (Public Law No. 109-177, 120 Stat. 247), which requires the ATF Director to be appointed by the President with the advice and consent of the Senate. This statutory requirement reflects the importance of ATF's crucial public safety mission. That mission is all the more critical today given the unacceptable level of firearms violence in our communities.

The confirmation of an ATF Director will reinforce that the Federal government is committed to reducing firearms violence; signal to the dedicated professionals of ATF and ATF's local, state, Federal, Tribal, and territorial law enforcement partners that both Congress and the Administration support ATF's vital mission; and enhance continuity and stability at ATF. A Senate-confirmed Director is also uniquely positioned to respond to congressional inquiries and to advocate for the agency during the budget formulation and enactment process.

Question 5. Vermont Office (Importance of Confirming U.S. Marshal/Attorney Nominees): I would like to thank your hardworking Federal agents, especially those in Vermont, for their dedication to fighting criminal activity and protecting our communities. The U.S. Marshals working out of Burlington arrested 90 fugitives last year, and even more in the year prior. The Vermont U.S. Attorney's Office aided in the criminal investigations of Purdue Pharma's role in the opioid epidemic that has ravaged the New England area. Given the critical role that the Department's Federal law enforcement officials play in keeping us all safe, it deeply concerns me that a single Senator has arbitrarily held up two U.S. Marshal and six U.S. Attorney nominees.

A. When politicians hold U.S. Marshal and U.S. Attorney nominees hostage for political grandstanding, how does that impact the Department's ability to investigate crimes and prosecute criminals? What kind of impact does that have on the local communities depending upon these law enforcement officials?

Answer. It is vitally important to have Senate-confirmed U.S. Marshals and U.S. Attorneys in each Federal district. The U.S. Marshals protect the rule of law by apprehending the nation's most violent fugitives and help ensure the safety of the Federal judiciary. The U.S. Attorney serves as the chief Federal law enforcement officer in each district. Despite delays in the confirmation process, the committed public servants who work in these districts have ensured that their important work and mission continue without interruption.

Question 6. DOJ Review of FBI Nassar Investigation Declination Decision: Last year, the Senate Judiciary Committee held a hearing to examine the Justice Department Inspector General's report on the FBI's unacceptable handling of the Larry Nassar investigation. During that hearing, we heard from some of the nation's most elite gymnasts who spoke bravely about their traumatic experiences and their long search for justice and accountability.

While the Justice Department initially declined to bring charges against the disgraced FBI agents involved in this investigation, the Department announced in October that it was reviewing that declination decision based on "new information that has come to light." However, we have not heard from the Department on the status of that decision.

A. Do you have any updates with regard to that review and its timeline?

Answer. As the Deputy Attorney General testified before the Senate Judiciary Committee on October 5, 2021, the Assistant Attorney General for the Criminal Division, Kenneth Polite, undertook a review of the September 2020 decision not to bring Federal criminal charges against two former FBI special agents in connection with their involvement in the FBI's investigation of Lawrence Nassar. The Criminal Division's review was led by experienced prosecutors who carefully reviewed and analyzed the evidence gathered in the investigation. On May 26, 2022, the Criminal Division's decision to adhere to its prior decision not to bring Federal criminal charges was made public.

The Criminal Division's decision does not in any way reflect a view that the Justice Department condones the conduct of the former agents; nor does it reflect a view that the investigation of Lawrence Nassar was handled as it should have been. As I testified before this Committee on April 26, 2022, the institutional failures here are unspeakable and quite apparent.

Question 7. January 6th Investigation: Less than a year and a half ago, a violent mob of insurrections stormed the Capitol, the first time in 244 years that our country was almost prevented from carrying out a peaceful transfer of power. According to the Federal Bureau of Investigation, the violent attack was an act of domestic terrorism. Five people died during or soon after the attack, and nearly 140 law enforcement officers suffered injuries, ranging from brain damage to cracked ribs, to smashed spinal cord discs.

Although I am encouraged more than 800 people have been charged with crimes stemming from the assault on the Capitol, the Justice Department estimates between 2,000 and 5,000 people entered the Capitol on January 6. Investigators have a long way to go before everyone who participated in the attack is held accountable.

A. Why is it important these individuals are held accountable for their failed attempt to overthrow the will of the American people? What resources or tools would DOJ need to improve its efforts to hold these perpetrators accountable?

Answer. The commitment to the peaceful transfer of power must be respected by every American. Our democracy depends upon it. The preservation of American democracy also requires our willingness to tell the truth. That is why it is essential for us to ensure that the magnitude of an event like the January 6, 2021, assault

on the United States Capitol is not downplayed or understated. That attack disrupted proceedings in both chambers of Congress and interfered with the peaceful transfer of power from one administration to the next.

In response, the Department began work on what has become one of the largest, most complex, and most resource-intensive investigations in its history. The prosecution efforts, which are being led by the United States Attorney's Office for the District of Columbia, are ongoing. Accordingly, the President's fiscal year 2023 Budget requests \$34.1 million and 130 term positions (80 term attorneys) to support the Justice Department's efforts to investigate and prosecute defendants charged in connection with the events of January 6, 2021.

- B. Do you have any updates about DOJ's investigation of the funders, organizers, and ringleaders who may have not been present at the Capitol on January 6, 2021, but nonetheless were responsible for the terrible events of that day?

Answer. Longstanding policy and practice of the Justice Department generally prevents us from commenting on or confirming the existence of any investigation.

Question 8. DOJ IP Enforcement Office: It is imperative that American innovation is protected, especially against bad actors in foreign countries. The Justice Department's Intellectual Property Task Force has indicted Chinese citizens and companies attempting to steal trade secrets from companies like Motorola and General Electric. I believe this work is critical in protecting our public safety and economic wellbeing. I thank you for that work on behalf of American innovators and inventors.

- A. How is the IP enforcement task force equipped to investigate and prosecute trade secret violations in a complex digital world? What kind of resources or tools would the DOJ need to improve its enforcement of the Defend Trade Secrets Act?

Answer. The Department of Justice remains committed to the protection of intellectual property rights and to vigorously combating intellectual property crime, particularly when it threatens public health and safety, national security, and the U.S. economy. This includes combating economic espionage and other thefts of trade secrets that pose a significant threat to U.S. companies and competitiveness.

The Economic Espionage Act (EEA) of 1996 provides criminal penalties for economic espionage as well as other thefts of commercial trade secrets. Within the Justice Department, the National Security Division's Counterintelligence and Export Control Section (CES) is responsible for review and approval of economic espionage charges. Together with CES, the Criminal Division's Computer Crime and Intellectual Property Section (CCIPS) coordinate on economic espionage and other trade secret prosecutions involving foreign actors and provide substantial guidance and support to United States Attorneys' offices in prosecuting a range of trade secret theft cases and in meeting the investigative, evidentiary, and technological challenges these cases pose. While the threat of foreign governments and business competitors stealing U.S. trade secrets remains high, the coordination within the Department—including with the FBI's counterintelligence, criminal, and cyber agents—results in strong cases with a deterrent impact.

In addition, the 2016 enactment of the Defend Trade Secrets Act (DTSA) created a Federal civil cause of action for trade secret theft, including thefts for which the EEA provides criminal penalties. As a result, many trade secret owners have been able to pursue civil remedies for trade secret theft in Federal courts. While the Justice Department does not specifically track the number of Federal civil trade secret actions brought, the opportunity to protect trade secrets through private action in Federal courts has clearly been a powerful tool for victim companies.

Question 9. Death Penalty: Last summer you imposed a moratorium on Federal executions pending a review of the Justice Department's policies and procedures.

- A. Do you have any updates about the status and timeline of that review?

Answer. On July 1, 2021, I asked the Deputy Attorney General and Office of Legal Policy to engage in a series of reviews pertaining to Federal execution protocols, the Manner of Execution regulations, and related Justice Manual provisions. These are complex issues, and the various perspectives on these matters all deserve to be heard and given due consideration. The Department has therefore engaged in comprehensive and ongoing outreach to solicit input and inform policy decisions. That engagement continues with urgency and deliberation.

QUESTIONS SUBMITTED BY SENATOR BRIAN SCHATZ

Question 1. Prosecutorial discretion for state-approved marijuana: Following up on my question at your hearing, the Obama Administration issued guidance on prosecutorial discretion for noninterference in states, territories, and tribes where marijuana is legal. These memos—known as the Cole and Wilkinson memos—provided states, territories, and tribes with clarity as they implemented approved marijuana programs. Given the increased number of approved programs in the years since the Cole and Wilkinson memos, as well as the utility of the guidance provided by the memos, does the Justice Department's plan to update and reissue the Cole and Wilkinson memos? If yes, what is your expected timeline?

Answer. As I stated in my testimony on April 26, 2022, the Justice Department's enforcement resources are not put to their best use prosecuting nonviolent, low-level marijuana offenses, even in jurisdictions where marijuana use remains illegal. With respect to those jurisdictions where marijuana use and sales are lawfully regulated, there is even greater reason to conserve prosecutorial resources so that we can focus our attention on violent crimes and other crimes that cause societal harm and endanger our communities. The Department is examining a range of issues that relate to marijuana and its production, sale, and use, and we intend to address these issues in the days ahead.

Question 2. Project HOPE Institute: The explanatory statement accompanying the Consolidated Appropriations Act, 2022 (Public Law 117–103) included language directing the OJP to establish a Project HOPE Institute to provide training, technical assistance, and best practices for jurisdictions replicating the HOPE model. What is the status of the Project HOPE Institute?

Answer. The Bureau of Justice Assistance (BJA) reports that it is administering competitive grant funds and managing training and technical assistance to state, county, and Tribal agencies to operationalize the principles behind Project HOPE—swiftness, certainty, and fairness—in their supervision strategies. BJA works closely with the Swift Certain and Fair (SCF) Resource Center, which provides content expertise and project management support to those grantees to design, implement, and adjust their strategies to local needs and contexts.

In fiscal year 2021, BJA made an award of \$500,000 to support the Hope Institute, via competitive solicitation, to the Marron Center at New York University, which operates the SCF Resource Center, to expand guidance to the field at large.

The fiscal year 2022 solicitation opened March 23, 2022 and closed on May 25, 2022. The award to support the Hope Institute remains on track for implementation in 2022.

Question 3. Correctional Education Evaluation: The explanatory statement accompanying the Consolidated Appropriations Act, 2021 (Public Law 116–260)—also included in the explanatory statement accompanying the Consolidated Appropriations Act, 2022 (Public Law 117–103)—included language directing the NIJ to establish a public-private partnership with research and correctional institutions to collect and evaluate data and continue to advance the research on the impact of correctional education on recidivism. What is the status of the public-private partnership?

Answer. The National Institute of Justice reports that it awarded a competitive grant of \$585,726 to the University of Chicago to examine whether re-orienting the prison experience towards rehabilitation—by investing in education, mental health, and physical health while individuals are incarcerated—can reduce prison recidivism, specifically reincarceration rates. The project involves a collaboration with the Illinois Department of Corrections. This project performance period is 3 years, from January 1, 2022, through December 31, 2024. Should you wish a more detailed briefing of the project design and expected outcomes, my staff would be happy to put your staff in contact with the relevant experts within the Department.

Question 4. Science Advisory Board: The explanatory statement accompanying the Consolidated Appropriations Act, 2021 (Public Law 116–260)—also included in the explanatory statement accompanying the Consolidated Appropriations Act, 2022 (Public Law 117–103)—included language directing OJP to reestablish a Science Advisory Board to provide extra-agency review of, and recommendations for, OJP's research, statistics, and grants program. The re-established Board should be comprised of scholars and practitioners in criminology, statistics, sociology, and practitioners in the criminal and juvenile justice fields and should be tasked with ensuring the programs and activities of OJP are scientifically sound and pertinent to policymakers and practitioners. What is the status of the Science Advisory Board?

Answer. The Office of Justice Programs (OJP) reports that it is assessing the re-establishment of the OJP Science Advisory Board. OJP has discussed this issue and

reengaged with multiple external scientific organizations, including the National Academy of Science's Committee on Law and Justice and the Consortium of Social Science Organizations. Dr. Nancy La Vigne, whom the President appointed Director of OJP's National Institute of Justice, began her tenure on May 9, 2022. OJP anticipates that Dr. La Vigne will play an important leadership role in advancing the consideration and re-establishment of the Science Advisory Board.

Question 5. ICACCOPS Training: The explanatory statement accompanying the Consolidated Appropriations Act, 2022 (Public Law 117–103) included language directing the Justice Department to prioritize expanded training on and use of ICACCOPS across Federal, State, local, Tribal, and military law enforcement agencies. The language also directed the Justice Department to coordinate with the Department of Defense on the implementation of section 5500 of Public Law 116–92. What is the status of the expanded training and the coordination with the Department of Defense?

Answer. In accordance with the joint explanatory statement accompanying the Consolidated Appropriations Act, 2022 (Public Law 117–103), the Department's Office of Juvenile Justice and Delinquency Prevention (OJJDP) reports that it is actively working together with Fox Valley's National Criminal Justice Training Center (NCJTC) to expand capacity, training, and coordination with entities across the Department of Defense (DoD). Those efforts build on ongoing programs and efforts that provide DoD entities with ICACCOPS training and resources. For example, NCJTC reports that its ongoing management of the ICACCOPS investigative system, the ICAC Task Force website, and the ICAC listserve, provides valuable resources to many members of DoD investigative entities. In addition, NCJTC reports that it provides core and specialized training and technical assistance to DoD investigators, including training on ICACCOPS supported tools.

Question 6. Sexual Abuse Services in Detention Hotline: The explanatory statement accompanying the Consolidated Appropriations Act, 2022 (Public Law 117–103) included language directing the Justice Department to explore opportunities for releasing existing grant funding, including through OVC's discretionary grant program, for efforts that would create a hotline to provide sexual abuse and rape crisis counseling services to incarcerated individuals across the country. What is the status of the efforts to create a national hotline to provide sexual abuse and rape crisis counseling services to incarcerated individuals?

Answer. In fiscal year 2021, the Office on Violence Against Women (OVW) partnered with the Bureau of Justice Assistance (BJA) to issue the National Service Line for Incarcerated Survivors of Sexual Abuse solicitation, supported with funds from BJA's Prison Rape Prevention and Prosecution Grants appropriation. The Urban Institute, in partnership with the National Sexual Violence Resource Center, was selected as the recipient and has begun work.

The Service Line Initiative is being administered as a two-phase project beginning with a planning phase followed by an implementation phase.

This current project is for Phase One—the planning phase. Phase One will include a national scan of practices related to efforts to comply with PREA Standards, identification of common service gaps and needs, and guidance from subject matter experts on what a national service line would require to be responsive to both the PREA Standards and the unique needs of incarcerated victims. The goal of Phase One is to develop a comprehensive plan for the design and implementation of a Service Line for incarcerated victims of sexual abuse.

Phase Two, the implementation phase, will focus on using the comprehensive plan developed in the first phase to guide the Service Line's implementation. It is anticipated that Phase Two will be directed and administered by OVW and BJA, and that it will be funded competitively. Phase Two is dependent upon the availability of sufficient PREA appropriations in future fiscal years.

QUESTIONS SUBMITTED BY SENATOR JOE MANCHIN, III

Question 1. As the Chairman of the Cybersecurity Subcommittee on the Armed Services Committee I am acutely aware of the various risks posed to the U.S. Government and our critical infrastructure operators, which is why I was pleased to see streamlined cyber intrusion reporting standards included in the previous appropriations omnibus.

The FBI's 2022 Internet Crime Report details more than 800,000 complaints of suspected Internet crime were filed and nearly \$7 billion dollars lost last year. That's nearly doubled from 2019. This makes clear to me that cyber threats are only

growing in number and sophistication. In my opinion, one of the largest issues we're facing is a continued lack of interagency cooperation in tracking and responding to these cyber threats due to perceived jurisdiction limits. While the Department of Defense and the Intelligence Community can only operate outside of the United States, DHS and DOJ are the main entities responsible for operating within the U.S.—and lack of cooperation among the agencies means cyber-attacks are more likely to slip through.

A. In order to combat this lack of cooperation and communication why are inter-agency taskforces not more prominent between interagency organizations?

Answer. The Justice Department has worked together with partners across government to establish and strengthen mechanisms that facilitate strong interagency cooperation and communication to address cyber threats:

- The Justice Department's National Cryptocurrency Enforcement Team, Computer Crime and Intellectual Property Section, and Counterintelligence and Export Control Section lead our efforts to coordinate with domestic law enforcement, regulatory, and other partner agencies across government to combat the criminal use of digital assets, criminal cyber threats, and state-sponsored cyber threats, respectively.
- Regular interagency cooperation has been essential to the Justice Department's successful cyber enforcement efforts to date. For example, our successful operation in March 2022 to disrupt malware known as "Cyclops Blink" that was controlled by the Russian Federation's Main Intelligence Directorate (GRU), began with collaboration between the Federal Bureau of Investigation (FBI), the Department of Homeland Security's (DHS) Cybersecurity and Infrastructure Security Agency (CISA), the National Security Agency, and the United Kingdom's National Cyber Security Centre. Additionally, the March 2022 unsealing of criminal charges against four Russian government employees for their role in two historical hacking campaigns targeting critical infrastructure was paired with a related FBI, CISA, and Department of Energy cybersecurity advisory, sanctions by the Department of the Treasury, and a Department of State Rewards for Justice announcement.
- The National Cyber Investigative Joint Task Force (NCIJTF) is a multi-agency cyber center with the responsibility of coordinating, integrating, and sharing information to support cyber threat investigations and synchronizing joint efforts that focus on identifying, pursuing, and defeating bad actors seeking to exploit our nation's systems. The NCIJTF is a frequent venue for collaboration and coordination among 30 partnering agencies from across the Federal government, including the Justice Department, the Intelligence Community, and the Department of Defense (DoD). Task Force representatives are co-located and work jointly to leverage collective authorities and capabilities.
- The FBI also works closely with CISA, NSA, and international partners to release advisories identifying malware and mitigation measures to assist those with compromised devices. As a recent example of this coordination, in February 2022, the FBI, CISA, and NSA published a joint Cybersecurity Advisory regarding the ongoing efforts of Russian state-sponsored cyber actors to target U.S. cleared defense contractors.
- In addition, the National Security Council convenes weekly Cyber Response Group meetings and regular Interagency Policy Committee and sub-IPC meetings to share threat updates and discuss and implement cyber policy. Further, on some occasions, the interagency has convened Cyber Unified Coordination Groups to coordinate the government's response to significant cyber incidents. These meetings include, among others, representatives from the Justice Department, the Intelligence Community, DoD, the State Department, the Department of the Treasury, and DHS.
- When significant cyber incidents occur within the United States, such as the ransomware attacks in the last year against Colonial Pipeline and Kaseya, officials from the FBI and CISA work in lockstep coordinating the response. In addition, CISA's Joint Cyber Defense Collaborative, which established in August 2021 to unify defensive actions and drive down risk in advance of cyber incidents, includes the public and private sector as well as Federal and state, local, Tribal, and territorial governments.

B. How often do you meet with the other Cabinet Secretaries to discuss cyber threats and improving our response efforts during and after attack?

Answer. Cyber threats and incident response are a frequent topic of conversation at all levels of leadership. Along with other senior Department officials, I regularly discuss these issues with principals and deputies across government in both NSC-led meetings and direct conversations with colleagues.

Question 2. Recently, a district court judge in Louisiana indicated that he would grant a temporary restraining order blocking the end of Title 42. At the time that the Administration announced its decision to end the Title 42 policy on May 23, I made clear my concern about ending Title 42 without a plan in place to deal with the anticipated influx of migrants at our southern border. Specifically, I pointed out that encounters at the southern border reached an all-time high level of 1.734 million people during fiscal year 21. And that through the first 5 months of fiscal year 22, encounters were on pace to match or exceed those numbers.

A. Is DOJ planning to appeal any TRO issued by the district judge?

Answer. On April 27, the District Court for the Western District of Louisiana issued a temporary restraining order in Louisiana, et al. v. Centers for Diseases Control & Prevention, et al. The temporary restraining order prevented the government from implementing the termination of the Title 42 order before May 23, 2022. The Department did not appeal that order. On May 20, the district court issued a preliminary injunction preventing CDC from enforcing the termination of the Title 42 order. The Department has appealed that decision. Because this matter is in active litigation, it would not be appropriate for me to comment further.

B. What is the Administration's plan for addressing the anticipated influx of immigrants at the southern border?

Answer. The Department of Homeland Security (DHS) is responsible for border processing, enforcement, and security. While the United States Marshals Service and the Federal Bureau of Prisons have provided DHS limited support upon request in appropriate circumstances, the Justice Department's Executive Office for Immigration Review (EOIR) is responsible for equitably and efficiently administering our nation's immigration court system. While EOIR will work to assign sufficient immigration judges to minimize the impact on EOIR's existing docket, EOIR needs more resources to address the case backlog, which has been growing for over a decade, and the Justice Department's fiscal year 2023 budget request would strengthen EOIR's ability to apply the immigration laws justly, consistently, and in a timely fashion, while ensuring due process under the law. The Department requests a total of \$1.35 billion for EOIR to reduce the backlog of immigration cases, which would allow EOIR to hire more than 1,200 new staff, including approximately 200 new immigration judges above the fiscal year 2022 enacted level.

Question 3. It is undeniable that the opioid epidemic has taken a serious toll on all Americans— not just in my state, but across the country. As I am sure you are aware, last year, the CDC reported that more than 100,000 Americans died from drug related overdoses, making 2021 the deadliest year on record for overdoses. It is estimated that more than two-thirds of those overdoses likely involved an opioid or a synthetic opioid, such as fentanyl. And for those men and women who are fortunate enough to escape death and get clean, they often face severely limited job opportunities after serving their time for crimes committed as a result of their drug addiction. To help fix this problem, I introduced a bill called the Clean Start Act last Congress and again this Congress, which seeks to help individuals working to recover from substance use disorder with criminal records seal those records if they complete a comprehensive addiction treatment program and show that they have turned their lives around.

A. How do you plan on helping former offenders re-join the workforce and once again become responsible taxpayers?

Answer. Eliminating barriers to successful reentry is a priority for the Justice Department. To advance this important goal, the Department plans to continue employing a broad set of policy tools and strategic partnerships with Federal, state, and grantee partners.

For example, in fiscal years 2022 and 2023, DOJ and the Department of Labor (DOL) will partner to provide intensive job training in select Bureau of Prisons' facilities followed by intensive, individualized reentry support during halfway house or home confinement. This includes \$100 million in the President's fiscal year 2023 budget for DOJ and DOL to develop a national initiative to provide comprehensive workforce development services to those in Federal prison, both during their time in Federal custody and after they are transferred to community placement. DOL and DOJ would also oversee evaluation to assess these programmatic efforts on recidivism, labor market outcomes, and other key metrics.

The Justice Department also supports reentry through the broad array of programming, policy initiatives, and grantmaking undertaken by the Office of Justice Programs (OJP). This includes OJP's work with state and local systems to better equip formerly incarcerated persons for re-entry by facilitating the attainment of state IDs prior to release; helping build successful prison/college partnerships to im-

prove educational outcomes; and implementing vocational and employment skills training programs that result in apprenticeships and meaningful employment post-release. OJP (through the BJA), also supports, and will continue to support, grantees who are implementing programs specifically designed to help populations recovering from substance use disorders be ready to reenter the workforce.

OJP's work will be further advanced through its recently announced partnership with the Council of State Governments Justice Center. Through that partnership, OJP will help launch the national Reentry 2030 campaign, a national initiative to achieve better and more equitable reentry and reintegration outcomes by engaging states to adopt public, ambitious goals that drive system change.

This is just a high-level description of some of the many varied ways the Department is engaging on this critical issue. Should you desire a more detailed briefing on the Department's efforts, my staff would be happy to put you in touch with the relevant experts within the Department.

B. What programs and initiatives, in your experience, are the most effective in preventing recidivism for first time offenders?

Answer. Across institutions, the Department offers and supports a variety of programs to address reentry needs related to education, employment, substance use, and mental health to assist individuals' successful transition back to the community. My staff would be happy to put you in touch with the relevant experts within the Department—including staff within the Office of Access to Justice and OJP—to provide your staff with a detailed briefing regarding the relative advantages of various programs, policies, and approaches.

QUESTIONS SUBMITTED BY SENATOR LISA MURKOWSKI

Question 1. Accessing DOJ Grants. In October of 2020, the Department of Justice launched JustGrants, an online grant management system to streamline the grant process for applicants and grantees and to simplify the payment process. I have heard from several Alaskans that there were some issues with the system when it was first launched a few years ago, which I understand the Department has been working to resolve.

A. How has the Department been working with stakeholders and internally to bring JustGrants up to full performance?

Answer. In October 2020, the Justice Department transitioned to a single consolidated grants management system to eliminate duplication of effort across DOJ's grantmaking components, improve our ability to manage, track, and monitor DOJ grants, and provide applicants and grantees with an improved user experience across the entire grants lifecycle. JustGrants replaced multiple legacy DOJ systems and integrated them into one unified system, which was a complex, resource intensive effort. JustGrants launched in October 2020 with basic functionality to support operations necessary to move applications through the essential stages of the grant management lifecycle, from solicitation posting, application review, and award making, through post-award management, monitoring, and closeouts of all open and active awards. JustGrants is currently supporting 40,000 users and approximately 15,000 active grants totaling \$17.6 billion. As of May 10, 2022, \$7.2 billion has been drawn down by grantees since JustGrants went live.

Over the course of the transition to JustGrants, many users experienced instances in which JustGrants did not perform as they expected. It is a priority for the Department to improve the functionality of JustGrants. Current emphasis is on ensuring a successful fiscal year 2022 award making season, which includes improvements in application submission, application review, transmitting commitments, and obligations to DOJ's Financial Management System. This fiscal year we have increased the number of development teams from six to eight, which has allowed us to release more updates into the system in less time to improve the user experience. OJP reports that a recent examination of service desk tickets in April of this year compared to the same time last year indicated a 52 percent reduction in calls. The types of calls have also shifted significantly from system issues and walking users through actions in the system to assisting grantees with password re-sets and making role assignments.

OJP reports that it provides significant outreach and support to users on how to apply for funding opportunities in the new system and manage grants once awarded. Similar to last year, the JustGrants team is hosting "Application Mechanics" webinars for applicants and continues to provide four weekly sessions for users to receive live on-the-spot technical assistance to carry out actions within the grants

management system. To respond to the peak periods of the application season, the JustGrants Service Desk is extending hours and will add staff to meet demand.

DOJ obtains internal and external user feedback through a variety of means such as weekly office hours for users and training and webinar feedback forms. DOJ uses this information to improve system functionality, usability, training resources, and support services. It is and will remain a priority of DOJ to continue to evolve and improve the system over time to bring more benefits to applicants, grant recipients, and Department personnel across the grants lifecycle.

QUESTIONS SUBMITTED BY SENATOR SUSAN M. COLLINS

Question. Rapid disbursements, generous benefits, and suspensions of traditional verification requirements during the pandemic rendered unemployment insurance (UI) programs ripe for fraud. According to the Department of Labor Office of the Inspector General, at least \$163 billion of the estimated \$872.5 billion in pandemic-related UI payments could have been paid improperly, with a significant portion attributable to fraud. While state and Federal law enforcement have recovered some funds, much more must be done.

A. DOJ's budget request recognizes combating pandemic fraud as a "Priority Goal." How will this designation help DOJ combat pandemic fraud?

Answer. The President's fiscal year 2023 Budget requests an additional \$41.2 million to combat pandemic fraud. These additional resources will allow the Department to fund analysts tasked with identifying connections between irregularities in the large volume of pandemic benefit data collected and under collection, which will result in potential criminal leads. These additional resources will also permit the staffing of strike teams to pursue the leads that analysts develop, transforming the raw data into actionable criminal investigative matters. And these additional resources will fund agents, analysts, and prosecutors in the field who will open criminal matters and use the powerful tools of legal process to investigate the networks of fraudsters who stole billions in pandemic relief funds. In sum, these resources will increase the likelihood that we identify fraud proceeds and restore them to the Treasury, in amounts far greater than the funds provided for this effort.

B. During its investigations, has DOJ or any of its partners identified any international criminal organizations responsible for this fraud?

C. Do any such organizations have ties to the Russian government?

Answer. Questions 1B and 1C: With respect to investigations and resolutions that have been made public, the Department's Director for COVID-19 Fraud Enforcement advises that several cases have involved foreign actors seeking to exploit pandemic relief packages for personal gain. For example, last month Federal prosecutors in the Western District of Washington secured a guilty plea from a Nigerian citizen who used the stolen identities of more than 20,000 Americans to file for more than \$2 million in government benefits, including from multiple state unemployment insurance benefit systems during the pandemic. See <https://www.justice.gov/usao-wdwa/pr/nigerian-citizen-pleads-guilty-covid-19-unemployment-fraud-washington-and-17-other>.

In addition, as a general matter, our law enforcement partners advise that stolen personally identifiable information (PII) is the fuel that drives much of the pandemic relief fraud, and a vast amount of PII has been stolen by international criminal cyber actors and is sold online. In the coming days, the Department will be announcing the launch of specialized pandemic fraud Strike Force Teams in key districts across the country. These Strike Force Teams will supplement the hard work underway throughout the Department, including by targeting fraud committed by overseas actors who steal the identities of American workers to further their criminal ends and who have victimized other Americans by tricking them into moving money from our shores to foreign countries.

QUESTIONS SUBMITTED BY SENATOR JOHN KENNEDY

Question 1. Federal Correctional Complex Oakdale and Federal Correctional Complex Pollock are Federal prisons facilities in Louisiana. FCC Oakdale and FCC Pollock are experiencing twin crises that many other Federal prisons across the nation face: correctional officers are overworked and understaffed. The dangers faced by these correctional officers cannot be overstated. My constituents back home in Louisiana are concerned about this issue—and so am I.

In 2017, the Department of Justice eliminated all existing vacancies within the BOP—approximately 5,000 positions nationwide—in an effort to downsize the agency. This decision lowered the total number of approved positions at facilities like FCC Oakdale and FCC Pollock. Nearly 5 years later, this has led to chronic staffing shortages. Congress attempted to correct this issue in 2021 and again in 2022 when it provided funding to the BOP in the respective Omnibus bills directing BOP to hire staff across the Federal prison system so that levels would equal those from before the position elimination.

BOP has failed to carry out Congress's instruction, and it is instead lowering the total amount of positions. For example, in January 2016, FCC Oakdale had 501 positions filled out of 550 total positions authorized (46 vacancies). As of April 2022, FCC Oakdale has only 416 positions filled out of 467 total positions authorized (46 vacancies). In 2018, FCC Pollock had 365 positions filled with 426 total positions authorized. Now there are only 313 positions filled with 368 total positions authorized. BOP pretends that it has met the January 2016 staffing levels as directed by Congress, but the reality is that there are fewer total positions authorized across both Federal prison complexes. This has led to augmentation—forcing non-correctional officers, such as teachers and counselors, to perform the duties of correctional officers—and mandatory overtime for correctional officers already facing exhaustion and fatigue.

Per the Joint Explanatory Statement to the 2021 Omnibus, the BOP was instructed “to improve hiring policies to ensure that, within the funding provided, it can promptly fill existing and future vacancies in order to staff its 122 Federal facilities at January 2016 levels, and forgo further position eliminations.” The Joint Explanatory Statement to the 2022 Omnibus stated “BOP is expected to hire additional full-time correctional officers in order to reduce the overreliance on augmentation and improve staffing beyond mission-critical levels in custodial and all other departments, including medical, counseling, and educational positions.”

Since the BOP has ignored congressional instruction, the situation has grown dire. Prison housing units at the low security facility at FCC Oakdale often only have one correctional officer to monitor inmates within that housing unit. Correctional officers at FCC Oakdale are often forced to work double shifts in order to make up for staff shortages, which leads to exhaustion and fatigue. Non-correctional officers, such as teachers and counselors, are being forced to work as correctional officers in order to make up for staff shortage. Correctional officers at FCC Pollock are frequently mandated to work 16-hour days, apparently with no breaks between 8-hour shifts. Augmentation occurs there, too. This is unacceptable. Recently a member of my staff visited the Federal prisons in Oakdale and Pollock, Louisiana. He observed staffing shortages at these facilities firsthand. During his visit to the United States Penitentiary at FCC Pollock, two inmates attacked and stabbed another inmate with hand-made metal shanks. As a result, a housing unit was placed on lockdown and an ambulance was called, with the ambulance operator ultimately requesting a medivac helicopter.

- A. Can you commit in writing that the Department of Justice will faithfully ensure that all 122 Federal prisons in this country, including those in Oakdale and Pollock, Louisiana, will receive the appropriate level of funding pursuant to the instructions from this Committee?

Answer. As I made clear in my testimony before this Committee on April 26, 2022, maintaining a safe and humane correctional system is a critical responsibility of the Justice Department. In particular, ensuring that all 122 BOP facilities are fully staffed by professionals with the necessary skills and expertise to ensure a safe and humane prison system is a priority for the Justice Department. That is why in fiscal year 2023, the President's Budget requests a total of \$8.18 billion for BOP to ensure the health, safety, and wellbeing of correctional staff and incarcerated individuals. The Justice Department's fiscal year 2023 request would allow BOP to hire more than 700 new correctional officers and nearly 600 new First Step Act staff.

- B. What steps are the Department of Justice taking to reduce augmentation of positions within BOP and mandatory overtime of correctional officers?

Answer. BOP reports that through the first half of fiscal year 2022, documented augmentation hours have decreased compared to each of the past two fiscal years. BOP further reports that it has contracted with an outside consultant, NTT Data Services, to create a new tool that will help BOP make real-time staffing calculations and predictive forecasting for staffing needs, which will help BOP better understand and address the overuse of augmentation and overtime. Currently, BOP is working closely with the vendor and the study is moving along. BOP anticipates that, as soon as this summer, it will be able to start testing a new tool for making staffing projections.

- C. When will the staffing numbers at FCC Oakdale and FCC Pollock be adjusted to reflect the staffing positions of January 2016 as directed by Congress?

Answer. BOP reports that it has contracted with a consultant to assist it in determining the appropriate staffing level at all institutions. BOP further advises that any adjustments to BOP's staffing levels are contingent upon affordable FTE levels determined by receiving adequate funding from Congress. BOP's affordable FTE level in 2016 was 37,565. In fiscal year 2021, BOP's affordable FTE level was 35,161. This reflects a reduction of over 2,000 FTE.

According to BOP, any adjustments to return to the 2016 staffing levels will require additional FTEs and adjustments to ensure adequate positions at all institutions.

- D. Have non-correctional officers tasked with correctional officer responsibilities been adequately trained to meet departmental standards?

Answer. BOP reports that employees working in institutions, regardless of their position, receive the same basic law enforcement training in correctional duties and are required to successfully complete this training as a condition of their employment. As a result, they all receive Law Enforcement Officers pay, are covered under the LEO retirement system, and are expected to perform correctional duties and functions as needed.

- E. How much overtime has been used at FCC Oakdale and FCC Pollock between April 1, 2021, and April 1, 2022?

Answer. BOP advises that overtime costs during this time period were approximately \$3.2 million for FCC Oakdale and approximately \$6.2 million for FCC Pollock.

Question 2. Over a year ago now, I submitted Questions for the Record (QFRs) to the Federal Bureau of Prisons, which operates under the Justice Department, after Director Michael Carvajal testified before the Senate Judiciary Committee's April 2021 hearing titled "Oversight of the Federal Bureau of Prisons." Director Carvajal never responded to my questions. I sent two additional oversight letters regarding BOP funding to Director Carvajal on July 15, 2021 and December 14, 2021, respectively, without response.

- A. As the country's chief law enforcement officer, will you ensure that I receive substantive responses to Questions for the Record and oversight letters?

Answer. Yes. BOP reports that its responses both to your oversight letters dated December 14, 2021 and July 15, 2021 as well as all outstanding Questions for the Record that Director Carvajal has received will be substantive and submitted to Congress in short order.

Under the previous administration, the Justice Department's China Initiative "reflect[ed] the strategic priority of countering Chinese national security threats" by prosecuting individuals who committed espionage to benefit the Chinese government. In 2022, the Justice Department ended the program.

- A. Are you aware that FBI Director Christopher Wray concluded that the espionage threat posed by China is the most "unprecedented in history"? Is the FBI wrong?

Answer. Director Wray and I are fully aligned in both our assessment of the threats posed by the government of the People's Republic of China (PRC) and the Justice Department's response to those threats. The Department—including the FBI—is committed to taking a comprehensive approach that draws on the full extent of our tools and authorities to address the alarming rise in illegal and nefarious activities from the PRC government.

- B. Do laboratories and businesses continue to face threats of economic espionage and intellectual property theft by the Chinese?

Answer. Yes, laboratories and businesses continue to face significant threats of economic espionage, intellectual property theft, and threats to research integrity and security by the Chinese government and its policies. The Department is committed to using all available legal tools to prevent and address that activity, including partnership with research funding agencies and appropriate criminal investigations and prosecutions.

- C. What Departmental programs or tools remain in place to protect the country against Chinese counterterrorism, espionage, and intellectual property theft?

Answer. The Department continues to employ a rigorous, all-tools approach. In addition to opening criminal cases, where appropriate, the Department is actively engaging with and sharing information with the companies, universities, and international and local governments whose technology, innovations, research, and infor-

mation may be at risk. The Department also chairs the Committee for the Assessment of Foreign Participation in the United States Telecommunications Services Sector, which advises the Federal Communications Commission on national security and law enforcement concerns associated with applications for telecommunications licenses meeting certain thresholds of foreign ownership or control.

We are committed to protecting the country against the threats posed by the government of the PRC—in particular, espionage, cyber intrusions, and theft of intellectual property. As the Assistant Attorney General for the National Security Division said in February, the Department “will be relentless in defending our country from China,” and will “continue to prioritize and aggressively counter the actions of the PRC government that harm our people and our institutions.” There has been no change in tools or resources allocated to address threats from PRC government policies, including espionage and intellectual property theft.

QUESTIONS SUBMITTED BY SENATOR BILL HAGERTY

Question 1. Despite the fact that marijuana is illegal at the Federal level, some states do not prohibit its usage under state law. How do drug usage rates, the number of drug prosecutions, and other drug abuse and addiction metrics compare among states that allow or prohibit marijuana usage under state law?

Answer. The Department does not have the data to undertake the comparison requested in the question. For example, DEA reports that it does not track drug usage rates, the number of drug prosecutions, or other drug abuse and addiction metrics. Nor has the Department—as far as I am aware—conducted any analysis or research along the lines contemplated by the question.

Last year, President Biden issued Executive Order 14006, which directed the Attorney General not to renew U.S. Marshals Service (USMS) contracts for contractor-operated criminal detention facilities.

This executive action was poorly conceived and short-sighted. Specifically, the Administration did not consider its significant consequences for the USMS and the American people. This executive order is harming detainees by forcing their relocation to less-safe and less-humane facilities that are often hours away from their families and counsel.

This decision seems to have been driven by politics, rather than internal or external analysis or budget or logistical justifications regarding the impact of this decision on the justice system. In light of this misguided executive action, the USMS did not renew contracts with a facility in West Tennessee and a facility in Kansas and is in the process of declining to renew others.

The USMS should have the flexibility to contract with private facilities for pre-trial criminal detention when doing so best accomplishes its mission and is in detainees’ interests.

The fiscal year 2022 Omnibus Appropriations Act gave your Department the discretion to take appropriate action where necessary to account for a lack of suitable government-operated detention space. So far, though, your Department has not used this discretion.

Question 2. Have there been any internal or external reviews or analyses regarding the implementation of Executive Order 14006? If so, please describe these reviews and analyses.

Question 3. Has your Department or its Inspector General evaluated the impact of Executive Order 14006 on the justice system?

Answer. Questions 2–3: With respect to Justice Department reviews and evaluations regarding the implementation of Executive Order 14006, including the impact on the justice system, the United States Marshals Service (USMS) reports that its Prisoner Operations Division conducted an assessment of all Intergovernmental Agreements (IGAs) with state and local agencies within proximity of the private facilities under direct contract with USMS. The USMS assessment examined IGA bedspace availability within 150 miles of the affected Federal courthouses to determine whether private facility populations could be absorbed. The Federal Bureau of Prisons (BOP) reports that it conducted a simultaneous review of its facilities proximate to USMS private detention facilities to determine bedspace suitability and availability for USMS needs. BOP has provided over 1,800 beds (over and above bedspace already provided for USMS use) to assist USMS in complying with EO 14006.

In addition, USMS and the Justice Management Division report that they have developed an initial analysis of implementation costs based on rough estimates of

the average IGA population, the number of facilities required to accommodate the displaced detainees, and transportation requirements to support the distance and dispersion of detainees among many facilities. Since completion of the initial assessments, USMS reports that it has continued to review options for safe, secure housing of detainees being relocated as a result of EO 14006, including whether contract extension clauses are necessary.

With respect to any evaluation of the impact of Executive Order 14006 on the justice system conducted by the Inspector General, we would respectfully refer you to the Justice Department's Office of the Inspector General.

Question 4. Have the Bureau of Prisons and the U.S. Marshals Service been efficient and cost-effective with respect to sharing facilities and services in the past?

Answer. USMS and BOP have a history of working closely together on matters involving the detention and transportation of Federal inmates, and routinely collaborate to maximize USMS bedspace usage at Federal facilities. USMS and the BOP have an ongoing Memorandum of Understanding (MOU) under which the BOP makes more than 11,000 beds available at 26 facilities in major metropolitan areas such as Los Angeles, San Diego, Philadelphia, Chicago, and Houston. In some of these locations—Miami, Los Angeles, New York, Seattle, and San Diego—USMS maximizes nearly every bed the BOP has allocated for USMS use.

As part of the USMS–BOP coordination on EO 14006, the BOP has helped provide solutions to critical USMS detention requirements due to a facility closure in the District of Kansas (Leavenworth). In addition, BOP has made facilities available to USMS in Pennsylvania and North Carolina to assist with pre-sentencing detention housing shortages unrelated to EO 14006.

Question 5. Do you believe that a decision of this magnitude with wide-ranging impacts on the criminal justice system merited an analysis regarding its likely and potential effects prior to implementation?

Answer. As noted, the Department has conducted assessments and reviews. With respect to the impact on the criminal justice system, the executive order explains that the Federal government “has a responsibility to ensure the safe and humane treatment of those in the Federal criminal justice system,” and that “privately operated criminal detention facilities do not maintain the same levels of safety and security” for incarcerated individuals and correctional staff. We will continue working to implement the executive order in responsible fashion.

QUESTIONS SUBMITTED BY SENATOR MIKE BRAUN

Question 1. Nearly 1 month ago, on March 29, Senator Lankford and I, alongside six other colleagues, sent a letter to you regarding the Department of Justice's October 4, 2021, memorandum directing the FBI to target parents expressing concerns at school board meetings.

During a hearing before the House Judiciary Committee in October, you admitted that the National School Boards Association's September 29, 2021 letter, proven by emails obtained through FOIA requests to have been solicited by Secretary Cardona, was the foundation for your memorandum—not data.

You have not responded to our letter and provided data proving the need for such allocation of finite Department resources nor have you rescinded this offensive memo even after the National School Boards Association publicly apologized for the September 29 letter.

- A. What data do you have that this is an issue that warrants Federal intervention and why does it take a month to reply?
- B. Do parents have a right to express concerns to their local school board?
- C. Who is the primary stakeholder in children's education?

Answer. 1A, 1B, 1C: As I said in my congressional testimony last October, it is the job of parents to be involved in the education of their children, and it is “the role [of] the First Amendment to protect their ability to be involved.” That is why the October 4, 2021, memorandum makes absolutely clear in the first paragraph that “spirited debate about policy matters is protected under our Constitution.” These protections clearly and importantly cover debate concerning school board policies.

Question 2. As of the date your response, what is the number of Firearms Technology Industry Services evaluation requests still pending a final determination response from ATF to the requesting party?

Answer. ATF reports that, as of May 13, 2022, Firearms Technology Industry Services (FTISB) has 222 evaluation requests pending final determination. These 222 cases are comprised of 105 stabilizing brace and frame or receiver determinations submitted over 1 year ago; 20 receiver determinations submitted under 1 year ago; 80 import evaluations less than 60 days old; and 17 domestic evaluations of various types submitted recently. ATF further reports that frame or receiver determinations and stabilizing brace determinations have been delayed because of Department rulemaking on these subjects.

A. Of the pending evaluation requests disclosed in response to question 1, how many of them have been pending for over 1 year?

Answer. ATF reports that 105 evaluation requests are pending for longer than 1 year.

B. How many of them have been pending for over 2 years?

Answer. ATF reports that 76 evaluation requests have been pending longer than over 2 years.

C. What is ATF's current processing time for ATF Form 6 Import Permits, and Forms 4, respectively?

Answer. ATF reports that processing the ATF Form 6 Import Permit currently takes an average of 45 days. ATF reports that processing the ATF Form 4 currently takes an average of 10 months for a paper form and 90 days for an e-Form.

Question 3. Can the regulated public rely on the guidance posted on ATF's website as the current position of the agency?

Answer. Yes. ATF routinely checks its website in an effort to ensure instructional information is current, within prevailing policy, and authorized by the associated statutes and regulations.

Question 4. When ATF determines that guidance posted on their website is "wrong" or represents a misinterpretation of law, does the ATF take steps to clarify this with the public and how long does that process take? Is there currently any guidance that the agency considers incorrect or contrary to law?

Answer. ATF reports that guidance it posts is carefully reviewed prior to issuance and that posted guidance reflects the most complete analysis of the law and facts at the time the guidance is made available to the public. ATF reports that it is unaware of any current guidance that is incorrect or contrary to law.

SUBCOMMITTEE RECESS

Senator SHAHEEN. The hearing is adjourned.

[Whereupon, at 12:05 p.m., Tuesday, April 26, the subcommittee was recessed, to reconvene subject to the call of the Chair.]

COMMERCE, JUSTICE, SCIENCE, AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 2023

TUESDAY, MAY 3, 2022

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met, pursuant to notice, at 10:04 a.m., in room SD-192, Dirksen Senate office Building, Hon. Jeanne Shaheen (Chair), presiding.

Present: Senators Shaheen, Van Hollen, Moran, Capito, and Braun.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AND THE NATIONAL SCIENCE FOUNDATION

OPENING STATEMENT OF HON. JEANNE SHAHEEN

Senator SHAHEEN. Just for the record, we will no longer take people asking questions in virtual format, so people will be here in person, and we will take people in order of arrival for questions.

This is really a pivotal moment for the prosperity and security of the United States and democracies around the world. At the Defense Appropriations Subcommittee, which is also meeting right now, Secretary of Defense Lloyd Austin and Chairman of the Joint Chiefs Of Staff Mark Milley are discussing resources needed to meet the military challenges from Russia, China, and others around the world. But the agencies that are represented here that each of you represent—the National Aeronautics and Space Administration (NASA) and the National Science Foundation (NSF) are also key to standing up to the challenges facing our country. So it gives me great pleasure this morning to welcome NASA Administrator Bill Nelson and NSF director—I am going to call you Dr. Panch for ease of statement. So thank you both for being here this morning. It is really good to see you again, and I am delighted that our Ranking Member has joined us.

Just to clarify, again, for the record, we have about four hearings going on in the Senate this morning, so we are not sure who will be able to attend, but Senator Moran and I, I know, have lots of questions, so we will be able to cover so many issues that are going to be important as we look at the appropriations process.

The programs that each of you manage are on the frontlines of bolstering the Nation's cybersecurity, training teachers, technicians, explorers, and entrepreneurs, developing industries of the fu-

ture, and understanding the existential threat of climate change. This subcommittee wants the next pair of boots on the moon, the next Nobel Prize-winning discovery, and the next paradigm-changing technology company to be made in the USA, or, from my perspective, better yet, the Granite State. I am sure Senator Moran feels that way about his home State of Kansas.

We know in New Hampshire that manufacturers have what it takes to cut it in space. We have local companies much like Mikrolar, a contractor for NASA, who is a continued contributor of technology and supplies to NASA programs, but we cannot take our continued leadership for granted. Our global competitors, including China—especially China—are investing heavily in scientific and technological innovation, and if we want to see sustain our scientific leadership, and the economic prosperity, and national security that it affords, we have to continue to keep peace.

When the U.S. Government was shut down in 2019 due to partisan bickering—a disagreement in the Senate over the budget—China was landing on the dark side of the moon. We are not going to be able to compete if that is the choice that we have. Now, I do not want to focus on the past, but we need to learn from it so that we do not repeat it. Most critical, it is a reminder of what is at stake in this global competition. That is why I am pleased that the fiscal year 2022 omnibus provided the largest increase to NSF in more than a decade and a \$770 million increase for NASA. I am also pleased that Congress is currently in the midst of a bipartisan conference on significant legislation to advance the mission of both these agencies, the U.S. Innovation and Competition Act, which is the name of the Senate version of the bill.

President Biden's fiscal year 2023 budget for NASA and NSF build on this progress and keep the Nation moving in the right direction. For NASA, the fiscal year 2023 request is nearly \$26 billion, an increase of \$1.9 billion, or 8 percent, above the fiscal year 2022 enacted level. The President's request includes \$10.5 billion for NSF. This is an increase of \$1.65 billion, or 19 percent, above the fiscal year 2022 enacted level. There is a lot to like in these requests. I am sure that each of you would have liked more, but I think this is an increase that can be put to good use, and I know that both Agencies plan to expand climate research.

NASA is asking for \$2.4 billion in earth science research and more than \$500 million to lessen the impact of aviation on the climate. NSF's budget includes a total of \$1.55 billion for climate and clean energy research as we work to enhance our energy security and create energy efficiency and renewable energy jobs. Most important, the request invests in people with \$150 million for STEM engagement at NASA and \$1.4 billion for NSF's renamed Directorate for STEM Education. And this is a major priority for me because I have seen how critical it is to our economy in New Hampshire and to the economy in the country.

I was just at a ribbon-cutting yesterday for BAE systems, which makes critical parts for the F-35 and a lot of our warfighting equipment, and they are hoping to hire several hundred more jobs in New Hampshire. And when I asked them what is your biggest challenge, it was workforce. It was finding those STEM-educated workers who can come in and do the jobs, the engineers, the sci-

entists that they need. And so the work that you are doing in that area, both NASA and NSF, is really critical. This is, of course, a point of pride for New Hampshire as well because of the home—we are the home of Christa McAuliffe and Alan Shepard, who are both revered Granite Staters and emblems of STEM education.

The same sentiment is shared by our academic institutions that are highly respected around the country for their aerospace research and innovation. And as we were discussing, Senator Administrator Nelson, we are immensely proud of the University of New Hampshire Space Center, which was recently selected by NASA to research the earth-sun environment. As one of the two winners of the Heliophysics Medium-Class Explore Competition, the \$250 million will improve our understanding of the dynamics of the sun, its connection to the earth and the universe.

NASA's budget request will land the next humans on the moon and return soil samples from Mars, while NSF seeks to create jobs and maintain U.S. leadership on critical technologies that will define the next several decades, technologies like artificial intelligence and quantum computing through the new Directorate for Technology, Innovation, and Partnerships, and I am really looking forward to hearing more about that in your testimony. There are also a few challenging items in these requests. In particular, I am concerned with the proposed cuts to NASA heliophysics and an overall lack of resources to address recent decadal surveys, and astrophysics, and planetary science at both agencies.

So in conclusion, I believe that we must continue to look toward the next frontiers of science and space, and I am looking forward to the launch of Artemis 1 this summer. I understand that Senator Moran is also looking forward to that. I support NASA and NSF because these agencies inspire us with curiosity-driven research and exploration, and I think curiosity is one of the most important aspects of the human condition. So we thank you—both of you for what you do to answer questions that we want to know about.

So with that, let me recognize the vice chair and one of the conferees of the United States Innovation and Competition Act, Senator Moran.

OPENING STATEMENT OF SENATOR JERRY MORAN

Senator MORAN. Chairwoman, thank you very much. I appreciate hearing your enthusiasm. You and I are involved in a lot of hearings, in this subcommittee and others, and I would hate to admit that none of—that any of them are ones that I am not excited about being at. But if there is a level of enthusiasm for a subject for a hearing, it is this one, and it is nice to have the two of you here today together. And I certainly welcome our former colleague, Administrator Nelson, and Director Panchanathan to this hearing.

I want to start by thanking Panch for visiting Kansas with me last year. It was a highlight and very valuable certainly to me and I hope to you, but to the people, the students that we spent and you spent time with, and I am very grateful for that. And, Senator Nelson, you are, “relentless” may be an overstatement, but not far—relentless in your willingness—stated willingness to come to Kansas. And it seems to be my schedule that is keeping that from happening, and I am going to make it happen shortly, and I thank

you for that. There is great value in Americans seeing the two of you, hearing your—what you are about, your mission, and generating the enthusiasm in them. It is helpful to us as we appropriate money for our constituents to believe that that money is being wisely spent and a value to the country.

The proposed budget for NASA is \$26 billion. That is an increase of about 8 percent. NSF's proposed budget is \$10.5 billion and represents an almost 19-percent increase. I am pleased to be a conferee on USICA, and I hope that we have success in reaching an agreement so that that legislation can become law. NASA is one of the most well-known government agencies. In the past year, we have witnessed the successful launch of the James Webb Telescope, and I appreciate your efforts, Administrator, to see that I and four of my colleagues were present. We did not quite succeed. It all worked on the 20th of December, it worked on the 22nd of December, it may have worked on the 24th of December, but when it was Christmas morning, most of our families had other plans for us on that day. But in addition to the James Webb Telescope, it was a year of research and science on Mars from perseverance and ingenuity, and we are eagerly awaiting the Artemis 1 launch that signifies our first step toward returning American astronauts and, in this case, a woman to the moon.

I have been the lead Republican on this committee since the early days of the Artemis program and worked closely with the previous administrator to identify challenges ahead on what was needed to ensure the long-term success of Artemis missions. Returning to the moon and sustaining a presence there is a long-term goal for our Nation, and I am pleased that this Administration is continuing that goal. NSF's scientific research is no less impressive. In Kansas alone, you can go from a lab studying plant genomics to studying Arctic and Antarctic ice without leaving the State, and even without leaving the campus.

We cannot rest upon our past successes, however. There is significant competition across the globe to be the Nation that unlocks the knowledge and discoveries that will drive economic growth and success. This research is important to our national security as well. We know that competition is a focus from investments by other nations but also from incentivizing the unlawful transfer of intellectual property. This is a recognition of the power of knowledge. It is important we are able to harness that power, knowledge, and inspiration as generated by your agencies for the good of our country. NASA and NSF have the opportunity to capitalize on their missions, to encourage students, young people across the country, no matter where they live, to pursue activities and careers in STEM. We just had a former astronaut in Kansas at the Kansas Cosmosphere, and we visited with 4th, 5th, and 6th graders, hugely a value. They had no interest in me but were very excited about the astronaut.

Our country needs a workforce in each and every State that is ready to push the frontiers of knowledge and has the skills to thrive in a tech-intensive economy. Great opportunities within your Agencies to maintain our leadership across the scientific spectrum on earth and in space if we are strategic in our investments. We are at a time where there is severe unrest in the world. Russia and

China continue to make significant gains in the space domain. It is vital that the United States maintain our leadership in space and in research and development, and I look forward to discussing the importance of this and the details of your proposed budgets being presented with us today. I thank you both for your leadership.

Senator SHAHEEN. Thank you very much, Senator Moran. Senator Nelson and then Dr. Panch, do you want to give us your testimony?

Senator NELSON. Thank you, ma'am. Madam Chair, if I may have my remarks submitted for the record, and I would like to just talk to you, if I may.

First of all, I want to thank you all for the appropriations for 2022, and that gave us what we needed. And a little birdie told me that you all are seriously considering getting the appropriations bills out for 2023 before October 1, and if you do, that will be a minor miracle. All of you will become Merlin the magician, and—but I do believe that that is being seriously discussed among the leadership, and my compliments to Chuck Schumer and Mitch McConnell that those serious discussions, as well as the chairs and the Ranking of Appropriations, are occurring, and I hope it does. It will bring about certainty for all agencies of government if that, in fact, happens, and breaks what has become a routine procedure where we often wait half, at least, of a fiscal year before getting the appropriations and going on a continuing resolution of previous appropriations, which often do not have any application to the present. So I commend you.

I want you to know, just to pick up on comments that both of you made about STEM and about kids, I have been just blown away by our interns. We have lots of interns, and we love our interns. And 30 percent of our interns end up coming to work for NASA, and we are going to expand our interns. They are reflective of what the two of you just related about seeing students in school, that when the subject of space comes up, their little eyes light up. They get excited. They are motivated. It is a subject matter of which it is a window into the items that are absolutely critical for the future of the country: science, technology, engineering, mathematics.

We saw a bit of this several generations ago in the Apollo generation when that major thrust of a space achievement occurred for two generations of students. We saw the effects of a concentration on the STEM subject matter and how that rippled through the schools, and the colleges, and the universities, and produced a workforce that gave us some of the technology that we are experiencing today. And that is what is going to happen with the Artemis generation, and you all—the two of you have just testified to that fact by virtue of what you have seen, and it is extraordinary.

We are taking it very seriously. We send our astronauts to a lot of schools. We send our scientists to a lot of schools. We are giving grants specifically in areas that have been overlooked in the past. This is part of our diversity outreach. So, for example, we have sent a space grant to the University of Wyoming. In the past, a lot of those rural universities did not have a direct relation, but we do not want those students in rural areas—and that is just one exam-

ple—we do not want them overlooked. They are part of the national culture that is so excited about space, and technology, and so forth. So I wanted to comment since the two of you both mentioned it.

You have given us the resources in which to proceed with the Artemis Program. It was the Apollo generation. We are going back to the moon. We are going to land the first woman and the next man. It is going to be an exciting time. But this time we are going back to learn, to stay, to develop new systems, new technologies, new techniques on how to live a long time in that hostile environment, because when we go to Mars, we are going to have to learn that, and we are going to have to learn new technologies, too.

I want to urge you as an Appropriations Committee, do not short-sheet space technology, the R&D. We need that extra oomph in our research and development, and let me give you one example. For years, by the way, you, the Congress, has rescued us on the question of nuclear energy in space. As a matter of fact, not until this year were we able to get the Office of Management And Budget to agree to put, albeit a minor amount, it is a symbolic amount for nuclear research for space, nuclear thermal and nuclear electric, not only producing electricity where, for example, on the surface of the moon we are going to need a lot of electricity because if we find water, then we have rocket fuel. And we have got a mission going to land on the South Pole next year. It is going to dig around down into the moon's surface, and if there is water there, then we have that opportunity.

So I want to commend you for how you have constantly supported nuclear thermal, nuclear electric, but I want to ask you to consider pouring on the juice because that nuclear propulsion would give us a way to get to Mars quicker. And if we can get to Mars quicker, then we do not have to stay there for a long, long time until the planets realign so that we can get back within a reasonable period of time.

And so I could keep talking on and on. Aviation, something dear to Senator Moran, we are going to fly the first electric airplane this year. We are going to fly the first low-sonic boom, supersonic future transport that can fly over populated areas with just a little rumble instead of that boom, boom that goes with the existing sonic boom. There are so many things. I am going to wait for your questions. Both of you mentioned James Webb Space Telescope. My goodness, in 1 month we are going to have the first pictures, and it is going to be from light that has traveled at the speed of light, 186,000 miles per second, traveled for 13-and-a-half billion years. It will be the light in the infrared spectrum that is from the formation of the very first galaxies. Just think of the discoveries that we are going to have of this thing called the universe that is too big for me to even conceive it. Think of the questions we are going to answer of which we do not even know what the questions are right now as a result of what we are going to learn.

And so I am going to stop there, Madam Chair. I want to hear from Dr. Panch, who is well-known, well-respected in his scientific discovery, a partner for us, and I look forward to hearing from you all as well.

[The statement follows:]

PREPARED STATEMENT OF HON. BILL NELSON, ADMINISTRATOR, NATIONAL
AERONAUTICS AND SPACE ADMINISTRATION

Chair Shaheen and Members of the Subcommittee, I am pleased to have this opportunity to discuss the President's \$26,000,000,000 budget request for NASA for Fiscal Year 2023. This budget will keep us at the forefront of exploration and discovery through daring and challenging missions like Artemis, which includes returning American astronauts to the Moon as early as 2025. This budget will help our Nation—and the world—address climate change. It provides opportunities in science, technology, engineering, and mathematics (STEM) education, and it promotes diversity, equity, inclusion, and accessibility (DEIA) throughout the Agency and with our partners. It's an investment to support good-paying jobs and the businesses and schools that partner with NASA in all 50 States. Finally, this budget reaffirms the Administration's confidence in the extraordinary NASA workforce that has dared to do the impossible for more than six decades. This year, we adopted the mission statement "NASA explores the unknown in air and space, innovates for the benefit of humanity, and inspires the world through discovery." This is a budget that will allow us to fulfill those goals and serve those ideals. While my five minutes doesn't allow me time to describe NASA's more than 100 missions in development and operation, I would like to highlight a few for you today.

Soon, the Space Launch System, the most powerful rocket NASA has ever built, topped by the Orion spacecraft, will lift off from historic Launch Complex 39B at the Kennedy Space Center for its maiden voyage around the Moon. This mission—Artemis I—will take the Orion spacecraft and science payloads around the Moon, as well as test out systems in preparation for Artemis II—the first crewed launch, scheduled for 2024. After these test flights and as early as 2025, NASA will launch Artemis III, returning U.S. astronauts to the surface of the Moon. The next generation of moonwalkers will more strongly reflect the diversity of the Nation. During the Artemis campaign, NASA will land the first woman and the first person of color on the Moon—but the Moon is a steppingstone to further exploration. With annual missions to build out our lunar infrastructure, including the Gateway—a new international space station in lunar orbit—NASA astronauts will learn to live and work on and around the Moon in preparation for future exploration of Mars. This budget invests approximately \$7.5 billion in Exploration, including key elements for a robust and sustained presence at the Moon including an upgraded launch capability; sustained lunar lander capability; lunar robotic missions; lunar science; communications infrastructure; next-generation spacesuits; safe, reliable, and continuous surface power systems; and surface mobility systems. And, with projects to test technologies that would allow for human exploration of Mars, we are advancing toward the Red Planet.

The budget includes approximately \$4.3 billion for Space Operations, continuing support for the International Space Station, which the Administration has proposed extending through 2030, while stimulating the growth of the low-Earth orbit economy by working with industry to develop commercial space stations. These investments will pave the way for continuity of sustained U. S. presence in orbit and create scientific and economic opportunities.

This budget increases funding for NASA's Space Technology research and development portfolio to \$1.44 billion, to develop essential technologies that enable NASA's future missions to the Moon, Mars and beyond, while ensuring our technology investments also support the space economy. Space Technology has more than 1,400 technology projects and approximately 140 planned flight demonstrations. Soon, we will send the CAPSTONE CubeSat to the Moon as a pathfinder for the Artemis program. CAPSTONE will collect data and test navigation technologies in the unique orbit planned for Gateway. Other notable Space Technology investments that support exploration of the solar system include those in fission surface power and nuclear propulsion. Through this budget, NASA will continue working with academia, and form strategic commercial collaborations using joint investments with industry to develop important technology solutions that support new space economies in low-Earth orbit and at the Moon. This work increases the Nation's space capabilities, supports job creation, and enables NASA to focus on missions farther into the solar system than ever before.

This request emphasizes NASA's role in addressing climate change, as a leading provider of Earth systems science and data. With this budget, the Agency will start to build a future Earth System Observatory: an array of satellites, instruments, and missions that will generate a 3D, holistic view of the entire planet. From bedrock to atmosphere, the Earth is a system. As that system changes, NASA will help measure and understand the nature of that change. This request also reflects a renewed emphasis on providing actionable data and information to a broad range of

users. NASA is planning an Earth Information Center that will make climate data and information more accessible and usable for Federal, State, and local government leaders, researchers, as well as the public. These efforts will be implemented in coordination with other agencies and partners.

The recent, remarkable launch of the James Webb Space Telescope demonstrated NASA's innovation alongside international partners and inspired the world. Faced with 344 single points of failure, the NASA team poured hard work and ingenuity into this project, and pulled it off flawlessly. This summer, we will see its first scientific images, revealing the stars and galaxies that formed more than 13 billion years ago, just after the beginning of the universe—a period of cosmic history never before observed. Again, we will bring the world together through the unique science from an ambitious NASA mission.

Building on this success, this request is the largest request for science funding in NASA history at nearly \$8.0 billion. The President's budget request enables NASA to explore solutions for bringing the samples of Martian rock and soil collected by the Perseverance rover to Earth through the Mars Sample Return mission. This budget supports over 100 science missions and 10,000 U.S. scientists through more than 4,000 research awards across astrophysics, heliophysics, Earth science, planetary science, and biological and physical science.

The budget provides more than \$971,000,000 to advance U.S. leadership in the civil aviation manufacturing sector, with over half of that amount targeted to reduce the climate impacts of the aviation industry. This year, NASA will start test flights on our Low Boom Flight Demonstrator, which will enable environmentally and socially acceptable supersonic passenger flights, opening new markets for American companies and workers, and the X-57 Maxwell, an all-electric aircraft. This request also accelerates plans for a new experimental "X" plane focused on sustainability. Under the Sustainable Flight National Partnership, NASA and U.S. companies will develop and fly a highly efficient, next-generation airliner prototype as early as 2026. NASA investments will result in safer skies, smoother passenger experiences, and faster, more sustainable aircraft.

NASA continues to invest in engaging students, educators, and educational institutions to attract diverse groups of students to Science, Technology, Engineering, and Mathematics (STEM). This includes funding that supports learning opportunities that spark interest and provide connections to NASA's mission and work; creating unique opportunities for a diverse set of students to contribute to NASA's work; and building a diverse future STEM workforce. The Office of STEM Engagement (OSTEM) leads NASA's STEM engagement function, providing strategic guidance and direction in partnership with the mission directorates. In fiscal year 2023, the budget request includes \$150,000,000 for OSTEM, supporting the National Space Grant College Fellowship Project (Space Grant); Minority University Research and Education Project (MUREP); Established Program to Stimulate Competitive Research (PSCoR); and Next Generation STEM Project (Next Gen STEM).

NASA fully supports the Biden-Harris administration's vision to affirmatively advance equity, civil rights, racial justice, and equal opportunity for all. The Agency launched its Equity Action Plan in April 2022, a comprehensive effort to assess and examine the potential barriers and challenges that exist for communities that are historically underrepresented and underserved in the aerospace and STEM fields. NASA is assessing its programs, procurement processes and grant policies to identify systemic barriers that limit representation and participation of a diverse community of students and professionals. When we enable individuals to inclusively participate, we provide space for all possible talent, skills, knowledge, perspectives, ideas, thinking, problem-solving, and innovations. This empowers NASA to achieve the greatest success in discovering and expanding knowledge for the benefit of all humanity.

With each great step, NASA magnifies its presence as a unifying symbol of possibility and inspiration. At every opportunity, NASA endeavors to educate and inspire. With every breakthrough, we seek to generate more than incredible data—we help to create the next generation of scientists, engineers, and explorers who will be the innovators of the future. The American story is about discovery, innovation, and a relentless spirit to push forward—and upward. This budget allows NASA to continue our journey to enable a new era filled with boundless optimism and limitless possibilities for all humanity.

Senator SHAHEEN. Thank you very much. Dr. Panch?

STATEMENT OF HONORABLE SETHURAMAN PANCHANATHAN, DIRECTOR, NATIONAL SCIENCE FOUNDATION

NSF'S FISCAL YEAR 2023 BUDGET TO CONGRESS

Dr. PANCHANATHAN. Thank you so much. It is truly a delight to testify with you. As you said, NASA is a great partner. Good morning, Chair Shaheen, Ranking Member Moran, and Members of the Subcommittee. It is truly an honor to appear to you—appear with you again today to discuss the President's fiscal year 2023 budget request and the many ways in which the National Science Foundation is accelerating discovery and innovation, as I say, at speed and scale for the benefit of all Americans. I would like to start by thanking this Committee for your continued support of NSF. Your leadership has been and will continue to be central to keeping the United States the global leader in science, engineering, and technology.

For more than 70 years, NSF has been a catalyst for economic growth and job creation in the United States. You do not have to look hard to see the profound impact of the Agency. The Internet, 3D printing, smartphones, and the networks that power them, and even the CRISPR technologies that were foundational in the development of COVID tests and vaccines, and disease-resistant crops, are just a few examples of how NSF's investments have benefited every American.

However, we currently face challenges to our scientific leadership. You both spoke about that. Other nations are seeking to replicate our success, our unique innovation ecosystem, and to control the future of critical technologies, like AI and Quantum Information Science. Our economic and national security depends on our ability to invest heavily in the technologies of today while making the discoveries that are the foundation for the technologies of tomorrow and the future. We must see growth everywhere by building ecosystems of innovation in every region of our country, and we must harness our domestic talent across every demographic and geographic background to unlock the true potential of our workforce.

NSF'S FISCAL YEAR 2023 BUDGET TO CONGRESS

The \$10.5 billion fiscal year 2023 budget request for NSF makes historic investments in each of these areas. First, the budget funds critical exploratory, curiosity-driven research that, Chair, you talked about, which is an engine of economic growth and the foundation for the industries of the future. The request includes \$9.8 billion, an increase of \$1.6 billion above the fiscal year 2022 enacted level, to support research across the spectrum of science, engineering, technology, and STEM education. With this additional funding, NSF will continue to be the champion of fundamental research that is the bedrock of our future.

Second, the budget invests nearly \$1.4 billion—again, you alluded to that, Madam Chair—in support of the scientists and engineers of today and tomorrow. There is tremendous untapped STEM talent across every demographic and socioeconomic group in every geographic region of our country. Every person needs access to quality STEM education opportunities, from K to 12, to community colleges and universities, and we must inspire and motivate the

missing millions to participate in the Nation's innovation enterprise.

NEW PROGRAM: GRANTED

The fiscal year 2023 request introduces a new program aimed at advancing the geography of innovation and engaging the missing millions. Since I spoke to you last, I am delighted to announce this new program. This new program is called GRANTED, an acronym for Growing Research Access for Nationally-Transformative Equity and Diversity. This will focus on breaking down barriers to competitiveness at underserved institutions within the Nation's research enterprise. It will complement NSF's longstanding, broadening participation programs and build lasting institutional capacity.

DIRECTORATE FOR TECHNOLOGY, INNOVATION, AND PARTNERSHIPS

Finally, the budget makes substantial investments in use-inspired, solutions-oriented research. This has been a critical part of NSF's mission and now must be scaled to meet this moment of intense global competition. With the support of the Administration and Congress, NSF has launched, and I talked about this last year, and I am delighted to say again that we have launched the first new directorate in more than 30 years. This new Directorate for Technology, Innovation, and Partnerships, or TIP, sits at the crossroads of exploratory, curiosity-driven research, use-inspired solutions-oriented research, and translational research across all scientific and engineering disciplines. Significant resources are needed to ensure that TIP will have the transformative impacts it is designed to achieve. That is why the fiscal year 2023 budget request includes \$880 million for this new directorate. TIP will leverage decades of NSF's investments in areas like Artificial Intelligence, expedite technology development and translation in emerging industries, and cultivate new education and entrepreneurial pathways.

REGIONAL INNOVATION ENGINES

I am also proud to announce that today, we will be releasing the first new major funding opportunity through the TIP Directorate. The Regional Innovation Engines Program offers a unique opportunity to spur economic growth in regions that have not participated in the technology boom of the past few decades. It will include partners from industry, academia, government, nonprofit, civil society, and communities of practice. These partnerships will stimulate the creation of technology-driven products and solutions to serve the corresponding regions and the Nation's needs. In doing so, the NSF Engines, as we call them, will stimulate economic growth, develop talent, and build centers of innovation across the country. The fiscal year 2023 budget request additionally invests in the critical world-leading infrastructure, including testbeds, living laboratories, and prototyping platforms necessary to enable fundamental research.

RESEARCH SECURITY

NSF also takes very seriously the need to safeguard taxpayer-funded research. NSF is playing a leading role in developing processes, training, and policies to ensure research security and integrity. We are committed to strong partnerships across the Federal Government with academia and with our like-minded international partners to uphold the values of openness, transparency, reciprocity, and research integrity that have made the global research environment so successful.

I am amazed every day by the ingenuity and the dedication of the NSF workforce and the incredible innovations NSF makes possible. During the pandemic, we saw no decrease in productivity. In fact, it was quite the opposite, and thanks to the support of the Administration and Congress through the CARES Act and the American Rescue Plan, we have been able to support those in the research community most impacted by the pandemic.

Again, I would like to thank each of you for your support of NSF. The fiscal year 2023 request positions the Agency to ensure U.S. leadership in science, engineering, and technology for decades to come, and I look forward to working with you to achieve that goal. Thank you, Madam Chair and Ranking Member Moran.

[The statement follows:]

PREPARED STATEMENT OF DIRECTOR PANCHANATHAN

INTRODUCTION

Chair Shaheen, Ranking Member Moran, and Members of the Subcommittee, it is a privilege to appear before you today to discuss how the National Science Foundation is building on decades of successful investments and breakthroughs in science, engineering, and technology to ensure that the United States remains the global leader in innovation into the future.

Established by the National Science Foundation Act of 1950 (Public Law 81-507), NSF is an independent Federal agency charged with the mission “to promote the progress of science; to advance the National health, prosperity, and welfare; to secure the National defense; and for other purposes.” NSF is unique in carrying out its mission by supporting research across all fields of science, technology, engineering, and mathematics, and at all levels of STEM education. NSF investments contribute significantly to the economic and national security interests of the Nation, and development of a future-focused science and engineering workforce that draws on the talents of all Americans resulting in the creation of new businesses, new jobs, and more exports.

Over the past 72 years, NSF has funded research and researchers, innovations and innovators, and world-class infrastructure that has garnered incredible benefits to the Nation. The Internet, 3D printing, and CRISPR technologies that enable everything from the development of COVID-19 vaccines to climate- and disease-resistant crops are all examples of the outcomes and benefits of NSF investments. Many of the technologies and industries that are the drivers of national competitiveness today—artificial intelligence, quantum information science, advanced manufacturing, and advanced wireless and biotechnology, to name a few—are rooted in NSF support, over the course of multiple decades in many cases, for research at the frontiers of science and engineering.

SECURING THE FUTURE

Since the end of World War II, the United States has been the global leader in science, engineering, and technology due to the vision of leaders like Vannevar Bush and sustained investment by the Federal Government. The decision to make long-term investments in basic research was not just a decision to make science and engineering a priority alongside the economy, national defense, and national health—what we have learned is that these investments are an engine that strengthens each of these national priorities.

Today, we are facing challenges to that leadership as other nations seek to replicate our success, especially to control the future of technologies. According to the 2022 Science and Engineering Indicators report, “The State of U.S. Science and Engineering,” published by the National Science Board and prepared by NSF’s National Center for Science and Engineering Statistics, while the United States remains the world leader in global research and development, the rate of growth of research and development and science and technology capabilities by other countries, including China, has outpaced that of the United States in recent years. The 2022 report also shows that while industry performs the substantial majority of U.S. R&D, the Federal Government continues to be the largest investor in basic research. However, the proportion of U.S. R&D funded by the Federal Government, across all research types, has declined since 2010.¹

As we look to the future, it is critical that we foster the Nation’s capacity to produce breakthroughs, to innovate, and to cultivate the diverse domestic talent necessary to power our country forward. Our economic and national security depend on our ability to invest heavily in the technologies of today while making the discoveries that are the foundation for the technologies of tomorrow; to seed innovation everywhere by building ecosystems of innovation in every region of the country; and to develop our domestic talent across every geographic and demographic background. The President’s fiscal year 2023 Budget Request of \$10.5 billion for NSF makes historic investments in each of these areas.

STRENGTHENING ESTABLISHED NSF

By seeding strategic investments, NSF explores the frontiers of discovery and innovation, and makes possible breakthroughs and advances that place the United States at the forefront of global leadership in science and technology. With the continued support of Congress, NSF has been able to sustain support for high-risk, high-reward research that produces incredible benefit for the American people. For example, more than four decades of NSF investment preceded the detection of gravitational waves from merging black holes billions of light years from Earth. This discovery was groundbreaking, with the lead researchers winning a Nobel Prize in Physics in 2017. To achieve this feat, they had to develop and refine new equipment and technologies to achieve their goals—and the development of these ultra-sensitive sensors and precision detection techniques they are pursuing today could very well prove to have incredible impacts on our everyday lives in the form of transformative future technologies, like quantum sensor technology.

Curiosity-driven research has proven to be an engine of economic growth. Since its inception, NSF has been a foundation for the industries of the future. Each year, thousands of researchers expand the base of human knowledge and, in doing so, unlock new possibilities. They have built autonomous vehicles; revolutionized our wireless networks; developed life-saving medical technologies; transformed manufacturing; and brought digital tools to agriculture, transportation, and education. Curiosity-driven, exploratory research is a critical component to the Nation’s current and future success. This will continue to be our central focus: to accelerate discovery and to enhance state-of-the-art research capabilities.

To that end, the President’s fiscal year 2023 Budget Request includes \$9.8 billion, an increase of \$1.6 billion above the fiscal year 2022 enacted level, to support research across the spectrum of science, engineering, and technology, including biological sciences; computer and information sciences; engineering; geosciences; math and physical sciences; social, behavioral, and economic sciences; and STEM education. With this additional funding, NSF will continue to be the champion of the fundamental research that is strengthening our science and engineering enterprise at speed and scale.

Within the request are key priority areas where NSF plays a leading role in addressing issues of national importance. For example, the request includes funding to accelerate climate research, increasing our understanding of the impacts of climate change and developing corresponding solutions. NSF has been investing in fundamental research at the heart of global climate issues for several decades. Long-term, continuous, and consistent observational records are a cornerstone of global climate science and resilience research. NSF supports a variety of research observation networks that complement, and are dependent on, the climate monitoring systems maintained by our Federal partners. The results of NSF investments have helped us understand climatic phenomena, and helped communities design

¹National Science Board, National Science Foundation. 2022. Science and Engineering Indicators 2022: The State of U.S. Science and Engineering. NSB-2022-1. Alexandria, VA. Available at <https://nces.nsf.gov/pubs/nsb20221>.

mitigation strategies, strengthen adaptation capabilities, and build more resilient futures.

Focal areas of the fiscal year 2023 Request include Clean Energy Technology (CET) and the U.S. Global Change Research Program (USGCRP). The fiscal year 2023 request invests \$500,000,000 in CET spanning high-risk, high-reward ideas from researchers across the science and engineering spectrum. These investments are needed to create broad new understanding and innovations that may increase energy efficiency, enhance sustainability, mitigate climate change, or lead to other societal benefits. NSF's portfolio spans longstanding programs as well as focused new opportunities and will continue to advance the fundamental science and engineering underlying clean energy technologies and infrastructure that decrease energy prices and build our domestic supply chain. NSF also will support multidisciplinary research in areas such as affordable green housing and sustainable systems for clean water, clean transit, and other infrastructure.

In fiscal year 2023, \$913,400,000 is requested for NSF to continue to support research that contributes to the USGCRP goal to accelerate action on two fronts: (1) advance scientific knowledge of the integrated natural and human components of the Earth system, focusing on changes that pose the biggest risks and opportunities to society, and (2) provide the scientific basis to inform and enable timely decisions on adaptation and mitigation. NSF will continue to engage with other USGCRP agencies on priorities from intra-seasonal to centennial predictability, predictions, and projections; water cycle research; impacts of climate change on the Nation's critical ecosystems, including coastal, freshwater, agricultural and forests systems; understanding the impacts of global change on the Arctic region and effects on global climate; and fundamental research on actionable science.

In addition, NSF will seek greater integration of social-science research, methodologies, and insights into understanding and supporting responses to global change, improving computing capacity, and maintaining needed observational capabilities over time.

For example, in fiscal year 2023, NSF will develop the National Discovery Cloud (NDC) for Climate, a new resource that will federate advanced computing, data, software and networking resources, democratizing access to a cyberinfrastructure ecosystem that is increasingly necessary to further climate-related science and engineering.

INVESTING IN INNOVATION AND EMERGING INDUSTRIES

Equally important to our Nation's competitiveness and success is use-inspired, solutions-oriented research, which has been a critical part of NSF's mission throughout its history. Intense global competition and a rapidly changing technological landscape requires the United States to take a different approach to research and development investment that brings science and technology innovations to market much more rapidly. Doing so requires unleashing the untapped economies of innovation across the Nation and more tightly integrating curiosity-driven research and use-inspired outcomes. NSF fosters an environment ripe for innovation focused on economic and societal progress. Many of today's foremost national and societal challenges such as healthcare and education demand deeply multidisciplinary, multi-sector, solution-oriented research to achieve much-needed science and technology innovations. We must enable collaborations spanning diverse institutions, sectors, and geographies to co-create new technologies and solutions to address these challenges and accelerate prosperity.

With the support of the Administration and Congress, NSF has launched its first new directorate in more than thirty years. The new Directorate for Technology, Innovation and Partnerships (TIP) sits at the crossroads of exploratory, curiosity-driven research, use-inspired, solutions-oriented research, and translational research across all disciplines and investment models. Significant resources are needed to ensure that TIP will have the transformative impacts it is designed to achieve. That is why, in fiscal year 2023, \$880,000,000 is requested for TIP to work with programs across NSF and with other Federal and non-Federal entities to expedite technology development in emerging industries. This investment is crucial to addressing societal and economic challenges, while maintaining the United States' technological leadership. TIP will leverage decades of NSF investments in areas like artificial intelligence and quantum information science coupled with accelerating the translation of research results from the lab to the market and society. TIP will also cultivate new education pathways, leading to a diverse and skilled technical future workforce comprising researchers, practitioners, technicians, and entrepreneurs.

Partnerships within the agency, with other agencies, industry, non-profit organizations, and like-minded international partners are also crucial to our success. TIP

will leverage NSF's unique relationships with the academic community and grow the agency's collaboration with industry to spur innovation throughout the Nation. The NSF Regional Innovation Engines (NSF Engines) will engage local communities, academia, government partners, industry, philanthropy, and others to identify issues of local, regional, and national importance, and to drive innovation in critical and emerging technologies to address these issues. The NSF Engines will be geographically distributed to ensure that we are unlocking the innovation that we know exists everywhere.

The fiscal year 2023 Budget Request proposes increased funding in six emerging industries where continued investment in both exploratory, curiosity-driven research and use-inspired, solutions-oriented research is needed to sustain U.S. leadership, support economic development, and secure our National security.

(1) Advanced manufacturing is essential to almost every sector of the U.S. economy, spurring it forward by increasing productivity, enabling new products, and opening new industries. The fiscal year 2023 Request includes \$421,000,000 for research to develop innovative technologies to create products and processes with higher performance, higher efficiency, and greater capabilities. NSF programs accelerate advances in manufacturing materials, technologies, and systems; workforce development; and translational activities that speed advances from the lab to the market.

(2) Advanced wireless networks and systems provide the communications backbone that connects users, devices, applications, and services that will continue to enrich America's economy. NSF has a proven track record of investing in fundamental research that advances wireless technologies. For example, today's fifth-generation ("5G") wireless networks and systems were enabled by two decades of ground-breaking NSF-funded research on millimeter-wave capabilities, advanced antenna systems, and novel algorithms and information processing protocols. NSF partners with other Federal agencies and industry on such research. Looking forward to fiscal year 2023 and beyond, NSF-supported research will make possible innovations in areas critical to future generations of wireless networks and systems, such as new wireless devices, circuits, protocols, and systems; security and resilience; mobile edge computing; distributed machine learning, and inferences across mobile devices; and fine-grained, real-time dynamic spectrum allocation and sharing. In fiscal year 2023, \$168,000,000 is requested for this research, which will generate new insights capable of making wireless communication faster, smarter, more affordable, and more robust and secure— with profound implications for science and society.

(3) Artificial intelligence (AI) is advancing rapidly and holds the potential to vastly transform our lives. NSF is the largest non-defense funder of artificial intelligence research and the agency's ability to bring together numerous fields of scientific inquiry uniquely positions the agency to lead the Nation in expanding the frontiers of AI. Additionally, through collaboration and coordination with the Office of Science and Technology Policy, NSF leadership is helping to drive and coordinate AI R&D efforts across the government. In addition to foundational research advancing the frontiers of learning, reasoning, and planning, the key to harnessing the promise of artificial intelligence is the use-inspired and translational research that links artificial intelligence and economic sectors such as agriculture, manufacturing, transportation, and personalized medicine. Equally important is the investment in education and learning, including growing the human capital and institutional capacity needed to nurture the next generation of artificial intelligence researchers and practitioners. In fiscal year 2023, \$734,000,000 is requested for NSF's AI investments, including continued support for the National AI Research Institutes program, a growing partnership with other Federal agencies and the private sector, to create national hubs for universities, Federal and local agencies, industry, and non-profits to advance AI research and workforce development.

(4) Biotechnology comprises the data, tools, research infrastructure, workforce capacity, and innovation that enable the discovery, use, and alteration of living organisms, their constituent components, and their biologically-related processes. NSF has long supported the breadth of fundamental research that catalyzes ongoing developments in biotechnology. In fiscal year 2023, \$392,000,000 is requested for NSF investments that will include continued support for discovery of fundamental biological principles and the development of biotechnologies, advances in bioinformatics, computational biology, and systems biology, as well as advances in the future biotech workforce.

(5) Microelectronics and semiconductors are omnipresent in today's world—in transportation, communications, healthcare, manufacturing, information technology, and nearly every other part of our daily lives. Yet, U.S.-led innovations in this area have slowed in recent decades, and the Nation is now facing historically unprecedented global competition and chip shortages impacting numerous sectors of the

economy. The overarching objective of NSF's investment in microelectronics and semiconductors is to develop new paradigms in semiconductor capabilities. With the fiscal year 2023 request of \$146,000,000, NSF will continue to invest in foundational research, in use-inspired research, and in partnerships and infrastructure, including access to chip fabrication facilities for the research community, to seed a vibrant future for microelectronics and semiconductors in the United States.

(6) Quantum Information Science (QIS) research will form the basis of one of the major technological revolutions of the 21st century. NSF investments advance fundamental understanding of uniquely quantum phenomena that can be harnessed to promote information processing, transmission, and measurement in new ways. Building upon more than three decades of exploratory discovery, NSF investment in QIS will help propel the Nation forward as a leading developer of quantum technology. In fiscal year 2023, \$261,000,000 is requested for NSF to invest in foundational quantum science advances, helping mature a relatively new field, which will have implications for computing, communications, and many other critical industries.

INVESTING IN A DIVERSE AND INCLUSIVE STEM WORKFORCE

There is tremendous untapped STEM potential throughout the Nation. To meet the needs of the future workforce that is necessary for successfully seeding innovation throughout the Nation, every person needs access to quality STEM education opportunities. Every demographic and socioeconomic group in every geographic region of the country is full of talent that must be inspired and motivated to participate in STEM and contribute to the Nation's innovation enterprise. We must scale existing pathways into STEM fields and create new tracks into science and engineering. The fiscal year 2023 request includes \$1.38 billion for STEM education in support of the scientists and engineers of today and tomorrow.

Each year, NSF investments reach approximately 300,000 people at almost 2,000 institutions in every State and territory. Through their work on NSF-supported grants, students, researchers, faculty, technicians, entrepreneurs, and others develop the skills and knowledge that prepares them for the jobs of the future. To ensure continued global leadership in science and technology, we must inspire, nurture, and advance domestic talent across our Nation. The future depends on investment in inclusion, in diversity, in training STEM educators, and in inspiring the next generations through formal and informal learning. Continued global leadership also requires investment in the next generation of scientists trained to pursue questions beyond the traditional scientific disciplines. NSF is investing in education research across all levels of learning—from preK–12 through graduate education and beyond—which then informs education and training programs to better develop skill sets in cutting-edge technologies, promote highly collaborative team science, and foster greater diversity in the workforce.

NSF is strongly committed to the development of a future-focused science and engineering workforce that draws on the talents of all Americans. Increasing equity in underserved communities must span a wide range of stakeholders, from individuals traditionally identified as underrepresented or underserved, to institutions of higher education that serve groups underrepresented in STEM, to those communities, lands and jurisdictions across the country that currently lack resources and opportunities for robust education, workforce development, and regional innovation.

In fiscal year 2023, NSF intends to build on existing programs and develop new ones to strengthen and scale equity investments. NSF will focus on those groups underserved and underrepresented in STEM and will be more intentional in how we engage Minority Serving Institutions (MSIs). NSF will further expand support for individuals and institutions in EPSCoR jurisdictions to ensure geographic diversity.

In fiscal year 2023, NSF requests \$50,000,000 to launch a new initiative called Growing Research Access for Nationally Transformative Equity and Diversity (GRANTED). GRANTED will improve the Nation's research capacity at emerging and underserved research institutions through a variety of mechanisms and programs aimed at advancing the geography of innovation and engaging the Missing Millions, the millions of young people and students who have the talent and drive to be part of the STEM community but who have not been able to access STEM opportunities. It will support the enhancement of research administration and post-award management as well as the implementation of effective practices for competitive proposal development, through mechanisms such as research-coordination networks (RCNs) and institutional partnership grants, ideas labs, and research enterprise hubs in different geographic regions. GRANTED funding in fiscal year 2023 will focus on support for MSIs and aim to mitigate the barriers to competitiveness

at underserved institutions within the Nation's research enterprise as NSF contributes to the Administration's priority on equity.

WORLD-CLASS RESEARCH INFRASTRUCTURE

NSF invests in world-class research facilities, instrumentation, and scientific capabilities to ensure that researchers have access to the most cutting-edge scientific equipment. Through the Major Research Equipment and Facilities Construction (MREFC) projects, NSF has built the world's most powerful solar telescope, transformative optical and radio telescopes, state-of-the-art research vessels, and complex facilities in the harshest environments, including at the South Pole.

The fiscal year 2023 request continues these investments, including long-term upgrades of NSF's major Antarctic infrastructure. It also supports construction of the Vera C. Rubin Observatory, two detector upgrades at the High Luminosity-Large Hadron Collider, and the Regional Class Research Vessels. NSF is also investing in smaller scale, but equally important research infrastructure that serves a vital purpose for the United States' research and innovation enterprise. The Mid-scale Research Infrastructure program is aimed at transforming scientific and engineering research fields as well as inspiring STEM talent. Mid-Scale Research Infrastructure (RI) can also serve as a proving ground for new and innovative major research facilities. In fiscal year 2023, NSF will invest a total of \$126.25 million in Mid-scale RI, split between two tracks, Mid-scale RI-1 (\$50,000,000), funded through the Research & Related Activities account, and Mid-scale RI-2 (\$76.25 million), funded through the MREFC account. Through these two tracks, the Mid-scale RI program is providing U.S. researchers access to critical infrastructure, including testbeds, living laboratories, and prototyping facilities, across the spectrum of disciplines supported by NSF.

The Nation's science and engineering activities rely on facilities and instruments that are geographically and technically accessible, cost-effective, and managed well. To meet the infrastructure needs of the entire community, NSF is dedicated to supporting activities that ensure that instrumentation and research infrastructure can be designed, developed, acquired, or constructed across the Nation, through programs with focused oversight and targeted investments. Moreover, a sizeable portion of NSF's resources is invested in the ongoing operations and maintenance (O&M) activities necessary to keep research infrastructure at the cutting edge, and fully operational and accessible to those who use it to advance the boundaries of science.

The fiscal year 2023 facilities O&M request continues to reflect a balance among multiple priorities. NSF divisions carefully allocate resources between research grants and O&M costs for research infrastructure. In addition to the regular O&M funding that keeps facilities functional, support for upgrades, significant periodic maintenance, and infrastructure renewal must also be addressed within Facilities O&M, which accounts for 10 percent of NSF's total request in fiscal year 2023. NSF continues to explore ways to invest in research infrastructure at all scales in order to keep pace with changing technologies, increased demand by users, and expanding research opportunities.

NSF RESPONSIVENESS TO COVID-19

NSF is grateful to the Administration and Congress for the support of the research ecosystem during the COVID-19 pandemic. With the funding provided by the "Coronavirus Aid, Relief, and Economic Security Act," or "CARES Act," NSF was able to mobilize the research community to make critical contributions to fighting the SARS-CoV-2 virus, including research to model the virus's structure, create new products to mitigate the virus's spread, and develop new treatments and vaccines. From equipment delays and reagent shortages to lost training time and missed field research, the pandemic also strained research projects in unique ways. With the continued support from Congress and the Administration, including the \$600,000,000 provided in the American Rescue Plan act of 2021 (ARP), NSF has been able to support groups of individuals and institutions most affected by the pandemic, as well as those at vulnerable transition points in their research careers. With more than \$450,000,000 of the ARP funding obligated to date, NSF has been able to make more than 1,300 awards spanning all disciplines of science and engineering- supporting researchers, students, facilities and more. Thanks to these investments, NSF has been able to support innovative research ideas and sustain critical research talent that is central to our long-term competitiveness that could have been lost during the pandemic without the support that the Administration and Congress made available.

SECURING TAXPAYER-FUNDED RESEARCH

NSF is expanding capabilities and competencies to protect the U.S. science and engineering enterprise through its Research Security Strategy and Policy activity. In January 2022, the Office of Science and Technology Policy, through the National Science and Technology Council, issued implementation guidance for National Security Presidential Memorandum 33 (NSPM-33) on the National Security Strategy for United States Government-Supported Research and Development. NSF is working together with other Federal research agencies to establish uniform mechanisms for researchers to provide agencies with consistent information on their appointments, activities, and sources of research support; many of these mechanisms will be made available to the community during fiscal year 2023. Consistent with its published System of Records Notice, NSF has established processes to proactively identify conflicts of commitment, vulnerabilities of pre-publication research, and risks at various stages of the research funding enterprise from proposal submission to the performance of NSF-funded research. To ensure clear understanding of research security issues, NSF disclosure requirements, and the tenets of beneficial international collaboration, NSF is leading the efforts to develop training resources for staff and the research community that will continue to be refined in fiscal year 2023. NSF is also commissioning a JASON study in fiscal year 2022 to provide guidance on the establishment of a Research on Research Security funding program that is expected to begin in fiscal year 2023.

NSF participation in discussions with the U.S. research community and with international colleagues is key to the success of the agency's activities, which includes the development of common frameworks for understanding research security. That is why NSF is co-leading the U.S. efforts to work with G7 nations on research security and integrity. NSF is committed to strong partnerships across the Federal Government, with academia, and with our like-minded international partners to ensure that we can uphold the values of openness, transparency and reciprocity that have made the international research environment so successful.

CONCLUSION

At a time of intense global competition, the fiscal year 2023 Budget Request for NSF positions the agency to lead the Nation in innovation, discovery, and STEM education to build a more diverse and inclusive workforce and unleash economic and societal progress. With the new TIP Directorate established, NSF is well positioned to leverage the uniquely American innovation system in which investment in fundamental research is intertwined with strong partnerships among government, academia, and industry. With a keen focus on strengthening NSF's investments in exploratory, curiosity-driven research and use-inspired innovations, NSF will build on seven decades of preeminence in STEM to catalyze partnerships that produce breakthroughs and advancements in emerging industries like artificial intelligence and quantum information science. In this way, NSF will ensure that the United States is in the vanguard of global competitiveness.

Thank you for the opportunity to testify before you today. With the continued support of this Committee and the Congress, NSF will continue to unleash rapid innovations, and foster ecosystems of innovation throughout the country to ensure that the United States remains the global leader in science, engineering, innovation, and technology.

Senator SHAHEEN. Well, thank you both very much for your testimony. We will now enter 5-minute questioning rounds, and I will begin.

Administrator Nelson, I think the whole world has been transfixed on Russia's unprovoked war in Ukraine and what is happening there. And part of what we have heard from the rhetoric coming out of Russia is the suggestion that they may no longer participate with us in the International Space Station, and they may look to China to partner on space activities. Can you talk about how concerned we should be about that and whether you are hearing at NASA's level any chatter that they may actually be pulling out of our partnership there?

Senator NELSON. Madam Chair, they are not pulling out. In the last day or so, there are misleading headlines. If you read the articles, it says something else of comments that were made by people

in Roscosmos, the Russian space agency. I want you to think about this issue in a historical context. In the height of the Cold War with the Soviet Union, a Soviet spacecraft and an American spacecraft rendezvoused and docked in space, and the crews lived together and worked together in space led by General Tom Stafford and General Alexei Leonov. That personal friendship endured over the years, so much so, when Alexi passed away a couple of years ago, who gave the eulogy at the funeral in Moscow? None other than General Tom Stafford, and that cooperation in civil space has continued to this day.

First, there was a Russian space station. There was Mir, and the U.S. Space Program—space shuttle docked with Mir, then together we built the International Space Station. Theoretically, you cannot operate the space station without both. The Russians had the propulsion, the altitude control. The U.S. has the electricity production. I see nothing in the very even-keeled professional relationship between the cosmonauts and the astronauts, between mission control in Moscow and Houston, in the training of Russian cosmonauts in America and the training of American astronauts in Moscow and Baikonur, I see nothing that has interrupted that professional relationship, no matter how awful Putin is conducting a war with such disastrous results in Ukraine.

Senator SHAHEEN. Well, thank you. That is really nice to hear, and I have been encouraged by the reports that we have seen about recent cooperation between the cosmonauts and our astronauts. Can you also comment on China and what you are seeing with respect to China and Russia cooperating in space?

Senator NELSON. Now, China is completely a different experience for the U.S. Space Program because there has not been any transparency. They are very secretive. An example: they put up their space station and the first stage of the rocket. They did not save enough fuel so that they could have a controlled reentry. This is about a year or two ago, and as a result, it was going to come down someplace. Fortunately, it came down in the Indian Ocean, but it could have come down somewhere in Europe. It could have come down in Saudi Arabia. And they were secretive about the coordinates of where it was going to come down.

I have since talked to the Chinese ambassador, and he gave me the opening. He said, well, what could we do. I said, I will give you an example of exactly what you could do to begin things. You, 50 years after us, have returned a sample from the moon. Fifty years ago, we made our sample of the lunar soil and rocks available to the international scientific community. You could do the same. Thus far, they have not indicated anything, so it has been a very strained relationship with the Chinese space program.

What is the extent of cooperation with Russia—between Russia and China? I am simply not sure. China has made entreaties to Russia, Russia has flirted with China, and you remember Putin went to the opening of the Olympics as the guest of President Xi, but we do not know to what extent. We do know that because of the professional relationship and what I believe to be the intention of the Russian space program to continue with the space station, and now that we have gotten the White House approval of extending the space station until 2030, if you all appropriate funds, and,

of course, what we want to do is continue it until we have a commercial space station and then deorbit an aging space station in 2031. But we see every reason that the Russians are going to continue on the space station for the immediate future, and, of course, we personally hope that they will continue with us all the way to 2030.

Senator SHAHEEN. Thank you very much. Senator Moran.

RETURNING HUMANS TO THE MOON

Senator MORAN. Chair, thank you very much. Administrator Nelson, given the amount of work that remains to be done with test flights and developing and testing a lander and space suits, what do you see as the largest technical threat to landing our astronauts on the moon by 2025?

Senator NELSON. First of all, you all have helped us so that that landing will occur because there have been indications, and we hope that you will consider favorably the President's request to start competition in a human lander. Now, as it turned out, the first competition, NASA simply did not have enough money to award for two landers. And by far, the most economical of the three competitors was the one that was given the nod—SpaceX—for the first landing. That is a done contract. What we wanted to do, and what you all, the Congress, have made particularly clear to me through hearings all last year, and I happen to agree with you, is that you wanted competition for the ultimate lander. So on the basis of that, we have started the initial process, and if you deem it wise in giving us the appropriations which the President has requested, then we will have a simultaneous competition excluding SpaceX because they already have that under procurement law and cannot participate in the next competition. The winner of that competition would have the opportunity, as SpaceX, to land an uncrewed lander first and then do the crude landing. They would have that opportunity.

And then we would have two landers somewhere in the 2027 timeframe, having both already landed to make the ultimate choice of the lander that would last for some period of time as the lander on the moon. That is a decision that you will have to make in this President's request, and I believe that that is the plan that can bring us all the value of competition. You get it done with that competitive spirit, you get it done cheaper, and that allows us to move away from what has been a plague on us in the past, which is a cost-plus contract, and move to an existing contractual price.

AERONAUTIC CAPABILITIES

Senator MORAN. Thank you for your answer. Let me ask about aeronautics. You did mention that it has a great value to Kansas and the country. That portfolio includes everything from low-sonic boom aircraft to developing advanced materials and technologies that lead us to a safer, cleaner, more fuel efficient aircraft. You are asking for an increase of \$90 million to further our understanding of aeronautics. That is a \$972 million dollars request.

While NASA is involved in identifying and improving this research, there are great opportunities within the university research community to improve our understanding and develop aeronautic

capabilities within the aviation sector. How does NASA intend to use its proposed aeronautics budget to build upon the strong university research capabilities that exist today to solve current and future aeronautical problems of tomorrow?

Senator NELSON. Well, for example, at Wichita State, they are working on composites. Here is the problem today with composites. You can do an airliner, like the, I think it is called the 787. It is a composite body. It is much lighter, but it is kind of like a one-of-a-kind. You need to be able to stretch that process out where you can make composites and it be much more of an assembly line situation. Wichita State is working on that. You get that to the point through aeronautical research that NASA is working on so that we can start popping out air frames that are composites. Then you have saved a lot of weight, and, therefore, you have saved a lot of fuel, and you have gotten a lot greater efficiencies. And according to the passengers that fly on the 787, it is also more comfortable inside because of the humidity.

Senator MORAN. It seems like you agree with me that the private university—the public and private universities are of value to NASA and to the country in this regard.

Senator NELSON. Absolutely, and as a matter of fact, Senator Shaheen was here 12 years ago when we passed the new NASA bill on a track where there was going to be the government program, and there was going to be a commercial program, and we are seeing the fruits of that, for example, going to and from the International Space Station today because we are transporting crew by NASA contracting with SpaceX and eventually Boeing. And Boeing should launch its spacecraft, by the way, in a week or so, and this is a test flight, and then the crew would be later this year. So we would have two ways of getting to the International Space Station—SpaceX and Boeing—and we have already got lots of ways to get cargo up there, including Northrop Grumman launching from Senator Van Hollen's constituency. It is actually right across the State line in Virginia, but most of the people live in Maryland that work there at Wallops Island launch facility.

And so there is just so much that is happening in the commercial area, whether it is done directly under NASA's government contracts or whether NASA contracts with commercial entities in order to produce what we are asking them to produce. Now, when it comes to safety, NASA is all over it. We are not simply going to put up crew in spacecraft that are not safe, even though we have contracted with a commercial company, and the proof is in the pudding. Look what has happened with commercial crew going to and from the International Space Station.

Senator SHAHEEN. Thank you, Senator Moran. Senator Van Hollen.

WALLOPS FLIGHT FACILITY

Senator VAN HOLLEN. Thank you, Madam Chairman, and to the Ranking Member. Great to have both of you here. Administrator Nelson, thank you for your enthusiasm, for all the initiatives that you are overseeing, and for presenting a budget that includes important investments in space exploration and discovery, as well as robust funding for earth sciences, which you said are very impor-

tant to all of us and encompass many of the Maryland-based missions, including at Goddard.

And appreciate the funding for PACE, for OSAM 1, and, again, continuing support for the Webb Telescope. We are all thrilled with the fact that that deployed successfully, and we all know a million things had to go right in order for that to be successful, and it has been. And I am very proud of all the folks at the Space Telescope Science Institute in Baltimore who were responsible for mission operations for the Webb as well as about 2,000 other Marylanders at Goddard and other places. And as you say, we all look forward to getting the first images back soon.

Thank you for mentioning Wallops. I am going to spend a moment focusing on the Wallops Flight Facility, which, as you indicated, is critical to our space and earth science missions. It is a hub for unmanned flight. It is a supplier to the International Space Station. It is a home to NASA's Balloon Program. This is a great budget, but it does have a shortcoming in that it does not include the funds that we have traditionally provided to the 21st Century Launch Complex Program. Other Administrations have also admitted that, and we have worked on a bipartisan basis to make sure those funds are provided because Wallops is attracting new commercial space partners. It is growing, and I think you have acknowledged as well in your infrastructure needs budget the importance of the Wallops Island Causeway Bridge.

So Mr. Administrator, I know you have been there, just your commitment to work with us to make sure that that is a success.

Senator NELSON. Not only do you have my commitment. I have been out there, and we are afraid that bridge is going to fall in the water.

Senator VAN HOLLEN. Yes.

Senator NELSON. And it is the number one priority, and I thought with machinations with some of your colleagues on this Committee that we were going to get it in the 2022 budget. I may get in trouble by saying this, but I hope that there is going to be kind of infrastructure bill that is still going to come out of the Senate that would allow us then to have high-priority, desperately-needed infrastructure projects like the Wallops Island Bridge be taken care of.

Senator VAN HOLLEN. Yes.

Senator NELSON. The only way we got some of the others was that you all passed our hurricane emergency supplemental, and we got the roof being done down in New Orleans on the big facility down there, but we have not been able to get that Wallops Bridge—yes.

Senator VAN HOLLEN. I hear you. I hear you, Mr. Administrator. We are going to work on that. I mean, the infrastructure modernization bill had a lot of good investments in it, but it did neglect some critical U.S. Government investments like this one. I mean, obviously if you do not have a bridge going to the Wallops Space Complex, you are in a world of hurt. I do want to flag also the issue of bridge repair over the BW Parkway for Goddard.

Mr. Administrator, let me ask you about heliophysics because I indicated that I think the budget is a good one, but in the area of heliophysics, there is a slight reduction, which I will work with my

colleagues to remedy. But I do want to applaud you for your continued support to the science directorate. If you look at the Heliophysics Division's budget, it has been reduced. I think that is a mistake, especially as we witness the impact of solar flares on Starlink satellites, and space weather, as you know, poses a serious risk to our satellites and communication systems. So I have—I also believe you are—you are committed to that mission.

In my remaining time, Dr. Panch, if I could just thank you also for all your work at the National Science Foundation. Quantum science is obviously a critical area for our country, and you mentioned it in your remarks, and Maryland is an important center for quantum information science. Can you elaborate a little bit more on what you are doing in that area, and at the same time, talk a little bit more about your efforts to bring HBCUs—

Dr. PANCHANATHAN. Yes.

Senator VAN HOLLEN [continuing]. Into your efforts to make sure that all of our talent is on the playing field when it comes to science.

QUANTUM INFORMATION SCIENCE

Dr. PANCHANATHAN. Thank you, Senator, for asking the question. As you pointed out, it is a very, very important technology, and it is very important that we stay in the vanguard of innovation. It turns out yesterday, I was giving a talk at IBM Yorktown, and I was standing in front of the quantum computer right there and admiring the tremendous work that has gone into it in terms of many, many things: materials, devices, the fabrication technologies, of course, that goes with it, the Quantum Information Science, and a whole lot more, and the quantum networking, all of those things that have come together in order for us to be building such a fantastic machine. And I was told that it is deployed not only across the United States but also will be deployed all across the globe, so really a world leader in this.

From an NSF perspective, this investment has happened for several decades. We are here today because of the sustained investments that NSF has made in all aspects, whether it is physics, chemistry, you know, material science, computing, engineering, and a whole lot more, over several decades to get to the point where we are right now. And I am very thrilled to say that through a partnership with the Department of Energy and other partners, we are continuing to invest in quantum institutes, which are large-scale partnerships, to be able to advance it at speed and scale, as I would often say. We also have a number of investments in terms of how we take these ideas to action in terms of entrepreneurial ventures and supporting industry partnerships, things of that nature, and that is why I was there at IBM yesterday.

But as you said, the most important thing for us is to make sure that we have the quantum workforce. This is an exceedingly important imperative. Yes, we will have great quantum researchers, and we will continue to invest in that, but we need to make sure that we have quantum inspiration starting not just at the university level but right at the K to 12 level. So we have a Q-12 Program, which essentially is focused on K to 12 inspirations of quantum. How might we get quantum foundry-like ideas accessible for high

school children to be able to, and middle school children to be able to, get excited about quantum science? How can we relate quantum futures at the K to 12 level? So this is something that we are working with many partners to develop that kind of curriculum at the K to 12 level.

HISTORICALLY BLACK COLLEGES AND UNIVERSITIES

To your point about HBCUs, we have a program called Expand QISE, Quantum Information Science and Engineering. This is precisely the focus. How might we get the quantum futures also exciting people at HBCUs, at other MSIs, Hispanic-serving institutions, Tribal colleges and universities, so we are working diligently with our partners? Specific to HBCUs, since we met last, Senator, I have had many conversations with HBCU presidents and chancellors, and I am thrilled to report that one of those presidents and chancellors is University of Maryland Eastern Shore President Anderson, and so we had good conversations and asking them how might we have more Historically Black Colleges and Universities. How might we have the minority-serving institutions, R2 institutions, also participating in the quantum revolution? We also need community colleges in this because it requires a lot of technical skills also to be part of how we build the quantum future.

So we are working on all of this in terms of STEM training for talent everywhere to be inspired by quantum.

Senator VAN HOLLEN. Thank you. Thank you, Madam Chair.

Senator SHAHEEN. Thank you. Senator Capito.

COMMERICAL LANDER

Senator CAPITO. Thank you, Madam Chair, and thank you both for being here today. Administrator Nelson, it is good to see you. About a week ago I was pleased to be at a conference—I just missed you. You came, I think, the next day, but I was with a couple of your leaders, James Reuter and Thomas Zurbuchen from the Space Technology and Science areas. And the goal is to combine the skill and resources, both in people and capabilities, of West Virginia, Ohio, and Pennsylvania regions to become more active contributors to our space industrial base. A really exciting conference. I have seen this firsthand at Constellium and Ravenswood, which does a lot of the aluminum, and then also I toured the Astrobotic—I do not know if you got to do that—while we were in Pittsburgh, which was exciting to see what they are going to be landing in the 4th quarter.

So how do you see this perspective? I know you touched on it a bit with the question that I heard with Senator Moran, the private sector and even the more rural parts of our Nation that can really capitalize on the exciting, I think, futures in space?

Senator NELSON. Specifically, that consortium of three States is responsible for 10,000 jobs in the three States, and it is impressive what you all have done. Also, while I was there, I did go to Astrobotic, and they revealed the first commercial lander on the moon. This will be, and it will be later this year, this will be the first U.S. landing on the moon since a half century ago when we last landed with Gene Cernan on Apollo 17. And this is going to be a commercial landing under the CLPS Program, of which we

have incentivized the commercial industry to build the landers and put scientific payloads on them, many of which are NASA payloads, and do all kinds of things without NASA having to do the lander.

And so, for example, there are three companies that are going to be landing. One of those companies is going to have a NASA instrument on it. It will land on the South Pole. It will dig down to see if the water that we know is there in the shadowed crevices on the South Pole, which is now ice, is there water underneath, and if so, then there is the potential for rocket fuel, hydrogen, and oxygen. And so these are the kind of things that you are doing out there in combining the efforts of three States, and it is only going to grow.

Senator CAPITO. Yes, it was really exciting to hear not just the private sector, but that higher ed, educational, and the nonprofit community. As you know, Pittsburgh has some really great community organizations from their long history of building this country, that they have now—are now sustaining and looking at space.

Let me ask you one other question about the upcoming OSAM—it used to be called Restore-L—and because West Virginia's Robotic Technology Center is a part of that. That is the in-space service, assembly, and manufacturing of satellites. What do you think—how important is this? I mean, I can see it, but if you could quantify a little bit.

Senator NELSON. Hugely important.

Senator CAPITO. Mm-hmm. Mm-hmm.

Senator NELSON. If we are able to service a spacecraft on orbit, then we get extra life out of it.

Senator CAPITO. Right.

Senator NELSON. Not only repairs and maintenance, but also fueling.

Senator CAPITO. Right.

Senator NELSON. And so it makes sense.

Senator CAPITO. Right.

Senator NELSON. And we are developing—NASA's developing this capability. We have contracted out for commercial entities to do this as well. And by the way, before you get through, I just want to give kudos to you. You know, we have what we call the IV&V Center—

Senator CAPITO. Right.

Senator NELSON [continuing]. In West Virginia—

Senator CAPITO. Mm-hmm.

Senator NELSON [continuing]. Independent verification and validation of software.

Senator CAPITO. Right.

Senator NELSON. That is so super important to NASA, and I am going to be there in a couple of weeks, and I hope your schedule on a Monday morning works out so that you can come with us. And then I will try to get you and whoever in the delegation is with us back to Washington.

Senator CAPITO. Sounds great. That is named for Katherine Johnson, as you know, one of our proud West Virginians. I was there for the dedication. I look forward to that, and I will be looking at my schedule. Thank you. I have a question for you, but I will submit it for the record. Thank you so much.

Senator NELSON. Thank you so much, Senator. Good seeing you.

Senator SHAHEEN. Thank you, Senator Capito.

Senator BRAUN.

Senator BRAUN. Thank you, Madam Chair. You know, where I come from, which was running a business for 37 years prior to getting here, investment was always the most important thing you had to consider. When you invest, there is a return on it, and if you do not do it well in business or government, you end up paying the price. Your competitors generally outmaneuver you in the long run.

When we are looking at both NASA, the National Science Foundation, you might be surprised, but I think we ought to be putting as many resources into it as we can. It is one of the few things that, even though it may not be tangible, it is very important, and sometimes it is very tangible as well in terms of what it yields down the road. So I am one that generally always thinks of the particulars, which I see \$23.27 billion enacted in fiscal year 2021, \$24.04 request, \$25. That is about as mild a request in terms of increases of anything I have seen since I have been here. It is in the context, though, that we are \$30 trillion in debt. That is such a complicated subject. All I can tell you, it is not a great business plan to borrow your way into the future when a lot of it does not give you a true return on investment.

I want to talk about I think what is even a more an existential discussion, and that is our main geopolitical competitor. So, Dr. Panch, when it comes to the Chinese, they are not apologetic. They are not even quiet about it. They would want to replace us someday and do it, I think, by merit, according to maybe what they might think that might be, but in the meantime, I have observed them as being ones that, I do not know, their handshake business partners. And if we do enable and invest more in the National Science Foundation or NASA, how are we sure that with their behavior, especially when you are maybe doing it to some extent where there is—even if it is not shared information, it could be extracted, how are we certain that we are going to do it in a way that keeps us secure and does not aid the competition? And then, Mr. Nelson, I would like you to answer that same question as it would apply to NASA. Go ahead.

RESEARCH SECURITY STRATEGY POLICY AND CHINA

Dr. PANCHANATHAN. Thank you very much, Senator, for that question. I often say research is security. Research is research integrity. Research integrity is research security. So clearly, before I get to the specific question about China, we are working with international partners who share our values, who share our values of research integrity, transparency, openness, and also reciprocity. So we are working with partners who emphasize that, and we are building those partnerships.

So one of the things that NSF did 2 years ago, and I was at that time on the National Science Board, is we commissioned a security group called JASON, and we asked them to look at the problem so that it is not just an internal thing only but an external group of experts looking at it and giving us advice in terms of how do we move forward in research security. And we are pretty much fol-

lowing the guidelines that have been given to us by JASON, of course, in consultation with many other constituencies.

One of the principal recommendations that was made was to appoint a chief officer for Research Security Strategy and Policy, whose job it is to, every day, wake up and think about research security on its own—in its many forms to make sure that we are protecting those things that need to be protected, and set up the policies that need to be set and put in place for that to be, you know, exercised in its fullest form. And I am very happy to say that that person reports directly to me, and that was part of the recommendation. But more importantly—yes.

Senator BRAUN. Are you confident that in this case, especially with what we have observed over the last decade or so, especially more recently, that it will be foolproof, it will not be breached if we are making these investments to where it would be nothing more than giving them information that would end up hurting us somehow in the long run?

Dr. Panchanathan. Senator, this is where I think the partnership with agencies, and that is what we are working with right now, NSF is closely partnering with this chief officer, with the intelligence agencies, with other agencies like NASA, with the Department of Energy, and all these agencies because it is an all-of-government approach. In fact, NSF co-leads with the Office of Science and Technology Policy, with the Department of Energy, and NIH to make sure that the policies that we are putting in place is consistent across the board for all researchers in institutions that we essentially invest in.

And so I can tell you that we have constant conversations about this. In fact, I will tell you since we met last time, we have developed an analytic software that can actually look at where people are supposed to be declaring their conflicts of interest and things of that nature of commitment, that they are surfaced, and we are able to then make sure that people are ensuring that they are declaring their conflicts, as the case may be. But more importantly, the work happens in the academic institutions. So we are partnering with the academic institutions to make sure that the policies that we are putting in place are going to be, you know, essentially implemented.

But in terms of taking care of any breaches, we work very closely with the Office of Inspector General. As you know, it is an independent entity from NSF, and we make sure that we take care of any such situations.

Senator BRAUN. Thank you because it looks like you are well aware of the potential of what might happen. Mr. Nelson, would you weigh in?

Senator NELSON. Senator, your question about China, I have made no bones about, in response to Senator Shaheen, they are simply not transparent. They have not cooperated. We have given them ample opportunities, and I will not repeat what is already on the record for the Committee. We would welcome that, but we would be very guarded in our dealings with the Chinese. But thus far, all the opportunities that we have given them, and the example that I gave was that life was threatened on the face of the earth with the uncontrolled entry of their first stage of their rocket

when they put up their space station. Not only had they not saved enough fuel for a controlled reentry, and, thank goodness, it came down in the Indian Ocean, but it could have come down in Europe, and it could have come down in Saudi Arabia.

And not only had they not done that, but they refused to give us coordinates and information about the track. We fortunately had our own information about the track, so we were pretty on top of it, but it is just another illustration. And it is such a contrast to what we have been doing with the Russians ever since the Soviet Union, in 1975, where the civilian space program has always had a cooperation to this point now and going forward, why this is such an international space program with the Japanese and the European Space Agency, and now the UAE are all participating with us, not only on the space station, but as we go to the moon and the gateway, which is like a space station, that will orbit the moon.

Senator BRAUN. Well, thank you for being vigilant and alert to the potential. Thank you.

Senator SHAHEEN. Thank you, Senator Braun. Senator Braun raised the issue of investing, and I agree. I think it is one of the reasons that I support the U.S. Innovation and Competition Act, because I think that is a place where we are investing in science in a way that we really need to, science and innovation. And one of the provisions that is included in that that I support requires that at least 20 percent of NSF investment go to EPSCOR States, like New Hampshire.

So, Dr. Panch, can you talk about why it is important for us to also encourage small States to participate in EPSCOR and to invest in those programs?

ENCOURAGING STATE PARTICIPATION IN EPSCOR

Dr. PANCHANATHAN. Madam Chair, thank you so much for that question. If you recall, last year when I gave the testimony, I said talent and ideas are democratized all across our Nation, no exception. I happen to come from one of the small States, too, and, therefore, I fully understand that when you energize talent everywhere, I think innovation will happen, can happen anywhere. I always say innovation anywhere, opportunities everywhere, for which we need to energize talent everywhere.

I have been deeply committed to this since I got in. In fact, the central pillar of my three-pillar vision is about ensuring inclusivity access and ensuring that we embrace diversity of all kinds: diversity of geography, socioeconomic, demographic, and racial diversity. So we need to make sure that talent everywhere is energized, so that is the first point that I want to lead off with.

So if you look at some of the programs that NSF has launched, let us take the AI institutes or the quantum, even, programs. You will be very pleased to know that AI institutes right now, with just two rounds, with 16 institutes, spans 40 States and the District of Columbia, and a third round is coming in. And this is an intentional effort because I truly believe that AI is everywhere, and AI should be everywhere, and quantum, likewise, should be inspired everywhere.

So I think in terms, therefore, how do we get these ideas that we say are everywhere to rise up? And that is why I talked about

this new program that we launched where, if you look at institutions that truly deserve the level of investments with the fantastic ideas that is everywhere, one way of doing that is to make sure some of the institutions have the research infrastructure support that makes it possible for them to rise up and be successful in the gold standard merit review process of NSF. How do we get those institutions, and other institutions also to play ball? And this is why the GRANTED Program is a virtual research infrastructure office.

How do we get to such developments support? How do we get pre-award, and post-award support? How do we get support in terms of how we transact intellectual property? How do we build a partnership with industry? This kind of support that—is not necessarily available in all institutions. How do we make it possible in Historically Black Colleges and Universities, in other MSIs, in States like the EPSCOR States, where there is a lot of talent and ideas that need to be lifted up? So I am a huge fan of the GRANTED program to lift those ideas and make them successful. So I am very, very comfortable with the fact that we have it as an aspirational goal of how we might invest in all these States, the EPSCOR States included, in a way that can bring out those talents and ideas.

Senator SHAHEEN. And so you would agree then that helping to build that infrastructure also means ensuring that NSF's large-scale programs, like science and technology centers, engineering research center, midscale infrastructure, AI institutes, the new technology directors, director, and all of those should also encompass EPSCOR States.

Dr. PANCHANATHAN. Absolutely. In fact, I have made the point, in fact, publicly I have said this, that when institutions like R1 institutions lead and some—they bring in partnership other institutions, I have said that we should also look at R2 institutions, and MSIs, and HBCUs. Sometimes they should be the lead and R1s should be partner institutions. And so I am fully in concert with the fact that all these institutions can be everywhere and should be everywhere because ideas are everywhere.

Senator SHAHEEN. And does that 20 percent of NSF investment, is that a goal that allows us to do that?

Dr. PANCHANATHAN. So an aspirational goal because if the GRANTED Program, as we have outlined it, which I am confident is going to be wildly successful, you will find that we will end up over the years that we are essentially probably exceeding even that kind of investment that goes to the EPSCOR States and the regions of our Nation where the investments are not as prominent right now. So, you know, as an aspirational goal, it is a good goal to have.

Senator SHAHEEN. Well, thank you. I am counting on—Senator Moran is a member of—a conferee of the conference committee to hold tight on that 20 percent to go to EPSCOR States, small EPSCOR States, so share that with Senator Moran since he is not here right now.

Let me also ask you, Dr. Panch, about the number of additional grants that NSF would be able to fund if you are funded at the request level. What does that allow you to do that you would not be

able to do otherwise, and how do you see that contributing to our goal of promoting innovation and competition?

ADDITIONAL GRANT FUNDING WITH FISCAL YEAR 2023 REQUEST LEVEL

Dr. PANCHANATHAN. Madam Chair, if you will recall the last testimony that I gave, I talked about the numbers of grants, what we need, and what we are leaving on the cutting room floor. I, in fact, invoked this when I was with Senator Moran in Kansas when a question was asked from a faculty member who had gotten a competitive rating and said, but I did not get funded, right? So NSF, we receive about 40,000 to 50,000 grant proposals a year. Last year, for example, it was about 43,000 grant proposals. We fund about 11,000 of them, a 25-percent sort of a success rate, let us put it that way. Now, clearly, if you ask me, Panch, so what is the number of proposals that are recommended by the Gold Standard Merit Review Process that the NSF, you know, is very well known for, it turns out it is close to about, you know, one-third, or 30 percent, of the proposals. So clearly, we have a number of proposals that are ranked competitive that are left behind on the cutting room floor, right? So right now, with 25 percent, with the new investments that are being proposed, we will get to about 2,800 more proposals, our success rate going from 25 percent to 26 percent.

But I also talked about the size of our grants last time. You know, I said average is about 200K. We need to work towards raising it to 300K. With this increase, we will get from 200K to 240K. You know, we will be part way there. We will be 20 percent of the way there, and so the 50 percent that we desire, but that is a good trend to take to where we need to be in terms of how we should get this done. And I see this as a national security issue because the unfunded ideas and unfunded proposals are the ones that our competitors invest in, and we should not leave that on the cutting room floor.

And I am hoping, and I am grateful for all of you for recognizing that, and I am grateful to the President and the Administration for investing in NSF because this would make that possible.

Senator SHAHEEN. Thank you. Senator Moran is back, but while he is still getting settled—

Senator MORAN. If you would ask another question—

Senator SHAHEEN. Yes.

Senator MORAN [continuing]. I would be grateful.

Senator SHAHEEN. I will do that because I wanted to wait until you got back to follow up on your question to Administrator Nelson about the 2025 date, because, obviously, it depends on a lot of things going right if we are going to make that 2025 date. And I was a little fuzzy on how confident you are that that can actually happen. So can you tell us today that, if you get your budget request, that you will be able to make that 2025 date for the landing?

MOON FLIGHT TIMELINE

Senator NELSON. We will not fly astronauts until it is safe, and if that means there is a delay, then we will delay. But we have every reason to believe that we are on a schedule that, first of all, that Artemis will certainly, through the SLS Rocket and the Orion Spacecraft, be ready, and we will have flown in 2024 a crew after

this first test flight later this year. We will have flown a crew in a 30-day mission in lunar orbit. And then we have every confidence to feel that, under the contract with SpaceX, that in 2024, they will land an uncrewed lander as part of their demonstration, and that a year later, in 2025, that we will be ready for them to have launched their lander into lunar orbit. Orion goes into lunar orbit, the crew is transferred, and the lander goes down and lands and stays for whatever the prescribed time is, a day or so, and then they come back and rendezvous in lunar orbit with Orion, and come home.

Now, of course, we believe that that is the schedule, but I can just tell you that if I am making the decisions, it is not going to fly until it is safe.

Senator SHAHEEN. Well, I certainly think we would all expect no less than that—

Senator NELSON. Yes, ma'am.

Senator SHAHEEN [continuing]. That certainly needs to be the bottom line for the decisionmaking. My question is really, assuming that it is safe, are we going to meet all those other deadlines in order to ensure that it is safe—

Senator NELSON. Yes.

Senator SHAHEEN [continuing]. And get the landing done?

Senator NELSON. And I appreciate your question, and you ought to ask that question. It is also true that every space mission that we have had, there have been delays. You think back to Apollo. Look what happened after the Apollo 1 fire. I mean, they were down for over 2 years and still, with an incredible amount of money poured in, were able to make President Kennedy's goal of landing on the moon by the end of the decade. Look at the space shuttle, the space shuttle, a fantastic flying machine, by the way, that we now know had certain technical flaws, and we lost 14 souls. It, too, was delayed until 1981 when, in fact, a lot of people thought that it was going to fly not long after Apollo-Soyuz in 1975 and fly in the late 70s. It did not happen, and look what happened. When we lost Challenger, we were down 2-1/2 years, and then in 2003, we lost Columbia and were down another couple of years and the further delays.

So you cannot go until it is right, but all these things cost money. These delays cost money. That is another reason we had a question here about competition. That is another reason to get to fix-priced contracts and then hold them to it, and we are doing that with the landers for the moon.

Senator SHAHEEN. Thank you. Senator Moran.

MAINTAINING BASIC RESEARCH LEVELS WHILE ESTABLISHING TIP DIRECTORATE

Senator MORAN. Thank you, Chair. Dr. Panch, again, thank you for your presence here and your leadership at NSF. Let me begin by talking about the TIP Directorate. You mentioned in your testimony about the development of the new directorate, and you did so with great excitement. The NSF budget proposes \$880 million for the continued establishment of the TIP Directorate, which is now about 20 percent of the total amount that is being requested for research. Is NSF balancing the creation of the TIP Directorate

while preserving its basic research foundation, the bedrock of NSF's work, its mission, and should I, should we be concerned that TIP will change the direction of NSF and undermine that basic research needed to enable us to reach the goals of TIP?

Dr. PANCHANATHAN. Very good question, Senator. Thank you for asking that question. So if you look at some of the programs in the TIP Directorate—let us look at SBIR/STTR Program, the Innovation Corps, which is the entrepreneurship program, and the Partnership For Innovation, which is also a program that was at NSF, some of those programs that have been focused on the translation of scientific ideas into the market have been existent at NSF in terms of training the entrepreneurs of the future.

What we are trying to do right now is to scale them, but on top of that, also build a program called the Regional Innovation Engines, and these regional innovation engines, to be very clear, are meant to train the next generation, the future practitioners and future researchers also, in a fused environment of academia and industry working together. So it is about the mission of NSF, which is about training the STEM talent for the future and inspiring new ideas, so it is the same mission that we are working on.

I cannot talk enough about the NSF's vision. When I came in, I started describing it this way. It is the DNA of NSF. The one strand of the DNA of NSF is curiosity-driven, discovery-based exploratory research, and that is something that you alluded to, Senator, but we also at NSF have been doing the other strand, which is what I called use-inspired, solutions-focused, translational research or innovations. To me, these are highly synergistic like DNA is. Explorations make possible translations, but translations make possible more explorations.

There are many, many examples of this, you know, including, for example, in space exploration. You start working on the technology for space exploration. You explore. You find new sites, new problems to solve, and this synergy is exceedingly important, in fact, to open up new vistas of scientific explorations also. That is why this is exceedingly important. The TIP Directorate, I want to make sure, is not a distraction. It is an attraction. It is an attraction to do more in exploratory science rather than distracting of explanation, so that is the first thing I want to say.

The second thing I want to say is it makes possible the kind of work that we need in States like Kansas. You and I saw this, Senator, first time, the unbelievable work and the talent that is there in the Johnson Community College. Let us take that as an example. They are doing amazing work. They won the Community College Innovation Challenge when we were there. And when I met these students, it is very clear that if we do not have these crucibles of innovation, we will not have the community colleges, universities, and other researchers getting the practitioner talent trained at the highest level of intensity for where we need to move forward in terms of the industries of the future.

So I am happy to elaborate more, but this is what we are trying to do.

Senator MORAN. Let me follow up with, in the absence of what research takes place at NSF, where would the private sector—in the absence of that research, what would we lose the most? What

does the private sector do in comparison—applied research versus basic research—or do we need to focus public funds?

APPLIED RESEARCH VS BASIC RESEARCH

Dr. PANCHANATHAN. Yes, so the public funds, I think, are mostly focused—still in NSF, the majority of the public funds are focused and will continue to be focused on fundamental, basic research. But as I said earlier, we are also trying to invest so that more fundamental research can be uncovered through the practitioner work that we do. But let us not forget, just in the last year—let us take some examples. In the AI institutes, in fact, the private sector has come to us and said we will co-invest with you. Amazon invested in the Fairness in AI Program. One of the AI institutes scaled funding of \$20 million were invested by a combination of Intel, Google, Accenture, and Amazon. So the private sector is coming to us and saying we will co-invest with you because our basic research needs are something that NSF is well positioned to do. You have a gold standard merit review process. We can work with you to unearth more basic research that benefits all industries, so, in fact, I would say it is an additive effect rather than a subtractive effect.

So yesterday I was in IBM. You know, IBM is investing about \$100 million on HBCU campuses to empower them. And we were talking about how we might collaborate with companies who have interest in wanting to get the talent of the future and also newer ideas that they want to work in, and they are willing to partner with NSF. This is a new world: a new world of partnership. So what we are also doing at the same time is, to address your question in another way, I am developing a strong partnership with the Department of Commerce so that their regional technology hubs and our regional innovation engines are tightly integrated. So the scientific prowess of what we have, which is what makes our Nation unique, the innovation potential that is there is able to be taken out and scaled, and that we are able to compete now with other nations who are starting to become more tight.

So I want us to be a lot more tightly coupled between agencies, between the various programs, and nice handoffs, and we have a fantastic partnership with NASA at so many levels, and that is what we need more of. And I am a huge fan of that because our Nation, I think, needs all the public investments to then translate to economic prosperity, societal prosperity, and, most importantly, every region of our Nation, and the ideas and talent lifted up there. And we saw firsthand what is happening in the great State of Kansas.

Senator NELSON. Senator, if I may, Dr. Panch has just described the emphasis on public/private partnership, the ethos that is very similar to what we are doing. It is a new day. Government cannot do it all. You all give us X amount of money, and we have got to make that money happen the way that we are trying to achieve, and we can leverage that money by working with the commercial industry and through competition, bring those costs down to NASA.

I will give you one more example: the development of SpaceX and their very successful rocket, the Falcon 9 and the Falcon 9 Heavy. General Hyten, the vice chairman of the Joint Chiefs, told me last year before he retired, he said the fact that we have competition

now ongoing to space just for the military has saved them \$40 billion in launch costs. So it is just another example of the public/private partnership. We are doing this with regard to climate, and, of course, I will be happy to go into examples if you would like that, Senators.

Senator MORAN. Dr. Panch, my questions are not intended to be critical but to garner an understanding of how we can more rapidly advance—

Dr. PANCHANATHAN. Yes.

Senator MORAN [continuing]. The outcomes that we need economically and in national security in a time in which our adversaries have—seemingly an adversary has unlimited public funds.

Dr. PANCHANATHAN. Yes.

Senator MORAN. How do we do this in a way that gets us to the places that we need to be the fastest?

PUBLIC INVESTMENT IN SCIENCE VS COMPETING NATIONS

Dr. PANCHANATHAN. Senator, I never look at your question as a criticism at all. In fact, on the contrary, I look at it as, you know, your expression of strong support. I will tell you, to the point that you make about our competitors, our competitors somehow, because they have a top-down approach, they seem to force the synergy. Forced synergies will not work. We all know that, at least not in the long term. That is what is fantastic about our Nation. I repeat this slogan. I say innovation anywhere, opportunities everywhere. I will keep saying this because we have that innovation potential anywhere, and that is why we need to bring that out by, not forced synergies, by natural synergies of coming together, and that is what we are doing.

How can we use the public funds in a way that inspires every talent and idea everywhere, but at the same time, how do we leverage, as Senator Nelson was saying, through public-private partnerships, scale even more and scale faster? I am anxious to scale fast because I think we are so good, but we need to scale fast and use every bit of talent that we have in our Nation.

Senator MORAN. Absolutely. The capabilities of the United States to advance faster, better, be safer, be more economically secure than our adversaries comes from the initiative, enterprise. Innovation that comes from our private sector, that comes from private citizens.

Dr. PANCHANATHAN. Yes.

Senator MORAN. And government is a tool in which we can enhance and speed up that process, but I will choose the innovator over the government decision every time.

Dr. PANCHANATHAN. You are right. I mean, innovation is everywhere, but we have a role, I often say, Senator, if I can say that. We have a role of catalyzing, enabling. As public investors, that is what we are doing. The innovation is there. All we are doing is we are trying to make it surface up. We do not want anybody to be left behind. You know, I have met unbelievable talent all across the Nation. I am traveling quite a bit. Like Administrator Nelson, I am also traveling quite a bit around the Nation, and I am so inspired. Every time I go, I meet K to 12 students. I meet our community

college students. I meet our university students and entrepreneurs. I am really inspired to do more, faster, better, as you said.

Senator MORAN. As we would say, I adopt Dr. Panch's last few paragraphs as my own remarks. Thank you.

Dr. PANCHANATHAN. Thank you.

Senator MORAN. Let me ask, in regard to the conference committee that is hopefully soon to meet, what is it that you hope to see occur in USICA, or whatever the legislation ultimately is called, that advances the cause at NSF?

IF USICA/COMPETES ACT ADVANCES

Dr. PANCHANATHAN. Big, bold investments that take all of the ideas that I talked about that are being left behind. And, Senator, we saw a concrete example in our conversation at the Johnson Community College. It is disheartening to see people who are putting a lot of effort to take their idea with so much hopes and aspirations, and writing a fantastic proposal, submitting it to NSF, and getting a gold standard merit review saying, yes, this is worthy of investment, and not having that idea flourish is a totally missed opportunity; likewise, those ideas that need to be, you know, inspired everywhere that result in innovation ecosystems, you know.

For example, we talked about the States of Kansas, you know, Nebraska, Iowa, Indiana, Illinois, just as one example, where they can be the crucible of the innovation for the future of agriculture—smart agriculture—then such crucibles of innovation that we can build all across our Nation. And I was with John Deere the other day, just 2 weeks ago, in Illinois visiting John Deere, and I am looking at their technological roadmap. I am looking at what they are doing, and I am saying, wow, you know, I never knew a tractor company has so much technology built into this with AI, computing, and so on.

And so I think that is what we need to do more is to see how we can build those crucibles of innovation, and to do that, the proposals that are made in the USICA and COMPETES Acts, I think, is the right strategy, the investment for this bold, rapid scaling of ideas and talent. And I am really, really hopeful, and I am very thankful for all of your support so that we will make this happen very soon, sooner than later, because we cannot miss any more time. This is the time.

Yesterday, my talk at IBM was the time is now. This is the time. We need to accelerate our progress to stay far ahead of our competition, not even look behind.

Senator MORAN. Senator Shaheen, I am down to no longer any questions, but just one comment, and that is to the NASA Administrator. Senator Nelson, earth-observing satellites are an essential tool for Kansas because it aids us in our agricultural practices, and that is a hugely important component of our State's economy. And your offer to educate me, show me, and demonstrate to Kansans and Americans the value of those earth-observing satellites is very much appreciated, and I look forward to the moment in time in which we accomplish that.

Senator NELSON. Yes, sir, and, indeed, a lot of people think of NASA as the space agency—do not forget the first "A," aeronautics. But also people do not realize NASA is the point of the spear on

climate and climate change because all the measurements that are being made are done by instruments that we design, build, launch, and many of them we operate. And over the course of the next decade, we are going to have the—a great observatory of five additional major spacecraft, that all of this information is going to be put into a 3D composite on precisely what is happening to the earth's climate, what is happening to the water, to the land, to the ice, to the atmosphere.

We are putting up at the end of this year a mission that is going to be able to measure for the first time the elevation of the streams, and rivers, and lakes, the freshwater. We have been able to measure the elevation of the oceans, the salt water. We are going to be able to find out very precisely what is happening to the ice. And all of this, and we have the support of the White House on this, and we hope we will have your support. We are going to create, if you can envision in space terms, a mission control center. It is going to be called the Earth Information Center. It is going to bring all of this data in, and it is going to be displayed, and it is going to be available to everybody, not just government at all levels, including your local county commission when they are planning their land planning. But it is going to be available to schools, and universities, and the private sector as well as to what is happening and the changes that are happening to the climate.

Senator MORAN. Rainfall may be the most common topic of conversation among my constituents on most days.

Senator NELSON. And, Senator, I just want to say on Dr. Panch's testimony, we did not collaborate on our testimony, but I feel like I could start a sentence and he could finish it, and vice versa. And what he said, big, bold investments, and that is equally applicable to NASA.

Senator MORAN. Thank you.

HELIOPHYSICS AND SPACE WEATHER

Senator SHAHEEN. Well, thank you. We appreciate that. I do have a few more questions actually before we close the hearing. And I share your enthusiasm, Administrator Nelson, for this budget, but I will admit I have a couple of concerns. One is the one that Senator Van Hollen raised about heliophysics, and that is based on a parochial concern because the cut has the potential to impact the University of New Hampshire, which is one of our Nation's premier heliophysics institutions, but also because one of the things that heliophysics does, as you know, is helps us to understand how our sun impacts the solar system. And part of that is what happens with climate change, as you were so eloquent about, and also our weather.

And I appreciate NASA's establishing the space weather as its own program, but I wonder if you could help me understand why the request cuts space weather more than 12 percent, and what activities are proposed to be terminated. And one of the things that I always remember is one of the reasons we were not successful back when we were trying to get the Iran hostages out was because we did not accurately understand what the weather was going to be when we landed those helicopters, and we saw the same thing happen when we went to get Osama bin Laden. The weather al-

most undermined that mission as well. So it is not just about our crops and what we need to do, but there are also significant national security implications for understanding what is happening with our weather.

So help me understand why the cut, and how the decision to reduce funding for heliophysics was made.

Senator NELSON. I do have, in my previous life, some credentials in this area because there is an instrument up there called Discover. It was terminated in politics in a previous administration because it had been proposed by a former Vice President of the United States.

Senator SHAHEEN. Yes, I remember that.

Senator NELSON. And yours truly had the opportunity to get some more—fortunately, NASA had the good sense to keep it in mothballs. And then, lo and behold, the Department of Defense had a reason for wanting to get it up to give us a quick alert on a solar explosion and all that radiation, and so it is out there, a million miles. This is now called Discover, and it warns us of the solar radiation that is coming so that we can determine, our satellites as well as our ground stations, when that solar explosion is coming at us.

University of New Hampshire, you are right, is a leader in the field of heliophysics. The decrease in the Space Weather Program, which was \$2.7 million, or, as you stated, 12 percent, is due to a ramp down in the spending on space weather monitoring on an instrument called HERMES, which stands for Heliophysics Environmental And Radiation Measurement Experiment Suite, and will complete its integration and test this coming December. Now, there were a bunch of things going on in science. This was the decision since every now and then we get arbitrary amounts that are handed to us, and scientific decisions had to be made, but there is also a truth that the President proposes and the Congress disposes.

PROJECT COST OVERRUNS

Senator SHAHEEN. Okay. I appreciate that response. The other concern that I want to raise is a report from the GAO because, at the direction of this Committee, the Government Accountability Office analyzes the cost and scheduled performance of major NASA projects. And I do not think this is a problem of your leadership or even your predecessor's leadership. It is a long-term problem at NASA. What the GAO found was that NASA projects are experiencing the largest collective cost and schedule overruns since they began reporting in 2009. The overruns cannot be attributed to COVID alone. Many projects had late-stage design changes that led to costly modifications and schedule slippage, and the collective budget pressure is delaying launch dates and squeezing out newer projects.

So can you help us understand what you are working on to improve this project management, and do you see improvement anytime soon in our ability to manage those big projects?

Senator NELSON. Madam Chair, there better be, and you are exactly right. There is no excuse for cost overruns, but the old way of doing things was always cost-plus.

Senator SHAHEEN. Mm-hmm.

Senator NELSON. And because of the competition that we have been talking about, we have been moving to the fixed price, where we can, under procurement law. In those that we cannot do cost-plus, we are moving to really crack down on them. I want to give you an example because Bechtel underbid on a cost-plus contract in order to, what appears, to get the next mobile launcher for the larger version of the SLS. The larger version has an enhanced upper stage that will carry more payload, including the gateway, which is like the mini space station that will be in lunar orbit. And they underbid it, and then they could not perform, and NASA is stuck.

And what I have done is I have called in the CEO of Bechtel, who, by the way, is the grandson of the founder. His name is Bechtel. And they have readily acknowledged it, but there is no way under the contract, since it is a cost-plus contract, that we can do anything but eat it, and that is not right. And times are a-changing, and so what I have done specifically, other than jawboning and giving a lecture to all of our managers about tightening up on all of this, and, particularly, going forward, I have specifically named the deputy administrator, Colonel Pam Melroy, an astronaut commander, to serve as the Agency's chief acquisition officer to elevate the importance of acquisition.

We are working closely with GAO and our inspector general at NASA on the recommendations. I think we are beginning to make some progress in closing out the GAO recommendations related to strengthening this acquisition process. We are committed to improving our management of our cost and our schedule commitments. And I have also established a new chief program management officer dedicated to strengthening NASA's oversight of its enterprise, of its management, and of its program management policies. Under the law, that is what I can do, and going forward, if we take this competition seriously, we are going to be able to do a lot more cost-plus contracts well.

Senator SHAHEEN. Well, thank you. I appreciate that explanation, and it sounds like progress. Obviously we will want to continue to stay in touch with what you are seeing and what we can do to be helpful as you look at whether you need any new authorities to address what is happening. My final question, Dr. Panch, is for you because, in addition to space, which is really a new frontier not just for research, unfortunately, for our security, so is that the Arctic is a new frontier—

Dr. PANCHANATHAN. Yes.

Senator SHAHEEN [continuing]. Both for research and for our national security.

Dr. PANCHANATHAN. Yes.

Senator SHAHEEN. And as we look at the inroads that some of our competitors are making in the Arctic, it raises serious concerns about what we should be doing there. So can you describe NSF's plans for expanding Arctic research and how you see that rolling out?

ARCTIC AND ANTARCTIC RESEARCH

Dr. PANCHANATHAN. Senator, thank you so much for the interest. Clearly, you know, the Arctic and Antarctic are of great interest to

NSF, and we have a lot of work that we invest in, in both the Arctic and Antarctic. As you know, in the Arctic case, we also, you know, look at the North Atlantic as a huge partnership, not only what we do within the Nation but also with our partners in Europe, Canada, and others. So this is critical for economic as well as security in making sure that we are building resilience into the future.

And so one of the things that we are doing is, you would be happy to know that we are working closely with the Arctic communities because we need to make sure that we are including them in the conversations. And so increasingly, NSF is very sensitive to the idea of making sure that our Arctic colleagues living in the Arctic are, you know, party to conversations, and that is why you will find that we are taking a social/behavioral, not just a scientific approach only, a social/behavioral humanistic approach in terms of how we are devising the future for the Arctic. So clearly, there is an investment area that NSF has always made, and we plan to continue to do that.

And I am very pleased to say that it is not just, you know, in a few States. You know, many States across the Nation participate in this, all the way ranging from Alaska to New Hampshire, and so we expect that this will continue into the future, and that is the way I see it.

Senator SHAHEEN. Well, good. Thank you very much. Are you all set, Senator Moran?

Senator MORAN. Yes.

ADDITIONAL COMMITTEE QUESTIONS

Senator SHAHEEN. Let me just point out that if there are no further questions, Senators have until May 10 to submit additional questions to the subcommittee's official hearing record, and we request that NASA and NSF respond within 30 days to any questions that you might receive.

[The following questions were not asked at the hearing, but were submitted to the National Aeronautics and Space Administration for response subsequent to the hearing:]

QUESTIONS SUBMITTED BY SENATOR DIANNE FEINSTEIN

QUESTIONS SUBMITTED TO ADMINISTRATOR BILL NELSON, NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Question 1. The Stratospheric Observatory for Infrared Astronomy (SOFIA) was scheduled for termination again this year, following several previous years in which NASA has recommended eliminating its budget. I understand that this is based on the recommendation of many astronomers and astrophysicists, but I do want to note that the SOFIA program has made several key discoveries during its life, including confirming the presence of water ice on the Moon, which is now of key interest for the Artemis program. SOFIA also discovered the presence of helium hydride in interstellar space, which was first theorized in the 1970s.

Now that the program is slated for termination in October, I am concerned that scientists who have relied on SOFIA do not have sufficient time to close out their research. This is even more critical since there are no alternatives to SOFIA's observational capabilities. Additionally, Administrator Nelson described in the hearing with the Appropriations Committee how critical it was that the DISCOVER project was put into storage and was able to launch once interest in its capabilities revived. Administrator Nelson, will all remaining accepted science proposals using the

SOFIA instrument be completed by the termination of activities? If not, what support does NASA require in order to ensure that those planned flights occur?

Answer. SOFIA will conclude its science operations at the end of September 2022. During fiscal year 2022, SOFIA will continue to carry out a full program of science operations that has included multiple deployments to the southern hemisphere. As of June 5, 2022, SOFIA has 54 science flights planned for the remainder of fiscal year 2022, which includes 32 flights for its annual deployment to New Zealand during June-August 2022 and an additional 18 flights from Palmdale, California, in September 2022. During fiscal year 2022, SOFIA is prioritizing the completion of legacy surveys to establish an enduring archive of data for community use. Most selected proposals from Cycle 9 will be completed; however, some selected proposals will not be conducted due to scheduling conflicts. With the remaining planned 54 flights, 80 percent or more of Cycle 9 programs are expected to be complete before the end of fiscal year 2022, which will be the highest completion rate achieved for any cycle over the lifetime of the SOFIA project. Of the nine multiple-cycle SOFIA legacy programs, four legacy programs and two pilot legacy programs are anticipated to be fully completed, while the majority of the remaining two legacy programs and one pilot legacy will be completed. In addition to completing U.S. programs, SOFIA is ensuring that our German partners are also able to complete their programs.

The SOFIA project is developing a project closeout plan for fiscal year 2023. That plan will include completion of data reduction and archiving; training of personnel at the Infrared Science Archive (IRSA), where all the SOFIA science and (house-keeping) observatory data will reside; user support for completed Cycle 9 observations; documentation and tools on how to use or reprocess SOFIA observations; and general observer funding for completed observations.

Question 2. Administrator Nelson, can you describe the plan for the SOFIA aircraft and telescope? Has NASA looked at the possibility of keeping the technology like it did with DSCOVR?

Answer. The SOFIA project is developing an orderly project closeout plan for fiscal year 2023. As a part of that closeout plan, SOFIA will follow the standard NASA disposition process. As a part of that process, NASA will determine if any part of the SOFIA mission, such as one or more of its instruments, may be used in support of another NASA or other Federal agency mission, and, if so, will be dispensed in support of that mission. The SOFIA telescope is the property of the German Space Agency (DLR), and discussions are underway with DLR as to how they would like to proceed.

QUESTIONS SUBMITTED BY SENATOR BRIAN SCHATZ

Question 1. The United States is a leader in both ground- and space-based astronomy due to six decades of sustained commitment to develop, fund, and operate cutting edge instruments. In spite of this long-standing history, there is no funding in either NSF's or NASA's fiscal year 2023 budget to begin implementation of any of the recommendations in the decadal survey of astronomical science, Astro2020.

- A. Please explain the absence of implementation funding in either the NASA or the NSF budget.
- B. Does the lack of implementation funding signal that the Administration intends to pivot away from our nation's six-decade commitment to astronomy? If the Administration is turning away from astronomical science, please explain why.
- C. If not, why is there no mention of either ground- or space- based priorities in its budget request?
- D. If the Committee were to provide near-term funding to start implementation of Astro2020, may I have your commitment that you begin as soon as the funds become available?

Answer. The Administration is not turning away from astronomy as evidenced by NASA's fiscal year 2023 budget request. NASA's fiscal year 2023 budget request includes funding for space-based astronomy. This request for NASA Astrophysics proposes a program balanced between realizing the science of the world's greatest portfolio of space telescopes (including increased funding for realizing the science from the Webb Space Telescope and operation of the newly launched IXPE) and completing and launching missions under development (including the Roman Space Telescope, SPHEREx, and the newly selected COSI). Due to the delay in the publica-

tion of the Decadal Survey, NASA had limited time to incorporate Decadal Survey recommendations into the fiscal year 2023 Budget Request. The fiscal year 2024 budget request will be fully informed by the Decadal Survey recommendations.

QUESTIONS SUBMITTED BY SENATOR JOE MANCHIN

Question 1. I'm looking forward to seeing you in a few weeks May 15th for the Robotics Championship at Fairmont University.

Last year, I spoke to you about the importance of NASA's IV&V Facility, which is proudly named after the incredible Katherine Johnson and just down the road from Fairmont State.

Through their work in communities across the state, staff at the IV&V Program have done an incredible job educating the next generation of West Virginians. Over the last year, they engaged over 8,000 students in student workshops, STEM competitions, events, and hands-on activities. The IV&V Program has also trained 200 teachers in educator workshops which will have far reaching, and continuing, impacts to the students of West Virginia.

West Virginians have played a key role in our nation's developments and achievements in space, from the contributions of 'Hidden Figures' like Katherine Johnson and 'Rocket Boys' like Homer Hickam. We need to make sure we are seeking out the next generation of these rural students.

A. What are you doing to use the resources of NASA to help reach the next generation of rural students?

Answer. NASA is focused on broadening student participation, which includes reaching students in rural areas. Here are a few examples of these efforts:

NASA CONNECTS is a community of practice for K–12 teachers, aimed to reach teachers through a virtual platform and enable increased accessibility to NASA learning opportunities and resources for them and their students. NASA CONNECTS is reaching students where they are.

NASA has also established the TEAM II Community Anchors, now in its first year, to include small-medium sized informal education institutions in providing more direct access to NASA experts and resources. TEAM II investments in science centers, museums, and other informal education organizations, have yielded programs and resources that are focused on reaching underserved and underrepresented students including those in rural areas.

In December 2021, NASA selected a group of 21 diverse projects, called Community Anchors, from museums, science centers, library systems, and other informal education organizations across the country. Designation as a Community Anchor recognizes an institution as a local community resource, allowing access to rural areas. These 21 projects are bringing space exploration to traditionally underserved areas and broaden student participation in STEM fields.

In January 2022, NASA's Teams Engaging Affiliated Museums, and Informal Institutions (TEAM II) program selected three informal education organizations to help inspire the next generation of explorers through STEM learning—and to expand student participation in STEM, including rural communities. One of the selected institutions, Franklin County Historical Society, Ohio, created the NASA Learning Lunchbox, with the goal of feeding STEM diversity and serving underserved youth across the Nation, including in rural areas. The Center of Science and Industry (COSI) distributed 30,000 kits at local food banks across the United States. In fact, NASA Learning Lunchboxes were sent to Wheeling, West Virginia. A West Virginia news article features this website, with the following quote: "This unprecedented effort has already reached all corners of Ohio, Tennessee, West Virginia, Kentucky, and more, while bringing together over 400+ partners to help address the education needs."

In NASA's Sparking Participation and Real-world eXperiences in STEM (SPARX) program, K–12 students participate in challenges, competitions, and hands-on activities at after-school programs. NASA SPARX is a Next Gen STEM pilot initiative that aims to broaden student participation in Agency STEM opportunities with a focus on underserved and underrepresented communities, including rural areas.

Question 2. The bipartisan U.S. Innovation and Competitiveness Act, which passed the Senate in June last year, authorizes \$10 billion for NASA to choose another company to compete for the Human Landing System within the Artemis program to land astronauts on the Moon.

Some are arguing that locking in competition for this system will ensure long-term cost savings, while redundancy will ensure that we're not relying on foreign

companies to take us to the Moon. Others argue this is a bailout for rich billionaires like Jeff Bezos.

We're likely going to have a vote today on this provision.

A. What do you view as the importance of having a second Human Landing System?

Answer. Per NASA's mission schedule for the Artemis program, the Human Landing System (HLS) will be employed for the first crewed lunar landing in 2025, and the second Artemis crewed lunar landing is planned as soon as 2027. SpaceX's Starship-based HLS will be employed for the 2025 landing. In fiscal year 2023, NASA plans to enlist a second HLS development contractor for subsequent crewed lunar landings, and this approach is important to maximize the likelihood of satisfying the overall Artemis schedule and to avoid potentially costly impacts that an HLS delay would create for other elements of the Artemis architecture (e.g. the Space Launch System, Orion spacecraft, Gateway, EVA spacesuits, etc.) that also support crewed lunar missions.

B. What role do redundancies play in the safety and security of our astronauts and missions?

Answer. As a tool to ensure mission success and crew safety, redundancy may be applied to individual components, such as backup computers, or to larger elements, such as complete spacecraft. This can be done using the same or different designs that can perform the same function. Each approach has its strengths and weaknesses, and the ideal case allows both to be implemented as appropriate. Space exploration programs, by their nature, expand the limits of our capabilities. Because space exploration programs operate at the edge of our experience base, we must address the potential for problems, including the use of backup designs and suppliers. The Commercial Crew Program faced a similar challenge, which was addressed by contracting with both Boeing and SpaceX. This resulted in one of the vendors successfully providing crew transportation to the ISS even when the other vendor had technical problems that delayed their capability. This freed the United States from dependency on Russian services years sooner than might have occurred.

As the first human rated lunar landers to be built in over 60 years, the Human Landing Systems will need to address the highest risks in the Artemis program. The SpaceX design is highly innovative and offers the potential for outstanding performance, and it will need to demonstrate equitable levels of safety to validate its performance prior to crewed missions. While NASA has much confidence in the SpaceX team and their design, good program management practices encourage including additional suppliers and designs when practical.

Question 3. West Virginia benefits from a program called EPSCoR that is designed to allow states that are underrepresented in Federal research projects, including those at NASA and NSF, to participate in research. Because of this program, West Virginia researchers have received funds to investigate the effects of solar activity and space weather on Earth and its magnetic field, played a role in building an autonomous rover for Mars exploration, and created 3D printed materials and devices suitable for space usage. It's clear that Federal research funding has economic and quality of life implications for our states and communities.

Unfortunately, that Federal research funding is not widely distributed. The 25 EPSCoR states and jurisdictions, including WV, receive just 10.15 percent of NSF research funding. In contrast, the top five states that receive the most NSF grants account for nearly 40 percent of the total. The U.S. Innovation and Competition Act (USICA) includes a provision that would set aside 20 percent of NSF and Department of Energy research funding for the 28 EPSCoR states that are underserved by research funds.

A. Administrator, can you speak to the importance of this program and can we work together to ensure that future budget requests for the NASA EPSCoR program are more robustly funded?

B. Administrator, West Virginia researchers have told me that they benefited from a NASA program called the Technical Interchange Meeting (TIM), but NASA recently made changes to the programs so that it is less research-focused. Can we work together to ensure that the research needs of EPSCoR states like mine can continue?

Answer. A. NASA's EPSCoR program continues to provide sustained support to jurisdictions and their institutions through a broad set of competitive research opportunities to build research capacity within the underrepresented (EPSCoR) states. This accountability entails close partnership and effective collaboration with the NASA Mission Directorates. Additionally, the fiscal year 2023 budget request accelerates NASA efforts related to K-12 partnerships, and broadening student partici-

pation, which supports the Administration's initiatives. NASA EPSCoR's contribution to these goals is more indirect and can be sustained with the fiscal year 2023 budget request as submitted.

Answer. B. In the past, the EPSCoR Technical Interchange Meeting (TIM) was a stand-alone EPSCoR-only meeting that took place at a NASA Center. EPSCoR would conduct a meeting between the 28 EPSCoR jurisdiction researchers and researchers at the host Center to discuss possible collaborations on EPSCoR-funded research within the jurisdiction. Now that NASA OSTEM has moved to an enterprise approach, which involves integrating operations across geographic locations to allow for an optimum service delivery approach to meet mission needs, the need to create even broader connections has been paramount. Thus, the term "TIM" was dropped, and the activity was integrated into a larger meeting called "Better Together," which incorporates more than just research discussions for a wider audience. The purpose of "Better Together" is to strengthen grantee and stakeholder relationships with OSTEM and NASA missions, integrate across projects, network, exchange ideas, and establish new connections. The EPSCoR discussions are now a smaller part of this larger meeting involving all four of the OSTEM enterprise projects. Although other audiences such as K-12, internships, broadening student participation, etc. are addressed at the "Better Together" meeting, EPSCoR is given time for their jurisdiction researchers, along with MUREP and Space Grant researchers, to meet with NASA researchers to discuss possible collaborations.

QUESTIONS SUBMITTED BY SENATOR VAN HOLLEN

Question 1. Maryland's Goddard Space Flight Center is home to the largest group of Earth Scientists in the world and to programs like Landsat, the longest continuous space-based record of Earth's land in existence, and the PACE mission, which is set to launch in 2024 and will advance data on our ocean health and study long-term climate trends.

How will the Administration continue to strategically bolster NASA's role in our national response to climate change?

Answer. The fiscal year 2023 President's Budget Request for NASA invests \$2.4 billion in Earth-observing satellites and related research to improve the Nation's understanding of climate change. The fiscal year 2023 budget request will enable NASA to continue to provide the world with climate data from its existing fleet of Earth observing satellites and will expand its role as a leading provider of satellite Earth observations by investing in the next generation of missions to monitor changes taking place on Earth. The future Earth System Observatory (ESO) will comprise five missions that will enable scientists to generate a 3D, holistic view of the entire planet and to better understand, measure, and model the nature of the Earth's climatic changes. The data from the ESO will also assist with the evaluation of scenarios and policy options for how society might respond to climate change. NASA will augment the core of the ESO with a new class of mission, the Earth System Explorers (ESE), to make additional high-priority observations, potentially including greenhouse gases, and encourage innovative solutions through competitive mission selection.

NASA also continues to advance technology for new measurement capabilities that can make possible future generations of airborne and satellite-based measurements of greenhouse gases. The fiscal year 2023 President's Budget Request for NASA includes funding is included to advance the development and testing of new technologies for space-based greenhouse gas measurements. These technologies will enable NASA to improve measurements of carbon dioxide and methane fluxes and trends as well as global and regional quantification of point sources and identification of source types.

NASA makes its data, including climate data, freely available to ensure anyone can access it for use in research or to inform policies and actions to address the threat climate change poses to economic prosperity and national security. In addition, NASA trains and works with hundreds of partners through our Applied Sciences program to leverage and maximize Earth science data for societal benefit. As part of a renewed emphasis on providing actionable data and information to a broad range of users, NASA is planning a new Earth Information Center (EIC) with an initial focus on prototyping capabilities for a greenhouse gas monitoring and information system that will integrate data from a variety of sources. A key goal of the EIC will be to make its data more accessible and usable to Federal, State, and local governments; researchers; the public; and other users.

The fiscal year 2023 President's Budget Request for NASA also invests more than \$500 million of the \$972 million Aeronautics request to reduce the climate impacts of the aviation industry, which includes the Sustainable Flight National Partnership, through which NASA and U.S. companies will develop and fly a highly efficient, next-generation airline prototype as early as 2026, and support the global aviation community's aggressive goal of net-zero carbon emissions by 2050. NASA Aeronautics is investing in cost-sharing partnerships with U.S. industry under the Sustainable Flight National Partnership to research and demonstrate high risk, high payoff technology advancements that will enable entry into service in the early 2030s of next-generation single-aisle aircraft that are 25–30 percent more energy efficient with the capacity to utilize 100 percent sustainable aviation fuel and fly optimal trajectories. NASA Aeronautics will invest in a focused set of major technology demonstrations by NASA with industry, including a first-ever high-power megawatt-class electrified powertrain for large transport aircraft propulsion, advanced high-efficiency airframes, advanced composite structures produced four to six times faster than the current state of the art, and advanced small core engine technologies based on breakthrough NASA innovations. NASA Aeronautics, in partnership with the Federal Aviation Administration and airlines, will pioneer new air traffic management automation tools to safely and reliably put future aircraft on flight paths optimized for minimal environmental impact; the next evolution of air traffic management will safely increase operational efficiency at the vehicle, fleet, and system-wide levels. Finally, NASA Aeronautics is working with our nation's universities to pioneer next-generation technologies for a zero-emissions aviation future through the highly successful University Leadership Initiative.

Question 2. Hardware and service costs have increased substantially due to supply chain constraints and logistics impacts because of the situation in Ukraine and the long-term impacts from COVID-19.

How is NASA planning for and responding to the budget impacts of these events?

Answer. NASA has on-going efforts underway to assess all of the areas cited by the question:

COVID-19 has impacted NASA projects in multiple ways. In the early stages of the pandemic, NASA projects were impacted by facility shutdowns, restarts, and reduced on-site access due to social distancing and cleaning protocols; and interruptions to test and construction efforts. In March 2020, Congress passed the Coronavirus Aid, Relief, and Economic Security (CARES) Act (Public Law 116-136), which included \$60 million for NASA to help address these immediate impacts and support continued Agency operations. As the pandemic evolved, NASA projects already underway deployed cost and schedule reserves to address increases and delays caused by workforce availability issues at contractor sites, supply chain disruptions, and travel limitations which hindered plans for international cooperation. NASA has used existing risk management systems and tools to track evolving impacts and develop project-specific mitigation strategies. During COVID-19, NASA takes these risks and mitigation strategies into account when establishing Agency baseline cost and schedule commitments for projects transitioning from formulation to implementation. NASA also takes into account COVID-19 related impacts during project replans and rebaselining.

To date, NASA has notified Congress of nine projects across the Agency that have experienced cost and schedule growth due in part to COVID-19 pressures. These projects include the Roman Space Telescope, James Webb Space Telescope, Geostationary Carbon Observatory (GeoCarb), Surface Water and Ocean Topography (SWOT), the NASA-Indian Space Research Organization Synthetic Aperture Radar (NISAR), the Orion exploration crew vehicle, the On-orbit Servicing, Assembly, and Manufacturing 1 (OSAM-1) and Solar Electric Propulsion (SEP) technology demonstration missions, and the Low-Boom Flight Demonstration (LBFD).

Supply chains are another area of impact. Impacts include significantly reduced availability of materials and services, delays in products delivery, schedule slips, and increased cost of materials, resources, and products. Systematically building and maintaining visibility into the supply chains for mission programs and projects is the basis for Supply Chain Risk Management (SCRM) supporting situational awareness, planning, risk analysis and informed decisionmaking at project and enterprise levels. NASA's Office of Safety and Mission Assurance (OSMA) SCRM program launched the NASA Supply Chain Insight Central (SCIC) information and analysis services platform for operational use in March 2021 to collaboratively build integrated, collective visibility and insight into the supply chains of NASA programs/projects:

- OSMA collaboration with Agency functions is ongoing to further develop and implement SCIC capabilities and services to address key SCRM and industrial base challenges.
- OSMA has identified, as a key priority of the SCIC initiative, the formulation of NASA policy and requirements for supply chain visibility reporting to enable SCRM, which is currently underway in collaboration with the NASA Office of Procurement.

The OSMA SCRM program and its SCIC initiative is also supporting the Agency's partnership with the Department of Commerce to conduct a US. Civil Space Industrial Base survey, which is expected to substantially boost the Agency's insight into current and potential suppliers and their operating conditions.

NASA also collaborates with key USG space partners in the DOD and national security community on supply chain risks and vulnerabilities. Relative to specific impacts of Russia's war on Ukraine, it has had limited impacts on NASA's programs. Impacts have largely been mitigated by having had on-hand forward purchases or through securing alternate U.S. suppliers. The issue of overall economic instability, in particular rising interest rates, are being monitored.

Question 3. Decadal Surveys from the National Academies have been "the gold standard" for NASA to conduct high priority scientific missions. With the release of Astro2020, the astronomy and astrophysics Decadal Survey, does NASA intend to continue to follow the guidance of the Decadal Survey?

Answer. NASA recognizes that decadal surveys are the "gold standard" for recommending prioritized science programs. Implementation of Decadal Survey recommendations is modified to reflect existing budgets, particularly when funding for new missions is different from that assumed in the Decadal Surveys. Specific to the Astro2020 Decadal Survey, implementation of recommendations will also depend on the progress of necessary technology maturation.

Ahead of and following release of the 2020 Decadal Survey, NASA has been developing the strategy and road mapping plans for implementing Decadal Survey recommendations. The fiscal year 2023 budget request includes realistic precursor science and technology plans that are the first steps in an executable plan for the NASA's future astrophysics mission portfolio. The Decadal Survey recommends a deliberate approach to beginning future great observatories. NASA is pursuing the recommendations based on the timelines and opportunities outlined in the report.

QUESTIONS SUBMITTED BY SENATOR JOHN KENNEDY

Question 1. I understand you made a visit to the Michoud Assembly Facility this past December. Michoud has weathered multiple hurricanes over the years, most recently Hurricane Ida. NASA's fiscal year 2023 Budget Request includes \$424 million for "Construction and Environmental Compliance and Restoration." Is this amount sufficient to ensure Michoud is working on schedule and what is the status of the damage repairs?

Answer. The ongoing fabrication and assembly of NASA's Space Launch System flight hardware at the Michoud Assembly Facility (MAF) is critical to the success of the Artemis program. To ensure timely completion of this hardware, NASA has been repairing and upgrading the critical infrastructure at MAF over the last several years through Construction of Facilities projects funded within the Construction and Environmental Compliance and Restoration appropriation (CECR), and through the fiscal year 2022 Emergency Supplemental Appropriation to repair damage caused by hurricanes Ida and Zeta.

NASA's fiscal year 2023 CECR budget request includes funding for three (3) repair projects at MAF. These are:

- Building 110/114 Critical Cranes Repairs;
- Building 110/114 Fire Suppression Upgrades; and,
- Steam Systems Upgrades, Phase 2 of 2.

The execution of the NASA fiscal year 2022 Emergency Supplemental Appropriation to repair damage caused by hurricanes Ida and Zeta is ongoing. NASA is continuing discussions with the U.S. Army Corps of Engineers to execute all major roof repairs at MAF (B103, B220, B320 and B420). It is anticipated that an agreement will be finalized within Q4, with roof repair contract awards following immediately thereafter. Additionally, NASA is continuing execution of several minor repair projects using available local contracting mechanisms. To date approximately \$20 million has been obligated for these various repair efforts.

The current pace of funding is sufficient to ensure that MAF is working on schedule and sufficient to maintain the Artemis schedule.

Question 2. Currently, the SLS Heavy Lift Rocket for Artemis missions is being tested so that astronauts may return to the moon. Beyond the planned Artemis crew missions, what specifically will be the role for the SLS in the next decade? Will SLS be used for cargo-only missions in support of staying on the moon, or our journey to Mars, or to launch important science missions?

Answer. As noted previously, the Agency is in the process of transitioning integrated management of SLS to industry by establishing an Exploration Production and Operations Contract (EPOC) contract. EPOC will enable industry to make the SLS available as a cargo vehicle for other uses, such as commercial, DOD, and science—where relevant capability is needed, and it is cost effective.

NASA believes that SLS is a national asset, and transition of SLS Exploration Production and Operations to industry—so that industry can reduce the rocket's production and operations costs—is the quickest and most cost-effective way to enhance its use.

Question 3. Administrator Nelson, Louisiana benefits from a program called EPSCoR that is designed to increase research capacity in states that are underrepresented in Federal research projects, including those at NASA. I am concerned that the Office of STEM Engagement's mission and goals don't align well with the research focus of this program. Will you work with me to find a better home for this research program within the agency?

Answer. NASA's Office of STEM Engagement is accountable for the Agency's STEM engagement function, providing strategic guidance, integration, and operational oversight of a portfolio of efforts to support students, educators, and educational institutions, as well as management of the appropriated STEM engagement program. This accountability entails close partnership and effective collaboration with the NASA Mission Directorates.

NASA EPSCoR is fully aligned with the Agency's STEM engagement strategy and organizationally is positioned in the Office of STEM Engagement for cross-cutting research efforts and direct contributions to Mission Directorate needs and priorities. This is accomplished through an effective structure with established liaisons with Mission Directorate and Center technical organizations. These liaisons establish requirements for EPSCoR solicitations, review proposals and provide support and active engagement throughout the life cycle of the various EPSCoR activities. NASA EPSCoR ensures that all Mission Directorate needs are represented through the set of solicitations each year and works with technical organizations effectively to drive results that are of value to both NASA and the EPSCoR jurisdictions.

Question 4. In looking over your fiscal year 23 budget request for the Office of STEM Engagement, can you explain why the allocation for NASA EPSCoR remained flat? This is a very important program for my state to build research capacity in areas vital to NASA's mission, and I am concerned that it is not being prioritized enough in your budget.

Answer. NASA EPSCoR continues to provide sustained support to jurisdictions and their research institutions through a broad set of competitive research opportunities. Additionally, the fiscal year 2023 budget request accelerates NASA efforts related to K–12, partnerships, and broadening student participation, which supports the Administration's initiatives. NASA EPSCoR's contribution to these goals is more indirect, and can be sustained with the fiscal year 2023 budget request, as submitted.

QUESTIONS SUBMITTED BY SENATOR DIANNE FEINSTEIN

QUESTIONS SUBMITTED TO HON. SETHURAMAN PANCHANATHAN, DIRECTOR, NATIONAL SCIENCE FOUNDATION

Question 1. Support for astronomy research has long been divided between NASA and NSF, with NASA supporting space-based telescopes, and NSF supporting ground-based telescopes. Traditionally, NSF has relied heavily on significant private investment in ground-based astronomy. Astronomy remains one of the few scientific disciplines with no associated NSF-funded research center. Director Panchanathan, with the increasing scale and cost of ground-based telescopes putting this research outside of the scope for anyone but national governments, what is your plan for research investments?

Answer. The NSF Division of Astronomical Sciences (AST) currently manages four federally funded Research and Development Centers (FFRDCs): NSF's National Optical-Infrared Astronomy Research Laboratory (NOIRLab), the National Solar

Observatory (NSO), the National Radio Astronomy Observatory (NRAO), and Green Bank Observatory (GBO). These FFRDCs operate observing facilities, build instrumentation, and develop data analysis pipelines and archives, while also serving as focal points for organizing and engaging the U.S. nighttime optical, solar, and radio communities. These centers play essential roles to build collaborations and partnerships with universities, not-for-profit private entities, other U.S. government agencies, and international institutions that enable NSF to undertake projects of increasing scale and complexity. Significant examples include the International Gemini Observatory (an international partnership managed by NSF as part of NOIRLab), the Atacama Large Millimeter/submillimeter Array (ALMA, an international partnership in which NRAO represents the U.S. interests), and the soon-to-be commissioned Rubin Observatory (an inter-agency partnership with the Department of Energy, which will be part of NOIRLab as it transitions into operations). Such partnerships, along with those with private entities such as Keck, Simons, Moore, and other foundations, form a key component of NSF's strategy to undertake the next generation of optical and radio facilities, and our FFRDCs will continue to play a central role in building and maintaining these relationships.

Question 2. The NSF recently launched its Technology, Innovation, and Partnership (TIP) Directorate, which is focused on supporting critical technologies, workforce development, and the translation of basic research for commercial goals. These goals are certainly laudable, but these goals should be in addition to NSF's existing activities and not result in decreases to basic science research funding. Director Panchanathan, will you ensure that basic science research does not receive decreased funding or support in order to support the TIP Directorate?

Answer. NSF will continue to support the full spectrum of fundamental research, from foundational, curiosity-driven, discovery-oriented research to use-inspired, solutions-oriented research. Building on NSF's longstanding leadership in science and engineering research and education, TIP serves as a crosscutting platform and collaborates with NSF's other directorates and offices to leverage, energize, and rapidly advance use-inspired, solutions-oriented research and innovation in critical and emerging technologies and industries. NSF has long invested in use-inspired research and the translation of research results into practice through a wide range of programs.

NSF is taking a balanced approach between its existing directorates that support basic research and TIP in the fiscal year 2023 President's Budget Request. The request calls for an increase of \$1.64 billion for the Research and Related Activities and STEM Education Accounts over fiscal year 2022 Enacted, around \$430 million would go to TIP as part of the directorate's initial "start-up," and \$1.21 billion would go to the other research directorates and offices. It will be critically important for TIP to work closely and collaboratively with all the other NSF directorates and offices to identify specific areas ripe for co-investment.

Increased funding for TIP is contingent upon Congressional appropriations, and NSF greatly appreciates the continued strong bipartisan support for the agency.

QUESTIONS SUBMITTED BY SENATOR BRIAN SCHATZ

Question 1. The United States is a leader in both ground- and space-based astronomy due to six decades of sustained commitment to develop, fund, and operate cutting edge instruments. In spite of this long-standing history, there is no funding in either NSF's or NASA's fiscal year 2023 budget to begin implementation of any of the recommendations in the decadal survey of astronomical science, Astro2020.

A. Please explain the absence of implementation funding in either the NASA or the NSF budget.

Answer. The delay of the Decadal Survey due to COVID resulted in the committee recommendations (released in November 2021) arriving well after the agencies' development of the fiscal year 2023 budget request and shortly before iterations with OMB. NSF has opened discussions with the projects prioritized in the Astro2020 report and is working with them to understand their needs, which have evolved significantly since their presentations to the Astro2020 committees in late fiscal year 2019. NSF is exploring ways to provide critical funding support for further design and development activities that respond to the highest priority recommendations from Astro2020. Any future facilities ultimately represent significant investments by the U.S. taxpayer, requiring detailed planning and review through the well-developed Major Facility processes at NSF, which are designed to ensure the success of such large projects and to secure return on those investments.

- B. Does the lack of implementation funding signal that the Administration intends to pivot away from our nation's six-decade commitment to astronomy? If the Administration is turning away from astronomical science, please explain why.

Answer. NSF remains committed to the continued support of astronomy and is developing a broad and thoughtful response to Astro2020, including evaluation of the recommended next-generation facilities as well as planning for the recommended investments in other areas highlighted as critical to ensuring a healthy and vibrant U.S. astronomical community. The facilities discussed in the Decadal Survey, both those NSF currently operates and potential future telescopes, form a system of research infrastructure across many scales that will continue U.S. leadership in the key fields of astronomy and astrophysics (e.g., radio, optical, gravitational waves) and provide scientific data to thousands of scientists across the U.S. The democratization of science—allowing researchers from many different states, universities, and institutes to participate in world-leading research activities—has been an enormous strength of the U.S. scientific environment. NSF will continue this tradition through a balanced portfolio that provides support for members of the research community coupled with open access to the advanced tools and datasets that they need to do world-leading science such as that prioritized in Astro2020.

- C. If not, why is there no mention of either ground- or space-based priorities in its budget request?

Answer. The unfortunate timing of the release of Astro2020 did not provide NSF sufficient lead time to incorporate specific initiatives in the fiscal year 2023 budget request. The request does, however, highlight the roles of two of NSF's federally Funded Research and Development Centers (FFRDCs) - the National Radio Astronomy Observatory (NRAO) and NSF's National Optical-Infrared Astronomy Laboratory (NOIRLab) - including development efforts for the next generation facilities prioritized by Astro2020 and in supporting the broad scientific priorities described in the report. Of note is the ramp up in operations funding for the Vera C. Rubin Observatory, which was highlighted as an ongoing priority in the Astro2020 report.

- D. If the Committee were to provide near-term funding to start implementation of Astro2020, may I have your commitment that you begin as soon as the funds become available?

Answer. NSF greatly appreciates your support of its mission and specifically the support for continued leadership in the astronomical sciences. NSF has requested funding for Astronomy in the President's fiscal year 2023 budget that is sufficient to advance high priority activities identified in Astro2020, projects in which we have already invested almost \$100 million for development. Of course, allocation and award of the funding will rely upon our thorough review processes to ensure that the investments are made in a fiscally sound manner and will result in the best science opportunities for the U.S. community.

Question 2. The US Extremely Large Telescope Consortium and its counterpart in radio astronomy have submitted development proposals to the NSF in recent weeks.

- A. What is the schedule to begin the review of these proposals?

Answer. In general NSF neither publicly acknowledges the receipt of nor comments on review of proposals. However, we can assure you that we are communicating and coordinating with the projects prioritized in the Astro2020 report to understand their near-term needs. NSF strives to process all proposal requests in a timely manner.

- B. If they are deemed meritorious, will the NSF fund them with the considerable balances in the Agency's research account, or from unobligated funds elsewhere?

Answer. Again, NSF neither publicly acknowledges the receipt of nor comments on review of proposals. Being judged meritorious is one of many factors used in a funding decision. Successful facility design and development proposals are funded from the Research and Research Activities (R&RA) account appropriation.

QUESTIONS SUBMITTED BY SENATOR JOE MANCHIN

Question 1. I was so disappointed that we were not able to schedule a visit to the Green Bank Observatory last month, but I can tell you that there was a big ice storm there that day so we both lucked out. Our meeting would have otherwise had great timing, as it coincided with the release of the decadal survey on astrobiology

by the National Academies of Science, which highlighted the Green Bank Telescope as playing a key role in the future of earth's defense against asteroids and other near-earth objects. For many years, I have been committed to ensuring the Green Bank Observatory stays open for the next generation of young scientists in West Virginia and around the world. Through my seat on this Committee, I have strongly supported Green Bank's work observing and cataloging near-earth objects, including the development of new technology that would make it the world's largest moveable antenna and transmitter.

A. How is Green Bank used in the detection of near-Earth objects, and how could it be used in the future?

Answer. As highlighted in the newly released Planetary Science and Astrobiology Decadal Survey 2023–2032, ground-based radar observations can provide invaluable information to reduce orbital uncertainties of near-Earth objects by several orders of magnitude and can also yield detailed characterization of their physical properties that can influence impact mitigation strategies. NSF's National Radio Astronomy Observatory (NRAO) and Green Bank Observatory (GBO) are developing new instrumentation that will enable studies of near-Earth objects to refine orbits and assess the level of threat they pose. Over the past two decades, NSF and GBO have worked successfully with NASA and commercial entities to receive radar transmissions for scientific and defense purposes. NSF will be discussing opportunities for enhancing collaboration in the coming years that make use of the capabilities of the Green Bank Telescope (GBT).

B. How will NSF respond to the recommendations from the National Academies of Science, particularly its recommendation for the use of the Green Bank Telescope as a transmitting station?

Answer. NSF is currently funding a design study for a high-power (500 kW) radar transmitter for installation on the Green Bank Telescope, and discussions are underway with the scientific community, and other agencies as NSF plans the final design and construction of the system.

Question 2. The collapse of the Arecibo Observatory in Puerto Rico in 2020 was shocking. While the Green Bank Telescope was built much more recently than Arecibo, the collapse of Arecibo does call into question NSF's assets around the world, and whether they too are in need of maintenance. With the establishment of the new Tech Directorate at NSF, it is particularly important that NSF does not lose sight of its traditional research responsibilities. I understand that NSF is conducting a review of its facilities in the wake of the Arecibo collapse.

A. Have you reviewed the status of Green Bank? How would you grade the infrastructure at the site?

Answer. Yes, NSF regularly assesses the condition of the Green Bank facilities, undertaking a thorough external review roughly every 3 years in addition to the annual maintenance activities. The most recent assessment is currently being completed. Although the preliminary report has identified no urgent safety or structural issues, it does identify several elements of site infrastructure that will soon need significant investment to address maintenance typical of a facility that is twenty years old. These include work on the azimuth track as well as a need for large-scale repainting to ensure the structure remains sealed and protected from the elements, enabling it to withstand another twenty years of operations. NSF will work with the awardee, AUI, and Green Bank Observatory staff to determine the preferred approach and appropriate timescales for addressing the issues identified by this recent assessment.

B. Please keep in touch with my office with respect to any needs or requirements for maintenance for Green Bank. It would be devastating to lose the capabilities that Green Bank provides.

Answer. Thank you—NSF agrees completely!

Question 3. West Virginia benefits from a program called EPSCoR that is designed to allow states that are underrepresented in Federal research projects, including those at NASA and NSF, to participate in research. Because of this program, West Virginia researchers have received funds to investigate the effects of solar activity and space weather on Earth and its magnetic field, played a role in building an autonomous rover for Mars exploration, and created 3D printed materials and devices suitable for space usage. It's clear that Federal research funding has economic and quality of life implications for our states and communities. Unfortunately, that Federal research funding is not widely distributed. The 25 EPSCoR states and jurisdictions, including WV, receive just 10.15 percent of NSF research funding. In contrast, the top five states that receive the most NSF grants account

for nearly 40 percent of the total. The U.S. Innovation and Competition Act (USICA) includes a provision that would set aside 20 percent of NSF and Department of Energy research funding for the 28 EPSCoR states that are underserved by research funds.

A. Director, what steps can NSF take beyond EPSCoR to improve its investments in smaller, more rural states like WV?

Answer. NSF is committed to expanding its geographic engagement to spur innovation that provides an opportunity to capitalize on talent across the U.S. NSF has a critical role in catalyzing networks of institutions, through partnership opportunities, to build the next generation of centers focused on innovation and contribute to local economies. As of fiscal year 2021, approximately 13 percent of NSF funding (i.e., R&RA, EHR, and MREFC appropriation accounts) was awarded to institutions in EPSCoR jurisdictions. The five initial EPSCoR jurisdictions that joined NSF EPSCoR in 1980 have increased their proportion of NSF's total research funding by 76 percent over the past 42 years. Other cohorts that entered in later years have also shown remarkable gains, with each cohort showing an increase in research competitiveness over the periods of participation.

NSF has two specific activities planned for increasing investment in EPSCoR states. In fiscal year 2023, NSF has proposed a new cross-agency activity, Growing Research Access for Nationally Transformative Equity and Diversity (GRANTED). Through GRANTED, NSF will engage under-resourced and under-served institutions, including MSIs, community colleges, rural institutions, predominantly undergraduate institutions, and emerging research institutions, to build and enhance their research support capacity. As a result, investigators at under-resourced institutions, including institutions within EPSCoR jurisdictions, will be equipped to submit more competitive research proposals to programs across NSF.

NSF will also support specific targeted research capacity building activities for EPSCoR-eligible states. The EPSCoR program will explore mechanisms that will foster partnerships and collaborations among eligible institutions not previously engaged in EPSCoR research capacity building activities. These activities will include additional enhancements to existing Research Infrastructure Improvement (RII) tracks, possible new funding opportunities that will leverage the success of EPSCoR's fiscal year 2022 RII Bridging EPSCoR Communities initiative in response to American Rescue Plan funding, and partnerships with cross-directorate funding activities aimed at enhancing the delivery of benefits from EPSCoR research to the respective jurisdiction's economic, industrial, and research development.

Beyond GRANTED and EPSCoR, NSF has multiple programs designed to increase research capacity and leverage realized research infrastructure from across the Nation, including in EPSCoR jurisdictions. Examples of additional NSF programs that may enhance the research capacity of EPSCoR jurisdictions include Mid-scale Research Infrastructure Track 1, National Artificial Intelligence (AI) Research Institutes, the Expanding Capacity in Quantum Information Science and Engineering (ExpandQISE) program, and the recently announced Regional Innovation Engines, which is being coordinated by the newly established Directorate for Technology, Innovation, and Partnerships (TIP).

Question 4. The cybersecurity of our nation's critical infrastructure and government systems is very important to me. We cannot have a strong cybersecurity defense without the workforce to maintain these systems. I am concerned about the state of our cybersecurity workforce, in particular attracting new talent to work in government agencies. I am pleased that the National Science Foundation is providing CyberCorps Scholarships to students who agree to work in cybersecurity jobs for Federal, state, local or tribal governments after graduation. As I understand, most of these scholarships are given to students from four-year collegiate institutions and community colleges can only put forth nominees if the student agrees to transfer to a four-year college to complete a bachelor's degree.

A. I think that we are missing out on a population of individuals who can be very valuable to the cybersecurity workforce with an associate's degree or certifications provided through trade school programs. Would you be willing to consider adjusting the scholarships to drop the four-year college requirement?

Answer. NSF appreciates your recognition of the important aim of the CyberCorps® Scholarship for Service (SFS) program, to attract talented students to work in Federal, state, local, or tribal government organizations following their graduation. Community colleges do play an important role in the efforts to develop the cybersecurity workforce necessary for the Nation's cybersecurity missions. They

offer an important pool of students who could be recruited to fill the cybersecurity needs of government.

Historically, SFS supported only students in their junior and senior years so community colleges were not participating. The Cybersecurity Enhancement Act of 2014 introduced the opportunity to provide 3 years of SFS support and, subsequently, community college (CC) students were included in the SFS program via a “CC Pathways track” where second-year students at community colleges became eligible for 1 year of support and could then transfer to a four-year SFS institution to be supported for two more years. As of December 2021, there were 28 community colleges participating in the CC Pathways, in addition to the 83 four-year SFS schools.

The CC Pathways approach was intended to mitigate a problem with placing SFS students without a four-year degree in Federal government positions until government hiring practices evolve towards a competency-based approach. The National Defense Authorization Act for fiscal year 2018 authorized an alternative approach, the Community College Cyber Pilot (C3P) program. Specifically, it authorized SFS scholarships for community college students who are pursuing associate degrees or certifications and who already have bachelor’s degrees or are veterans of the Armed Forces. The C3P Pilot consists of 8 community colleges that in September 2018 received grants for a three-year period. However, due to the impact of the ongoing COVID-19 pandemic, the pilot has been extended to the fourth year and will conclude in September 2022. It is expected that the final evaluation of the C3P pilot outcomes will be available by January 2023.

In addition to the above options, the SFS program has considered other changes including dropping the four-year college requirement (currently, only veterans of the Armed Forces are eligible). However, NSF would need to proceed with caution because the students who are unable to fulfill their government service see their scholarship converted into a Federal Direct Loan. This situation presents a grave risk.

An additional factor is that as more and more scientific advances, such as artificial intelligence or quantum science, are incorporated into cybersecurity education, the coursework demands are increasing. In fact, a workforce with integrated AI and cybersecurity competencies is one of the strategic directions for the SFS program. Under this scenario, fulfilling the necessary course requirements in a two-year program of study may prove challenging.

At the same time, NSF will use any opportunity to pilot and evaluate new models to recruit the first- or second-year community college students and mentor them to successfully compete for entry-level cybersecurity positions.

In addition to the SFS program, NSF also supports cybersecurity development at community colleges through the Improving Undergraduate STEM Education: Computing in Undergraduate Education (IUSE:CUE) program which invests in computing curricular development and has a community colleges track. The Advanced Technological Education (ATE) program, which focuses on the community college education of technicians of the future in advanced technological areas, also invests in cybersecurity education including both national centers of excellence, and the engagement of institutions new to NSF.

QUESTIONS SUBMITTED BY SENATOR SHELLEY MOORE CAPITO

Question 1. Since its dedication in 2000, the GBT has been a fundamental instrument for planetary science and planetary defense, observing NEOs and Potentially Hazardous Asteroids, the Moon, and the terrestrial planets as a receiver for radar projects. Now, thanks to new technology under development for the GBT, it is the largest fully steerable antenna in the world capable of transmitting radar signals for research. The GBT’s 100- meter diameter makes it an impressive tool for radar work. The location of the GBT and its maneuverability permits it to observe 85 percent of the celestial sphere, allowing it to quickly track objects across its field of view.

Director, for several years I have had to talk to previous Directors imploring them to not mothball the Green Bank Telescope. We have a new director there, Dr. James Jackson, and I wonder if you could talk a moment about the possibilities and promise of radar systems in the area of planetary defense. The National Academy of Sciences has written on the dangerous effects of the impacts of Near Earth Objects.

A. I believe Green Bank can play a role here, what are your thoughts?

Answer. GBT can play a significant role in determining the orbits and characterizing the physical properties of NEOs, particularly in conjunction with NASA’s Goldstone Solar System Radar (GSSR) systems. GBT already occasionally operates as part of a bistatic radar facility in which the GSSR transmits radar pulses and

the GBT receives the faint return signals from the reflection of those pulses by NEOs. NSF is currently funding a design study for a high power (500 kW) radar transmitter for installation on the GBT that will be complementary to the GSSR. Discussions are underway with NASA and national security agencies about how partnerships building upon this development may be able to enhance current capabilities.

QUESTIONS SUBMITTED BY SENATOR BILL HAGERTY

Question 1. In my previous role as the U.S. Ambassador to Japan, I saw firsthand the importance of maintaining U.S. superiority in technology and innovation. I'm very concerned by the rapid growth in China's R&D investments and what this means for U.S. global competitiveness. According to the National Science Board's 2022 Science and Engineering Indicators, "The share of global R&D performed by the U.S. declined from 29 percent in 2010 to 27 percent in 2019, whereas the share by China increased from 15 percent to 22 percent." Dr. Panchanathan, how do you see NSF's role evolving as U.S. leadership is being challenged?

Answer. Our Nation's economic and national security depends on its ability to:

- Invest heavily in the technologies of today and tomorrow;
- Unleash innovation everywhere by building ecosystems of innovation in every region of the country; and
- Quickly develop our domestic talent across every geographic and demographic background.

The technologies of today—from artificial intelligence to quantum information science to semiconductors and microelectronics—hold massive implications for national and economic security. It is imperative that NSF double down now on these critical technology areas and the research that will seed the technologies of the future.

For decades, NSF has seeded high-risk and nascent ideas that have over time developed into applied technologies with transformative impacts on our economy and society. For instance, Google and Qualcomm, now multibillion-dollar companies, each started with a single grant from NSF. Similarly, the AI revolution that we are witnessing today traces its roots to investments by NSF in the 1980s and 1990s. As an example, when a streaming service recommends the next show that you should watch based on what you watched the night before—that capability is fueled by NSF-funded research on a technique called collaborative filtering. And the convergence of the NSF-funded page-rank algorithm that led to Google, wireless networking, touchscreen interfaces, and other innovations has catalyzed unanticipated industries like mobility and e-commerce in which the U.S. dominates today.

Global R&D investments have tripled over the last two decades, and while US investment has also grown, the U.S. share has gone down, with the rate of growth steeper in other Nations. While the top-down structures in non-democratic nations do not foster sustained innovation, it is nonetheless imperative that we strengthen our investments and our overall approach to R&D in critical and emerging technologies at speed and scale. The risk of falling behind is simply not an option.

That is why NSF launched a new directorate—our first in more than three decades—called Technology, Innovation and Partnerships, or TIP. The goal of the TIP directorate is to do precisely as described above—to leverage, energize, and rapidly advance use-inspired, solutions-oriented research and innovation in critical and emerging technologies and industries. By collaborating with NSF's other directorates, the rest of the Federal enterprise, and the private sector, TIP will advance technology and address national, societal, and economic challenges, including regional opportunities present across the Nation; accelerate the translation of research results to the market and society; and tap into the vast talent base that exists throughout the Nation and has for too long been left behind when it comes to the U.S. research and innovation enterprise.

This is not the type of research the private sector will support by itself. The U.S. has led because of the uniquely American innovation ecosystem that has brought together academia, industry, and government in a powerful way, with Federal investments in academic research seeding industry uptake leading to new products and services. Investments by both are necessary in order to stay ahead. Indeed, the U.S. innovation ecosystem is the envy of the world—and now is not the time to let up. Sustained growth in NSF, the Federal Government's basic research agency, is critical to ensuring the U.S. remains in the vanguard of global competitiveness.

Dr. Panchanathan, NSF recently announced a new Technology, Innovation, and Partnerships (TIP) Directorate to focus on creating breakthrough technologies to meet the societal and economic needs of our country. I understand that NSF has already moved some existing programs into the TIP Directorate and has begun to make new funding announcements.

Question 2. Can you speak to whether the process TIP will use to review grants will be modified to match the goals of the directorate?

Answer. The TIP directorate will build upon NSF's longstanding merit review process in developing an approach that best aligns with the directorate's mission while enabling the selection of the best proposals for funding. The directorate anticipates incorporating broad and diverse expertise in its review process, including individuals from government, industry, and nonprofits in addition to academia, along with detailed program-specific review criteria. TIP will also pursue pilots to enhance the review process, accelerate the proposal review and award timeline, and ensure milestone-based assessment of active awards.

Question 3. Are there new, more nimble and flexible funding mechanisms and processes that you plan to implement that would be unique to the directorate?

Answer. TIP is actively exploring new funding mechanisms and oversight processes. For example, in the beginning of May, NSF launched the NSF Regional Innovation Engines program by issuing a Broad Agency Announcement—a relatively novel approach for NSF. The goal with this approach is to engage the broadest set of stakeholders, beyond the traditional academic community with which NSF usually engages. A recent webinar for this program drew over 2,600 participants, almost 50 percent of whom were from non-academic institutions—an initial sign of success for this approach.

More generally, NSF has partnered with a firm to run a series of visioning workshops and is in discussions with the Federation of American Scientists to explore new funding mechanisms that would help to accelerate research and innovation.

Question 4. Institutions in Tennessee tell me that they are eager to take advantage of the programs TIP intends to launch, particularly possible expansions to the I-Corps program. Can you speak to your vision for this important entrepreneurial program? Will anything about it change now that it is part of TIP?

Answer. The NSF Innovation Corps (I-Corps™) program, an experiential entrepreneurial education program, will continue to further the Nation's innovation ecosystem by equipping researchers with the tools needed to transform discoveries into innovative technologies. I-Corps™ connects the technological, entrepreneurial, and business communities, addressing skill and knowledge gaps to accelerate the transformation of basic research into deep technology ventures.

Over time, NSF anticipates enhancing and optimizing the agency's current "Lab-to-Market Platform," which includes the I-Corps™ program. This will allow researchers to pursue additional prototyping, demonstration, and scale-up work, giving rise to new startups and small businesses that will lead to new markets and economies of scale. For example, through the I-Corps™ program, NSF will build out I-Corps™ Hubs so that every part of the country has easy access to these "national resources" and support an increasing number of Teams each year. With increased funding, NSF would be able to support partnerships between I-Corps™ and other NSF programs such as the Convergence Accelerator and NSF Regional Innovation Engines.

Question 5. As NSF launches the TIP Directorate and is placing increased attention and resources towards more use-inspired research in key technology areas, we must be mindful not to duplicate efforts of other research agencies, including the Dept. of Energy. For over 70 years, NSF's strength has been its ability to promote scientific progress across basic scientific and engineering disciplines as the cornerstone of America's basic research enterprise. How is NSF balancing these other fields of basic research versus the more applied, technology-driven research it is now pursuing? What will the future of other directorates look like as TIP ramps up? And how is NSF collaborating with other agencies, such as DOE, to ensure taxpayer dollars are being used efficiently?

How is NSF balancing these other fields of basic research versus the more applied, technology-driven research it is now pursuing?

Answer. NSF has consistently supported the full spectrum of fundamental research, from foundational, curiosity-driven, discovery-oriented research to use-inspired, solutions-oriented research. Indeed, this synergy between discovery and innovation constitutes NSF's "DNA," if you will. It is how transformational leaps forward happen. In a similar fashion, NSF's investments in science and technology are

also intertwined. The scientific pursuit of knowledge and understanding cannot be separated from the development of new technological capabilities. In turn, new technology capabilities enable the pursuit of new scientific research questions that were previously out of reach.

NSF has long invested in use-inspired research and the translation of research results into practice through a wide range of programs. The TIP directorate constitutes a once-in-a-generation opportunity to double down on this type of work to focus on pivotal challenges and positively transform society, and to do so through public and private partnerships that help to inform, coordinate and grow NSF's research and education investments. Together, TIP and the other NSF directorates and offices will advance technology; address national, societal, and economic challenges, including regional opportunities present across the Nation; and tap into the vast talent base that exists throughout the Nation and has for too long been left behind when it comes to the U.S. research and innovation enterprise.

What will the future of other directorates look like as TIP ramps up?

Answer. Building on NSF's longstanding leadership in science and engineering research and education, TIP serves as a crosscutting platform and collaborates with NSF's other directorates and offices to leverage, energize, and rapidly advance use-inspired, solutions-oriented research and innovation in critical and emerging technologies and industries. In general, NSF plans to take a balanced approach between its existing directorates that support basic research and TIP. For over seven decades, NSF has been investing in fundamental research in all fields of science and engineering, delivering foundational and use-inspired outcomes, and will continue to do so.

And how is NSF collaborating with other agencies, such as DOE, to ensure taxpayer dollars are being used efficiently?

Answer. Within the Federal research and development enterprise, NSF's investments complement those of other agencies. Specifically, many other agencies invest in R&D focused on their mission needs. NSF investments in fundamental research often involve partnerships with other agencies to leverage that research and help meet those agencies' needs. For example, NSF has collaborated with the U.S. Department of Agriculture (USDA) on the NSF-led National Artificial Intelligence Research Institutes program, with USDA's National Institute of Food and Agriculture fully funding four food and agricultural institutes to date. Beyond these partnerships, NSF stands ready to rapidly scale use-inspired and translational research, complementing and enhancing R&D investments across the Federal government.

TIP serves as an agency-wide resource to catalyze and scale public and private partnerships to amplify and further the impact of NSF investments in research, innovation, and education. Specifically, TIP provides expertise and support to build partnerships, along with co-funding to strategically advance high-impact relationships that will deepen and advance NSF's mission across science, engineering, and education. TIP ensures these partnerships expand the reach of, and exponentially increase the return on, NSF's investments across all directorates and offices.

Senator SHAHEEN. This was a very informative hearing. It feels like our science future is in good hands, and we very much appreciate the work that both of you are doing—

Dr. PANCHANATHAN. Thank you.

Senator SHAHEEN [continuing]. And look forward to continuing to collaborate and cooperate with your efforts.

SUBCOMMITTEE RECESS

Senator SHAHEEN. At this point, the subcommittee stands in recess until Wednesday, May 11, at 2:00 p.m., when we will hold a hearing on the budget request of the Department of Commerce. Thank you both.

Dr. PANCHANATHAN. Thank you, Madam Chair and Ranking Member Moran.

[Whereupon, at 11:55 a.m., Tuesday, May 3, the subcommittee was recessed, to reconvene subject to the call of the Chair.]

COMMERCE, JUSTICE, SCIENCE, AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 2023

WEDNESDAY, MAY 11, 2022

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 2:00 p.m., in room SD-192, Dirksen Senate Office Building, Hon. Jeanne Shaheen (Chair), presiding.

Present: Senators Shaheen, Feinstein, Reed, Schatz, Van Hollen, Moran, Murkowski, Collins, Capito, Hagerty, and Braun.

DEPARTMENT OF COMMERCE

OPENING STATEMENT OF SENATOR JEANNE SHAHEEN

Senator SHAHEEN. Good afternoon. The Subcommittee on Commerce, Justice, Science, and Related Agencies will come to order.

We are delighted to have the Secretary of Commerce, Gina Raimondo here, to speak to the President's fiscal year 2023 funding request for the Department. It is great to have you back before the subcommittee.

We have three votes that are supposed to be starting at 2:30, and in the interest of time I am going to submit my opening statement for the record.

[The statement follows:]

PREPARED STATEMENT OF HON. JEANNE SHAHEEN

Good afternoon, everyone, and welcome to today's hearing to review the President's fiscal year 2023 funding request for the Department of Commerce. Our witness today is Secretary Gina Raimondo.

Secretary Raimondo, it's great to see you again.

At its core, the Department of Commerce's mission is to help American workers and businesses thrive.

To achieve this goal, the Department relies on a talented workforce spread across all 50 States, every U.S. Territory, and dozens of countries around the world. I want to thank the more than 40,000 Department employees for their work.

With its unique tools, the Department is often called upon to meet our country's most complex challenges.

The Department's trade experts enforce sanctions that are the lynchpin of our country's response to Russia's invasion of Ukraine. Its world-class scientists are on the front lines of responding to the climate crisis.

And the Department's economic development staff are helping communities bounce back from the recession caused by the COVID-19 pandemic. The Department really is America's Swiss Army knife.

To maintain the Department's diverse capabilities, this Subcommittee must ensure that the Department has the resources it needs to succeed.

To that end, the fiscal year 2022 omnibus spending bill included \$9.9 billion for the Department of Commerce.

This year, the President's fiscal year 2023 budget request for the Department of Commerce is \$11.7 billion—an 18 percent increase compared to the fiscal year 2022 enacted level for the Department.

This proposal builds off of the Department's ongoing work to help American workers and businesses compete.

To do so, this budget proposes increasing funding for NIST by nearly \$240 million. This investment would boost advanced manufacturing research and strengthen manufacturers around the country—all to support good-paying American jobs and improve U.S. competitiveness.

The budget also proposes a nearly billion dollar increase for the National Oceanic and Atmospheric Administration (NOAA).

With this investment, NOAA will expand climate and weather research and operations, upon which New Hampshire's Seacoast communities and fisheries rely.

Turning to international trade, I was especially pleased to see the budget propose a \$26 million increase to support small- and medium-sized American businesses through Global Markets at the International Trade Administration.

This is a big deal for small states like New Hampshire, which were adversely impacted by the trade policies of the previous administration, and are trying to recover as we fight to put COVID-19 in the rearview mirror.

Every effort should be made to assist our local businesses.

When I was Governor of New Hampshire, I led the first trade mission outside of North America, so never count the little guy out—we're always looking for ways to increase the size of our footprint in the global market, and international trade programs allow us to do that.

And on that note, this office helps American businesses tap into new markets abroad. The potential return on investment for this funding is enormous.

In 2020, New Hampshire exported \$5.5 billion in goods to the world. Increasing that amount by even a fraction would benefit my entire State.

The budget proposal also would strengthen the Bureau of Industry and Security's efforts to stop illegal exports to Russia and to enhance trade export control partnerships with allies.

As you know, we included \$22 million for these efforts in the first Ukraine supplemental appropriations bill, which passed as part of the omnibus earlier this year.

Because the situation with Russia continues to evolve, I would be interested in knowing whether the resources requested fully capture the Department's needs to administer and enforce the export sanctions.

Finally, turning to the National Telecommunications and Information Administration, I know that many members of this Subcommittee would like an update from our hearing earlier this year regarding the Department's progress in administering the broadband programs from the Infrastructure Investment and Jobs Act.

On Monday the White House announced that 20 Internet providers committed to reducing prices and increasing speeds for households enrolled in the FCC's Affordable Connectivity Program.

This was welcome news for millions of Americans.

And while the FCC is not under this subcommittee's jurisdiction, as an author of the broadband provisions in the bipartisan infrastructure law, I was glad to see this progress.

However, more must be done if we are to truly address longstanding issues to close the digital divide and ensure broadband access for unserved and underserved regions of the country.

Secretary Raimondo, as you can see, there is plenty to discuss today, and we very much look forward to your testimony.

With that, I now would like to recognize the CJS Subcommittee Vice Chair, Senator Moran, for his opening remarks.

Senator SHAHEEN. And Senator Moran is on his way, so we will give him the option when he gets here, of either submitting for the record, or speaking. But that will allow us to move to questions, hopefully, before we get to the votes that are being called.

So with that, Secretary Raimondo, I will turn the microphone over to you.

STATEMENT OF HONORABLE GINA RAIMONDO, SECRETARY, DEPARTMENT OF COMMERCE

Secretary RAIMONDO. Okay. Thank you. Good afternoon, and thank you, Chair Shaheen, for this opportunity, and to the Members of the Committee.

The priorities funded in this budget build upon the investments that you—

Senator SHAHEEN. Excuse me, Madam Secretary; maybe you could pull the microphone a little closer, so that everyone can hear better?

Secretary RAIMONDO. Yes. Sorry. Is this better?

Senator SHAHEEN. Yes.

Secretary RAIMONDO. Much better. Sorry. I apologize.

Okay. So, as I was saying, the priorities funded in the budget build upon the investments that you all enacted in fiscal year 2022. And I will say, I am so very grateful for your support, as we look forward to accomplishing even more in 2023.

COMMERCE FUNDING PRIORITIES

The budget request includes \$11.7 billion for the Department, which is an 18 percent increase above fiscal year 2022 enacted. And I would just like to go through the six key priorities in areas of investment that comprise the \$11.7 billion.

First, the President's budget strengthens the Nation's supply chains by investing in domestic manufacturing. Specifically it calls for \$1.46 billion to support the work of NIST, including \$275 million for NIST Manufacturing Extension Program (MEP), and \$97 million to expand NIST's role in Manufacturing USA. This, as you all know, will help small and medium-sized manufacturers improve their competitiveness.

The budget also proposes \$16 million to augment the Commerce Department's data tools and expertise to support more secure and diversified supply chains.

Second, the budget positions us to compete globally, protect our national security, and continue to lead a global coalition, united in condemnation of Russia's aggression against Ukraine. Specifically, it calls for \$630 million for ITA to enhance commercial diplomacy, it provides BIS \$200 million to apply and enforce export controls, and strengthen efforts to counter new threats from Russia and China.

Third, the budget invests in equitable and inclusive economic growth for all Americans. I believe that America's greatest strength and core to our competitive advantage, is our diversity. Accordingly, the budget proposes \$500 million for the EDA to help communities experiencing economic distress take control of their future and position themselves for future prosperity.

It also proposes \$110 million for the Minority Business Development Agency, which will meet the full authorization that was included in the Bipartisan Infrastructure Law. And very importantly, for those of you representing rural States, part of this funding will be used to open new regional offices, and establish rural business centers.

Fourth, the budget takes historic action to combat the climate crisis. It includes \$7 billion for NOAA to continue providing data,

strategies, and expertise necessary to address the climate crisis. The request also supports programs to catalyze wind energy, restore habitats, protect oceans and coasts, and improve NOAA's ability to predict extreme weather associated with climate change.

An area that I know is of interest to this committee, the budget also proposes \$87 million for the Office of Space Commerce. This is a significant increase, and this increase in funding will be dedicated to standing up civil operational, space situational capability at NOAA.

Fifth, the budget expands opportunity and discovery through data. Timely data is crucial to supporting American competitiveness, innovation, and growth. The budget provides the Census Bureau with \$1.5 billion to continue its transformation to a 21st century data-centric model. It also calls for \$141 million for the Bureau of Economic Analysis to support new data on the supply chain, income distribution statistics, and the growth in Space Commerce.

Sixth, and finally, the budget ensures that the Department can provide 21st century service to the American people. It proposes new funds to enhance our own cybersecurity, and increase the diversity and equity of our own workforce.

Before concluding on this budget, I would be remiss if I didn't take just a second to thank you for the \$22 million that you provided to the BIS in the Ukrainian supplemental to implement and enforce the increased export controls on Russia. And I would be happy to talk about that today.

And I would also be remiss if I didn't thank you for your work to advance the United States Innovation and Competition Act (USICA). I cannot emphasize enough the urgency with which we must move to pass USICA. And I will tell you that I and my team are fully and totally committed to do anything that we can to assist you as you get that critical piece of legislation to the President's desk.

The Commerce Department has key priorities in the bill, including the tech hubs, supply chain authorities, and the CHIPS funding. And I will say chip manufacturers have made clear that they are going to build new chip facilities, the question is: Will they be built in the United States of America? And the answer will depend on how quickly we can move forward with the USICA bill.

So, I am delighted to be here, and of course happy to take all of your questions.

[The statement follows:]

PREPARED STATEMENT OF SECRETARY GINA RAIMONDO

Chair Shaheen, Ranking Member Moran, and members of the Committee, thank you for this opportunity to discuss President Biden's fiscal year 2023 Budget Request for the U.S. Department of Commerce. The priorities reflected in this Budget build upon the important investments you enacted in fiscal year 2022 through annual appropriations, the Bipartisan Infrastructure Law, and the Ukraine Supplemental Appropriations Act. I am grateful for your support of the Department as we look forward to accomplishing even more in fiscal year 2023.

The President's Budget Request includes \$11.7 billion for the Department of Commerce, an 18 percent increase above the fiscal year 2022 enacted level. The investments proposed in this budget will position us to continue fulfilling the Department's mission to create the conditions for economic growth and opportunity for all communities, implement the recently published 2022–26 Departmental Strategic

Plan (Innovation, Equity, and Resilience: Strengthening American Competitiveness in the 21st Century), and support the President's economic vision for America—to build our economy from the bottom up and the middle out.

Today, I will focus on six key areas of investment within the President's Budget for the Department of Commerce.

First, the Budget strengthens the Nation's supply chains by investing in domestic manufacturing.

Rising costs for working families and ongoing supply shocks underscore the urgency of building long-term resilience across critical supply chains, strengthening domestic manufacturing, and beginning to institutionalize supply chain resilience within the Department of Commerce.

The Budget calls for \$1.46 billion to support the work of the National Institute of Standards and Technology, or NIST, including \$275 million Manufacturing Extension Program, or MEP, which is an increase of \$117 million over fiscal year 2022. Today, there are 51 MEP centers that work with manufacturers to help them develop new products and customers, expand and diversify markets, adopt new technology, and enhance value within supply chains. The additional investment in MEP will enable the centers and their clients to respond quickly to new market opportunities by working at all levels of the supply chain, from original equipment manufacturers to suppliers, and with state and Federal governments. It will also facilitate initiatives to expand the pool and diversity of workers in the manufacturing sector, by partnering with workforce organizations to coordinate and tailor services to meet the needs of local manufacturers.

The Budget also includes \$97 million to expand NIST's role in Manufacturing USA. The U.S. government currently funds 16 Manufacturing USA Institutes, one of which is sponsored by the Department of Commerce. Each Manufacturing USA Institute is a public-private partnership with a distinct technology focus, such as advanced composites, additive manufacturing, biofabrication, smart manufacturing, and sustainable manufacturing. Each institute works to secure the future of U.S. manufacturing through innovation, education, and collaboration. With this request, the Department of Commerce will maintain funding for our current institute, which focuses on biopharmaceutical manufacturing, and sponsor four new Manufacturing USA Institutes that will promote collaboration on industry-relevant research and development to spur manufacturing innovation in the U.S.

The Budget also proposes \$16.1 million to augment the Commerce Department's data tools and expertise to support more secure and diversified supply chains. This investment will provide Bureau of Economic Analysis (BEA) \$5.2 million and 15 positions to better collect data on U.S. participation in global supply and distribution chains and will provide the International Trade Administration (ITA) \$10.9 million for 38 positions for additional capacity needed to strengthen supply chain resilience by allowing us to track the supply of goods and services and respond to acute disruptions.

Second, the Budget positions us to compete globally, protect our national security, and continue to lead a global coalition united in condemnation of Russian aggression against Ukraine.

The Budget calls for \$630.8 million for the International Trade Administration (ITA), \$72 million above the fiscal year 2022 enacted level. Within this, the Budget calls for investments to strengthen commercial diplomacy in targeted areas of high economic and geostrategic value, including the Indo-Pacific region, which will assist U.S. companies competing in these important markets.

The Budget provides the Bureau of Industry and Security (BIS) \$199.5 million, representing an increase of \$58.5 million, or 41 percent more than the fiscal year 2022 enacted level, to apply and enforce export controls to advance our national security objectives. Within this, the Budget includes \$36 million to secure the information and communications technology and services (ICTS) supply chain and \$10 million in new funding to strengthen national security efforts to counter current and emerging threats from Russia and China.

Third, the Budget continues a focus on equitable and inclusive economic growth for all Americans.

We fail to meet our full potential as a nation if we are not investing in all underserved communities, workers, inventors, and entrepreneurs.

The Budget provides \$502.5 million for the Economic Development Administration (EDA) to help communities experiencing economic distress take control of their future and position themselves for economic prosperity and resiliency. Within this, the Budget includes \$50 million for the new Recompete Pilot Program, which will provide grants to communities experiencing high prime-age employment gaps. It also

increases funding for the Assistance to Coal Communities program, to continue to assist communities economically impacted by changes in the coal industry. The most directly comparable portion of EDA's American Rescue Plan Act Coal Communities Commitment was the Economic Adjustment Assistance portion, and this was significantly oversubscribed with applications totaling more than twice the \$200 million in funding available. With additional funding, we would be able to better support these and so many other communities.

The Budget proposes \$110 million for the Minority Business Development Agency (MBDA), double the fiscal year 2022 enacted level, necessary to meet the full authorization this Committee put forth in the Minority Business Development Act included in the Bipartisan Infrastructure Law. This funding will build MBDA's capacity and expand existing grant programs, including the flagship business and specialty center programs, opening regional offices, and establishing a Rural Business Center program.

Fourth, the Budget takes historic action to combat the climate crisis.

The coast-to-coast devastation caused by extreme weather events has been heart-breaking to watch. Extreme winds, tornadoes, hurricanes, wildfires, heat, and floods threaten lives, families, homes, and businesses. Addressing the climate crisis is an essential component of the Department's mission to create the conditions for economic growth and opportunity.

The Budget includes \$6.9 billion for the National Oceanic and Atmospheric Administration (NOAA), an increase of \$986 million from the 2022 enacted level to ensure the Department is providing decision-makers across the public and private sectors with critical, actionable data, strategies, and expertise to address the climate crisis. The Department will bolster equity in its service delivery to ensure that our most vulnerable communities, including tribal, rural, and other underserved populations, have access to the information and tools they need to make climate-smart decisions. The Budget includes additional funding for the Climate Competitive Research Program to provide decision-makers with the information and tools they need to respond to climate change, and to provide climate change projections out to 2050. Our budget request for NOAA also supports programs to catalyze wind energy, restore habitats, protect the oceans and coasts, continue education and outreach efforts in local communities, and improve NOAA's ability to predict extreme weather, including events associated with climate change. It also includes \$2.3 billion to support the nation's weather and space weather satellite enterprise, which is a \$667 million increase above the fiscal year 2022 enacted level, to ensure the continuity of our world-class weather observation capability. The next decade is a critical time to address the climate crisis, and with this Budget, NOAA has a once in a generation opportunity to advance climate resilience and promote economic growth.

Additionally, the Budget proposes \$87.7 million for the Office of Space Commerce, a \$71.7 million increase above the fiscal year 2022 enacted level. The U.S. commercial space industry pioneers innovative technologies that transform our daily lives, gather critical data, enable communications, and help secure the Nation. This significant increase in funding for the Office of Space Commerce will be dedicated to standing up a civil, operational Space Situational Awareness (SSA) capability at NOAA that meets the industry's needs.

Fifth, the Budget expands opportunity and discovery through data.

The Nation's economy, technology, and demographics are changing rapidly and profoundly, making timely data crucial for developing the insights needed to support American competitiveness, innovation, and growth of quality jobs. The Budget provides the Census Bureau with \$1.5 billion to enable it to continue its transformation from a 20th century survey-centric model to a 21st century data-centric model that provides more timely and relevant data products to our stakeholders. The Budget also calls for \$141 million for BEA, \$25 million more than the fiscal year 2022 enacted level, to support new data on the supply chain, income distribution statistics, healthcare spending, and growth of the space economy to better inform decision-makers.

Sixth, and finally, the Budget ensures the Department can provide 21st century service to the American public.

The Budget proposes new funds to enhance cybersecurity and increase the diversity and equity of our workforce. It also proposes investments to improve technology and customer experience. These investments will ensure that the Department can provide best in government services to the American public. The mission of the Department could not be carried out without our dedicated employees. They have persevered through new challenges and emerged more resolute to help the Department achieve new heights.

Together, in the face of extraordinary challenges, we are building a 21st century economy that is keeping America competitive globally and positioning America's workers and businesses for success. We are already witnessing historic levels of job creation and economic growth. But there is more work to do. I look forward to working with you to enact the President's fiscal year 2023 Budget for the Department of Commerce to do that work. I am happy to take your questions.

Senator SHAHEEN. Well, thank you very much. Again, when Senator Moran arrives we will go to him. But in the meantime we will open for questions based on order of arrival; 5 minute question rounds. And I want to begin where you concluded, which is talking about the action to impose export controls on Russia and Belarus in response to their invasion in Ukraine.

And I know that we provided funding earlier this year in the supplemental to help do that, but can you speak to the scope of these efforts? How they are progressing? If you see any signs that it is having an impact? And then also, what are the needs of the Department as we go forward, recognizing that the situation is going to be changing? And we need to make sure you have the resources you need.

EXPORT CONTROLS

Secretary RAIMONDO. Yes. Thank you. So as it relates to the scope, the scope is unprecedented, it is broader than anything the United States has ever done with respect to export controls insofar as the United States, the Department of Commerce led a coalition of 37 other countries to join us in aligning our export controls.

And our approach was to deny Russia technology which would cripple their ability to continue a military operation and that is exactly what we are doing. U.S. exports of technology to Russia have fallen by nearly 70 percent since we imposed these export controls. And you are starting to see it.

You see two tank manufacturing facilities have shut—Lada, the auto manufacturer, has furloughed workers and closed down. I met a few weeks ago with the Prime Minister, and we have reports from Ukrainians that when they find Russian equipment, military equipment, on the ground, it is filled with semiconductors that they took out of dishwashers and refrigerators.

And so, the point is, we are having a very serious effect. What we need to do in order to continue this is enforcement, enforcement, enforcement.

As I said, thank you for the resources. We will come back to you if we think we need more. I would just say, I am extremely proud of the team. And I am deadly serious about enforcing, and have been crystal clear, particularly with China, that we won't tolerate any circumvention of these export controls.

Senator SHAHEEN. I am delighted to hear that. And so pleased to hear also that you are seeing the impact of what we are doing.

Senator Moran, just so you are up to date on where we are. Because of the votes, I submitted my statement for the record.

Senator MORAN. No peer pressure. But I will do the same.

Senator SHAHEEN. So I was going to go ahead and finish my questions, and then turn it over to you, for either your statement, or to start your questioning, whichever you prefer.

Senator MORAN. Thank you.

Senator SHAHEEN. I want to go to another issue that I recognize you don't have control over, but I do think you have an important voice in this discussion. And that is the increasing challenges that we are having in New Hampshire, in particular industries around workforce.

It is a general challenge throughout the State, but when it comes to our seasonal businesses, the tourism industry, they are facing severe workforce challenges, and a key reason for that is because of the lack of sufficient H-2B visas being available to them.

And I had the opportunity to ask Secretary Mayorkas about this issue last week, and he said that they are moving in the Department of Homeland Security with—he used the term “lightning speed”—now, I have to say that is a disturbing characterization of what has been an alarmingly slow process.

Tell me what we can do to speed this along? How can your agency help us as we try and support those businesses that are really desperate for workers? And, you know, we have lost two seasons because of the pandemic, our season starts on Memorial Day. I know you know this because you were governor of Rhode Island, so you were dealing with these same issues. What can we do to move this debate?

WORKFORCE FOR THE TOURISM INDUSTRY

Secretary RAIMONDO. Yes. So first of all, I appreciate you bringing it up. As you said, Rhode Island is heavily, heavily dependent on tourism, particularly in the summer. These businesses make all of their living between Memorial Day and Labor Day, and they are utterly reliant on visas—short-term visas, work visas, student visas.

So, I sympathize with where you are coming from. As you mentioned Secretary Mayorkas, he and Secretary Walsh temporarily increased the visas, 35,000 additional. I will tell you, I convened the TTAB, the Travel and Tourism Advisory Board, and I heard an earful from industry that we need to do more, we need to go faster, and we should consider a statutory increase on the cap.

What I am doing, and what I will continue to do even more so at your urging, is make sure the voices of industry are heard in the administration that we do go faster, but also we ought to think about longer term solutions.

Senator SHAHEEN. Well, thank you very much. I appreciate that and look forward to working on those longer term solutions.

Senator Moran?

OPENING STATEMENT OF SENATOR JERRY MORAN

Senator MORAN. Chair, I would ask unanimous consent that my opening statement be made a part of the record.

Senator SHAHEEN. Without objection.

Senator MORAN. And Madam Chair, I would yield to the Senator from Alaska so that you and I can spend time and figure out who is going to be chairing when the votes actually occur.

Senator SHAHEEN. Very good point. Senator Murkowski.

Senator MURKOWSKI. Thank you, Madam Chair. And thank you Senator Moran, appreciate that.

Madam Secretary, welcome. Good to see you. I want to start my questions with fisheries surveys. You know I always want to talk about fish first.

As you are well aware, we are still trying to address this mismatch between survey coverage and the stocks that NOAA is trying to quantify. Going forward more funding is going to be needed to maintain both the historic survey coverage in Alaska, and support new survey missions within the North Bering Sea, and even the Arctic.

But I want to thank you and NOAA for the work that you have done to prioritize fisheries surveys in the Bering Sea, and in the Gulf. And I would ask that you keep us updated on any challenges that you may be encountering with regards to this year's survey plan.

We had one vessel, the Oscar Dyson, that was held back a little bit, but you know full well we have had the opportunity to discuss what happens when we have those gaps in data. Lost surveys are more harmful than ever as we are seeing these changes in our marine environment. We missed a year of crab data in 2020, and then next year the Bristol Bay Red King Crab Fishery was closed for the first time in decades. And believe me, I am hearing from fishermen and managers on this issue.

Can you share with me what resources NOAA needs in either manned or unmanned technology, to really help us gather this data in a more reliable way so that we can work to address these challenges that we are seeing with the resources in our oceans due to the impact from climate change?

FISHERIES SURVEYS

Secretary RAIMONDO. Yes, thank you. We have talked about this. And I have to say, even listening to you, it is tough to hear, because slow data, lack of data I know affects people's livelihoods. The budget calls for \$3.3 million for additional resources into the surveys, and we believe that this will help us, significantly with our data collection, with the speed with which we do it, with the continued modernization with which we do the work.

We are, as you mentioned, un-crewed. We are very definitely looking at that, and I think that the team thinks that that has great potential in the future. Another thing that we are doing, as you know, we have had issues with—mechanical issues with vessels, and while it is tough to predict these things, what we have instituted now is a kind of a proactive maintenance review of the vessels, in an effort to prevent maintenance failures of the vessels which was what happening in the past.

So, I guess what I can tell you is, the investment of the millions should help, we are committed to it. And I would just ask that we stay in close contact so that I can continue do what I can to manage the team.

Senator MURKOWSKI. Well, we will certainly let you know where those issues are arising. I want to shift now to broadband. We had the opportunity in the Senate Committee on Indian Affairs last week to be able to inquire a little bit more from some of your team on the Tribal Broadband Connectivity Program.

We were looking for a little more granularity on the program funding levels, and so today I would ask for your input here, when you combine the previous appropriations, as well as the Bipartisan Infrastructure Law, we have got available funding for the TBCP at about \$3 billion. We also understand that the subscription rate is well above \$5 billion.

So what I was hoping to get last week, and what I would ask for your help today is, is more details on this difference here, between what we have made available, and then really what that need is, what that subscription rate is. And when you look at redundant applications that have come in, and then the non-qualifying applications, how does this all factor out?

So in this year's budget you have asked for about another billion, but what I am hoping to understand is how you came to this one billion dollar figure. Is it really going to cover the difference that we see after you take into account the non-qualifying applications, the redundant applications, is this a space where we think we are actually going to be addressing the need?

BROADBAND

Secretary RAIMONDO. Okay. I tried to capture all that. I will follow up with your team to get into the details. I think the answer is yes, but I do want to clarify something which is very important. The final allocation for Alaska, for all of your States, cannot be made until we have the Federal Communications Commission, FCC maps.

Senator MURKOWSKI. And we have talked about those, yes.

Secretary RAIMONDO. And the FCC is starting to collect data to go into the maps June 30. And they are forecasting possibly November for the maps. So, I guess what I am trying to say is, our intention is to make sure that every State gets enough money so that everyone is covered. And if you have a large, unserved population, as you currently do, you will receive, more money through the formula, and the intention would be that you would, receive enough.

Also, the program includes a 10 percent set aside for high-cost locations, and I have to believe, that given your geography, it would be a high-cost location. So, in any event, I will follow up specifically, but we are very committed to making sure whoever is not now served, will get served.

Senator MURKOWSKI. Thank you for your responsiveness. Thank you.

Senator SHAHEEN. Thank you Senator Murkowski. Senator Feinstein.

Senator FEINSTEIN. Thanks very much, Madam Chairman. And welcome.

As you are aware, job growth has been excellent, however the public, I think, is more focused on inflation which has been at the highest level since the 1980s. And much of this has been brought on by dynamics the administration can't solve in the short run, such as the Russian invasion of Ukraine, the global supply chain crisis, et cetera.

There has been some debate about whether reducing the substantial tariffs the Trump administration put into place, would re-

duce inflation. But whether or not tariffs cause inflation, they significantly raise prices on U.S. families and businesses, so even if tariffs are not inflation, per se, they similarly impact on people's finances.

I think there may be cases where tariffs can make sense. However, the costs we impose are mostly borne by U.S. businesses and families, reducing them would leave people more resources to deal with rising prices. If so, what is the administration's plan to reduce the burden of tariffs?

TARIFFS

Secretary RAIMONDO. Thank you for the question. Let me say since I have been Commerce Secretary, we have been able to eliminate the Trump 232 tariffs on steel and aluminum from the EU, Japan, and the U.K. And I have heard from industries that consume steel and aluminum that this has been a benefit.

What the President has said with respect to the 301 tariffs, the China tariffs, is that we don't believe Trump's process was strategic. And so, as the President said yesterday, we right now, as a team, are in the middle of an evaluation of those 301 tariffs to see, you know, whether any changes might be warranted.

Obviously, it is the USTR that leads in that effort but, the President has been clear, we need to look at every single tool in our toolbox to fight inflation. It is the number one priority, and so we are looking at it holistically.

Senator FEINSTEIN. So it is not inconceivable that you could reduce tariffs; is that right?

Secretary RAIMONDO. It is not inconceivable, right.

Senator FEINSTEIN. How positive might the thought be?

Secretary RAIMONDO. I can't say. I can't say, and I would defer to the White House and USTR, but the President has been clear that the Trump tariffs imposed on China were not done in a thoughtful way, and so we are, as a team, taking a look at it and considering a more strategic approach.

Senator FEINSTEIN. Thank you very much. And I might follow up in writing, and perhaps you can inform us with what you do. I would appreciate that very much.

Secretary RAIMONDO. Thank you.

Senator FEINSTEIN. Thank you. Thank you Madam Chairman.

Senator SHAHEEN. Thank you Senator Feinstein.

Senator Moran.

Senator MORAN. Thank you, Madam Chairman.

And Secretary, welcome. Thank you for the conversation we had when you were working, and I was working on Saturday morning last.

I want to talk about a pilot program, not a pilot program, but a program for pilots. Congress provided appropriations in the fiscal year 2022 Omnibus Bill to sustain an Aviation Ascension Training Program, as authorized in the NOAA Commissioner Officer Corps Amendment Act.

PILOT TRAINING PROGRAM FOR NOAA

Secretary RAIMONDO. Okay.

Senator MORAN. So Congress authorized that pilot training program for NOAA, what we are really talking about is, hurricane hunters; that type of pilot. Last fall I had the opportunity to have Rear Admiral Hahn, and the K-State Salina, Dean, Dean Starkey, they signed a memorandum of understanding to create a unique program involving those two entities to train pilots.

This partnership leverages some existing experience while ensuring a pipeline for NOAA to have pilots. NOAA has relayed that they are currently working on establishing guidelines and regulations to move this program forward. I am not certain that you would know about this program, but I am asking you, would you share with me when these will be established allowing this memorandum of understanding between NOAA and K-State Salina to move forward. And if you don't know about it—

Secretary RAIMONDO. Yes.

Senator MORAN [continuing]. Then the purpose of my question is to give you the chance to get acquainted with this topic.

Secretary RAIMONDO. Exactly, I will get you an answer, by the end of the day. I don't have an answer. I am familiar—I have been in a hurricane hunter, and I can tell you we do need help upgrading, and getting new ones. But with respect to this training program, I have to get you a proper answer.

Senator MORAN. The Senate Commerce Committee worked with me to get legislation to increase the pipeline of pilots.

Secretary RAIMONDO. Yes, yes.

Senator MORAN. Which, there is a tremendous shortage everywhere, but evident that NOAA, and hugely important. Let me ask an anti-circumvention inquiry. I think we have had a conversation, and several of us have introduced legislation, and written you about what is going on in the solar panel industry.

Secretary RAIMONDO. Yes.

Senator MORAN. I won't go into the description of the problem. But why is there no industry-supported threshold to initiate this anti-circumvention inquiry? Would legislation be helpful? When I have asked you this question I think the answer has been: Our hands are tied.

Secretary RAIMONDO. Mm-hmm.

Senator MORAN. And I am trying to figure out how to untie your hands, because there is a process, at least on solar panels, that is being utilized to keep tariffs in place to the detriment of the industry, by one small company who made the claim. And you know, should a small, single company, without access to confidential information, actually provided necessary data to meet the statutory requirements to initiate the inquiry?

So I am suggesting to you that the Department may have an opportunity to deny this kind of inquiry, specifically: Did the Department of Commerce staff make a finding, also required by the statute, that the investigation itself met the appropriateness criteria? So there is criterion in statute, did the make the finding that the company met that criteria? And I guess if the answer is yes, then what more can we do to keep this kind of thing from occurring, which I think is pretty darn damaging to businesses in the United States?

SOLAR SUPPLY CHAIN

Secretary RAIMONDO. Yes. Okay. There was a lot in that, and I will do my best in a minute. First of all, I have heard from many of you, and many in the industry, and I share the sense of urgency. I understand how fragile the solar supply chain is, and how we need to move forward quickly.

Having said that, as you well know, Senator, this particular statute, which we are obligated to implement, is very circumscribed; there are five criteria, and five criteria only, that ITA can look at in deciding whether to initiate. And if they find that the case meets the threshold of the five criteria, we are obliged to initiate, which is what we are doing, and we are going to move as fast as we can.

Having said that, you know, I have been asked: Why don't you consider climate as a factor? Why don't you consider policy as a factor? Why don't you consider the disruption to the supply chain as a factor? The answer is, statutorily, there is no discretion.

So the answer to your question, could you help? That is of course your decision, but were you to institute some discretion, then we could implement it according to those changes.

Senator MORAN. I would ask you, if the Department would like to work with us to provide some legislative suggestions that might address the discretion, or at least create greater list of criteria, for the decision to be made on. And then I would ask you to make certain that the findings that are required by the statute have actually been met—

Secretary RAIMONDO. Yes.

Senator MORAN [continuing]. In this solar panel circumstance. Thank you.

Senator SHAHEEN. Thank you. Senator Reed.

Senator REED. Thank you very much, Madam Chair.

Let me just follow up briefly on Senator Moran's question, which is important now, because there has been a lot of rhetoric suggesting that this is an indication of the administration's lack of support for green economy, for alternate energy.

As I understand it, and you can confirm it, Madam Secretary, that the President is proposing the most ambitious climate package in the history of the United States, with \$555 billion in tax cut spending, and other incentives, to promote wind, solar, power, and other renewables. And I believe that is accurate. Can you confirm that?

CLIMATE

Secretary RAIMONDO. Absolutely, yes.

Senator REED. Yes. And you are a strong supporter of this effort?

Secretary RAIMONDO. Yes.

Senator REED. And I am also, not only from the perspective of the economy, but also national security, as we are witnessing now, if we weren't as reliant on hydrocarbons we would have much more leverage in many places than we need it. So thank you.

You have answered, I think in detail, the particular important question Senator Moran asked, and I think that answer stands.

Secretary RAIMONDO. Yes. Thank you.

Senator REED. One other area that we are concerned about, again it comes from a national security perspective; the President was down in Alabama at the factory manufacturing Javelin Missile systems, and one of the issues that came up is the lack of semi-conductors.

But again, from my chairmanship on the Armed Services Committee, practically every system we have in the military today has a microchip somewhere in it. And I presume, and you can confirm that, the lack of domestic supply, or a reliable supply from an ally, is a great concern to the administration, as it is to the contractors.

CHIPS AND SEMI-CONDUCTORS

Secretary RAIMONDO. Absolutely. I hear regularly from contractors that chips are a rate-limiting factor, for their ability, over time, to continue to replenish. There are just over 200 chips in every Javelin launching system. There are hundreds of chips in every satellite, and on, and on.

And even more worrisome, the most sophisticated chips, of which we make none in the United States, and are totally dependent on Taiwan for, are exactly the kind of chips that are needed in sophisticated military equipment, which is why, in my opening statement, I am saying to the Committee, I really believe it is time to take action on this. I have also heard, Senator, from semiconductor companies, who tell me they are going to expand their facilities, and they have to make those decisions this year in order to meet the demand.

Germany, Singapore, Taiwan, Japan, Spain, France are all putting huge subsidies in front of these companies, and if we don't pass this USICA bill this year they will have no other choice but to build overseas, which does us no good.

Senator REED. Well, thank you. I have the same observations from the perspective, to not only the economy, but I suggest to national security.

One issue that is a little close to home is that we have been working closely with NOAA about infrastructure at Newport, which would support their operations in a much more efficient way than currently they conduct them, were 100 percent designed, but we have to get into the next phase. And I would ask if you could look at that, and any support would be deeply appreciated.

Secretary RAIMONDO. Yes; absolutely. I have talked to you about it. I, of all people, know how important it is to the state, and we are going to work with you.

Senator REED. We talked about semiconductors, and we also talked about, you know, alternate energy, and one of the areas where you have very personal experience is offshore wind. And do you think that NOAA and BOEM have the tools they need to maintain, and indeed accelerate the pace of offshore wind being deployed?

OFFSHORE WIND DEPLOYMENT

Secretary RAIMONDO. It is an excellent question. I think, yes, yes I think is the answer, although I will go back and ask if we need more tools. But we need to do a better job of accelerating the permitting process, I think we have the tools, I think we need to con-

tinue to increase our sense of urgency, and frankly, kind of just break down the bureaucracy between BOEM at the Department of Interior, and NOAA, and that is what we are doing.

In fact, Janet Coit, who ran the Department of Environmental Management for me in Rhode Island, has come here. She is Head of Fisheries, and that is what we are doing. We have executed an MOU, between Interior and Commerce, and it is just a constant push to make sure we move more quickly.

Senator REED. Thank you very much.

Thank you, Madam Chair.

Senator SHAHEEN. Thank you, Senator Reed.

Senator Hagerty, I am told that you were here at the gavel before you left. So you are next.

Senator HAGERTY. Thank you, Madam Chair.

And Secretary, it is good to have you here.

Secretary RAIMONDO. Thank you.

Senator HAGERTY. I would like to just follow up on the discussion you have the Senator Reed for a brief moment. You and I have talked about this before, but every Member in this Committee, and every Senator here, has actually supported a piece of legislation that is essentially a fast-track permitting process for chip fabrication facilities here in America. It takes roughly a 5 year program—

CHIP FABRICATION FACILITIES PROCESS

Secretary RAIMONDO. Mm-hmm.

Senator HAGERTY [continuing]. A 5 year permitting process down to about 18 months. So I would encourage and appreciate any help from the Department as well getting support in the House to move this through. I think it fits right in line with what you are talking about from a strategic standpoint.

Secretary RAIMONDO. Yes. I would be happy to work with you on that. It is an issue. For these facilities, permitting often holds them up.

Senator HAGERTY. Yes, and I think we are—

Secretary RAIMONDO. For 1, 2 years at a time.

Senator HAGERTY. I think we are very aligned on that. I would like to turn just a minute to talk about the census, excuse me. It is a function that is required, you know, by the Constitution. In looking at the 2020 Census, there are a lot of questions about the statistical methods and the assumptions that are used to supplement the actual data that is collected. There are methods like group quarters imputation, or differential privacy that are employed. I am not sure if you are familiar with these methodologies.

STATISTICAL METHODS AND ASSUMPTIONS USED BY CENSUS

Secretary RAIMONDO. Somewhat, I mean, obviously I am not a statistician, but somewhat.

Senator HAGERTY. Yes. I am, like you, somewhat familiar with, I understand the principles of them, but it seems to me that the employees at the Department of the Census, are really the only ones that fully understand and appreciate the assumptions, the models, what goes into them; and you know, they are the ones that are actually charged with looking at the actual numbers, making

adjustments, changing the numbers, and coming up with the final report.

I just feel the American public, certainly the Congress, would be well served to have a little more oversight and more visibility into what those methods are, and how they are being deployed.

And I wanted to bring this up to you, if you could be supportive of perhaps putting in place a bipartisan panel that would overlook the way the census is conducted, the methodologies. Again, this should be a nonpartisan issue I think for us, and a bipartisan panel has been done before, it strikes me this may be a way to get some more transparency and oversight in place.

Secretary RAIMONDO. You know, this is the first I am hearing of it, but I am open to following up with you. What I can tell you, is I have set the tone at the top of the Commerce Department, that the Census Bureau should be fact-based, data-based, science-based, statistical-based. And Rob Santos, who is the new Census Head, has a strong statistical background.

And I feel confident that is the way he is running the Bureau. Having said that, more transparency is always better.

Senator HAGERTY. I will provide a few more questions for the record on that, but I look forward to working with you in that regard. And I appreciate the Chair, perhaps, having an oversight meeting soon about what the Census is doing, and it would be great to get that on our agenda.

The next place I would like to turn has to do with our competitiveness in the Indo-Pacific. And I know you have spent a good deal of time on that. Our economic leadership in that region I think is terribly important for a national security interest, it is important for good jobs here in America. As a former governor you appreciate that, I am certain, very much.

I just led a bipartisan delegation to Japan a couple of weeks ago, worked very closely with my successor, Ambassador Rahm Emanuel, we visited with the Prime Minister, with his cabinet, with a number of business leaders, and in all of those meetings it was clear to me that it is as important as ever that we continue to find ways to deepen our economic ties in the region, particularly given what is happening with the Chinese Communist Party, their aggressive posture, whether it be from a diplomatic standpoint, a military standpoint, and certainly from an economic standpoint, we see the Chinese Communist Party moving in every direction in that region.

Also, when I served as Ambassador, prior to Ambassador Emanuel, I worked very hard to put in place a trade agreement between the United States and Japan. That helped deepen our agricultural ties, help deepen our industrial ties. And importantly, it had an element in it of digital trade, a high-standard digital trade component to it, that I think could serve as a model for the broader region. And I would look forward to working with you on that to get your thoughts on how that might be rolled out. I have discussed this with Ambassador Emanuel, and I think it holds, it holds some real promise.

My first question for you specifically is, under the aegis of the Indo-Pacific Economic Framework, that has been discussed heavily, and I think it will be discussed much more as President Biden visit

the region; what are your plans to advance our economic leadership in the region?

COMPETITIVES IN THE INDO-PACIFIC

Secretary RAIMONDO. Yes. So, a few things: One, I agree with everything you have said, and will be happy to follow up. I have already been to Tokyo once. The President will be there next week. We can't do enough to shore up our economic presence in the region.

The good news is—by the way, Emanuel Rahm has me on speed dial, we talk several times a week. We are a digital supply chain, aligning on export controls, investments.

Senator HAGERTY. Okay.

Secretary RAIMONDO. There's a lot there. If you think about semiconductor export controls, there are only three countries that have toolmakers, the U.S., Japan, and the Netherlands. So if we could align on that it could be incredible.

I am one of the co-leads, along with Ambassador Tai, on the Indo-Pacific Economic Framework. In fact, I met this morning with the Prime Minister of Vietnam to get them on board. I hosted Minister Hagiuda last week, because he is my counterpart, and we are kicking off an economic dialogue, as between our Commerce Department and Ministry Economy Trade and Industry.

So you know, time doesn't permit here, but suffice it to say, this is a top priority of mine. I share your prioritization, and frankly your concern. We need an economic strategy there, but frankly, we also need to be a counterweight to China.

Senator HAGERTY. Indeed. And I think there is great potential. I have watched with great interest what you are doing with the U.S.-EU Technology Council. I would encourage you to look at Japan, perhaps, as a way to continue to find means of agreement and cooperation there. And if there are any things that you need from this Committee to support that; please let us know.

Secretary RAIMONDO. Great; thank you.

Senator HAGERTY. Thank you, Secretary.

Thank you, Madam Chair.

Senator SHAHEEN. Thank you. Senator Schatz.

Senator SCHATZ. Thank you, Chair. First of all, I want to just make sure we have a meeting of the minds on this solar hold up. I want to know that you are alarmed, and I want to know that you are going to update the Members of the Senate who have expressed their concerns on a bipartisan basis, with some pace. Maybe weekly that either you or an assignee can communicate with us about where we are in the process.

So first, are you alarmed? And second, will you communicate with us regularly on where we are?

SOLAR STATUTE

Secretary RAIMONDO. So I would say yes, and yes.

Senator SCHATZ. Okay.

Secretary RAIMONDO. You know, as I said to one of your other colleagues we have to move forward quickly to meet our climate goals, but as I also said to Senator Moran, there is a process, there is a law, I have to implement the law.

Senator SCHATZ. Yes. I got it. I don't want to get into an argument with you about the law. I will say that this five-part test in the statute has to meet all five parts, and I would argue that the allegation that what is happening in terms of the manufacturing process in Southeast Asia is minor or insignificant, is just facially not true.

And if you can't go through a fact-finding process on the frontend, then you are stuck, essentially, having to open up an investigation, and grind an entire industry to a halt while you do your fact-finding. So that is one point I would like to make.

But the crux of this is, Commerce has already asked and answered the critical question here, which is that what is happening in Southeast Asia is not minor or insignificant. It has affirmed this in multiple scope rulings, March 2012, October 2020, June 2021 that adding a positive-negative junction is a highly technical production process. And I and I know you are not looking at revisiting the question of whether turning a wafer into a cell is minor or insignificant. So first of all, are we in agreement about that?

Secretary RAIMONDO. So let me say this. I am not involved. We are sitting, as essentially, a judge, in a quasi-judicial capacity. And it is the professionals at ITA who are going through this analysis.

So, as I said earlier I don't have discretion, or ability to weigh in on their fact-finding process. And, you know, we are not permitted even to talk about this extensively. But I would be happy, I suppose, to let you speak to them with counsel on the phone, if that would be useful.

Senator SCHATZ. Yes, a couple of things. First, the administrative authority in the statute is the Secretary, right. So it is not, like, assigned to some independent panel of civil service professionals, that authority is vested in you, and there is nothing inappropriate about you being more engaged in the process.

They may not like that but I get that you don't get to weigh climate goals, or public policy, or anything else. But what I am saying is the thing that was alleged is just facially not true, and the manufacturing process that is occurring in Southeast Asia is not minor or insignificant, because the Commerce Department has already decided that.

So now the only thing that the Commerce Department is in a position to make a determination on is, is the thing that is happening in Southeast Asia actually what is happening in Southeast Asia. Like, can you just confirm that turning wafers into cells is what is happening?

And my worry is that although the statute reads you have 150 days to come to a preliminary determination, and then another—and I think either another 300 days, or a total of 300 days, those are not statutory minimum numbers of days, that is a maximum.

Secretary RAIMONDO. Mm-hmm.

Senator SCHATZ. And so what I want for you to contemplate is that you do have the discretion to get a little more personally engaged, it doesn't jeopardize the independence of the investigation. Informing Congress as to the status of it, also is not, I think, in any way improper; and finally, that we are in a major, major hurry because the solar industry in the United States is at a halt.

I know the pushback you are getting from within the Department, and I respect the independence of these civil servants, but the authority is vested in the Secretary.

Secretary RAIMONDO. Mm-hmm. All right, let me respond to this. I hear you. You know, I think it is August 29 or mid-August is the outside limit. There is nothing that prevents us from going faster, and I assure you we are going to go as fast as possible, making sure we tick and tie the process and don't cut corners. But yes, if we can do better than August, we certainly will.

Secondly, you know, respectfully, having been a governor and run organizations I know that this is an urgent matter. I also know how to respect regulators, and make sure that they have the freedom to do their job. This is complex, and there are two sides to the story, which is not to say I don't share the urgency, and I am engaged in an appropriate way.

But there is a point I do want to make. A lot of the—I think Senator Reed said, rhetoric, or rumor, et cetera, is very focused on, you hear it, you know, a 200 percent tariff. And I really want to address that for a second, if I might.

While it is true Commerce would be permitted to impose a tariff at that excessive level, that is exceedingly unlikely. That level of a tariff is only reserved in outside cases, where you can tell the difference between the company and, say, the Communist Party of China.

The last 150 times we have done this since 2012, we have come out in the 10, 11, 12 percent range, under 20 percent. Now, I am in no way, like, predetermining what this will be, if it will be anything. I do think it is important, though, to say the 200 percent is an extreme case, and not fitting with the precedent that we have had.

But, listen, I share your urgency, and I am happy to update you as regularly as you would like.

Senator SCHATZ. Thank you very much.

Senator SHAHEEN. Thank you, Senator Schatz. Senator Collins.

Senator COLLINS. Thank you, Madam Chair.

Secretary Raimondo, it is good to see you. I am going to start by asking you a very quick question on the implementation of the Infrastructure Broadband Development Grants that you, Chair Shaheen, and I worked so hard on, and that are targeted first for unserved areas and then underserved areas.

My question is this: the NTIA has until May 16 to publish the Notice of Funding Opportunity for this program, and many States are eagerly awaiting that notice. In my State, the Maine Connectivity Authority stands ready to pursue this transformational assistance. My question is this: will NTIA meet that deadline?

BROADBAND DEVELOPMENT GRANTS

Secretary RAIMONDO. Yes, we will. And there is even a chance we will beat that deadline.

Senator COLLINS. I am very glad to hear that. Now, I am going to switch to our usual contentious issue which we discuss, and that is the onerous new regulations on Maine's lobster men and women.

May 1 marked the first day of these—implementation of these regulations. It was a dark day for the industry.

NOAA denied an entirely reasonable request from the governor, the entire Maine delegation, to delay implementation of the rules, which we do not think are valid in the first place, until July 1. What is interesting is NOAA's denial of this modest extension, was opposed by another Federal agency, the Small Business Administration's Office of the Advocacy.

And here what the office said: it asserted that NOAA was putting lobster men and women in quote, "An impossible scenario", and if they are quote, "Not granted a short delay of the compliance deadline, they may stand to lose significant amounts of revenue, or in some instances, their entire business."

And this is because of supply problems where the gear being mandated by NOAA is simply not available. Now, I know that NOAA has announced a graduated enforcement approach, but that is a very small comfort. The industry estimates it will lose \$7 million in lost fishing time that would have been saved by just granting that 2 month extension.

Each of Maine's more than 4,500 commercial lobster men and women, are small, self-employed business owners. That is why the SBA advocated for them, but NOAA totally ignored what the SBA asked for, in reinforcing what the industry, the entire delegation, and the governor also requested.

So now, we are also hearing that NOAA may impose further regulations on the industry. So how can the industry trust that NOAA is not going to regulate them out of existence, given that the agency has rejected recommendations from the SBA's Office of Advocacy? Not just those of us who represent the State, but an independent office within the SBA, another Federal agency.

FISHERIES ENFORCEMENTS ON LOBSTER INDUSTRY

Secretary RAIMONDO. Yes. So, I appreciate you bringing it up. And as I said last time, I will say again, I really, truly admire your advocacy on behalf of the lobstermen. I do.

I have a bit of good news in this regard which is that our Head of Fisheries, Janet Coit, is in weekly, if not daily, contact with the Maine Commissioner, Pat Keliher, and they have worked hard to find local suppliers of the new kind of gear, including Maine Mold, it is a small company you may know, that they are providing the new gear at an affordable price for the lobster fishers.

You say that the graduated enforcement isn't much, but I will assure you that along with our goal of enforcement, we are trying to assist with compliance, and we will be as lenient as we can to assist with compliance, instead of a "gotcha" sort of approach.

The final thing I will say is we are on path to have the \$14 million out by the end of June which should help with the cost for the lobstermen to comply.

Senator COLLINS. Thank you.

Senator SHAHEEN. Thank you, Senator Collins.

Senator Van Hollen, I am going to turn the questioning over to you, and ask you to take the gavel so I can go vote, and I will be right back.

Senator VAN HOLLEN. Will do. Thank you Madam Chair.

Madam Secretary, it is great to see you. I just want to run through a couple of shared priorities, to underscore my support for items in the budget to begin with. EDA we look forward to working with you to make good use of those funds. I can tell you in the State of Maryland, especially cities like Baltimore, they have been very important for economic development purposes.

NOAA, lots of important tools, like the Digital Coast and Coastal County Snapshot being used by coastal communities in Maryland, to identify risks from climate change, and prepare for necessary mitigation. And look forward to working with you on the NIST budget—excuse me—the NOAA budget.

NIST, I was pleased to see a large request for the construction research facilities. I know that you and the President are big supporters of what we are working on here, in terms of the USICA Bill, the America COMPETES Bill, this is a critical part of that investment, so I am glad to see it included here. And the budget requests for Scientific Technical and Research Services, with respect to NIST, and America's role in standard setting.

And I am going to get back to that in one second. I do want to say amen, and I will not go over the comments made by my colleagues, Senator Schatz and Senator Moran, with respect to the solar panel issue, this uncertainty is creating havoc. I heard your testimony but I will leave it at just seconding their comments.

I know you are not responsible for overseeing our travel rules, and our visa processing system, but I know that you recognize the great benefit to our economy and commerce of international travel here to the United States.

We have huge backlogs in our visa processing offices. I have raised this issue with the State Department and DHS, but since can look at it from the hat of, you know, the benefit to our economy, and not just sort of international relations, and only security, I am going to ask you to go back on that. We can clearly meet our security concerns and our health care concerns and still do a lot better, in my view.

So on the issue of our representation on very important but little known, at least to the American public, international standard setting organizations. One of them as you know is the ITU. The ITU helped set rules governing—international rules governing control of the Internet, and right now there is a Russian candidate seeking to be the chair of this, at a time when we are witnessing, the world is witnessing Putin, essentially put Russia on lockdown, when it comes to any freedom of the Internet.

So let me just ask you, Madam Secretary, what is your assessment of where we are in that international, that vote that will be taking place with respect to that very important position?

INTERNATIONAL STANDARD SETTING ORGANIZATIONS

Secretary RAIMONDO. Yes. I appreciate you bringing this up. It is something not a lot of people talk about, but it is incredibly important. China is showing up, more and more aggressively in technical standard setting bodies internationally, and NIST is planning to really reassert ourselves.

We are backing a candidate, Doreen Bogdan-Martin, for the ITU. We are putting our all into helping her, and supporting her. In

fact, I was in Estonia just trying to shore up support for Doreen. It is a campaign, it is an election. You cannot predict the outcome, but I assure you this, it is a priority of ours, the stakes are high, and I really hope we win.

Senator VAN HOLLEN. Well, I appreciate that. And I think what we have been, you know, witnessing with Putin's War in Ukraine, and his shutdown of all, sort of, freedom of the press and the Internet in Russia, should be a reminder to most in the world, that we need an open Internet. But obviously there are countries that have an interest in the authoritarian model as well.

Secretary RAIMONDO. No doubt about that.

Senator VAN HOLLEN. So I appreciate your focus on this. My last questions relate to the export control restrictions and sanctions, to go after Russia's military and key industries. I have heard Senator Shaheen ask about that, and I have been following the progress we are making with respect to some of Russia's tank manufacturing, and the aircraft industry.

I know you announced some additional restrictions. My concern here, on the financial side, has been the need to plug more holes with secondary sanctions, which I don't think we are doing enough of. On this side I know you are vigilant about it, but I worry about, you know, Russia's efforts to use shell companies, especially when they are looking for highly important military technology.

Can you talk about what we are doing to make sure that they don't open that back door while we close the front door?

EXPORT CONTROL RESTRICTIONS AND SANCTIONS

Secretary RAIMONDO. Yes. It is an awesome question, and something we spend a lot of time on, and it is why we are requesting more money for enforcement and agents. Look, what we know now; first of all, Russia has an extensive network. They have been doing this for decades, trying to get around export controls. As far as we can see, there is no, like, systemic backfilling by China, by any particular countries, but we will monitor it.

Here is one thing that I take comfort in, because we have done this, multilaterally, with 36 other countries that means we have 37 countries on enforcement which is unprecedented. And that, from what we can tell, is like vastly enhancing our ability to enforce. So, it is a vigilance, it is a constant vigilance, but at this point in time I feel quite confident that we are on top of it; and again, because we are not doing it alone.

Senator VAN HOLLEN. Yes. Thank you. Thank you for your efforts on that.

Senator Capito.

Senator MOORE CAPITO. Thank you. And welcome, Madam Secretary. Thanks for being here.

There have been reports in Reuters, and elsewhere, that China has been pressuring our U.S. executives, companies, and business groups against the USICA Bill. To your knowledge, is there any truth to these reports, and the threats that our U.S. companies are receiving from our Chinese emissaries—from the Chinese emissaries?

CHINA OPPOSITION TO THE USICA BILL

Secretary RAIMONDO. Yes. Thank you. So, like you, I have seen the reports. There have been more than one report, and it doesn't surprise me at all. China doesn't want us to pass this bill. They know that this bill will enable us to out-compete them. And in the past handful of years, China has invested \$160 billion in increasing their own domestic semiconductor production, so the last thing they want is for us to invest \$52 billion, which will make us stronger.

So, yes, I have heard the report. They are deeply concerning to me, and it just means we have to act, we have to act now. As I said to Senator Reed, it is an issue of national security. And I think the reason China is so against it, is because they know how important it is for us.

Senator MOORE CAPITO. Right. Thank you. Would you say the crux of their objections would be that semiconductor portion of it, because that is going to have the most economic benefits—it does have the most economic benefit?

Secretary RAIMONDO. You know, it is a good question. I don't know. I would say certainly that is what they have explicitly been against, but the rest of it, increases in research and development, the tech hubs, all of it goes to enhancing America's competitiveness.

Senator MOORE CAPITO. Right.

Secretary RAIMONDO. And so I think they would probably oppose the whole thing.

Senator MOORE CAPITO. Well, as a supporter of that bill.

Secretary RAIMONDO. Thank you.

Senator MOORE CAPITO. And I am on that very small conference committee that is meeting tomorrow. So I appreciate that.

Today, NOAA has 40 petaflops of supercomputing capability for weather predicting and research. So I looked up “petaflop”, because I have no idea what that is. And for our viewing public, a “petaflop” is one thousand million-million flashing—let us see—floating point operations per second. Or another way to say it, a quadrillion, which is a thousand trillion, that is how fast it is.

So I am sure we will all remember that, but I didn't want to say “petaflops” without knowing what it was. As you know, NOAA's facility in Fairmont, West Virginia, is one of NOAA's five research and development supercomputers. We are very proud of that.

In addition, the IIJA provided NOAA with another \$80 million for research, supercomputing. We have placed a big emphasis on the supercomputing capabilities, for a lot of reasons, for NOAA. So I am proud of the work that we do in Fairmont. And I guess, could you speak to the vision that you have for supercomputing, and how West Virginia may play a role there?

SUPER COMPUTING IN WEST VIRGINIA

Secretary RAIMONDO. I think West Virginia will play a very important role. For fiscal year 2023 we are requesting \$20 million in the President's budget to recapitalize and maintain the high-performance computing capacity. And that will enable consistent capacity increases in R&D through computing sites, specifically like the one in West Virginia.

Senator MOORE CAPITO. In Fairmont, yes.

Secretary RAIMONDO. In Fairmont. So, I think artificial intelligence, high performance computing, these areas are areas of increasing economics, national security, and climate change. You know, we need this, we are depending on it, we are investing in it, and I can firmly say that Fairmont will stand to benefit from these investments.

Senator MOORE CAPITO. Great. Well, we are very pleased to have NOAA there and look forward to further investment. Let me ask you, go back to a quick clarification on a question that Senator Collins asked about the deadline, you know how interested I am in—

Secretary RAIMONDO. I know.

Senator MOORE CAPITO [continuing]. In the digital divide, you are probably surprised I didn't start with that. But you mentioned a May 17 deadline. Just so I can clarify for my Broadband Council at home. That is the deadline that you are going to then come forward with a request for proposals, or does the proposal have to be in—

BROADBAND—NOTICE OF FUNDING OPPORTUNITY

Secretary RAIMONDO. Yes. Exactly, so it is May 16.

Senator MOORE CAPITO. Mm-hmm.

Secretary RAIMONDO. Monday. It is what the NOFO, so it is a Notice of Funding Opportunity.

Senator MOORE CAPITO. Okay.

Secretary RAIMONDO. And it will go out the 16TH. The way it is going to work, you can tell us to your folks, we will ask every State to then apply for the money, all they have to do is submit to us an intention to apply.

Senator MOORE CAPITO. Okay.

Secretary RAIMONDO. Which they should do quickly. Then we will be sending them a \$5 million dollar planning grant, and then we will get to work right away on the back and forth of putting together the proposal.

Senator MOORE CAPITO. Okay. So the planning grant, okay great; great news. I did have a question on the supply chain that is needed to deploy all this broadband.

Secretary RAIMONDO. Yes.

Senator MOORE CAPITO. But I will save that for question for the record. And thank you.

Secretary RAIMONDO. Yes. May I say something?

Senator MOORE CAPITO. Yes.

Secretary RAIMONDO. You asked me last time I saw you, a week or two ago, what happens if RDOF says someone is covered, but if they are not covered for 5 years?

Senator MOORE CAPITO. Right, running with this all over the place, yes.

Secretary RAIMONDO. The answer is, you are counted as unserved until you are actually served.

Senator MOORE CAPITO. Really?

Secretary RAIMONDO. Yes. So I wanted to make sure to get back to you.

Senator MOORE CAPITO. Okay. That is a great clarification. Thank you.

Secretary RAIMONDO. Yes.

Senator MOORE CAPITO. And Senator Braun, I am turning it over to you. And I am going to go vote. Thank you.

Senator BRAUN. I guess, I will recognize myself here, so.

[Laughter.]

Senator MOORE CAPITO. It is a little strange.

Senator BRAUN. The first time that has occurred in a little over 3 years, but it is the nature of how this place works.

Secretary RAIMONDO. Here we go. Here we are.

Senator BRAUN. So back on March 15, I introduced a letter about the labor negotiations with the West Coast folks, in terms of having those done by July 1. I understand they may have started yesterday. So last time there has been a dispute there, it ended up lasting 10 months, and it probably had more latitude in terms of how long you could go.

I think that would be devastating for supply chain, everything else we have come through. I was hoping to get your opinion as to whether you think we will get these negotiations done, so that we don't, you know, pass that July 1 deadline.

LABOR NEGOTIATIONS WITH WEST COAST PORTS

Secretary RAIMONDO. I am sorry; which negotiation?

Senator BRAUN. Okay. So it would be the upcoming contract negotiations for the West Coast ports. So it is a labor negotiation.

Secretary RAIMONDO. Okay. Okay, sorry. I am not involved in that, so—

Senator BRAUN. No. I think I am raising the point in that, you know, supply chain is part of what you are concerned with.

Secretary RAIMONDO. Yes. No, yes.

Senator BRAUN. That has been a major bottleneck on supply chain. And I, and about 17, 18 other Senators put it in a letter to President Biden, and really have not heard back. Although I am told that they may have started yesterday. So why don't you find out how they are going.

Secretary RAIMONDO. Okay. Fair enough. Yes.

Senator BRAUN. And to make sure that we don't pass the July 1 threshold, because that would add, you know, right when we are starting to get a little fluidity.

Secretary RAIMONDO. Yes. Yes.

Senator BRAUN. You know back, I guess, from the frying pan into the fire. So I will discuss something—

Secretary RAIMONDO. Yes.

Senator BRAUN [continuing]. That we both share a concern with. My business was logistics, distribution. I know how supply chains have been really rattled, displaced, main trading partner for many. The Chinese have now done some things in their own country that look like they are going to be less dependable when it comes to how it is going to work on key things we get from their semiconductors.

We know what that has done to many, many different industries. Those are issues I am hoping that we are going to somewhat, reflexively bounce back into something that is going to be more workable. I know you are working on some of the particulars. We have talked about it before. So I won't belabor that.

I think what I am concerned about mostly, in our American economy, no one else seems to be, is the fact that the President put out a blueprint on a budget 10 years out, that shows us actually growing our structural deficits, taking our debt from \$30 trillion where it is currently, record high in our country's existence, to \$45 trillion.

Love to know how you view that, in terms of being a viable blueprint. And when do we have to start addressing the underlying causes, which are tough issues, Social Security, Medicare, that drive the structural deficits? Or whether it makes a difference? Whether we can have a blueprint for our country out there that says, hey, we are going to be \$45 trillion, that is taking us into territory way exceeding where we were post-World War II?

THE AMERICAN ECONOMY

Secretary RAIMONDO. So, I can assure you that the President is concerned about fiscal responsibility. In fact, the deficit shrunk significantly this past year, under his leadership. And he will be the first to tell you that he is for responsible, efficiently run government. But we also think it is important to make investments.

You know, like the investments that we made in the Bipartisan Infrastructure Bill, investments in broadband, investments in clean water, et cetera. So I think that like all things, it is a balance. But I can tell you the President is committed to running a responsible government, and fiscal responsibility.

Senator BRAUN. Well, I know he said that. To me, the proof is in the practice and the pudding, so to speak, and pre-COVID we were borrowing about 23 percent of every dollar we spend here, marginally. Now, that is up to 30 percent, and we created the largest deficits in our country's history. Some in a bipartisan way, in trying to navigate through the pandemic, and be careful about tout-ing that we are bringing the deficits down because, still, huge deficits that we created, so the law of gravity would bring you down.

What I am more concerned about is putting a formal blueprint out there that averages between now and then, you know, \$1.5 trillion deficits times 10, 15 trillion added to our debt. I don't think it is a business plan that is sustainable.

I think politicians, including Jay Powell at the Fed, through whatever this modern monetary theory is supposed to be, I think it runs us into the ditch in a hard way. And I would hope that there might be some modification to our country's business plan that does something other than that; or do you like, or are you comfortable with a blueprint that shows us being 45 trillion in debt?

Secretary RAIMONDO. I am comfortable with the President's plans but I agree with you that we have to continue to work to live within our means.

Senator BRAUN. I guess we will live with that today. Thank you.

Secretary RAIMONDO. Thank you.

Senator SHAHEEN. Thank you, Senator Braun. I think Senator Moran is still coming back, and I have a few more questions. We still have two more votes which could take a while. So since you are here, I get to ask questions.

And I want to go back to NOAA, because, as you know, last year NOAA required increased observer coverage for the Northeast Groundfish Fishery, which has been an ongoing challenge for us in New Hampshire, as for other groundfish fisheries, and throughout New England.

This year with NOAA increasing the coverage requirement to 100 percent from about 40 percent, every fishing trip is going to have to have an observer on board, and the program costs are going to significantly increase.

So I have been pleased, over the last 5 years, when we have worked to see that we cover the cost of at-sea monitors for our fishing boats. And I was disappointed this year that the budget request for NOAA actually proposed to cut the funding for this program from the enacted level. So can you talk about that decision? And has NOAA actually estimated the full cost of at-sea monitoring for the 2022 fishing year?

NOAA FUNDING FOR AT-SEA MONITORING

Secretary RAIMONDO. Yes. So, first of all, thank you for your support of the at-sea monitoring. It is important to all the New England States. And yes, they have. I know there has been a cut, but we have \$11 million left over from prior years. So it is our estimation that the \$7.6 million which we have requested, plus the 11 which we have, will be adequate.

Senator SHAHEEN. So will you commit to me that NOAA will cover the full cost of at-sea monitors this year?

Secretary RAIMONDO. That is the plan, yes.

Senator SHAHEEN. Great. Thank you. I appreciate that, and also look forward to seeing how we can help some vessels move to electronic monitoring.

Secretary RAIMONDO. Mm-hmm, yes.

Senator SHAHEEN. Of which I know there has been some reluctance to do, but I think the more the fishing industry sees what is happening in that area, and is able to understand how that would affect them, the more likely they are to be willing to switch over. So I think that is also a significant piece of this.

Secretary RAIMONDO. Yes. I agree. Senator Murkowski and I chatted a little bit about the un-crewed. I mean there is all sorts of technology that we need to adopt to make this easier.

Senator SHAHEEN. Great. Sticking with NOAA; the Infrastructure Investment and Jobs Act provides about \$3 billion over 5 years for programs for NOAA, and I was very pleased to work to try and ensure that the majority of this funding goes to improve coastal resilience, and restoring habitat, something that is very important to us as, you know, in coastal States.

And I know that communities are very eager to receive these funds, but it has been almost 6 months since the passage of the Bipartisan Infrastructure Act, and yet NOAA has only released two of at least ten notices of funding opportunities.

So can you talk about what the reasons are for the delay, and when communities can expect that they may see more of those funds?

INFRASTRUCTURE INVESTMENT AND JOBS ACT

Secretary RAIMONDO. Yes. So, as you say, it was nearly \$3 billion, \$2.96 billion. That is an unprecedented amount of money for NOAA to have received, which is not an excuse; it is just a reality that it is more than they have ever done. We plan and will have all the Notice of Funding Opportunities out by the end of June. So that is a commitment, end of June.

Senator SHAHEEN. Great.

Secretary RAIMONDO. And we are just going to work towards that.

Senator SHAHEEN. And there are ways that we can help alert our communities that these notices are coming, and they should be watching for them, and encourage them to be paying attention, and seeing how we can help communities.

Secretary RAIMONDO. You know, that is a good question. I will have my staff follow up with you specifically.

Senator SHAHEEN. That would be great.

Secretary RAIMONDO. So I can give you a more specific sense of when New Hampshire, for example, should start looking for it.

Senator SHAHEEN. That would be really helpful. As you know, one of the—one of the things that I have been very impressed with in the Seacoast of New Hampshire, is the extent to which communities are looking towards the impacts of climate change, and getting ready to address that. And so I know these funds are going to be very important as they think about what is coming down the pike.

One final question before I turn it over to Senator Moran. Is through the CARES Act, the American Rescue Plan, and the Infrastructure Investment and Jobs Act, Congress has made historic investments in the Commerce Department, as well as many other areas of government and in States, to help get through the pandemic. And we may soon pass some form of the U.S. Innovation and Competition Act, hopefully that will add more funding at the Department, that you are not expecting. And just as with NOAA, that that is great news, but it presents challenges for the Department.

ENSURING SUCCESS OF DEPARTMENT INVESTMENTS

Secretary RAIMONDO. Yes.

Senator SHAHEEN. And a lot of us are watching because we are very anxious to see these programs be successful. So can you talk about how you are ensuring that the Department is coordinating those investments, and what we can do to ensure that you have the support you need to do that?

Secretary RAIMONDO. Yes. Look, like you, I don't want to say anxious about it but I have a real sense of focus to make sure that we implement all this money correctly. It is over a \$100 billion, which is an extraordinary amount. I hope you take some confidence in the fact that NTIA, which is implementing almost \$50 billion, is going to get that out on time, if not ahead of time. By the way, by this Friday, every State will have a State point of contact for broadband.

Senator SHAHEEN. That is great.

Secretary RAIMONDO. And I have personally communicated with all the governors. So what is my point? My point is, we are gearing up, we are ready, we will implement, we are hiring. I hope you do pass USICA, and that will send \$52 billion for chips, and we already have done a lot of the work related to what is the org chart, what kind of talent do we need.

So it will be a partnership between you, and this Committee, and our team, but I want you to have confidence that we know it is a heavy lift, and we are prepared.

Senator SHAHEEN. Great. We look forward to that.

I will turn it over to Senator Moran.

Senator MORAN. Thank you. I don't know I was of much help to you today, but it was unintentional on my part.

Senator SHAHEEN. Ships through the night.

Senator MORAN. Yes. Madam Secretary, Russia's invasion of Ukraine has created new and complex trade challenges. While the administration has requested emergency Ukraine-related funding for the Bureau of Industry and Security, it has not done so for the International Trade Administration. What is the Department and ITA doing to promote exports, rural exports in particular, so U.S. farmers can help meet the emerging global food crisis that has arisen as a result of the evil Russian invasion?

ITA AND PROMOTING EXPORTS

Secretary RAIMONDO. Thank you for that question. We are requesting an increase in the President's budget for ITA, and that it is specifically for export promotion. And there is a team within ITA looking at strategies specifically to respond, as you just said. And with respect to food, there is a great deal of work going on within the Administration, in the interagency, around how we can meet the needs that have been created by the invasion.

Senator MORAN. Is there money within the budget to help U.S. industries address emerging supply chain challenges and disruptions that have arisen as a result of the war in Ukraine?

FUNDING FOR THE SUPPLY CHAIN CHALLENGES

Secretary RAIMONDO. Yes. We are requesting \$16 million additional for supply chain work, whether that is specifically for Ukraine, no, is the answer. But it will be used for that. I will say this, that \$16 million is what we are asking for to address the existing crisis. The crisis you are referring to the existing crisis.

What this country really needs is what is in USICA, or whatever we call it; the Competition Bill, which is a permanent supply chain management operation within the Department of Commerce. If we have learned one thing through COVID, we are woefully under-resourced as it relates to the Federal government's ability to map, monitor, manage, and support our supply chain.

We have lost 25 percent of our small manufacturers in the last 25 years, probably many in your State, many in my State, but one of the only countries, industrialized countries, that doesn't have this. And so that is why I have so much passion for the supply chain portion of the USICA Bill.

We ought to be continuously monitoring, continuously providing loans, and such, to small manufacturers, so we are not constantly reacting to these supply chain disasters.

Senator MORAN. Does that provision exist in either the House or Senate version in one or—

Secretary RAIMONDO. Yes it does, in both.

Senator MORAN. In both?

Secretary RAIMONDO. In both, yes.

Senator MORAN. Okay. So your testimony is you support that provision that is in those bills?

Secretary RAIMONDO. Strongly.

Senator MORAN. Okay. And then the Department of Commerce, do you have the capability or—and are you doing so, if you do, to engage with U.S. companies that—to help them find a role to play in reconstructing Ukraine?

ROLE OF U.S. COMPANIES IN RECONSTRUCTING THE UKRAINE

Secretary RAIMONDO. Ah. Thank you for that question. So I had the opportunity, a couple of weeks ago, to meet with the Prime Minister, he came to visit with me. We talked mostly about export controls, because I was trying to gather information about whether we are being effective. But the conversation quickly turned to the rebuilding of Ukraine.

And so the answer to your question is, yes, we are already in process, engaging the private sector, looking at our own tools within ITA, to figure out how we can lean into the rebuilding effort. I will tell you this, we are very early stages, the initial outreach to U.S. industry has been excellent. And I would say more broadly the U.S. private sector has stepped up in ways that have supported the administration's work.

Senator MORAN. I just, in between voting, and the State and Foreign Ops Appropriations Subcommittee that is meeting at the same time today, where the topic is food aid globally.

Secretary RAIMONDO. Yes.

Senator MORAN. But certainly Ukraine is maybe a need, and is a contributing factor, a significant factor in the hunger that is occurring, or will occur around the world, one of the answers that Ambassador Beazley provided was that there is no way to truck grain out of Ukraine to world markets. Does that make sense to you?

He was responding to someone else's question, and I didn't have a chance to follow up. But the goal—I mean most of that grain is shipped out by ship.

FOOD AID IN THE UKRAINE

Secretary RAIMONDO. Yes.

Senator MORAN. I didn't say that very well as, you know, realizing that—

Secretary RAIMONDO. No, no. I know what you mean. It does make sense to me; having said that, I would have to look into it further to verify it.

Senator MORAN. We ought to be—I mean, transportation in Ukraine may be—that every industry is important in the rebuilding, and the restructuring, but to help meet global hunger, agri-

culture and transportation seem to me to be of huge importance, as you, and the private companies that you just mentioned, discuss what the next steps are, those might be the places that are so valuable, not only to Ukraine, but also to the world.

Secretary RAIMONDO. That is an excellent point.

Senator MORAN. When we were on the border of Ukraine, the Ukrainians were particularly asking for diesel fuel, so that they could actually produce the crops, which captured my attention. It would be so sad to have crops in a field, or seed to plant, or crops to harvest, and the absence of diesel fuel prevents them from doing so.

Assure me, Madam Secretary. It appears to me that there is—as I would expect—there is significant emphasis in the administration's budget, in your Commerce Department budget, on climate change. Having just been in Kansas a weekend ago, and saw the results of a tornado in Andover, assure me that the priorities on climate change do not diminish the necessity, or the capabilities, of providing the current weather, and the warnings necessary, and the knowledge necessary for people to protect themselves, and for farmers to make decisions about planting, and harvesting? And are we—or we make sure we are not diminishing what we need to do otherwise?

CLIMATE CHANGE AND CURRENT WEATHER PRIORITIES

Secretary RAIMONDO. No. In fact, we are expanding what we need to do. In fact I was just meeting with Dr. Spinrad the other day, around what more investments we are making to improve our weather forecasting, improve our wildfire forecasting. And how we can continue to develop data products that we can provide to businesses, to States, to cities, to do an even better job with drought forecasting, which of course leads to fires, et cetera.

So no, I would say if anything we are doubling down on this, and some of the investments in satellites, and such, are exactly for that.

Senator MORAN. Thank you for your answers.

Senator SHAHEEN. Thank you, Senator Moran. I actually only have one more question. And that has to do with Anomalous Health Incidents. The Omnibus budget included a provision that allowed the Department to have up to \$5 million to assist certain employees and family members who may have been affected by anomalous health incidents. Can you tell us if that funding has been used? If you have—if you think it is going to be adequate to address the concerns that you are hearing from employees, or if you need additional help?

ANOMALOUS HEALTH INCIDENTS

Secretary RAIMONDO. Yes, I need—permit me to get back to you on that. I have not heard that it is not enough. And I have been in close contact on all of these issues, but I will get back to you, and give you a better answer.

Senator SHAHEEN. That would be great. Thank you.

Senator Moran, do you have any further questions?

Senator MORAN. No. Thank you. I do, but I don't have time for them.

ADDITIONAL COMMITTEE QUESTIONS

Senator SHAHEEN. In that case, if there are no further questions. Senators have until Wednesday, May 18, to submit additional questions for the official hearing record, and we would request the Department responses within 30 days of any questions for the record.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

QUESTIONS SUBMITTED BY CHAIRMAN LEAHY

QUESTIONS SUBMITTED TO SECRETARY OF COMMERCE GINA RAIMONDO, DEPARTMENT OF COMMERCE

Question 1. Through the enactment of the Infrastructure Investments and Jobs Act (IIJA) in November 2021, the National Telecommunications and Information Administration (NTIA) received \$48.2 billion in funding to augment the efforts of its Office of Internet Connectivity and Growth to provide communities with the resources and tools necessary to deploy broadband infrastructure. For largely rural states like Vermont, where tens of thousands of households do not have broadband access, these funds will make a substantial difference in their work to ensure that everyone has affordable and dependable Internet service.

Since negotiations of the IIJA began almost a year ago, the cost of raw materials and labor needed for deploying broadband have increased considerably. Further, shipping delays for certain materials and components have the potential to hinder ability of telecommunications providers to quickly make use of Federal funds and address the most immediate broadband needs of their communities.

- A. What effect does the NTIA expect the compounding challenges of higher costs and supply chain constraints to have on the effectiveness of the broadband funding set aside by the IIJA?

Answer. The DOC has taken a leading role in addressing supply chain challenges facing our nation. The Department and NTIA are well positioned to engage with the telecommunications sector and manufacturers to ensure that there is sufficient supply of fiber, equipment, and other necessary materials to implement the broadband programs. We leverage the resources and expertise within the Department and work closely with industrial stakeholders to address this critical issue.

For the BEAD program, each Eligible Entity may choose its own means of competitively selecting subgrantees for last-mile broadband deployment projects, though that process must incorporate certain principles to satisfy the Infrastructure Act's mandates and the BEAD Program's goals.

- B. What steps does the NTIA plan to take to address any negative impacts, and how can Congress assist in these efforts?

Answer. See response above.

Question 2. On March 28, 2022, the Department of Commerce announced the launch of an investigation into alleged circumvention of duties for solar panels imported from four Southeast Asian countries. The investigation is in response to a petition from Auxin Solar, which alleged that Chinese manufacturers shifted some production to these countries in an effort to evade 2012 duties. Solar panel imports from these four countries account for 80 percent of all solar panel imports to the United States. The Commerce Department is considering up to 250 percent tariffs on these solar panel imports to be applied retroactively.

The Solar Energy Industries Association (SEIA) is forecasting that solar installations for 2022 and 2023 will be cut by 46 percent due to these circumstances, resulting in a drop of 24 gigawatts of planned solar capacity. If this capacity is replaced by fossil fuels, the United States will emit an additional 364 million metric tons of carbon by 2035. The SEIA is also projecting that 100,000 American solar workers will lose their jobs. The consequences to this investigation contradict President Biden's efforts to reduce greenhouse gas pollution and support good-paying American jobs in the renewable energy industry.

In SEIA's Broad Industry Survey, 88 percent of Vermont solar companies responded that the investigation will have severe or devastating impacts to solar business, and that \$10 million worth of projects have already been impacted in Vermont alone. I have heard from a number of Vermont solar companies that this investiga-

tion threatens their long-term viability, which would not only result in a loss of jobs in Vermont, but would also stymie the state's ability to address carbon emissions moving forward.

In May 2021, the Department of Energy's Solar Energy Technologies Office released a Multi-Year Program Plan to accelerate the advancement and deployment of solar technology. One of the Plan's goals was to expand the solar workforce to 300,000 employees by 2025.

- A. What will the Department of Commerce do to negate the economic and environmental impacts of the market disruption in the domestic solar industry caused by this investigation?

Answer. Anti-dumping (AD) and countervailing duty (CVD) proceedings are a quasi-judicial process, subject to review in U.S. courts. AD and CVD proceedings are in response to dumping or state-sponsored subsidies that harm U.S. industry. The Commerce Department bases its findings on the factual information on the record of its proceedings, following methodologies provided under the law, regulations, and long-standing practices.

When dumping and subsidization cause harm or injury to our domestic industry, AD/CVD duties are imposed on imports to offset those negative effects and ensure a healthy system of international trade in which everyone can compete on a level playing field. With respect to the specific case you referenced, Commerce was originally scheduled to announce its preliminary and final determinations in these circumvention inquiries by August 30, 2022, and January 27, 2023, respectively. Commerce's determinations will be made in accordance with U.S. law and be based on the facts on the record as well as in consideration of comments filed by interested parties. Based on the complexity of this case, we extended the preliminary determination until November 28, 2022.

On Monday, June 6, the White House announced that it was invoking the Defense Production Act to accelerate domestic production of clean energy technologies, including solar panel parts, grid components, building insulation, heat pumps and more. The proclamation also calls for up to a 24-month hold on potential duties on solar cells from Cambodia, Thailand, Malaysia, and Vietnam which may come as a result of the ongoing circumvention inquiries. On July 1, Commerce published a notice in the Federal Register with a proposed rule to implement certain aspects of the Proclamation. In the meantime, Commerce's ongoing circumvention inquiry will continue. To the extent circumvention is found to be occurring, the White House proclamation authorizes a temporary exception to the requirements to collect certain estimated duties and duties on imports of certain solar cells and modules from Cambodia, Thailand, Malaysia, and Vietnam.

- B. Does the Department of Commerce support the Department of Energy's plan to expand the solar workforce and open new solar markets?

Answer. Commerce is supportive of DOE's efforts to expand the solar workforce and open new solar markets. Growing a strong domestic workforce throughout all facets of the solar value chain will be key to delivering economic prosperity to American families while combatting climate change and creating the conditions for the U.S. solar industry to thrive in a competitive global market.

Question 3. Congress is working toward a final agreement to make substantial investments in microelectronics, which the Department of Commerce will use for long-needed investments in the United States' ability to domestically produce critical semiconductors. The United States has need for both for more advanced chips for processing at smaller nodes, as well as more capable chips to manage the tremendous power requirements that 5G wireless connectivity and beyond requires. In fact, the importance in networking systems has become as significant a requirement for future technology as the processing capability.

- A. How does the Department of Commerce assess the need for what used to be considered "legacy" node chips in light of the increased demand for connectivity?

Answer. I applaud the members of Congress who worked hard to get the CHIPS and Science Act to President Biden's desk. My staff have hit the ground running to operationalize this historic investment in America's global economic leadership. To assess industry's needs from legacy to leading-edge node chips, the Department issued RFI on the chips shortage. Respondents from all organization types noted that if investments in manufacturing leading-edge nodes and legacy nodes were equivalent, the return on investment for legacy nodes would be higher due to the current growing demand and broader capacity in certain applications. Accordingly, we recognize that investments are needed across the industry.

B. How in demand are trusted supply chains for chips that enable 5G wireless networking?

Answer. Building out trustworthy supply chains for chips that enable cutting-edge applications, including 5G, artificial intelligence and machine learning, and autonomous vehicles, is critical to the success of the CHIPS program. This is why it's crucial that we bring chip production home and construct a semiconductor ecosystem here in the U.S. My hope is to help bolster our chips supply chains for 5G networking through the CHIPS program.

C. What value do advanced techniques and materials such as Gallium Nitride and epitaxial growth provide?

Answer. New materials and processes enable dramatic new properties and performance of integrated circuits, which are especially important in areas such as extending battery performance in mobile devices and electric vehicles, greater reliability in the electric grid, or harsh environment performance in aerospace.

Leading-edge nodes and compound semiconductor nodes (such as silicon carbide and gallium nitride) are key areas of focus needed to maintain future competitiveness, and where aligning facilities, equipment, and other capacity are critical. In response to the Department's RFI on the chips shortage, large businesses highlighted the need for wide bandgap semiconductors, including silicon carbide and gallium nitride. Scalable end-to-end compound semiconductor manufacturing facilities with advanced, flexible tooling were thought to enable the broadest array of semiconductors for applications in 5G/6G wireless, broadband rural/urban access, data centers, and emerging augmented reality and virtual reality (AR/VR) products.

Epitaxy, a method of depositing or growing a monocrystalline film, enables a high-purity starting point for building a semiconductor device. Epitaxy facilities generally specialize on a limited family of compound semiconductors. Thus, several facilities are needed to provide the range of materials and structures needed for a diversity of essential high performance devices and related technologies.

D. What domestically-available advanced techniques and materials for chips that 5G wireless networking exist?

Answer. As discussed above, building out trustworthy supply chains for chips that enable cutting-edge applications, including 5G, is critical to the success of the CHIPS program. The CHIPS program will enable more domestic production of these critical chips and restore U.S. leadership in semiconductor production and innovation.

QUESTIONS SUBMITTED BY SENATOR DIANNE FEINSTEIN

Question 1. As you know, the Commerce Department's inquiry regarding the import of solar cells and modules is causing uncertainty in the market. A California company is alleging market practices by some companies that would result in tariffs up to a 250 percent increase.

While I understand your department's process calls for an investigation, California is anticipating delays of over 400 megawatts of hybrid solar plus storage projects that were to come online this year. This includes 163 megawatts of storage in September, which falls amid peak wildfire season when the need for renewable energy is even more important.

A. Secretary Raimondo, how is the Commerce Department going to provide certainty about the cost of solar panels while the investigation is ongoing so California can meet its clean energy goals? And, what is being done to ensure an expeditious investigation?

Answer. Anti-dumping (AD) and countervailing duty (CVD) proceedings are a quasi-judicial process, subject to review in U.S. courts. AD and CVD proceedings are in response to dumping or state-sponsored subsidies that harm U.S. industry. The Commerce Department bases its findings on the factual information on the record of its proceedings, following methodologies provided under the law, regulations, and long-standing practices.

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Question 2. Since President Biden took office, the U.S. economy has created 8.3 million jobs, which is a record pace. At 3.6 percent, the unemployment rate is near historical lows. However, the economy is still several million jobs short of pre-pandemic levels in large part because nearly 1.5 percent of the labor force that existed in early 2020 still has not returned to the job market since the pandemic began.

A. Secretary Raimondo, what are the main reasons that this substantial number of individuals has not returned to the workforce and should we be concerned about it? What is the Administration doing, and what should Congress consider doing, to make it easier for people to return to the workforce?

Answer. There are about 600,000 fewer workers in the labor force before the pandemic, and nearly the entire gap is from women. This frustrates me but does not surprise me at all because accessible childcare, elder care and family leave policies are essential for supporting labor force participation, particularly among women. And the United States falls short on all three.

Women shoulder the burden of caregiving in the United States, and many had to leave the workforce to take care of their children and elderly family members full time. Unavailable and unaffordable care is an economic crisis driving current workforce and economic challenges across the country. Across the world, affordable childcare is generally connected to higher maternal rates of employment.

We see the impacts of paid family leave in states that have passed more robust leave laws. For mothers taking leave to care for children, paid leave nearly closing the workforce participation gap between women with young children and other women. For caregivers accessing leave to care for other family members, paid leave increases workforce participation.

Caregivers often sacrifice their careers and financial futures by reducing work hours, taking on debt and tapping into their own savings—ultimately jeopardizing their own financial security.

Question 3. In recent years, there has been a significant increase in the amount of space debris orbiting Earth due to collisions and anti-satellite tests, now totaling more than 30,000 individual objects. With tens of thousands more satellites proposed to be launched soon, mitigating the impacts of this debris is increasingly important. Multiple Federal agencies currently track space debris, including the Defense Department, NASA, and Commerce. The Commerce Department has requested a significant increase in its budget for the Office of Space Commerce this year, from \$16 million to \$87.7 million.

A. Secretary Raimondo, can you explain how the Office of Space Commerce plans to spend this funding increase? How does the Department of Commerce plan to collaborate with other agencies to set regulations for debris, satellite construction, and orbital paths?

Answer. The fiscal year 2023 Budget request is based on a thorough review of the National Academy of Public Administration study and what it would cost to develop a sound and robust Open Architecture Data Repository (OADR) and fully staff the Office of Space Commerce (OSC). The increase is going towards achieving Initial Operating Capability (IOC) no later than fiscal year 2024, and Full Operational Capability (FOC) expected by 2025. Without this funding, NOAA cannot meet these critical milestones.

Receipt of the full request of \$87.7 million will allow OSC to maintain the OADR development schedule, including:

—Continue to hire key staff.

- Support partnerships among OSC and DoD and other Federal agencies, academia, and commercial industry to share space situational awareness (SSA) information through the OADR. The additional funding reflects the importance the Administration places on the SSA mission and will support NOAA's efforts to accelerate the development of the OADR from a pilot demonstration to FOC in 2025.
- Award a contract to a cloud infrastructure and data integration service provider which would provide cloud services to host the OADR and deliver SSA products and services, procure commercial data, services, and infrastructure to populate the OADR; and to build out the proving ground (or test area) for use by government, industry, and academia for innovation activities.
- Acquire a variety of commercial capabilities (products, services, and technologies) that will make key contributions to the OADR, consistent with the guidance of Space Policy Directive-3.

In addition to the implementation of the OADR, the funding will allow OSC to maintain its prior commitment to domestic and international advocacy of the U.S. commercial industry, and to continue licensing of the operations of private space-based remote sensing systems commercial licensees.

With respect to our plans to collaborate with other agencies, OSC is collaborating with DoD, NASA, and other bureaus within the Department of Commerce as it develops the OADR to provide SSA information and basic spaceflight safety services to civil and private spacecraft operators. As the current provider of this information and services, the DoD is the most critical partner, and OSC is working to conclude an agreement with the U.S. Space Command and the US Space Force to govern our collaboration. OSC is currently working with the White House Space Council and other interested agencies to investigate what steps might be necessary to reduce orbital debris, and ensure the future safety of spaceflight operations, pursuant to Space Policy Directive 3.

Question 4. I continue to be deeply concerned about industrial waste dumped off the California coast between the 1930s and 1960s that still remains in our ocean. This toxic waste includes DDT—a chemical so harmful it was banned in 1972.

We now know that oil and gas-related chemicals are also likely to have been dumped there as well. Scientific studies point to decades of detrimental impacts to the marine life, including cancer in dolphins and sea lions.

The survey conducted by NOAA and partners in March 2021 mapped approximately 36,000 acres at 3000 feet depth of the sea floor. This area, known as dumpsite #2, revealed around 26,000 dumped barrels of industrial waste, and over 100,000 other debris objects. We also know based on historical record, there are a total of 14 known offshore dumpsites off the California coast. This is alarming.

Both EPA and NOAA have informed my office a number of times that they have more questions than answers on this problem and a follow-up survey mission is the best next step to understand the state of the barrels, as well as the chemicals in them and around them in the water and on the sea floor. Yet, more than a year later, neither agency has provided a funding estimate despite repeated requests by my staff, nor a plan of action for next steps.

- A. Secretary Raimondo, I ask that NOAA and its partners act with urgency and prioritize this issue. NOAA's expertise is critical to address this major problem. Can you describe the next steps NOAA will take to help us better understand the impacts of this historic ocean dumping?

Answer. NOAA is part of a State/Federal interagency group, led by EPA, further assessing dumpsite #2. NOAA's technical representatives have supported two products to better delineate dumpsite #2 and its potential risks. First, the interagency technical team developed a side scan sonar survey plan to supplement the March 2021 survey areas. Additionally, the technical team developed a sediment sampling plan based on a conceptual model of exposure and risk at the site. The next steps are to budget the two plans and proceed with implementation. EPA is the lead for budgeting and implementation with support from NOAA. At the same time, NOAA is administering fiscal year 2022 Congressionally Directed Spending for Scripps. NOAA provided timely technical review of the Scripps proposal and award is expected in the fourth quarter of fiscal year 2022. The information and data generated by the Scripps work will further inform and potentially address some of the interagency needs.

- B. This historic toxic dumping is a major problem off the California coast, but it is coming to light that California's coastline is not the only place where historic ocean dumping took place. Although the United States outlawed

this practice decades ago, major problems and risks from these lingering chemicals still exist.

- C. Does NOAA have the statutory authority it needs to monitor or conduct testing on the impacts of the DDT and other toxic waste that was dumped decades ago but remains active in our environment?

Answer. NOAA has sufficient statutory authority to provide support to lead agencies, primarily under the National Oil and Hazardous Substance Pollution Contingency Plan and environmental response statutes, such as Oil Pollution Act (OPA) and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This authority is the principal mechanism for NOAA's current engagement in the Southern California site supporting EPA and collaborating agencies in the development of the plan that allows for improved understanding of potential risk to human health and the environment posed by Dump Site #2. Also, as a Trustee under CERCLA, OPA, and National Marine Sanctuaries Act (NMSA), NOAA has the authority in appropriate circumstances to conduct natural resource damage assessment and seek damages for restoration.

Question 5. The National Oceanic and Atmospheric Administration (NOAA) released two studies highlighting the detrimental impacts of ocean acidification on the West Coast. NOAA scientists confirmed in a December 2019 study on acidification variability in the California ecosystem that California's waters are rising in acidity at twice the global average, threatening marine life and adding to a growing number of costly fishery disasters.

A second NOAA study, published in January 2020 on Dungeness crab larvae in the Pacific Northwest, documented for the first time (outside of lab conditions) that ocean acidification can damage the shells and sensory organ of Dungeness crab, threatening the long term growth of the one of the most valuable fisheries in U.S. coastal waters.

- A. What efforts is the Department taking to combat ocean acidification? What programs and plans does the Department have in place as our oceans continue to acidify?

Answer. NOAA is funding and conducting research and monitoring to understand how ocean chemistry is changing in U.S. waters and how organisms, like Dungeness crabs, are affected by those changes. This funding and research are primarily led by NOAA's Ocean Acidification Program and Pacific Marine Environmental Laboratory, and coordinated across NOAA and other Federal agencies.

NOAA is planning research to better understand the role the ocean might play in carbon sequestration (also known as marine carbon dioxide removal or mCDR). In fiscal year 2022, NOAA funded (with the Department of Energy and ClimateWorks) an mCDR research project. The project focused on ocean alkalization as a method of ocean acidification mitigation and long-term carbon sequestration. Additionally, the NOAA Carbon Dioxide Removal Task Force is finalizing a strategic plan which will include an evaluation of mCDR approaches and subsequent impacts. Subject to the availability of funds, NOAA is pursuing an expanded Federal funding opportunity on mCDR in fiscal year 23 through the National Oceanographic Partnership Program which would consist of funding from NOAA and other Federal agencies.

While NOAA's efforts can help communities mitigate and adapt to ocean acidification, ultimately, ocean acidification is caused by rising carbon dioxide levels in the atmosphere being absorbed by the ocean. The most direct solution to ocean acidification is for the U.S. and the world to reduce carbon dioxide emissions.

Question 6. Due to heightened impacts of climate change, extreme weather events and pollution, marine environments—as well as inland waterways and reservoirs—are experiencing prolonged and very harmful algal blooms. These blooms lead to human and animal illness and jeopardize commercial fisheries as well as drinking water resources.

- A. How is the Department spending congressionally-appropriated funding related to mitigating impacts or preventing harmful algal blooms?

Answer. In fiscal year 2021, NOAA spent almost \$28 million to understand, detect, monitor, and forecast HABs, helping communities with decisionmaking related to their prevention, control, and mitigation (PCM).

1. About \$20 million of fiscal year 2021 spending was on HAB mitigation—specifically detection, monitoring, and forecasting to help coastal resource managers, public health officials, drinking water managers, fishers, recreational users, the tourism industry, and research scientists plan for and around HABs. NOAA is developing a National HAB Observation System

(NHABON) and provides operational HAB forecasts for Lake Erie, Texas, and Florida. Short-term (twice weekly) forecasts identify which blooms are potentially harmful, where they are, how big they are, and where they are likely headed.

2. \$3.6 million supported the Prevention, Control, and Mitigation Program (PCMHAB) within NOAA's National Centers for Coastal Ocean Science's research funding to move promising PCM technologies through development, to demonstration and application. NOAA also funds socioeconomic research to assess impacts of HAB events on coastal economies and societies, and the costs and benefits of mitigation strategies to aid managers in devising cost-effective management strategies.
3. \$4.4 million was spent across NOAA on early-stage research to understand the causes and impacts of HABs and their toxins, which is fundamental to successful management and mitigation.

With these funds, NOAA actively works to identify cost-effective adaptive and mitigation strategies for communities to increase their resilience to future HAB events, identifying the environmental drivers of HAB events to inform responses to future climate change, including changes in HAB geographic range, seasonality, and toxicity. NOAA utilizes advanced technology for remote and autonomous monitoring of HABs in near real-time and develops forecasts to provide early warning of HABs for state, Federal, and tribal partners.

In fiscal year 2022, NOAA solicited proposals to establish a HAB Control Technology Incubator to speed up the development of control methodologies. By supporting small proposals, the incubator will quickly and economically test the potential of new approaches. The most successful proposals could then be submitted to PCMHAB competitions for a more thorough evaluation. The incubator will also develop a clearinghouse of regulations and permitting requirements related to the testing and ultimately application of control technologies. NOAA anticipates announcing the awardee in late fiscal year 2022.

Question 7. It is crucial we prioritize and accelerate sustainable fishing gear testing and authorization to protect our marine environments. Deep-Set Buoy Gear was approved by the Pacific Fishery Managements Council in September 2019, and provides a sustainable alternative to Drift Gillnets. I understand that the National Marine Fisheries Service is now going through the authorization process for Deep-Set Buoy Gear.

- A. What is the current timeline for the authorization of Deep-Set Buoy Gear and what are the steps that need to be taken to authorize new gear?

Answer. NOAA Fisheries is currently preparing a proposed rule to implement the Pacific Fishery Management Council's (Council's) proposed amendment to the Fishery Management Plan for U.S. West Coast Fisheries for Highly Migratory Species, which NMFS anticipates publishing soon. We have been coordinating with the Council on regulations to accompany their transmittal of the amendment, which led to the Council revising its final preferred alternative for a proposed amendment in March 2021.

In developing the proposed rule, NMFS must establish the infrastructure to permit, manage, and monitor the fishery. NMFS is currently working with agency partners to formalize these procedures and business rules to support the record of decisionmaking. Part of the effort has included developing and testing a system by which NOAA Fisheries can qualify individuals for limited entry permits according to the tiered criteria recommended by the Council, which incorporates a reliance on data prepared by the California Department of Fish and Wildlife (CDFW). Additionally, NMFS needs to complete a Section 7 consultation under the Endangered Species Act (ESA). Revisions to data collection and permitting procedures under the fishery management plan that are necessary to implement the proposed action are also subject to the Paperwork Reduction Act.

Upon publication of the proposed rule, there will be a public comment period. During that time and subject to completion of the Section 7 ESA consultation, NOAA Fisheries can respond to comments on its draft environmental impact statement (EIS), pursuant to the National Environmental Policy Act (NEPA) and prepare a final EIS for publication. Following a cooling off period on the final EIS, and consideration of public comments collected on the proposed rule and fishery management plan amendment, NOAA Fisheries will prepare a record of decision under NEPA and a final rule for publication.

Upon publication of the final rule, and before limited entry permits can be issued, NMFS will take several steps to ensure a fair ranking of applications according to

the Council's qualifying criteria and adherence to Council-recommended limitations on permit ownership and transfers.

B. How can this process be streamlined and/or accelerated?

Answer. NOAA has been working to streamline implementation of deep-set buoy gear authorization wherever possible. As discussed above, NOAA has been coordinating with the Council, as well as the California Department of Fish and Wildlife, to assess ranking procedures for qualification for limited entry permits, and to document such considerations for compliance with the Magnuson-Stevens Fishery Conservation and Management Act. Continuing these effective partnerships is paramount to completing the remaining clearance and rulemaking processes to implement authorization of deep-set buoy gear.

QUESTIONS SUBMITTED BY SENATOR BRIAN SCHATZ

Question 1. Less than 10 percent of the initial appropriation has been handed out of a program that was authorized in December 2020. What are you doing to ensure that broadband funding provided through the Infrastructure Investment and Jobs Act (Public Law 117-58) is distributed in a timely manner? Are you concerned about the pace at which NTIA has processed awards for the Tribal Broadband Connectivity Fund?

Answer. NTIA has met or exceeded every deadline established for it by Congress, under the Infrastructure Investment and Jobs Act (IIJA). Congress entrusted NTIA with a great responsibility in IIJA: to help ensure all Americans have access to high-speed Internet and the modern, digital society. We are working expeditiously to make sure the funds get to the places in need quickly and without delay.

NTIA must also be good stewards of taxpayer funds and do everything in our power to ensure that grant recipients have strong plans in place that reach people in need and are equipped to follow through on their plans. We must also make sure that, before obligating any funds, robust oversight measures are in place to prevent any waste, fraud, or abuse.

As we have been working tirelessly to expand our staffing and technical capacity in response to the new authority and trust granted to us by Congress, we will move as quickly as possible to obligate funds.

Question 2. I appreciate NIST's efforts on mitigating AI bias and the development of the Risk Management Framework. What activities has NIST planned to provide actionable guidance to reduce the risks from AI bias? Will you ensure that NIST consults not only with developers and deployers of AI systems when creating this guidance but also with communities that are impacted by biased AI systems? What level of funding and staff is being provided to NIST for these activities?

Answer. NIST contributes to the research, standards, and data necessary to advance characteristics of trustworthy artificial intelligence, including mitigation of harmful bias, in order to realize the full promise of this technology. NIST has significantly expanded its efforts to identify, understand, measure, and mitigate harmful bias, with a focus on a socio-technical approach. This reflects a recognition and increased awareness that AI operates in a larger social context, in addition to traditional efforts focused on computational elements. Working very closely with a diverse set of stakeholders, NIST is building guidance that is flexible and can be applied across AI use contexts and sectors. Specifically, NIST recently published "Toward a Standard for Identifying and Managing Bias in Artificial Intelligence" (NIST SP 1270), which identifies the concepts and challenges associated with bias in AI and provides preliminary guidance for addressing them. Managing bias is also included as one of the key trustworthiness characteristics outlined in the NIST AI Risk Management Framework which NIST is developing hand-in-hand with the larger community. This Framework will provide guidance to organizations on how to manage risks of AI systems. As a companion to the AI Risk Management Framework (AI RMF), NIST is developing a Playbook to assist the broad set of interested stakeholders with actions they can take to implement the framework, including concrete steps to mitigate the risks from harmful bias.

Will you ensure that NIST consults not only with developers and deployers of AI systems when creating this guidance but also with communities that are impacted by biased AI systems?

Answer. Yes. NIST takes a transparent and stakeholder driven approach in its development of priorities, research, and guidance to advance AI trustworthiness. This includes engaging with a diverse range of stakeholders through multiple public workshops, opportunities for public comment and feedback on publications, and nu-

merous meetings, listening sessions, and roundtables with stakeholders from as many sectors as possible. NIST continues to reach out beyond the U.S. to international and multinational organizations. Because of the impact AI can have on individuals, communities, and society, NIST has increased its outreach to and engagements with civil society organizations and other advocacy groups—including those focused on fairness, civil liberties, and the rights of individuals—to provide the perspective of those who may be impacted by AI bias. NIST seeks to identify new stakeholders, including those who are directly impacted, to help better understand this challenging area.

NIST believes it is important for AI developers and deployers to understand the broader impact AI can have on individuals and society, in addition to the direct risks to the organization. This perspective is woven prominently into the guidance included in the draft NIST AI RMF.

Moreover, NIST is managing the National Artificial Intelligence Advisory Committee, which reports to the President and the National AI Initiative Office. That committee's scope includes addressing issues of bias, and its membership includes some of the nation's top experts concerned about issues of bias.

What level of funding and staff is being provided to NIST for these activities?

Answer. NIST is investing an estimated \$30 million in fiscal year 2022 on artificial intelligence activities across the agency, including \$11 million dedicated to advancing trustworthy and responsible AI. The fiscal year 2023 President's budget includes an additional \$15 million requested for AI activities to develop a new NIST AI Collaborative Institute and increase technical expertise in its laboratory research efforts. Trustworthiness and the issue of harmful bias and its potential impact on individuals and society are a key component of that research and are part of multiple programs and projects.

Question 3. Stakeholders, especially those from minority communities, have raised a number of concerns on the use of facial recognition technology. The Facial Recognition Vendor Test is an important program to provide reliable and accurate information on the performance of commercial facial recognition products. What funding is being designated to ensure that the Vendor Test continues to expand its offerings and incorporate more real world scenarios in its testing?

Answer. The NIST Face Recognition Vendor Test (FRVT) program is funded at approximately \$2.5 million in fiscal year 2022 through a combination funds from NIST and other Federal agencies. Since its initial development in 2000, the FRVT program has driven research priorities and standards for the face recognition community. The program also provides information to organizations so they can determine whether and how face recognition technology can be deployed.

NIST tests face recognition algorithms for real world relevant use cases related to 1-1 and 1-N, image quality, morph detection, and demographic variations defined by sex, age, and race. The tests include real world data relevant to face recognition. NIST also conducts relevant research as part of its privacy engineering and artificial intelligence trustworthy efforts to provide direction on mitigation of harmful bias and enhancing privacy, which could also apply to the deployment of face recognition technologies in real world scenarios.

More funding would allow for expanded focus that included needs of the broader facial recognition community such as additional real world data sources and relevant use cases.

Question 4. The Commerce Department's Office of Native American Business Development has been authorized since 2000, but the office is not yet fully functional and it lacks leadership. What is the status of the office, including the appointment of a Director? What is the current funding for the office and what are the plans for the fiscal year 2023 funding?

Answer. A search for a Director (GS-15) of the Office of Native American Business Development is in the final stages, and the Department hopes to be able to announce the director soon. The Office of the Secretary is preparing for the arrival of the director, and the important work of the Office of Native American Business Development continues in the meantime.

The Office was formally transferred from the Minority Business Development Agency (MBDA) to Departmental Management (DM) in fiscal year 2022. Funding of \$200,000 is requested in the fiscal year 2023 Departmental Management (DM) Congressional Submission.

Question 5. Despite the many challenges of the 2020 census, the population counts were sound for use in apportionment, and the Redistricting Data File also passed the Census Bureau's quality standards. However, that file is filled with impossible and improbable results due to underlying data quality issues or the new disclosure

avoidance system applied to the 2020 Census. Demographers, budget officials, urban planners, public health officials, and program administrators rely on timely, reliable population tract-level data. Will the Census Bureau flag statistics with questionable reliability? And if so, how and for whom?

Answer. The Census Bureau releases information about 2020 Census data quality (<https://www.census.gov/programs-surveys/decennial-census/decade/2020/planning-management/process/data-quality.html#metrics>) in a number of ways, including comparing the results to population estimates, (<https://www.census.gov/programs-surveys/popest.html>) the Post-Enumeration Survey, (<https://www.census.gov/programs-surveys/decennial-census/about/coverage-measurement/pes.html>) and Demographic Analysis. (<https://www.census.gov/programs-surveys/decennial-census/about/coverage-measurement/da.html>).

As for the quality associated with the Census Bureau's use of differential privacy for the 2020 Census, the disclosure-avoidance error introduced is minimal compared to other known sources of error (<https://www.census.gov/library/fact-sheets/2022/variability.html>) in census counts because of operational and coverage issues. This means the local population counts and demographic information—often used to draw congressional districts and for other purposes—are better protected, as well as fit for their intended use. The method used for protecting data in the 2020 Census is a more sophisticated and precise mechanism for injecting noise into published statistics than the swapping mechanism used in prior censuses.

Question 6. Stakeholders, and in particular data users, have consistently raised concerns about the need to improve the American Community Survey (ACS). For example, the Census Project, an independent organization, published a report in March 2022, on the ACS. The report not only reinforces the ACS as the primary source of information regarding our nation's changing demographic and socio-economic characteristics for data users in the public, private, and non-profit sectors, but also raises awareness about the survey's challenges. Among other things, the report asks Congress and the administration to provide additional resources that could be used to enhance the survey's sample size (which has not occurred since 2011), strengthen its content by revising and adding questions, and improve the survey's response rate, which has fallen over 20 percent since 2017. What actions is the Department taking to support the Census Bureau so it can address challenges facing the ACS.

Answer. The Department of Commerce supports the Census Bureau in its efforts to continue to modernize and improve the ACS data collection operations. The Census Bureau met with The Census Project staff to understand the suggestions in the report. The Census Bureau is evaluating the suggestions and formulating priorities for future research and implementation. The Census Bureau continually evolves its survey operations to balance the needs of individual respondents with the need for impactful data in our communities. The Census Bureau will keep improving by using a multipronged approach, focusing on:

- Enhancing respondent mail materials.
- Employing alternative data sources, such as administrative records.
- Modifying the modes and design of the ACS.
- Understanding the survey experience from the perspective of our respondents.
- Improving group quarters data collection and products.

The Census Bureau explores new research and experimentation with ACS protocols while still meeting the multi-tiered demands of survey operations. The Census Bureau is continually building on exhaustive research to improve the ACS. The Census Bureau's Agility in Action series (<https://www.census.gov/programs-surveys/acs/operations-and-administration/agility-in-action.html>) provides more information on the research agenda.

Question 7. Nearly 700 billion dollars are distributed annually in states based on population estimates. Over the next 5 years, what changes to the population estimates program and American Community Survey are being planned, researched, tested, or implemented? How are these changes or potential changes being evaluated by data users? How will outside stakeholders and researchers be included in these improvement plans or changes? What funding is designated to ensure that the Census Bureau has the staffing needed to undertake these plans and conduct meaningful engagement with outside parties?

Answer. The Population Estimates Program (PEP) regularly engages in research designed to improve the annual estimates. Research tasks are determined each year based on priorities identified during the previous vintage of estimates and available resources. Over the next 5 years, research on potential improvements to the estimates base will be prioritized. To assist with this work, the Census Bureau has

formed the Base Evaluation and Research Team (BERT), internal experts researching the feasibility of taking coverage measures from the Demographic Analysis and Post-Enumeration Survey into account in the development of the official population estimates. BERT consists of subject-matter experts in the areas of population estimates, age and sex statistics, coverage measurement, race and ethnicity, demography, and disclosure avoidance. The team is taking a phased approach to the research, beginning with an analysis of 2020 Census data and coverage measures. Ultimately, the team will make recommendations to the PEP regarding the incorporation of additional 2020 Census data or coverage adjustments into the population estimates base. Any proposed changes will be thoroughly tested and subject to rigorous review to determine whether the change produces plausible estimates across all demographic subgroups and geographies. Proposed changes will also be vetted with advisory groups and other stakeholders. Should changes be successfully incorporated into the estimates base, the population estimates developed from that base will also be used by the American Community Survey (ACS) and the Puerto Rico Community Survey as survey controls so that the population totals from the survey conform to the updated population estimates.

The ACS program is actively investigating and enacting options for survey enhancements, as well as making research-based changes to how the program operates and engages with respondents. To ensure better data, the Census Bureau tests new and modified questions for the ACS approximately every 5 years to ensure the survey stays relevant as society changes and Federal agency data needs evolve. Starting in September 2022, the Census Bureau will begin the field test to gauge how new and modified questions perform. A variety of quality metrics will be used to determine which wording is best understood and produces the most accurate data. Ultimately, the results of the 2022 Content Test will determine the recommended revisions to questions and new questions to be included. Recommended changes will be submitted to OMB for approval and inclusion in the ACS in 2025. These results allow the survey to remain dynamic and responsive, capture our nation's trends, and meet Federal data needs. Additional future research includes plans to improve messaging, expand monitoring of near real-time operational and survey data, improve statistical methodology, and adjust the in-person contact strategy. The Census Bureau publishes research plans for the ACS on a regular basis in our Agility in Action report series: <https://www.census.gov/programs-surveys/acs/operations-and-administration/agility-in-action.html>.

How are these changes or potential changes being evaluated by data users?

Answer. At this time, research conducted by the Base Evaluation and Research Team (BERT) is in a preliminary phase. Therefore, no specific changes have been proposed. BERT will prioritize transparency and stakeholder engagement throughout the research process and plans to offer webinars to data users regarding proposed changes.

Proposed changes to ACS content follow an established process that includes scientific review and consultation with the Office of Management and Budget (OMB) and the Interagency Council for Statistical Policy (ICSP) Subcommittee for the ACS. Final question wording must be vetted by the ICSP Subcommittee and OMB before field testing as well as prior to implementing in the survey. Through Federal Register Notices the public (including data users) are given an opportunity to provide feedback on proposed changes. The ACS program also periodically conducts data user surveys in order to collect feedback on ACS data products and services.

How will outside stakeholders and researchers be included in these improvement plans or changes?

Answer. The Base Evaluation and Research Team will prioritize stakeholder engagement via briefings and webinars to a variety of groups including the Federal-State Cooperative for Population Estimates, Census Bureau advisory committees, and others. These presentations will include the status of the research and any proposed changes to the development of the estimates base.

For the ACS Content Test, the Census Bureau, in coordination with the Office of Management and Budget Interagency Committee for the ACS, solicited proposals for question changes or additions from over twenty Federal agencies. The ACS program communicates continuously with stakeholders through Federal Register Notices, presentations, webinars, e-mail communications, and the online ACS data user community (<https://acsdatacommunity.prb.org>). The Census Bureau has also worked closely with the National Academy of Sciences and other external experts to inform ACS research.

What funding is designated to ensure that the Census Bureau has the staffing needed to undertake these plans and conduct meaningful engagement with outside parties?

Answer. The ACS program dedicates funds within its annual allocation to support ACS research and communications. The ACS program's engagement with stakeholders and external experts is supported with the current funding levels for the program.

Question 8. The Census Bureau does not produce estimates of accuracy—i.e., undercounts and overcounts—for areas below the state level. Nevertheless, we know from independent analyses, as well as the national estimates of accuracy, that any number of cities, counties, towns, and Tribal areas were undercounted in the 2020 Census. If the census numbers are wrong, then annual population estimates—which are used to allocate Federal assistance to states, localities, individuals, and families—can be skewed for the next 10 years.

Unfortunately, in the last decade, the opportunity for local and Tribal governments to challenge their annual numbers was very limited. Congress is considering support for additional funding for the Census Bureau's Population Estimates Program, to expand the role of state and local governments in improving the accuracy of their annual population estimates through an expanded Population Estimates Challenge Program—which allows local and tribal governments to challenge their annual population estimates within 90 days of release of the estimates each spring. What steps will you take to help strengthen the critical population estimates program?

Answer. The Census Bureau has formed the Base Evaluation and Research Team (BERT), a group of internal experts tasked with researching the feasibility of taking coverage measures from the Demographic Analysis and Post-Enumeration Survey into account in the development of the official population estimates. Furthermore, both the BERT and PEP will create opportunities for stakeholder engagement via briefings and webinars to a variety of groups including the Federal-State Cooperative for Population Estimates, Census advisory committees, and others to ensure external feedback which could potentially strengthen the program may be received and evaluated.

Question 9. Users of the Survey of Income and Program Participation (SIPP) have communicated how important the survey has been, particularly as the economy emerges from the COVID-19 pandemic, for analyzing the impact of government assistance programs on families and communities. Despite its value as a unique resource, it has been largely flat funded by the Census Bureau in recent years, rendering the agency unable to enhance the survey's sample size, address decreasing response rates, and improve the survey's content, among other necessary upgrades. What does the Census Bureau view as the most pressing challenges facing SIPP? How much does the Department estimate it would cost for the Bureau to pursue necessary changes to the SIPP?

Answer. The Survey of Income and Program Participation (SIPP) is the primary source for data that can help policy makers understand the sub-annual dynamics of program eligibility and receipt in the context of the family and individual economic and demographic situation, for example, to measure the needs and change in participation in nutrition programs, such as the Supplemental Nutrition Assistance Program (SNAP) and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) and how those needs change for families across time.

SIPP faces many challenges including managing data quality in a period of increasing nonresponse, hiring and retaining qualified interviewers, and evolving to meet these challenges and leverage enterprise technological changes. Developing a multi-mode framework for SIPP is essential to meet respondents with the collection modes they are most comfortable with and reserving the most expensive methods for the hardest to reach cases. While the development of a multi-mode framework is important, it is only in the discussion phase, and this framework has not been decided.

The fiscal year 2023 President's Budget proposes \$47 million for SIPP, which would enable the collection and production of SIPP data for a sample of 35,000 households.

Question 10. What planning and testing is underway to prevent quality issues in decennial program products (like the 2020 files, American Community Survey, and population estimates) from reoccurring? What is the plan for research and testing for the 2030 census?

Answer. Included in our current research agenda for the 2030 Census are numerous projects to increase quality such as improved communications, messaging, and advertising, expanded use of administrative records, further tailoring of contact

strategies, and near real-time analysis of data. Achieving a complete and accurate census continues to be a primary goal with objectives of ensuring all living quarters are associated with an address and accurate response data are obtained for all identified living quarters.

For the American Community Survey (ACS), research is underway to incorporate the use of administrative records in the ACS. The use of administrative records can improve quality of the published data. The Census Bureau is also conducting a content test this fall (2022) to ensure the questions on the ACS are up —to date and reflect the needs of the nation. Future research includes plans to improve messaging, expand monitoring of near real-time operational and survey data, improve statistical methodology, and adjust the in-person contact strategy. The Census Bureau publishes research plans for the ACS on a regular basis in our Agility in Action report series: (<https://www.census.gov/programs-surveys/acs/operations-and-administration/agility-in-action.html>).

To potentially address quality issues from the 2020 Census that may be carried forward throughout the decade via the official population estimates (which build off decennial data in the estimates base), the Census Bureau has formed the Base Evaluation and Research Team (BERT). The team is researching the feasibility of taking coverage measures from the Demographic Analysis and Post-Enumeration Survey into account in the development of the official population estimates. BERT consists of subject-matter experts in the areas of population estimates, age and sex statistics, coverage measurement, race and ethnicity, demography, and disclosure avoidance. The team is taking a phased approach to the research, beginning with an analysis of 2020 Census data and coverage measures. Presently, the Population Estimates Program (PEP) only includes limited data from the 2020 Census in the estimates base from which the annual population estimates are developed. Ultimately, the BERT will make recommendations to the PEP regarding the incorporation of additional 2020 Census data or coverage adjustments into the population estimates base. Any proposed changes will be thoroughly tested and subject to rigorous review to determine whether the change produces plausible estimates across all demographic subgroups and geographies.

The 2030 Census is currently in the design selection phase. This phase includes research, testing, and operational planning and design work to inform the selection of the initial 2030 Census operational design, targeted for late 2024. This work will factor in past census experiences, evolving technology, and stakeholder feedback. The Census Bureau's research agenda includes numerous projects to explore enhancements to data collection (including group quarters), data processing, operational infrastructure, and expanded use of administrative records.

For the 2030 Census, for the first time, the public can formally give input on planning and designing the next census. Your comments and recommendations are key for planning and designing the next census.

As announced in a Federal Register Notice posted August 17, 2022, everyone is encouraged to provide input now through November 15, 2022. We will use this input to inform the Census Bureau's decisions on the 2030 Census operational design.

Following the design selection phase, the program will move to the development and integration phase to conduct rigorous testing and to prepare for peak production.

Question 11. The Census Bureau's Ask U.S. Panel project aims to create a probability-based online research panel using a cooperative agreement with a private entity. Please explain the relationship between the Ask U.S. Panel, the High Frequency Data Program, and the Pulse Surveys. How does the Bureau distinguish between these various projects? In what ways are they interconnected?

Answer. The Pulse Surveys—the Household Pulse Survey (HPS) and the Small Business Pulse Survey (SBPS)—were conceived in March 2020, to produce near real-time data on the ways in which American households and small businesses were experiencing the social and economic disruptions brought on by the Covid-19 pandemic.

The High Frequency Data Program evolved out of a recognition that the Pulse Surveys had value beyond the pandemic. The High Frequency Data Program was established in fiscal year 2021, and now serves as the programmatic framework for the Census Bureau to mature the Household Pulse Survey and the Business Trends and Outlook Survey (formerly, the Small Business Pulse Survey), and support them as ongoing Census Bureau data products.

The Ask U.S. Panel was initiated in 2019 as a research project within the Census Bureau's Research and Methodology Directorate via a cooperative agreement with RTI, International. The objective of the project was to identify a better way to re-

cruit study participants for Census Bureau studies and improve representativeness of research outcomes.

How does the Bureau distinguish between these various projects? In what ways are they interconnected?

Answer. Please see Answer 11–A above with respect to the distinctions among these projects. With regard to their interconnected nature, data from the Small Business Pulse Survey (SBPS) and the Household Pulse Survey (HPS) were quickly embraced by a diverse range of data users, and it became clear that pulse data had value beyond the pandemic. With support from Congress in fiscal year 2021, the Census Bureau established a High Frequency Data Program with the goal of maturing its ability to produce ongoing timely data products. The pulse surveys are strategically managed at the Census Bureau within this High Frequency Data Program framework. Over time, the research on the Ask U.S. Panel suggested that the concept of a panel had potential beyond the research activities for which Ask U.S. was originally designed, and a panel developed internally by the Census Bureau—building on methodologies used on Ask U.S. and expanding to leverage existing Census Bureau data sources—could serve to improve the current design of the HPS. Building on the early research associated with the Ask U.S. Panel, the Census Bureau recognizes the potential for developing a new panel, rigorously developed and maintained using high-quality Title 13 data resources to ensure representativeness of the U.S. population, may have value beyond research. As additional program areas and agencies became interested in the idea of using a panel for rapid measurement, the Census Bureau recognized that such a panel could provide a foundation for the production of official statistics.

Question 12. A recent Federal Register notice from the Department of Commerce indicates the Ask U.S. Panel is an interagency effort with representatives from Census, the Economic Research Service, the Bureau of Labor Statistics, the National Center for Health Statistics, the National Center for Science and Engineering Statistics, the National Center for Education Statistics, the Department of Defense, Department of Transportation, Department of Labor, and the Social Security Administration. Please explain how the interagency effort is structured. Are the agencies providing financial support for the Ask U.S. Panel? How much research will each agency receive?

Answer. The Economic Research Service, the Bureau of Labor Statistics, the National Center for Health Statistics, the National Center for Science and Engineering Statistics, the National Center for Education Statistics, the Department of Defense, Department of Transportation, Department of Labor, the Social Security Administration, and the Office of Management and Budget have all contributed to the methodological conversation about the concept and value of a panel developed and maintained by the Census Bureau. Further, agencies that contributed financially to the Ask U.S. Panel Pilot project include the Economic Research Service, the Food and Nutrition Service, the National Center for Health Statistics, the National Center for Education Statistics, Department of Transportation, Department of Labor, and the Social Security Administration.

As set forth in the Interagency Agreements (IAAs) between the Census Bureau and each of these agencies, each contributing agency provides input on key sampling domains of interest and topical surveys/research questions for implementation in the Pilot Study. These agreements entitle the funding agencies to contribute up to 5 questions to the baseline survey and the initial topical survey. Lastly, the Department of Defense has a separate IAA to recruit additional subsamples of active-duty military and military spouses for a specialized pilot baseline and topical survey.

QUESTIONS SUBMITTED BY SENATOR LISA MURKOWSKI

Question 1. Broadband The Senator greatly appreciates the Secretary's time and attention to the unique needs of Alaska with respect to broadband deployment. The NTIA's goal of "Internet for all" is extremely laudable and was a big driver for the Senator to support of the IJA. As you can understand, the Senator is extremely interested in the specifics of the BEAD program roll out. If you could please review and provide responses to these questions, we would greatly appreciate it.

The BEAD allocation to states relies on the broadband serviceable location fabric identifying all structures where a broadband connection can be installed in each state, and which structures are unserved. Alaska does not have the same mapping data which the fabric relies on as the Lower 48 states. Review of the preview version of the fabric has revealed missing data for significant regions of Alaska.

- A. How are NTIA and the FCC ensuring that the fabric will be accurate for Alaska?

Answer. The IIJA directs the Assistant Secretary, in coordination with the Commission, to allocate BEAD funds amongst the states once the broadband DATA maps are made public. I agree that accurate mapping—including the mapping fabric—is vital, and that the FCC’s challenge processes—both for the fabric and for provider data submitted in conjunction with the new Broadband Data Collection—are critical to improving their accuracy. With respect to your specific questions about the fabric and CostQuest, I must defer to our colleagues at the FCC.

- B. What additional data has CostQuest identified to fill in the missing data for Alaska?

Answer. See response above.

- C. If additional data for additional surveying, such as aerial mapping, is needed to create an accurate fabric for Alaska, how will NTIA and the FCC ensure the fabric is accurate before allocations are made?

Answer. See response above.

Question 2. The BEAD program sets aside a significant amount of funding for “high cost areas” to help bridge the digital divide. As you know, there is no place more “high cost” than Alaska. The statute includes factors to be taken into consideration in determining what areas qualify, including remoteness, lack of population density, and unique topography—all of which especially describe Alaska. The statute also gives the Assistant Secretary discretion to rely on “any other factor” in determining which areas are “high cost” in a state and therefore eligible to receive additional resources. Alaska has historically come up short exactly because we are so high cost. This set aside is an opportunity to direct resources to those areas of the country with the highest costs to build and provide service.

- A. How are the Department and NTIA thinking about this high cost set aside as it relates to Alaska?

Answer. NTIA staff are actively developing the definition of “high-cost area,” but I cannot at this time predict when NTIA will release its guidance on that issue. We are working with each Eligible Entity, including the State of Alaska, to identify and help to resolve the unique issues that each Eligible Entity faces, and we maintain a close working relationship with key stakeholders and experts in Alaska. The Assistant Secretary will soon be visiting your state to get an on-the-ground view of the challenges facing bringing high-speed Internet to all Alaskans.

- B. What assurances can you give that the Department and NTIA are committed to ensuring that Alaska gets the sizable resources needed to connect every Alaskan with affordable broadband service?

Answer. See response above.

Question 3. In the BEAD NOFO on Page 15, Section C (Definitions), Subsection U (Reliable Broadband Service), it states, “The term ‘Reliable Broadband Service’ means broadband service that the Broadband DATA Maps show is accessible to a location via: (i) fiber-optic technology; (ii) Cable Modem/Hybrid fiber-coaxial technology; (iii) digital subscriber line (DSL) technology; or (iv) terrestrial fixed wireless technology utilizing entirely licensed spectrum or using a hybrid of licensed and unlicensed spectrum.”

- A. Are these the only technologies considered to provide “reliable broadband service”? For example, is satellite not considered Reliable Broadband Service? In some instances in Alaska, it may be the only viable option.

Answer. For the purposes of the BEAD Program, locations served exclusively by satellite do not meet the criteria for Reliable Broadband Service and so will be considered “unserved.” The Infrastructure Act defines “reliable broadband service” as “broadband service that meets performance criteria for service availability, adaptability to changing end-user requirements, length of serviceable life, or other criteria, other than upload and download speeds, as determined by the Assistant Secretary in coordination with the FCC.” IIJA §60102(a)(L). For the purposes of this definition, the Assistant Secretary adopts the criteria that Reliable Broadband Service must be (1) a fixed broadband service that (2) is available with a high degree of certainty, (3) both at present and for the foreseeable future, and finds, after coordination with the FCC, that the definition of Reliable Broadband Service set forth in the BEAD NOFO best meets those criteria.

With that said, the BEAD Program is designed to give each state significant flexibility to develop a fair, open, and competitive processes for selecting subgrantees. If no Reliable Broadband Service technology meeting the BEAD Program’s technical

requirements would be deployable for a subsidy of less than a state's Extremely High Cost Per Location Threshold at a given location, the state is authorized to select a proposal involving a less costly technology for that location, even if that technology does not meet the definition of Reliable Broadband Service but otherwise satisfies the Program's technical requirements. We expect there will be no small number of locations or sets of locations that exceed the "Extremely High Cost Per Location Threshold," especially in Alaska.

Question 1. Climate Science and Research/Fisheries Disasters

In Alaska, Secretary Raimondo approved a backlog of 14 fisheries disasters from 2018 to 2021. Iconic rivers like the Yukon and Kuskokwim are seeing depleted Chinook and chum runs that freezers and drying racks empty. Every speaker at the Alaska delegation's salmon roundtable agreed upon the need for better and more accessible science as we see impacts to fisheries from the warm water blobs in the Gulf of Alaska, the shrinking of the Bering Sea cold pool, and stock migrations into colder waters.

- A. The Department of Commerce plays a critical role in preparing our nation for the impacts of climate change through NOAA's science and research projects. We cannot adapt and Congress cannot make informed decisions without reliable information. How much funding does NOAA plan to allocate to expand climate observation, forecasting, and research? How would NOAA utilize those funds to better prepare a state like Alaska that is ground-zero for climate change in the Arctic?

Answer. NOAA's fiscal year 2023 President's Budget request includes an increase of \$261.5M above fiscal year 2022 Enacted to support an earth system approach to enhance NOAA's authoritative climate products and services. NOAA's work directly impacts communities across the Nation and around the globe, from supporting climate-resilient communities and climate-ready fisheries to improving forecasts and response to climate-related natural disasters.

The request includes an additional \$23.3M in NMFS and \$10.0M in OAR, above fiscal year 2022 Enacted, to support the NOAA Climate-Ecosystem-Fisheries Initiative (CEFI). This initiative directly supports NOAA's goals to achieve a climate ready nation, and NMFS' efforts to deliver climate products and services to help sustain the nation's valuable living marine resources, and the many businesses and communities that depend on them. The CEFI will build a national ocean/ecosystem prediction and decision support system to support climate-informed fisheries management, protected species conservation, and adaptation of resource-dependent sectors and communities.

Through CEFI, NMFS will provide direct support for climate resilience and adaptation in Alaska, the Arctic and other regions in three ways—providing climate-informed assessments and management advice to decision makers (\$10.0M), maintaining and enhancing survey operations that are impacted due to climate change (\$3.3M), and bolstering support to state and tribes for their efforts to improve climate resilience through the Species Recovery Grants Program (\$10.0M). OAR's request would support down-scaling global climate models to regional scales to project climate impacts on key species and ecosystems. This is a first step for the CEFI, which, with additional funding, could provide improved understanding of climate changes in Alaskan waters. These fiscal year 2023 budget requests are essential to building the CEFI system needed to support climate-informed decision making.

The fiscal year 2023 President's Budget also includes several OAR initiatives to improve climate observations and research that will benefit Alaska and the Arctic. This includes an additional \$16.1M for Sustained Atmospheric Observations, which would create an independent, transparent evaluation of greenhouse gas (GHG) emissions and provide a robust understanding of the allowable cumulative GHG emissions to limit global warming. Additionally, the \$9 million requested for Providing Climate Projections out to 2050 to inform Risk Management would develop standardized and accessible climate projections with society-relevant data delivery services to improve the equity of climate risk information.

Lastly, the fiscal year 2023 President's Budget request includes \$6 million for OAR's Arctic Research activities. Overall, OAR investments in Alaskan and Arctic sustained observations and monitoring of ocean, climate, and marine ecosystems will continue to establish baseline conditions of the region through long-term moorings in the Bering and Chukchi Sea, the state-wide Climate Reference Network, and Barrow Atmospheric Baseline Observatory. These observations support improved modeling and forecasting of ocean, climate, and ecosystems that provide essential services to communities, partners, and decision-makers. Continued investments in new observing technologies and capabilities to overcome the extreme Arctic environment will hone our understanding of sea-ice, ocean climate, and marine ecosystem

changes, and are needed to realize the full potential of new blue economic opportunities in Alaska and the Arctic.

Advancing these efforts will directly support production, delivery and use of the climate related information needed to support resilience and adaptation to changing climate and marine ecosystems in Alaska. Specifically, to address climate change in Alaska and the Arctic, NOAA Fisheries would improve marine ecosystem monitoring (including humans) and better support predictive capacity to inform management and marine resource users (commercial and coastal communities). Monitoring would include consistent support for shipboard oceanographic, fisheries, and marine mammal observations on the U.S. Arctic shelf in the Bering, Chukchi, and Beaufort Seas. These observations would support the Alaska Climate Integrated Modeling project and the Climate Ecosystem Fisheries Initiative to forecast climate change impacts on fish, shellfish, marine mammals, fisheries, and fishery dependent communities in the Bering Sea.

QUESTIONS SUBMITTED BY SENATOR JOHN KENNEDY

Question 1.

Preface:

- In 2014, the National Marine Fisheries Service (NMFS) selected 500 (approx. 1/3 of the fleet) Gulf of Mexico Shrimp Permit owners using a stratified random sampling method to participate in the Cellular Electronic Logbook (cELB) Program.
- The fiscal year 22 omnibus appropriation bill directed NMFS, in consultation with the Gulf of Mexico Fishery Management Council and shrimp industry stakeholders, to continue the development and implementation of the cELB.
- The cELB collects spatial patterns of fishing efforts for scientific research under NMFS, it requires cost sharing between NMFS and the shrimp fleet.
- In December 2020 the 3G network used for cELBs was phased out. To supplement the data collection, the shrimping industry provided funding to develop a pilot program using P-Sea WindPlot, an alternative technology.

Given that the shrimp industry and the Council have already invested almost \$1 million to develop a new scientific data collection system, based on the widely-used P-Sea WindPlot navigation system, in the wake of 3G going off line, can you commit NMFS to using the new technology rather than more expensive alternatives that many smaller shrimp boats cannot afford?

Answer. The Gulf of Mexico Fishery Management Council is currently exploring two options for the new Gulf shrimp data collection system, and funded a pilot study to test the ability of the P-Sea WindPlot system to be used in concert with one of those options to meet fishery science and management objectives. That pilot study, along with another being conducted by NMFS Southeast Fisheries Science Center, is expected to be complete in early 2023, after which time the Council will identify its preferred path forward. Shrimpers in the Gulf of Mexico may have different needs and expenses that are dependent on other Gulf permits held by a vessel, and those associated permit reporting requirements, as well as the electronic equipment currently available on a vessel. To meet the regulatory requirement to report shrimp effort, the varied needs of Gulf shrimpers, and allow for flexibility, NMFS will be approving specifications for the Council's preferred new Gulf shrimp data collection system, which could then be met by multiple vendors and products. NMFS will support use of the P-Sea Windplot navigation system as one of several products available to shrimp fishermen if it is able to meet those specifications.

Question 2.

Preface:

- On April 13, 2021, disaster struck Gulf Coast families when a 129-foot commercial lift boat, the SEACOR Power, capsized in the Gulf of Mexico. Six crewmembers were recovered alive, six were found dead, and seven remain unaccounted for.
- The capsizing of the SEACOR Power is the worst disaster to strike the Gulf Coast since the Deepwater Horizon blowout in 2010.
- For days, numerous volunteers, including the Cajun Navy, scoured the skies and seas in an effort to locate missing crewmembers.
- Volunteers intended to use trawling nets to assist in recovery searches but encountered strong opposition from NOAA related to Federal regulations concerning sea turtles. Volunteers using their own shrimp boats wanted to tempo-

rarily tie their Turtle Excluder Devices (TED) for targeted recovery operations, but were unable to due to Federal red tape.

- Volunteers were given the costly and time-wasting options of either removing the TEDs entirely or replacing the nets with expensive alternatives.
- NOAA claims the National Marine Fisheries Service does not have the authority to waive TED regulations when lives are at stake. The NMFS has prosecutorial discretion over charging those that violate TED regulations, and, the Secretary of Commerce can override their decision.

I understand this issue predates your time as Secretary, can you ensure a similar situation will be prevented in the future? If so, why wasn't this discretion utilized to allow volunteers to search for bodies in the ocean and give closure to these devastated families?

Answer. Shortly following the Seacor lift boat accident, NOAA Fisheries reviewed our regulatory authority to issue TED exemptions and determined our authority is limited to responding to certain environmental conditions or enabling experimentation to improve TED efficacy. The regulatory authority to grant these exceptions is at 50 CFR 223.206(d)(3) and 50 CFR 223.207(e)(2). 50 CFR 223.206(d)(3) authorizes NOAA Fisheries to allow compliance with tow- time restrictions in lieu of TED requirements if the agency's Assistant Administrator determines the presence of algae, seaweed, debris, or other special environmental conditions in a particular area makes trawling with TED-equipped nets impracticable. 50 CFR 223.207(e)(2) authorizes NOAA Fisheries to issue permits exempting from TED requirements public or private experimentation aimed at improving the shrimp retention efficiency of approved TEDs, developing new TEDs, or conducting fishery research.

In both of those situations, the exemption process did not apply and, even if it could be used, would have taken longer (one to several weeks) than NOAA Fisheries' proposed solution. NOAA Fisheries instead proposed that the trawls could be modified to no longer be considered shrimp trawls under the regulatory definitions, by removing the TED and bag end used for shrimping and replacing it with a bag end constructed of 4" or greater mesh. The 4" or greater mesh webbing is readily available at net shops, and in many cases may already be owned by the trawl fishers. Webbing of that size mesh is used for a variety of purposes, including chafing gear on TEDs and for bag ends when some shrimp trawlers seasonally convert their gear for fish trawling. Removal of the TED and bag end, construction of a simple bag end made of 4" or greater mesh, and attachment to the trawl can be completed in 1–2 hours or less.

Therefore:

- In the unfortunate event that a similar situation occurs in the future, the solution proposed by NOAA Fisheries would be the quickest and most efficient means of allowing the trawl fishers to tow their trawls as part of recovery operations.
- When investigating allegations of violations, NOAA Fisheries gathers evidence of mitigating and aggravating factors that contributed to the violation. While it is correct that NOAA's Office of General Counsel (OGC) has prosecutorial discretion over charging those that violate TED regulations, such discretion typically comes into play after a violation has been detected and mitigating factors, if any, can be evaluated by OGC.

Question 4.

Preface:

Secretary Raimondo, NOAA has predicted a higher-than normal hurricane season with a forecast for 19 named storms, nine reaching hurricane status and four to become major hurricanes. Many of these communities are in my state along the coast continue to struggle to recover from past storms, most of which are economically disadvantaged and racially diverse.

- A. How do you justify a budget that claims to promote diversity and equity and calls for billions of new dollars in spending, yet doesn't expand our capacity to better predict hurricane track and intensity? Several of NOAA's key hurricane buoys in the Gulf of Mexico are inoperable and after Congress provided \$35 million in supplemental funds for NOAA to improve in part, hurricane intensity forecasting, including through deployment of unmanned ocean observing platforms. Why are you failing to use the supplemental funds Congress provided, with explicit direction, protect the lives of diverse communities in Louisiana?

Answer. NOAA appreciates Congress' support from the fiscal year 2022 Disaster Relief Supplemental Act (DRSA) and is eager to realize improvements to its hurri-

cane track and intensity prediction capabilities. Funding from DRSA includes \$35 million for NOAA to improve hurricane intensity and track forecasting and precipitation and flood prediction, forecasting, and mitigation capabilities. Upon Congressional approval of NOAA's DRSA Spend Plan in February 2022, NOAA has moved aggressively to execute these funds, which supports our work to protect lives and property.

This funding will benefit diverse coastal communities, including in Louisiana, by allowing NOAA to accelerate implementation of the Hurricane Forecast Improvement Project (HFIP), make advancements to the Hurricane Analysis and Forecasting System (HAFS), improve risk communications for vulnerable populations, increase ocean observations including with uncrewed observing platforms, advance ocean/air data assimilation, develop a new hurricane testbed, and enhance precipitation prediction and storm surge forecasting. It also includes funding for the repair and replacement of damaged NOAA and partner assets in Louisiana and funding for additional response and improvement efforts that will support the greater Gulf of Mexico region. DRSA did not cover NOAA hurricane buoy repairs in Louisiana, however, NOAA has scheduled servicing for the 2 buoy outages in the Gulf of Mexico and is working with the U.S. Coast Guard to execute repairs on those weather buoys by the end of August.

NOAA is dedicating approximately \$1 million in DSRA funding for the repair and replacement of damaged NOAA and partner assets in Louisiana. The DSRA also provides \$9 million for additional response and improvement efforts including mapping, charting and geodesy services for Louisiana and Texas; ocean observation activities for improving hurricane intensity forecasts and data assimilation improvements.

NOAA is working with Saildrone to deploy two remotely-controlled saildrones in the Gulf of Mexico supported by DRSA funds during the 2022 hurricane season. Overall, NOAA will be deploying seven saildrones for hurricane research in the Atlantic Ocean/Caribbean Ocean/Gulf of Mexico for the 2022 hurricane season as compared to the five that were deployed in the Atlantic Ocean/Caribbean Ocean only in 2021. These will be deployed on a research basis to understand how the collection of ocean and atmospheric measurements can improve our representation of air/sea processes in forecast models.

In addition, there are currently four NOAA ocean gliders operating in the Gulf of Mexico. These gliders collect subsurface ocean observations to improve hurricane intensity forecasts. Further, NOAA supports an array of profiling floats and drifting buoys in the Gulf of Mexico that provide data year-round, including during critical periods like hurricane seasons. Deployment of additional observing platforms in the Gulf of Mexico will be greater in 2023 through the integrated field campaign funded by DRSA.

QUESTIONS SUBMITTED BY SENATOR BILL HAGERTY

Question 1. The Census is one of the most important functions of your Department and a basic institution of government required by the Constitution. During your hearing you seemed to agree that Congress and the American people deserve transparency regarding how the Census is conducted that allows for meaningful oversight of the methods and assumptions used, is that correct?

Answer. Yes, I do agree. As I said in the hearing, I set the tone at the top of the Commerce Department that the Census Bureau should be fact-based, data-based, science-based, and statistical-based. More transparency is always better.

Question 2. In finalizing the 2020 Census, the Census Bureau used a methodology called "group quarters imputation" to estimate the number of people living in certain group housing facilities like prisons, nursing homes, and college dorms. As such, part of the final Census count reflects people actually counted in the field, and part reflects Bureau guesswork about how many people live in certain locations. Shouldn't the Census Bureau publicly disclose how much of the 2020 Census count resulted from actual evidence-based counting in the field, and how much of the count resulted from guesswork and assumptions, in order to provide transparency and allow for oversight?

Answer. Count imputation is a statistically valid method of population counting that has been employed by the Census for decades and was upheld by the Supreme Court in *Utah v. Evans* in 2002. It is universally accepted in the demographic research community that imputation improves the accuracy of the population count. At the end of data collection for group quarters (GQs), the Census Bureau realized many GQs had not provided the necessary information indicating their occupancy

status or population count. To address this issue, the Census Bureau assembled the GQ count imputation (GQCI) team to remove reporting errors from GQs and, when possible, to apply a count imputation procedure when valid responses from occupied GQs were not available. Among all GQs in the census, the Census Bureau applied GQCI to about 2 percent. Similarly, among all people enumerated in the census at GQs, about 2 percent were derived through GQCI. For those people, the Census Bureau imputed all their characteristics in the characteristic imputation operation as part of the creation of the Census Edited File. More information on the procedure can be found in a brief summary memorandum. (https://www2.census.gov/programs-surveys/decennial/2020/program-management/memo-series/2020-memo-2022_08.pdf).

The Census Bureau is assessing the GQCI operation and will release a memorandum this fall providing, among other information, rates of GQCI by states and separately by major types of GQs. Additionally, on May 28, 2021, the Census Bureau released additional quality metrics (<https://www.census.gov/newsroom/press-releases/2021/additional-2020-quality-metrics.html>) for housing units looking at how census operations obtained a response for each address. The Census Bureau released the percentage of occupied housing units in each state that were enumerated by self-response, in nonresponse follow-up with household members and proxies, by using administrative records, by “other enumerations,” and by count imputation. The results are available in this downloadable table (https://www2.census.gov/programs-surveys/decennial/2020/data/operational-quality-metrics/census-operational-quality-metrics-release_2.xlsx). In Tennessee, for example, 77 percent of occupied housing units self-responded, and 21 percent were counted by non-response follow-up. Less than 0.5 percent were enumerated by count imputation.

Question 3. There have been suggestions that releasing information regarding the evidence-based counting numbers and the imputed numbers might somehow compromise the personal information provided by Census respondents. Can you explain how releasing statewide totals of people actually counted in each state, compared to people guessed or assumed to live in each state, would compromise privacy?

Answer. The Census Bureau is charged with safeguarding the confidentiality of census information. Pursuant to that responsibility, the Census Bureau has, for decades, employed disclosure avoidance techniques to defend against the release of any “publication whereby the data furnished by any particular establishment or individual ... can be identified.” 13 U.S.C. § 9(a)(2). And the Census Bureau has assiduously avoided disclosing information “reported by, or on behalf of, any particular respondent.” Id. § 8(b). But computer technology and processing power have grown exponentially in recent years, substantially increasing the risk of reconstruction and reidentification attacks on census data. The Census Bureau has kept pace (and tried to stay a step ahead) by developing ever-more sophisticated disclosure avoidance systems to protect the confidentiality of census information. Still, as with any information security system, if the system’s foundation is undermined, the information being secured is rendered vulnerable.

Question 4. Another method the Census Bureau used in finalizing the 2020 Census was what it calls “differential privacy,” which essentially involves the Bureau purposefully injecting erroneous data into the reported data for the supposed purpose of shielding personal information. For example, 10 people live in Census Block 1, and 40 people live in Census Block 2, the Bureau may report these numbers as 20 people in Census Block 1 and 30 people in Census Block 2—and change the demographic data, too—to supposedly make it harder to reverse engineer any personal information. This means the local population counts and demographic information—often used to draw congressional districts and for other purposes—are purposefully inaccurate. In addition to the other assumptions and adjustments made to the evidence-based count, this further obscures the real data. In your view, is it problematic that, because of this “differential privacy” method the Census doesn’t provide accurate information regarding local populations and demographics?

Answer. The Census Bureau has employed many methods to protect respondent confidentiality over the decades. The 2010 Census was protected using a method called “data swapping”, where sensitive records (e.g., a household with unique characteristics relative to those around them) in one geography were swapped with records from a household in a nearby geography. That is, the Census Bureau “perturbed” the data in 2010 and previous censuses to protect respondent confidentiality. In reviewing available methods to protect the 2020 Census, the Census Bureau concluded that statistical noise calibrated with differential privacy was the best tool currently available to ensure adequate privacy protection while maximizing data quality. Balancing statistical accuracy and the confidentiality of census data

has long been at the core of the Census Bureau's work. Protecting the confidentiality of respondents' information is both a legal requirement under 13 U.S. Code §§ 8(b) and 9, and an operational necessity if the agency is to maintain the public's trust that the Census Bureau will properly safeguard the information it provides. Consequently, the Census Bureau has long relied on a variety of statistical techniques to protect confidentiality and reduce disclosure risk in the data products it releases to the public.

Over the years, as disclosure risks have increased because of advances in computing power and the growing availability of external data sources that could be used to reidentify census respondents from published tabulations (<https://www.census.gov/data/academy/webinars/2021/disclosure-avoidance-series/simulated-reconstruction-abetted-re-identification-attack-on-the-2010-census.html>), the Census Bureau has adapted and improved its disclosure avoidance methods (<https://www.census.gov/content/dam/Census/library/factsheets/2021/comparing-differential-privacy-with-older-disclosure-avoidance-methods.pdf>) to keep pace with these growing threats. For the 1970 and 1980 censuses, the Census Bureau suppressed data for small areas and small populations. For the 1990 through 2010 censuses, the Census Bureau injected "noise" (statistical error) into published tabulations through a process called "swapping." The Census Bureau's use of differential privacy for the 2020 Census is a more sophisticated and precise mechanism for injecting noise into published statistics than the swapping mechanism used in prior censuses. The error introduced into 2020 Census publications by the 2020 Census Disclosure Avoidance System is necessary to protect against reidentification, and this disclosure-avoidance error is trivial compared to other known sources of error (<https://www.census.gov/library/fact-sheets/2022/variability.html>) in census counts because of operational and coverage issues. This means the local population counts and demographic information—often used to draw congressional districts and for other purposes—are better protected as well as fit for their intended use.

Question 5. Census Bureau employees are the only people with any visibility into the real numbers and how they are being changed using guesswork. And they won't share their methods and assumptions because they say it will compromise them. So there's no way to oversee these methods and assumptions. With an important constitutional function like this, shouldn't the Census Bureau have to disclose its counting assumptions and modifications to the actual evidence-based count to allow for meaningful oversight?

Answer. The Census Bureau is always ready to prepare briefings and informational materials for any Congressional oversight requests. For the 2020 Census, we spearheaded a 2020 Census Congressional Partnership Initiative through which Census Bureau staff met with Members of Congress and their staff from nearly 400 congressional offices in Washington, DC. Field-based congressional partnership specialists arranged hundreds of events involving congressional state/district offices. We also arranged weekly briefings on major 2020 Census operations for appropriations and oversight staff and periodic briefings to which all Congressional staff were invited in addition to the 2020 Census Program Management Reviews.

In addition, before the Census Bureau publishes any statistic, it applies safeguards that help prevent someone from being able to trace that statistic back to a specific respondent. The 2020 Census is using a powerful privacy protection system known in scientific circles as "differential privacy," designed specifically for the digital age. The Census Bureau is transitioning to this privacy protection system to keep pace with emerging threats in today's digital world. As part of this transition, the Census Bureau began releasing demonstration products in 2019 and requesting public feedback. These demonstration products allow the public to see the level of "noise" that is being added by the disclosure avoidance methodology through the creation of a 2010 Census data set protected using the new disclosure avoidance methodology. The public is then able to compare the demonstration data product to publicly released 2010 Census data to evaluate the differences. See the Demographic and Housing Characteristics File (DHC) Development and Production Timeline (<https://www2.census.gov/programs-surveys/decennial/2020/program-management/DHC%20Timeline>) for more information. Additionally, the Census Bureau hosted a second public workshop with CNSTAT on June 21–22, 2022, to provide opportunities for data users who rely on more detailed sociodemographic data to assess and provide feedback on the suitability of the most recent DHC demonstration data product. (The first public workshop was held in December 2019.) These data user analyses and feedback will help inform Disclosure Avoidance System improvements for the next round of demonstration data, scheduled for release in August 2022, and ultimately inform final decisions on the 2020 Census DHC production settings. It is important to note that the Census Bureau's transparency regarding the imple-

mentation of improved data protection methods is unprecedented. Historically, the impacts of the agency's confidentiality protections on published data products have largely been opaque to data users.

In keeping with its commitment to transparency, the Census Bureau has undertaken a series of unprecedented quality reviews early in the data release process. This includes enlisting outside experts to independently evaluate the results, as well as providing frequent updates through a blog series and through the 2020 Census Data Quality (<https://www.census.gov/programs-surveys/decennial-census/decade/2020/planning-management/process/data-quality.html>) webpage. The Census Bureau works with multiple oversight entities, such as the Government Accountability Office and the Department of Commerce's Office of Inspector General, as well as engages with respected members of the scientific and statistical community to conduct independent assessments of the 2020 Census. These entities extensively and carefully review the methods and processes the Census Bureau uses to produce the counts, disclosure edits, etc., to ensure the results are meeting goals and statistical standards. The experts are from three groups—National Academies of Sciences, Engineering and Medicine (NASEM) Committee on National Statistics, American Statistical Association Quality Indicators Task Force, and JASON (an independent scientific advisory group)—and all three have produced census quality reports. For example, the NAS Panel to Evaluate the Quality of the 2020 Census produced, "Understanding the Quality of the 2020 Census, (<https://nap.nationalacademies.org/read/26529/chapter/1>)" the ASA Task Force produced, "2020 Census Quality Indicators, (<https://www.amstat.org/asa/files/pdfs/POL-2020CensusQualityIndicators.pdf>)" and JASON produced, "Assessment of 2020 Census Data Quality Processes, (<https://www2.census.gov/programs-surveys/decennial/2020/program-management/planning-docs/2020-census-data-quality-processes.pdf>)."

Question 6. In March, 18 of my Senate colleagues and I sent President Biden a letter expressing our serious concerns with the record increases in fertilizer prices that are impacting American farmers. Since, unfortunately, the situation in Ukraine has only exacerbated the problem. Since January 2021, according to the most recent data from USDA's Marketing Services, the prices of key fertilizer sources have substantially increased. Can you provide me an update as to what actions your Department has taken to reduce the cost of sky rocketing prices?

Answer. We at the Commerce Department continue to be very concerned about the Russian invasion of Ukraine and its many unfortunate humanitarian, security, and economic consequences. We are maintaining open communications with the fertilizer industry and sharing their perspectives with Administration leadership and interagency counterparts to address this situation.

Question 7. I understand that your Department has a role in the U.S. Geological Survey's (USGS) designation of critical mineral. Potash, a key mineral for fertilizer production, has historically been designated a critical mineral by USGS, but has been removed. Will you commit to working with the Department of Interior to restore potash as a critical mineral?

Answer. The Commerce Department, along with other United States government agencies, is a member of the White House Office of Science and Technology Policy's National Science and Technology Council Critical Minerals Subcommittee (CMS). In February 2022, the Department of the Interior announced the revision of the critical minerals list, noting that Interior's U.S. Geological Survey (USGS) developed it using "the most up-to-date scientific methods to evaluate mineral criticality". According to USGS, "[T]he 2022 list of critical minerals is based on a methodology developed over several years with leadership by the USGS and interagency input coordinated by the CMS. The USGS published the new methodology in 2020 and this methodology was used to create the draft list and update it in 2021–2022." Commerce would refer you to USGS for any further information.

Question 8. Liquefied Natural Gas (LNG) is a major input cost for fertilizer production. Have you spoken directly with Secretary Granholm, the White House, or any other Cabinet official about the impact record LNG prices are having on the cost of fertilizer production? Are there any plans underway to change regulatory policy and stymie the Biden Administration in a manner that could be expected to lower LNG prices?

Answer. The Administration has taken actions to address the disruptions to the global supply chains for fertilizer due to Putin's unjustified invasion of the Ukraine. In May, President Biden announced that USDA was doubling funding for domestic fertilizer production from an initial \$250 million investment to \$500 million. This action should help lower costs and boost availability for farmers, so they can obtain the inputs they need at prices they can afford to maximize yields.

Question 9. On July 11, 2021, Congressman Michael McCaul and I wrote to urge you to add Yangtze Memory Technologies Company (YMTC) to the Entity List. YMTC is China's state-owned national champion for memory chips, with ties to the CCP military. Unfortunately, since then, our dependence has continued to grow on Chinese companies like YMTC with clear ties to the Party-state and military that are threats to our national security. Witness Apple's recent disturbing decision to consider relying, in part, on YMTC chips for its phones. My colleagues and I are now finalizing bipartisan legislation that aims to preserve a secure chip and memory supply for the United States. Your executive power could greatly facilitate achieving this goal. Why have you not yet added YMTC to the Entity List?

Answer. The Bureau of Industry and Security (BIS) shares your concerns about efforts by the People's Republic of China (PRC) government and PRC companies to threaten U.S. national security and foreign policy interests. A core objective of BIS is to impair the PRC's goal of parity in leading-edge semiconductor technology. BIS continually assesses available open-source, proprietary, and classified information, in coordination with our interagency partners, for the addition of other Chinese parties to the Entity List, all while ensuring U.S. technological leadership. Since the start of the Biden Administration, BIS has placed over 100 PRC parties on the Entity List and maintains nearly 600 PRC parties on the Entity List to date. While the Entity List is a powerful tool, it is not the only tool BIS possesses to address activities that threaten our national security and foreign policy interests. BIS uses "Is Informed" letters—letters to individual companies informing them of additional license requirements related to specific parties and/or items—and imposes additional license requirements because of end-use or end-user concerns, such as unacceptable risk in or diversion to weapons of mass destruction (WMD) programs in certain countries. BIS also aggressively pursues criminal and civil penalties related to unauthorized exports to China, and investigations are carried out by law enforcement officers whose mission is to investigate such violations and pursue them criminally and administratively.

Under the Export Administration Regulations (EAR), all additions to the Entity List are subject to an interagency review process and require a majority vote of the End-User Review Committee (ERC), which is chaired by the Department of Commerce, with representation from the Departments of State, Defense, Energy, and where appropriate, Treasury. The ERC determines whether the entity has been involved in, is involved in, or poses a significant risk of being or becoming involved in activities that are contrary to the national security or foreign policy interests of the United States.

BIS welcomes the opportunity to provide technical assistance on any draft legislation upon request.

Question 10. You have been a vocal advocate for increasing U.S. semiconductor manufacturing. I'm also very supportive of increasing American chip manufacturing, which will create American jobs and bolster our national security interests vis-à-vis China. In March, you noted that twenty years ago we made nearly 40 percent of the world's chips, and now we make only 12 percent. You noted that we buy 90 percent of our most sophisticated chips from Taiwan—the same Taiwan that China has its sights set on. Is that kind of dependency a significant vulnerability for American national and economic security?

Answer. Yes. American dependency on chips manufactured abroad is absolutely a significant vulnerability for national and economic security. I applaud the members of Congress who worked hard to get the CHIPS and Science Act to President Biden's desk. My staff have hit the ground running to operationalize this historic investment in America's global economic leadership and to shore up these vulnerabilities.

Question 11. The United States continues to lead the world in chip design, software, and equipment, so it seems the problem is that it has become too costly or uncertain for chip manufacturers to locate in the United States. Chip manufacturers have told me that this problem cannot be solved with dollars alone—as proposed by the CHIPS Act Congress is now considering. Even well-funded projects cannot be completed if they are tied up with multi-year permitting processes. In fact, our permitting process is one of the reasons manufacturers chose to relocate in places like Taiwan in the first place. Given the dire need to encourage chip manufacturing in the U.S., do you agree that, conceptually, it makes sense to allow chip manufacturers to utilize an existing Federal program that improves the Federal permitting process if it helps speed up domestic chip manufacturing projects?

Answer. I was pleased to support your bill (S. 3451) to add semiconductor facilities to the existing FAST-41 process. Lengthy permitting processes cannot delay the impact of this historic investment in American semiconductor manufacturing.

Question 12: Do you support legislation, which has been approved unanimously by the U.S. Senate (S. 3451), to utilize existing Federal programs to streamline the Federal permitting process and bring chip manufacturing back to the U.S.?

Answer. Yes. I supported S. 3451, and I am pleased that the bill became law.

Question 13: Will you work with my office/staff to convey the benefits/push for legislation in the House, etc.?

Answer. As per the Energy Act of 2020, at least every 3 years the Department of the Interior must review and update the list of critical minerals. We refer you to USGS, which is a part of Interior, for further information on its plans for the next revision.

SUBCOMMITTEE RECESS

Senator SHAHEEN. The subcommittee now stands in recess, subject to the call of the Chair.

Senator SHAHEEN. Thank you.

Senator SHAHEEN. Thank you.

[Whereupon, at 3:29 p.m., Wednesday, May 11, the subcommittee was recessed, to reconvene subject to the call of the Chair.]

COMMERCE, JUSTICE, SCIENCE, AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 2023

WEDNESDAY, MAY 25, 2022

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 2:00 p.m., in room SR-192, Dirksen Senate Office Building, Hon. Jeanne Shaheen (Chair) presiding.

Present: Senators Shaheen, Leahy, Moran, Collins, Graham, Boozman, Moore Capito, Kennedy, Hagerty, and Braun.

FEDERAL BUREAU OF INVESTIGATION

OPENING STATEMENT OF SENATOR JEANNE SHAHEEN

Senator SHAHEEN. The Subcommittee on Commerce, Justice, Science, and Related Agencies, will now come to order.

Good afternoon, everyone. Welcome to today's hearing, to review the President's fiscal year 2023 funding request for the Federal Bureau of Investigation.

Our witness today is FBI Director, Christopher Wray. Director Wray it is very nice to have you before the Committee again.

I must admit, however, that I rewrote my opening statement for today's hearing, based on the tragic events in Texas. But I want to begin by recognizing the more than 36,000 employees of the FBI who protect our country from violent criminals, terrorists, and others who would mean us great harm. And I want to thank everyone at the FBI for their dedication and service to the country.

The FBI remains on standby to jump into action to assist their State, local, and Tribal partners with investigating criminal activity. And the most recent example of this was assisting in the horrific aftermath of the shooting at Robb Elementary School in Uvalde, Texas, yesterday, a shooting that has so far claimed 21 lives, 19 of them children.

As a mother and grandmother I can only—really I can't begin to imagine the pain that these families are going through. I want to thank the FBI for sending the agents in and other key staff so quickly, to what I know has been a very difficult crime scene.

I understand that the FBI has also made Victim Specialists available as part of the response, and I hope they are able to remain in this community as long as they are needed. And if this Committee can provide resources to help make that happen, please let us know.

I know that we don't know yet what motivated this killer. I do know that several of our colleagues have already called for better mental health screening, from enforcing laws that keep guns out of the hands of felons, and for hardening schools.

I would agree with all of those recommendations, but I also think Congress needs to act to strengthen background checks, and to stop allowing the sale of weapons of war.

As, my colleague, Senator Murphy rightly pointed out yesterday, mental illness is not unique to the United States, but the devastating rate of gun violence is. We can't accept this status quo, the lives of Americans, of our children depend on Congress being willing to enact meaningful policies to address the scope of this crisis and to keep people safe.

Weapons of war enable mass shootings like the one at Robb Elementary, where we don't know the motive. And others like the shooting at Tops market, where we know the motive all too well. People who are simply going about their everyday lives, whether it is attending religious services in Pittsburgh, in Charleston, shopping at Walmart in El Paso, dancing at a night club in Orlando, or getting groceries in Buffalo. They were all murdered by individuals motivated by hate.

The FBI's budget request of \$10.8 billion includes additional resources for combating domestic terrorism, and mass violence. We have discussed this topic before here, in this Committee, yet again, and again, we have witnessed White supremacist targeting others based on their gender, sexual orientation, or faith.

Now, we are fortunate that technological progress has given us advances in medicine, science, and manufacturing, as well as improving the ease of how we can communicate with others. But unfortunately, new technologies have also allowed the rapid spread of hate, conspiracy theories, and disinformation to wider audience, and they have allowed those with extremist views to find a community. I hesitate to call it a "community", because I think of community as something positive. To find others who share those extremist views.

While we should be able to freely express our ideas, it should not come at the expense of someone's life or wellbeing. We clearly need to find better solutions and actions to stem future violence, and I know that the FBI will be part of those solutions.

Just as the FBI rapidly responds to crisis situations, I believe Congress needs to also find a way to more quickly and appropriately respond to the issue of mass violence, including those committed with firearms and domestic terrorism.

I am certainly ready to work on common-sense legislation that I think the majority of Americans can support, and I am sure that many of my colleagues on this Committee who will join me as well.

So, Director Wray, I look forward to your testimony, and to the discussion today.

With that, I would like to recognize the CJS Subcommittee Vice Chair, Senator Moran, for his opening remarks.

OPENING STATEMENT OF SENATOR JERRY MORAN

Senator MORAN. Chairman Shaheen, thank you very much, thank you for convening this hearing.

Director Wray, welcome back to the subcommittee.

I, too, before considering the budget request, would like to make a brief word on yesterday's senseless act of violence that stole the lives of nineteen children and two teachers.

My wife and I have had this conversation. It is heartbreaking. The murder of these innocent children is horrific. In a small town, tight-knit community like Uvalde, it is the size of a town I grew up in, I know there will not be a single member of the community who is not touched by this tragedy.

Director Wray, I am confident that you will bring the full investigative powers of the FBI to bear, in determining the motives, the warnings, and how, and why. I am also confident there will be an introspection, examining whether all laws, NICS Section policies were properly followed, and we await your findings.

The FBI is requesting \$10.7 billion for salaries and expenses in 2023. That amount is 605 million, or 6 percent above the fiscal year 2022 enacted. But as we have demonstrated in Texas, and in Buffalo, and nearly every city across the country violent crime, including murders, assault and robberies is on the rise.

I can give this Committee statistics, percentages on the rise of crime, but no one here, especially after yesterday's tragic shooting, doubts that violent crime is a growing problem in our country. We have also seen a dramatic increase in violent attacks on law enforcement officers.

This is a matter that I know, you, Director Wray, care about deeply. I have seen it in your conversations, I have heard it in your testimony. I experience it on our telephone all yesterday, and I appreciate your efforts, your care, and concern, and your efforts to raise awareness about the violent crime occurring across our country.

While I note the Bureau is working to keep us safe here at home, we also face ever-evolving threats from foreign adversaries as well. I recognize your job is really endless, you know, there is never enough that can be done. You have repeatedly warned that nothing presents a broader, more severe threat to our ideas, our innovation, and our economic security than the Chinese Government.

I understand that as of January of this year, the FBI is investigating more than 2,000 cases of Chinese Government trying to steal our information in technology, and the FBI is opening a new counterintelligence case every 12 hours.

I am interested to learn about the FBI's efforts to address cyber crime, and ransomware. The Bureau made transformational changes after 9/11, and these changes help keep our nation safe from acts of terrorism.

Today, changes of a similar magnitude may be needed to combat cyber threats, including threats from both criminal organizations, and state actors.

I appreciated your comments to the students of the University of Kansas when we were there together this past March, where you emphasized how important it will be for them to bring their talents to the frontline of the cybersecurity workforce.

Director Wray, I look forward to hearing today about the Bureau's budget, your budget request. And I hope to be able to help you and the FBI address all of the challenges that we face in this

country, related to law enforcement. The challenges are tremendous, the ones that we saw, reminded of again yesterday, are at the forefront, that the world is a dangerous place, every place we turn.

I welcome you to the Subcommittee, and I look forward to a somber and sober discussion of the circumstances we find ourselves in.

Senator SHAHEEN. Thank you, Senator Moran. At this time the Chair of the Full Appropriations Committee, Senator Leahy would like to make a statement.

OPENING STATEMENT OF SENATOR PATRICK LEAHY

Senator LEAHY. Thank you, Chair Shaheen, and Vice Chair Moran for your comments.

Director Wray, we have known each other for a number of years, and I will just tell you some of my concerns. Twenty-one victims; that is 21 families waking up this morning with broken hearts. Those of us who have had, whether we have had children or not, but those who have had children and grandchildren, we think 19 children, murdered.

Gun violence is an epidemic. It can't be ignored, it can't be overstated, it can't be hidden behind the guise of an unassailable Second Amendment argument.

And I don't want to politicize or overreact, I am just, I am angry, I am extremely angry that 19 more children, and two adults who were fighting to protect them have been murdered, murdered. Murdered!

I am angry that today too many in Congress are just willing to accept these mass shootings as another breaking news story, as just another part of our daily lives. Oh, we are praying for the victims. Of course we are praying for the victims, but what the hell are we doing to stop further victims?

I have owned firearms responsibly my entire life. I support a strong Second Amendment. I spent 8 years in law enforcement, but simple common sense and what should be our shared humanity, compel us to not simply quietly acknowledge the crisis. We all know that it is a crisis, but we need to do something about it.

Nearly 10 years ago, a murderer took the lives of 26 people, including 20 children, at Sandy Hook. I led the Senate Judiciary Committee's action to advance legislation to help address the epidemic of gun violence. And over 2 years ago, as then Vice Chairman of the Appropriations Committee, I worked to break through the years long refusal to provide the CDC and the NIH with resources to simply study the roots of gun violence.

The gun lobby had blocked those resources for years, even just having a study of gun violence, but now we need more! And we have got to stop saying, well, next week, next month, next year, we have to do it now. How many more people will die before this country says, enough is enough? I will say it today. It is enough.

So Director Wray, thank you for being here today, as the Director of the Federal Bureau of Investigation you have a critically important job. You have to protect our country from threats of terrorism, and crimes, both foreign and domestic, and, while you are doing it, you have to uphold the rights and values that make this a great democracy.

I don't envy that task. I respect that task, but the heinous mass shooting in Buffalo, New York, earlier this month is a stark reminder that domestic terrorism is still very much present in the United States. It is also a somber reminder that the majority of domestic terrorism perpetrated against innocent Americans is driven by those espousing white supremacists and racist ideologies.

Now, that is not a controversial statement, it is a simple fact. And that is what makes this moment so dangerous. When facts are distorted into untruths, and parroted by those with a pulpit to do so, we tread dangerously far from the core tenets of our democracy.

If we can't clearly and unequivocally condemn the actions of white supremacists, or simply acknowledge the January 6, 2021, attack on our Capitol for what it was, an insurrection, we fan the flames of hatred and violence, and we allow them to grow. It is alarming to me. It should be to every American. It is in my State of Vermont, whether you are Republicans, or Democrats, Independents, it is alarming.

But I will also further highlight the importance of the work of the dedicated men and women of the Bureau, and your leadership there, Director Wray. Each year this Appropriations Committee wrestles with how best to dedicate valuable taxpayer dollars. Next week I am going to have binders about this thick at my home in Vermont where it is nice and quiet, reading through all these budget requests. But in exchange, of course, for the money, we said we expect the FBI to confront forcefully, head on, the threat of domestic terrorism. We expect you to faithfully and fully adhere to the rule of law to investigate whatever crime is committed, to work with the Department of Justice and State and local law enforcement to hold the perpetrators of any crime accountable.

I stand ready to support you. But I also want you to respond when we have questions, either Republicans or Democrats, on this Committee.

So I can say a lot more. I won't. I would rather hear the Director, Chair Shaheen. But thank you for the courtesy.

Senator SHAHEEN. Thank you, Senator Leahy.

Director Wray, the floor is yours.

STATEMENT OF HON. CHRISTOPHER WRAY, DIRECTOR, FEDERAL BUREAU OF INVESTIGATION

Mr. WRAY. Well, thank you. Good afternoon, Chair Shaheen, Ranking Member Moran, Chair Leahy, Members of the Subcommittee.

I know, of course, that we are here to talk about the FBI's budget, but like all of you, I want to begin with what is on everybody's hearts and minds.

Yesterday we got the news that we all dread, including those of us in law enforcement, we do this work for the victims, both the actual victims, and the victims we are trying to prevent from being victims, and there is no category of victims that more motivates the men and women of law enforcement, including the men and women of the FBI, than children.

And parents got calls yesterday that are too devastating to even fathom, and a community, really a whole Nation, was shaken by another horrific mass shooting, this time, once again, at an elemen-

tary school, full of young kids just days, days away from finishing their school year, and my heart goes out to the families of the victims, and to the entire community of Uvalde.

I know that you are experiencing unimaginable pain and trauma, and the entire FBI family feels your heartbreak and stands with you.

There will certainly be more that we are going to learn about this heinous attack in the days ahead, and I know the American people, and especially the people of Uvalde, are looking for answers. I do want to acknowledge the heroism of all law enforcement who responded immediately to the scene.

For our part, the FBI will continue to work around the clock with the Texas Department of Public Safety and the Uvalde Police Department, and our other State, local, and Federal partners, to assist in any way we can. We are dedicating the full resources of the FBI San Antonio Field Office, and a whole host of other FBI divisions to helping the Texas DPS, and the Uvalde Police, who have the lead in the investigation.

On top of that we are devoting significant national resources, including investigative and analytical resources, in evidence response, and laboratory personnel, Victim Services professionals to assist the families of the victims, crisis management and behavioral analysis units.

So bottom line, we are absolutely heartbroken about yesterday's tragic events, and committed to doing our part to support our partners in the investigation and the community of Uvalde, as we begin to try to move forward.

Of course the range of criminal cyber and counterintelligence threats we face as a Nation has never been greater, or more diverse, and the demands and expectations placed on the FBI have never been higher.

And before I take your questions, I want to spend just a few minutes talking about the FBI's efforts in some of those areas, namely, our efforts to combat terrorism both domestic and international, and our efforts to help tackle the rise in violent crime.

Unfortunately this tragedy, as well as the recent tragedy in Buffalo, and way too many before, reinforce what we in the FBI have been so concerned about for so long, and that is the threat of lone actors who look to attack regular, everyday people going about their regular, everyday lives. And in fact it is that threat that we continue to be most concerned about here in the homeland.

And while it is too soon to be commenting on the motivation behind yesterday's tragedy, and I don't want to get out ahead of Texas DPS which has the lead on that, as the horrific attack a little over a week ago in Buffalo shows, we have got to continue to stay laser focused on our efforts to counter violence motivated by hate and extremism.

Even on the international terrorism side we are seeing home-grown violent extremists, inspired by groups like ISIS, like al-Qaeda, acting alone or in small groups, and leaving fewer dots to connect, and less time in which to connect them, and countering fast-moving threats like these requires a team approach, so we have requested an enhancement not just for additional investigators but also support personnel to help us perform the important

outreach, and partnership building that is so essential to countering this threat.

The scourge of violent crime, of course, extends beyond mass shootings, and beyond crimes motivated by extremist ideology. In fact, rising violence is the number one concern I hear about from chiefs and sheriffs all across the country with whom I speak just about every week.

With those partners we are leading hundreds of task forces to get the worst of the worst off the streets. We are sharing intelligence to focus our collective efforts, and we are providing technical resources and expertise to bring more violent criminals to justice.

Last fiscal year those task forces focused on violent crime, made more than 17,000 arrests, seized more than 8,000 illegally possessed firearms, and dismantled nearly 300 gangs and criminal enterprises across the country. And that is all separate and apart, and in addition to all of our Joint Terrorism Task Force work on the counterterrorism side, domestic terrorism, international terrorism.

I should add that with this hearing falling 2 years to the day, after the murder of George Floyd, I do want to emphasize that we and our State and local partners are also focused on improving interactions between law enforcement and the communities we all serve, to ensure equal justice for all.

Of course these are just a few of the threats we are tackling. The FBI's budget request this year reflects the breadth, depth, and complexity of those threats. In addition to the things I have already mentioned each and every day our folks are also dealing with an ever-expanding array of threats on the cyber front from ransomware, and the theft of trade secrets, and personal information, to malign and influence campaigns, to intrusions targeting our critical infrastructure.

And that includes working with our private sector, government, and foreign partners to meet the danger from Russian cyber actors during this time of Russia's unprovoked aggression in the Ukraine.

We are also taking on the Chinese Government's broad-scale economic espionage campaign that targets our innovation, our ideas, our economic security. And today, as we mark the 40th National Missing Children's Day, it is important to highlight the work of our 400 FBI personnel and nearly 800 additional officers who serve on our Child Exploitation and Human Trafficking Task Forces, that we have dedicated to investigating crimes against children, and to identifying and locating child victims.

Our fellow citizens look to us to protect the United States from all those threats, and a whole bunch more, and I am proud to see the men and women of the FBI step up and rise to meet those challenges every day.

I would like to again thank this subcommittee for all the support you have provided the men and women of the FBI over the years.

And to the community of Uvalde, we will provide whatever resources we can, we will support you however we can, and we will stand with you in our thoughts, and our prayers.

And thank you. I am happy to take your questions.

[The statement follows:]

PREPARED STATEMENT OF CHRISTOPHER A. WRAY, DIRECTOR, FEDERAL BUREAU OF INVESTIGATION

Good afternoon, Chairwoman Shaheen, Ranking Member Moran, and Members of the Subcommittee. Today, I appear before you on behalf of the men and women of the Federal Bureau of Investigation (“FBI”), who tackle some of the most complex threats every day with perseverance, professionalism, and integrity—sometimes at the greatest of costs. I am extremely proud of their service and commitment to the FBI’s mission and to ensuring the safety and security of communities throughout our nation. On their behalf, I would like to express my appreciation for the support you have given them in the past, ask for your continued support in the future, and pledge to be the best possible stewards of the resources you provide. I would like to begin by providing a brief overview of the President’s fiscal year 2023 budget request for the FBI, and then follow with a short discussion of key threats and challenges that we face, both as a nation and as an organization.

FISCAL YEAR 2023 BUDGET OVERVIEW

The fiscal year 2023 budget request proposes a total of \$10.8 billion in direct budget authority to carry out the FBI’s national security, intelligence, criminal law enforcement, and criminal justice services missions. The request includes a total of \$10.7 billion for Salaries and Expenses, which will support 36,945 positions (13,616 Special Agents, 3,287 Intelligence Analysts, and 20,042 professional staff), and \$61.9 million for Construction. The request includes eleven program enhancements totaling \$324.6 million. These enhancements are proposed to meet critical requirements and close gaps in operational capabilities, including \$52.0 million to enhance cyber investigative capabilities, \$48.8 million for additional personnel and tools to investigate and counter acts of mass violence and address threats to public safety, \$34.1 million to mitigate threats from foreign intelligence services, \$20.6 million to combat crime and corruption, \$17.8 million to address the increase in civil rights investigations, \$36.9 million to enhance the FBI’s cybersecurity posture and protect internal networks, \$25.0 million to address data analytics/technical tool development and technical surveillance, \$27.4 million to support infrastructure needs related to the use of Body Worn Cameras, \$39.4 million for operations and maintenance of FBI-owned facilities, and \$22.5 million to support the expansion of Federal jurisdiction for crimes committed on Tribal lands in response to the McGirt Supreme Court decision. When compared against the fiscal year 2022 President’s Budget, the fiscal year 2023 request level represents a total increase of \$527.8 million, all of which falls in the Salaries and Expenses account.

KEY THREATS AND CHALLENGES

Our nation continues to face a multitude of serious and evolving threats ranging from homegrown violent extremists to hostile foreign intelligence services and operatives, from sophisticated cyber-based attacks to Internet facilitated sexual exploitation of children, from violent gangs and criminal organizations to public corruption and corporate fraud. Keeping pace with these threats is a significant challenge for the FBI. As an organization, we must be able to stay current with constantly evolving technologies. Our adversaries—terrorists, foreign intelligence services, and criminals—take advantage of modern technology, including the Internet and social media, to facilitate illegal activities, recruit followers, encourage terrorist attacks and other illicit actions, to spread misinformation, and to disperse information on building improvised explosive devices and other means to attack the U.S. The breadth of these threats and challenges are as complex as any time in our history. And the consequences of not responding to and countering threats and challenges have never been greater.

The support of this Committee in helping the FBI do its part in thwarting these threats and facing these challenges is greatly appreciated. That support is allowing us to establish strong capabilities and capacities to assess threats, share intelligence, leverage key technologies, and—in some respects, most importantly—hire some of the best to serve as Special Agents, Intelligence Analysts, and professional staff. We have built, and are continuously enhancing, a workforce that possesses the skills and knowledge to deal with the complex threats and challenges we face today—and tomorrow. We are building a leadership cadre that views change and transformation as a positive tool for keeping the FBI focused on the key threats facing our nation.

Today’s FBI is a national security and law enforcement organization that uses, collects, and shares intelligence in everything we do. Each FBI employee understands that, to defeat the key threats facing our nation, we must constantly strive

to be more efficient and more effective. Just as our adversaries continue to evolve, so, too, must the FBI. We live in a time of acute and persistent terrorist and criminal threats to our national security, our economy, and indeed our communities. These diverse threats underscore the complexity and breadth of the FBI's mission: to protect the American people and uphold the Constitution of the United States.

NATIONAL SECURITY

Top Terrorism Threats

Preventing terrorist attacks, from any place, by any actor, remains the FBI's top priority. The nature of the threat posed by terrorism—both international terrorism (“IT”) and domestic terrorism (“DT”)—continues to evolve.

The greatest terrorism threat to our Homeland is posed by lone actors or small cells who typically radicalize online and look to attack soft targets with easily accessible weapons. We see these threats manifested within both Domestic Violent Extremists (“DVEs”) and Homegrown Violent Extremists (“HVEs”), two distinct threats, both of which are located primarily in the United States and typically radicalize and mobilize to violence on their own. Individuals who commit violent criminal acts in furtherance of social or political goals stemming from domestic influences—some of which include racial or ethnic bias, or anti-government or anti-authority sentiments—are described as DVEs, whereas HVEs are individuals who are inspired primarily by global jihad but are not receiving individualized direction from Foreign Terrorist Organizations (“FTOs”).

Domestic and Homegrown Violent Extremists are often motivated and inspired by a mix of socio-political, ideological, and personal grievances against their targets, and more recently have focused on accessible targets to include civilians, law enforcement and the military, symbols or members of the U.S. Government, houses of worship, retail locations, and mass public gatherings. Selecting these types of soft targets, in addition to the insular nature of their radicalization and mobilization to violence and limited discussions with others regarding their plans, increases the challenge faced by law enforcement to detect and disrupt the activities of lone actors before they occur.

The top threat we face from DVEs continues to be from those we categorize as Racially or Ethnically Motivated Violent Extremists (“RMVEs”), including those who advocate for the superiority of the white race, who were the primary source of lethal attacks perpetrated by DVEs in 2018 and 2019. It is important to note that we have also recently seen an increase in fatal DVE attacks perpetrated by Anti-Government or Anti-Authority Violent Extremists, specifically Militia Violent Extremists and Anarchist Violent Extremists. Anti-Government or Anti-Authority Violent Extremists were responsible for three of the four lethal DVE attacks in 2020. Also, in 2020, we saw the first lethal attack committed by an Anarchist Violent Extremist in over 20 years. These Anti-Government/Anti-Authority Violent Extremists have specifically targeted law enforcement and the military as well as institutions or members of the U.S. Government.

The number of FBI investigations of suspected domestic violent extremists has more than doubled since the spring of 2020. A few months ago, we marked the 1 year anniversary of the January 6 assault on the U.S. Capitol, which has led to unprecedented efforts by the Department of Justice, including the FBI, to investigate and hold accountable all who engaged in violence, destruction of property, and other criminal activity on that day. To date, the department has arrested and charged nearly 800 individuals who took part in the Capitol assault.

The FBI uses all tools available at its disposal to combat domestic terrorism. These efforts represent a critical part of the first-ever National Strategy for Countering Domestic Terrorism, which was released in June 2021, and which sets forth, for the first time, a comprehensive, whole of government policy to address the many facets of the domestic terrorism threat.

The FBI assesses HVEs are the greatest, most immediate international terrorism (“IT”) threat to the Homeland. As I have described, HVEs are people located and radicalized primarily in the United States, who are not receiving individualized direction from global jihad-inspired FTOs but are inspired largely by the Islamic State of Iraq and ash-Sham (“ISIS”) and al-Qa’ida to commit violence. An HVE’s lack of a direct connection with an FTO, ability to rapidly mobilize without detection, and use of encrypted communications pose significant challenges to our ability to proactively identify and disrupt it.

The FBI remains concerned that FTOs, such as ISIS and al-Qa’ida, intend to carry out or inspire large-scale attacks in the United States. Despite its loss of physical territory in Iraq and Syria, ISIS remains relentless in its campaign of violence against the United States and our partners—both here at home and overseas. To

this day, ISIS continues to aggressively promote its hate-fueled rhetoric and attract like-minded violent extremists with a willingness to conduct attacks against the United States and our interests abroad. ISIS' successful use of social media and messaging applications to attract individuals seeking a sense of belonging is of continued concern to us. Like other foreign terrorist groups, ISIS advocates for lone offender attacks in the United States and Western countries via videos and other English language propaganda that have, at times, specifically advocated for attacks against civilians, the military, law enforcement and intelligence community personnel.

Al-Qa'ida maintains its desire to both conduct and inspire large-scale, spectacular attacks. Because continued pressure has degraded some of the group's senior leadership, we assess that, in the near term, al-Qa'ida is more likely to continue to focus on cultivating its international affiliates and supporting small-scale, readily achievable attacks in regions such as East and West Africa. Over the past year, propaganda from al-Qa'ida leaders continued to seek to inspire individuals to conduct their own attacks in the United States and other Western nations.

Iran and its global proxies and partners, including Iraqi Shia militant groups, continue to attack and plot against the United States and our allies throughout the Middle East in response to U.S. pressure. Iran's Islamic Revolutionary Guard Corps-Qods Force ("IRGC-QF") continues to provide support to militant resistance groups and terrorist organizations. Iran also continues to support Lebanese Hizballah and other terrorist groups. Lebanese Hizballah has sent operatives to build terrorist infrastructures worldwide. The arrests of individuals in the United States allegedly linked to Lebanese Hizballah's main overseas terrorist arm, and their intelligence collection and procurement efforts, demonstrate Lebanese Hizballah's interest in long-term contingency planning activities here in the Homeland. Lebanese Hizballah Secretary-General Hasan Nasrallah also has threatened retaliation for the death of IRGC-QF Commander Qassem Soleimani.

As an organization, we continually adapt and rely heavily on the strength of our Federal, State, local, Tribal, territorial, and international partnerships to combat all terrorist threats to the United States and our interests. To that end, we use all available lawful investigative techniques and methods to combat these threats while continuing to collect, analyze, and share intelligence concerning the threat posed by violent extremists, in all their forms, who desire to harm Americans and U.S. interests. We will continue to share information and encourage the sharing of information among our numerous partners via our Joint Terrorism Task Forces across the country, and our Legal Attaché offices around the world. The fiscal year 2023 Request includes an additional 208 positions (including 55 Special Agents, 18 Intelligence Analysts, and 135 professional staff) and \$48.8 million to counter terrorism and the increasing acts of domestic terrorism, including acts of mass violence and threats to public safety, occurring across the United States.

Cyber

Over the past 2 years, nation-state and criminal cyber actors took advantage of people and networks made more vulnerable by the sudden shift of our personal and professional lives online due to the COVID-19 pandemic, targeting those searching for personal protective equipment, worried about stimulus checks, and conducting vaccine research.

Throughout these last 2 years, the FBI has seen a wider-than-ever range of cyber actors threaten Americans' safety, security, and confidence in our digitally connected world. But these threats will not disappear when the pandemic ends. Cyber-criminal syndicates and nation-states keep innovating ways to compromise our networks and maximize the reach and impact of their operations, such as by selling malware as a service or by targeting vendors as a way to access scores of victims by hacking just one provider.

These criminals and nation-states believe that they can compromise our networks, steal our property, and hold our critical infrastructure at risk without incurring any risk themselves. In the last few years, we have seen—and have publicly called out—China, North Korea, and Russia for using cyber operations to target U.S. COVID-19 vaccines and research. We have seen the far-reaching disruptive impact a serious supply-chain compromise can have through the SolarWinds intrusions, conducted by the Russian SVR. We have seen China working to obtain controlled defense technology and developing the ability to use cyber means to complement any future real-world conflict. We have seen Iran use cyber means to try to sow divisions and undermine our elections, targeting voters before elections and threatening election officials after. As these adversaries become more sophisticated, we are increasingly concerned about our ability to detect and warn about specific cyber operations against

U.S. organizations. One of the most worrisome facets is their focus on compromising U.S. critical infrastructure, especially during a crisis.

What makes things more difficult is that there is no bright line where nation-state activity ends and cybercriminal activity begins. Some cybercriminals contract or sell services to nation-states; some nation-state actors moonlight as cybercriminals to fund personal activities; and nation-states are increasingly using tools typically used by criminal actors, like ransomware.

So, as dangerous as nation-states are, we do not have the luxury of focusing on them alone. In the past year, we also have seen cybercriminals target hospitals, medical centers, and educational institutions for theft or ransomware. Such incidents affecting medical centers have led to the interruption of computer networks and systems that put patients' lives at an increased risk at a time when America faces its most dire public health crisis in generations. And we have seen criminal groups targeting critical infrastructure for ransom, causing massive disruption to our daily lives.

We are also seeing dark web vendors who sell capabilities in exchange for cryptocurrency increase the difficulty of stopping what would once have been less dangerous offenders. What were once unsophisticated criminals now have the tools to paralyze entire hospitals, police departments, and businesses with ransomware. It is not that individual hackers alone have necessarily become much more sophisticated, but—unlike previously—they are able to rent sophisticated capabilities.

We must make it harder and more painful for hackers and criminals to do what they are doing. The FBI, using its role as the lead Federal agency with law enforcement and intelligence responsibilities, works seamlessly with domestic and international partners to defend their networks, attribute malicious activity, sanction bad behavior, and take the fight to our adversaries overseas. We must impose consequences on cyber adversaries and use our collective law enforcement and intelligence capabilities to do so through joint and enabled operations sequenced for maximum impact. And we must continue to work with the Department of State and other key agencies to ensure that our foreign partners are able and willing to cooperate in our efforts to bring the perpetrators of cybercrime to justice.

An example of this approach is the international seizure in April 2022 of Hydra Market—the world's largest and longest-running darknet market. Hydra was an online criminal marketplace that enabled users in mainly Russian-speaking countries to buy and sell illicit goods and services, including illegal drugs, stolen financial information, fraudulent identification documents, and money laundering and mixing services, anonymously and outside the reach of law enforcement. Transactions on Hydra were conducted in cryptocurrency and Hydra's operators charged a commission for every transaction conducted on Hydra. In 2021, Hydra accounted for an estimated 80 percent of all darknet market-related cryptocurrency transactions, and since 2015, the marketplace has received approximately \$5.2 billion in cryptocurrency. The seizure of the Hydra servers and cryptocurrency wallets containing \$25 million worth of bitcoin was made in Germany by the German Federal Criminal Police (the Bundeskriminalamt), in coordination with the FBI and our other Federal partners in the Drug Enforcement Administration, the Internal Revenue Service, U.S. Postal Inspection Service, and Homeland Security Investigations. The FBI used sophisticated techniques, our unique legal authorities, and, most importantly, our worldwide partnerships to significantly disrupt this illegal marketplace.

Last year, cybersecurity companies including Microsoft disclosed that hackers were using previously unknown vulnerabilities related to Microsoft Exchange software to access email servers that companies physically keep on their premises rather than in the cloud. These "zero day" vulnerabilities allowed the actors to potentially exploit victim networks, engaging in activities such as grabbing login credentials, installing malicious programs to send commands to the victim network, and stealing emails in bulk. The FBI issued a joint advisory in partnership with the Department of Homeland Security's Cybersecurity and Infrastructure Security Agency ("CISA") to give network defenders the technical information they needed to mitigate the vulnerability. However, while many infected system owners successfully removed the web shells, others were not able to do so. That left many systems vulnerable to adversaries who could continue to steal information, encrypt data for ransom, or potentially even execute a destructive attack. In response, through a court-authorized operation in partnership with the private sector, we were able to copy and remove malicious web shells from hundreds of vulnerable computers in the U.S. running Microsoft Exchange Server software. This is another example of how the FBI used its unique authorities, in this case, court-issued legal process, and its partnerships with the private sector to have tangible, real-world impact on the problem.

We took over 1,100 actions against cyber adversaries last year, including arrests, criminal charges, convictions, dismantlements, and disruptions, and enabled many more actions through our dedicated partnerships with the private sector, foreign partners, and at the Federal, State, and local entities. We also provided thousands of individualized threat warnings and disseminated more than 100 public threat advisories by way of Joint Cybersecurity Advisories, FBI Liaison Alert System (“FLASH”) reports, Private Industry Notifications (“PINs”), and Public Service Announcements (“PSAs”)—many of which were jointly authored with other U.S. agencies and international partners.

We have been putting a lot of energy and resources into all of those partnerships, especially with the private sector. We are working hard to push important threat information to network defenders, but we have also been making it as easy as possible for the private sector to share important information with us. For example, we are emphasizing to the private sector how we keep our presence unobtrusive in the wake of a breach; how we protect information that companies, and universities share with us. We are also committed to providing useful feedback and improving coordination with our government partners so that we are speaking with one voice. But we need the private sector to do its part, too. We need the private sector to come forward to warn us—and warn us quickly—when they see malicious cyber activity. We also need the private sector to work with us when we warn them that they are being targeted. The recent examples of significant cyber incidents—SolarWinds, HAFNIUM, the pipeline incident—only emphasize what I have been saying for a long time: The Government cannot protect against cyber threats on its own. We need a whole-of-society approach that matches the scope of the danger. There is really no other option for defending a country where nearly all of our critical infrastructure, personal data, intellectual property, and network infrastructure sits in private hands.

In summary, the FBI is engaged in a myriad of efforts to combat cyber threats, from improving threat identification and information sharing inside and outside of the government to developing and retaining new talent, to examining the way we operate to disrupt and defeat these threats. We take all potential threats to public and private sector systems seriously and will continue to investigate and hold accountable those who pose a threat in cyberspace. The fiscal year 2023 Request includes an additional 137 positions (including 38 Special Agents, 15 Intelligence Analysts, and 84 Professional Staff) and \$52.0 million to enhance cyber information-sharing abilities and increase cyber tools and capacities. The Request also includes 9 positions and \$36.9 million to help protect internal FBI networks.

Foreign Influence

Our nation is confronting multifaceted foreign threats seeking to both influence our national policies and public opinion, and cause harm to our national dialogue and debate. The FBI and our interagency partners remain concerned about, and focused on, foreign malign influence operations—which include subversive, undeclared, coercive, and criminal actions used by foreign governments in their attempts to sway U.S. voters’ preferences and perspectives, shift U.S. policies, increase discord in the United States, and undermine the American people’s confidence in our democratic institutions and processes.

Foreign malign influence is not a new problem, but the interconnectedness of the modern world, combined with the anonymity of the Internet, have changed the nature of the threat and how the FBI and its partners must address it. Foreign malign influence operations have taken many forms and used many tactics over the years. Most widely reported these days are attempts by adversaries—hoping to reach a wide swath of Americans covertly from outside the United States—to amplify existing stories on social media in an attempt to discredit U.S. individuals and institutions.

The FBI is the lead Federal agency responsible for investigating foreign malign influence threats. Several years ago, we established the Foreign Influence Task Force (“FITF”) to identify and counteract foreign malign influence operations targeting the United States. The FITF is led by the Counterintelligence Division and is comprised of agents, analysts, and professional staff from the Counterintelligence, Cyber, Counterterrorism, and Criminal Investigative Divisions. It is specifically charged with identifying and combating foreign malign influence operations targeting democratic institutions and values inside the United States. In all instances, the FITF strives to protect democratic institutions; develop a common operating picture; raise adversaries’ costs; and reduce their overall asymmetric advantage.

The FITF brings the FBI’s national security and traditional criminal investigative expertise under one umbrella to prevent foreign influence in our elections. This better enables us to frame the threat, to identify connections across programs, to ag-

gressively investigate as appropriate, and—importantly—to be more agile. Coordinating closely with our partners and leveraging relationships we have developed in the technology sector, we had several instances where we were able to quickly relay threat indicators that those companies used to take swift action, blocking budding abuse of their platforms.

Following the 2018 midterm elections, we reviewed the threat and the effectiveness of our coordination and outreach. As a result of this review, we further expanded the scope of the FITF. Previously, our efforts to combat malign foreign influence focused solely on the threat posed by Russia. Utilizing lessons learned since 2018, the FITF widened its aperture to confront malign foreign operations of China, Iran, and other global adversaries. To address this expanding focus and wider set of adversaries and influence efforts, we have also added resources to maintain permanent “surge” capability on election and foreign influence threats.

These additional resources were also devoted to working with U.S. Government partners on two documents regarding the U.S. Government’s analysis of foreign efforts to influence or interfere with the 2020 Election. The main takeaway from both reports is there is no evidence—not through intelligence collection on the foreign actors themselves, not through physical security and cybersecurity monitoring of voting systems across the country, not through post-election audits, and not through any other means—that a foreign government or other actors compromised election infrastructure to manipulate election results.

The FBI will continue to investigate this threat leading up to the fiscal year 2022 mid-term election and will not stop working with our partners to impose costs on adversaries who have or are seeking to influence or interfere in our elections.

In addition, the domestic CI environment is more complex than ever, posing a continuous threat to U.S. national security and its economy by targeting strategic technologies, industries, sectors, and critical infrastructures. Historically, asymmetric CI threats involved foreign intelligence service officers seeking U.S. Government and U.S. Intelligence Community information. The FBI has observed foreign adversaries employing a wide range of nontraditional collection techniques, including the use of human collectors not affiliated with intelligence services, foreign investment in critical U.S. sectors, and infiltration of U.S. supply chains. The FBI continues to adjust its CI priorities and posture to address the evolving and multifaceted threat.

The fiscal year 2023 request includes an additional 88 positions (including 14 Special Agents, 35 Intelligence Analysts, and 39 Professional Staff) and \$34.1 million to help combat the threats posed by foreign, and potentially hostile, intelligence services and other foreign government actors.

CRIMINAL THREATS

We face many criminal threats, from complex white-collar fraud in the financial, healthcare, and housing sectors to transnational and regional organized criminal enterprises to violent crime and public corruption. Criminal organizations—domestic and international—and individual criminal activity represent a significant threat to our security and safety in communities across the Nation.

Violent Crime

Violent crimes and gang activities exact a high toll on individuals and communities. Many of today’s gangs are sophisticated and well organized and use violence to control neighborhoods, and boost their illegal money-making activities, which include robbery, drug and gun trafficking, fraud, extortion, and prostitution rings. These gangs do not limit their illegal activities to single jurisdictions or communities. The FBI is able to work across such lines, which is vital to the fight against violent crime in big cities and small towns across the Nation. Every day, FBI special agents work in partnership with Federal, State, local, and Tribal officers and deputies on joint task forces and individual investigations.

Like the FBI’s work combatting gangs, the FBI also investigates the most serious crimes in Indian Country—such as murder, child sexual and physical abuse, violent assaults, drug trafficking, public corruption, financial crimes, and Indian gaming violations. As you are aware, there are almost 600 federally recognized American Indian Tribes in the United States, and the FBI has Federal law enforcement responsibility on nearly 200 Indian reservations. This Federal jurisdiction is shared concurrently with the Bureau of Indian Affairs (“BIA”), Office of Justice Services; the FBI works very closely with BIA and other Federal, State, and Tribal partners across the United States on crimes in Indian Country.

Over the past year, the FBI’s work in Indian Country increased significantly due to the July 9, 2020, Supreme Court ruling in *McGirt v. Oklahoma*, which determined that the territorial boundaries of the Muscogee Creek Nation (“MCN”) would

fall under Federal Indian Country jurisdiction, expanding the FBI's responsibility for investigating felony offenses committed by or victimizing a Tribal member. The principles of the *McGirt* decision also apply to the status of the Cherokee, Chickasaw, Choctaw, Seminole, and Quapaw Tribal territories in Oklahoma. Combined, all six reservation territories encompass approximately 32,000 square miles, or 45 percent of the state of Oklahoma. The total population within the combined borders is roughly 1.9 million, of which approximately 420,000 are enrolled Tribal members.

This drastic increase in FBI jurisdiction poses significant and long-term operational and public safety risks given the challenges associated with the increased number of violent criminal cases now under Federal jurisdiction within Oklahoma's Indian Country territory. Since this decision, the FBI's Oklahoma City Field Office ("OC") has seen a drastic increase in the total number of Indian Country investigations and now has the FBI's largest investigative responsibility. Since the Federal court ruling in the *McGirt* case, the FBI's Oklahoma City field office, which previously investigated approximately 50 criminal cases a year involving Native Americans, has managed thousands of Indian Country cases, prioritizing cases involving the most violent offenders who pose the most serious risk to the public.

To effectively conduct these investigations, the FBI has conducted temporary duty ("TDY") rotations of Special Agents, Intelligence Analysts, Victim Specialists and other professional staff to the Muskogee and Tulsa RAs, the offices most impacted by the decision. The FBI has also expanded State, local, and Tribal participation on task forces to assist with response and investigative efforts. The U.S. Attorney's Offices in the Eastern District of Oklahoma and the Northern District of Oklahoma also increased their staffing. To support the U.S. Attorney's effective prosecution of these crimes, the FBI must have the capability to sustain an enhanced presence in FBI OC. As such, the fiscal year 2023 request includes an additional 76 positions (including 45 Special Agents, 1 Intelligence Analyst, and 30 professional staff) and \$22.5 million to support the surge in personnel. In addition, the fiscal year 2023 Request includes 15 positions (including 10 Special Agents and 5 professional staff) and \$5.3 million to investigate violence against women, specifically missing or murdered indigenous persons in the U.S. The Request also includes \$27.4 million to fulfill the Department of Justice's policy and launch a Body Worn Cameras program for FBI Special Agents across all FBI field offices.

Transnational Organized Crime ("TOC")

More than a decade ago, organized crime was characterized by hierarchical organizations, or families, that exerted influence over criminal activities in neighborhoods, cities, or States. But organized crime has changed dramatically. Today, international criminal enterprises run multi-national, multi-billion-dollar schemes from start to finish. Modern-day criminal enterprises are flat, fluid networks with global reach. While still engaged in many of the "traditional" organized crime activities of loan-sharking, extortion, and murder, modern criminal enterprises are targeting stock market fraud and manipulation, cyber-facilitated bank fraud and embezzlement, drug trafficking, identity theft, human trafficking, money laundering, alien smuggling, public corruption, weapons trafficking, extortion, kidnapping, and other illegal activities. TOC networks exploit legitimate institutions for critical financial and business services that enable the storage or transfer of illicit proceeds. Preventing and combating transnational organized crime demands a concentrated effort by the FBI and Federal, State, local, Tribal, and international partners.

While the FBI continues to share intelligence about criminal groups with our partners and combines resources and expertise to gain a full understanding of each group, the threat of transnational crime remains a significant and growing threat to national and international security with implications for public safety, public health, democratic institutions, and economic stability across the globe. TOC groups increasingly exploit jurisdictional boundaries to conduct their criminal activities overseas. Furthermore, they are expanding their use of emerging technology to traffic illicit drugs and contraband across international borders and into the U.S. To combat these efforts, the FBI's fiscal year 2023 Request includes an additional 3 Special Agent positions and \$5.5 million.

Crimes Against Children and Human Trafficking

It is unthinkable, but every year, thousands of children become victims of crimes, whether it is through kidnappings, violent attacks, sexual abuse, human trafficking, or online predators. The FBI is uniquely positioned to provide a rapid, proactive, and comprehensive response; identify, locate, and recover child victims; and strengthen relationships between the FBI and Federal, State, local, Tribal, and international law enforcement partners to identify, prioritize, investigate, and deter individuals and criminal networks from exploiting children.

But the FBI's ability to learn about and investigate child sexual exploitation is being threatened by the spread of lawless spaces online. For example, currently, there are at least 30 child pornography sites operating openly and notoriously on the Darknet, including the Tor network. Some of these child pornography sites are exclusively dedicated to the sexual abuse of infants and toddlers. The sites often expand rapidly, with one site obtaining 200,000 new members within its first four weeks of operation.

The FBI has several programs in place to arrest child predators and to recover missing and endangered children. To this end, the FBI funds or participates in a variety of endeavors, including our Innocence Lost National Initiative, Innocent Images National Initiative, Operation Cross Country, Child Abduction Rapid Deployment Teams, Victim Services, 80 Child Exploitation Task Forces, 53 International Violent Crimes Against Children Task Force Officers, as well as numerous community outreach programs to educate parents and children about safety measures they can follow.

The FBI combats this pernicious crime problem through investigations such as Operation Pacifier, which targeted the administrators and users of a highly sophisticated, Tor-based global enterprise dedicated to the sexual exploitation of children. This multi-year operation has led to the arrest of over 348 individuals based in the United States, the prosecution of 25 American child pornography producers and 51 American hands-on abusers, the rescue or identification of 55 American children, the arrest of 548 international individuals, and the identification or rescue of 296 children abroad.

Child Abduction Rapid Deployment Teams are ready response teams stationed across the country to quickly respond to abductions. Investigators bring to this issue the full array of forensic tools such as DNA analysis, trace evidence, impression evidence, and digital forensics. Through improved communications, law enforcement also has the ability to quickly share information with partners throughout the world, and these outreach programs play an integral role in prevention.

In addition to programs to combat child exploitation, the FBI also focuses efforts to stop human trafficking—a modern form of slavery. The majority of human trafficking victims recovered during FBI investigations are United States citizens, but traffickers are opportunists who will exploit any victim with a vulnerability. Victims of human trafficking are subjected to forced labor or sex trafficking, and the FBI is working hard with its partners to combat both forms.

The FBI works collaboratively with law enforcement partners to investigate and arrest human traffickers through Human Trafficking Task Forces nationwide. We take a victim-centered, trauma-informed approach to investigating these cases and strive to ensure the needs of victims are fully addressed at all stages. To accomplish this, the FBI works in conjunction with other law enforcement agencies and victim specialists on the local, State, Tribal, and Federal levels, as well as with a variety of vetted non-governmental organizations. Even after the arrest and conviction of human traffickers, the FBI often continues to work with partner agencies and organizations to assist victims in moving beyond their exploitation.

The FBI commends the committee's dedication to these efforts and appreciates the resources provided to combat these horrific acts. The fiscal year 2023 Request includes an additional 4 positions (2 Special Agents and 2 professional staff) and \$6.1 million to develop sophisticated tools to combat technology that allows child sex offenders to operate on the Dark Web, shielded from law enforcement action.

Civil Rights

The FBI remains dedicated to protecting the cherished freedoms of all Americans. Civil rights crimes are among the most egregious violations of Federal law—they include color of law violations, hate crimes, Freedom of Access to Clinic Entrances ("FACE") Act violations, and voter suppression. These crimes cause long-term, enduring damage to communities and economic infrastructure, compromise law enforcement and judicial system capabilities, and provoke widespread fear and trauma. We also support the work and cases of our local and State partners, as needed.

The investigation of hate crimes is the number one priority within the FBI's civil rights program due to the devastating effect these types of crimes can have not just on the victims and their families, but also on entire communities. A hate crime is a criminal offense against a person or property motivated in whole or in part by the individual's bias against a race, religion, disability, ethnic/national origin, sexual orientation, gender, or gender identity. While the First Amendment to the Constitution allows for the free expression of both offensive and hateful speech, this protection does not extend to criminal acts, even those done to express an idea or belief. The First Amendment also does not protect someone who issues a true threat to inflict physical harm on individuals or groups, or who intentionally solicits others to

commit unlawful acts of violence on his or her behalf. The FBI remains dedicated to investigating these types of crimes. In fact, the number of FBI hate crime investigations increased 63 percent between fiscal year 2019 and fiscal year 2020.

Beyond investigative work, the FBI recognizes proper and thorough handling of civil rights crimes does not begin the moment they are reported—it begins before they occur, with a solid and trusting relationship between the community and law enforcement. Each FBI field office will be taking specific actions to combat civil rights crimes in their area of responsibility (“AOR”) to encourage systemic change. These actions include identifying appropriate partner agencies and local groups to develop outreach relationships at all levels, especially those that will spark institutional change; increasing civil rights-focused working groups and task forces with State, local, private, public, and non-profit partners; and providing increased training for State and local agencies and community groups centered on color of law investigations and hate crimes statutes to provide education about civil rights violations, promote increased reporting of hate crimes, and rebuild community trust in law enforcement.

Furthermore, we are focused on working with our State and local partners to collectively do a better job of tracking and reporting hate crime and color of law violations to fully understand what is happening in our communities and how to stop it. Our ability to address significant national issues, such as the use of force and officer-involved shootings and jurisdictional increases in violent crime, depends on fuller statistical understanding of the underlying facts and circumstances. Some jurisdictions fail to report hate crime statistics, while others claim there are no hate crimes in their community—a fact that would be welcome, if true. We are dedicated to working vigorously with our State and local counterparts in every jurisdiction to better track and report hate crimes, in an accurate, timely, and publicly transparent manner.

The fiscal year 2023 request includes an additional 92 positions (including 33 Special Agents and 59 professional staff) and \$17.8 million to effectively address the recent increase in civil rights violations and proactively mitigate future incidents before they occur.

KEY CROSS-CUTTING CAPABILITIES AND CAPACITIES

Data Analytics and Technical Tools

As criminal and terrorist threats become more diverse and dangerous, the role of technology becomes increasingly important to our efforts. We are using technology to improve the way we collect, analyze, and share information. We have seen significant improvement in capabilities and capacities over the past decade; but keeping pace with technology remains a key concern for the future.

The volume of data collected during investigations continues to rapidly expand. For example, in the case of the 2017 Las Vegas shooting, the FBI recovered one petabyte of data. Insufficient network bandwidth and tools necessitated the need for 260 FBI personnel to work over 10 days to manually review 21,500 hours of video footage. These bandwidth and data challenges are not limited to major cases or large offices. It is not uncommon for FBI investigations to generate more than one terabyte of data per day, an amount that could normally take two days to transit FBI networks at current bandwidth levels. As a result, the FBI has made dedicated efforts to upgrade and transform its information technology platforms to meet the demands of current and future investigations. We have upgraded hundreds of circuits and have been able to significantly reduce the time it takes to send large data files. To keep pace in an era where investigations and analysis will increasingly be conducted at the petabyte scale, the FBI needs to continue to build networks that can move bulk data, modernize investigative data analysis, and reduce reliance on stand-alone, ad-hoc systems.

In fiscal year 2019, this Committee was instrumental in helping the FBI begin an IT modernization effort that included investing in network infrastructure, core data management for advanced analytics, and cybersecurity. Through this initiative, we have made significant progress in reducing current IT limitations hindering operational capacity and diminishing substantial security risks. However, more must be done.

FBI special agents and intelligence analysts need the best technological tools available to be responsive to the advanced and evolving threats that face our nation. Enterprise information technology must be designed so that it provides information to operational employees rather than forcing employees to conform to the tools available. IT equipment must be reliable and accessible, thus decreasing the time between information collection and dissemination. Therefore, the fiscal year 2023 Request includes an additional \$17 million to ensure the FBI is sufficiently investing

in its enterprise infrastructure to access, manage, transport, protect, and evaluate information to ensure mission-essential intelligence is reaching FBI investigators and key partners in sufficient time to comprehensively and strategically address threats.

CONCLUSION

Finally, the strength of any organization is its people. The threats we face as a nation have never been greater or more diverse and the expectations placed on the FBI have never been higher. Our fellow citizens look to the FBI to protect the United States from all of those threats, and the men and women of the FBI continue to meet and exceed those expectations, every day. I want to thank them for their dedicated service.

Chair Shaheen, Ranking Member Moran, and Members of the Subcommittee, thank you for the opportunity to testify today. I am happy to answer any questions you might have.

Senator SHAHEEN. Thank you very much, Director.

Let me just announce at the beginning that we will have 5-minute questioning rounds. I will call on people in order of arrival, and all of the questioners will be in person, we will not have anyone on WebEx.

I will begin the questions. And I know it is very recent, but are there any updates that you can give us from Uvalde for what we have found out about the shooter's motivation? I know the reports have been that he acted alone, as you pointed out, but is there any other information that you can share with this Committee?

Mr. WRAY. There is really, unfortunately, it is such a fluid situation right now, and I do really want to respect the fact that the Texas DPS has the lead on the investigation, so I don't want to get out in front of them right now. My experience teaches me that in these incidents the facts change as we understand them, often quite rapidly in the first few days.

So with respect, there is not much I can add right now, beyond what has already been reported in the press.

Senator SHAHEEN. You said in your testimony that one of the biggest threats is—and concerns is the threat of lone actors who attack people they don't know indiscriminately. Do we have—are there statistics over the years that show that there is been an increasing percentage of those kinds of crimes? And do we have any idea, any research into what is motivating those kinds of lone individuals?

Mr. WRAY. So on the first part, on the statistical side, I don't know that I could quote you statistics right here, but I can definitely tell you that we at the FBI, and I know I, from my first few months as FBI Director, have been highlighting this threat, the lone actors, or effectively lone actors using readily accessible weapons, attacking what is often referred to as soft targets, which are essentially, as I said in my opening, regular, everyday people wherever they are doing their lives.

As to what motivates them, that is all over the map. I mean it is everything from the racially motivated violent extremists, to different sorts of anarchists, and militia violent extremists, to home-grown violent extremists, which is a term we use to sort of distinguish people who are here already in the U.S. but who are inspired by foreign terrorist organizations, like ISIS, like al-Qaeda.

And then increasingly we are seeing people with this kind of weird, hodgepodge blend of ideologies. The old-school world of kind

of people with some purity of radical ideology then turning to violence is often giving way to people who have kind of a jumble of mixed up ideas. And you know, we have seen cases where somebody, 1 month is saying they are an ISIS supporter, and then the next month they say they are a white supremacist.

We had a case in Minneapolis where a bunch of guys that described themselves as Boogaloo Boys, then ended up deciding to provide material support to Hamas.

I look at the El Paso shooter in the Walmart there, and if you look at his so-called manifesto, it is all over the place. So we are having more and more challenges trying to unpack what are often sort of incoherent belief systems, combined with kind of personal grievances.

Senator SHAHEEN. And there is no doubt, as you pointed out, that violent crime is increasing. I see that in my Home State of New Hampshire, and it seems like over the last couple of years it has been a reaction to COVID, to the opioid epidemic, to factors obviously, the availability of weapons is another factor. Are there other things that we are thinking have happened over the last couple of years that have really contributed to the violent crime that we are seeing today?

Mr. WRAY. Well I would agree with the first, the several that you listed, I would add to that that we are seeing, for a variety of reasons, in some places way too many of repeat offenders, or dangerous offenders ending up back out on the street, certain prosecution practices or sentences that don't adequately keep somebody behind bars when they really need to be.

And I would say that a lot of police departments in this country, if you talk to most chiefs and sheriffs, which I as I said, I am doing just about every week, most of them are really struggling with recruiting and retention, and that certainly doesn't help. So we need to support the men and women of law enforcement because that is who stands between us and the violent criminal element.

Senator SHAHEEN. Thank you. Senator Moran.

Senator MORAN. Chairman, thank you.

Director Wray, this subcommittee has invested hundreds of millions of dollars in Stop School Violence Act since its enactment in 2018. As you would know these programs support school resource officers, hardening of our schools, anonymous reporting hotlines, threat assessment programs, and training for school personnel.

Your team at the FBI has some of the best minds in the world when it comes to emergency situations. Have you heard from your experts? What have you heard from your experts about the most effective ways to prevent and respond to these terrible events?

Mr. WRAY. So I think what I would say is, we are doing a number of things on this front to try to help harden, if you will, and I hate the fact that we even have to talk about hardening our schools, but it is a reality that they have become targets. So we, in addition to all of our investigative work, our bread and butter, you know, the cases we are bringing of different sorts, violent crime, terrorism crime, gang crime, et cetera, we provide all sorts of support through training, and capacity building.

So we have trained I think something like 110,000 different law enforcement officers on active shooter response, we have put out a

whole bunch of different PSAs, and instructional videos, to schools, to school resource officers, to school administrators, to houses of worship, to communities, as well as to law enforcement, to help them better defend. And there is a host of information in there.

In addition to that we are, obviously, providing forensic support through our lab, we are doing shooting incident reconstruction, I mentioned in my opening statement. In Uvalde we have Evidence Response. That is often one of the things that we are quickly asked to provide by our State and local partners. But that is of course after the fact. And what we are trying to do is figure out how to better get in front of it.

Senator MORAN. We would welcome your advice and suggestions. Last year in this room you and I spoke at least briefly about counterintelligence threats along the southern border. Two weeks earlier I had the opportunity to question the Attorney General about the cartels' activities there.

The purpose of those questions a year ago were to address what I had learned on my visits to McClelland, Texas, that last year, just previous to those hearings, which is while immigration dominates the conversation about the southern border, there are also grave national security threats there.

This was confirmed just yesterday when an FBI search warrant unsealed in Ohio, revealed that an assassination plot against former President George W. Bush included plans to smuggle assassins into the United States from Mexico.

According to press reports the suspect, an ISIS operative was recording—was recorded claiming to have just smuggled two individuals associated with Hezbollah, into the United States.

Yesterday's events compel me to start again on this topic that we discussed last year: What is the FBI's assessment of our national security threats along our border, southern border in particular, but borders generally? And what can you tell us in this setting about the number of known or suspected terrorists, or special interest aliens who have crossed into the United States from Mexico?

Mr. WRAY. Well, certainly border security is a major, major challenge that cuts across a whole host of the programs that we serve, and the national security piece of it that you are highlighting is one part of it. Obviously, I am very proud of the work that our folks did on the Ohio case that you mentioned. We obviously worked closely with Secret Service on that to coordinate that, to make sure that it was all done in a way that prevented any true threat from coming to fruition.

Certainly any porous point of entry is a potential vulnerability that bad actors, of all sorts, including national security threats, can seek to exploit. And I have been down to all of our field offices that have border crossings as part of their area of responsibility, I have had CBP folks show me around so I can see firsthand what they are dealing with, and they have a heck of a challenge on their hands.

And we, through our Joint Terrorism Task Forces, in particular, work very closely with our DHS partners to try to bring the counterterrorism dimension to the threat. I think that is probably all I would be able to say about it in an open hearing, but certainly you are right to be focused on it as an issue of concern.

Senator MORAN. Perhaps we will have the chance to have a closed session as well.

Chair, thank you.

Senator SHAHEEN. Thank you Senator Moran. Senator Kennedy.

Senator KENNEDY. Mr. Director, I remember when you were nominated and confirmed, boy, was I glad to see you. I believe then and I believe now that you are not a politician, I think your predecessor was. And he and others did immeasurable damage to one of the most important institutions in American Government.

Because I believe, as you do, that in addition to the DEA, the FBI is probably the premiere law enforcement agency in all of human history, and it should be above politics. For the record who is Michael Sussman?

Mr. WRAY. Well, Michael Sussman is a lawyer who is currently involved in a trial by the Durham Special Counsel Team.

Senator KENNEDY. His law firm, Perkins Coie, was counsel to Secretary Hillary Clinton's campaign, right?

Mr. WRAY. Senator, I am mindful, as I think you would expect me to be, that the case is currently in the middle of trial.

Senator KENNEDY. I know—

Mr. WRAY. And I am—well we have agents, and I have assigned agents to work on the Durham Team. I want to be really, really careful about not getting into a discussion about a case that is currently in front of a very independent and strong-willed Federal judge, and a jury right now, so.

Senator KENNEDY. Well, Mr. Sussman was counsel to Secretary Clinton's campaign, and we also know that he was the source of the information provided to the FBI that the Trump campaign had a back channel communication to Russia, which we now know wasn't true.

Is it true that Michael Sussman, a partner at Perkins Coie, counsel to the Hillary Clinton campaign, and the source of this information about the allegations regarding the Trump campaign; is it true that he had a special—he had a badge that gave—an FBI headquarters badge that gave him special privileges in entering the FBI Building?

Senator KENNEDY. Well, Senator, what I would say to you is much in keeping with the gracious comments you made at the beginning about my commitment to trying to make sure I do this job the right way, that includes making sure that with a case that is currently in the middle of trial and an investigation being run by Mr. Durham, that we are actively helping him with, I just—I don't think I can really get into a discussion of those topics at the moment.

Senator KENNEDY. When the FBI opened the file, to investigate Mr. Sussman's allegations; is it true that the FBI concealed Mr. Sussman's identity?

Mr. WRAY. Again, I completely understand your interest in the question, and then I respect it, and I am just hope you will respect the fact that because I have got agents working with Mr. Durham on the case, and they are in the middle of trial right now I just don't think I can get into a discussion of that here.

Senator KENNEDY. When the FBI opened its file to investigate the allegations that Mr. Sussman, on behalf of the Clinton cam-

paigned made, now known to be untrue, about these back channel communications between the Trump campaign and Russia. When the FBI opened the file is it true that the file said the source of this information was not Mr. Sussman but the Department of Justice?

Mr. WRAY. Again, the same response. These are the very kinds of questions that are being litigated in front of the jury and Judge Cooper, right now.

Senator SHAHEEN. Senator Kennedy, I would just urge you to follow a separate line of questioning, as Director Wray has said he is not going to answer questions——

Senator KENNEDY. I appreciate that, Madam Chair.

Senator SHAHEEN [continuing]. Relative to this case that is being litigated.

Senator KENNEDY. I appreciate that Madam Chair, and, you know, how much I respect you. I want my time back by the way.

Senator SHAHEEN. You can have those 3 seconds that I have.

Senator KENNEDY. No. You talked for about 10 seconds.

Senator SHAHEEN. I am happy to give you those 10 seconds.

Senator KENNEDY. Thank you, Madam Chair. And I appreciate your help with my questions, but I can handle it myself.

Chris, at some point you are going to have to address this. And I understand you don't want to address it in the middle of a prosecution, but there are millions of Americans that look at this and think, I am not saying they are correct, that the FBI has become a political organization. And at some point you are going to have to address that.

The institution is just too important, and some of my colleagues may not want to talk about this, but we are going to have to talk about it at some point.

Mr. WRAY. Well, so first off, I totally appreciate your concern about our institution. And I will tell you that what I can speak to now is that I have implemented all sorts of reforms that I have spoken about quite publicly, over 40-plus corrective measures that deal with a lot of the same issues that are at the heart of the underlying investigation.

I completely turned over the entire leadership team in the FBI. We have taken disciplinary action where we could, but we have also been in close cooperation and coordination with Mr. Durham, who is the special counsel, and I think that is the best thing I can do to help address the concerns you are talking about.

As to the FBI's reputation, I will tell you, having been to all 56 of our field offices, now almost all of them twice. Having been New Orleans just earlier this month, and Baton Rouge just shortly before that, that what I find in talking to Americans out in the field, law enforcement partners, business leaders, community leaders, victims, prosecutors, families, is a widespread, even resounding appreciation, and respect for the men and women of the FBI.

And you will be, I hope, relieved to know that in Louisiana over the last 3 years, the last 2½ years, the number of people in Louisiana applying to be special agents of the FBI has doubled what it was in the first few years when I took over. And so I think that speaks very well of the good citizens of Louisiana and their appreciation and view of the FBI's credibility again——

Senator KENNEDY. And I thank you for coming, Chris. And I thank you for all the hard work you have done, but I am going to stand by my comments. I think at the right time you are going to have to address this. And assure the American people.

Senator SHAHEEN. Senator Hagerty.

Senator KENNEDY. That the rot is gone. Thank you. Thanks for being here, Chris.

Senator HAGERTY. Thank you, Chair Shaheen.

And Director Wray, it is good to see you here again. I would like to turn my comments to something very disturbing that is happening right now with respect to the Supreme Court justices, and what we have seen in recent weeks are protests at the homes of Supreme Court justices and their families, something that I think that should be completely out of bounds. It also may be illegal.

Federal law prohibits protesting at the residence of a judge with the intent of influencing the judge, and many of the protesters are doing just that. Protesting outside judges' homes, attempting to intimidate them, I think, and to changing their ruling on the Dobbs case.

So Director Wray, is the FBI in any way investigating these protesters as a potential crime?

Mr. WRAY. So I don't want to get into any particular predicated assessment or investigation that we may have ongoing right now. I will say that we are working very closely with the U.S. Marshals, who, as you may know, are now providing round-the-clock security at the justices homes, and with the Supreme Court Marshal and Supreme Court Police, together, they have responsibility for protection of the judges themselves and their facilities.

But I will tell you this, my view, and my instructions to the FBI are: That there is a right way and a wrong way in our system, and under the Constitution, to express what you are upset about, and who you are upset with. And violence and threats of violence, no matter what you are upset about, or who you are upset with, is not the way to go.

Senator HAGERTY. I couldn't agree with you more.

Mr. WRAY. We will pursue all lawful and predicated investigations we can to ensure that.

Senator HAGERTY. The U.S. Supreme Court Police recently reported, I am going to use their quote, "A significant increase in violent threats", to your concern, against Supreme Court justices and the Supreme Court building. And as FBI Director it sounds, and I just want you to confirm, that you have received information that the Supreme Court's members are facing elevated threats that do warrant increased security, intelligence, and intelligence resources.

Mr. WRAY. As I have said, we are in close contact with them, receiving tips and leads, and things like that from them, and without, again, weighing in on what in the way of assessments and investigations we have open. But my charge to our people is that we are going to aggressively pursue violence and threats of violence against public officials, including against judges.

Senator HAGERTY. I appreciate that, Director Wray, and I think I share your concerns, and I think that many on our Committee I am working here on our side to make certain that, along with the extra help that the U.S. Marshals are providing right now, that if

there is any shortfall in monetary resources needed, particularly in the very near term, to make certain that the justices and their families are properly protected, that we address that, because heaven forbid, these threats turn into, or manifest themselves into the violence, that I think concerns us both.

I would like to turn to another issue now, and that is at our southern border. Specifically the case of a Colombian national named, Isnardo Garcia-Amado, who recently crossed our southern border and who was flagged by the FBI Terrorist Screening Center. He was released by Border Patrol agents into the United States on April the 18.

Then on April the 21, 3 days after his release, the FBI alerted the Department of Homeland Security that this man was on the terrorist watch list. You would think that DHS would have then immediately arrested this person, yet, despite knowing that a suspected terrorist had been released in the United States, the leadership of the Department of Homeland Security didn't even authorize ICE to arrest him until two weeks later. He was in Florida by that time.

So this Colombian national was caught by DHS, and then released into the United States before the FBI determined that he is on the terrorist watch list. Is that your understanding as well?

Mr. WRAY. I will confess, Senator, that I am not sure I am familiar with this specific case. It has a vague ring of familiarity from something I got briefed on, but I think I would have to circle back to you, which I am happy to do.

Senator HAGERTY. I would appreciate that. You can see my concern though. And I guess my broader question is, in your view, if this were to happen does that jeopardize American safety to catch and release border crosses before the FBI has had the opportunity to make that determination, as to whether or not they are terrorists?

Mr. WRAY. Well, certainly I think we need to have close lash up between FBI agents on the Joint Terrorism Task Forces, especially in the border States, with their DHS counterparts, who have a very tough job. Those folks, CBP folks down on the line there that I have met with, and they usually have people designated on our task forces which is designed, in part, to prevent some of the slippage that might—

Senator HAGERTY. Now, I would say the slippage is a great concern. And even further concerning is DHS taking 2 weeks, after receiving information from the FBI, to actually notify to arrest a person. I mean does that concern you as well; is a slippage that could, again, endanger American safety?

Mr. WRAY. Well, I certainly understand the concern. I think I would need to kind of drill in further on the facts to make sure I have got the full context.

Senator HAGERTY. Okay. I would appreciate that. And also when you come back to me if you could let me know how many border crossers have been apprehended, that are on the national terrorist list. I am deeply concerned about this.

When I went to the border myself, a couple of—about 6 weeks ago, I was informed that 157 different nationalities have been apprehended at our southern border in the past year. That is a deep,

deep national security concern, and I would very much appreciate your following up with me in terms of, what is known, and also if you have any estimates on what is not known, because I think that is an even greater concern, are those people that are coming here using the border, as Senator Moran talked about, for some very nefarious purposes. Thank you.

Thank you, Madam Chair.

Senator SHAHEEN. Thank you, Senator Hagerty.

Senator Capito.

Senator MOORE CAPITO. Thank you, Madam Chair. And thank you, Director, for being with us today. We are going to be asked to consider legislation, I believe, tomorrow, regarding domestic terrorism, and much of your statement, written statement was devoted to the topic of domestic terrorism. The DOJ has a unit dedicated to anti-domestic terrorism efforts presently, and you testified last year that your agency has significantly boosted resources directed towards these initiatives.

Can you elaborate on the FBI's existing initiatives on domestic violence or domestic terrorism prevention and investigation? And how you are already working with existing agencies and departments? And I would say that one of the fears that I would have with this legislation before us, is that we are creating more stovepipes of information that, in reality, could slow the flow of information, and accuracy of that. So I would like to hear your comments on that, please.

Mr. WRAY. Well, I would probably decline to weigh in on the legislation itself, as is our usual practice.

Senator MOORE CAPITO. I figured that. Okay.

Mr. WRAY. But as to—you are right, that we are doing a whole lot on domestic terrorism already. We have, I think, over the last few years, and this really started, I would say in summer of 2019, and kind of, has just continued since then.

We have, I think, more than doubled our domestic terrorism caseload, we have—I think we are now up to about 2,700 domestic terrorism investigations they cover the waterfront of different types. We have also created a Domestic Terrorism-Hate Crimes Fusion Cell to bring both those kinds of expertise together. We have had some very significant plots disrupted using those efforts, we have our Joint Terrorism Task Forces in all 56 field offices.

Senator MOORE CAPITO. Right.

Mr. WRAY. That is about 4,400, or so, investigators, they are working on it. But I will also say, in our budget request before the subcommittee, we are asking for more resources for domestic terrorism. That is separate apart from any legislative effort, just in our fiscal year 2023 request.

Senator MOORE CAPITO. Where would you say those extra dollars, which parts of your investigative domestic terrorism arm would you see need to be increased, budgetarily? Or is it just an overall?

Mr. WRAY. Well, I would say it is two things. It is investigators and tools, technical tools, you know, increasingly in the domestic terrorism space, much like in other criminal arenas, the terrorists are reverting to use of technology that makes it harder and harder to connect the dots. And so that is a part of it.

But the other thing is we have, in the short run, had to sort of surge resources to handle that domestic terrorism caseload, and as I mentioned in my opening statement, I do not think we are in a position where any of these other threats, the traditional violent crime threat that I hear about from chiefs and sheriffs all the time, the international terrorism threat, that has absolutely not gone away.

Senator MOORE CAPITO. Right.

Mr. WRAY. That had slightly abated during COVID, the foreign terrorist threat, but especially in the wake of the withdrawal in Afghanistan, I think we, the FBI, are going to have a bigger and bigger role on the foreign terrorist threat.

So partly, our budget request is designed to make sure that the sort of duct tape approach that we have been using for the last 18 months to 2 years, is not the way we have to continue going forward. So we can have a longer standing commitment to the domestic terrorism load.

Senator MOORE CAPITO. So a more robust and wider reach.

Mr. WRAY. Right.

Senator MOORE CAPITO. And that soon you are taking from something else to—

Mr. WRAY. Correct.

Senator MOORE CAPITO [continuing]. To put that into your—I am curious to know. I think the American public would like to know. I have no idea what the answer to this question is, I don't—I think I know. The tragedy in Texas, what role does the FBI play in this? Or do you play a role in this?

Mr. WRAY. So we are in a support role, we are—so Texas DPS, the Texas State Law Enforcement Agency, which is a terrific partner of ours; and the Uvalde Police Department, they have the lead, we are in support role. Now, our support takes all sorts of forms so we have investigative resources, analytical resources, we have lab personnel doing evidence response.

Senator MOORE CAPITO. Right; mm-hmm.

Director Wray: We have other kinds of forensic response, we have Victim Services professionals, as I mentioned to the Chair, who are helping the families of the victims. We have crisis management teams, behavioral analysis teams, so we have a whole host of things down there, but we—and so while it is a formidable footprint and engine, it is, at the end of the day, in support of our great State and local partners.

Senator MOORE CAPITO. Right. Well, thank you for that, and thank you for those agents that are working in that support. This is very difficult I am sure, for them as well.

And I would just like to add just very briefly the local offices that that I hear from my Charleston, West Virginia folks, I just want to thank them, and you, because they are very tied to us. I am sure all of us have heard from our local offices in this time of sort of uneasiness, and I just really appreciate the efforts at which they go to, to include me, and my family, and others that might be in precarious situation from time to time. So please extend my great gratitude for that.

Mr. WRAY. Thank you.

Senator MOORE CAPITO. Thank you.

Senator SHAHEEN. Thank you, Senator Capito.

I am going to turn the gavel over to Senator Collins, to ask her questions while I go vote, and either Senator Moran or I will be back shortly.

Senator COLLINS. Thank you very much, Madam Chair. You know how much I like having the gavel.

[Laughter.]

Senator COLLINS. Director Wray, thank you first of all for being here today. Your agency is so important in so many areas, and so many ways. All of us are clearly horrified by the vicious killings that occurred yesterday.

And I want to ask you about one approach that has been taken, and get your judgment about it. The State of Maine is among some States that have enacted statutes that we call either a red- or yellow-flag law.

And the law in Maine which was developed in consultation with a wide range of groups; essentially allows the court to have the police temporarily confiscate firearms from someone who is deemed to be a danger to either him or herself, or to others.

Importantly, the Maine law includes due process rights, and a medical assessment. So it can't be just some neighbor's opinion, or even a family member's opinion, there has to be a medical assessment as well. And that is to ensure that the concerns are well founded, and that Second Amendment rights for law-abiding citizens are protected.

In your experience, how successful have these relatively new red-flag and yellow-flag laws been?

Mr. WRAY. It is a very good question. I would say, I am not sure that I have seen any kind of rigorous assessment, overall, of the effectiveness of the so-called red-flag laws. There are other names for it, as you alluded to. I know that DOJ has recently published a model statute for States to consider.

I think what I could say to you is that it has been our experience that with a whole wide variety of shooter situations, whether it is a terrorist type situation, or more traditional violent criminal situation, most of the time you see that there was someone who knew the person, or came into contact with the person, who saw some change in behavior that alarmed them. And in the situations where law enforcement has been successful at preventing an attack it is almost always thanks to somebody like that coming forward.

And whether it is done through a protective order of the sort—a protection order of the sort, you are describing, or whether it is just because they contacted law enforcement, and law enforcement was able to act, that is the key. And the ones that haven't been prevented an awful lot of the time, it turns out there was somebody who maybe didn't know to contact law enforcement, or was afraid to contact law enforcement, for one reason or another.

And you hear all the time the saying, "If you see something, say something." And most people when they hear that, they picture the unattended backpack, you know, in the greyhound bus terminal, or something. But what we really need right now in this country is, if you see something about somebody, people to say something.

And if they do, whether it is through statutes like the one in Maine, or through some other mechanism, that can be quite effec-

tive, and certainly, if more States were to adopt these laws we would, on our end, through NICS and NCIC have to, you know, make arrangements to be able to then have that information in the relevant databases to be able to help prevent them from getting their hands on a weapon. But certainly it is something we could look at.

Senator COLLINS. Thank you. Another proposal that I have long supported would strengthen Federal law by making it easier for prosecutors to go after gun traffickers and straw purchasers. And let me describe what I have seen and heard about in the State of Maine from law enforcement officers. Gangs and drug dealers target addicts who have clean records, so they then ask them to purchase guns for them, and they swap heroin or other drugs for the guns. These guns are then used to commit horrific crimes in our communities.

Often, far from Maine, there was a gang in Connecticut that was known for coming to Maine enlisting addicts to buy guns for them, because the addicts had clean records and could pass the background check. So this Congress, I once again joined my colleague, Senator Leahy, in reintroducing the Stop Illegal Trafficking in Firearms Act, and we would create a new criminal offense for straw purchasing.

Right now, it is essentially treated as a paperwork violation, a slap on the wrist. Instead, we would make these crimes punishable by time behind bars.

What is your opinion of closing that straw purchase, or loophole that allows for criminal gangs to access guns when they could not buy them themselves, because of their own criminal records?

Mr. WRAY. Well, I think I would have to study the legislation more closely to give you a more informed assessment of that. I will tell you that even back to when I was a line prosecutor I used to prosecute a lot of these same straw purchaser cases and typically, as you say, they are prosecuted as false statements cases, you know, when somebody essentially lies on the 4473 Form.

And just as you say, what you see over and overall, is violent gang members who enlist people who are down on their luck, for one reason or another, either they are, as you say, they are addicts, or they are financially in distress and so that the money that comes with it, when they get paid to be the straw purchaser, they take advantage of people who are down their luck that way.

I think there might be a difference in the culpability level for the straw purchaser, versus the gang member who enlists them, and that is when we—when I tried those cases, and prosecuted those cases, that was sort of the approach we took.

But I think you are right to be focused on the straw purchaser issue as an important ingredient to preventing guns from getting in the hands of people who are, after all, prohibited under existing law from having them.

Senator COLLINS. Right. I actually feel bad for many of the straw purchasers, because they frequently have serious substance abuse problems, and they are being manipulated, and used by these gang members. But that—that is a real problem.

Let me follow up on the drug issue, and as we know America has set a terrible new record in the number of drug overdoses in the

past year. It is 104,000 Americans died of drug overdoses. In Maine, an estimated 636 people died of drug overdoses in 2021. That is a 23 percent increase from the previous year. But what, to me, is even—or equally chilling, is the fact that that is actually only a small portion of the number of overdoses.

The number of overdoses in Maine that we know about was nearly 9,000. Fortunately, the rest of them were saved. I talked to Attorney General Garland about this issue, and he pointed out that the FBI, along with other DOJ components, is playing an important role in fighting the large-scale drug trafficking organizations that are bringing drugs into this country.

I am concerned about what is happening at the southern border, based on my discussion with Border Control agents. Has the government's inability to secure the southern border led to more drugs entering the United States?

Mr. WRAY. Well, certainly the influx of drugs across the southern border is a very important fuel, not just to addiction in this country, but to violence in this country; and that is one of the parts that the FBI plays a pretty big role in. You have transnational criminal organizations in Mexico enlisting the help of gangs, and other organizations here in the U.S., to distribute the drugs, and there is violence over turf, over distribution routes, et cetera.

I know that when I have been down to the border and talked to the CBP folks there, and to our field offices that have responsibility in that area, the quantity of the seizures that they routinely are engaged in make the seizures in other parts of the country look really quite small by comparison. I mean it is just another day in the life for a lot of them. And so it is striking.

And I think you are correct that the overdose death statistic or the overdose statistic itself, in some ways underestimates the scope of the problem, in part, because Narcan, happily, has become so much more widely available, but that, in turn, ends up almost masking the problem.

Senator COLLINS. Exactly.

Mr. WRAY. So the effectiveness of first response, which is a good thing, is actually maybe misleading some into thinking that the problem is not as bad as it really is. And it is really an epidemic.

Senator COLLINS. And finally just a quick question. You were talking about domestic terrorism with Senator Capito. Would you agree that the sources of domestic terrorism include groups and ideologies on the left, on the right, from overseas, such as ISIS? In other words, there is not just one ideological source of domestic terrorism; is there?

Mr. WRAY. Certainly, when we look at domestic terrorism, we focus on the violence, and the violence—and we are sort of ideology agnostic, if you will. And the terrorism, the domestic terrorism threat we see covers the waterfront from people—we don't use terms like "left" and "right", but we see the racially motivated violent extremists, we see militia violence, and anarchist violence, we see people with this kind of salad bar of ideologies that don't fit into any category.

And then of course on the—we tend to bucket it under the international terrorism side, the ISIS-inspired folks who are here, they are not sent here by ISIS, but they are here, and they are

radicalized online. That is a huge category, and the plot that we disrupted, that was talked about earlier, involving the attempt to kill former President Bush is a good example of that threat.

So I think—I understand the focus on ideology, but for us the focus has to be on the violence to make sure that we are not getting—we are not missing something in that regard.

Senator COLLINS. And that is where it should be. Thank you very much.

Senator SHAHEEN. Thank you, Senator Collins. Senator Braun.

Senator BRAUN. Thank you Madam Chair.

I can't remember the last time we have had the chance to speak, but good to have you back again.

I want to go back to, and I think I asked Mr. Garland—or you know, somebody else this question, but when you go back to 2020, the summer of it, there was a lot of crime in our cities, and of course what I have been hearing mostly about, and it would be the arrests that we made associated with January 6.

So can you give me some kind of accounting in terms of all the various incidents that occurred across our big cities that had, you know, the crime in the streets, where I think we actually ended up with more people killed, you know, lots of downtown businesses, you know, burned and damaged.

Have we been as diligent there, as we have on the January 6 issue, and just give me a general accounting where I know that we have arrested over 700 individuals associated with it. What have we accomplished from what was, you know, something maybe even broader in scope in terms of damage and lives lost?

Mr. WRAY. So I don't have exact numbers for you here, but what I will tell you is that the violence amid all this—amidst all the civil unrest over the summer of 2020, we used all 56 of our field offices, we used our Joint Terrorism Task Forces, and all 56 of our field offices there were hundreds of investigations, hundreds of arrests.

Now, I should pause on that last part, because often there is as you know, no domestic terrorism offense, Federal domestic terrorism offense, so a lot of times what we on our Joint Terrorism Task Forces, which have State and local officers assigned to them, part of the reason for that is that sometimes the most effective charge is a State charge.

So a lot of times the Federal investigations from some of the activity over the summer resulted ultimately in some State charge, but we had any number of cases involving Molotov cocktails, you know, burning and firebombing, you know, police cars, things like that, and we continue—they don't get a lot of attention in the press—but we continue to develop cases and bring charges still from some of the activity back then. So we have not taken our foot off the gas on those cases.

Senator BRAUN. You know, I didn't know if you have that information. I would like to know with a little more specificity, and get back to the office later, in terms of what that kind of comparison would be in terms of arrests, and convictions, based on January 6, versus the whole spectrum of what occurred back in the summer of 2020, if you would.

Mr. WRAY. I will see what we can get you on that.

Senator BRAUN. Okay.

Mr. WRAY. Thank you.

Senator BRAUN. You know, tragically we have had another shooting occur. I am interested in that mental health component. I am interested in whether it is racially motivated, whether it is just somebody that is out to create havoc, like just occurred. What are we doing that takes information that in many cases is broadcast, as aggressively as being in a manifesto?

Maybe not that direct, but your—we pick up always after the fact that there has been some telegraphing of what might happen. So are we doing what you think needs to be done to kind of figure out what might occur when we find out after the fact that there has generally been information out there from as obvious as a manifesto, to maybe a lot of indications that this could happen? Are you happy with what law enforcement is doing across the board, especially the FBI?

Mr. WRAY. Well, I am very proud of the hard work of the men and women of law enforcement, not just the FBI, but our State and local partners, who bear the primary burden for a lot of what you are talking about. I will say that there is no shortage of hateful information out there, on the Internet, in social media in different forms, and we, the FBI, don't just go out and kind of monitor social media sort of passively looking for stuff, we rely on proper predication, and then pursue it.

So what that really gets back to, is the exchange that I had with Senator Collins, about the importance of having the public come forward. You know, I use the saying that used to be applied in a different context, "if you see something say something". What we need, what law enforcement needs, is the public, neighbors, school teachers, relatives, friends, classmates, whoever, the people who are likely to see somebody's behavior online, and see it change from just being somebody just blowing off steam to taking a bit of a turn.

And that is often the same person who would know: This person has not only just taken a really dark turn, but this person I know, you know, this member of the public, has weapons in his or her home.

Senator BRAUN. Yes.

Director Wray: And calling law enforcement. And when that happens, that is when we are most effective. And we need to try to encourage more and more of that, which is why our NTOC, our public access line, if you will, gets millions of tips a year, and we are frantically trying to push those out, when we get them before—

Senator BRAUN. I think whatever observation tools you use, whatever algorithms might be in place but, it seems it is kind of disappointing that so often we hear that that might have—that was there, and we just needed to do a better job of ferreting it out.

May I have just another few seconds for a quick question?

Senator SHAHEEN. Go ahead.

Senator BRAUN. I was on a School Board for 10 years. I could not get in my school as a School Board member because we had a security system in place that had to allow you in. And I think we had a resource officer there in Texas at that school. What is the FBI's viewpoint on taking soft targets, like a school, to where seemingly

we rotate into a tragedy too often, to where having that in place? Why don't we have more of it?

And we had this in place in Indiana in my own school district back 10 to 12 years ago? Why aren't we doing more there?

Mr. WRAY. Well I think that a lot of those are judgments by individual school systems, and School Boards that may be based on resources, other things. I do know that we, on the FBI side, have tried to help heighten the awareness of things that they can do to better harden the schools. We have put out PSAs, videos about—to better harden the school environment.

There is a lot of thinking that has improved in law enforcement and security over the last 10 or 15 years, about the best way to protect an otherwise soft target, like a school. And so we are really trying to get the word out so that they can—they have the information they need to take some of those actions. And so as to why an individual school may or may not have chosen a particular security measure; that probably depends on the school system.

Senator BRAUN. Thank you.

Mr. WRAY. Thank you.

Senator SHAHEEN. Thank you, Senator Braun. Senator Graham.

Senator GRAHAM. Thank you, Director, very much for coming. The budget request is how much percent over last year?

Mr. WRAY. I don't have the percentage for you right now. I know that we didn't get quite what we had hoped for last year—

Senator GRAHAM. Ms. Chair, what is that number? Do we know? Madam Chair?

Senator SHAHEEN. 6 percent.

Senator GRAHAM. Okay. Plus inflation, too high, more than six percent; I think so.

Mr. WRAY. Yes, think so.

Senator GRAHAM. So what I want the American people to know, is that the budget request for the FBI is below inflation. Do you agree with that?

Mr. WRAY. I am sorry? I couldn't hear you very well.

Senator GRAHAM. The budget request for the FBI is below inflation.

Mr. WRAY. It sounds like it.

Senator GRAHAM. Yes. After listening to you, and everything you say is a legitimate concern, you have a lot to do. Do you think the Committee should look at increasing your budget?

Mr. WRAY. Well, first let me say, I appreciate the question.

Senator GRAHAM. And it is not a hard question.

Mr. WRAY. I would say that any additional resources the Committee would see fit to send our way I can absolutely assure you and the rest of the subcommittee they will be put to good use.

Senator GRAHAM. Okay, great. I want to ask you to comment on ongoing investigation, but apparently there was an effort, some plot maybe to kill President Bush 43. Have you read about it? Are you familiar with it?

Mr. WRAY. I am familiar with it.

Senator GRAHAM. Okay. Let us just make this comment. Is it fair to say that al-Qaeda and ISIS still exist?

Mr. WRAY. Absolutely.

Senator GRAHAM. Is it fair to say there are people thinking every day about how to get into America to kill a bunch of us from those organizations?

Mr. WRAY. Yes.

Senator GRAHAM. And the FBI is integral in stopping those plots before they start?

Mr. WRAY. Yes.

Senator GRAHAM. So would you say that after Afghanistan the threat to the homeland has gone up or down?

Mr. WRAY. Well, let me say this about the threat. We are concerned, very concerned about what the threat landscape looks like in the wake of the withdrawal of Afghanistan for a number of reasons. One, we are concerned about the loss of sources and collection over there which means—

Senator GRAHAM. There are no FBI agents in Afghanistan?

Mr. WRAY. Not anymore.

Senator GRAHAM. Yes.

Mr. WRAY. Or at least not that I can—

Senator GRAHAM. Yes, of course.

Director WRAY [continuing]. I am allowed, or not, for their safety and—so we are concerned about less source coverage, over time. And I think Director Burns has testified, you know, just as a matter of fact, that we will lose collection of—

Senator GRAHAM. Just put a fine point on it, because I don't have much time. Our withdrawal has made us a lot less aware of the threat coming from Afghanistan than before we withdrew. That is fair statement, right?

Mr. WRAY. I think so, yes.

Senator GRAHAM. And it is a fair statement that al-Qaeda and ISIS still are present in Afghanistan, and maybe their influence is growing?

Mr. WRAY. Are certainly present, and I think we are concerned about them growing.

Senator GRAHAM. Yes?

Mr. WRAY. Yes.

Senator GRAHAM. Okay. So let us look at domestic terrorism. Is there any law that you need, that you don't have, when it comes to investigating domestic terrorism?

Mr. WRAY. Well, we always welcome more tools in the toolbox, but we, I think, have been very effective with the tools that we do have.

Senator GRAHAM. Okay.

Mr. WRAY. Not just Federal charges, but as I said to Senator Braun, using State charges when appropriate. We have gotten creative in using hate crime charges, and things like that, as well. What we really need are more resources more than anything else.

Senator GRAHAM. Okay. Well, count me in for more resources to help you deal with this threat as well as other threats. Gun control, do you know of any system—apparently the fact pattern is as, we understand it now, that the person in Texas who did this horrible thing had no criminal record. How would the system deal with somebody who has never been charged with a crime, never even investigated for a crime, went out and bought a gun, what kind of law would stop that?

Mr. WRAY. Well, we don't know all the facts yet, as far as that——

Senator GRAHAM. Yes. But let us just assume that fact there.

Mr. WRAY [continuing]. but these are, depending on the individual, there are other prohibitors in 922 besides the Felon——

Senator GRAHAM. Here is the point. If there is something we can do to deal with this particular situation that we are not doing, can you get back with us?

Mr. WRAY. I would be happy to work with the Committee.

Senator GRAHAM. Okay, great.

Mr. WRAY. I think that there is just no one, simple, single answer to that all.

Senator GRAHAM. Yes. Okay. Well, I am open-minded to ideas. So finally, from the FBI's point of view, you have been following the Sussman trial, I would assume?

Mr. WRAY. Yes.

Senator GRAHAM. Okay. Well, he is in trial. But let me just ask you this question. A lot of Americans are concerned with the fact that a campaign lawyer for the Clinton campaign could go to the FBI, and provide information to the FBI that led to an investigation of the opposite party. And it seems to not have held much water.

Can you understand why people would be concerned about that?

Mr. WRAY. I certainly understand why people are concerned.

Senator GRAHAM. And the Horowitz Review, of the Crossfire Hurricane. You are familiar with his findings, the Inspector General.

Mr. WRAY. Yes.

Senator GRAHAM. This is your chance to tell the American people that you are going to make sure that never happens again, and you are dedicated to making sure that, for whatever reason, there are no more Carter Pages investigations that seem to have gotten completely off the rails?

Mr. WRAY. So I will I will put the Sussman case to the side for the moment, because I don't to comment on a case——

Senator GRAHAM. Okay. Sure.

Mr. WRAY [continuing]. That is in front of the jury right now. But let me say this. The conduct that is described in the Inspector General's Report, I consider to be utterly unacceptable, and also unrepresentative of the FBI that I see every day. And my firm instructions to our people, are that we need to make sure that that never happens again. And we have implemented over 40 corrective measures that go directly to the things that are described in that report.

We have made changes of the entire leadership team in the FBI. And the FBI that I see today, in 2022, is very different from what is described in that report.

Senator GRAHAM. Thank you.

Senator SHAHEEN. Thank you, Senator Graham.

I have another round of questions. I assume you do as well Senator Moran.

Senator MORAN. I do; right.

Senator SHAHEEN. I want to talk about something that we talked—discussed a little bit on the phone this week, and that is

the whole Task Force KleptoCapture, and what we might do to address, not just Russian officials and oligarchs, circumvention of sanctions, and export restrictions, but also what needs to happen to address the ability of transnational crime organizations, corrupt officials in places like Russia, from being able to park their money in our financial system in the United States, and the West? And what we need to do to prevent that?

And I want to start with the fact that we provided the FBI with over \$43 million in supplemental funding for the KLEPTO—for the Task Force KleptoCapture, as part of the 2022 Omnibus. Can you talk a little bit about how you are using that funding, and what else we ought to be thinking about, as we are looking at how we address the ability of criminals to use our financial system for their own benefit?

Mr. WRAY. Well, first let me say that those who have been profiting from corruption in Russia, and treating the world like it is their playground, by evading sanctions, are people we are coming after. I am working closely with partners, not just across the Federal government, but also with a whole host of foreign partners.

And obviously the new KleptoCapture Task Force is an integral, really at the heart of that effort. And we have had some success already in freezing bank accounts, luxury yachts, artwork, things like that, sometimes that is through enabling—the FBI provides information to a foreign partner, and they are able to take action to seize or freeze, and sometimes it is through us using our own authorities.

We are also going after, and this is important, and it goes to something I think that you and I talked about on the phone, it goes to not just the—say, the oligarchs, the sanctioned individuals themselves, but to the whole ecosystem or infrastructure that they rely on, the people that they may have on their payroll, the people that, otherwise, enable them to engage in the corruption, and the sanctions evasion. And that is an important part of it.

As to the funds, the \$43 million that you referred to, for which we are very grateful, we are using that in a variety of ways. Yes, some of it is of course going to our cyber efforts, and our counter-intelligence efforts, related to the Russia, Ukraine, conflict, but we are using it part for our agents and personnel on the KleptoCapture Task Force, as well as—and this is an important piece—our pursuit of the crypto currency, because that is an important ingredient for a lot of the bad actors here, many of whom think that they can hide behind the anonymization that exists with virtual currency.

And they are not as clever as they think they are; but we have to continue to evolve our own technologies and tradecraft to be able to go after them, and we have made some very significant seizures of cryptocurrency lately, working with the Department of Justice. And that is going to be an important, increasingly, important part of this going forward.

Senator SHAHEEN. So what has been the biggest obstacle in trying to address activity, particularly with respect to Russia, and the war in Ukraine, and those sanctions?

Mr. WRAY. I think I would say that the biggest challenge that we face is a lot of these folks are pretty savvy about relying on

opaque other foreign jurisdictions. And so there are ways in which, by taking advantage of some of those other systems, they are able to make it more challenging for us to follow the money, and get after the money.

Not necessarily impossible. And there is a role here for diplomacy, State Department, Treasury Department, others, in engaging with some of those foreign partners to work better with us, to help make sure that we have clamped down on the system.

Senator SHAHEEN. Any particular entities that you would like to name?

Mr. WRAY. I think the State Department would probably appreciate it if I didn't name specific countries in an open hearing, but.

Senator SHAHEEN. Although you pointed out we are cooperating with the international community, and I have heard from some of—some officials that there are entities that may be part of other countries that—where countries have cracked down in-country, but those entities where they still have significant interest may not have provided the same kind of crackdown. Is that—I mean I am being pretty opaque here in the way I am describing it, but.

Mr. WRAY. Right, no, “opaque” is the right word, both for the way we have to talk about it, but also what is in some of these countries. I will say there have been quite a number of countries where we have gotten more cooperation than we might have, you know, in years past. So I don't want to make it sound too bleak. We have had a number of partners that have taken, for them, more aggressive action than we would historically have seen. And that is, I think, a measure of the international community being so appalled by what Russia is up to in the Ukraine.

Senator SHAHEEN. Thank you. Senator Moran.

Senator MORAN. Chair, thank you.

Let me talk again about the surging increase in violent crime. I believe that two of the most effective ways to address violent crime are through surging FBI resources to the most affected communities, through Joint Federal Local Task Force, such as Safe Streets Task Forces.

You and I heard the commentary from law enforcement, local and State law enforcement when we were together in March in Kansas, I understand that as of May, I think it is early May, the FBI surged resources in six field offices, and it secured significant arrests, and firearm seizures from violent criminals.

Director Wray, is the FBI considering additional resource surges over the coming year, or expanding its existing task force network.

Mr. WRAY. So on the surges, I think what you are referring to is a new team that I created about 6 months, or so, ago, which is called Our Violent Crime Rapid Deployment Teams, and what that does is we have been sending it to particularly hard hit hot spots or cities, at the embrace or request of the of the—both the FBI field office and our local partners, to assist.

And we have had very good luck in the six, or so, cities where we have done that. I know in Buffalo for example, you know, several months ago we had about a 50 percent decrease in homicides during the surge. In Milwaukee I think we had a pretty significant decrease.

But that is by its very nature, somewhat temporary. We can't send those teams to just be there sort of in perpetuity, so part of what we are trying to do is both achieve a short-term, dramatic reduction by listening closely to the locals as to what they most need, but then also trying to put in place things that will have a more sustained, durable impact that will outlive the team's deployment.

We expect to continue that model, to keep sending that team to different places, but ultimately, as you and I, I think, discussed recently, this is a problem, "this" the violent crime problem, that dominates every discussion I have with chiefs and sheriffs all the time. You know, had a five—our last nationwide data is a 5 percent increase in the violent crime rate, which doesn't sound like much, maybe to some Americans, until you stop and think: So that means 67,000 people, "victims" of violent crime, would not have been a victim the year before. And the homicide rate went up 30 percent, which is, I think the highest in like 50 years, increase.

So any resources, the committee—this subcommittee would be able to send us on the violent crime problem, could immediately be put to very effective use. And there will be a lot of State and local partners who would be very grateful as well, because one of the things we are really trying to do all across the country, is lean in to see where we can take cases federally to get some of the worst of the worst, and to dismantle some of the most significant gangs, and keep them off the streets for a much longer period of time.

Senator MORAN. Director, let me explore just a minute longer the idea of surging, and the point you make I think is a good one. Certainly anyone whose life is saved, or property is not stolen because of a surge, that is a valuable thing, but what we need is longer term results from that surge.

So is there something that happens structurally? I mean first of all I would say is we are getting more guns out of the hands of people who are not entitled to have guns, I assume, in that surge; and we are putting more criminals, who are likely to commit violent crimes, to be incarcerated; those ought to have some longer lasting effect rather than just the amount of time that your additional resources are in the community?

Mr. WRAY. You are exactly right. That there are two key concepts here, partnership and intelligence; partnership meaning, it has got to be a team effort, it has got to be, how do we put the FBI's two together with the State local law enforcement partners, and ATF, and DEA, and Marshals. Put one agency's two, with another agency's two, and have it equal more than four, right; how to get a synergy where the whole is greater than the sum of the parts.

So partnership is key, and then the second piece, intelligence, is when you hear "intelligence", really what you should take away from that, what Americans should just take away from that is, that is better understanding the problem in order to prioritize going after the thing that is really driving the violent crime, in order to have a longer lasting impact.

So that might mean identifying particular gangs that are wreaking havoc on a neighborhood. It could mean a particular neighborhood that is disproportionately being fought over by two gangs. It could be any number of things, but if you get good intelligence, and

then the partnership acts based on that intelligence with a strategy, that is how you get an impact that lasts longer, for example.

Senator MORAN. I would be interested in knowing, Director, if there is—any characteristics about the communities that have the most significant increases in violent crime, the most prevalent violent crime? When you focus your efforts on a particular community, what is the common denominator among those communities? And then perhaps we can try to deal with the underlying reason that a community is experiencing that increase.

Mr. WRAY. You know, violent crime is, by its nature, unfortunately, a little bit different everywhere. And that is why we really have to take not a one-size-fits-all. And so what I mean by that is, in one community it might be a particular neighborhood gang that has just run amuck. And if you really drill down you may find that the homicide rate is being disproportionately driven by that one gang's activity.

In another community there could be a rampage of commercial robberies, or carjackings, and that is what is really driving it. In another place it could be a particular neighborhood, or particular corridor on a highway that is part of a drug trafficking route. In another place it could be, and this is something we are seeing in a lot of places, too many repeat, dangerous offenders who are either out on bail, or who have been not serving very long sentences.

And the only thing more frustrating to law enforcement than having to arrest somebody who should be behind bars; is having to arrest the same person over, and over, and over, again.

Senator MORAN. That is a good point for—that is something that can that can be pursued. That is a concrete path that could be advanced.

Let me—I told Senator Shaheen one more question, I meant one more topic. And in September of last year you testified before the Senate Judiciary Committee that the FBI's failure for its mishandling of the Larry Nassar investigation was quote, "Inexcusable." "It never should have happened, and we are doing everything in our power to make sure it never happens again."

To that end you testified that the FBI had begun implementing all four recommendations from the Inspector General's Report. Could you please provide me with an update on where those—where that implementation of those recommendations stand?

Mr. WRAY. I would be happy to provide it to you in writing, maybe afterwards, if that would be helpful.

Senator MORAN. Okay.

Mr. WRAY. I mean—for the most part I think we have implemented all of them quite a while ago, and certainly we took disciplinary action against the one agent who was still with the FBI, you know, once we—once we learned what had happened.

And I just—it is hard for me to explain to you how angry and upset I was when I learned what the FBI did and failed to do back in 2015. But I am determined to make it right now that I am here, and we are going to make sure that everybody in the FBI learns the lessons from that, just a tragic experience.

Senator MORAN. I appreciate that. Senator Blumenthal, and I, and our subcommittee in the in the Commerce Committee spent a year-and-a-half exploring, investigating, and providing rec-

ommendations for legislation that became law. And we have had—we share that frustration, that anger, about how everyone who should have done something, didn't do it well, or didn't do anything.

And again as you, I think, would agree, we would expect the FBI to be among the most—purest in their willingness, desire, and capabilities to respond to somebody in need. So it is a terribly sad circumstance, and we await the Department of Justice making some decisions about what to do, if anything, in regard to those individuals.

Mr. WRAY. And just to be clear, on that part, you know, we don't—that is really between the Inspector General and the Department of Justice for that.

Senator MORAN. All right. I wasn't suggesting it. It is a question I asked the Attorney General.

Director Wray: Yes.

Senator MORAN. But I wanted to highlight it for his, perhaps, when he reviews your testimony, he will know that he has been questioned, once again about this topic.

Thank you, Chair.

Senator SHAHEEN. Well, thank you very much for raising that issue.

And Director Wray, if you do send the response to Senator Moran, I hope Senator Moran; you will share it with the Members of the Committee.

Senator MORAN. I will do so.

Senator SHAHEEN. Because I know there are a lot of people on the Committee who are concerned about it.

Your final exchange for that issue, raised a question for me, because you were talking about the Federal crimes that you are investigating. And as we know, the top law enforcement official in our States when it comes to Federal crimes are, U.S. attorneys, and I have been very troubled by the delay in getting U.S. attorneys in place across this country.

And I just wondered if you could speak to what happens if we don't have somebody in that role? If we have somebody who is just acting? Or that that the U.S. Attorney has not been officially put in place to take charge of those investigations, and what kind of challenges that presents, as you are trying to bring a case before court?

Mr. WRAY. Well, what I—I want to be a little bit careful here. What I would say is the acting U.S. attorneys around the country, in my experience, are some of the most dedicated, most seasoned, most capable prosecutors, Federal prosecutors that that are out there. And I know a number of them personally, and have enormous respect for them.

Having said that, it is helpful to a U.S. Attorney's Office, and to the law enforcement community to have a Senate-confirmed, presidentially appointed U.S. Attorney, because at least in some districts that is what is required for important initiatives to be pursued.

For sometimes, you know, important personnel changes to be made in an office, having served in a U.S. Attorney's Office, and having been assistant attorney general, dealing with all the U.S.

attorneys, you know, in my previous time in government, I know that there is a level of ability to take action on certain kinds of things, that I think it is a little bit easier, certainly, for a permanent U.S. Attorney.

But I also want to be very clear that I think the acting U.S. attorneys that are out there, are doing a terrific job, and they are working really well with our field offices.

Senator SHAHEEN. I appreciate that, and I appreciate the importance of reinforcing the job that those acting U.S. attorneys are doing. But I would just argue that at this time when we are facing a lot of challenges with respect to increased criminal activity that having the top decision maker in those offices is really critical.

And we need to urge the administration to move those people if they haven't been nominated, and Members of the Senate to approve them so that we can get people in place. So that we have got everybody on the ground that we need in order to address the challenges that we are facing when it comes to crime.

Senator MORAN. And may I make this bipartisan, please?

Senator SHAHEEN. Please do.

Senator MORAN. I will join the Chair in making the request of the administration. And I suppose the Senate, should they be nominated, act expeditiously to get us our U.S. attorneys which are absent in many places including my home State.

Senator SHAHEEN. Yes. Thank you. Thank you very much, Director Wray.

ADDITIONAL COMMITTEE QUESTIONS

Senator SHAHEEN. If there are no further questions this afternoon, Senators may submit additional questions for the official hearing record. We request the FBI's responses in 30 days.

[The following questions were not asked at the hearing, but were submitted to the National Science Foundation for response subsequent to the hearing.]

No questions were submitted.

SUBCOMMITTEE RECESS

[Whereupon, at 4:00 p.m., Wednesday, May 25, the subcommittee was recessed, to reconvene subject to the call of the Chair.]

COMMERCE, JUSTICE, SCIENCE, AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 2023

WEDNESDAY, JUNE 22, 2022

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 9:34 a.m., in room SD-192, Dirksen Senate Office Building, Hon. Jeanne Shaheen (Chair) presiding.

Present: Senators Shaheen, Feinstein, Reed, Coons, Manchin, Van Hollen, Moran, Murkowski, Collins, Hagerty, and Braun.

OFFICE OF THE UNITED STATES TRADE REPRESENTATIVE

OPENING STATEMENT OF HON. JEANNE SHAHEEN

Senator SHAHEEN. Good morning. Welcome to today's Commerce, Justice, Science, and Related Agencies Subcommittee Hearing, to review the activities in fiscal year 2023 funding request of the Office of the U.S. Trade Representative.

We will recognize members in order of appearance, and there will be 5 minutes for questions.

Our witness today is Ambassador Katherine Tai, the United States Trade Representative. Welcome, Ambassador Tai. We are glad you are here, and it is nice to see you again.

As this committee knows, the Office of the U.S. Trade Representative is responsible for developing and coordinating U.S. international trade, commodity, and direct investment policy, and overseeing negotiations with other countries. As the U.S. Trade Representative, Ambassador Tai, is the administration's principal trade advisor, negotiator, and spokesperson on U.S. trade policy.

In order for USTR to succeed this subcommittee must ensure it has sufficient resources to carry out its important mission. To that end, the fiscal year 2022 Omnibus Spending Bill included \$71 million for the Office of the United States Trade Representative, for fiscal year 2023 the administration requests \$76.54 million for USTR.

So we look forward to hearing how you plan to use that money and what your priorities are, Ambassador.

While we consider these priorities it is important to also consider the most pressing trade issues confronting our country. One of those issues is Russia, following Vladimir Putin's illegal invasion of Ukraine, the United States led a broad coalition of allies to swiftly punish Putin and his cronies with crippling sanctions. During to-

day's hearing I would be interested in learning more about your efforts to counter Russia's aggression, especially in light of the recently signed law revoking Russia's permanent normal trade relations status.

Another issue is our trade relationship with China. As you know, China has failed to fulfill obligations outlined in the Phase One Agreement, particularly its purchase commitments under that deal. China also, serially, violates human rights and workers rights despite its assertions to the contrary.

I am interested to hear about the administration's efforts to ensure China lives up to its end of the deal, and your view of the future of the U.S.-China trade relationship. I would also like to learn more about how the administration's recent launch of the Indo-Pacific Economic Framework for Prosperity fits into that relationship.

Another related issue is the tariffs imposed on goods from China under Section 301 of the Trade Act. In fiscal year 2022 Omnibus Spending Bill passed in March, Congress directed USTR to establish and administer an exclusion process for these tariffs.

Now, I can speak to many New Hampshire businesses that can't source goods from outside of China, who are understandably seeking some real relief from tariffs. We look forward to hearing how USTR is working to comply with this congressional directive.

And I just want to close by commending you on your achievements in your first year as U.S. Trade Representative, through your work the United States ended a decades-long civil aircraft trade dispute resulting in lifted tariffs on billions of dollars worth of U.S. exports, ranging from products like cheese to distilled spirits. We also reached deals with the United Kingdom, the European Union, and Japan to remove existing tariffs on steel and aluminum.

And moreover, under the U.S.-Mexico-Canada Agreement, USMCA, USTR has employed the Rapid Response Mechanism to defend workers' rights. I think that is proved that when done right, trade agreements can really foster positive movement on labor and environmental rights, rather than negative ones.

Ambassador Tai, we have a lot to discuss. I thank you for appearing before us today.

And with that, our Ranking Member is just right on cue, for his remarks. But while he is getting ready let me just say I have a statement that I will submit for the record, and that includes some additional comments that I left out; so I will do that, without objection.

Senator SHAHEEN. And if the Ranking Member is ready, I will call on him.

OPENING STATEMENT OF SENATOR JERRY MORAN

Senator MORAN. Chair Shaheen, thank you very much. And please know that my tardiness was not related to the moment in which you concluded your opening remarks.

Senator SHAHEEN. And that is okay. I told everybody where you were. So they knew you weren't just playing hooky.

Senator MORAN. Thank you very much. Thanks for covering for me. I appreciate you convening this hearing, and I appreciate you accepting, honoring my request that we have a hearing focused on

trade, and have the Trade Ambassador before us. And so, thank you very much.

And Ambassador Tai, welcome. I appreciate you coming to testify before our subcommittee.

At last year's hearing I stated that you were stepping into your role at USTR at a time in which trade policy and trade enforcement has arguably never been more important. I believe that statement is even more true today, when you consider record-high inflation impacting Americans at the pump, the grocery store, and the pharmacy; supply chain disruptions that continue to ripple through the economy; and China's continued effort to steal American intellectual property, and always be our adversary.

Ambassador, due to inflation the American people are struggling to meet. You have a critical role in helping lead us out of this economic environment, and helping Americans get back on their feet. I am very interested in the enforcement of USMCA, and the Phase One China Trade Deal, as both have significant impacts on my Home State of Kansas.

Kansans benefit from exporting goods and services in a fair trade environment. Given that Mexico, China, and Canada are consistently the top markets for Kansas exports, we must ensure that these trading partners live up to their commitments in USMCA, and in the Phase One Agreement.

I am eager to receive an update from you about the current compliance with these agreements, I support efforts to crack down on unfair trade practices.

I also want to further understand how you are managing a full slate of Section 301 investigations. Congress has directed USTR to "Immediately establish and administer an exclusion process for U.S. businesses", and the inaction of the administration is putting extra burdens on American businesses, and upon their workers.

I look forward to hearing from you how USTR plans to execute an exclusion process, and how you are reviewing expired exclusions to make certain that businesses have the opportunity to petition their government for relief.

As we consider USTR's funding needs for fiscal year 2023, I am looking forward to learning more about President Biden's trade strategy, and priorities, and also better understanding what level of resources USTR requires to perform these growing responsibilities.

I believe the administration's policies have been unclear thus far, and I hope today that you will provide some clarity on trade strategies you are pursuing to benefit Kansas, and all the people of America.

Finally, I am concerned about this administration's failure to pursue and secure new trade agreements. Other countries are securing market opening trade agreements and our absence from large, bilateral, multilateral trade agreements is putting the U.S. at a disadvantage. This includes seeing little or no progress on an agreement with the United Kingdom, and continued unwillingness to join an agreement with our Indo-Pacific partners, such as the Comprehensive and Progressive Trans-Pacific Partnership.

My view is we can't afford to remain on the sidelines as other countries enhance their market access and set rules that may disadvantage U.S. companies and our workers.

Ambassador, thank you. Again, I recognize the challenging circumstances you find yourself in. And I look forward to hearing your testimony today, and hope that we can work productively together to promote free and fair global trade policies that benefit America, its economy, our workers, and our families. Thank you, Ma'am.

Senator SHAHEEN. Thank you, Senator Moran.

Ambassador Tai, the floor is yours.

STATEMENT OF KATHERINE TAI, AMBASSADOR, U.S. TRADE REPRESENTATIVE

Ambassador TAI. Well, thank you so much Chair Shaheen, and Ranking Member Moran. It is an honor to be here with you, and the Members of the Subcommittee today.

Thank you for inviting me to discuss President Biden's fiscal year 2023 budget request for the Office of The United States Trade Representative.

Today, I would like to highlight our progress in implementing a worker-centered trade policy that increases American competitiveness abroad, advances the rights of workers, and establishes the United States as a leader in shaping a more resilient form of globalization.

Before I begin, I want to be clear that Congress is our constitutional partner on trade and close collaboration is critical to developing successful American trade policy.

The President's budget request for fiscal year 2023 provides \$76.54 million for USTR. This includes \$61.54 million available directly to USTR, and \$15 million allocated through the Trade Enforcement Trust Fund.

This request will help the agency enforce our existing trade agreements, strengthen ties with allies, and advance a trade agenda that supports the middle class, improves labor and environmental standards, and creates an inclusive prosperity.

Enforcement is a critical component of our administration's trade agenda. Manufacturers, farmers, and ranchers do not always get the full benefits of our trade agreements. Workers and communities suffer due to unfairly traded imports. This creates a trust gap with the public, which is why enforcement is needed as part of our worker-centric trade policy.

For example, using the Rapid Response Mechanism in the U.S.-Mexico-Canada Agreement, we asked the Government of Mexico to review whether workers at four facilities in Mexico were denied the rights of free association and collective bargaining. Thanks to the operation of this mechanism, workers at the General Motors facility in Silao, Mexico, voted for a new union that negotiated a better contract, which will provide higher wages, and that is good for American workers.

Our enforcement efforts also helped to protect the environment. We initiated consultations with Mexico to prevent illegal, unreported, and unregulated fishing. We also reached an agreement with Vietnam to keep, illegally harvested or traded timber out of the global supply chain.

Finally, we are pressing Canada to fulfill its commitment to U.S. dairy farmers and producers, and recently initiated a second set of dispute settlement consultations over Canada's tariff-rate quota restrictions. Canada's actions continue to prevent U.S. dairy producers from receiving the benefits promised in the USMCA. We will not give up until our farmers see those promises delivered.

The next major component of our trade agenda is the realignment of the U.S.-its commitments under the Phase One Agreement. Several rounds of difficult discussions made clear the limits of the PRC's interest in delivering on those obligations.

And that is why it is time for us to turn the page on the old playbook. The PRC's non-market industrial policies unfairly target U.S. workers, businesses, and key sectors. We have to use all available tools, and develop new tools, to defend our economic interests and values.

President Biden recognizes market economies must act in concert to confront policies that are fundamentally at odds with the modern trading system. And that is why we have also brought a renewed focus to engagement with our partners and allies, who also are negatively impacted by the PRC's unfair trade and economic practices.

Beyond this cooperation, we are deepening our engagement with key trading partners through new and existing bilateral and multilateral agreements and arrangements.

Last month, I joined President Biden to launch the Indo-Pacific Economic Framework for Prosperity. We are developing high-standard commitments for the digital economy, labor, environment, agriculture, and trade facilitation that promotes resilience and facilitates sustainable economic growth for our workers and for our planet.

We also announced the U.S.-Taiwan Initiative on 21st-Century Trade in June. Under the auspices of the American Institute in Taiwan, and the Taipei Economic and Cultural Representative Office, we are developing concrete ways to strengthen this bilateral trade and investment relationship.

And beyond the Indo-Pacific region, we have stepped up our trade engagement in many other areas, most recently, at the World Trade Organization. During the WTO's 12th Ministerial Conference last week, the United States helped produce breakthroughs on key issues, including: A multilateral agreement to prohibit subsidies for those engaged in illegal, unreported and unregulated fishing; an extension of a moratorium on customs duties, on electronic transmissions, a modification of intellectual property protections for COVID vaccines, for the COVID pandemic, and a ministerial declaration on food insecurity, and a commitment to examine how we can, together, facilitate safe agricultural trade to feed a growing global population.

We are also building on our bilateral engagement with our transatlantic partners. Last year we reached an understanding in the Boeing-Airbus dispute and adopted a framework to resolve the Section 232 steel and aluminum trade disputes that removed or avoided more than \$20 billion in tariffs, all without surrendering our principles and our interests.

Lowering those tensions helped us begin negotiations on a global arrangement with the European Union. This will be the world's first sectoral arrangement on steel and aluminum trade to tackle emissions and non-market excess capacity. We also regained access to the EU market for American shellfish for the first time in a decade, and recently concluded the Second Ministerial Meeting of the U.S.-EU Trade and Technology Council.

Our work to use trade as a collective policy tool to raise standards in the world economy extends to our efforts directed at eliminating the use of forced labor in global supply chains.

On June 21, which was yesterday, the Forced Labor Enforcement Task Force launched its enforcement strategy of the Uyghurs Forced Labor Prevention Act to prohibit the importation of goods produced entirely, or partially, in the Xinxiang Autonomous Region of the PRC, or produced by certain entities.

As you can see, we have an ambitious and important agenda. I look forward to working with the subcommittee to enact our fiscal year 2023 budget request, so that USTR can fulfill this agenda on behalf of the American people. Thank you.

[The statement follows:]

PREPARED STATEMENT OF AMBASSADOR KATHERINE TAI, THE UNITED STATES TRADE REPRESENTATIVE

Good morning, Chair Shaheen, Ranking Member Moran, and Members of the Subcommittee. Thank you for inviting me to discuss President Biden's fiscal year 2023 budget request to support the Office of the United States Trade Representative (USTR).

Before I begin, I want to be clear that Congress is our constitutional partner on trade and close collaboration is critical to developing successful trade policy.

The President's budget request for fiscal year 2023 features \$76.54 million for USTR. This includes \$61.54 million available directly to USTR and \$15 million allocated through the Trade Enforcement Fund.

This request will help the agency enforce our existing trade agreements, strengthen ties with allies and partners, and advance President Biden's new approach to trade policy that supports the middle class, improves labor and environmental standards and creates inclusive prosperity and new opportunities for our workers, farmers and businesses.

Enforcement

Our Administration is committed to enforcement as a critical component of our trade agenda. Manufacturers, farmers and ranchers do not always get the full benefits of access to new markets and too many workers and communities suffer due to unfairly traded imports. This has created a trust gap with the public and is why enforcement is a key component of our worker-centered trade policy.

For example, using the Rapid Response Mechanism in the United States-Mexico-Canada Agreement, we asked the Government of Mexico to review whether workers at four facilities in Mexico were denied the rights of free association and collective bargaining. Thanks to the operation of this mechanism, workers at the Silao GM facility voted for a new union that negotiated a better contract, which will pay workers a higher wage.

Our enforcement efforts have also helped protect the environment. We initiated consultations with Mexico designed to prevent illegal, unreported, and unregulated fishing. We also reached an agreement with Vietnam to keep illegally harvested or traded timber out of the global supply chain.

Finally, we continue to press Canada to fulfill its commitment to U.S. dairy farmers and producers, and recently initiated a second set of dispute settlement consultations over its tariff-rate quota restrictions. Canada's actions are preventing U.S. dairy producers from receiving the market access benefits promised in the USMCA and we will not let up.

China

The next major component of our trade agenda is the realignment of the U.S.-China trade relationship.

In October, I announced a new strategy to re-align our engagement with the PRC, which would begin with direct discussions with its leaders.

We pressed the PRC to live up to its commitments under the “Phase One Agreement.” Several rounds of difficult discussions made clear the limits of the PRC’s interest in delivering fully on those obligations.

This has become part of a pattern. The United States has repeatedly sought and obtained commitments from China, only to find that lasting change remains elusive.

That is why we need to turn the page on the old playbook. The PRC’s non-market industrial policies unfairly target U.S. workers, businesses, and key sectors. We have to use all available tools, and develop new tools, to defend our economic interests and values.

President Biden also recognizes that our ability to defend against unfair PRC economic practices requires that market economies act in concert to confront policies and practices that are fundamentally at odds with the modern global trading system. That is why we have also brought a renewed focus to engagement with our partners and allies, who also are negatively impacted by the PRC’s unfair trade and economic practices.

Strengthening and Deepening our Trade Relationships

Beyond this cooperation, we are deepening our engagement with key trading partners through new and existing bilateral, plurilateral and multilateral agreements and arrangements.

Look no further than our renewed engagement with the Indo-Pacific.

I was proud to join President Biden last month to launch the Indo-Pacific Economic Framework (IPEF) for Prosperity. USTR is leading the discussions on IPEF’s trade pillar.

I recently held a productive meeting with our 13 partners in Paris to discuss our vision and priorities for this pillar. We are beginning to develop high-standard commitments across several areas including the digital economy, labor, environment, agriculture, and trade facilitation that support our larger goals of promoting resilience and facilitating sustainable and inclusive economic growth that benefits our workers and our planet.

We also announced the U.S.-Taiwan Initiative on 21st-Century Trade earlier this month, under the auspices of the American Institute in Taiwan (AIT) and the Taipei Economic and Cultural Representative Office (TECRO), to develop concrete ways to strengthen our trade and investment relationship with Taiwan and advance our mutual economic priorities.

Beyond the Indo-Pacific region, we have stepped up our bilateral and multilateral engagement at the G7, G20, OECD, Summit of the Americas, and, most recently, at the World Trade Organization.

We also continue to build on our bilateral engagement with our Transatlantic partners. In the last year, we reached an understanding in the Boeing-Airbus dispute and adopted a framework to resolve the Section 232 steel and aluminum trade disputes that removed or avoided more than \$20 billion in tariffs—without surrendering our principles and interests.

Lowering those tensions helped pave the way for us to begin negotiations on a global arrangement with the EU. While our discussions are still ongoing, this will be the world’s first sectoral arrangement on steel and aluminum trade to tackle both emissions and non-market excess capacity. We also regained access to the EU market for American shellfish for the first time in a decade, and just recently concluded the second ministerial meeting of the US-EU Trade and Technology Council.

Our work to use trade as a collective policy tool to raise standards in the world economy extends to our efforts directed at eliminating the use of forced labor in global supply chains. We are doing our own part to set the pace of this important work. On June 21, the Forced Labor Enforcement Task Force launched its enforcement strategy of the Uyghur Forced Labor Prevention Act in order to prohibit the importation of goods produced entirely or partially in the Xinjiang Autonomous Region of the PRC or produced by certain entities.

The U.S. Customs and Border Protection, in coordination with USTR, has issued withhold release orders in 35 instances over the years that flag products coming from the PRC produced partially or entirely with forced labor. This includes 11 active WROs on products from Xinjiang.

I look forward to working with this subcommittee to enact our fiscal year 2023 budget request so that USTR can fulfill this agenda on behalf of the American people.

Senator SHAHEEN. Thank you very much Ambassador Tai.

I would like to begin with the 301 Tariffs and the exclusion process. I was pleased to have the chance to talk with you a little bit about this on the phone this week, and I think this hearing gives us an opportunity to explore what USTR is thinking with respect to the exclusion process, and how this process is going to move forward.

So, I want to—as I referenced in my opening statement, the 2022 Omnibus Appropriations Bill included a directive for USTR to what I am quoting here, “Immediately establish and administer an exclusion process for U.S. businesses seeking relief from section 301 Tariffs that are active as of the date of enactment of this act.” End quote.

So more than 3 months have passed, and it is not clear what process has been established, and again, as we discussed this is a process that is essential for many of our New Hampshire businesses. I am sure everybody on this subcommittee has examples in their own States of how businesses are affected.

So, can you update us on how USTR is planning to comply with this congressional directive?

Ambassador TAI. Thank you for that question, Senator Shaheen. I appreciate the attention that you and the subcommittee have paid to the tariff exclusion process, and I know the particular leadership that this subcommittee has played in the history of the tariff exclusion process. The purpose of the Section 301 investigation, and associated tariff action is to address China’s unfair trade practices.

The existing tariffs are there to address China’s IP rights abuses, and also forced tech transfer practices. At the same time, we are committed to ensuring that the 301 tariffs support the Biden-Harris administration’s deliberative long-term vision for realigning the U.S. China trade relationship with our priorities.

So let me just say this, I think that you and, in general, our Members of Congress have been extremely articulate and effective in advocating for your constituents in terms of—as Senator Moran mentioned—very challenging economic circumstances that we have all found ourselves in over these past several years.

What I would like to let you know, is that at my office, USTR, we are taking into consideration in the design of the tariff exclusion processes that we have implemented, and the ones that we are looking to implement in the future, all the feedback that we have gained from Congress and our stakeholders including the results of a GAO Report addressing the past administration of the 301 exclusion process.

So, what I would like to convey to you is that we, in the Biden administration, are moving forward with respect to the entire China trade relationship, including the tariffs and the requests for an exclusion process, with a deliberativeness to ensure that any exclusion processes that we implement, and have implemented are fair, transparent, administrable, and give our stakeholders the opportunity to make their case for relief at a very challenging time in our economy, and the world economy.

Senator SHAHEEN. Well, thank you. I appreciate there are a lot of considerations when it comes to tariffs, particularly when we are

looking at the actions of China. But you called what Congress is asking “a request”, it is not a request, Ambassador Tai, it is a directive. And I wonder if you will commit to us and the subcommittee that you are going to comply with this directive, and give us some sort of a timeframe on when you expect that to happen?

Ambassador TAI. Senator Shaheen, on this one I think I would direct you to the President’s comments over the weekend, that with respect to China tariffs, and next steps on actions, they are pending with him right now.

Senator SHAHEEN. So, are you suggesting that the subcommittee needs to refer this issue to the President and ask him when USTR is planning to comply?

Ambassador TAI. I think what I am saying to you, Chair Shaheen, is that these issues are under consideration for a decision as we speak right now.

Senator SHAHEEN. Thank you. Senator Moran.

Senator MORAN. Senator Shaheen, thank you for your highlighting the directive nature of what Congress has told the USTR Ambassador to do. And while it may take a short amount of time in order to accomplish that, we have seen no evidence that the requirement, the directive is being followed.

Ambassador, the pinch of input costs is soaring and very damaging to American agriculture producers. The invasion of Ukraine has only heightened the demand for food production, but tariffs on fertilizer represent an opportunity for you to relieve some of the pressure on the agricultural community. Many of these duties are put in place by the Department of Commerce. Yet USTR can and should play a role, certainly in expanding markets.

But what can you do? I am talking about phosphates from Morocco. This administration placed countervailing duties on fertilizer ingredients coming from Trinidad and Tobago. What can you do to help lower the cost of imported fertilizer components?

Ambassador TAI. Ranking Member Moran, I know how important agricultural production is to the U.S. economy, but also how important our agricultural production is to the world economy, and to food security, frankly. And I am also keenly aware of the exacerbations on global trade and supply that Russia’s decision to invade Ukraine has inflicted on all of us.

With respect to fertilizer trade and supply, and what USTR can do about it, let me say this: I consider Secretary Vilsack, our agriculture secretary, to be one of my most important partners in the administration, and frankly one of my closest friends, personally. We have been working together very closely on food security issues, writ large, but also specifically on the fertilizer pinch that we are all in.

We have been working closely with USDA, both between myself and the Secretary, and also our teams, to encourage feedback from a variety of our stakeholders on USDA’s American-made fertilizer initiative, that provides a \$250 million grant for domestic production of fertilizer.

USTR is also working with the inter-agency to encourage multilateral development banks, the FAO, the Food and Agriculture Organization, and the International Fund for Agricultural Develop-

ment to finance projects to expand fertilizer production, as well as increase the efficient use of fertilizer and precision agriculture.

Both areas where American farmers are, frankly, at the leading and cutting edge of practice in the world, and we will continue to work internally within the administration, and with our allies and partners to find additional ways to mitigate the global fertilizer shortage, and prevent similar shocks in the future.

The additional thought that I would offer you in your description of the pinch that we are in is—and I think that this is an issue that presents itself across the board in many different areas, and I will be glad to highlight them—is one of the biggest challenges that we have right now is how to responsibly and effectively react to, respond to the current economic challenges and shocks that we have, but with an eye to ensuring that we are building towards a future system that is more resilient, that does not throw us back into the crisis that we are encountering today.

Senator MORAN. Ambassador I know Secretary Vilsack well, myself, and I have encouraged him to be a voice for agriculture, for agricultural producers throughout this administration, so I appreciate that you are consulting and working with him, and he is working with you.

But your answer, it seemed to me, was a list of things that we are attempting to do but did not include anything on that list about actually eliminating the tariffs or the countervailing duties that have been imposed on the phosphates, and other fertilizer components that come into the United States.

Ambassador TAI. If I may respond to that specifically, the anti-dumping countervailing duty programs are run out of Commerce. And your specific question is: “What can we do at USTR”, and that was the filter through which I was responding.

Senator MORAN. And so is the answer that you have nothing to do with eliminating those countervailing tariffs and duties at the Department of Commerce?

Ambassador TAI. They are not my programs, but I am happy [speak] with Secretary Vilsack to have those conversations with the Commerce Secretary.

Senator MORAN. Please do. I have had those conversations with the Secretary, myself.

Madam Chair, I don’t think I have the time for another question.

Senator SHAHEEN. Thank you. Senator Coons.

Senator COONS. Thank you, Chair Shaheen, Ranking Member Moran.

Great to be with you, again, Katherine. U.S. Trade Representative Tai, I appreciate your time before our subcommittee, and look forward to working with the Chair to pursue our directives to the administration, and our prerogatives.

I am grateful for the work that you are doing, and your accomplishments. I am particularly encouraged to hear the progress on IUU fishing, your openness to working together on promoting Delaware’s chicken exports, our favorite protein, which for those who have other proteins they really care about, I am happy to go to bat with anyone about why chicken is the low-fat, high protein, low cost, low environmental impact protein that the world needs today.

Senator SHAHEEN. No commercials here; come on.

[Laughter.]

Senator MORAN. Your reputation for bipartisanship, you are exceeding your capabilities here.

Senator COONS. Thank you for what I think was a marathon WTO Ministerial in Geneva, and for your work there. And you know, frankly I have just two quick questions. But I would love to hear what you see as the path forward in our trade relations with China, and in trying to make the WTO relevant and effective in some way.

China, my understanding, has agreed to exclude itself from the TRIPS waiver for COVID vaccines. Is that an enforceable commitment in any way?

Ambassador TAI. We see it as a legally binding commitment that they have made at the WTO, yes.

Senator COONS. And I would be interested in what you see as the path forward for plurilateral and bilateral negotiations. I have a bill with Senator Portman, the Trading System Preservation Act, which would authorize the President to negotiate sector-specific agreements with like-minded partners within the WTO system, an area that I think may be fruitful for work.

And we are introducing today, the Special Relationship Act, Senator Portman and I; that would authorize a bilateral FTA negotiation with the U.K. I understand that market access isn't on the table, in the Indo-Pacific Economic Framework, but I am encouraged that the IPF has been launched. Should we be negotiating to open foreign markets to U.S. producers? And what are your priorities for these negotiations?

Ambassador TAI. Senator Coons, that was a number of issues.

Senator COONS. It was.

Ambassador TAI. Well, I am going to work backwards, because your last question is the one that is freshest in my mind. On the Indo-Pacific Economic Framework it is true that market access is not on the table in these negotiations.

What I would like to say on that is, when we talk about market access in trade terms and trade terminology, we are talking specifically about tariff liberalization, and that is what is not on the table. Nevertheless, in our trade agreements, and our trade arrangements, and everything that we do in trade it is about markets, and it is about how we work together.

So, the Indo-Pacific Economic Framework is about market access. What I would say though is that it is not about tariff liberalization. It is about ensuring and building partnerships, and confidence in each other's markets, through our regulators, through these conversations, and looking at assuring the quality of the access that we have granted to each other, through existing rules on tariffs, but also looking at new sets of rules that frankly go beyond goods trade.

Digital economy issues have not that much to do with tariffs. What is crossing borders, bits and bytes, but also what is crossing borders is a set of values, and a desire to build confidence in how we connect, how we are interconnected in today's economy. So, I think that this is one of the most important initiatives that we have ongoing, and also incredibly important that we are doing it with our partners in the Indo-Pacific region.

Senator COONS. And what do you think might be our path forward in U.S.-China trade negotiations?

Ambassador TAI. That is a question about which I, personally, and my agency spends a lot of our time thinking about, and working on. What I would like to say is that the public debate recently has been very, very fixated on the issue of the tariffs.

What does it mean to remove the tariffs? What does it mean for our leverage? Let me say this, there are a set of challenges that we are facing right now, collectively, in our global economy. We need to look at the tools that we can use to address that. And I know this Committee has spoken with respect to tariff exclusions, and the tariff exclusion process.

I just want to be clear, and put this in context, tariff exclusion is a temporary and targeted relief from existing tariffs, it does not remove the existing tariffs. That is an important distinction that has been lost in the public debate.

But also the other piece of what has been lost in the public debate is, whatever we need to do for ourselves, in this relationship, around the world to get through the set of challenges that we are facing today, we will one day find ourselves on the other side of these challenges, and I think it is very important that what we do now, not undermine the need that we have to make ourselves more competitive, and to defend our economic interests in a global system that, for the past several decades, has eroded our leadership in many, many different areas in the economy.

Senator COONS. Thank you. Thank you, Madam Chair.

Senator SHAHEEN. Thank you Senator Coons. Senator Collins.

Senator COLLINS. Thank you. Good morning, Ambassador. In 2018 China imposed a 25 percent retaliatory tariff on U.S. lobsters, which obviously affects the State of Maine more than any other State in the Nation. Before the tariff China was the second-largest importer of American lobster in the world. During the first month under the new tariffs, however, live lobster exports to China declined by 64 percent.

Now the 2020 Phase One Trade Deal required China to purchase more than \$500 billion of U.S. exports in 2020, and 2021. I worked very closely with your predecessor to make sure that lobster was specifically included in that agreement. According to reports, however, China purchased only \$289 billion worth of exports, nowhere near the \$500 billion figure that was committed to.

Now, what is frustrating to me, is I raise this exact issue with you when you appeared before this subcommittee last April. Then in February of this year I sent you a letter asking you to hold China accountable for the purchase commitments it made under the Phase One Trade Agreement. You did not even respond to my February letter.

So I am going to try for the third time to get answers from you. What actions are you taking to hold China accountable to fulfill its U.S. lobster purchase commitments?

And more broadly, what specific actions are you taking to respond to China's dismal purchasing record, its overall performance under the Phase One Trade Agreement?

Ambassador TAI. Senator Collins, let me begin by saying, I am very sorry if I have not responded yet to your February letter. I

will go home, back to my office, and rectify that immediately and let you know that we will do better. And you have my commitment with respect to correspondence with you, your office, and with the Congress in general.

On China's Phase One commitments, specifically with respect to lobster, which I know is very important to you and your constituents in the State of Maine; let me, if you will allow me, put that in the larger context of China's purchase commitments in Phase One, because those are the most public-facing of the commitments that they made in the Phase One Agreement, and the ones that are most easily checked, and visible to everyone who has access to public trade data.

It has been very clear to us that China did not hit its targets in a number of areas, including with respect to lobsters in the Phase One commitments that they made to the United States Government.

We have spent several months, starting in October, having discussions with China around how they are going to fulfill those commitments now that we see that the numbers do not match up. I thought it was well worth having that conversation with China, because I have always perceived, and seen, in my experience with China, that China does care about its international credibility.

What we have seen, however, through these conversations, is that that has not been enough to motivate China to make good on these purchase commitments in particular. That is what is leading us to conclude that it is time to turn the page on the old playbook. We do need to enforce our rights with respect to China, and we do need to defend the interests of our entire economy including our lobster people, lobster men, and lobster women, our manufacturers, our workers, our ranchers, our producers.

And I feel very strongly that we need to take a new and more comprehensive look at enforcing those rights, and defending those interests with respect to China. And that is what we are doing right now at USTR.

Senator COLLINS. I look forward to getting more specificity from you, in writing.

Madam Chair, I know my time has expired, so I would ask unanimous consent that additional questions that I have, one supporting the point that both you and the Ranking Member made on 301 tariffs exclusions, and the other on Softwood Lumber Agreement which is very important, be submitted for the record, and I hope I will get answers.

Senator SHAHEEN. Without objection.

Senator COLLINS. Thank you.

Senator SHAHEEN. Senator Hagerty.

Senator HAGERTY. Thank you, Chair Shaheen, and Ranking Member Moran for holding this hearing. Ambassador Tai, it is good to see you today. I would like to talk with you about the China tariffs that were put in place by the previous administration, and specifically, I would like to talk about the negotiating leverage that those tariffs provide.

I can tell you from personal experience that when those tariffs were imposed on China that it was felt around the world. It demonstrated, particularly to Japan, the third largest economy in the

world, that we were serious about leveling the playing field for American producers. It helped us open significant new markets for American agriculture, and importantly, it allowed us to establish a very high standard digital trade agreement.

Ambassador Tai, I understand that China is not living up to the commitments that it has made under Phase One, you have talked about that at length. My question for you is: Wouldn't removing these tariffs simply encourage more bad behavior? What kind of message would it send to China?

Ambassador TAI. I appreciate that question very much, Senator Hagerty, because at USTR we are responsible for the formulation of American trade policy, and guiding the U.S. economy through challenges, and opportunities that are presented today, but really to set up the American economy for success in the future. The China tariffs are, in my view, a significant piece of leverage, and a trade negotiator never walks away from leverage.

The question for us, and this is something that we have done in the Biden administration, with respect to a number of different Section 301 investigations, and tariff actions is: How do you convert this leverage into a strategic program that will strengthen American competitiveness and defend our interests in a global economy in which China will continue to play?

We need to use our tools more effectively. We need new tools. We need to bring an entirely new approach. And I think that all of those things are built on the back of the tools that we have in our hands right now.

Senator HAGERTY. I certainly think sustaining leverage from the standpoint of a business person, which I have been on my life, is a critical factor here. I hear the argument that it will have an impact on inflation. Look, inflation didn't take off when the tariffs were imposed it stayed, you know, at or below 2 percent when the tariffs were originally imposed. So I think that is a false argument. And I appreciate the fact that you appreciate the leverage that you have, and encourage you to use it.

I would like to turn now to the Indo-Pacific Economic Framework, the so-called "IPEF". You have met with representatives from the 13 countries that participate in the Indo-Pacific Framework, and many experts have argued that the IPEF is too vague, it lacks substance, and perhaps that was the price of convincing more countries to join the framework.

But as you focus on making IPEF more substantive, I urge you to build on the successes of our Nation's prior engagements in Asia. And specifically, I would like to talk about my experience when I was U.S. Ambassador to Japan, as we negotiated the U.S. Japan Digital Trade Agreement. It is comprehensive, it is a high standard agreement that addresses digital barriers, and I think it holds great potential.

So Ambassador Tai, I would like to ask you your thoughts on whether you have considered looking at the U.S.-Japan Digital Trade Agreement, and perhaps using its provisions, parts thereof, that have been fully negotiated, as a standalone sector-specific trade agreement in the region?

Ambassador TAI. Well, Senator Hagerty, thank you so much for sharing your experiences. I think that in this administration we

are picking up on those relationships, and I do agree that there is a lot of energy in this region, and also worldwide, for trade conversations and trade work to be done with respect to the digital economy, how we can work together, how we can formulate rules, how we can establish common understanding to facilitate the growth in this part of our economy.

So, that is absolutely a part of the Indo-Pacific Economic Framework that we are working on. I think what I would like to say with respect to the standalone sectoral approach, however, is that we are actually much more ambitious about what we can accomplish, and what we should accomplish, with respect to our partners in this region.

And so, while digital will be an integral part of what we are bringing to the negotiations and the conversation in the Indo-Pacific, it will not be the only one because digital itself implicates so many aspects of our economy, so many of our stakeholders. It needs to be, itself, a comprehensive and robust approach to digital economic and trade relations.

Senator HAGERTY. I think it will present a good example.

Ambassador TAI. And also be part of a larger package.

Senator HAGERTY. And I look forward to working with you on that. But one last point, I would like to discuss a very worrying development that is occurring in Mexico. And Mexico is one of the United States most important international partners, and it is our closest neighbor to the south. There are many difficult issues that we are trying to deal with Mexico, but our robust economic relationship should provide a firm foundation to strengthen and stabilize our efforts with an eye toward our future relationship there.

But actions over the past year by the government of the current President, Andrés Manuel López Obrador, have weakened that bond, and are threatening the economic ties of our two nations.

Last month, nine of my colleagues joined me to send a letter to President Biden to address the Mexican Government's aggression toward U.S. companies, particularly the arbitrary and punitive actions recently taken against Vulcan Materials. Vulcan Materials is a strategic supplier, particularly to the southeast part of the United States because of how we build our infrastructure.

So Ambassador Tai, we have yet to hear back from President Biden. I know you have weighed in on this topic with the Minister of Economy in Mexico. We can't tolerate our nearest neighbor to the south, basically, nationalizing American companies' assets. It is extremely damaging to our Nation's working relationship. And I hope that you will commit to taking an immediate action to help address these illegal actions.

Ambassador TAI. Senator Hagerty, are you speaking with respect to Mexico's energy policies specifically, or across the board?

Senator HAGERTY. No. I am speaking to the fact that Mexico has nationalized a piece of a mining operation that is responsible for sending aggregate into the Gulf of Mexico, and basically we are dependent on it, not only in Florida, but all the way through the southeast.

Ambassador TAI. Thank you for that clarification. Let me assure you that one message that I hope is conveyed very, very clearly through my participation in this hearing, is the commitment of the

USTR to the enforcement of all of our trading rights. And I want to assure you that my team is working on all aspects of these issues.

And I can assure you that we will not rest. Enforcement is a critical piece, and we are working on the challenges that we have in Mexico.

Senator HAGERTY. Yes. I appreciate. Yes, I appreciate your diligence there.

Ambassador TAI. Thank you.

Senator HAGERTY. I have heard it also strongly from the energy community as well, that this is also an issue for them.

Ambassador TAI. Thank you, Senator Hagerty.

Senator HAGERTY. Thank you.

Senator SHAHEEN. Senator Feinstein would be next, but this is her birthday, so we are going to give her plenty of time to settle in, and get ready, and go to Senator Braun.

Senator BRAUN. Thank you, Madam Chair.

One of the great successes of the Trump administration I think was reorienting Washington's focus on national security, economic threats posed by the Communist—China Communist Party.

The way I look at, in the geopolitical landscape, they are playing with a chessboard, and we seem to be very reactive. Everything I see that they are doing is incrementally building up their military capabilities, but I really think they intend to win economically. Day-by-day, month-by-month, year-by-year, to where when that day comes, when they probably will inevitably be a larger economy than ours, they have certainly become skilled state capitalists, will wonder: Did we make the right moves along the way?

I am concerned that they have the ability, they are patient, I view them as a saving, and investing country, their Road and Belt Program tells you that. I think they are hedging their bets there, as they increasingly do things that make them less than a handshake business partner. I won't repeat all of it, but the intellectual property issue that they seem to go after with impunity, they way over produce, look at our steel industry, they have got half the world's capacity, dump the gluts on the market.

We have got to be careful. Ideally, in a world that works right you have the ability to have free trade, in places where it is not fair and free, we had better be careful.

President Trump's 301 tariffs were successful in bringing the CCP to the table, put real pressure on the Chinese Government. Moving forward, I think they help us reduce reliance on the Chinese market, and by the way, they are a trading economy. We are not, but we accommodate them mostly for our propensity to import, consume, and spend.

All kind of abstract considerations that, to me, they are getting the winning end of the bargain at this point. That is why I am concerned about the one tool, to limit USTR's flexibility with restrictions on 301, that tool there, we can't do that.

Do you agree that the USTR must have the flexibility to design an exclusion process that also maintains sufficient economic pressure to go along with it?

Ambassador TAI. Senator Braun, I absolutely agree with that.

Senator BRAUN. Well, that is great because I think the proof will be in how we practice it. Would you care to elaborate in some detail how you see our relationship with China evolve over the next half-a-decade to a decade, and what your main concerns are, about how they are playing the game, versus how we are reacting to it?

Ambassador TAI. Thank you so much for this opportunity, because I think that this is absolutely the question that we need to focus on with respect to positioning the American economy today for the future, and for future success.

Let me begin by saying this, unless we define the problem there is not going to be a good way for us to assess whether or not we are solving it, whether or not we are being effective. I think that—

Senator BRAUN. Are you doing well at defining it now?

Ambassador TAI. Well, the Section 301 investigation that was launched by the Trump administration that you referenced addressed a very legitimate and deep problem that we have had with Chinese economic practices, which is with respect to intellectual property rights and forced tech transfer practices.

But that is not the sum total of the challenge that we have, and I think that in your comments you have started getting at the contours of the challenge that we have, which is a fundamental economic incompatibility between a very, very market-based economy that we have here in the United States and very strict division between the State and the private sector, and a Chinese economy through which the Chinese State's interests and control and direction extend.

To your point about, you know, it would be great if we could have free trade?

Senator BRAUN. Mm-hmm.

Ambassador TAI. But you have to know who you are competing against. I always come back to the David Ricardo, "Econ 101", where you have comparative advantage. And if you have got, you know, two islands, both of them producing bananas and making boats, but one of them has the conditions for producing bananas, and the other one, say, has more engineers. The logic is that, you know, you should have one focus on making boats, and the other one make bananas. They can trade and everybody is better off.

The problem is that that is not the world that we live in, and especially if you expand out that economic model and you say it is not just two products that our economies make, but let us say there are 25 products that our economies make, and then you look at the theory of comparative advantage, and then you realize the advantages are not always natural.

When you are—when you are working with another economy, even in the simplistic model, where that economy is not—is a state capitalist model, that economy is going to be able to target and take over entire industries and create advantages that the market-based economy doesn't have.

That is the fundamental challenge that we have, and unless we start focusing on identifying that as the problem, and thinking through how we address it, I think that we condemn ourselves to repeating cycles of experiences that we have had from steel and aluminum, to solar. Right now, the Chinese Government, the PRC,

is looking very closely at semiconductors, and a number of other strategic industrial areas that are going to be critical for our future, and our future competitiveness.

And so, from me to you, my answer is, we need to be keeping our eye on the ball on this bigger picture, and with respect to all of the economic challenges and the pinches that we and Americans are experiencing right now, it is our responsibility to do what we can to provide that relief.

But I will just be very, very clear, with respect to tariffs and trade tools, we can impact the design of our competition, and we can impact the competitiveness of our economy in the medium and the long term. With respect to short-term challenges, there is a limit to what we can do with respect to, especially inflation.

Senator BRAUN. I agree. Thank you.

Senator SHAHEEN. Thank you, Senator Braun.

Senator BRAUN. The long run is always the bigger consideration, and it is tough to navigate correctly through the short run. But it sounds like you got a handle on it. Thank you.

Senator SHAHEEN. Thank you, Senator Braun. Senator Feinstein.

Senator FEINSTEIN. Thank you very much. I am really delighted to welcome you here. And I wanted to talk a little bit about China and China trade. When I became Mayor of San Francisco one of the first things I did was develop what was called a "sister city relationship" with Shanghai.

And over the years we had some 50 different trade efforts, ongoing, leading from San Francisco and other areas in California, and I think, particularly when Jan Zeman (ph.) became President that was sort of a heyday for us.

So the relationship has always been a very positive and good one. You have said that the United States must enforce terms of the Phase One Agreement, and you have outlined principles for a multilateral trade approach to China, and the discussions with China are taking place.

It would be really helpful for me to hear more of the detail about what concrete steps are being taken to move this relationship forward. I say this as a Californian. We believe it is the Century of the Pacific, and that these relationships are extraordinarily important.

Ambassador TAI. Thank you so much, Senator Feinstein. And let me add my congratulations to Chair Shaheen, on the occasion of your birthday.

Again, the U.S.-China relationship, as I have said before, because it is true, is one of profound consequence. We are the two largest economies in the world, and how we relate to each other affects—

Senator SHAHEEN. Ambassador Tai.

Ambassador TAI. Yes.

Senator SHAHEEN. Can we ask you to put the mic a little closer. Thank you.

Ambassador TAI. Absolutely. How we relate to each other affects not just workers and businesses, communities, businesses large and small in our own economies, but how we relate to each other impacts the entire world. And that is very, very clear for all of us to see.

And so, in terms of the realignment that we talk about in the Biden administration that we know that the United States needs to have with China in trade and economics, it means that the status quo and the way things have been cannot—cannot continue.

In order to be able to compete, in order for our workers and our businesses to have an opportunity to thrive, we need to fundamentally adjust how we relate to each other, and we need to expand the set of tools that we use, we need to expand the way that we use our tools—

Senator FEINSTEIN. May I be so rude as to interrupt you. How would you do this? That is the question. And what parts of the government? Because it has seemed to me that over the years that China works very differently than the United States does; and you really start with personal relationships, and then you build them into business relationships, which is sort of contrary to how we trade. But that is what I have learned in my interaction as Mayor of San Francisco and trying to build trade for California.

Ambassador TAI. You are absolutely correct. Personal relationships, whether they are in the U.S. Congress or they are in international economic relations, do define possibility. I will share with you that over the course of the past, almost year-and-a-half of my time in my position, that I think that the U.S.-China relationship has really suffered from the COVID pandemic, and policies that the Chinese Government has taken with respect to managing COVID.

There have been very, very few in-person interactions between members of our administration, and the members of the Chinese government. I think that those conversations are very, very important, but what I also want to make clear is that in those conversations we, as the United States, have to be extremely clear and extremely clear-eyed, and unrelenting about our interests.

We do not need to get emotional about the challenges that we have, but it is absolutely incumbent upon us to be as tough as we need to be in order to navigate a future where the United States, and China are economies in this world that need to be able to compete on fair terms.

Senator FEINSTEIN. Thank you. Thank you.

Senator SHAHEEN. Thank you, Senator Feinstein. Senator Murkowski?

Senator MURKOWSKI. Thank you, Madam Chair.

Ambassador Tai, welcome, good to see you. I am looking forward to your visit to Alaska next week. And in that vein, I wanted to broaden the discussion here, obviously a great deal of focus on China, where we are with the Section 301 tariffs. Our reality, though, is that China is now importing 50 percent more seafood than it did in 2017.

Unfortunately, China is sourcing this seafood from other nations. Our producers are not fairly able to access the growing market due to tariffs—you understand, above everyone, the background on this.

In 2020 and 2021, China's seafood purchases of U.S. seafood product were down—44 and 38 percent respectively, relative to the 2017 baseline. So you are going to be North next week, you are going to be talking with folks in the resource sector, but particularly those in the seafood sector. You will have an opportunity to

go out and be on the ground, and see what it really means to these local and regional economies.

So the question that I would ask you this morning is, what are you going to share with them, in terms of what efforts this administration is making to help address these tariffs that have been so, so harmful to the U.S. seafood industry, and more specifically, to the Alaska industry?

And as you respond to this question, recognize that beyond China the reduction of trade barriers to seafood markets in Japan, the European Union, and the U.K., these are all also priorities for us. So can you speak to the Alaska seafood issues, and the tariffs that that folks have been operating under for far too long?

Ambassador TAI. Well, thank you Senator Murkowski. And I am also looking forward to the trip to Alaska, which follows on the invitation you extended me at this hearing last year. I have never been to Alaska before. But even more, the reason why I am looking forward to this is precisely to have the types of conversations that you have just outlined are awaiting me in your home State. Every time I travel out into the United States, especially places I have never been before, and have these conversations, I learned something new.

And I will just share with you. In mid-April, I made a trip out to Oregon and the Oregon Coast and met with some fishermen at Senator Wyden's invitation. Senator Merkley was there as well. Those conversations really helped to inform me, with respect to the real world, the real impact on real members of our communities, in the WTO fisheries subsidies negotiations that we just had last week, and how important it is to engage in establishing rules for ensuring that in fisheries, that we have a sustainable approach, and we have fair parameters for the world's fishermen to engage in.

Senator MURKOWSKI. Let me let me go ahead and interrupt, because I have one more question that I want to ask. You will get an earful. You will get an earful, and you will see it for yourself, and our hope and the reason for the invitation, not only for myself, but Senator Sullivan, is so that we can see action in this area.

I wanted to shift just very briefly here with regards to Arctic, and our friends in the Arctic, most notably Iceland. Iceland is a great friend of ours. We have got good strong relationships through Arctic strategy, and transatlantic relations. U.S. is the fifth largest import and export market for Iceland.

Iceland has made tremendous gains in its renewable energy sector, we have got a—we have got a great relationship again. China, a non-arctic Nation on the other side of the globe, has recently signed a free trade agreement with Iceland. The people in Iceland are saying: Why not us? Why not us? You run risks I think when we discourage countries from doing business with autocracies, whether it is China and Russia. But then we don't offer them any viable alternatives.

We say we will be there for you, but we are not going to enter into the free trade agreement. Your comments to why this has not been addressed, at least in a significant way. I know the ask has been out there for some time because I have been part of those dis-

cussions, so any update that you might have on an Iceland Free Trade Agreement?

Ambassador TAI. So unquestionably, Iceland is an important trading partner. In fact, I met my Icelandic counterpart in Geneva last week at the WTO. I think that all the reasons that you have raised in terms of enhancing our collaboration with Iceland economically are entirely valid. And Iceland, is an FTA country, so with respect to our build and rebuild of our relationship with the EU, that those do have positive implications for our relationship with Iceland as well.

I am ready and willing to show up and to engage with all of our partners. I take your point on the strategic aspects. I guess what I would say with respect to what you have just presented to me, is that the fact that Iceland has just signed a free trade agreement with China will make us thoughtful about how we—the parameters of the kinds of collaborations that we build with Iceland, to ensure that.

And I think this is very true in terms of our approach the Indo-Pacific as well, to ensure that what we are doing is providing our partners with choice, with more choices. It is providing us with more choices as well, but it is not entangling us further into a version of globalized supply chains that is going to undermine our ability to build for more resilience.

And I think that with respect to China and the Chinese market, and this goes back to your fishermen as well, we have seen China use its leverage, with respect to its market, to push countries on politically—political and sovereign decisions that China has found that it doesn't like. We are a very, very large economy, and we experience it differently, but this is the version of that coercion that we experience. It is not coercive, but it is very painful.

I think that this is absolutely something that we are focused on addressing in the U.S.-China relationship, which is the reliability and confidence that we have in each other, and to the extent that we don't have it, all of the collaborations that we need to have with our other partners and allies to ensure that we provide each other with resilience.

Senator FEINSTEIN. I appreciate that. I know that it would mean a great deal to Iceland, and it doesn't take much from us. So I look forward to exploring these conversations further.

Thank you, Madam Chair.

Senator SHAHEEN. Thank you, Senator Murkowski. Senator Reed.

Senator REED. Thank you very much, Madam Chair.

I know you will enjoy Alaska because I have been to Alaska with Senator Murkowski, and it was terrific. I just want to warn you though, the way they measure things in Alaska, it is how many times bigger it is than Rhode Island. So just be prepared for that, okay.

[Laughter.]

Senator REED. I just came from the Banking Committee Hearing with Chairman Powell, the Federal Reserve. You know, we are facing an issue of inflation which is significant with multiple causes, but one that everyone admits to is the supply chain, and normally

with a task force in place. Can you tell us what progress we are making on rearranging our supply chain?

And just one other comment is that we build and took for granted a global supply chain built on efficiency and speed without sustainability, or the ability to reconnect quickly. With the pandemic, that has been broken, and I don't know if that will be put together again. But what are you doing in the task force on supply chain?

Ambassador TAI. Senator Reed, thank you for this question. I wish that I also were able to visit Chairman Powell's hearing, because I know how much inflation is impacting our economy, and our people, and how concerning it really is. And I agree with you.

I think that with respect to supply chains, the bottlenecks, the disruptions that we have had these last couple years that they have been a significant disrupter in our economies. And significantly eroded our confidence, and "our", I mean collectively, our American and worldwide confidence in the global economic system, which is why working towards a version of globalization that is built for beyond efficiency, resilience and sustainability is our guiding principle in terms of our engagements with all of our partners in our initiatives that are ongoing right now.

Let me say this on supply chains in particular. I had a really eye-opening conversation with a CEO and Chairman earlier at the early parts of this year, who is in the banking industry, and we were talking supply chains, and he said to me, "You know, as I have been looking at the supply chain challenges, what strikes me is that I would never have designed these supply chains to look like this." And at the time I didn't quite understand what he meant by that, and I thought about it through the lens of a banker, and what has struck me is, what I think is an important perspective, which is our supply chains have not taken into account risk.

They have been all about efficiency, and in terms of what we can contribute from trade, to building supply chains that are more resilient I think a key part of this is incorporating into our work on trade beyond tariff liberalization, is how we can incentivize countries and more specifically, our firms to calculate in the risk of their supply chain design, as they make their business decisions.

And this is one of the key issue areas that we are raising with our trading partners and all the initiatives we have going on right now.

Senator REED. I think that is a sensible approach. Can you give us any sense of tangible progress in this regard, of rationalizing the supply chains, as you say, make it more robust and resilient?

Ambassador TAI. USTR is tasked with heading the supply chain task force on an inter-agency basis. We have a list of all the work that we have done over the course of the last year, which I won't go into, and I will refer you to our website and let you know that it is there. But I think that the most important work is yet to come and has really got to be on an international basis.

How do we connect our economies together, and how do we, in a very, very clear-eyed way, identify the things that we have to do to correct for a set of supply chains and a version of globalization that is built only for efficiency right now? And so just let you know that whether it is in the Indo-Pacific, whether it is our initiative with Taiwan, the initiative that—on the future of Atlantic Trade

that we have going on with the United Kingdom, the EU Trade And Technology Council, and all of these different arrangements, we are laser-focused on this issue of our supply chain resilience.

Senator REED. Thank you very much.

Thank you, Madam Chair.

Senator SHAHEEN. Thank you Senator Reed. Senator Van Hollen.

Senator VAN HOLLEN. Thank you. Thank you Madam Chair. And it is great to see you Ambassador Tai.

I want to turn to the recently announced U.S.-Taiwan Initiative on 21st Century Trade. If you could just quickly identify the top priorities that you expect to come out of that agreement, and tangible changes in terms of trade with Taiwan that you hope to see?

Ambassador TAI. Certainly. Thank you, Senator Van Hollen. And I appreciate your interest in this particular relationship and this issue.

In our announcement kicking off this particular initiative we identified 11 areas where our initiative will be focused, seven of those areas are the same or similar to the ones that we have announced in the Indo-Pacific Economic Framework. Those go to the digital economy, and digital trade, labor, environment, trade facilitation, science-based and evidence-based regulatory practices, when it comes to trade for agricultural products. In the category of the additional areas where we will be focused with Taiwan in our initiative, I think that they are a very interesting set of conversations around non-market economy challenges that we share, State-owned enterprises. And the other two, I am going to have to look at my notes, but they are also on our website.

But I think that they are particularly relevant and consistent with what I just said to Senator Reed. They are looking at how we can work together with our partners on building resilience, sustainability, and then the other piece that is really critical to us is inclusiveness as we build out into an economic recovery. How do we bring as many in the world in our own communities as we can into prosperity?

Senator VAN HOLLEN. Well, Thank you Madam Ambassador. As you know, there was some concern including shared by many in the Senate that Taiwan was not part of the Indo-Pacific Economic Framework, but I am glad that you have developed this initiative, and look forward to working with you on both those fronts.

So on another committee, the Senate Foreign Relations Committee, I chair the Subcommittee on Africa, and interested in what you, at USTR, are doing with respect to U.S. trade and investment in Africa, which in my view is good for U.S. businesses, good for U.S. workers, good for partners in the region. And I think it is worth noting that in the next 30 years the population of the entire Continent is expected to double, and one-quarter of the world will live in Africa by the year 2050.

So it seems to me that we need to really keep our eye on the ball here, and do better than we have. Obviously some of our chief adversaries and competitors like China are very much engaged in Africa. What are you doing at USTR? And are you working with the Prosper Africa Initiative folks to make sure that we combine our resources in a smart way?

Ambassador TAI. Absolutely, USTR is an active participant in the Prosper Africa efforts within the administration. And I agree with everything you have said, Senator Van Hollen, about the opportunities, and frankly the necessity of the United States to amp up our engagement with Africa, for all the reasons you have listed. And also, I think one of the most interesting, and awesome, frankly, data points is also the number of young people that are in Africa.

And that goes to the growing population that the youth of the world are largely in Africa, and this is really about our collective future. Let me say this with respect to U.S. Africa Trade. AGOA is a foundational trade program that we have had with the African Continent. It expires in 2025, and there have been a lot of conversations with my African counterparts around what is going to happen to AGOA after 2025. I know that there are a lot of leaders, thought leaders on this issue within the U.S. Congress, and I will let you know that USTR is engaging and stands ready to engage across the board, on what a vision is for AGOA going forward.

But I will also let you know, it is my—it is my view that AGOA is not enough. AGOA has been around for a long time, and I think AGOA can do better. But also, I will just share with you in the context of the World Trade Organization, 12th Ministerial Conference that just concluded last week, that with respect to the Intellectual Property Rule changes that were made for COVID vaccines, for a limited period of time, to address the covid pandemic that I found most powerful.

My African counterparts who asked the United States to lean in and get that effort across the finish line because it is going to, in their view, allow the African Continent a foothold into a very important supply chain, that they do not have access to. And I think that it is through new efforts, and new initiatives also, that we have got to push ourselves to think about how we can be a better partner to the entire African Continent.

Senator VAN HOLLEN. Well, thank you, madam Ambassador. I look forward to continuing the conversation about AGOA and updating it, upgrading it. As I am sure, you know, about 90 percent of our non-energy imports under AGOA, in 2020, came from just five countries. And you know, clearly we have got to expand the benefits of AGOA, along with engaging with Africa on the African Continental Free Trade Area and see what kind of mutual benefits we can draw. So I look forward to continuing that conversation.

Thank you, Madam Chair.

Senator SHAHEEN. Thank you, Senator Van Hollen.

Ambassador Tai, I think I, and I think Senator Moran also, we have a couple more questions. So we would like to do another round with you.

And I would like to go back to Russia. And I think that the actions that you and the President engaged in leading up to Russia's War in Ukraine have been very important in helping to unite the allies, and present a united front, and being able to put in place a series of sanctions that, while they are taking some time, they are having a real impact.

In April, Congress passed a bill revoking Russia's permanent normal trade relations status. This law gives you additional au-

thority to sanction Russia in other ways. I wonder if you can give us some insights into what you are thinking, and how you might be using this authority.

Ambassador TAI. Chair Shaheen, I want to begin by thanking you and the entire U.S. Congress for speaking with such conviction, and resolution on the issue of Russia. Earlier this year, the United States Government being able to respond with one voice; was incredibly powerful, and enabled us to take a real leadership role in responding to Russia's aggression in Ukraine.

As a result of the bill that Congress passed, and that the President signed into law earlier this spring, the United States has, with respect to trade, suspended permanent normal trade relations with Russia, and that means that we have imposed non-MFN tariffs on imports from Russia, and that action alone has increased tariff rates on over 75 percent of U.S. imports from Russia.

We are continuing to engage in the administration through our conversations with other partners and allies to look at how we can use this new authority to impose additional consequences on imports from Russia. I think what I would really also like to note here that we have talked a lot about tariffs in the course of this particular hearing, and I just want to note that I think about tariffs a bit like—tariffs are like two-by-fours, they can be used for lots of different purposes.

With respect to Russia, these tariffs are punishment. We are using these two-by-fours as a kind of a weapon, but in other areas, right, our tariffs are used to build platforms. They are used as weapons to level the playing field. They are used as encouragement to create enforcement and incentivize compliance.

So, in this particular area, you know, I also feel that it is important, from the USTR perspective, to note that these tariffs we are using in a particular way which is appropriate, and which is focused on changing Russia's behaviors.

Senator SHAHEEN. Well, thank you. I certainly agree with that, and agree with your sentiment that it has been very important for Congress to be united in responding to Russia's unprovoked war. And it has sent an important signal not just to Russia but to our other adversaries who are really looking closely at what we are doing here, and how we are responding.

I want to—so just to follow up, so then I would urge you to think about every way possible, as you say; that we can penalize Russia for what they are doing. And if you see ways in which this subcommittee can be helpful with that, or that Congress can do more, I hope you will share that with us.

You mentioned in your opening remarks the importance of the legislation that is currently in the Committee of Conference, whether it is America COMPETES, or the U.S. Innovation and Competition Act. So much of the discussion at this hearing has been about China, and the threat that China poses. Can you talk about—I mean, one of the motivating—the main motivator behind that legislation, I think, is to try and level the playing field for the United States with China.

Can you talk about what it will mean if we are not able to bring that legislation across the finish line; and what kind of a disadvantage that will put the United States at against China?

Ambassador TAI. I would be delighted to, Chair Shaheen. With respect to realigning our relationship with China, there is a set of—there is both defense and offense that we have to play, and frankly, when I look at tariffs, I see the tariffs mostly as defense. But if our goal, with respect to China—and frankly every other non-market economy that our businesses, and our workers have to compete with—defense isn't enough, we have also got to play offense.

And I think that in terms of what is in the conversation around the Bipartisan Innovation Act—it goes by many names—it is a combination of defensive tools and offensive tools. And what I mean by “offensive tools” are those are the tools to really invest in ourselves to give our industry, and our workers the boost to take their talents, and resources, and assets, and allow them to shine in a competitive field, that we have not considered fair in a very long time, and which is really critical to our success in the future.

So, the way I look at what is before our Members of Congress right now, in this conference, is really things that we need to do that are necessary, but by themselves not sufficient for putting the American economy on the strongest footing possible. And I think that there is a lot more work for us to be doing together, the administration and Congress. And I am committed to doing that work with all of you.

General SCOBEE. Well, thank you. I appreciate that. And hope that all of the conferees will hear that statement today. Senator Manchin?

Senator MANCHIN. Thank you. Thank you Madam Chair.

And thank you for being here, and doing the job that you do, and we are very hopeful in your accomplishments.

Let me just ask the question here. I have got two of them. The State-backed companies that are circumventing U.S. trade laws, by a variety of methods including transshipment and dumping. Transshipment of goods through third countries to evade anti-dumping duties undermines the integrity of our trade laws, and puts domestic manufacturers at risk from unfairly traded products; in a nutshell, what happens.

And I was just at a little company in West Virginia that makes a lot of products for the solar industry, and they are now competing with dumping parts, and they know it is coming from China, but it is coming through different vessels, if you will.

So I applaud yours, and Secretary Raimondo's inclusion of annual audits of steel producers owned by and operated by Chinese parent companies. And the recently struck trade agreement with the U.K. And I encourage you to continue to pursue the audits in any future trade agreements. So given its inclusion in the recent U.K. Trade Agreement, how likely is it that you all will pursue similar audit provisions, whether it be for steel or other products, and future trade deals?

Ambassador TAI. Well Senator Manchin, I am always delighted to talk about U.S. manufacturing, and how we can make the American economy create more opportunities, and be a rosier place for our manufacturing.

Senator MANCHIN. We are just asking for a level playing field.

Ambassador TAI. A level playing field, absolutely. Your specific question goes to our interest in incorporating audit provisions in our arrangements with our trading partners, to ensure that the playing field remains level.

Senator MANCHIN. I think basically——

Ambassador TAI. I am very interested in this issue of audits. And I am interested in expanding it beyond anti-dumping and counter-vailing——

Senator MANCHIN. When you have a U.S. company identifies that they know they are getting dumped on, and all they are asking for is an audit from the country—and look, just pick an Indonesian country anywhere, pick one, and we know it is being funneled through China, to have that audit show that they didn't—they don't have the production facilities, they can't do it there, so they have to be funneling from somewhere else. I think we could determine that pretty easily. And then classify them for anti-dumping.

Ambassador TAI. I think that audits and verification go to the heart of the integrity of our trade tools. And I agree with you entirely.

Senator MANCHIN. Okay. The other one is the relationship between U.S. and China, I know we have been talking a lot about that, has been tumultuous over the years. I think basically we probably had progress by 2019 having a trade deal with them, but then with COVID coming up and China failed on a number of their purchase agreements, and while it is important to note that the initial phase occurred during the pandemic, they have made no efforts to reassure the United States they are committed to making good on the terms that they agreed to.

So given the 2020 Phase One Trade Agreement between us and China, ultimately did not produce its desired outcomes, what avenues are being explored right now to ensure that fairness, in any future trade agreements between China and ourselves?

Ambassador TAI. This is absolutely one of the most important questions that we are grappling with right now, and one of the most important issues to determine what our economic future looks like in this globalized economy.

Senator Manchin, I have talked quite a bit about China. Last October I gave a speech about the Biden administration's approach to the U.S.-China trade relationship. We spent several months focused on China's performance under the Phase One Agreement, and as we turned the corner into 2022, and we were able to look at full-year trade data for 2020 and 2021. We absolutely saw gaps between the purchase commitment levels, in particular, that China had committed to, and also where the purchases actually were.

Let me just say this also. In the speech that I gave in October, we also reviewed our approach to the China Trade and Economic Relationship over the course of the past several administrations. And it is very, very clear certainly to me at this point that it is time for us to turn the page on the playbook that we have had with China, which has been a combination of negotiating agreements on one hand——

Senator MANCHIN. Do you have enforcement mechanisms; any enforcement mechanisms available to you all to be used with this agreement?

Ambassador TAI. Absolutely, we do.

Senator MANCHIN. Are you all going to use them?

Ambassador TAI. Yes.

Senator MANCHIN. Okay. And let me ask you on the first question too, both of them. Is there something that we need to do to help you basically, you know, tighten down on some of this, because they are just running amok playing us, just playing us really. And it is a shame.

We keep talking about, and I will tell you my biggest peeve right now is the whole thing with the EVs, the batteries, chips, and all the different things, rare earth minerals processing, anodes, cathodes everything that we need. And if we are ever going to get this industry up and running and be self-sufficient in North America, then we have to make sure that they can't dump on us.

And right now we are about ready to put our whole eggs in one basket, thinking EV is the way to go, and we are going to be absolutely so taken advantage of, to the point where we are going to be held hostage by the foreign supply chain that China has the grip on. I just, I just can't believe that we are even thinking about going down that path. And I am gonna do everything I can to stop it, because I think it is stupid, because we are not able to protect our investments in the country.

Because if Jerry Moran in Kansas wants to start a new company, and he is up and running, and they start dumping, he can't compete. He can't go out and get financing, he has no—you know, the markets aren't going to basically respond to him. And we just—we are just held at a disadvantage because of the economy that we have, and the way we administer our economy. But we depend on you all to crack hard and crack them down as tight as you can.

We talk about border adjustment. I don't know if you have talked about that, Madam Chair; if you all talked about border adjustments. The reason that we have Democrats and Republicans talking about border adjustment, we think that is the only level playing field we might have. They are not paying attention to any of the agreements they sign, and we have no penalties to them.

But at border adjustment we would have that product coming in and we proved it came from a country, but it really came from China, via other countries. So that is my frustration.

I am sorry to vent. I thank you for giving me a chance to do that.

Senator SHAHEEN. Thank you, Senator Manchin.

Ambassador Tai, would you like to briefly respond to Senator Manchin?

Ambassador TAI. Senator Manchin, you began that by asking what you can do, and to help, and I think that what you have just conveyed is absolutely, I want to let you know, loud and clear, and well received by me sitting in this chair.

Senator SHAHEEN. Thank you very much. Senator Moran.

Senator MORAN. Chair, thank you.

In this setting, and with the Secretary of Commerce, both the Chair and I, and other Members of the Committee have had ongoing conversations about lumber particularly as they relate to home building, home prices, we are still absent this agreement with Canada. Can you provide me an update on any progress that has been

made in a long-term resolution of this issue with Canada on softwood lumber?

Ambassador TAI. Yes. Senator Moran, I would be happy to provide you with an update. I talk lumber almost every single time I have seen my Canadian counterpart, and I have seen her quite a bit in these last several months. I have indicated that we are open and interested in addressing lumber through another agreement which we had in place several years ago, that requires the Canadian Government to be willing to address the fundamental challenges that we have with respect to an unlevel playing field for our industry, with respect to how they govern their harvesting and their industry, which has the impact of subsidies, for our competitors.

When and if Canadian industry and the Canadian government are ready to address those issues, we stand ready and willing to enter into negotiations to see if we can, once again, come to some kind of an agreement with Canada.

Senator MORAN. Leverage has been a theme of the conversations this morning. Is there leverage with Canada in that regard to induce them to do so?

Ambassador TAI. Senator Moran, I like the way you think. And I would be happy to have a follow-up conversation with you around how we might examine that question.

Senator MORAN. All right, thank you. One of the more recent developments in home building, and in home ownership has developed as a result of the lack of grain-oriented electric steel needed to build transformers. And so there is a shortage in Kansas, and I assume the country in getting the transformer necessary to build a new home or to have a new home, have a connection with utilities.

I know that we increased tariffs on imported steel, I know there was a Department of Commerce investigation that subsequently found no corresponding increase in domestic manufacturing to meet U.S. demand; this type of steel remains under Section 232 Tariffs. Any thoughts of what USTR can do to solve this problem of lack of transformers?

Ambassador TAI. Senator Moran, let me go back to USTR and check the facts, because I have had two sets of conversations on grain-oriented electric steel of late. One is around the need to access more of them, or more of this type of steel for transformers. The other one goes to some of your colleagues here in the Senate, and then also in the house who represents States and districts where there is one lone producer in the United States left.

Senator MORAN. And producing the transformers—

Ambassador TAI. And in my mind the fact is that GOES is not subject to 232. But let me come back to you with better facts.

Senator MORAN. Okay.

Ambassador TAI. Let me just say this—these conversations really break my heart because, they are similar to the conversations we have on solar. We litigated several cases at the WTO against China on their approach to cornering the market on grain-oriented electric steel, and our loss of our own industry. And what I find time and time again, is whether it is with respect to GOES, or solar, that once we have lost the better part of our industry, we find our-

selves totally over a barrel, domestically, and also with our other trading partners around how we can—how we can have reliable access to these types of industrial products, where we have confidence in their integrity.

And so let me just say this bottom line is: let me go back to USTR and do some homework and follow up with you.

Senator MORAN. Finally, again, on this conversation of tariffs being utilized as leverage, it seems to me that if we are creating a circumstance in which we want and have leverage, the result would be that we would be negotiating additional trade agreements, bilateral, multilateral. But the administration has not requested trade promotion authority. That is one thing. What new agreements, trade agreements is the administration pursuing that then justifies the use of tariffs to be leveraged?

Ambassador TAI. I think that in terms of the China tariffs, that is with respect to leverage vis-à-vis China.

Senator MORAN. Mm-hmm.

Ambassador TAI. And it has been a very long time since we have looked at negotiating what I would call a traditional trade liberalizing agreement with China. I think the last effort that we had was the Bilateral Investment Treaty. And that was way back in 2015 and 2016, and I don't think this may be when they come out of the woodwork. I don't think anyone has asked me to re-engage with that particular issue.

At USTR I had an agency that is built for two things, and it is on a spectrum. These two activities are not mutually exclusive. One is trade negotiations, and the other one is trade enforcement. And so, we have every interest, and we are actively pursuing negotiations every single day, and enforcing every single day.

Your question about TPA, I am happy to engage in the conversation with Congress. And this is the larger issue around how we orient U.S. trade policies in negotiations separate from the enforcement side, to further our national interests. And I think that our focus right now really is on sustainability and resilience.

That means a modification; and a course correction for the approach that we have taken in the past. In particular, around trade liberalization; and I think it is an important conversation to have, and I would like to let you know that I am happy to engage in it with the Congress.

My main point being, however, that we have got to bring new thinking to how we think about trade agreements, and trade agreement negotiations. We have to take into effect the really painful experiences that we have had these couple of years, and figure out how we do things differently to remain connected with the rest of the world, in a way that is good for the American economy, and that is built for resilience in the long term.

Senator MORAN. I appreciate your answer. I am not going to ask more questions, Chair.

[Laughter.]

Senator MORAN. I appreciate your answer, and I would highlight, at least from my take, I like that you put on par with negotiations of agreements, enforcement of agreements, it seems to me for a long time we celebrate. We do the high five when the agreement

is signed, but when the results don't occur there seems to be less than adequate follow-through. So I appreciate that.

I also think that you were segmenting China and leverage in a different way than other trading, or potential trading partners, around the globe. And I think that is a—an appositive, and it is a necessary attitude to have with China.

And finally, I would say that the WTO is broken, its appellate body, it seems to me, no longer really function—membership so broad that agreements appear impossible. And I would just encourage the—trying to fix those problems but as equally important trying to find friendly countries around the world to institute smaller successes than appears to me we would get in work with WTO.

Does that make sense? Did I say anything that doesn't make sense? That was a question.

Senator SHAHEEN. No. No further questions, Senator Moran.

Senator MORAN. Well, I don't know that I want the answer, but—

Ambassador TAI. All of it makes sense.

Senator SHAHEEN. Oh. Thank you, Senator Moran. And actually you have made a very good argument for why we need to fund USTR's budget, right, Ambassador Tai.

ADDITIONAL COMMITTEE QUESTIONS

Senator SHAHEEN. If there are no further questions this morning, Senators have until June 29 to submit additional questions for the official hearing record, and we would request the agency's responses within 30 days.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

QUESTIONS SUBMITTED BY SENATOR DIANNE FEINSTEIN

QUESTIONS SUBMITTED TO AMBASSADOR KATHERINE TAI, U.S. TRADE REPRESENTATIVE

Question 1. As you may know, I opposed the former president's escalatory trade wars. The costs of the tariffs we put into place on many countries have been paid almost exclusively by U.S. families and businesses. I also believe they strained our international relationships and were not part of a thoughtful strategy.

I realize that the Biden Administration inherited these tariffs, and I thank you for having reduced them in some cases. I also recognize that imposing tariffs can be useful in certain cases. China, for instance, has engaged in numerous unfair trade practices and we should be serious about trying to change its behavior.

—Ambassador Tai, when and how does the Administration believe tariffs should be used, and when are other tools more appropriate? What are we asking our trade partners to do in exchange for reducing or eliminating current tariffs? How specifically do you assess whether or not tariffs are achieving our desired goals?

Answer. Tariffs are a legitimate tool in the trade toolbox. The Biden-Harris Administration is continually reviewing the China Section 301 tariffs; this process is a key part of the Administration's deliberative, long-term vision for realigning the U.S.-China trade relationship around our priorities and making trade work for American workers and businesses, which have been unfairly targeted by China's non-market policies and practices. As part of our review, we have initiated and completed two separate exclusion processes—one on COVID-related products, and one addressed to over 500 previously-extended but expired exclusions. In the latter process, we reinstated exclusions where American workers, farmers, and domestic producers would benefit. The statutory 4-year review also provides an opportunity to

assess the tariffs. Furthermore, we are continuing to consider additional modifications and exclusions processes, as warranted.

Question 2. As you know, China is the world's second-largest economy and is likely to someday surpass U.S. GDP. While it is a lucrative market for many U.S. companies, China has also engaged in many unfair trade practices, including intellectual property theft, heavy subsidization of key industries, and preferential treatment for state-run businesses.

The Biden Administration inherited numerous tariffs on imports from China, along with the "Phase One" trade agreement. China has not fulfilled its end of that agreement, including promised purchases of U.S. agricultural products, which of course are important to California. You have said that the U.S. must enforce the terms of the Phase One agreement and outlined principles for a multilateral approach to fair trade with China. You also have said that discussions with China are taking place, but it would be helpful to me to hear more details about what concrete steps are being taken to move this relationship forward.

—Ambassador Tai, what specific steps has the Administration asked China to take to improve trade relations with the U.S.? What specific negotiations with China have taken place or are planned? What has been China's response, and what is China asking of us?

Answer. In October 2021, we launched a direct dialogue with China regarding China's failure to fulfill the purchase commitments made in the U.S.-China Economic and Trade Agreement, commonly referred to as the "Phase One Agreement." We are also engaging in technical level discussions with China regarding its incomplete implementation of its agriculture and intellectual property-related commitments. We also have been raising our concerns relating to China's harmful non-market policies and practices that were left unaddressed by the Phase One Agreement, particularly China's state-directed industrial targeting, which has had devastating impact on American workers and businesses as well as on our allies and partners.

While we continue to keep the door open to conversations with China, including on its Phase One Agreement commitments, we also need to acknowledge the Phase One Agreement's limitations, which did not focus on some of China's most harmful practices, namely economic coercion and non-market practices. Going forward, our strategies will also include vigorously defending our values and economic interests from the negative impacts of China's unfair, non-market policies and practices. At the same time, we are not solely relying on bilateral engagement. We are actively reaching out to and enhancing our engagement with like-minded trading partners, both directly and through multilateral institutions, as we seek to develop and execute joint or coordinated strategies for addressing the unique challenges posed by China.

As part of this effort, we are prepared to use whatever trade tools we have that may be necessary to protect U.S. interests. That includes working with Congress to develop new trade tools that take into account the realities of what trade looks like today.

Question 3. Earlier this year, you said that while free trade agreements are in the U.S. toolbox for negotiating trade relations, they are "a very 20th century tool." Since opening markets and the principle of free trade have been a central feature of U.S. trade policy for decades, I'd be interested in hearing a bit more from you on that issue.

—Ambassador Tai, your earlier statement implies that free trade agreements are in some way outdated. In what sense do you believe they have become so? And given that you said that free trade agreements should still be a tool in our toolbox, in which circumstances do you think they would make sense?

Answer. The Biden Administration is using our trade tools to create new opportunities for American agriculture, including using our existing Trade and Investment Framework Agreements (TIFAs) and Free Trade Agreements (FTAs) to eliminate tariff and non-tariff barriers to U.S. agricultural products. Last year, we secured a number of wins that will provide more certainty for U.S. farmers, ranchers, and food producers around the country, including: removal of retaliatory tariffs due to resolution of the EU aircraft dispute and a historic agreement on steel aluminum; removal or aversion of tariffs due to agreements with four European trading partners on Digital Services Taxes; new access to the Indian market for U.S. pork following the U.S. India Trade Policy Forum; favorable outcomes on products such as pork, beef, rice, wheat, corn and grape juice in negotiations with the United Kingdom and the EU on tariff rate quotas resulting from Brexit; Vietnam's approval of pending biotech events following TIFA engagement; MFN duty reductions in Vietnam for

corn, wheat, and frozen pork; and regaining access to the EU market for our shellfish producers. We are also committed to strong enforcement of our agreements, as our recent win on Canada dairy illustrates, to promote predictability and level the playing field in agricultural trade.

Question 4. As you know, Trade Promotion Authority, legislation that Congress has previously passed several times to make it easier for the Administration to negotiate trade agreements, expired on July 1, 2021.

A number of members of Congress have said that they would like to renew Trade Promotion Authority. You have said Congress should renew Trade Promotion Authority, but with an updated set of priorities. However, there has been little indication that the Administration considers renewing it to be a priority.

—Ambassador Tai, do you believe that Congress should renew Trade Promotion Authority? If so, how do you think it should look different than previous Trade Promotion Authority that Congress has passed? What actions has the Administration taken to move forward on legislation to renew it? If you do not want to renew Trade Promotion Authority, why not?

Answer. There are strong views on both sides of the Trade Promotion Authority issue, and I look forward to working with Congress should you decide to advance TPA legislation.

Question 5. In the past month, the Administration has introduced its frameworks for trade in the Pacific Rim and South Asia and for North and South America.

I thank the Administration for moving forward with trade relations in these regions that are critical to California's economy. And, I agree with the principles that the Administration has enumerated, including clean energy and infrastructure, strengthening our supply chains, and fighting corruption.

However, one principle notably missing from these frameworks is increasing access to markets, which is a priority for many U.S. producers to secure in other countries, and also what many countries want most from the United States.

—Ambassador Tai, is the Administration willing to negotiate market access with other countries despite it not being included in its trade frameworks? If so, why was it not included as a pillar in these frameworks?

Answer. This Administration takes a strategic approach when engaging our partners worldwide. As each partner is different, we have and will continue utilizing all our trade policy tools to come up with innovative arrangements, whether in the context of a large trade arrangement or through other formats that would secure market access and provide the greatest economically meaningful outcomes for the United States.

President Biden recently announced the launch of an Indo-Pacific Economic Framework (IPEF) to promote inclusive growth for U.S. workers and businesses and support our competitiveness going forward. USTR is leading IPEF's trade pillar, where we are pursuing high-standard commitments. While the Administration is not currently considering tariff liberalization, IPEF will enhance market access for American exporters by knocking down regulatory barriers and establishing rules that facilitate market access.

QUESTIONS SUBMITTED BY SENATOR CHRISTOPHER COONS

Question 1. The WTO Ministerial decision on TRIPS states: "No later than 6 months from the date of this Decision, Members will decide on its extension to cover the production and supply of COVID-19 diagnostics and therapeutics." In light of the Administration's position that any waiver should deal only with vaccines, will USTR engage in these negotiations?

Answer. In the interest of achieving consensus across the 164 Members of the WTO, Members focused on securing an outcome with respect to COVID-19 vaccines, with the potential to expand to COVID-19 diagnostics and therapeutics within 6 months. We are starting our domestic consultations on whether to extend the Decision to cover the production and supply of COVID-19 diagnostics and therapeutics and look forward to continuing to engage with Congress and all relevant stakeholders on this topic.

Question 2. In October, you announced a reengagement with the PRC on trade; in your testimony, you noted "several rounds of difficult discussions" with the PRC following that announcement and stated that the United States must "turn the page on the old playbook" with respect to its engagement with the PRC on trade issues.

What will be USTR's strategy for engagement with the PRC on trade, going forward?

Answer. In October 2021, we launched a direct dialogue with China regarding China's failure to fulfill the purchase commitments made in the U.S.-China Economic and Trade Agreement, commonly referred to as the "Phase One Agreement." We also have been raising our concerns relating to China's harmful non-market policies and practices that were left unaddressed by the Phase One Agreement, particularly China's state-directed industrial targeting, which has had a devastating impact on American workers and businesses as well as on our allies and partners.

While we continue to keep the door open to conversations with China, including on its Phase One Agreement commitments, we also need to acknowledge the Phase One Agreement's limitations, which did not focus on some of China's most harmful practices, namely economic coercion and non-market practices. Going forward, our strategies will also include vigorously defending our values and economic interests from the negative impacts of China's unfair, non-market policies and practices. At the same time, we are not solely relying on bilateral engagement. We are actively reaching out to and enhancing our engagement with like-minded trading partners, both directly and through multilateral institutions, as we seek to develop and execute joint or coordinated strategies for addressing the unique challenges posed by China.

As part of this effort, we are prepared to use whatever trade tools we have that may be necessary to protect U.S. interests. That includes working with Congress to develop new trade tools that take into account the realities of what trade looks like today.

QUESTIONS SUBMITTED BY SENATOR JERRY MORAN

Question 1. Given that current vaccine supply already exceeds demand, how will agreeing to waive US intellectual property lead to higher vaccination rates?

Answer. The WTO Ministerial Decision on the TRIPS Agreement is one part of a holistic approach to getting as many safe and effective COVID-19 vaccines to as many people around the world as possible. The Biden-Harris Administration continues to work with the private sector and all possible partners to expand sustainable vaccine and critical medical supplies manufacturing and distribution around the world, an important component of strengthening our global health security. The uncertainty around the virus, including variants, means that the pandemic is not over. The goal of this Decision is to facilitate production among WTO Members who do not have that ability and to diversify vaccine production. The Decision could help some developing country Members, such as South Africa, on such efforts. Developing distributed manufacturing capacities will foster regional self-sufficiency on vaccine production.

Question 2. The United States has never in its history agreed to such a broad waiver of intellectual property. What does USTR see as the costs of this waiver and how did you weigh them in arriving at the decision to consent to the IP waiver?

Answer. During a previous global health crisis—the HIV/AIDS crisis in 2002—WTO Members agreed to a waiver in connection with the implementation of paragraph 6 of the Doha Declaration on TRIPS and Public Health. The pandemic is another global health crisis that calls for WTO Members to respond. The Administration believes strongly in intellectual property protections, but in service of ending this pandemic, supported a waiver of those protections for COVID-19 vaccines.

Question 3. In agreeing to the TRIPS IP waiver, WTO agreed to consider in 6 months whether to extend the IP waiver to therapeutics used to treat COVID.

- Will USTR support this broader waiver?
- What factors will USTR weigh in reaching a decision?
- Is USTR concerned that the prospect of a future waiver, even if it's not enacted, could have a significant chilling effect on investment into new COVID therapeutics that could potentially save lives and improve health outcomes?

Answer. We are starting our domestic consultations on whether to extend the Decision to cover the production and supply of COVID-19 diagnostics and therapeutics and look forward to continuing to engage with Congress and all relevant stakeholders on this topic.

QUESTIONS SUBMITTED BY SENATOR SUSAN COLLINS

Question 1. Since the Softwood Lumber Agreement expired in 2015, the U.S. and Canada have been locked in a trade dispute that has resulted in the U.S. imposing both countervailing and antidumping duties on Canadian softwood lumber imports. These tariffs are very harmful to Maine businesses, many of which work closely with Canadian sawmills right across the border. High lumber prices also affect the availability of affordable housing for millions of Americans. We need long-term certainty and stability in the softwood lumber market, and particularly amid rampant inflation.

In November 2017, Canada appealed the Commerce Department's original determination to impose duties on Canadian lumber. NAFTA rules that apply to this appeal require that a panel be established and reach a final decision within 315 days of the appeal being made. It has now been over four and a half years, or almost 1,700 days, since Canada requested this review and yet a panel has not been established.

—Ambassador Tai, when will the panel be established so that it can reach a decision, which is long overdue?

—Do you plan to meet with your Canadian counterparts to negotiate a new Softwood Lumber Agreement?

Answer. USTR is engaged with our Canadian counterparts regarding the important task of composing panels. The United States has proposed candidates to complete NAFTA panel composition, but Canada has not acted on our proposals.

I continue to discuss softwood lumber with my Canadian counterpart in every meeting. The United States is open to resolving our differences with Canada over softwood lumber, but it would require Canada to address its policies that create an uneven playing field for the U.S. industry. Unfortunately, to date, Canada has not been willing to address these concerns adequately.

Question 2. As you know, Section 301 tariff exclusions for imports from China expired in December 2020. In March of this year, USTR announced that it would reinstate 352 exclusions that were previously granted, and that these reinstated product exclusions would apply retroactively to October 12, 2021 and extend through December 31, 2022.

One Maine company, Hussey Seating, located in North Berwick, is a family-owned business that designs, manufactures, and sells spectator seating systems around the world. I appreciate that USTR granted all three of Hussey Seating's product exclusion requests, at my urging. Making these product exclusions permanent, however, would provide much more certainty to Hussey and other companies that rely on certain imports.

—Has the USTR given any consideration to making these Section 301 product exclusions permanent, rather than going through the lengthy and uncertain process of assessing and extending them again?

—I understand that the USTR does not currently have a process in place to accept new exclusion requests. Is the USTR considering restarting a process to permit businesses to apply for exclusions?

Answer. The Biden-Harris Administration is continually reviewing the China Section 301 tariffs; this process is a key part of the Administration's deliberative, long-term vision for realigning the U.S.-China trade relationship around our priorities and making trade work for American workers and businesses. The statutory 4-year review also provides an opportunity to assess the tariffs.

In addition, we are continuing to consider additional modifications and exclusions processes, as warranted.

QUESTIONS SUBMITTED BY SENATOR JOHN BOOZMAN

Question 1. What is USTR doing to ensure the second dispute initiated under USMCA on Canada's dairy tariff rate quota administration will result in a different outcome than the first dispute, including measurable increases in US access?

Answer. We are carefully considering next steps to ensure that the United States gets the full benefit of the market access for American dairy workers, farmers, and exporters that Canada committed to under the USMCA.

Question 2. Are you aware, higher energy costs, supply chain disruptions, Russia's invasion of Ukraine along with other geopolitical tensions, and additional duties on imported fertilizers have resulted in significant price increases on fertilizer and other agricultural inputs for U.S. producers. A recent report by economists at the

Agricultural and Food Policy Center (AFPC) at Texas A&M University found nitrogen prices alone have increased 133 percent in the last year. What actions have you taken to help alleviate the surging global prices for fertilizer and other agricultural inputs? What actions are you taking to engage China to restore its exports of phosphate and urea in the global marketplace?

Answer. USTR has been working closely with USDA on various food security issues. USDA is making \$500 million available through a new grant program this summer to support independent, innovative and sustainable American fertilizer production to supply American farmers. The new program will increase competition in a concentrated market; create good-paying jobs at home while reducing the reliance on potentially unstable or inconsistent foreign supplies; and improve upon fertilizer production methods to jump start the next generation of fertilizers produced here in the United States.

USTR is also working with the interagency to encourage multilateral development banks, the Food and Agriculture Organization, and the International Fund for Agricultural Development to finance projects to expand fertilizer production, as well as increase the efficient use of fertilizer and precision agriculture throughout the world to lessen the global dependence on Russia. We will continue to work internally within the administration and with our allies and partners to find additional ways to resolve the global fertilizer shortage and prevent similar shocks in the future.

Question 3. The Phase 1 Economic and Trade Agreement requires the trajectory of Chinese imports of U.S. products to continue beyond 2021, what actions are you taking to ensure China continues to meet the purchasing goals set forth in the agreement?

Answer. It is apparent that China did not fully implement its Phase One Agreement purchase commitments, and we have been discussing with our Chinese counterparts how China plans to rectify the purchase shortfalls. We continue to consult with China on this and other trade matters, and all options remain on the table in dealing with China's compliance failures. We also need to acknowledge the limitations of the Phase One Agreement and past approaches to dealing with China. We are prepared to use all available tools, and by exploring possible new tools as necessary, to defend our economic interests in the face of China's unfair policies and practices. We are also working more closely with like-minded trading partners on issues of shared concern and new potential strategies.

Question 4. Thank you for your work in protecting U.S. farmers at the WTO—standing strong against India's ploys to expand their agricultural subsidies and public stockholding programs. As you know, rice is an important commodity in Arkansas and our farmers have been operating at a competitive disadvantage to India for years because of their trade distorting policies. Myself and 17 colleagues sent you a letter to this effect in December 2021. Can you commit to taking action to address India's behaviors and hold them accountable at the WTO?

Answer. I share your concerns regarding India's domestic support policies and am committed to holding our trading partners accountable to their international trade commitments. I also appreciate the reference to your letter of December 2021, which highlights that U.S. agricultural producers and exporters, particularly in the rice and wheat industries, are disadvantaged as a result of Indian domestic support policies.

India is a notable competitor for U.S. farmers, including Arkansas rice farmers, in third-country markets, and its agricultural policies impact our ability to export grains and other products both to India and globally. USTR and USDA staff are closely reviewing India's domestic support measures, and we are considering all options to ensure that U.S. exports can compete on a level playing field. In addition, the United States is working closely with a sizeable and growing coalition of World Trade Organization (WTO) Members in Geneva who share our concerns regarding India's domestic support policies. In May, the United States and other concerned WTO Members initiated technical consultations with India under the Bali Decision on Public Stockholding for Food Security Purposes.

Additionally, at the 12th Ministerial Conference of the WTO in June, I am pleased that we were able to uphold important WTO commitments on agriculture by standing up to India's demands that its public stockholding programs be exempted permanently from WTO limits on trade-distorting agricultural subsidies.

Question 5. Can you elaborate on USTR's China strategy? Does USTR plan any tariff relief, and will USTR initiate a new 301 investigation into Chinese subsidies?

Answer. A major component of the Biden-Harris Administration's trade agenda is the realignment of the U.S.-China trade relationship. Since last year, we have

launched a direct dialogue with China, and have pressed China to live up to its commitments under the Phase One Agreement. We have also raised concerns regarding China's state-directed, non-market policies and practices that were not addressed in the Phase One Agreement. Several rounds of difficult discussions made clear the limits of China's interest in delivering on those obligations. And that is why it is time for us to turn the page on the old playbook. China's non-market policies and practices unfairly target U.S. workers, businesses and key sectors. We have to use all available tools and develop new tools to defend our economic interests and values. President Biden recognizes that market economies must act in concert to confront policies that are fundamentally at odds with the modern trading system. And that is why we have also brought a renewed focus to engagement with our partners and allies, who also are negatively impacted by China's unfair trade and economic practices.

The Administration is continually reviewing the China Section 301 tariffs, as a key part of our deliberative, long-term vision for realigning the U.S.-China trade relationship around our priorities. As part of this process, in March, we reinstated exclusions where American workers, farmers, and domestic producers would benefit. The statutory 4-year review also provides an opportunity to assess the tariffs. We are continuing to consider additional exclusions processes and modifications, as warranted.

Question 6. As you know, the Administration has launched a number of non-trade, trade agreements, including IPEF, TCC, and Latam. How does USTR intend to link these together? That is, if you are focusing on trade facilitation in all three, are there best practices that should be common to all three?

Answer. We are developing a worker-centered trade policy that benefits U.S. workers and consumers, and ensures that U.S. companies can continue to innovate and create new economic opportunities both in the United States and abroad. Our initiatives are linked by a common goal of trade arrangements that include high standard commitments in the areas of labor, environmental sustainability, transparency and good regulatory practices, and trade facilitation. This Administration takes a strategic approach when engaging our partners worldwide. As each partner is different, we have and will continue utilizing all our trade policy tools to come up with innovative arrangements, whether in the context of a large trade arrangement or through other formats that would secure market access and provide the greatest economically meaningful outcomes for the United States. We look forward to continued close coordination with Congress on these initiatives.

QUESTIONS SUBMITTED BY SENATOR SHELLEY MOORE CAPITO

Question 1. I brought up this question last year during the fiscal year 2022 hearing. However, I still have concerns surrounding Jingye Group, a Chinese steel and iron manufacturer, had purchased British Steel—a steel manufacturer with facilities across the UK and Europe. As we continue to place focus on China's trade practices, I worry that acquisitions such as these could lead to the circumvention of U.S. trade law. My staff has reached out to USTR more than a few times to get a better understanding how the quotas and auditing process will work under the new agreement without receiving a sufficient response.

- Are the quotas in the Trade Rate Quotas (TRQs) with the EU and the one being negotiated with the U.K. divided out by Harmonized Tariff Schedule (HTS) code or is it just a lump sum of all steel tonnage?
- Can you elaborate on how the “melted & poured” requirement in the EU deal will be policed? What penalties will be levied for breaking the rules of the agreement?
- Will the results of the annual audits under the U.S. and U.K. be published for review?

Answer. The U.S. announcement of actions on EU imports under Section 232 provides that the aggregate annual import volume under the steel TRQ is set at 3.3MMT under 54 product categories (HTS codes for these product categories are listed in Annex 1 of the U.S. announcement <https://ustr.gov/sites/default/files/files/Statements/US%20232%20EU%20Statement.pdf>). This annual volume is allocated by product category on an EU member state basis in line with the 2015–2017 historical period.

The U.S. announcement of actions on UK imports under Section 232 provides that the aggregate annual import volume under the steel TRQ is set at 0.5 MMT under 54 product categories (HTS codes for these product categories are listed in Annex

1 of the U.S. announcement <https://www.commerce.gov/sites/default/files/2022-03/UK232-US-Statement.pdf>). This annual volume is allocated by product category in line with the 2018–2019 historical period. The U.S. Customs and Border Protection, in consultation with the Department of Commerce, administers the TRQ.

With regard to the annual audit, the U.S.-UK joint statement provides that, upon completion, the results of the annual audits will be made available to the United States. The statement also provides that the United States will protect any audit properly identified as containing proprietary information from public disclosure to the extent permitted by U.S. law.

Additional information on the administration of the TRQ or the annual audit may best be obtained from the Department of Commerce.

Question 2. As part of the Phase One Agreement with China, Chinese leaders committed to buying an additional \$200 billion worth of American goods and services over 2017 levels by the end of 2021. However, analysis¹ of the trade data published in March 2022 founds that China only bought 57 percent of the U.S. exports they committed to make by the end of 2021.

—Do you anticipate whether there will be a phase two of the agreement?

—Will there be an effort taken by USTR to enforce China's compliance with the energy provisions that are part of the Phase One Agreement?

Answer. It is apparent that China did not fully implement its Phase One Agreement purchase commitments, and we have been discussing with our Chinese counterparts how China plans to rectify the purchase shortfalls. We additionally continue to press China to implement other commitments of Phase One, including those relating to agriculture and intellectual property. We continue to consult with China on these and other trade matters, and all options remain on the table in dealing with China's compliance failures. We also need to acknowledge the limitations of the Phase One Agreement and past approaches to dealing with China. We are expanding our strategies beyond exclusively pressing China for change or for compliance with past commitments. We are prepared to use all available tools, and by exploring possible new tools as necessary, to defend our economic interests in the face of China's unfair policies and practices. We are also working more closely with like-minded trading partners on issues of shared concern and new potential strategies.

Question 3. As a result of the pandemic and indefinite work from home policies, many Americans are considering the option to move to rural areas, like my state of West Virginia. However, lumber prices have more than tripled since last spring and are further increased by tariffs on Canadian softwood lumber.

—Is your team working on a new softwood lumber agreement with Canada?

—Will you make this a priority?

Answer. I understand your concerns about spikes in lumber prices over the past year and a half, which have been followed by a downward trend due to changes in supply and demand as our economy recovers from the pandemic.

I continue to discuss softwood lumber with my Canadian counterpart in every meeting. The United States is open to resolving our differences with Canada over softwood lumber, but it would require Canada to address its policies that create an uneven playing field for the U.S. industry. Unfortunately, to date, Canada has not been willing to address these concerns adequately.

QUESTIONS SUBMITTED BY SENATOR JOHN KENNEDY

Question 1. Thank you for your work in protecting U.S. farmers last week at the WTO—standing strong against India's ploys to expand their agricultural subsidies and public stockholding programs. As you know, rice is an important commodity in Louisiana and our farmers have been operating at a competitive disadvantage to India for years because of their trade distorting policies. Myself and 17 colleagues sent you a letter to this effect in December. Can you commit to taking action to address India's behaviors and hold them accountable at the WTO?

Answer. I share your concerns regarding India's domestic support policies and am committed to holding our trading partners accountable to their international trade commitments. I also appreciate the reference to your letter of December 2021, which highlights that U.S. agricultural producers and exporters, particularly in the rice

¹ <https://www.piie.com/blogs/realtime-economic-issues-watch/china-bought-none-extra-200-billion-us-exports-trumps-trade>.

and wheat industries, are disadvantaged as a result of Indian domestic support policies.

India is a notable competitor for U.S. farmers, including Louisiana rice farmers, in third-country markets, and its agricultural policies impact our ability to export grains and other products both to India and globally. USTR and USDA staff are closely reviewing India's domestic support measures, and we are considering all options to ensure that U.S. exports can compete on a level playing field. In addition, the United States is working closely with a sizeable and growing coalition of World Trade Organization (WTO) Members in Geneva who share our concerns regarding India's domestic support policies. In May, the United States and other concerned WTO Members initiated technical consultations with India under the Bali Decision on Public Stockholding for Food Security Purposes.

Additionally, at the 12th Ministerial Conference of the WTO in June, I am pleased that we were able to uphold important WTO commitments on agriculture by standing up to India's demands that its public stockholding programs be exempted permanently from WTO limits on trade-distorting agricultural subsidies.

SUBCOMMITTEE RECESS

Senator SHAHEEN. So thank you very much, Ambassador Tai. This hearing stands in—subcommittee stands in recess until the call of the Chair.

[Whereupon, at 11:12 a.m., Wednesday, June 22, the subcommittee was recessed, to reconvene subject to the call of the Chair.]

COMMERCE, JUSTICE, SCIENCE, AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 2023

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

[CLERK'S NOTE.—The subcommittee was unable to hold hearings on departmental and nondepartmental witnesses. The statements and letters of those submitting written testimony are as follows:]

DEPARTMENTAL WITNESSES

PREPARED STATEMENT OF AMERICAN PHYSIOLOGICAL SOCIETY

The American Physiological Society (APS) thanks you for your sustained support of science at the NSF and NASA. In this statement we offer our recommendations for FY 2023 funding levels for these two agencies.

- The APS urges you to fund the FY 2023 NSF budget at a level of at least \$11 billion to prevent further erosion of program capacity and allow researchers to take advantage of scientific opportunities.
- The APS urges you to restore cuts to NASA's life sciences research budgets and to increase funding for the Human Research Program.

NSF and NASA support scientific research and technology development programs essential to the future technological excellence and economic stability of the United States. Federal investment in this research is critically important because breakthroughs in basic and translational research provide the foundation for new technologies to fuel our economy and make it possible for the United States to remain a global leader in science, technology and engineering. According to the 2022 Science and Engineering Indicators, other countries including China continue to increase basic research funding at a rate that outpaces the growth of U.S. investments.¹

NSF FUNDS OUTSTANDING RESEARCH AND EDUCATION PROGRAMS

NSF provides support for 24% of all federally funded basic scientific research, including 65% of the support for non-medical research in biology. NSF invests in basic biological research across a broad spectrum of sub-disciplines along with the equipment and other infrastructure scientists need for their work. Time and time again we have seen that knowledge gained through basic biological research provides a foundation for more applied studies that sustain the health of animals, humans and ecosystems. Moreover, NSF-funded research has led to countless new and unexpected discoveries that could not have been envisioned when the research began. These unforeseen applications have had enormous impacts on science, health and the world's economy.

94% of the NSF budget directly funds research and education. Most of this funding is awarded through highly competitive grants, which support over 300,000 researchers across all 50 States.² The NSF is the only Federal agency that supports basic research across all disciplines of science and engineering, and its continued funding is critical for the development of the next generation of scientists. NSF has an exemplary record of funding research with far-reaching potential. Since its incep-

¹ <https://ncses.nsf.gov/pubs/nsb20221/executive-summary>.

² https://www.nsf.gov/news/factsheets/Factsheet_By%20the%20Numbers_05_21_V02.pdf.

tion in 1950, NSF has supported the work of 248 Nobel Laureates, including the 2020 Nobel Prize in Chemistry for the development of CRISPR gene editing technology. Although there are many promising applications of CRISPR technology, such as rapid diagnosis of diseases like COVID-19, its discovery started as curiosity-driven basic science.

Biological research is just one part of the NSF portfolio. The APS believes that each of the NSF directorates support research that is critical to NSF's mission "to promote the progress of science; to advance the National health, prosperity, and welfare; and to secure the National defense." Collaboration among scientific disciplines is increasingly recognized as the best and most efficient way to advance science. This will only be possible with strong support for all disciplines of research.

In addition to funding innovative research in labs around the country, NSF education programs foster the next generation of scientists. The APS is proud to have partnered with NSF in programs to provide training opportunities and career development activities to enhance the participation of underrepresented minorities in science. We believe that NSF is uniquely suited to foster science education programs of the highest quality, and we recommend that Congress continues to provide Federal funds for science education through the NSF.

The APS joins the Federation of American Societies for Experimental Biology (FASEB) in recommending that the NSF be funded at a level of at least \$11 billion in FY 2023. The NSF budget has been flat in real terms for approximately the last 15 years. When former NSF Director Dr. France Cordova testified before the House Appropriations subcommittee on Commerce, Justice and Science on March 26, 2019, she stated that each year the NSF receives approximately \$4 billion worth of well-rated proposals that the agency is unable to fund within its current budget. Providing the agency with a significant budget increase would allow the NSF to support approximately 2,000 additional research grants. The NSF is poised to address major challenges facing our Nation and our world in the 21st Century, but it needs adequate resources to continue to carry out its mission.

SUPPORT FOR LIFE SCIENCES RESEARCH SHOULD BE INCREASED AT NASA

NASA sponsors research across a broad range of the basic and applied life sciences, including gravitational biology, biomedical research and the Human Research Program (HRP). The gravitational biology and biomedical research programs explore fundamental scientific questions through research carried out both on Earth and aboard the International Space Station, which provides an environment for the conduct of experiments in space. NASA's HRP conducts focused research and develops countermeasures with the goal of enabling safe and productive human space exploration. The program funds more than 300 research grants that go to academic researchers in more than 30 States around the country.

During prolonged space flight, the physiological changes that occur due to weightlessness, increased exposure to radiation, confined living quarters, and alterations in eating and sleeping patterns can lead to debilitating conditions and reduced ability to perform tasks. Scientists are actively engaged in research that explores the physiological basis of these problems with the goal of contributing to the identification of therapeutic targets and development of novel countermeasures. One of the most well-known studies of these physiological changes is the NASA Twin Study which compared identical twins and fellow astronauts Mark and Scott Kelly to document changes that occurred following Scott Kelly's 1 year mission aboard the International Space Station.³ The knowledge gained from this research is not only relevant to humans traveling in space, but is also directly applicable to human health on Earth. For example, some of the muscle and bone changes observed in astronauts after prolonged space flight are similar to those seen in patients confined to bed rest during periods of critical illness as well as during the process of aging.

NASA is the only agency whose mission addresses the biomedical challenges of human space exploration. Over the past several years, the amount of money available for conducting this kind of research at NASA has dwindled. In the past, appropriations legislation specified funding levels for biomedical research and gravitational biology, but ongoing internal reorganizations at NASA have made it difficult to understand how much money is being spent on these programs from year to year. The APS recommends that funding streams for these important fundamental research programs be clearly identified and tracked within the NASA budget. The APS also recommends restoration of cuts to peer-reviewed life sciences research to allow NASA-funded scientists to conduct research that will be critical not only for supporting the success of future long-range manned space exploration but also in

³ <https://www.nasa.gov/feature/nasa-twins-study-confirms-preliminary-findings>.

leading to innovative discoveries that can be applied to Earth-based medicine. As highlighted above, investment in the basic sciences is vital to our Nation's technological and economic future. This innovative engine of research fuels our world leadership and our economy. The APS urges you to make every effort to provide these agencies with increased funding for FY 2023.

Physiology is a broad area of scientific inquiry that focuses on how molecules, cells, tissues and organs function in health and disease. The American Physiological Society connects a global, multidisciplinary community of more than 10,000 biomedical scientists and educators as part of its mission to advance scientific discovery, understand life and improve health. The Society drives collaboration and spotlights scientific discoveries through its 16 scholarly journals and programming that support researchers and educators in their work.

PREPARED STATEMENT OF DEPARTMENT OF JUSTICE

Members of the Senate Committee on Appropriations—Subcommittee on Commerce, Justice, Science, and Related Agencies, my name is Abigail Echo-Hawk, and I am an enrolled citizen of the Pawnee Nation of Oklahoma, currently living in an urban Indian community in Seattle, Washington. I am Executive Vice President of the Seattle Indian Health Board (SIHB) and the Director of Urban Indian Health Institute (UIHI) where I oversee policy, research, data, and evaluation initiatives. To uphold the legislative mandate of the Not Invisible Act and Savanna's Act required by the Department of Justice and Department of Interior, I would like to request an oversight hearing on this issue. The Not Invisible Act and Savanna's Act are critical for addressing the Missing and Murdered Indigenous Women and People (MMIWP) crisis. Each day these go unfulfilled our Tribes, communities, and individuals affected by MMIWP go unserved.

I am an American Indian health researcher with more than 20 years of experience in both academic and non-profit settings. I participate in numerous local, State, and Federal efforts to support AI/AN communities in research, including serving on the Tribal Collaborations Workgroup for the National Institutes of Health (NIH) All of Us precision medicine initiative. I am also a recent member of the NIH Office of AIDs Research Advisory Council as the only Native representative. I am a co-author to four groundbreaking research studies on sexual violence and Missing and Murdered Indigenous Women and Girls (MMIWG) where I have called national attention to the institutional barriers in data collection, reporting, and analysis of demographic data that perpetuate violence against AI/AN people. I am a member of the National Academies of Sciences, Engineering, and Medicine (NASEM) Standing Committee for the Centers for Disease Control and Prevention (CDC) Center for Preparedness and Response (SCPR). Additionally, I serve on Washington State Office of the Attorney General's task force for Missing and Murdered Indigenous Women and People.

BRINGING NATIONAL ATTENTION TO THE MMIWP CRISIS

In 2018, UIHI released a groundbreaking report titled, *Missing and Murdered Indigenous Women and Girls Report*.¹ Through the first publication and multiple reports released since then, UIHI continues to identify gaps in local to Federal data collection methods on AI/AN people, gaps in gender-based violence care continuation, and lack of Federal funding available to meet the unique and prompting needs of Indigenous communities.

Since the release of our initial report, UIHI continues to document the existing resiliency and cultural strengths that combat the MMIWP crisis. In 2022, UIHI released *Supporting the Sacred: Womxn of Resilience*² which gathered the voices of AI/AN survivors and recommended increased and flexible funding for housing stability, legal representation, behavioral health, and investing in community services to reduce survivors' unmet needs. The report also found the relationship between law enforcement, providers, and survivors could be improved through culturally responsive training and authentic relationship-building. Finally, the report concludes by stressing gender-based violence services and programming be led by Native experts and communities to ensure utmost care of our people.

¹Urban India Health Institute. (November 2018) *Missing and Murdered Indigenous Women and Girls Report*. Retrieved from: <https://www.uihi.org/projects/our-bodies-our-stories/>.

²Urban Indian Health Institute. (May 2021) *Supporting the Sacred: Womxn of Resilience*. Retrieved from: <https://www.uihi.org/resources/supporting-the-sacred-womxn-of-resilience/>.

In 2022, we also released *Service as Ceremony: A Journey toward Healing*,³ which identified the intersectional impacts COVID-19 had on AI/AN experiencing intimate partner violence from the perspective of direct service providers. Recommendations to mitigate intimate partner violence includes training medical providers to work with AI/AN communities, support increased funding for community-based programming and services, and promote cross-system coordination amongst responders, Tribes, law enforcement, and community organizations.

Our reports continuously demand improved data collection on AI/AN populations, cross-system coordination, and increased investments to our community-based organizations serving AI/AN survivors, victims, families, and community members affected by violence.

EQUITY DETERMINATION BY THE GAO AND DEPARTMENT OF JUSTICE (DOJ) EQUITY PLAN

In 2021, the Government Accountability Office (GAO) released *Missing or Murdered Indigenous Women: New Efforts Are Underway but Opportunities Exist to Improve the Federal Response*⁴ documenting the Department of Interior (DOI) and the Department of Justice's (DOJ) Federal implementation failures to implement the Not Invisible Act and Savanna's Act of 2019. The GAO report recommended DOJ and DOI fulfill their legislative mandates by: developing a plan accomplish ongoing analyses of data in existing Federal databases; developing a strategy to educate the public on entering data into NamUs; developing a plan to conduct outreach to Tribes, Tribal organizations, and urban Indian organizations (UIO) to enter data into NamUs, and; and encouraging the Secretary of the Interior to appoint members to the Not Invisible Commission. The lack of Federal implementation of these legislative mandates perpetuates the cycle of violence against Indigenous bodies when Indian Country continues to demand action, accountability, and justice for our loved ones.

In alignment with Executive Order 13985: Advancing Racial Equity and Support for Underserved Communities Through the Federal Government and the DOJ—Equity Action Plan, we request the DOJ engage with underserved communities more effectively to increase reporting of crimes; ensure appropriate consideration of the needs of victims, and; improve the dissemination of resources, programs, and services. These efforts will honor the government-to-government relationship with Tribal communities and strengthen agency communication with front line responders to the MMIWP crisis.

IMPROVING DOJ'S APPROACHES AND RESPONSE TO VIOLENCE

Due to unique legal jurisdictional precedent on Tribal lands, Indian Country relies on the efforts of DOJ to assist violent crimes on and off Tribal lands. We request Congress oversee the implementation of Savanna's Act by the DOJ and ensure their equity plans do not go dismissed.

A continuous issue that affects both Tribal regions and urban areas, is the lack of multidisciplinary and multijurisdictional coordination for MMIWP. Tribal, Federal, State, and local jurisdictions often offer disjointed responses that leave crime victims and families without appropriate intervention resources and no way to hold officials accountable. Similar to DOJ creating an MMIP website available for anyone, DOJ must support improved communication amongst Tribes, State and local law enforcement, and community members through a nationwide data system to document missing and endangered Indigenous people. Additionally, DOJ can improve coordination between law enforcement and providers to assure victims, survivors, and families have access to programs, services, and activities that offer culturally responsive wraparound services in the local area.

In Washington state, a historical missing and endangered Indigenous persons advisory alert was created which will notify law enforcement, Tribal areas, and the public. Similar to an Amber Alert, Washington state patrol will respond to the call, and maintain the clearinghouse associated with the call line for individuals impacted by MMIWP. These State-based solutions can begin to bridge the jurisdictional gaps associated with MMIWP, and create a unified approach for Tribal, Federal, State, and local responses.

³Urban Indian Health Institute. (February 2022) *Service as Ceremony: A Journey toward Healing*. Retrieved from: <https://www.uihi.org/resources/service-as-ceremony-a-journey-toward-healing/>.

⁴U.S. Government Accountability Office. (October 2021) *Missing or Murdered Indigenous Women: New Efforts Are Underway but Opportunities Exist to Improve the Federal Response*. Retrieved from: <https://www.gao.gov/products/gao-22-104045>.

In 2021, UIHI released *A Step Toward Justice*,⁵ a case study documenting our efforts within the 13th largest county in the Nation, King County, to improve the accuracy of data collected on AI/AN populations. To address the misrepresentation and undercount of missing and murdered crimes against AI/AN people, UIHI led the creation of data fields for law enforcement to utilize and provided data collection techniques to improve accurate reporting on race/ethnicity, AI/AN identity, and Tribal affiliation. These efforts support law enforcement's improved data collection reporting from interactions with AI/AN people to better document AI/AN people affected by violence. We have created a national model that DOJ can use to support national efforts to identify AI/AN crime victims more accurately and correctly by engaging with Tribes, community leaders, and Tribal epidemiology centers.

ADDRESSING THE INCREASE OF INTIMATE PARTNER VIOLENCE THROUGH FLEXIBLE FUNDING

We are appreciative of the gender-based violence funding being made available to UIOs through the reauthorization of Violence Against Women's Act (VAWA). COVID supplements illuminated the various ways in which wraparound service providers can mediate authentic responses for Native survivors during times of a pandemic. During Tribal consultations held with the DOJ, Indian Country continuously asks for investments in our grassroots, community-based organizations, and Tribal organizations providing low-barrier direct service to both urban and rural AI/AN people. Our Native providers continue to offer unmatched services that must receive renewable, and flexible funding to respond to institutional inequities that perpetuate violence against Indigenous bodies.

COVID-19 exacerbated social determinants of health in AI/AN communities including income, housing, health, and safety. During the stay-at-home orders, AI/AN women experienced an increase in intimate partner violence,⁶ exposing them to additional traumas and placing them at greater risk of becoming unhoused. Many survivors of violence turned to cultural services to escape unsafe conditions. Through flexible spending, our Native providers were able to offer centralized services to address social determinants of health that can often lead to increased risks of intimate partner violence. During the pandemic, cultural healing spaces were created by providers and grew to support survivors' access to behavioral health, medical services, continuing education, and employment opportunities. However, additional, and long-term funding is needed to support health access, legal services, educational opportunities, and on the ground support to care for survivors' and victims' holistic needs.

A multi-pronged systemic approach to MMIWP will require implementation of Savanna's Act and Not Invisible Act, multi-jurisdictional coordination, improved data collection on AI/AN populations, and increased investment to community-based organizations responding to the crisis. These efforts will center those most impacted by MMIWP and address systemic issues plaguing Indian Country.

[This statement was submitted by Abigail Echo-Hawk]

PREPARED STATEMENT OF U.S. DEPARTMENT OF COMMERCE (DOC) AND THE U.S. DEPARTMENT OF JUSTICE (DOJ)

U.S. DEPARTMENT OF COMMERCE

North Atlantic Right Whales \$26 million

In 2020, North Atlantic right whales were designated as critically endangered by the International Union for Conservation of Nature (IUCN). Elevated mortalities of the species from entanglements in fishing gear and vessel strikes have been declared an Unusual Mortality Event (UME) by the National Oceanic and Atmospheric Administration (NOAA) since 2017. The annual documented rate of anthropogenic mortality and serious injury, due to both entanglement in gear and vessel strikes, has exceeded the population's potential biological removal level (PBR) since 1995.

In October 2021, scientists from the New England Aquarium released a new population estimate for North Atlantic right whales, indicating that the population num-

⁵Urban Indian Health Institute. (October 2021) *A Step Toward Justice* Examining the collaboration between Urban Indian Health Institute and the King County Prosecuting Attorney's Office and the lessons learned from their partnerships. Retrieved from: <https://www.uihi.org/projects/protecting-the-sacred/>.

⁶Urban Indian Health Institute. (February 2022) *Service as Ceremony: A Journey toward Healing*. Retrieved from: <https://www.uihi.org/resources/service-as-ceremony-a-journey-toward-healing/>.

bered only 336 as of January 2020, the lowest assessment in decades.¹ Right whales are extremely vulnerable to being caught in the vertical buoy lines used in lobster and crab trapping gear. Entanglement can lead to drowning, reduced mobility, and, in some cases, a long, painful death from starvation. Collisions with vessels of all sizes can also cause serious injuries, such as blunt force trauma, propeller cuts, and broken bones. Three North Atlantic right whale calves were killed or seriously injured by vessel strikes in U.S. waters in the last year. In February 2021, an adult whale was confirmed dead due to injuries from entanglement. Two other entangled whales were added to the serious injuries list in 2021.

Studies have shown that mortalities from known entanglements have continued to increase from 21 percent (1970–2002) to 51 percent (2003–2018).² Entanglements caused as many as 85 percent of diagnosable deaths from 2010 to 2015. In February 2021, a study co-authored by leading North Atlantic right whale scientists found that from 1990–2017, observed carcasses only accounted for 36 percent of North Atlantic right whale mortalities.³ These “cryptic mortalities,” i.e., deaths caused by human activities without an observed carcass, represent a larger proportion of the total mortality than previously believed.

The FY22 appropriations omnibus included \$21 million for North Atlantic right whales within the Marine Mammals, Sea Turtles, and Other Species line item. Within this funding, \$2 million was directed to NOAA for the continuation of a pilot program developing and field-testing new fishing gear technologies designed to reduce entanglements, and \$14 million was provided to States through the Atlantic States Marine Fisheries Commission (ASMFC) to help defray the cost to the fishing industry of compliance with the final 2021 rule to modify the Atlantic Large Whale Take Reduction Plan (ALWTRP) (FR–210827–0171). We are immensely grateful for the subcommittee’s concern for this species and the substantial increase in funding but remain deeply concerned with the effectiveness of the 2021 rule, in that it falls significantly short of the risk reduction needed to save this species from extinction.

Within our proposal of \$26 million, we believe funding should be appropriated to NOAA to develop and implement new rules aimed at reducing the mortality rate of North Atlantic right whales by vessel strikes, fishing-gear entanglements, and other threats. There must also be investment in reducing vessel-strike risk in high-traffic areas as well as a transition to whale-safe fishing gear. We believe the pilot program to refine and field test innovative fishing gear technologies, such as ropeless gear, should be expanded, including the development of geolocation technologies, and recommend \$8 million be appropriated towards this. Lastly, surveys and monitoring, enforcement, disentanglement, stranding response, and plankton recorder surveys are crucial to the conservation of this species.

We encourage Congress to direct investment to the development of ropeless technologies instead of expensive, short-term investments in “weak rope.” The use of 1,700-lb breaking strength lines (known as “weak rope”) may decrease the severity of entanglement injuries suffered by right whales but does not reduce the likelihood of entanglement in the first place nor the sub-lethal impacts of entanglement on whales. This gear also does not reduce the risk of serious injury or mortality for right whales who are less than 2 years old.⁴

If we are to save this species, it will require the investment and cooperation among Congress, agencies, scientists, and industry to find long-term solutions. We appreciate the subcommittee’s recognition of the urgency of this situation and the funding it continues to provide for the protection of North Atlantic right whales.

Unusual Mortality Event Contingency Fund \$4.5 million

Marine mammals are important indicator species of ocean health. Monitoring the health of marine mammals, especially during an Unusual Mortality Event (UME), can reveal emerging threats, potential impacts of human activities, and the effectiveness of management actions. A UME is defined as “a stranding that is unexpected; involves a significant die-off of any marine mammal population; and demands immediate response.” There are currently six active UMEs—Alaska ice seals, West Coast gray whales, Atlantic minke whales, North Atlantic right whales, Atlantic humpback whales, and Atlantic Florida manatees. In the newest UME to be de-

¹ Heather Pettis, Richard Pace III, Philip Hamilton, North Atlantic Right Whale Consortium 2021 Annual Report Card Report to the North Atlantic Right Whale Consortium (2022) available at https://www.narwc.org/uploads/1/1/6/6/116623219/2021report_cardfinal.pdf.

² Sharp, S, et.al (2019). Gross and histopathologic diagnoses from North Atlantic right whale *Eubalaena glacialis* mortalities between 2003 and 2018. *Diseases of Aquatic Organisms*, 135(1), 1–31. doi:10.3354/dao03376).

³ Pace, R. et al. (2021). Cryptic mortality of North Atlantic right whales. *Conservation Science and Practice*. 3. 10.1111/csp2.346.

⁴ Knowlton et al. (2016).

clared, the 2021 Atlantic Florida manatee, over 1,000 manatees have died. Rescue organizations are hampered by the lack of facilities and funds for responding to overwhelming numbers of live manatees in need of rescue and rehabilitation.

Since 1991, 71 marine mammal UMEs have been declared. The UME Contingency Fund was established through the Marine Mammal Protection Act to enable the National Marine Fisheries Service to reimburse marine mammal stranding network partners for costs related to: caring for and treating live animals that strand as part of UMEs; collecting, preparing, and sending biological samples to the National Marine Mammal Tissue Bank and other diagnostic laboratories to investigate the causes of UMEs; and collecting important marine mammal health data to inform and improve future UME responses and marine conservation. Although Congress created this fund in 1992, it appropriated funds only in 2005; all other contributions to the Fund have been through voluntary contributions. Given the growing number of UMEs, \$4.5 million should be allocated to the Unusual Mortality Event Contingency Fund to enable robust marine mammal stranding response efforts.

John H. Prescott Marine Mammal Rescue Assistance Grant Program \$8 million

The John H. Prescott Marine Mammal Rescue Assistance Grant Program (Prescott Grant Program), a program under NMFS, provides competitive grants to marine mammal stranding network organizations to do the following: (1) rescue and rehabilitate sick, injured, or distressed live marine mammals, and (2) investigate the events surrounding, and determine the cause of, the death or injury of marine mammals. Over the past 21 years, the Prescott Grant Program has been vital to protecting and recovering marine mammals across the country while also generating critical information regarding marine mammals and their environment. As the sole source of Federal funding for the National Marine Mammal Stranding Network, which is comprised of over 90 member organizations in 26 States, the District of Columbia, two territories, and two Tribes, robust funding is required for the Prescott Grant Program to enable it to continue its vital work.

Enforcement and Seafood Import Monitoring Program (SIMP) \$4 million

The Seafood Import Monitoring Program (SIMP) was established in 2016 to require U.S. importers of certain fish and fish products to provide and report key data, with the aim of uncovering illegal, unreported, and unregulated (IUU) fishing and/or seafood fraud and preventing it from entering U.S. commerce. The program oversees imports of 13 species groups (which are comprised of more than 1,100 unique species) including sharks and sea cucumbers, two marine species that are increasingly threatened by IUU fishing. The 2019 addition of shrimp has had implications for the critically endangered vaquita, of which only about 10 remain. The use of illegal gillnets for catching shrimp in the Gulf of California, and the subsequent by-catch of vaquitas, has been a major factor in the species' decline.

A 2021 report "Seafood Obtained via Illegal, Unreported, and Unregulated Fishing: U.S. Imports and Economic Impact on U.S. Commercial Fisheries," compiled by the U.S. International Trade Commission, found that \$2.4 billion worth of seafood imports derived from IUU fishing was imported in 2019 (11 percent of total seafood imports). Over 13 percent of the U.S. imports caught at sea were estimated to be caught using IUU fishing practices. Top species included swimming crab, wild-caught warmwater shrimp, yellowfin tuna, and squid. The report noted that IUU-sourced seafood is a threat to the livelihood of U.S. fishermen. These practices also pose risks to marine ecosystems, public health, and human rights.

In January 2020, the U.S. government allocated \$8 million to fight IUU fishing and bolster SIMP as part of the US-Mexico-Canada trade agreement (USMCA) that was approved in January 2021. As part of the agreement, funding will go to NOAA to help it cooperate with the Mexican government in fighting illegal fishing through 2023. Additional funding of \$4 million is necessary to ensure full enforcement of SIMP in FY23.

Marine Mammal Commission (MMC) \$6 million

The Marine Mammal Commission (MMC) is an independent Federal agency established by Congress in 1972 under the Marine Mammal Protection Act (MMPA). It is responsible for overseeing the proper implementation of the MMPA and provides comprehensive, independent, science-based oversight of all Federal and international policy and management actions affecting marine mammals. The MMC's work is crucial to maintaining healthy populations of marine mammals, including whales, manatees, dolphins, seals, sea otters, walruses, and polar bears, and ensuring their survival for generations to come. Additionally, the MMC seeks to ensure that Alaska Natives can meet their subsistence needs through hunting of marine mammals.

Each U.S. taxpayer contributes just over 1 cent per year to fund the MMC and its work. Until FY21, the MMC had been flat funded at \$3.43 million. In FY21, funding for the MMC was slightly increased to \$3.769 million, and was then further increased to \$4.2 million in FY22. Due to rising fixed costs, the MMC has absorbed significant essential costs (salaries, rent, etc.) and thereby reduced its discretionary funding. In order for the MMC to fully fulfill its obligations, we ask that \$6 million be appropriated for FY23.

U.S. DEPARTMENT OF JUSTICE

Environment and Natural Resources Division/Environmental Crimes Section

Additional \$2 million

AWI asks the subcommittee to provide an additional \$2 million, over and above the amount that would otherwise be appropriated, to the Environmental Crimes Section of the Department of Justice's Environment and Natural Resources Division, to be designated for the Section's work on animal cruelty crime.

Congress has taken significant steps in the last decade to strengthen Federal laws to protect animals from cruel treatment. For those efforts to be meaningful, it is imperative that the Federal Government's enforcement efforts be robustly supported. The attorneys in the Environmental Crimes Section are tasked with ensuring that justice is served when the Federal statutes and enforcement regimes that provide for the humane treatment of captive, farmed, and companion animals across the country are violated. These laws include the Animal Welfare Act, the Horse Protection Act, the Humane Methods of Slaughter Act, the 28-Hour Law, the animal crush video statute, the Animal Fighting Venture Prohibition Act, and, since 2019, the Preventing Animal Cruelty and Torture Act.

This is a tremendous amount of responsibility, and it is a responsibility that both Congress and the American public expect to be executed vigorously. The resources available to bring criminal prosecution under these laws has not kept pace with the improvements made in the laws. Given the increased workload the Section has taken on in just the last couple of years, a \$2 million increase in its funding its work on animal cruelty crimes is warranted.

[This statement was submitted by Nancy Blaney, Director, Government Affairs]

PREPARED STATEMENT OF THE WILDLIFE CONSERVATION SOCIETY

The Wildlife Conservation Society (WCS) would like to thank Chair Shaheen, Ranking Member Moran, and the members of the subcommittee for providing this opportunity to submit testimony in support of funding in the FY22 Commerce, Justice, Science and Related Agencies Appropriations Act for the National Oceanic and Atmospheric Administration's (NOAA) National Marine Sanctuaries Program, the National Marine Fisheries Service Office of Protected Resources funding for the critically endangered North Atlantic right whale and for the National Marine Fisheries Service (NMFS) Fisheries Data Collections, Surveys, and Assessments funding line specifically to enhance data collection and stock assessment of vulnerable shark, skate and ray species.

WCS was founded with the help of Theodore Roosevelt in 1895 with the mission of saving wildlife and wild places worldwide. Today, WCS manages the largest network of urban wildlife parks in the United States. Visited by 4 million people annually, the network includes our flagship, the Bronx Zoo, as well as the New York Aquarium in Brooklyn. Globally, our goal is to conserve the world's most important wild places, focusing on 14 priority regions that are home to more than 50% of the world's biodiversity. We have offices and field programs in more than 60 countries and with our partners manage more than 200 million acres of protected areas around the world, employing more than 4,000 staff including about 200 Ph.D. scientists and 100 veterinarians. Working in all the world's oceans, WCS combines its expertise in the field, aquarium and zoos to achieve its conservation mission both in New York and around the world. In our view, the largest threats facing marine wildlife and habitats require innovative, science-based solutions that balance conservation and sustainable use of the ocean.

The future of our ocean and coastal resources—and our National well-being—depends on a strong NOAA. For these reasons, we support robust investment in the Federal Government's premier ocean science, conservation and management agency. We ask that the subcommittee Members use this additional investment in NOAA in the FY23 Commerce, Justice, Science and Related Agencies appropriations bill to increase investments in the National Marine Sanctuaries Program, North Atlantic right whale conservation and fisheries data collections, surveys and assessments to

improve fisheries management and conservation measures for vulnerable shark, skate and ray species.

—*NOAA—National Marine Sanctuaries Program—\$87 Million:* The National Marine Sanctuary System is our essential network of protected waters held in trust for all Americans. Marine sanctuaries and monuments are home to millions of species, preserve our Nation's maritime heritage, and promote access for exploration and world-class outdoor recreation. The conservation and sustainable use of marine ecosystems and biodiversity are vital to maintaining a healthy ocean and Great Lakes, addressing the climate crisis, and underpinning productive coastal economies.

The United States is an ocean nation containing 3.4 million square nautical miles of ocean—larger than the combined land area of all fifty States. The National Marine Sanctuary Program serves as trustee for 15 ecologically and culturally significant ocean and Great Lakes sites. The system works with diverse partners and stakeholders to promote responsible, sustainable ocean uses that ensure the health of our most valued ocean places. A healthy ocean is the basis for thriving recreation, tourism and commercial activities that drive coastal economies. The Office of National Marine Sanctuaries also leads the National Marine Protected Areas Center, the Nation's hub for building innovative partnerships and tools to protect our special ocean.

WCS strongly supports the Biden-Harris Administration's commitment to 30x30 goals—conserving at least 30% of the world's lands and oceans by 2030 (30x30). US implementation of 30x30 provides a critical foundation for global success on biodiversity conservation, mitigating and adapting to climate change through natural climate solutions, and preventing zoonotic spillover that causes pandemics, such as COVID-19. It provides an opportunity for improved inter-agency coordination, as well as alignment, and synergy among existing and new laws, regulations, and mechanisms to enhance habitat protection. 30x30 can also provide a pathway to reconciliation of the issues of equity and justice that underlie conservation in this country by increasing access to nature, especially for under-resourced communities, and honoring and elevating the role of Indigenous Nations in any 30x30 strategy.

Although there are places that merit all protections that U.S. law can provide, working lands and busy waters also play a critical role in meeting the Nation's 30x30 goals. As such, the National Marine Sanctuaries Program which balances conservation and sustainable use must be an integral part of the U.S. response. The program needs additional resources to support existing Sanctuaries as well as to initiate the public-facing, stakeholder-driven process to designate new Sanctuaries in areas that NOAA has determined are worthy of protection. Currently, there is no Sanctuary in the biodiverse and culturally important waters of the New York Bight. Therefore, WCS nominated Hudson Canyon as a National Marine Sanctuary in 2016. Located just 100 miles from the Statue of Liberty, NOAA determined it is a site of ecological and economic importance and placed the nomination in its inventory of successful nominations. WCS's nomination recommended a Hudson Sanctuary designation would supplement and complement existing regulations by ensuring that oil, gas and mineral exploration and extraction be permanently precluded from a Hudson Sanctuary and that the existing authorities (e.g. Mid-Atlantic Fishery Management Council, the Atlantic States Marine Fisheries Commission and NOAA's Highly Migratory Species Division) continue to regulate fisheries within the Sanctuary, should it be designated. With increased resources from Congress, WCS looks forward to NOAA initiating the public-facing, stakeholder-driven designation process for Hudson Canyon.

For these reasons, WCS supports the Biden-Harris Administration's recommended investment of \$87m for the FY23 Sanctuaries and Marine Protected Areas ORF as detailed in the President's Budget Request and Congressional Justification.

—*NOAA—Office of Protected Species, funding for North Atlantic Right Whale conservation within Marine Mammals, Sea Turtles, and Others Species, \$26 Million:* NOAA's Office of Protected Species is responsible for the conservation, protection and recovery of more than 150 Endangered and Threatened marine species under the Endangered Species Act, including the North Atlantic right whale. The Office is also responsible for the management and protection of all whales, dolphins, porpoises, seals, and sea lions under the Marine Mammal Protection Act.

Recently updated estimates for North Atlantic right whale indicate that between January 2019 and January 2020 its population plummeted an additional eight% to 336 individuals, entailing a rate of decline forty times the legal limit. This is the lowest assessment in decades. We are facing an emergency situation: This species cannot recover without a significant reduction to the high level of mortality they are currently experiencing, including from ship strikes in high-trafficked areas, noise

pollution, and other impacts from fisheries and offshore wind energy development, including New York and New Jersey waters. Scientists from the Wildlife Conservation Society, in collaboration with the Woods Hole Oceanographic Institution and other partners, are monitoring right whales and other marine mammals as they migrate through the busy waters of the New York Bight. Twelve million dollars out of \$26 million is needed to increase investments in research, monitoring and management related to vessel strikes, ocean noise and fishing gear entanglements by NOAA. With this funding, managers, stakeholders and the public will be able to contribute to the conservation of the critically endangered North Atlantic right whale.

—*NOAA—National Marine Fisheries Service (NMFS) Fisheries Data Collections, Surveys, and Assessments funding line for vulnerable shark, skate and ray species, \$10 Million:* Insufficient fisheries data and stock assessment of shark, skate and ray populations prevents scientists from determining whether species are overfished and/or subject to overfishing. Many sharks are important predators in ocean food chains, which makes them critical in maintaining the balance of marine ecosystems. Most shark and ray species are long-lived, mature late, and produce few offspring. These life history characteristics make sharks extremely vulnerable to overfishing, whether from targeted fishing or bycatch. In a recent paper, experts estimated that 37.5% of shark and ray species are threatened with extinction, according to International Union for Conservation of Nature (IUCN) Red List criteria. Overfishing is the main threat for 100% of threatened species and the sole threat affecting 67 % of these species. Based on data from NMFS 2020 Report to Congress on the status of U.S. shark fisheries, there are 34 shark stock or stock complexes listed in U.S. waters of which 68% are either overfished and experiencing overfishing, have a mixed status, or have an “unknown” overfished or overfishing stock status. By directing \$10 million specifically allocated towards stock assessments for vulnerable shark, skate and ray species, Congress can help ensure the improved management and conservation of this important group of species.

WCS appreciates the opportunity to share its perspective and to make a case for increases in Federal investments in ocean conservation in the FY23 Commerce, Justice, Science and Related Agencies Appropriations Act. As an ocean nation, Americans depend on Federal investment in NOAA programs that are rooted in marine science and stakeholder engagement. These investments will help us balance marine conservation and sustainable use of the ocean.

Thank you for the opportunity to provide details on these WCS requests to the Commerce, Justice, Science and Related Agencies Appropriations subcommittee in preparation for the FY23 Appropriations Act. WCS marine science and policy experts are available to the subcommittee should there be any follow up questions.

[This statement was submitted by Noah Chesnin, Associate Director, New York Seascape Program]

NONDEPARTMENTAL WITNESSES

PREPARED STATEMENT OF THE ALLIANCE TO END SLAVERY AND TRAFFICKING

Honorable Matt Cartwright, Chair, Honorable Robert Aderholt, Ranking Member, House Appropriations Subcommittee on Commerce, Justice, Science and Related Agencies, Honorable Jeanne Shaheen, Chair, Honorable Jerry Moran, Ranking Member, Senate Appropriations Subcommittee on Commerce, Justice, Science and Related Agencies:

The Alliance to End Slavery and Trafficking (ATEST) appreciates and thanks you for your leadership in the fight to end child labor, forced labor and human trafficking. We are grateful for the increased support these programs have received over the past decade. We seek your assistance again in funding essential programs in the FY23 Commerce, Justice, Science and Related Agencies bill. The Justice Department plays a vital role in bringing traffickers to justice. These cases are often complicated and involve lengthy legal proceedings requiring additional resources for prosecutors as well as for victims who often experience severe trauma requiring intensive therapy and long-term services and support to rebuild their lives. Most victims require comprehensive case management, legal services and access to housing supported by trauma-informed and culturally competent victim services and community-based organizations to support their goals and help them navigate the often re-traumatizing court process.

We are grateful for your support to increase investments in these areas, and to continue to ensure that the Department of Justice works to strengthen collaborative community responses to human trafficking.

ATEST FY23 Appropriations Request Summary: CJS					
Department	Program		FY22 Enacted	Authorized Funding	FY23 Appropriation Request
Justice	Office of Justice Programs / State And Local Law Enforcement Assistance Victim Services Grants and Human Trafficking Task Forces		\$88,000,000	\$98,000,000	\$150,000,000
		Office of Justice Programs / State And Local Law Enforcement		\$8,000,000	\$10,000,000 (included within the \$150 million request)

Justice	Assistance Minor Victim Services Grants			
	Legal Activities/ Civil Rights Division: Human Trafficking Prosecution Unit	\$5,300,000	n/a	\$8,000,000
	National Institute of Justice / Prevalence Methodology & Study			\$10,000,000
	Federal Bureau of Investigation			Report Language (see below)
	U.S. Attorney's Offices			Report Language (see below)

DEPARTMENT OF JUSTICE

Office of Justice Programs/State and Local Law Enforcement Assistance Victim Services Grants and Human Trafficking Task Forces: \$150,000,000—According to the 2021 Trafficking in Persons (TIP) Report, Department of Justice (DOJ) grantees served 9,854 clients during the most recent 1-year period (7/1/19 to 6/30/20), approximately 17.6 percent more clients than DOJ grantees served the prior year (8,375). The National Human Trafficking Hotline identified 18,600 sex trafficking and forced labor victims in 2020, and reported a 60 percent increase in signal volume since 2019. Given that survivors of trafficking are coming forward in greater numbers than are being served by DOJ grantees, robust resources are needed to ensure that they receive appropriate responses and services. Data from the Trafficking Hotline and anecdotal evidence from established service providers demonstrate that insufficient resources and hindered access to resources remain a significant barrier for survivors. For example, service providers in New York City, including an ATEST member, reported a significant increase in survivors' requests for rental assistance, medical cost coverage and food vouchers. While some of these requests were met, service providers engaged in ongoing advocacy with landlords and medical providers to negotiate rent arrears arrangements or lower medical bills when funding was insufficient to cover these costs. In 2020 and 2021, Trafficking Hotline data shows that more than 50 percent of all crisis calls were requests for emergency shelter assistance.

The COVID-19 crisis has drastically changed the landscape for serving human trafficking victims and survivors. Service providers nationwide have reported a greater caseload and more difficulties providing services due to complicated and evolving COVID-19 mitigation measures. Data from one service provider showed a

556 percent increase in emergency response cases of escaping survivors since the start of the pandemic in 2019. Furthermore, this service provider has experienced a 455 percent increase in costs for basic necessities. As economic vulnerabilities continue to increase throughout the duration of the pandemic and economic recovery remains inconsistent, we expect an ongoing increase in required services for victims and survivors. Despite the amplified need for comprehensive services, we anticipate a possible 35 percent decrease in funding for service providers in the anti-trafficking movement as part of the economic fallout from this global health crisis. We are seeing significantly heightened client financial needs in all areas, including social and legal needs, and expect a significant increase in the need for sustained comprehensive services.

To attempt to meet the growing needs of victims and survivors, we request \$150,000,000 for human trafficking survivors and law enforcement. Given the increased vulnerability to trafficking due to persistent unemployment and general financial, legal and social instability, we request that no less than \$126,000,000 of the appropriation be for victim services, and that the majority of OVC money continues to be spent supporting direct services for all forms of trafficking in persons, including intensive case management and legal and shelter services. We also request that OVC review monies granted to law enforcement task forces to ensure task forces are adopting victim-centered approaches. Two of ATEST's direct service provider members, who also run federally funded task forces under the Enhanced Collaborative Model grants, report that many of their clients have experienced negative or harmful interactions with law enforcement. Clients report being coerced to testify against their traffickers under threat of prosecution themselves. Other clients who have reported strong labor trafficking cases have not been granted Continued Presence and law enforcement has declined to investigate these allegations. Other survivors were required to interview with law enforcement up to six separate times at the height of the pandemic, and were still not issued Continued Presence until their victim service provider advocates intervened on their behalf. One BIPOC client shared she was turned away by the police when seeking help. "I was searching for help and when I went to the police department they looked at me like I was crazy. They told me no one would want to house me or help me if I kept telling people I was running away from a pimp. They gave me a cold shoulder, a pamphlet to go across the street, and shooed me away." Essentially, when survivors of human trafficking seek help from law enforcement, the majority of survivors report being turned away, or arrested.

With respect to implementation of the Trafficking Victims Protection Act (TVPA) related to protection of victim rights, section 5 of Public Law 115-392 (one of the four bills in the most recent TVPA reauthorization), the Secretary of the Department of Homeland Security was to issue a directive regarding victim protection training and victim screening protocols. These protocols have still not been developed. ATEST is deeply invested in the development of victim-centered protocols by DOJ and DHS, in strong collaboration with DOL and HHS, for publication and dissemination to the extensive network of DOJ-funded task forces around the country.

Finally, we want to acknowledge, gratefully, that colleagues within the Department of Justice have steadfastly responded to our appropriations requests over the past decade and we have seen large increases in funding disbursed by Department of Justice for victims of human trafficking. The COVID-19 global pandemic is unlike anything we have seen before in recent times, and victims of human trafficking are disproportionately impacted. Therefore, we continue to request significantly elevated levels of funding and hope to continue the ongoing trend of increased appropriations.

Proposed Report Language: The bill provides \$150,000,000 for the Victims of Trafficking Grant program, of which no less than \$126,000,000 is for victim services. The \$10,000,000 request for minor victim services grants is included within the \$150,000,000 appropriations request for victim services overall.

Office of Justice Programs/State and Local Law Enforcement Assistance Minor Victim Services Grants: \$10,000,000—Specialized, comprehensive, trauma-informed and gender-specific assistance to minor victims of human trafficking is critical. Minors face significant hurdles recovering from the abuse and trauma they have endured. Law enforcement has identified the lack of specialized housing programs throughout the U.S. as the greatest obstacle in effectively prosecuting child traffickers. The Attorney General is authorized to provide grant funding to serve sex-trafficked minors. We request additional funds to support services, training and outreach for labor-trafficked youth. Including labor trafficked children is imperative given that the Federal definition of human trafficking includes both sex trafficking and forced labor. Furthermore, labor trafficking victims experience the same types of trauma, physical, sexual and psychological abuse seen in sex trafficking cases.

Unaccompanied minors working are at risk of and have experienced sex and/or labor trafficking, but often only receive support for their sex trafficking recovery. More than 50 percent of the Safe Horizon Anti-Trafficking Program clients are identified as labor trafficking victims. Another ATEST member noted that 28 percent of their survivors served were trafficked as minors. Increased funding to serve minor victims of all forms of human trafficking, including labor trafficking, would critically shore up prevention and protection efforts.

According to the National Advisory Committee on the Sex Trafficking of Youth in the United States, “a child or youth may more readily disclose concerns related to labor trafficking than concerns related to sex trafficking given the sexual violence, trauma, and stigma endemic in sex trafficking. Additionally, some disclosures that initially seem to involve only sex trafficking may also involve labor trafficking, as children and youth may be forced to work while also being made to engage in commercial sex acts.” We further request that the bill contain statutory language to make this funding available for 2 years instead of just 1 year.

Proposed Report Language: The bill provides \$10,000,000 for Minor Victims of Trafficking Grant program, of which \$5,000,000 is for victim services grants for sex trafficked minors, and an additional \$5,000,000 for victim services grants for labor trafficked minors. The Committee encourages DOJ to work in close coordination with the Department of Health and Human Services to encourage collaboration and reduce duplication of effort.

Legal Activities/Civil Rights Division, Human Trafficking Prosecution Unit (HTPU): \$8,000,000—HTPU houses the government’s top legal experts on prosecuting human trafficking cases. These cases are resource-intensive because they are procedurally complex and involve multiple jurisdictions and defendants. Per the Human Trafficking Institute’s Federal Human Trafficking Report, HTPU cases had a 89 percent conviction rate in 2020. Defendants in HTPU cases are consistently receiving longer sentences and more frequently ordered to pay restitution than non-HTPU cases. With increased funding, HTPU will be able to increase prosecutions of all forms of trafficking and forced labor. This funding should be prioritized for the prosecution of forced labor cases, which only constituted 6 percent of the active prosecutions in 2020, compared to 94 percent of active prosecutions for sex trafficking. From 2019 to 2020, new forced labor cases declined 11 percent, from 9 cases to 8 cases. The Human Trafficking Institute noted that prosecutors filed more sex trafficking prosecutions in 2020 than all forced labor prosecutions filed over more than 20 years after TVPA passage.

Additionally, the Abolish Human Trafficking Act (Public Law 115–392) designates an assistant U.S. Attorney in every U.S. Attorney’s Office across the United States to prosecute human trafficking cases. HTPU is responsible for supporting the training of these prosecutors.

Proposed Report Language: The Committee provides \$8,000,000 for the Human Trafficking Prosecution Unit (HTPU) and encourages HTPU and the Anti-Trafficking Coordination Teams to continue working with victim service providers and non-governmental organizations to ensure victim needs are prioritized as part of the overall strategy to combat human trafficking and particularly forced labor in the United States. Additional resources provided are to implement section 15 of Public Law 115–392. Furthermore, the Committee directs the Human Trafficking Prosecution Unit (HTPU) to report to the Committees on Appropriations no later than 120 days following enactment of this act on (1) the total number of human trafficking cases it prosecuted or assisted in prosecuting within the last 3 years disaggregated by type of trafficking, (2) the number of Assistant U.S. Attorneys who received training on human trafficking within the past 3 years, and, (3) the number of Assistant U.S. Attorneys who received training on restitution for human trafficking victims within the past 3 years.

*National Institute of Justice/Prevalence Methodology & Study: \$10,000,000.—*DOJ missed the deadline of December 21, 2019 to update Congress on its efforts to conduct the evaluation research and develop a methodology to assess the prevalence of human trafficking in the United States as mandated by Sec. 401(a) of the Trafficking Victims Protection Act of 2017 (Public Law 115–393). In the past, no funding has been allocated to a prevalence study in the United States. Funding provided will allow NIJ to finally develop a methodology and conduct a prevalence study on the nature of trafficking in the United States, or more accurately, a series of prevalence studies focused on specific geographies, economic sectors, and forms of trafficking. This research is essential to inform future appropriations decisions for counter-trafficking in persons programs. The development and implementation of the methodology is estimated to cost \$10,000,000 total. Such sums necessary to complete the evaluation research and development should be appropriated for FY23.

The lack of coordinated efforts across the country to collect reliable data about trafficking means funds are appropriated and programs established without dependable information regarding the prevalence of specific types of trafficking, the locations in which trafficking occurs, and the effectiveness of specific anti-trafficking measures. A concerted effort to collect reliable, accurate, relevant, and impartial data is necessary to establish more effective counter-trafficking in persons programs and to more appropriately target Federal funding. The study will need to include information from Federal and State law enforcement alongside direct service providers in order to present a comprehensive landscape of human trafficking in the United States. Conducting pilot studies that target specific high-prevalence regions, economic sectors, and population groups is a crucial step in developing a comprehensive and accurate prevalence methodology study; moreover, limiting the covered populations (as opposed to a national prevalence estimate) will allow the work to be conducted on a shorter timeline. The United States already invests a significant amount of resources in measuring human trafficking prevalence abroad, and it is past time to make the same level of investment in measuring prevalence domestically, if we are to continue as a leader in the global anti-trafficking field.

Proposed Report Language: The Committee directs the Secretary to report on efforts made by the National Institute of Justice to develop a methodology to assess the prevalence of human trafficking in the United States as mandated by Sec. 401(a) of the Trafficking Victims Protection Act of 2017 (Public Law 115–393). The Secretary should include in this report an estimate of the necessary funds to complete the evaluation research and development of the methodology in fiscal year 2023 and fiscal year 2024.

Federal Bureau of Investigation: Report Language.—The FBI is a critical Federal law enforcement agency partner fighting human trafficking. The presence of the FBI in any trafficking investigation significantly increases the chances of success. Furthermore, with trafficking investigations often crossing state lines, the presence of the FBI becomes critical.

Proposed Report Language: The Committee recognizes the complex nature of human trafficking investigations and encourages the Director to allocate additional resources for human trafficking cases and designate a lead agent in each field office as a point of contact for human trafficking investigations.

Legal Activities/United States Attorneys: Report Language

1) Consistent with the reauthorization of the Trafficking Victim Protection Act's requirement that each U.S. Attorney's Office (USAO) designate an Assistant U.S. Attorney (AUSA) as a lead human trafficking prosecutor, we request that the subcommittee include report language encouraging the prompt implementation and that the Executive Office of U.S. Attorneys provide sufficient support and training and technical assistance to the designated AUSAs to enable each respective jurisdiction to improve coordination and communication.

Proposed Report Language: The Committee directs the Executive Office of U.S. Attorneys, in consultation with the United States Attorneys, to provide sufficient support and training and technical assistance to each Assistant U.S. Attorney designated as the lead human trafficking prosecutor, consistent with the Trafficking Victims Protection Act.

2) We request that the Executive Office of U.S. Attorneys, in consultation with the Department of Homeland Security, develop a process to enable survivors with T-visas to obtain an expedited letter of support from the Department of Justice when their criminal case is closed.

Proposed Report Language: Designating a point of contact will improve communication and coordination within each jurisdiction, including victim service organizations, in order to better serve the victims of human trafficking and forced labor. The Committee directs the Executive Office of U.S. Attorneys, in consultation with the Department of Homeland Security, to develop a process to enable survivors with T-visas to obtain an expedited letter of support from the Department of Justice when their criminal case is closed, including a report on sufficient staffing to ensure that requests for letters can be processed in less than 3 months.

As a champion for the victims of child labor, forced labor and sex trafficking, you understand the complexities of these issues and the resources needed to respond. We have carefully vetted our requests to focus on the most important and effective programs. We thank you for your consideration of these requests and your continued leadership. If you have any questions, please contact ATEST Director Terry FitzPatrick (terry.fitzpatrick@atest-us.org).

Sincerely,

Coalition to Abolish Slavery and Trafficking (CAST)
Coalition of Immokalee Workers (CIW)

Covenant House Free the Slaves HEAL Trafficking
 Human Trafficking Institute Human Trafficking Legal Center Humanity United
 Action
 McCain Institute for International Leadership
 National Network for Youth (NN4Y) Polaris
 Safe Horizon Solidarity Center
 Truth: The Rabbinic Call for Human Rights United Way Worldwide
 Verité
 Vital Voices Global Partnership
 ATEST is a U.S.-based coalition that advocates for solutions to prevent and end
 all forms of human trafficking and modern slavery around the world.

PREPARED STATEMENT OF AMERICAN EDUCATIONAL RESEARCH ASSOCIATION

Chair Shaheen, Ranking Member Moran, and Members of the subcommittee:

Thank you for the opportunity to submit written testimony on behalf of the American Educational Research Association (AERA). I want to begin by recognizing your longstanding support for the National Science Foundation (NSF) and thank you and your staff for your strong commitment to maintaining agency flexibility in funding cutting edge science. AERA recommends that the NSF receive at least \$11 billion in fiscal year 2023. This recommendation is consistent with that of the Coalition for National Science Funding (CNSF), in which AERA is a long-term active member. AERA also recommends \$2 billion for the Census Bureau, consistent with the recommendation of The Census Project.

AERA is the major national scientific association of 25,000 faculty, researchers, graduate students, and other distinguished professionals dedicated to advancing knowledge about education, encouraging scholarly inquiry related to education, and promoting the use of research to serve public good. Many of our members are engaged STEM education research. Our members work in a range of settings from universities and other academic institutions to research institutes, Federal and State agencies, school systems, testing companies, and nonprofit organizations engaged in conducting research in all areas of education and learning from early childhood through the workforce.

Given the scientific expertise of the AERA membership and in our field, my testimony focuses on the importance of the current Education and Human Resources Directorate (referenced hereafter under its proposed new name in the fiscal Year 2023 budget request, STEM Education [EDU]) and the Social, Behavioral and Economic (SBE) Sciences Directorates at NSF. In addition, many of our members depend on an accurate Census count and data from the American Community Survey to do their work.

NATIONAL SCIENCE FOUNDATION

The Federal investment in research and scientific knowledge at NSF has led to innovation and discoveries that are applied in our daily lives. We appreciate the bipartisan interest in maintaining U.S. leadership and global partnerships in basic research through the Federal investments made in NSF.

The EDU and SBE Directorates are central to the mission of the NSF to advance fundamental knowledge and scientific breakthroughs and to ensure significant continuing advances across science, engineering, and education. EDU support is vital to research discoveries, capacity building, and methodological innovations directly related to STEM education and learning from early education through workforce development. Research and science supported by the EDU and SBE Directorates are also inextricably linked to the science and research of the other directorates (for example, Computer and Information Science and Engineering). We also see promise in the new Technology, Innovation, and Partnerships (TIP) Directorate, and encourage NSF to pursue education research as a priority in this directorate.

Furthermore, the EDU and SBE directorates are vital not just to producing essential knowledge but also to harnessing that knowledge to enhance productivity, innovation, safety, security, and social and economic well-being. I also wish to highlight the National Science Board Vision 2030, which calls for expanding the STEM talent pool. Ongoing NSF initiatives to broaden participation through programs such as NSF INCLUDES in EDU and the Build and Broaden program within SBE are examples to increase the diversity of the STEM educator and research workforce.

As indicated in the agency's budget request for fiscal Year 2022, 96 percent of appropriated funds directly supported research and STEM education through grants and cooperative agreements in fiscal Year 2021, with 78 percent of funding supporting research at colleges and universities. In addition, NSF estimates that more

than 132,000 K–12 students and 46,000 K–12 teachers will benefit from programs that directly engage them in STEM experiences within and outside the classroom in fiscal Year 2023.

STEM Education Directorate

The EDU Directorate at NSF is responsible for providing the research foundation necessary to achieve excellence in U.S. STEM education. EDU accomplishes this goal by supporting the development of a scientifically-literate citizenry as well as a STEM-skilled workforce. Advances in the industries of the future, including artificial intelligence and quantum information science, require building interest and engagement in STEM throughout the lifespan.

The EDU Directorate commitment to invest in fundamental research related to STEM across all education levels and to promote evidence-based innovations in teaching practices, instructional tools, and programs is essential to advancing STEM education and preparing the next generation of STEM professionals. EDU funded researchers are asking key questions, for example, about how to spark students' interest in math and science and keep them engaged, or about why so many students lose interest and confidence and about what can be done to keep them engaged. Understanding these and many other questions will help the United States build a well-educated and technology-literate workforce necessary for a prosperous economic future.

Key to advancing STEM education research is the Education Core Research (ECR) program, an important resource to the field that builds fundamental knowledge and capacity to understand STEM teaching and learning and develop the STEM educator and workforce pipeline. ECR grants have supported critical work in equity, inclusion, and ethics in postsecondary academic workplaces and the academic profession, as well as research to improve STEM teaching and learning for students with disabilities. We also applaud NSF in investing in midscale research infrastructure, serving as a potential resource for addressing key needs that include building data infrastructure capacity and developing innovative diagnostic assessment tools.

As the Nation continues to recover from the effects of the COVID–19 pandemic, research supported by EDU will be critical to fostering STEM learning in formal and informal settings. Through the RAPID program, EDU provided grants to education researchers to inform remote instruction, develop STEM curriculum that incorporated the COVID–19 pandemic to understand scientific principles, and provide insight into issues of equity in STEM education. Additional survey work and research supported through RAPID funding highlighted how the pandemic affected undergraduate and graduate students, including their engagement and interest in STEM and their satisfaction with online STEM coursework.

Increased investment in EDU is critical to support research to inform an educational system that will continue to incorporate technology inside and outside the STEM classroom and in labs. In addition, the EDU Directorate's focus on developing our Nation's scientific workforce requires resources to ensure that early career scholars and graduate students remain in the STEM talent pipeline. Some examples include material support to emerging scholars (both salary and "soft support"), mechanisms to connect and build communities among scholars, and focus on mentoring.

Social, Behavioral and Economic Sciences Directorate

In addition to the significant investments in education sciences provided by EHR, AERA values the important role the SBE Directorate in funding important education research and in social, family, and peer contexts connected to learning. The SBE Directorate also houses the National Center for Science and Engineering Statistics (NCSES).

The SBE Directorate supports research to better understand people and reveals basic aspects of human behavior in the context of education and learning. SBE funded research adds fundamental knowledge essential to promoting the Nation's economy, security, and global leadership. Understanding social organizations and how social, economic, and cultural forces influence the lives of students is important to improving teaching and learning and advancing STEM education.

The budget for SBE is 4 percent of the budget for Research and Related Activities, yet it provides approximately 65 percent of the Federal funding for basic research in the social and psychological sciences at academic institutions.

National Center for Science and Engineering Statistics (NCSES)

In addition, AERA has a strong interest in the National Center for Science and Engineering Statistics (NCSES) located in the SBE Directorate. As one of the Federal principal statistical agencies, NCSES provides invaluable statistical information about the science and engineering infrastructure and workforce in the U.S. and

around the world. NCSES collects and analyzes data on the progress of STEM education and the research and development, providing valuable information on the trajectories of STEM graduates both in STEM and non-STEM careers.

Additional resources in funding and staffing in FY 2023 for NCSES would support critical activities to develop new data techniques building on administrative data and to enhance data tools and visualizations to facilitate access to statistical resources. These methodological advances will be necessary for NCSES to implement the Foundations for Evidence-based Policymaking Act and to build the NSF data infrastructure to securely link its survey data with administrative data in other Federal agencies.

NCSES will also play a pivotal role in supporting the overall NSF priority to bring the “Missing Millions” from traditionally underrepresented populations into the STEM pipeline. Expanding NCSES surveys and incorporating information on inclusion-including data on the participations of LGBTQ+ populations, persons with diverse (dis)abilities, and other demographic attributes-can help NSF, other science agencies and institutions, and fields of science understand disparities in STEM and inform broadening participation initiatives.

CENSUS BUREAU

I also wish to emphasize the importance of adequate support for the Census Bureau, especially critical in the tabulation of data from the 2020 Decennial Census, planning for the 2030 Decennial Census, and in maintaining important survey collections. AERA recommends funding the Census Bureau at \$2 billion in FY 2023.

The requested amount of \$2 billion for fiscal Year 2023 will provide the agency with needed resources to conduct the Economic Census, process and finalize the enumeration and related activities for the 2020 Census, which experienced delays due to the COVID-19 pandemic. In addition, this amount of funding will provide resources for planning for the 2030 Decennial Census and continue the administration of the Household Pulse Survey, which has provided valuable, real-time data to inform the COVID-19 response. The recommended funding support will also allow the Census Bureau to incorporate innovations in the American Community Survey and the Current Population Survey.

Thank you for the opportunity to submit written testimony in support of at least \$11 billion for the National Science Foundation and \$2 billion for the Census Bureau in fiscal year 2023 appropriations. AERA would welcome the opportunity to work with you and your subcommittee to best further the crucial advances of the National Science Foundation and the important data provided by the Census Bureau. Please do not hesitate to contact me if AERA can provide additional information regarding this recommendation or the significant science made possible through the support of these agencies.

[This statement was submitted by Felice J. Levine, PhD, Executive Director]

PREPARED STATEMENT OF THE AMERICAN GEOPHYSICAL UNION

The American Geophysical Union (AGU), a non-profit, non-partisan scientific society, appreciates the opportunity to submit testimony regarding the fiscal year 2023 appropriations request for the National Aeronautics and Space Administration (NASA), the National Oceanic and Atmospheric Administration (NOAA), and the National Science Foundation (NSF). AGU, on behalf of its community of 130,000 in the Earth and space sciences, respectfully requests that the 117th Congress appropriate the following:

- \$9 billion for NASA’s Science Mission Directorate (SMD),
- \$154 million for NASA’s Office of STEM Engagement,
- \$7.2 billion for NOAA, and
- \$11 billion for NSF.

NATIONAL AERONAUTICS & SPACE ADMINISTRATION

AGU requests that Congress appropriate \$9 billion in FY23 for NASA’s Science Mission Directorate (a 18.2% increase over FY22 levels) and \$154 million for NASA’s Office of STEM Engagement (a 12.4% increase over FY22 levels). This request will allow NASA to remain on track to steadily advance existing and new decadal missions, provide unique opportunities for the next generation of STEM professionals, and ensure that the U.S. maintains its global leadership in the Earth and space sciences.

Earth Science Division

A strong investment in this division will support a robust climate and applications research program, including new and existing Earth Systems Observatory missions, the launch of three Earth System Explorers missions within a decade, and partnership opportunities to ensure sustained climate observations. Additionally, increased funding will enable NASA to begin planning for the Earth Information Center and roll out the Wildfire Earth Information System and Fire Information for Resource Management System, which will provide immediate benefits to Western States. A robust investment will also allow the Earth Science Data Systems and Applied Earth Sciences programs to provide tools and resources for public and private decision-makers, including implementing open science capabilities for all of NASA's Science Mission Directorate

Planetary Science Division

Strong investment in this division will allow NASA to pursue the Lunar Discovery and Exploration Program, which supports commercial collaborations and innovative exploration approaches, without sacrificing a balanced portfolio of other missions and exploration targets in our solar system. Specifically, increased funding will allow the U.S. to advance missions to explore new destinations in the solar system, such as the Europa Clipper, Psyche and Dragonfly missions, and a robust competitive Discovery Program. An increased investment in planetary science will allow NASA to begin planning to implement the latest decadal survey.

Heliophysics Division

A robust investment in Heliophysics will allow us to better understand the space environment and therefore realize our space exploration ambitions while protecting existing assets and people in space. Investing in research and analysis will also maximize the return of large missions, while ensuring a thriving heliophysics community through the support of early career scientists and diversity, equity, and inclusion efforts. Finally, increased funding will ensure a 2027 launch for the Geospace Dynamics Constellation, which was the highest priority decadal large-scale mission, support technology investments in future missions such as an Interstellar Probe and/or a Solar Orbiter Prober; and provide a strong basis for an ambitious 2024 decadal survey.

Office of STEM Engagement

According to the National Science Board, our country has a STEM talent deficit that will reach the millions by FY2030. As such, it is critical that we invest in NASA's efforts to re-engage and support students interested in STEM. Increased funding for the office will allow NASA to increase engagement of K-12 students, broaden participation in NASA at all levels, and increase partnerships to further expand NASA's STEM impact across the United States.

NATIONAL OCEANIC & ATMOSPHERIC ADMINISTRATION

AGU requests that Congress appropriate \$7.2 billion for NOAA in FY23 (a 22.5% increase over FY22). From weather forecasts to fisheries data, to groundbreaking research about the world around us, NOAA provides critical products and services to citizens, planners, emergency managers, and other decision makers, affecting more than one-third of the Nation's gross domestic product. Yet NOAA has for years remained severely underfunded.

Last year, there were 20 separate billion-dollar weather and climate disaster events across the U.S., costing a total of \$145 billion—the third most costly year on record, behind 2017 and 2005.¹ Those same disasters also caused more than 680 fatalities, the most disaster-related fatalities for the contiguous U.S. since 2011. With extreme weather becoming more frequent, more dangerous, and costlier to the Nation, especially in rural areas and marginalized communities. NOAA needs strong financial support to be able to bolster climate research, mitigate and prepare for worsening conditions, and build our National and economic resilience.

Robust funding for NOAA will also provide critical funding for satellites that provide weather forecasting, storm tracking, and long-term Earth observations to protect lives and infrastructure. Sufficient financial support will allow NOAA to maintain current launch and development schedules and develop the next generation of geostationary satellites, known as GEO-XO, well into the 2030s and beyond.

¹NOAA's National Centers for Environmental Information. Calculating the cost of weather and climate disasters. <https://www.ncei.noaa.gov/news/calculating-cost-weather-and-climate-disasters>.

NOAA science also plays a vital role in informing the world about changes in the climate system, as well as the effectiveness of certain mitigation techniques and adaptation strategies. Robust funding will allow the agency to continue this innovative work and lead cross-agency efforts in extramural programs such as the Cooperative Institutes, and the Sea Grant Program. These programs not only conduct research and observations, but also promote outreach and education to serve the public in every region and state.

NATIONAL SCIENCE FOUNDATION

AGU requests that Congress appropriate \$11 billion for NSF in FY23 (an approximately 24.5% increase over FY22 levels). Ambitious and robust funding for NSF is critical if the U.S. hopes to maintain its leadership in science and technology and reap the economic and national security benefits of that leadership.

Robust funding will allow NSF to realize congressional goals through the new Technology, Innovation, and Partnerships Directorate without sacrificing core NSF research and STEM education programs. NSF currently supports almost a quarter of all basic research—and 56% of basic geoscience research—done at U.S. colleges and universities. Robust funding will allow NSF to continue this support, while expanding efforts to aid graduate students, which is essential if we hope to attract and retain those in STEM fields.

Increased funding will also allow NSF to build research capacity at emerging and underserved institutions through the new Growing Research Access for Nationally Transformative Equity and Diversity (GRANTED) Initiative and to launch Global Centers to facilitate the education and development of a global workforce to address climate and clean energy challenges. By leveraging financial resources and capabilities from multiple partners, this initiative has the potential to build capacity and scale solutions here and around the world.

CONCLUSION

With our Nation facing critical and interconnected challenges affecting our economic strength, national security, and health and well-being, strong investments in science and innovation—specifically the work done by NASA, NOAA, and NSF—are vital for a stronger, more secure, better future for America. AGU appreciates the subcommittee's leadership in these areas, as well as the opportunity to submit this testimony. Thank you for your thoughtful consideration of our requests.

[This statement was submitted by Brittany Webster, Manager, Science Policy & Government Relations]

PREPARED STATEMENT OF THE AMERICAN INDIAN HIGHER EDUCATION CONSORTIUM

On behalf of the Nation's Tribal Colleges and Universities (TCUs), which are the American Indian Higher Education Consortium (AIHEC), we are pleased to present our Fiscal Year 2023 (FY2023) recommendations regarding the National Science Foundation's TCU Program (NSF-TCUP), and the National Aeronautics and Space Administration's Minority University Research and Education Project (NASA-MUREP). We respectfully recommend the following funding levels:

NATIONAL SCIENCE FOUNDATION (NSF)

Education and Human Resources Directorate (EHR):

—*Tribal Colleges and Universities Program (TCUP).*—TCUs urge the subcommittee to fund competitively awarded NSF-TCUP grants at a minimum of \$25,000,000 for FY2023.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA)

—*NASA Headquarters, Office of Education—Minority University Research and Education Project (MUREP).*—TCUs urge the subcommittee to expand the NASA MUREP program with robust funding and establish a TCU-specific program within MUREP at \$5,000,000 for FY2023.

Tribal Colleges and Universities: Raising and Training the Nation's Native STEM Workforce

TCUs are an essential component of American Indian and Alaska Native STEM education, research, and workforce. Currently, 35 accredited TCUs operate more than 75 campuses and sites in 15 States. TCU geographic boundaries encompass 80 percent of American Indian reservations and Federal Indian trust lands. American

Indian and Alaska Native (AI/AN) TCU students represent more than 230 federally recognized Tribes and hail from more than 30 States. Nearly 80 percent receive Federal financial aid, and approximately half are first generation students. In total, TCUs serve more than 160,000 AI/ANs and other rural residents each year through a wide variety of academic and community-based programs. TCUs are public institutions accredited by independent, regional accreditation agencies and, like all U.S. institutions of higher education, must regularly undergo stringent performance reviews to retain their accreditation status.

The Federal Government, despite its direct trust responsibility and binding treaty obligations, has never fully funded TCU institutional operations as authorized under Federal law. Yet despite funding challenges, TCUs are responding to the STEM workforce needs across the country. In fall 2020, 1,733 TCU students were enrolled in one of 191 STEM programs at TCUs. TCUs have established programs in high-demand fields: 11 TCUs offer pre-engineering programs, two TCUs offer bachelor's degrees in industrial and electrical engineering, five TCUs offer STEM teacher education programs, and 14 TCUs offer nursing programs. These efforts are preparing AI/AN nurses, engineers, and science and math teachers who contribute to a robust pipeline of STEM professionals in Indian Country. TCUs also train professionals in other high-demand STEM fields, including agriculture, information technology, and natural resource management.

TCUs know that to break the cycle of generational poverty and end the culture of dependency that grips much of Indian Country, TCUs must bring industry partners and STEM jobs to Indian Country. TCUs and Tribes must promote new Native-owned and operated STEM-based businesses, create public-private partnerships, and build a culture of self-sufficiency and innovation. NSF and NASA funding is essential in supporting this effort to promote STEM-enabled economic development in Indian Country and throughout rural America.

Each of the following Federal grant programs has invested in the development of STEM-centered instruction, research, and job creation across Indian country.

NATIONAL SCIENCE FOUNDATION (NSF)

Education and Human Resources Directorate (EHR)—Tribal Colleges and Universities Program (TCUP).—TCUs urge the subcommittee to fund competitively awarded NSF-TCUP grants at a minimum of \$25,000,000. The NSF-TCUP, administered by the NSF Education and Human Resources Directorate, is a competitive grant program that enables TCUs and Alaska Native Serving/Native Hawaiian Serving Institutions (AN/NHs) to develop and expand critically needed STEM education and research programs relevant to their Indigenous communities.

Since the program began in 2001, NSF-TCUP has become the primary Federal program for building STEM programmatic and research capacity at TCUs. For example, NSF-TCUP funding supported Navajo Technical University (Crownpoint, NM) in the development of its electrical and industrial engineering programs, which received accreditation from the Accreditation Board of Engineering and Technology (ABET) in 2018. This marks a significant milestone, with NTU leading the way as the first TCU to receive ABET accreditation.

Community-Based Research

TCUs use NSF-TCUP funding to provide students with valuable research experience in STEM fields. Through these opportunities, students conduct place-based research that serves their communities and can have national and international impacts. At Northwest Indian College (NWIC) (Bellingham, WA), students are conducting complex research related to food security focused on salmon, shellfish, and indigenous sea cucumbers. Through a partnership with Western Washington University, NWIC graduates continue to pursue their academic and career goals through WWU's master's degree programs. Aaniiih Nakoda College (Harlem, MT) faculty and students monitor streams for contaminants and are investigating West Nile virus vectors; and Sitting Bull College (SBC) (Fort Yates, ND) has established a water quality monitoring laboratory serving the Standing Rock Sioux and surrounding communities. SBC studies show that students participating in the college's research have retention rates that are double the rate of students who are not engaged in research.

Aaniiih Nakoda College (ANC)—Tribal Climate Resiliency

The environmental science program at Aaniiih Nakoda College (Harlem, MT) is based on an effective model of place-based instruction that combines rigorous coursework, internship placements, and undergraduate research experiences focused on student learning. ANC students are using their education and research skills to

help combat the looming climate change crisis and its effects on their Fort Belknap Indian Community.

For over a decade, ANC environmental studies students have been studying the 23 miles of river that pass through Tribal lands to monitor changes in water temperatures, impact on life in the river, and quality of local drinking water. Student researchers collect samples of small bottom-dwelling aquatic insects and freshwater algae. The specimens are brought back to ANC's laboratory to be sorted, identified, and analyzed. Next, the specimens are transported six hours away across the State to a private laboratory in Missoula, Montana for advanced testing and further analysis. Until additional resources are available to build out the required research infrastructure, ANC and other TCUs will continue to work with similar limitations in conducting vital research necessary to support Tribal communities in preserving health, environment, and traditional ways of life.

These success stories notwithstanding, AI/AN students are disadvantaged from pursuing STEM-centered career from an early age. AI/AN youth have the highest high school drop-out rate of any ethnic or racial group in the country. Those who do pursue postsecondary education often require developmental classes before taking on a full load of college-level courses. Placement tests administered at TCUs to first-time entering students in academic year 2019–20 showed that 23 percent required remedial math. Our data indicates that while 53 percent will successfully complete the course, many will take more than 1 year to do so.

Through NSF–TCUP grants, TCUs and AN/NHs are actively working to address this problem by developing strong partnerships with their K–12 feeder schools to engage students in culturally appropriate STEM education and outreach programs. Salish Kootenai College, located on the Flathead Indian Reservation, created a 2-year STEM Academy to prepare junior and senior high school students for college. Participating high school students engage in collaborative work with STEM researchers, conduct culturally relevant research, and take courses to earn college credit.

While a number of TCUs have achieved significant advances and success, only a portion of the TCUs have been able to benefit from this transformative program due in part to limited funding. We urge the subcommittee to expand the competitively awarded NSF–TCUP grants at a minimum of \$25,000,000.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA)

Minority University Research and Education Project (MUREP).—TCUs urge the subcommittee to expand the NASA MUREP program with robust funding and support a TCU-specific program within MUREP at \$5,000,000 for fiscal year 2023. Under its current design, MUREP provides a range of competitive awards to Historically Black Colleges and Universities, Tribal Colleges and Universities, and other Minority Serving Institutions to recruit and retain underrepresented students in STEM fields.

Due to the competitive aspect of current MUREP programs and limited funding, TCUs only receive funding from two MUREP grants: MUREP Institutional Research Opportunity (MIRO) and MUREP for American Indian and Alaska Native STEM Engagement (MAIANSE).

MUREP Institutional Research Opportunity (MIRO)

In October 2019, under the MUREP MIRO program, Sitting Bull College received \$1 million to further develop curriculum for an environmental science master's degree and includes support for air quality research on the Standing Rock Reservation. SBC students and faculty work with NASA's Langley Research Center, NASA's Goddard Space Flight Center, and the University of North Dakota to develop a regional research facility to monitor air quality, generating important data for the Tribe while providing invaluable research experience for SBC students. In the same MUREP MIRO award cycle, Navajo Technical University was selected to perform critical research and produce parts through its advanced manufacturing program for the Space Launch System at NASA's Marshall Space Flight Center. NTU's contributions through advanced manufacturing research and innovative parts production are advancing space exploration for the entire nation.

MUREP for American Indian and Alaska Native STEM Engagement (MAIANSE)

The MAIANSE program provides a unique opportunity for direct collaboration between TCUs and NASA to engage students in NASA STEM-related activities. Despite its popularity and value, participation in the MAIANSE program has been limited to three TCU projects each grant cycles due to limited funding.

To support the past TCU investment, AIHEC requests that the subcommittee expand the NASA MUREP program through robust funding and support a Tribal College and University-specific program within MUREP at \$5,000,000 for FY2023.

CONCLUSION

Tribal Colleges and Universities provide access to high-quality, culturally appropriate postsecondary education opportunities, including STEM-focused programs, for thousands of AI/AN students. The modest Federal investment in TCUs has paid great dividends in terms of employment, education, and economic development. We ask you to renew your commitment to help move our students and communities toward self-sufficiency by full considering our fiscal year 2023 appropriations requests. Thank you.

PREPARED STATEMENT OF AMERICAN INSTITUTE OF BIOLOGICAL SCIENCES

The American Institute of Biological Sciences (AIBS) appreciates the opportunity to provide testimony in support of fiscal year 2023 appropriations for the National Science Foundation (NSF). We encourage Congress to provide NSF with at least \$11 billion in fiscal Year 2023.

AIBS is a scientific association dedicated to promoting informed decision-making that advances biological research and education for the benefit of science and society. AIBS works to ensure that the public, legislators, funders, and the community of biologists have access to information that can guide informed decision-making.

IMPORTANCE OF BIOLOGICAL RESEARCH

Biological research is in our National interest. It advances our understanding of the living world and provides solutions to important problems. Increasing our knowledge of how genes, cells, tissues, organisms, and ecosystems function is vitally important to efforts to improve the human condition. Food security, medicine and public health, national security, economic growth, and sound environmental management are all informed by the biological sciences. Notably, biological research helps to sustain biodiversity and healthy ecosystems that underpin the livelihoods of communities. The knowledge gained from NSF-funded research also contributes to the development of new research tools and industries.

Biological research strengthens our economy. Research funding from NSF powers the expansion of the bioeconomy and has given rise to successful companies, such as Genentech, Ekso Bionics, and Ginkgo BioWorks, as well as new industries that provide more robust food crops or disease detection tools and techniques. The translation of biological knowledge into formal and informal education programs fosters the development of the scientifically and technically skilled workforce needed by employers. Data show that employers continue to seek workers with scientific and technical skills. Science and engineering employment in the United States has grown more rapidly—at an annual growth rate of 4 percent—compared to the 2 percent annual growth rate for the U.S. workforce overall. In fact, the U.S. STEM workforce constitutes 23 percent of the total U.S. workforce and is comprised of more than 36 million people in diverse occupations that require STEM knowledge and expertise.

IMPORTANCE OF NSF-FUNDED BIOLOGICAL RESEARCH

The cornerstone of NSF excellence is a competitive, merit-based review system that underpins the highest standards of excellence. Through its research programs, NSF invests in the development of new knowledge and tools that solve the most challenging problems facing society.

—*Combating emerging diseases:* NSF-funded research is playing crucial role in our response to the COVID-19 pandemic. Fundamental research supported by NSF led to the development of critical diagnostic tools and medical devices to combat the outbreak. NSF supported the discovery of bacteria from thermal pools at Yellowstone National Park that contain thermostable enzymes that allow for the rapid copying of genetic material through a process called Polymerase Chain Reaction (PCR). This process was integral to manufacturing a widely used clinical test for determining whether a patient has been infected with the virus that causes COVID-19.

—*Mobilizing big data:* Access to and analysis of vast amounts of data are driving innovation. NSF enables integration of big data across scientific disciplines, including applications in the biological sciences. Digitization of biodiversity and natural science collections involves multi-disciplinary teams, which have put

more than 130 million specimens and their associated data online for use by researchers, educators, and the public.

—*Enabling synthetic biology*: DNA editing has become more advanced and targeted with techniques such as CRISPR–CAS9 allowing scientists to rewrite genetic code and redesign biological systems. NSF funds research on how these techniques can be used to bio-manufacture new materials, treat diseases, and accelerate growth of the bioeconomy.

Other examples of federally-funded research that have benefited the public are chronicled in the AIBS report, “Biological Innovation: Benefits of Federal Investments in Biology,” which is available at <https://www.aibs.org/assets/pages/policy/AIBS-Biological-Innovation-Report.pdf>.

The NSF is the primary Federal funding source for biological research at our Nation’s universities and colleges, providing 65 percent of extramural Federal support for non-medical, fundamental biological and environmental research at academic institutions.

The NSF is also an important supporter of biological research infrastructure, such as field stations, natural history museums, and living stock collections. These place-based research centers enable studies that take place over long periods of time and variable spatial scales to provide insights into our Nation’s most pressing issues.

Scientific collections are an important component of our Nation’s research infrastructure. Recent reports have highlighted the value of mobilizing biodiversity specimens and data in spurring new scientific discoveries that grow our economy, improve our public health and well-being, and increase our National security. In 2019, the Biodiversity Collections Network released their report, “Extending U.S. Biodiversity Collections to Promote Research and Education,” outlining a national agenda that leverages digital data in biodiversity collections for new uses and calling for building an Extended Specimen Network. A 2020 report by the National Academies of Science, Engineering and Medicine, “Biological Collections: Ensuring Critical Research and Education for the 21st Century,” argued that collections are a critical part of our Nation’s science and innovation infrastructure and a fundamental resource for understanding the natural world.

Both reports articulate a common vision of the future of biological collections and define the need to broaden and deepen collections and associated data to realize the full potential for biodiversity collections to inform 21st century science. This endeavor requires robust investments in our Nation’s scientific collections, whether they are owned by a Federal or state agency or are part of an educational institution, free-standing natural history museum, or another research center.

While many Federal agencies have a role in supporting the development of the Extended Specimen Network, NSF has a central role to play. The agency has been a leader in this space through the Advancing Digitization of Biodiversity Collections program, and is now supporting critical advancements through the Infrastructure Capacity for Biological Research: Biological Collections program.

BUILDING THE STEM WORKFORCE

The NSF supports recruitment and training of our next generation of scientists. Support for undergraduate and graduate students is critically important to our research enterprise. Students learn science by doing science, and NSF programs engage students in the research process.

NSF awards reached 1,900 colleges, universities, and other public and private institutions across the country in FY 2021. Initiatives such as the Graduate Research Fellowship and the Faculty Early Career Development program are important parts of our National effort to attract and retain the next generation of researchers. Since 1952, the number of students supported by NSF Graduate Research Fellowships has grown to more than 60,000. In FY 2021, nearly 318,000 people, including researchers, postdoctoral fellows, trainees, teachers and students, were supported directly by NSF.

INVESTING IN NSF

Unfortunately, Federal research and development investments are shrinking as a share of the U.S. economy. The U.S. is still the largest performer of research and development globally, but our share of worldwide scientific activity has declined considerably over the past two decades, while countries in East and Southeast Asia, especially China, have been rapidly increasing their investments in science. According to the National Science Board, the annual increase of China’s R&D, averaging 10.6 percent annually between 2010 and 2019, continues to outpace that of the United States, with an annual average of 5.4 percent from 2010 to 2019.

To remain at the global forefront of innovation and to fully realize the benefits of NSF-supported research, the government must make bold and sustained investments in NSF. Unpredictability in funding disrupts research programs, create uncertainty in the research community, and stall the development of the next great idea.

Enacting robust funding increases for NSF will allow for critical Federal investments in scientific and educational research, as well as support for the development of the scientific workforce. These investments will allow NSF to increase the number of new graduate research fellowships it awards to nurture the human capital needed to ensure U.S. leadership in scientific innovation. Such increases will also enable NSF to expand support for important new initiatives, such as the Integrative Biology program, which promotes ambitious, high-risk-high-reward collaborative research, and the Biology Integration Institutes program, which supports collaborative research on frontier questions about life that span multiple disciplines within and beyond biology.

CONCLUSION

Providing the NSF with at least \$11 billion in FY 2023 is necessary to undo the harmful effects of recent stagnant funding that slowed American scientific discovery. The requested funding will grow and sustain the U.S. bioeconomy and enable NSF to accelerate work on important initiatives at the frontiers of science and engineering. This investment will enable NSF to support research in a number of important priority areas such as biotechnology, climate change, and advanced biomanufacturing. Importantly, these increases will advance research on infectious disease emergence and transmission, prevent future pandemics, and fill gaps in our knowledge about the spread and evolution of biological threats.

In addition to the appropriations process, Congress is currently considering legislation relevant to the scientific community, specifically reauthorization proposals to significantly expand NSF's mission and budget. Increasing investments in translational research through the new technology-focused directorate will bolster U.S. global leadership and competitiveness in innovation. However, we urge Congress to also make robust investments in basic and foundational research.

Please continue supporting increased investments in our Nation's scientific capacity. Thank you for your thoughtful consideration of this request and for your prior efforts on behalf of science and the National Science Foundation.

[This statement was submitted by Jyotsna Pandey, PhD, Public Policy Director]

PREPARED STATEMENT OF AMERICAN PSYCHOLOGICAL ASSOCIATION SERVICES, INC.

The American Psychological Association (APA) is the largest scientific and professional organization representing psychology in the United States, with more than 133,000 researchers, educators, clinicians, consultants and students as its members. Our mission is to promote the advancement, communication, and application of psychological science and knowledge to benefit society and improve lives.

APA urges Congress to provide the following funding levels for programs within the National Science Foundation (NSF) and Department of Justice (DOJ) in FY23.

NATIONAL SCIENCE FOUNDATION (NSF)

APA joins the scientific community urging Congress to provide at least an \$11 billion appropriation for the National Science Foundation (NSF) in FY 2023. As a member of the Coalition for National Science Funding, APA thanks Congress for its support for fundamental scientific research supported by NSF, including the approximately 4% increase in fiscal year 2022. As other nations continue to make dramatic increases in their investments in science, robust funding for NSF in FY 2023 can help the United States maintain its global leadership and competitiveness in science and engineering. Increased support for NSF will also provide funding for the more than \$3 billion in high-quality proposals (as estimated by the National Science Board) submitted to NSF each year that cannot be funded.

APA urges continued investments in core psychological science research at NSF. NSF is the only Federal agency whose primary mission is to support basic nonbiomedical research and education across all fields of science, technology, engineering, and mathematics. Although psychological science receives funding from various directorates within NSF, most core psychological research is supported by the Social, Behavioral, and Economic Sciences (SBE) Directorate. SBE supports research that focuses on variables that influence human behavior across all ages, interactions among individuals and groups, and the development of social and economic systems.

While SBE funding accounts for more than 60% of the Federal funding for basic social and behavioral science research at academic institutions, SBE has received historically lower levels of funding—the lowest funding level of the seven NSF Directorates. In addition to the core behavioral research in cognitive neuroscience, human cognition and perception, learning and development, and social psychology, SBE continues to invest substantial funds to participate in special initiatives and cross-directorate programs that address vital national priorities, including emerging technologies in society.

In addition to the SBE Directorate, APA encourages continued support for the Biological Science Directorate (BIO) and Computer Science and Information Systems Engineering Directorate (CISE), both of which provide important support for psychological research at NSF. BIO provides support for psychologists who study the principles and mechanisms that govern life from the level of the genome and cell, to the whole family, individual, or species. The work of CISE is of particular importance given the emphasis from Congress and the Administration on emerging technologies and artificial intelligence (AI). Knowledge derived from psychological science is essential to the work in many of the CISE divisions, as human behavior plays a key role in the design and implementation of new technologies. Human factors psychology is relevant for the development and advancement of automated systems in autonomous vehicles, essential for the creation of trustworthy and explainable AI, and necessary for research on the future of work.

APA also urges the Committee to provide robust support for research proposed by NSF's Convergence Accelerator and Technology, Innovation, and Partnerships (TIP) Directorate. The Convergence Accelerators offer new funding opportunities for research, including enhancing opportunities for persons with disabilities, developing sustainable materials for global challenges, and addressing food and nutrition security. TIP is the first new directorate at NSF in over 30 years. Its mission is to harness the Nation's vast and diverse talent pool, to advance critical and emerging technologies, to address pressing societal and economic challenges, and to accelerate the translation of research results from lab to market and society. The social, behavioral, and economic sciences are integral to these efforts which can improve U.S. competitiveness, grow the U.S. economy and train a diverse workforce for future, high-wage jobs.

APA strongly encourages NSF to support research to prevent, prepare for, and respond to future pandemics. The COVID-19 worldwide public health crisis persists, contributing to nearly 1 million deaths and around 82 million confirmed cases in the United States (U.S.) alone. Clear evidence illustrates wide health disparities in COVID-19 cases and vaccine distribution. COVID-19 has disproportionately impacted racial and ethnic minority communities across the U.S., particularly the African American community. In addition to the human toll, the impacts of COVID-19 have reached every sector of society, including health care, transportation, and economics and business. Psychological research supported by NSF has provided important insights to help recover from COVID-19 as well as prepare for future pandemics and their impacts on people, communities, and society. Stress and worry about contracting the virus, coupled with job losses, loss of childcare, as well as the devastating loss of loved ones due to COVID-19 are just a few examples of the specific ways the pandemic has affected mental health. To help accelerate healing and recovery, NSF partnered with the National Academies of Science, Engineering, and Medicine (NASEM) early in the pandemic to leverage knowledge from the social, behavioral and economic (SBE) sciences and create the Societal Experts Action Network (SEAN). SEAN helps NASEM and NSF's SBE Directorate to provide key decision makers rapid expert consultation and develop evidence-based recommendations to support local, State, and national responses to COVID-19, having published 16 reports to date. The latest guidance from the Societal Experts Action Network (SEAN) highlights new and updated COVID-19 data measures and surveillance strategies that decision makers can use to inform policy.

APA urges the Committee to help curb the potential loss of research talent likely to occur if early-career researchers are forced from scientific pathways due to economic or social circumstances which attenuate career progression and threaten their professional futures. While scientists across career stages have been upended by this monumental shift, early-career scientists, such as graduate students, postdoctoral fellows, and junior faculty, are particularly vulnerable. The interruptions to science during the COVID-19 pandemic still threaten the research careers of an estimated 668,000 graduate students and 64,000 postdoctoral fellows according to the National Center for Science and Engineering Statistics, a component of NSF's SBE Directorate. Early-career scientists are often just beginning to establish research independence and the negative impacts of the pandemic may be significant and long-lasting. Destabilizing fluctuations in research productivity, faculty positions in aca-

demia, and funding opportunities will impact early-career scientists in the immediate and late phases of their careers.

APA applauds NSF's investments in climate science and sustainability research. NSF has developed crucial funding mechanisms for climate and clean energy-related research over the past year that must continue. They fund a broad portfolio of research related to climate science and clean energy, including research the social, behavioral, and economic research on human responses to climate change. Nearly all subject areas and approaches within psychology (including environmental, cognitive, social, community, developmental, educational, school, counseling, clinical, neuroscientific, health, psychodynamic, humanistic, industrial and organizational, human factors, and other subfields) offer concepts, methods, and tools that can be applied or elaborated to address climate change.

APA supports NSF's continued mission to broaden participation in science, research, and education. We encourage greater investments in programming to diversify the scientific workforce through targeted support of scholars from diverse backgrounds and resources specifically for development and training. Additionally, we urge greater engagement with minority serving institutions (MSIs) and improved investment with their communities to further represent minority and historically underrepresented populations in scientific research. APA believes that these activities are necessary for the success of the scientific enterprise in the U.S. and it is imperative that NSF, through its actions, demonstrate compelling leadership to diversify the scientific landscape of the future.

DEPARTMENT OF JUSTICE (DOJ)

APA is committed to reforming policing and the criminal justice system, supporting those with mental illness within the system, meeting the needs of victims of violence, and ensuring that high-value research is funded, and the best scientific evidence is used to improve programs and policies.

APA urges the Committee to adopt a reform-minded approach by increasing appropriations for the following Office of Justice (OJP) and Bureau of Prisons (BOP) Programs. Within OJP, APA urges the Committee to provide \$45 million for the Bureau of Justice Statistics; \$43 million for the National Institute of Justice; \$125 million for the Second Chance Act including \$5 million to support Children of Incarcerated Parents demonstration grants; \$35 million for Justice Reinvestment; \$117 million for Delinquency Prevention Program. To address the impact the COVID-19 pandemic has had on increases in drug misuse, APA recommends: \$418 million for the Comprehensive Addiction and Recovery Act related activities including \$95 million for Drug Courts; \$25 million for Veterans Treatment Courts; \$35 million for Residential Substance Abuse Treatment; \$190 million for the Comprehensive Opioid Abuse Program; and \$40 million for the Justice and Mental Health Collaboration Program. APA supports \$10 million for Crisis Stabilization and Community Reentry Grant Program; \$140 million for STOP School Violence Act; \$50 million for Mentally Ill Offender Treatment and Crime Reduction Act; and \$21 Million for Improving Suicide Prevention Resources for States' Extreme Risk Protection Orders; \$3 million for the Missing Americans Alert Program (Kevin and Avonte's Law). Within BOP, APA recommends \$409.5 million for the First Step Act. Though rates of domestic abuse have declined significantly since the enactment of the Violence Against Women Act (VAWA), exposure to violence remains common, with one in three women in the U.S. experiencing rape, physical violence, or stalking at some point in their lifetime. Flat funding for the Office on Violence Against Women (OVW) would imperil progress made over the last three decades, especially now that the risks are even more severe. The stay-at home orders necessary for public safety during the COVID-19 pandemic seriously increased the risk of intimate partner violence, domestic violence, and child maltreatment.

APA urges the Committee to increase FY23 appropriations for OVW and prioritize the prevention of violence across the lifespan—including domestic and sexual violence, dating violence, and stalking, as well as children's exposure to family violence.

Of the FY 2023 funds made available to the OVW, APA specifically requests: \$400 million for Services, Training, Officers Prosecutors (STOP) Grants; \$17.5 million for Education and Training to End Violence Against Women with Disabilities; \$10 million for the Enhanced Training and Services to End Violence Against and Abuse of Women in Later Life Program (Abuse in Later Life Program); \$5.5 million for grants to assist Tribal governments in exercising special domestic violence criminal jurisdiction; \$47.5 million for Rural Domestic Violence and Child Abuse Enforcement; \$18 million for the Consolidated Youth Oriented Program; and \$40 million for grants to reduce violent crimes against women on campus. These programs are cru-

cial in preventing further violence, helping victims find safety and support, and starting them on the path towards recovery.

Psychological research has revealed effective strategies to enhance law enforcement and community relations, improve public safety, and reduce the risks of violence and aggression. These include the development of community-informed responses to violence, implementation of community-based policing implemented in a way that builds trust between police and the communities they serve, training on stereotypes and the effects of implicit bias. *APA urges the Committee to increase FY23 funding for the Office of Community Oriented Policing Services (COPS) to support federal, State, and local activities.* In particular, APA requests \$23 million for the Just Police Program (JPP); \$12 million for the Community Policing Development Program to help bolster training for responding to people with mental illness/disability, and \$16 million for the Law Enforcement Mental Health and Wellness Program to address the alarming rates of suicide among police officers.

[This statement was submitted by Katherine B. McGuire, Chief Advocacy Officer]

PREPARED STATEMENT OF AMERICAN SOCIETY FOR ENGINEERING EDUCATION

Summary: This written testimony is submitted on behalf of the American Society for Engineering Education (ASEE) to the Senate subcommittee on Commerce, Justice, Science, and Related Agencies for the official record. ASEE appreciates the Committee's support for the National Science Foundation (NSF) and asks you to robustly fund the agency in (FY) 2023, including the Research and Related Activities and the Education and Human Resources accounts. ASEE joins the academic and scientific community in requesting support of at least \$11 billion for NSF in FY 2023 to help alleviate impacts of historical underinvestment at NSF, advance core research and education activities, and address critical technologies where the U.S. is facing major competition from China. At NASA, ASEE supports the Administration's proposed growth for the Space Technology Mission Directorate (STMD) to increase its investment in crosscutting NASA technology gaps which support engineers and scientists in developing technology to advance science and space missions in the National interest. ASEE also supports proposed growth to NASA's Office of Education to advance NASA's initiatives to broaden participation of underrepresented groups in science and engineering.

Written Testimony: The American Society for Engineering Education (ASEE) is dedicated to advancing engineering and engineering technology education and research and is the only society representing the country's schools and colleges of engineering and engineering technology. Membership includes over 12,000 individuals hailing from all disciplines of engineering and engineering technology and includes educators, researchers, and students as well as industry and government representatives. As the pre-eminent authority on the education of engineering professionals, ASEE works to develop the future engineering and technology workforce, expand technological literacy, and convene academic and corporate stakeholders to advance innovation and sound policy.

NATIONAL SCIENCE FOUNDATION

Engineering shapes our Nation and powers our innovation ecosystem. NSF basic research, conducted in engineering schools and colleges around the country, catalyzes new industries and revolutionary advances. There is high demand for a workforce of well-trained engineers in industry and government to leverage these discoveries and develop innovative new technologies to improve our future. The partnership between the Federal Government and universities is essential to growth and innovation across our economy, and is helping to solve challenges in health, energy, and national security. NSF is a tremendously important piece of this innovation ecosystem, funding basic engineering and engineering education research at universities and supporting students to enable access to engineering education.

ASEE is grateful for recent increases, yet concerned that these investments have not kept pace with international competitors or growing research needs. Due to budget limitations, NSF is currently unable to fund \$3.9 billion worth of very good and excellently rated proposals each year.¹ With more funding, tremendous amounts of additional research and development could be undertaken, leading to novel and transformative discoveries. As the National Science Board predicted, in 2018 China surpassed U.S. investments in research and development. As some countries have

¹ https://www.nsf.gov/nsb/publications/2021/merit_review/FY-2020/nsb202145.pdf.

been steeply accelerating research funding, increasing NSF's appropriation would help secure continued U.S. global innovation leadership.

NSF funding has additionally fallen far behind other research agencies, risking distortions in the overall STEM ecosystem. For example, over the last decade the Department of Energy (DOE) Office of Science has grown faster than NSF and is approaching having the same funding level as NSF, despite studying a much narrower range of topics. Other agencies depend on NSF-funded discoveries and workforce development for their missions. NSF-funded research catalyzes fundamental advances that are utilized for national security applications while engineers trained with NSF funding become key components of the National security workforce and industrial base.

Additionally, NSF has a critical role to play in promoting economic recovery and research on many aspects of the pandemic. Continued support of NSF will be critical as the engineering community and the country move into the next phase of the COVID-19 pandemic. Engineers across the country adapted quickly to the realities of the pandemic, but challenges and disparities remain. NSF will be crucial to rebuilding the STEM pipeline, and building a better, more diverse and resilient STEM workforce.

ASEE joins the research and higher education community in requesting that the Committee fund NSF at \$11 billion in FY 2023 to drive advances in research and education and ensure the U.S. retains global competitiveness and scientific leadership.

Investments in engineering education and research from NSF are essential for having a workforce trained and ready to contribute to industry, government, and academia. NSF is a major supporter of engineering research and workforce initiatives funding 45 percent of engineering and 79 percent of computer science academic fundamental research. NSF-funded advancements touch every corner of our lives and economy, from wireless systems to advanced manufacturing, and from new tools to combat brain diseases to technologies to ensure our cybersecurity. NSF supports engineering education at all levels, ensuring the next generation of the U.S. engineering workforce is appropriately prepared to contribute and innovate and that domestic students are attracted to careers in engineering and engineering technology.

The NSF Directorate for Engineering (ENG) provides critical support for engineering education and research across the breadth of the discipline. These investments have dual outcomes of training future engineers that will discover tomorrow's innovations, all while furthering today's cutting-edge research. Engineering investments at NSF provide critical advancements in areas such as resilient infrastructure, advanced materials and manufacturing, and bioengineering, in addition to equipping students with the skills they need to be the next generation of technological leaders. Divisions such as Engineering Education and Centers (EEC) support university research, Engineering Research Centers, and engineering curriculum revitalization, including a new expansion to support 2-to-4-year transfer students. ENG grantees have robust partnerships with industry, expand the boundaries of our understanding of how students most effectively learn engineering, provide experiential opportunities fundamental to engineering education.

The NSF Directorate for Computer and Information Science and Engineering also plays a key role supporting engineering education and research, particularly within the Division of Information & Intelligent Systems, which supports efforts at the frontiers of information technology, data science, and artificial intelligence, among other areas. These investments are critical as we move into a world even more reliant on human-technology interactions. The Division of Computer and Network Systems has been building capacity within Minority Service Institutions to contribute to both the knowledge base and human resource base in computing and engineering.

ASEE is excited by the establishment of the Directorate for Technology, Innovation and Partnerships and believes the new directorate will help maintain the United States' leadership role in technological innovation and development of critical technologies. However, ASEE urges the subcommittee to provide NSF with enough funding to meet this expanded mission in emerging technologies, research translation, and expanding the geography of innovation while protecting core activities that sustains our science and technology ecosystem.

ASEE strongly supports NSF Education and Human Resources (EHR) funding to foster inclusive and effective learning and learning environments. The STEM workforce, particularly engineers, and computer scientists, drives our innovation and economic development. We need to fully develop all of our Nation's human talent in order to tackle pressing problems, including the STEM technical workforce, professional engineers, and advanced degree holders. Access to STEM experiences and skills are a critical aspect of developing well-rounded citizens, technological literacy, and the future STEM workforce. ASEE supports EHR programs including Improv-

ing Undergraduate STEM Education (IUSE) and Innovations in Graduate Education (IGE). The first is critical for preparing professional engineers and enhancing engineering educational experiences to broaden participation and retention, and the latter works to revolutionize graduate studies to best prepare students for STEM careers.

NSF plays a key role ensuring the development of new tools for teaching engineering design and analysis skills, which are under-taught in today's K–12 classrooms. As noted in the 2009 National Academies report *Engineering in K–12 Education*, engineering education has received little attention yet has the potential to improve student learning and achievement in other areas of STEM, increase awareness of engineering careers, and increase technological literacy. Engineering's focus on design and analysis enhances problem solving, teaches students new ways to approach challenges, and encourages students to connect science and math topics to real-world applications- all skills critical to the future technical workforce. ASEE supports programs to fill workforce needs including Advanced Technical Education (ATE) that prepares advanced technicians for America's high-skills workforce and graduate research fellowships and traineeships to create a pipeline of students knowledgeable and excited about engineering.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

ASEE is supportive of the Administration's proposed increases to the National Aeronautics and Space Administration (NASA) in its Space Technology Mission Directorate (STMD). Of importance to ASEE, STMD activities support the workforce development pipeline of future space engineers and technicians by engaging directly with the academic community through early career faculty programs, early-stage research grants, and university-led multidisciplinary research institutes. The disruptions to the STEM pipeline caused by the COVID–19 pandemic makes this work even more crucial. STMD's broad portfolio of activities helps to meet NASA's science objectives, establishes new commercial and academic partnerships, and stimulates the growth of the Nation's technology sector. STMD programs fill significant capability gaps for NASA and better position the agency to meet its long-term strategic goals in areas across all its directorates ranging from propulsion and power generation to materials science and high-performance computing. ASEE applauds the Administration's support of STMD's vital role and urges the subcommittee to support STMD's ability to focus on a broad array of NASA technology challenges, continue its engagement with the academic and private sectors, and keep long-term focus beyond specific near-term mission goals.

ASEE is also supportive of the Administration's proposed increase for NASA's Office of STEM Engagement and asks that the Committee support the proposed funding for this office in fiscal Year 2023 and beyond. NASA STEM Engagement programs inspire students to pursue engineering, science, and technology careers, and this office plays a vital role coordinating STEM education programs throughout the agency, including those at NASA centers. ASEE supports the continuation of the National Space Grant College and Fellowship Program (Space Grant), which supports university consortia in all 50 States, funding fellowships for engineering and other STEM students, while also offering important resources for faculty professional development and strengthening curricula. ASEE is also supportive of initiatives at the NASA Office of STEM Engagement to broaden participation of under-represented groups in STEM and to bring engineering design and analysis experiences to K–12 students.

CONCLUSION

NSF education and research investments have truly transformed our world through engineering breakthroughs such as the internet, fiber-optics, and medical imaging technology. These investments keep our communities safe, lower healthcare costs, and spur our economy. Today, engineering research is opening possibilities through advances in areas such as artificial intelligence, biosensors, and advanced materials. We ask that you robustly fund NSF at \$11 billion to support critical education and research programs that support our National security, address critical national challenges, and advance our economic competitiveness. In addition, at NASA, we urge you to fund proposed increases for NASA's Space Technology Mission Directorate and Office of STEM Engagement. Thank you for the opportunity to submit this testimony.

[This statement was submitted by Adrienne R. Minerick PhD, President, and Norman Fortenberry, ScD, Executive Director]

PREPARED STATEMENT OF THE AMERICAN SOCIETY FOR MICROBIOLOGY

The American Society for Microbiology (ASM) appreciates the opportunity to submit outside witness testimony for the Fiscal Year 2023 Commerce, Justice, Science and Related Agencies appropriations bill in support of increased funding for the National Science Foundation (NSF) and increased coordination of microbiome research by the White House Office of Science and Technology Policy (OSTP). ASM is one of the oldest and largest life science societies with 30,000 members in the U.S. and around the world. Our mission is to promote and advance the microbial sciences, including programs and initiatives funded by Federal Government departments and agencies, by virtue of the integral role microorganisms play in human health and society. Microbial science is a cross-cutting endeavor, and our members' federally funded research is fundamental to advances in human health, agriculture, energy, and the environment. For FY2023, ASM recommends the following:

Provide at least \$11 billion for the National Science Foundation in Fiscal Year 2023.

The NSF is a key supporter of microbiology research, including foundational research supporting ecosystems and biodiversity, mapping the microbiome, and discovering emerging pathogens. NSF-funded researchers across the country are working to improve lives through research on human and animal health, agriculture, energy, the environment, and biothreats. NSF funding is key to cultivating a diverse and inclusive scientific workforce that is prepared for future challenges and discoveries. However, due to lack of Federal funding, NSF was unable to fund nearly \$4 billion in highly rated research proposals in FY2020.

Fundamental research supported by NSF will enable new discoveries and solutions using biotechnology to promote the bioeconomy, forecasting and mitigating the impacts of global warming on essential ecosystem services, and predicting and preventing the emergence and spread of infectious diseases. NSF-funded research advances our understanding of the 70 percent of emerging human pathogens that have non-human origins, which pose serious threats to human health and global health security. To continue to achieve its goals, it is critical that the FY2023 appropriations bill robustly fund NSF.

Urge the Office of Science and Technology Policy to implement FY2022 CJS Appropriations report language on the microbiome and revisit the Interagency Strategic Plan for Microbiome Research.

Interagency coordination is more crucial than ever and responding to 21st challenges will require interdisciplinary and interagency coordination. Microbiome science aims to advance understanding of microbial communities (microbiomes) for applications in areas such as health care, food production, and environmental restoration to benefit individuals, communities, and the environment. Understanding of the microbiome has evolved significantly since the concept of the human microbiome emerged roughly two decades ago. Today it is understood that microbial communities exist on, in, and around people, animals, and the environment, and directly impact health and disease States. It is also clear that microbiome research and coordination are essential to unlocking the full potential of the bioeconomy. However, the rapid pace of discovery and the interdisciplinary nature of microbiome research necessitates cross-agency coordination and a robust data sharing infrastructure.

Launched in 2016, the National Microbiome Initiative pledged \$121 million in funding from Federal agencies and \$400 million in total cash and in-kind contributions from 100 companies, foundations and academic institutions. As part of this initiative, the Federal Microbiome Interagency Working Group developed the Interagency Strategic Plan for Microbiome Research, providing recommendations for improving coordination of microbiome research among Federal agencies and between agencies and non-Federal domestic and international microbiome research efforts. The 5-year Strategic Plan envisioned coordinated microbiome research activities across 21 government agencies, set out interagency objectives, structure and operating principles, and noted several research focus areas.

ASM is grateful to the House and Senate Appropriations Committees for including requested language in FY2022 report language that asks OSTP to review the Interagency Strategic Plan for Microbiome Research, to evaluate the progress made, consider whether the Federal investment has been adequate to fully realize the promise of this initiative, and begin the process to develop a strategic plan for interagency collaboration in this essential research for the next 5 years. We encourage the Committee to follow up with OSTP on implementation of this language.

CONCLUSION

ASM is particularly grateful to Congress for increasing investment in the NSF in recent years. In FY2023, we urge Congress to revisit OSTP's past commitment to microbiome research and to increase funding for NSF to \$11 billion. We thank you for your continued support for microbe-powered innovation.

[This statement was submitted by Allen Segal, Director of Public Policy and Advocacy]

PREPARED STATEMENT OF THE AMERICAN SOCIETY FOR THE PREVENTION OF CRUELTY TO ANIMALS

On behalf of our over 2 million supporters, The American Society for the Prevention of Cruelty to Animals (ASPCA) appreciates this opportunity to submit testimony to the Senate Appropriations subcommittee on Commerce, Justice, Science, and Related Agencies. Founded in 1866, the ASPCA is the first humane organization established in the U.S. and serves as the Nation's leading voice for animal welfare. We respectfully request that the subcommittee consider the following concerns when making fiscal year 2023 appropriations.

POLICE ENCOUNTERS WITH PETS

Media reports about violent encounters between law enforcement officers and pets—most often family dogs—are far too commonplace across the country. The ASPCA believes that the vast majority of these incidents are avoidable. The U.S. Department of Justice (DOJ) can assist in reducing these incidents by collecting national data around them and by providing resources for techniques to handle police and dog encounters in law enforcement de-escalation trainings. Tragedies like this take a serious toll on communities, further eroding trust with law enforcement, escalating tense situations, and endangering bystanders. There are many troubling examples of these incidents, some of which have garnered media attention in the last 18 months.¹

Shootings involving pets often account for a significant percentage of the total firearms discharges in a particular agency. Data from some municipalities suggest that 25–75 percent of all police firearm discharges are directed at dogs.² One DOJ official estimated that several thousand dogs annually are killed by law enforcement officers and described the phenomenon as “an epidemic.”³ Additionally, research reveals that these incidents take a disproportionate toll on communities of color. An analysis of officer-involved shootings in Los Angeles County revealed that between 28–46 percent of all firearms discharges were directed at dogs, and these shootings were geographically clustered in low-income communities of color.⁴

The House Fiscal Year 2022 Commerce, Justice, and Science Appropriations report included language directing the DOJ to include use of force incidents in any Federal database created to track law enforcement's use of force more broadly, or to submit a report on how this can be accomplished within 180 days. This language was included by reference in the final report. We greatly appreciate the subcommittee's support to include this new language. The DOJ recently announced a new police reform initiative, providing resources for de-escalation trainings, among other community-oriented policing priorities.⁵ This request is in line with this administrative priority.

¹ On May 3, Sacramento police officers shot and killed a family dog while serving a search warrant on the property. On April 17, Chicago police officers shot and injured a family dog while responding to a domestic dispute. Body cam footage from April 11 shows a Jacksonville, Florida police officer shooting and killing a family's 1-year-old puppy in her yard while responding to a neighbor's 911 call. Body cam footage from January 12 shows a Miami Dade officer shooting and killing a family dog seven times while responding to a barking complaint. On April 11 of last year, New Orleans police officers shot and killed an 18-week-old rescue puppy in his yard while responding to a 911 call. On March 23 of last year, the Tampa PD shot the dog of the woman who had called them for help.

² Bathurst, Cynthia, Donald Cleary, Karen Delise, Ledy VanKavage, and Patricia Rushing. 2015. *The Problem of Dog-Related Incidents and Encounters*. Washington, DC: Office of Community Oriented Policing Services; <https://cops.usdoj.gov/RIC/Publications/cops-p206-pub.pdf>.

³ Griffin, David; “Can Police Stop Killing Dogs?” *Police Magazine*; Oct. 29, 2014; <https://www.policemag.com/341722/can-police-stop-killing-dogs>.

⁴ Stefano Bloch, Daniel E. Martinez. 2020. *Canicide by Cop: A geographical analysis of canine killings by police in Los Angeles*. *Geoforum*: 111. 142–154; <https://www.sciencedirect.com/science/article/abs/pii/S0016718520300440>.

⁵ <https://www.justice.gov/opa/pr/justice-department-announces-40-million-funding-advance-community-policing-and-5-million>.

Encourage documentation and tracking for incidents of police use of force against pets:

Use of force reporting requirements among State and local law enforcement agencies are inconsistent, and many agencies do not require documentation for use of force incidents involving pets. Federally, no nationwide data exists regarding the prevalence of these tragedies, or for officer-involved shootings more broadly. DOJ's Federal Bureau of Investigations operates a National Use of Force Data Collection, which allows law enforcement to voluntarily provide data on use-of-force incidents. The voluntary data, which currently reflects only 40 percent of the total law enforcement officer population, does not, apparently, include incidents involving pets.⁶ A publication by the DOJ's Office of Community Oriented Policing Services (COPS) recognized the lack of data on this issue and urged law enforcement agencies to examine questions like how often police officers discharge firearms in dog-related incidents and how many dogs have been killed to better understand and address this problem.⁷ Understanding the scope and frequency of these incidents is fundamental to avoiding them.

Provide resources and training to de-escalate police encounters with pets and reduce violent incidents:

De-escalation trainings have proven to be quite beneficial in resolving situations with dogs without resorting to lethal force.⁸ Several States including Colorado, Illinois, Ohio, California, Texas, Nevada, and Georgia mandate training and have created programs on proper responses to encounters with dogs. These policies appear to be having a positive impact—between 2015 when the law was enacted and 2019, the number of dogs shot by police in Texas dropped from 281 to 31.⁹ Other States including Connecticut, Louisiana, New Jersey, and Oregon address law enforcement encounters with dogs either in basic training or through electives. The COPS office, which provides training for police departments on a variety of topics, published *The Problem of Dog-Related Incidents and Encounters* in 2011, which served as the foundation for a jointly created video series and toolkit in 2020 that provides training on methods for responding to dog encounters, including assessing dog behavior and risk levels, strategies for diffusing threatening encounters, as well as defense and escape tactics.¹⁰ The evidence is compelling that funding for the use of such trainings or creating incentives to do so could minimize risk to officers, families, and animals.

The ASPCA requests that the subcommittee recognize the impact of law enforcement's use of force in communities and the need to avoid such incidents by including the following report language in its FY23 Appropriations bill:

Police Use of Force Against Pets.—Police shootings directed at pets can account for a significant percentage of overall firearms discharges in communities—data from some localities suggests that anywhere from 25–75 percent of all law enforcement firearms discharges are directed at dogs, and that these incidents are geographically clustered in low-income communities of color where police shootings involving people are also concentrated. These occurrences escalate encounters with communities and erode trust in law enforcement.

The committee continues to be concerned about the lack of data and reporting requirements for police use of force incidents against pets and directs the Department to incorporate data on these incidents into broader efforts to collect, track, and report on police use-of-force and to provide guidance to law enforcement agencies regarding best practices in tracking and reporting data on these incidences.

The Department shall develop a grant program to support Law Enforcement Dog Encounters Training (LEDET) or other evidenced-based training programs for law enforcement to handle encounters with pets. The grants shall be made available to law enforcement agencies and other qualified entities, including nonprofit organizations and institutions of higher education.

⁶See “What is Collected?” <https://crime-data-explorer.app.cloud.gov/officers/national/united-states/uof>.

⁷Bathurst, Cynthia, Donald Cleary, Karen Delise, Ledy VanKavage, and Patricia Rushing. 2015. *The Problem of Dog-Related Incidents and Encounters*. Washington, DC: Office of Community Oriented Policing Services; <https://cops.usdoj.gov/RIC/Publications/cops-p206-pub.pdf>.

⁸Amendola, Karen, Valdovinos, Maria, Perea, Cesar. 2019. *An Evidence-Based Approach to Dog Shootings in Routine Police Encounters: Regulations, Policies, Practices, and Training Implications*. <https://www.policefoundation.org/publication/reducing-dog-shootings-in-routine-police-encounters-regulations-policies-practices-and-training-implications/>.

⁹Texas Humane Legislative Network.

¹⁰<https://www.sheriffs.org/ledet>.

Thank you for your consideration of this request, we look forward to working with you on this important issue.

[This statement was submitted by Nancy Perry, Senior Vice President, Government Relations]

PREPARED STATEMENT OF THE AMERICAN SOCIETY OF AGRONOMY (ASA)

Dear Chairwoman Shaheen and Ranking Member Moran:

The American Society of Agronomy (ASA), Crop Science Society of America (CSSA), and Soil Science Society of America (SSSA) represent more than 8,000 scientists and students, 13,500 Certified Crop Advisers (CCA), and more than 700 Certified Professional Soil Scientist (CPSS). We are the largest coalition of scientists and professionals dedicated to the agronomic, crop, and soil science disciplines in the United States.

In the coming decades, our agricultural system must sustainably produce food and fuel for a rapidly growing global population. The Nation's economic prosperity and security depend on our dedication to developing innovative, science-based solutions to address the challenges facing our food system. We appreciate the appropriations the National Science Foundation (NSF) received in (FY) 2022. Yet, as our Nation's producers face increasing extreme weather, limited resources, and market uncertainty, NSF's programs become even more important providers of the science they need to stay in business. NSF's Big Ideas initiatives, its core programs, and its unparalleled support for STEM students and the future STEM workforce require increased investment.

We support \$11 billion for the National Science Foundation for the fiscal year 2023. This funding level will put the premier government-funding agency for scientific research on track to address farmers' challenges by increasing the broad knowledge base supported by a wide range of scientific disciplines, such as biology, plant science, chemistry and soil science.

Within NSF we are very supportive of Signals in the Soil program. As Franklin D. Roosevelt stated in 1935, "A nation that destroys its soils destroys itself," and yet our soils are eroding at an alarming rate. This interdisciplinary program is a collaboration among four NSF Directorates, the U.S. Department of Agriculture's National Institute of Food and Agriculture, and five international science organizations to encourage convergent research and high-impact projects that advance a more comprehensive understanding of soil and the systems soils support.

In 2017, NSF launched its 10 "Big Ideas," a set of cutting-edge research agendas and processes poised to drive NSF's long-term research agenda. We are particularly supportive of NSF's Convergence Accelerator and Understanding the Rules of Life Initiatives. The Convergence Accelerator puts systems thinking into research practice. Agriculture researchers are uniquely aware of the multiple disciplines, technologies, and expertise necessary to produce realistic and useful information for producers working in large, multi-faceted outdoor systems. From water management to precision agriculture, this program provides support for exactly the kind of systems-level research successful agriculture requires. The Understanding the Rules of Life Initiative aims to address one of the biggest gaps in biological knowledge: our inability to predict an organism's observable characteristics—its phenotype—from what we know about its genetics and environment. This cross-disciplinary research could help create food crops with higher yields or nutritional content and new models for environmental remediation.

ASA, CSSA, SSSA have made the commitment to enhancing the experiences, opportunities, and safety of all Society members by creating a diverse, inclusive, and equitable environment in our scientific fields of study. NSF can play an invaluable role in addressing the equity challenges facing minority and underrepresented groups within the research workforce. We know that students and researchers from disadvantaged backgrounds are less likely to choose a field with unreliable funding. Robust Federal funding for NSF can advance a more representative and equitable research enterprise by bolstering the student pipeline, expanding educational programs and grants—especially for MSIs, expanding resources for early career researchers, and facilitating collaborations with diverse stakeholders to address existential threats, such as climate change.

Science is essential. A strong commitment to federally funded scientific research will boost the Nation's capacity for innovation, productivity, and economic prosperity.

Thank you for your consideration. For additional information or to learn more about ASA, CSSA, and SSSA, please contact Rachel Owen at rowen@sciencesocieties.org or 608-268-4965.

Sincerely,
Luther Smith, Interim CEO

PREPARED STATEMENT OF AMERICAN SOCIETY OF PLANT BIOLOGISTS

On behalf of the American Society of Plant Biologists (ASPB), I submit this testimony for the official record to support \$11 billion for the National Science Foundation (NSF) for (FY) 2023. ASPB recognizes the difficult fiscal environment our Nation faces, but we believe that sustained investments in scientific research are a critical step toward economic recovery and continued global competitive innovation for our Nation. ASPB would also like to thank the subcommittee for its consideration of this testimony and for its strong support for the research missions of NSF.

ASPB, founded in 1924 as the American Society of Plant Physiologists, was established to promote the growth and development of plant biology, to encourage and publish research in plant biology, and to promote the interests and professional advancement of plant scientists in general. ASPB members educate, mentor, advise, and nurture future generations of plant biologists; they work to increase understanding of plant biology, as well as science in general, in K-16 schools and among the general public; they advocate in support of plant biology research; they work to convey the relevance and importance of plant biology; and they provide expertise in policy decisions world-wide. Overall, ASPB members, as representatives of the society, work to disseminate information and excitement about plant sciences, especially through ASPB's advocacy, outreach activities, conferences, and publications.

FOOD, FUEL, ENVIRONMENT, AND HEALTH: PLANT BIOLOGY
RESEARCH AND AMERICA'S FUTURE

Plants are vital to our very existence. They harvest sunlight, converting it to chemical energy for food and feed; they absorb carbon dioxide and produce oxygen; and they are the primary producers on which most life depends. Indeed, plant biology research is making many fundamental contributions in the areas of energy security and environmental stewardship; the continued and sustainable development of better foods, fabrics, and building materials; and in the understanding of biological principles that underpin the health and nutrition of all Americans. In short, plant biology research is at the foundation of a robust American bioeconomy.

Plant science has become the backbone of agricultural innovation, and a thriving agricultural sector is a cornerstone for America's economic success. Agriculture and related industries comprise 6 percent of the U.S. GDP, contributing nearly \$1.055 trillion and 19.7 million jobs to the economy.¹ In fact, despite persistent U.S. trade deficits, there has been a surplus in agricultural trade since 1960. Steady increases in yield have made these surpluses possible, even in the face of sustained population growth. Such increases are due to improvements in crop seeds and agricultural innovations that, in turn, rely on sustained fundamental and applied research in crop science and plant biology. American farmers have experienced and come to expect continuously increasing yields, which are necessary for economic and national security. But for this to continue, growing investments in basic biological sciences are needed.

Plant biology is at the interface of numerous scientific breakthroughs. For example, NSF has supported high throughput experimental approaches that facilitate extraordinary syntheses of information, and plant biologists are using computer science and bioinformatics to make tremendous strides in our understanding of complex biological systems, ranging from single cells to entire ecosystems. Ultimately, understanding how plants function will enable biotechnological approaches toward more nutritious and productive crops, new sources of fuel, and the development of novel medicines to treat diseases like cancer.

Despite the significant positive impact plants have on our Nation's economy and in addressing some of our most urgent challenges, including food and energy security, Federal investments in fundamental plant biology research are modest. Still, scientists have maximized and leveraged this funding to understand the basic functions and mechanisms of plants, providing a foundation for vital advances in practical applications in agriculture, health, energy, and the environment.

¹ <https://www.ers.usda.gov/data-products/ag-and-food-statistics-charting-the-essentials/ag-and-food-sectors-and-the-economy/>.

ROBUST FUNDING FOR THE NATIONAL SCIENCE FOUNDATION

ASPB supports the new Directorate for Technology, Innovation, and Partnerships (TIP) and its goal to advance science and engineering research and innovation. This new directorate will accelerate basic research to solve national and societal problems. TIP will support use-inspired research in biotechnology, among other areas, and propel NSF-funded discoveries to new levels of innovation. TIP will also fund activities in priority areas such as climate resilience and energy sufficiency, advanced wireless research, biotechnology, microelectronics and semiconductors, advanced manufacturing, AI, and quantum sciences. Programs that broaden participation would also see major growth, and NSF would launch a new initiative aimed at building research capacity at emerging research institutions.

ASPB encourages strong support for the Directorate of Biological Sciences (BIO) and proportional funding increases across all of the scientific disciplines NSF supports. As scientific research becomes increasingly interdisciplinary, a diverse research portfolio at NSF is needed to maintain transformational research and innovation. NSF funding for plant biology specifically enables the scientific community to address cross-cutting research questions that could ultimately solve grand challenges related to a sustainable food supply, energy security, and improved health and nutrition.

NSF BIO is a critical source of funding for scientific research, providing the majority of the Federal support for non-medical, basic life sciences research at U.S. academic institutions and beyond. BIO supports research ranging from the molecular to the biosphere levels. These investments have significant payoffs, both in terms of the knowledge directly generated and in deepening collaborations and fostering innovation among communities of scientists.

BIO's Plant Genome Research Program (PGRP) is an excellent example of a high impact program that has laid a strong scientific research foundation for understanding plant genomics as it relates to energy (biofuels), health (nutrition and functional foods), agriculture (impact of changing climates on agronomic ecosystems), and the environment (plants' roles as primary producers in ecosystems). ASPB asks that the PGRP be funded at the highest possible level and have sustained funding growth to address 21st century challenges.

Additionally, ASPB is encouraged by the ongoing efforts of the Reintegrating Biology initiative. The Society hopes that these efforts will result in innovative, cross-disciplinary efforts that advance both plant science and biological research.

Without significant and increased support for BIO and NSF, promising fundamental research discoveries will be delayed and vital collaborations at the leading edges of scientific disciplines will be postponed, thus limiting the ability to respond to the pressing scientific problems that exist today and the new challenges on the horizon. Addressing these scientific priorities also helps improve the competitive position of the U.S. in a global marketplace.

CONTINUED SUPPORT FOR NSF EDUCATION AND WORKFORCE DEVELOPMENT PROGRAMS

As discussed above, among the challenges brought by a changing world, many will be addressed specifically by plant scientists. Sustained increases in crop productivity will be needed to match the demand for food expected from population growth. At the same time, climate change will present new challenges for crops and other plant ecosystems. These challenges will require efforts to increase productivity beyond current practices, including, for example, improvement in crop water use efficiency and enhanced crop photosynthesis efficiency and performance. More knowledge and innovation will be needed to replace chemicals from non-renewable sources (from fuels to biomedical applications) with plant-derived metabolites. These innovations will require contributions from basic and applied plant science fields, as well as collaboration with other sciences and engineering.

To tackle these challenges, a strong and diverse community of plant scientists, with increased involvement from women and minority scientists who often bring underrepresented perspectives, will be needed. However, the current training pipeline does not appear prepared to ensure the availability of this workforce. The number of PhD degrees awarded in the U.S. in biomedical sciences in the last two decades has increased at an unsustainable rate, even triggering warnings from members of the National Academy of Sciences;² however, this trend has not been paralleled by increases in plant-related PhD degrees. In fact, plant science doctoral degrees, both basic and agronomy-related, have remained stagnant during this pe-

²National Academies of Sciences, Engineering, and Medicine. 2018. The Next Generation of Biomedical and Behavioral Sciences Researchers: Breaking Through. Washington, DC: The National Academies Press. <https://doi.org/10.17226/25008>.

riod.³ Students gravitate towards fields with reliable and robust career and earning opportunities. What is necessary to change these trends is a strong investment in plant science research, basic and applied, renewed efforts to transform public perception of plant biology and plant biologists, and a push to increase the number of students in the plant science pipeline. Developing the workforce that will solve current and future challenges is urgent.

The NSF is a major source of funding for the education and training of the American scientific workforce and for understanding how educational innovations can be most effectively implemented. NSF's education portfolio impacts students at all levels, including K–12, undergraduate, graduate, and postgraduate, as well as the public.

ASPB urges the subcommittee to support expanding NSF's fellowship and career development programs such as the Postdoctoral Research Fellowships in Biology, the Graduate Research Fellowship (GRF), the Research and Mentoring for Postbaccalaureates in Biological Sciences (RaMP), and the Faculty Early Career Development (CAREER) programs—thereby providing continuity in funding opportunities for the country's most promising early career scientists.

ASPB urges support for NSF to further develop programs aimed at increasing the diversity of the scientific workforce by leveraging professional scientific societies' commitment to provide a professional home for scientists throughout their education and careers and to help promote and sustain broad participation in the sciences. Focused training and infrastructure support programs for Hispanic Serving Institutions, Historically Black Colleges and Universities, and Tribal Colleges and Universities remain vitally important, because they foster a scientific workforce that reflects the U.S. population.

ASPB also urges support for research that enhances our understanding of how educational innovations can be sustainably and effectively implemented. NSF Education and Human Resources (EHR) programs provide opportunities to expand NSF's research and evaluation efforts to address scale-up and sustainability. *ASPB encourages continued support for education research programs within NSF's EHR portfolio with a focus on understanding how previous investments in educational strategies can be made most effective.*

Grand research challenges will not be solved in a year, an administration, or a generation. It takes attention and investment at Federal research agencies, such as the NSF, over decades.

Thank you for your consideration of ASPB's testimony. For more information about ASPB, please visit at www.aspb.org.

[This statement was submitted by Crispin Taylor, PhD, Chief Executive Officer]

PREPARED STATEMENT OF ASSOCIATION FOR PSYCHOLOGICAL SCIENCE

APS RECOMMENDATIONS FOR FISCAL YEAR 2023 APPROPRIATIONS

- The Association for Psychological Science (APS) supports (FY) 2023 funding of at least \$11 billion for the National Science Foundation (NSF).* The NSF is critical to ensuring the success of the Nation's science, technology, engineering, and mathematics (STEM) enterprise and to promoting national security and prosperity.
- APS recommends increased funding for NSF's Social, Behavioral, and Economic (SBE) Sciences Directorate.* This NSF directorate is the primary funder of behavioral research conducted at U.S. colleges and universities. SBE-funded research provides the foundation upon which our knowledge of people, including our understanding of the human mind, brain, and behavior, is built.
- APS requests Congress encourage NSF to increase the number of Graduate Research Fellowships to 3,000 in FY 2023.* This program provides essential support that empowers students to pursue graduate education and training in STEM fields.

STATEMENT OF APS CHIEF EXECUTIVE OFFICER

Chair Shaheen, Ranking Member Moran, and Members of the subcommittee, thank you for the opportunity to provide testimony about psychological science priorities and interests at NSF in FY 2023. I am Robert Gropp, PhD, Chief Executive Officer of APS, which is a nonprofit scientific organization of approximately 25,000

³National Center for Science and Engineering Statistics, Survey of Earned Doctorates. <https://ncesdata.nsf.gov/builder/sed?type=chart&convert=1>.

scientists and students dedicated to advancing research psychology for the benefit of science and society. Many of these members are scientists and educators at the Nation's universities and colleges who conduct research and train undergraduate and graduate students with support from NSF.

FUNDING FOR THE NATIONAL SCIENCE FOUNDATION AND POLICY ISSUES

APS joins with the Coalition for National Science Funding to request that Congress provide at least \$11 billion in FY 2023 funding for NSF. NSF-funded research and training programs are engines that power the discovery and innovation that grow our economy, promote national security, and enhance human well-being.

NSF-funded research and education benefit every State and local community across the United States. In 2021, for example, New Hampshire research institutions secured more than \$33 million in research and education support from NSF, and institutions across Kansas received \$40 million. NSF is helping institutions in both States address the COVID-19 pandemic and other issues through funding, for example, the development of behavioral theories about resilience and sustainability for use by engineers (University of New Hampshire) and the study of how debt and economic insecurity developed during the pandemic and how these factors affect low-income communities (Dartmouth College). Other NSF-supported research examined challenges faced by individuals using public libraries for computing and Internet access amid the COVID-19 pandemic (University of Kansas) and how scientific goals and values can support responsible research conduct (Kansas State University).

Specifically, APS urges increased funding for NSF behavioral and social sciences and economics programs. The SBE directorate funds research on critical areas such as understanding human interactions with artificial intelligence and developing a secure and trustworthy cyberspace. The SBE directorate also works with other NSF directorates on major NSF projects such as the Future of Work and Human-Technology Frontier, Growing Convergence Research, and Harnessing the Data Revolution, ensuring that social and behavioral science research is contributing to our understanding and advancing these research areas critical to the future of science and engineering.

APS encourages Congress to provide sufficient funding to NSF to empower the agency to allocate increased funding for SBE. For this purpose, APS requests that Congress adopt the following report language:

Directorate for Social, Behavioral, and Economic Sciences (SBE).—The Committee supports the SBE directorate and recognizes the fundamental importance of the research it supports in advancing scientific understanding of critical challenges facing our Nation. These sciences also afford insights into advancing public health, defense and security, education and learning, and the interface between humans and technology. The SBE directorate funds more than half of our Nation's university-based behavioral science research, yet it is the smallest NSF directorate. The Committee believes that behavioral science provides evidence-based understanding of human behavior and recognizes the SBE directorate's unique role in funding this research. The Committee therefore recommends an increase over the Fiscal Year 2022 levels for SBE activities comparable to the increases provided for the other directorates.

NSF facilitates a wide variety of research conducted at colleges and universities across the United States. The agency also empowers the next generation of scientists to begin and continue their training and education in science. The Graduate Research Fellowship Program, or GRFP, is one such example of this work. Historically, NSF has awarded around 2,100 of these fellowships per year, but it receives applications from many more qualified students than it can support. For this reason, APS encourages Congress to provide NSF with funding to support at least 3,000 GRFP awards annually.

APS requests that the following language be included in the fiscal Year 2023 CJS Report:

Graduate Research Fellowship Program.—The Committee notes that the Graduate Research Fellowship Program (GRFP) has a long history of supporting outstanding graduate students studying NSF-supported sciences, engineering, and mathematics fields, including behavioral science, and selects recipients who go on to achieve high levels of success in their future academic and professional careers. In recognition of this program's contributions to launching the careers of talented future scientists, the Committee has provided the resources necessary to fund more than 3,000 grants in Fiscal Year 2023 and urges the program to continue to grow in future years.

SUMMARY AND CONCLUSION

Knowledge gained from NSF-funded psychological science research is essential to advancing innovation and discovery, improving the Nation's health and prosperity, and strengthening economic and national security. The importance of this research has been on display during the COVID pandemic. As an illustration of what investment in SBE sciences can do, I direct you to the APS Global Collaboration on COVID-19. This initiative has brought together psychological scientists and other experts to make recommendations on how we can draw on our field for the good of the country. This collaboration has identified that psychological and other behavioral sciences could have been better applied throughout the COVID-19 crisis, that these fields can contribute to COVID-19 and future threats, and that new research and research funding are urgently needed to best prepare society for future crises. I would be pleased to share further information on this effort with any interested Members of the subcommittee at your convenience.

APS shares your commitment to fostering innovation through investment in research. We appreciate the opportunity to provide this testimony, and we thank you for your leadership.

[This statement was submitted by Robert Gropp, PhD, Chief Executive Officer]

PREPARED STATEMENT OF ASSOCIATION OF SCIENCE AND TECHNOLOGY CENTERS, AMERICAN ALLIANCE OF MUSEUMS, ASSOCIATION OF CHILDREN'S MUSEUMS, AND ASSOCIATION OF SCIENCE MUSEUM DIRECTORS

Dear Chair Shaheen, Ranking Member Moran, and Members of the subcommittee:

Thank you for accepting this statement submitted by the Association of Science and Technology Centers (ASTC), the American Alliance of Museums (AAM), the Association of Children's Museums (ACM), and the Association of Science Museum Directors (ASMD).

We appreciate the opportunity to present the views of our associations to the subcommittee for its consideration as it prepares to write the Fiscal Year 2023 Commerce, Justice, Science, and Related Agencies Appropriations bill, particularly regarding the National Science Foundation (NSF), the National Aeronautics and Space Administration (NASA), and the National Oceanic and Atmospheric Administration (NOAA).

Our associations represent more than 5,000 member organizations in every State and district in America, including science centers, museums of all types, nature centers, aquariums, zoos, planetariums, botanical gardens, and natural history and children's museums, as well as companies, consultants, and other organizations that share an interest in science education and public engagement in science.

Taken together, our National reach is a vital resource for fostering rich public engagement in the importance of science and many other subjects and disciplines towards building a bright future and opportunity for all. Our place-based organizations are leading institutions in the efforts to promote education in science, technology, engineering, arts, and mathematics (STEAM), developing rich, innovative, and effective science-learning experiences. We are helping to create the future STEAM workforce and inspiring people of all ages about the wonders and the meaning of science in their lives. Our members are trusted and valued by their communities—a recent national public opinion poll, showed that 95% of voters would approve of lawmakers who acted to support museums and 96% of voters want Federal funding for museums to be maintained or increased (Museums and Public Opinion, S. Wilkening and AAM, 2018).

These past 2 years have been especially challenging for our community as nearly all of our members, many of whom receive the majority of their operating income from revenue from people coming through their doors, experienced prolonged closure of their facilities. Even as they have reopened to the public, attendance and revenue may take several years to recover. While Federal relief programs have provided an essential lifeline, the impact on our members will long outlast COVID relief (National Snapshot of COVID-19 Impact on United States Museums, AAM and Wilkening Consulting, 2021). At the same time, our member institutions continued to serve their communities and their missions, engaging their regions with STEM and youth engagement, supporting science learning and serving their communities in myriad other ways. Indeed, one of the most inspiring aspects of the past 2 years is how our member organizations have shown up for their communities and worked closely with local residents and organizations to advance conversation and action on the most urgent local priorities.

For example, a year ago ASTC, AAM, and ACM joined with a coalition of other national organizations to launch Communities for Immunity (www.communitiesforimmunity.org), an initiative supported by the Centers for Disease Control and Prevention and the Institute of Museum and Library Services to activate museums, libraries, and Tribal organizations to boost vaccine confidence in their communities. Building upon the high degree of trust that the public has in these cultural institutions, Communities for Immunity has been able to effectively engage vaccine hesitant members of their local communities.

As the Nation hopefully emerges from the immediacy of the pandemic, this example of action by the museum and library community demonstrates how these trusted institutions embedded in their communities offer an opportunity to advance community conversation and action on national and international challenges in locally relevant ways.

REQUESTS FOR FISCAL YEAR 2023 APPROPRIATIONS

We appreciate the support that the subcommittee has provided for the Nation's science and education agencies, including support for programs of particular interest to ASTC, AAM, ACM, and ASMD.

In general, we stress the need for inclusive programs that include support for informal education as much STEAM learning-including but not limited to school-aged youth-happens outside of formal schooling. Research has consistently shown that learning experiences outside of the formal classroom are vitally important to youth's future interest and capacity in STEAM (National Academies, 2006, 2009, 2010, 2015, 2016).

National Science Foundation (NSF)

The National Science Foundation (NSF) is one of our Nation's most important sources of support for STEM education, including many of the programs centered in the Directorate for Education and Human Resources (EHR). EHR supports STEAM education at all levels and for all audiences to help develop a diverse and well-prepared workforce and a scientifically well-informed citizenry.

Of particular interest to the museum community is the Advancing Informal STEM Learning (AISL) program in the Division of Research on Learning in Formal and Informal Settings, which advances new approaches to and evidence-based understanding of learning in informal environments. However, current funding levels have limited the ability of the program to support the range of informal STEM education programs that have been ranked highly competitive. We ask you to provide at least \$74.5 million for the Advancing Informal STEM Learning (AISL) program.

NSF also supports STEAM education and informal learning through its research directorates, and we urge the subcommittee to provide increased funding for the NSF Directorates for Biological Sciences; Education and Human Resources; Geosciences; and Social, Behavioral and Economic Sciences to continue to support museum research, collections, and programs that are key to lifelong STEAM education. We also support the focus on the intersection of science and society in NSF's new Directorate for Technology, Innovation, and Partnerships.

Finally, we support continued analysis and refinement of the broader impacts criterion on which all NSF proposals are evaluated, including efforts to enhance training for merit review panelists and NSF program officers and the development of tools for evaluating and documenting the societal impacts of research.

National Aeronautics and Space Administration (NASA)

The National Aeronautics and Space Administration (NASA) supports informal STEM education in a variety of ways. The Teams Engaging Affiliate Museums and Informal Institutions (TEAM II) program, within the Office of STEM Engagement, provides support for museums and planetariums to enhance programs related to space exploration, aeronautics, space and earth science, or microgravity.

We request at least \$130 million for NASA's Office of STEM Engagement, including at least \$15 million for the Teams Engaging Affiliate Museums and Informal Institutions (TEAM II) program.

In addition, NASA's Science Mission Directorate supports museums and museum networks through its Science Activation program, which connects competitively-selected teams across the country with NASA infrastructure teams. Last year, more than 50 teams supported by the program engaged more than 21 million learner interactions in all 50 States. To continue the program's evolution and strong reach nationwide, we request at least \$47 million for the SciAct Program.

National Oceanic and Atmospheric Administration (NOAA)

NOAA's Office of Education offers two grant programs to advance education in areas relevant to NOAA's mission, including support for museums, zoos, aquariums, and science centers. These programs help enhance the understanding and use of environmental information to promote informed decision-making by educators, students, and the public.

- The Bay Watershed Education and Training (B-WET) program promotes place-based experiential learning for K–12 students and related professional development for educators.
- Environmental Literacy grants support activities that inspire people to use Earth system science to improve ecosystem stewardship and increase resilience to environmental hazards. For more than 15 years, these grants have supported museum exhibitions, K–12 curricula, online education resources, citizen science activities, out-of-school programs, and professional development for educators.

As the need for enhanced education about our changing climate and community resilience increases, there is a need for a concurrent increase in the budget for the Office of Education. We request at least \$35 million for NOAA's Office of Education.

We continue to thank the subcommittee for all its support of a robust science and education budget. You have demonstrated your support for crucial programs that promote STEAM education for our Nation's students. Like our organizations, you recognize these are vital investments in our future, and we thank you in advance for taking action accordingly.

Our organizations stand ready to be of service to your work. We are always happy to provide examples of the ways that museums are contributing to their communities and helping to advance local, regional, and national priorities. With our networks of hundreds of community-based institutions, these examples can be in or near each Congressional district.

Founded in 1973, the Association of Science and Technology Centers (ASTC) is a network of nearly 700 science and technology centers and museums, and allied organizations, engaging more than 110 million people annually across North America and in almost 50 countries. With its members and partners, ASTC works towards a vision of increased understanding of and engagement with science and technology among all people. www.astc.org.

The American Alliance of Museums (AAM) has been bringing museums together since 1906, helping to develop standards and best practices, gathering and sharing knowledge, and providing advocacy on issues of concern to the entire museum community. Representing more than 35,000 individual museum professionals and volunteers, institutions, and corporate partners serving the museum field, the Alliance stands for the broad scope of the museum community. www.aam-us.org.

The Association of Children's Museums (ACM) champions children's museums worldwide. With more than 460 members in 50 States and 19 countries, ACM leverages the collective knowledge of children's museums through convening, sharing, and dissemination. www.childrensmuseums.org.

The Association of Science Museum Directors (ASMD) is a non-profit, professional association of natural history and other science museum directors. Our community of museum leaders gathers to share experiences and discuss issues related to the advancement of our respective organizations to benefit society and the planet. www.asmd-us.org.

[This statement was submitted by Christofer Nelson, President and CEO Association of Science and Technology Centers; Laura Lott, President and CEO, American Alliance of Museums; Arthur G. Affleck, III, Executive Director, Association of Children's Museums; and Bonnie Styles, Executive Director, Association of Science Museum Directors]

PREPARED STATEMENT OF BOARD MEMBER OF YOUTH ADVOCATE PROGRAMS, INC.

Chairman Cartwright, Ranking Member Aderholt, and members of the subcommittee, my name is Judge Thomas Foster, and I am a retired Kansas District judge, a current member of the National Council of Juvenile and Family Court Judges, and a board member of Youth Advocates Program. I am pleased to submit testimony on behalf of a coalition of organizations, co-led by the Youth First Initiative and Columbia Justice Lab's Youth Corrections Leaders for Justice. These organizations work to assist States in building on the past two decades of successful youth justice system accountability, reform, and improvement through expanding access to more effective and cost-efficient community-based alternatives for youth. Federal investments play a key role in juvenile justice efforts to protect youth, pre-

vent delinquency, and promote safe communities. To accomplish these goals, we seek \$100 million for a new initiative in the Department of Justice's (DOJ) Office of Juvenile Justice and Delinquency Prevention (OJJDP) that would support grants to States to implement a robust planning process to (1) close failed and ineffective youth prisons, (2) expand access to more effective and cost-efficient community-based alternatives, and (3) address economic concerns, such as the re-employment of facility workers and the economic impact of facility closures on communities. I want to thank the subcommittee for its past funding of Federal juvenile justice programs and urge it to support this new initiative at OJJDP to support States in moving from costly and ineffective incarceration to more effective community-based alternatives that produce dramatically better outcomes for youth, their families, and communities.

For more than four decades, YAP has supported youth and families involved in the youth justice and child welfare systems as well as adults in the criminal legal system. YAP has provided individuals and their communities with proven, effective, and economical community-based alternatives to institutional placement. YAP promotes expanding access to these resources for families and communities as an effective way to improve youth and family outcomes and community safety. YAP now serves youth and families in Kansas and 32 other States and Washington DC.

In 2014, the Kansas legislature funded a bipartisan comprehensive review of the Kansas juvenile justice system. I was honored to have been appointed by our Supreme Court Chief Justice to serve on this committee. The committee collected information and invited national experts to present data and information related to juvenile justice and best practices. Dr. Edward Mulvey, University of Pittsburgh, and Dr. Mark Lipsey, Vanderbilt University, travelled to Kansas to meet with us and make presentations which are available for review at the KDOC website.¹

As a result of this process many modifications were implemented. The most significant modification was the limitation on the use of juvenile prison and elimination of the group home system in Kansas. The Committee was convinced that these out of home placements just did not work as Kansas was spending over \$45,000 per year per child on an ineffective placement. The committee came to the conclusion that the out of home placement system could not be improved or salvaged and that it would be better to close them down and redirect the money to community-based programs that have been shown to work, such as intensive mentoring, family therapy, mental health services, parenting education, and substance use treatment. While Kansas closed its facilities, we still needed to identify and redirect funding to more effective community-based programs. YAP was one of the first programs brought to Kansas to address the need for community-based and in home services. Federal resources are needed now to galvanize and support Kansas' statewide effort to plan and implement its juvenile justice system transformation that will result in a better outcome for young people, increased system accountability, and safer communities.

Research shows that community-based alternatives perform far better than the youth prison model; racial and ethnic disparities and abuse of children, including at facilities nationwide, continue to plague the youth carceral system; and youth prisons are extremely expensive. Given these limitations, experts and youth justice leaders—including youth correctional administrators, judges, prosecutors, and youth advocates—recommend the closure of failed youth prisons in favor of more effective community-based alternatives. However, there are many youth prisons still operating and taking up significant and precious state resources that could be used to expand access to more effective alternatives.

There are a range of proven and effective alternatives to youth incarceration to support. Community mentoring programs that link young people to trusted adults show strong results. In Harrisburg, Pennsylvania, Youth Advocates Program found that 97% of program participants were not convicted or adjudicated of a new offense while in the program, 85% were living safely in the community at discharge, and 76% were regularly attending school, had graduated, or attained their GED at discharge. The NYC Mayor's Office and Urban Institute found that Credible Messengers' mentoring programs for youth on probation significantly reduced recidivism for young adults on probation by 69% after 12 months. At the 24-month mark, it was still 57% lower. These results show that evidence-based alternatives delivered in the community significantly reduce recidivism. YAP just completed a 2-year project in 15 jurisdictions across the Nation where it invested private foundation funds in the local juvenile justice systems to support expanded access to effective alternatives to youth incarceration. 80% of the highest risk youth served were diverted from youth prisons, and at the end of the project jurisdictions decided to sus-

¹ <https://www.doc.ks.gov/juvenile-services/Workgroup/Presentations/Lipsey>.

tain these programs with their own funds because they found the alternatives to incarceration to be more effective.

Incarceration contributes to racial disparities and poor long-term outcomes for youth. Racial inequities in incarceration are pervasive—Black youth are 5 times more likely and Latinx youth 3 times more likely than their white peers to be incarcerated for similar offenses. Excluding Indian Country, American Indians make up 3% of girls and 1.5% of boys in juvenile facilities but less than 1% of youth nationally. Long term outcomes for incarcerated youth include lower educational attainment and employment; high rates of homelessness; behavioral and emotional problems; poor physical health; and problems in forming stable family relationships. Physical and sexual assault and extended solitary confinement also are common. Incarceration also increases recidivism by disconnecting youth from their families, religious and spiritual connections, schools, and other pro-social experiences. As a result, incarcerated youth are more likely to have entered adult prison by age 25.

Closing youth prisons both saves money and increases public safety. The cost of youth incarceration is astronomically high, especially considering these poor outcomes. According to one recent study, the average cost of the most expensive confinement option for a young person in 48 States was \$588 per day, or \$214,620 per year—almost 15 times more than the U.S. spends per pupil for 1 year of K–12 public education. A Washington State Study showed that youth detention produced fewer benefits in reduced crime and other outcomes than many less costly programs. Spending \$1 for diversion and mentoring programs resulted in \$3.36 in benefits of reduced crime, while multisystemic therapy, a more service intensive alternative, produced \$13.36 in benefits.

Such community-based alternatives, including mentoring programs, evidence-based therapies, and small, rehabilitative and home-like facilities for the very few young people who commit serious crimes cost much less than prison and are safer for youth and staff. New York City's investment in small, homelike facilities resulted in a 53% drop in youth arrests and a 68% reduction in youth placement. Texas decreased youth incarceration by 38% and further decreased youth arrests by 49%. After California's closure of youth prisons in 2016, youth arrests for violent crimes in the state fell to less than half what they were in 1990. These States have demonstrated that closing failed youth prisons and diverting kids to community-based alternatives both save money and increase public safety.

Americans nationwide support Federal funding to incentivize States to close failed youth prisons to capture resources to reinvest in more effective and cost-efficient community-based alternatives. In a 2021 Youth First Initiative poll, 78 percent of adults endorsed the proposal to provide Federal funds to support State planning and consultation with stakeholders to close youth prisons and invest savings to expand access to community-based alternatives and provide workforce development services to workers from closed facilities. Additionally, residents polled in Pennsylvania and Virginia showed that 81 percent of Pennsylvanians and 85 percent of Virginians support a youth justice system that focuses on prevention and rehabilitation. In both States, more than 80 percent of respondents support providing financial incentives for States to invest in alternatives to youth incarceration.

At a time when our Nation is debating how to reduce the negative impacts of the justice system while increasing public safety, I urge you to fully fund in FY23 the new \$100 million initiative at OJJDP because it would accomplish the key goals of improving outcomes, addressing racial disparities, reducing long-term costs, and ensuring public safety.

Thank you so much for your time and consideration of these important issues. Please do not hesitate to contact me at thomas.foster27@gmail.com or Jenny Collier at jcollier@colliercollective.org if you have any questions or need additional information.

PREPARED STATEMENT OF COLUMBIA RIVER INTER-TRIBAL FISH COMMISSION

The Columbia River Inter-Tribal Fish Commission (CRITFC) is pleased to share our views on the Department of Commerce's FY 2023 budget and has identified the following funding needs:

1. \$70.5 million for Salmon Management Activities of which:
 - \$26.5 million supports Mitchell Act Programs to implement reforms called for in the "Conservation of Columbia Basin Fish" and the Federal Columbia River Power System (FCRPS) Biological Opinion, of which \$6.7 million (or 25 percent of the enacted amount) is directed to the Tribes to enhance natural stock recovery programs.

- \$43.5 million for the Pacific Salmon Treaty, of which \$43.5 million is annual operations for the implementation of the 2019–2028 Agreement.
- 2. \$100 million for the Pacific Coastal Salmon Recovery Fund to support on-the-ground salmon restoration activities.
- 3. \$4 million for Columbia River Pinniped Management to support implementation of the MMPA Section 120(f) permit issued by NOAA–F in 2019.
- 4. \$80.8 million for the Integrated Ocean Observing Systems (IOOS) program to continue the study of estuary and near-shore environment for multiple purposes including the restoration of treaty trust aquatic resources.

BACKGROUND

The Columbia River Inter-Tribal Fish Commission (CRITFC) was founded in 1977 by the four Columbia River treaty Tribes: Confederated Tribes of the Umatilla Indian Reservation, Confederated Tribes of the Warm Springs Reservation of Oregon, Confederated Tribes and Bands of the Yakama Nation, and the Nez Perce Tribe. CRITFC provides coordination and technical assistance to the Tribes in regional, national, and international efforts to protect and restore the fisheries and fish habitat.

In 1855, the United States entered treaties with the four Tribes¹. The Tribes' ceded millions of acres of our homelands to the U.S. and the U.S. pledged to honor our ancestral rights, including the right to fish at all usual and accustomed places. Unfortunately, a long history of hydroelectric development, habitat destruction, and over-fishing by non-Indians brought the salmon resource to the edge of extinction with many stocks extirpated and 12 salmon and steelhead trout populations in the Columbia River basin listed under the Endangered Species Act (ESA).

Today, the treaties form the bedrock of the region's fisheries management. The CRITFC Tribes are among the most successful fishery managers in the country leading restoration efforts and working with State, Federal, and private entities. CRITFC's comprehensive plan, *Wy-Kan-Ush-Mi Wa-Kish-Wit*, outlines principles and objectives designed to halt the decline of salmon, lamprey, and sturgeon populations and rebuild the fisheries to levels that support Tribal ceremonial, subsistence, and economic purposes. To achieve these objectives, the plan emphasizes strategies that rely on natural production, healthy rivers, and collaborative efforts.

Several key regional agreements were completed in 2008. The Columbia Basin Fish Accords set out parameters for management of the Federal Columbia River Power System (FCRPS) for fish passage. New agreements in *U.S. v. Oregon* and the Pacific Salmon Commission established fishery management criteria for fisheries ranging from the Columbia River to Southeast Alaska. The *U.S. v. Oregon* agreement also contains provisions for hatchery management in the Columbia River Basin. We have successfully secured other funds to support our efforts to implement these agreements, including funds from the Bonneville Power Administration (BPA), the Department of Interior, and the Southern Fund of the Pacific Salmon Treaty. Continued Federal support is needed to accomplish the management objectives embodied in the agreements.

1. SALMON MANAGEMENT ACTIVITIES: \$70.5 MILLION

Columbia River (Mitchell Act) Hatchery Program.—The Mitchell Act program was created in 1938 to mitigate for the impacts caused by the construction and operation of the Bonneville Dam. These production fish fuel West Coast salmon fisheries from the Oregon to Southeast Alaska, and to the interior Columbia River basin worth millions of dollars.

Mitchell Act facilities operation and maintenance (O&M) funding has been static for years and eroded buying power of this account results in reduced numbers of fish produced and reduced fish health which results in fewer fish for harvest. A modest increase of O&M budgets to \$26.7 million would help these facilities produce targeted numbers of fish to benefit Columbia River and West Coast fisheries and assist these Mitchell Act programs to begin integrating modern fisheries management and incorporate the dual needs of fish production and ESA salmon recovery opportunities.

Pacific Salmon Treaty Program.—CRITFC supports the U.S. Section recommendation of \$43.5 million for implementation of the revised Pacific Salmon Treaty (Treaty). The Department of Commerce principally funds programs conducted by the States of Washington, Oregon, Idaho and Alaska and the National Marine Fisheries Service (NMFS.) Unfortunately, the cost of programs conducted by the States to ful-

¹Treaty with the Yakama Tribe, June 6, 1855, 12 Stat. 951; Treaty with the Tribes of Middle Oregon, June 25, 1855, 12 Stat. 963; Treaty with the Umatilla Tribe, June 9, 1855, 12 Stat. 945; Treaty with the Nez Perce Tribe, June 11, 1855, 12 Stat. 9.

fill national commitments created by the Treaty continue to be substantially greater than the funding provided in the NMFS budget. Consequently, the States have supplemented the Federal Treaty appropriations from other sources, including State general funds. Many of those funding sources are limited or no longer available and this has been exacerbated by the ongoing global pandemic.

2. PACIFIC COASTAL SALMON RECOVERY FUND: \$100 MILLION

The Pacific Coastal Salmon Recovery Fund (PCSRF) was developed in 2000 by Washington, Oregon, Idaho, Alaska, and the treaty Tribes to fulfill the unmet needs for the conservation and restoration of salmon stocks shared in the Tribal, State, and international fisheries. Since that time, the number of entities eligible for receiving funding has grown.

PCSRF has funded 417 Yakama, Umatilla, Warm Springs, Nez Perce, and CRITFC Tribal salmon recovery projects. These projects have contributed greatly to the Pacific Northwest effort to avoid extinction of Columbia Basin salmon species and their habitat. Accomplishments from CRITFC and our member Tribes include 4,838 stream miles monitored; 417 miles of stream made accessible to salmon; 5,060 acres of riparian area treated; 11,341 acres conserved by acquisition or lease; and 2 million salmon fry/smolt released annually. PCSRF is vital to fulfill the region's goal of full salmon recovery, to provide sustainability of the fishery, and meaningful exercise of the treaty-reserved rights by the Columbia River treaty Tribes.

The co-managers have developed an extensive matrix of performance standards to address accountability and performance standards, which includes the use of monitoring protocols to systematically track current and future projects basin-wide. The PCSRF projects are based on the best science, provide adequate monitoring, and address limiting factors affecting salmon restoration. Projects undertaken by the Tribes are consistent with CRITFC's salmon restoration plan and the programmatic areas identified by Congress.

We recommend a funding level of \$100 million for the PCSRF FY 2023 allocation. Long-term economic benefits can be achieved by making PCSRF investments on-the-ground to rebuild sustainable, harvestable salmon populations into the future.

3. COLUMBIA RIVER PINNIPED MANAGEMENT: \$4 MILLION

Columbia River Section 120 Pinniped Removal Program.—Since 2002, sea lions in the Columbia River have significantly impacted endangered and threatened stocks of salmon and steelhead. Sea lions also prey on Pacific lamprey and mature sturgeon below Bonneville Dam, and on listed salmon and steelhead runs in the Willamette River and other tributaries to the Columbia River. Thirty-two wild salmon populations bound for the upper Columbia and Snake rivers are vulnerable to predation by sea lions immediately below Bonneville Dam. Other impacted ESA-listed salmon and steelhead populations include lower Columbia River chinook, lower Columbia River steelhead, middle Columbia River steelhead, Snake River Basin steelhead, upper Willamette River chinook, and Upper Willamette River steelhead. All six of these are listed as “threatened” under the ESA.

Despite non-lethal and limited lethal-take measures, the number of salmon and steelhead consumed by sea lions below Bonneville Dam more than doubled between 2006 and 2015, as larger Steller sea lions increased in numbers and began to take a higher toll; management and Federal authorization was initially focused exclusively on California sea lions. To respond to this change, Congress amended the Marine Mammal Protection Act (MMPA) in December 2018 to provide State and Tribal resource managers greater flexibility to manage sea lions. In August 2020, the CRITFC member Tribes, along with Oregon, Idaho, and Washington received a MMPA Section 120(f) permit from the National Marine Fisheries Service to actively manage pinniped populations on the lower Columbia River and its tributaries. The authority under this permit increases the scope and scale of current management and expands lethal removal to include Steller sea lions. It also expands the area of potential removals and it will increase removal activity to 10 per year. Previously, removing sea lions required a multistep process, including branding animals and identifying repeat offenders. This new authority has streamlined this process and, as a result, will increase the number of trappings and lethal removals in the future. To fully implement the program under the new permit, the States and Tribes are requesting \$4 million in Federal funds. This will supplement funds that the States and Tribes are currently contributing.

4. INTEGRATED OCEAN OBSERVING SYSTEMS (IOOS) PROGRAM: \$80.8 MILLION

Increase IOOS Funding Levels.—Study of the estuary and near-shore environment is critical to understanding not only the impacts to treaty trust resources, but also

actions needed to restore these resources. CRITFC has expanded its work to include the Coastal Margin Observation and Prediction Program (CMOP) whose main funding is through the NOAA-administered Integrated Ocean Observing System (IOOS) Program. Since 2020, we have partnered with the Northwest Association of Networked Ocean Observing Systems (NANOOS) through our acquisition of the CMOP program which has been a NANOOS-supported effort since 2004. The CMOP infrastructure, now operated by CRITFC, has been integral to NANOOS for decades and will remain so. The multi-institutional collaborative structure of the IOOS regional associations ensures that the Tribes are integrated into the governance and decision-making processes.

We strongly encourage a funding level of \$69.5 million be invested in the regional IOOS network and its partners using the funding for Coastal, Ocean, and Great Lakes Observing Systems to refurbish aging infrastructure, modernize equipment, and address critical issues facing our collective communities. Expansion of IOOS capabilities in biological monitoring is important to CRITFC's interest in improving ocean conditions for salmon and allow regional partnerships to continue to address Biden Administration priorities for climate change, racial equity, and the economy.

Improve Collaboration between NOAA Programs.—OAA should aim to create a comprehensive understanding of the Columbia River estuary and the near shore environment and work to improve the collaboration between these programs. CRITFC has collaborated with NOAA's Office of Coast Survey (OSC) in numeric and hydrodynamic modelling and plan to expand this effort to include hydrographic surveys in the confluence areas of Zone 6 of the Columbia River mainstem, where our Tribes primarily exercise their treaty-reserved fishing rights. This collaboration should be expanded with funding at \$11.3 million in the Navigation, Observations and Positioning line to address issues of floodplain restoration and flooding to improve salmon survival.

In summary, CRITFC and our four member Tribes have developed the capacity and infrastructure to become the regional leaders in restoring and rebuilding Columbia Basin salmon populations. Our collective efforts protect our treaty-reserved fishing rights and provides healthy, harvestable salmon populations for all citizens to enjoy. We will be pleased to provide any additional information that this subcommittee may require.

[This statement was submitted by Casey Mitchell, Chair]

PREPARED STATEMENT OF CONSORTIUM OF SOCIAL SCIENCE ASSOCIATIONS

On behalf of the Consortium of Social Science Associations (COSSA), I offer this written testimony for inclusion in the official committee record. For fiscal year (FY) 2023, COSSA urges the Committee to appropriate:

- \$11 billion for the National Science Foundation
- \$2 billion for the Census Bureau
- \$50 million for the National Institute of Justice
- \$60 million for the Bureau of Justice Statistics

First, allow me to thank the Committee for its long-standing, bipartisan support for scientific research. Strong, sustained funding for all U.S. science agencies is essential if we are to make progress toward improving the health and economic competitiveness of the Nation. The need for increased investment in science has become even more pronounced in light of the disruptions caused over the past 2 years by the COVID-19 pandemic.

COSSA serves as a united voice for a broad, diverse network of organizations, institutions, communities, and stakeholders who care about a successful and vibrant social and behavioral science research enterprise. We represent the collective interests of all STEM disciplines engaged in the rigorous study of why and how humans behave as they do as individuals, groups and within institutions, organizations, and society.

Social and behavioral science research is supported across the Federal Government, including at the National Science Foundation and the Department of Justice. Further, Federal statistics produced by the Census Bureau and other Federal statistical agencies provide data needed to conduct social science research to inform policy decisions. Taken together, Federal social and behavioral science and statistical data help provide answers to complex, human-centered questions.

In short, knowledge derived from social and behavioral science research has made our population healthier, our democracy fairer, our Nation safer, and our economy stronger, and not just in times of crisis. Without these sciences, policymaking on

major national and global issues would not be based on evidence, and billions of dollars would be wasted.

NATIONAL SCIENCE FOUNDATION

COSSA joins the broader scientific community in support of \$11 billion for the National Science Foundation (NSF) in FY 2023. The U.S. scientific enterprise, including NSF, requires stability, predictability, and sustainable funding growth, as well as Federal policies that are patient and can tolerate a reasonable amount of risk in order to achieve the greatest payoff.

Supporting All of STEM

NSF is the only U.S. Federal agency tasked with supporting basic research across all fields of science. NSF supports about a quarter of all federally funded basic scientific research conducted at colleges and universities nationwide and serves as the largest single funder of university-based basic social and behavioral science research. Though NSF's Social, Behavioral, and Economic Sciences Directorate (SBE)—one of eight research directorates at NSF—represents less than five percent of the entire NSF research budget, it supports around two-thirds of total Federal funding for academic basic research in the social and behavioral sciences (excluding psychology). As the primary funding source for the majority of our disciplines, stagnant or reduced funding for SBE has an outsized impact on the social and behavioral science community. As increased investment is made in NSF, we are hopeful the social, behavioral and economic sciences will see commensurate investments.

Further, while by far the smallest of the research directorates, SBE's impact is huge. The National Academies of Sciences, Engineering and Medicine stated in its 2017 consensus report, *The Value of Social, Behavioral, and Economic Sciences to National Priorities*¹, that “nearly every major challenge the United States faces—from alleviating unemployment to protecting itself from terrorism—requires understanding the causes and consequences of people's behavior. Even societal challenges that at first glance appear to be issues only of medicine or engineering or computer science have social and behavioral components.” We all observed first-hand the importance of understanding behavioral and social systems over the last 2 years as the world collectively worked to gain control of the COVID-19 pandemic. From mask mandates to vaccine hesitancy, the social and behavioral sciences have been shining light on this uniquely human challenge and informing policy solutions at all levels.

Keeping NSF Competitive

As we speak, a conference committee is considering sweeping innovation legislation (the America COMPETES Act) that contains reauthorization provisions for NSF and seeks to push the agency into new frontiers in technology transfer and convergence research. As the committee knows, NSF has already started moving in this direction with the establishment of the Technology, Innovation and Partnerships Directorate (TIP) in FY 2022. COSSA hopes that future support for and investment in TIP and related activities is also met with a commitment to maintaining the NSF's defining characteristic, which is to be the incubator for basic scientific discovery across all areas of science. NSF's investigator-initiated, discovery-driven identity is what makes it special and has kept the American science enterprise at the leading edge of innovation. We look forward to seeing how social and behavioral science will be incorporated into the work of the new TIP directorate in addition to ongoing support for social science across the foundation.

CENSUS BUREAU, U.S. DEPARTMENT OF COMMERCE

COSSA requests that the Committee appropriate \$2 billion for the Census Bureau in FY 2023. Social scientists across the country rely on the Census Bureau for accurate, timely, objective, and relevant data to better understand the U.S. population and to produce findings that help us shape policies that better serve the American people.

After a decade in which the Census Bureau received inconsistent and delayed funding, had to curtail essential research and testing of operations, and experienced significant pandemic-related disruptions, investments are needed to not only help the agency recover, but to also help it improve the collection and delivery of official statistics for the Nation. A modest increase in funding in FY 2023 could help the

¹ <https://www.nap.edu/catalog/24790/the-value-of-social-behavioral-and-economic-sciences-to-national-priorities>.

Census Bureau recover from years of postponed enhancements, sustain and strengthen its mission, and pursue numerous necessary operational innovations.

In addition, COSSA calls on Congress to fully fund the American Community Survey (ACS) and maintain its status as a mandatory Federal survey. The ACS is the only source of comparable, consistent, timely, and high-quality demographic and socio-economic data for all communities in the U.S. As a component of the Decennial Census, the ACS is a “mandatory” national survey. The Census Bureau needs additional funds to expand the ACS sample size (which has not been expanded since 2011) to produce more timely, granular data for a significant number of geographies and sub-populations than currently achievable. This would provide communities more timely data to fill in any gaps in the 2020 Decennial Census results caused by the pandemic.

NATIONAL INSTITUTE OF JUSTICE, U.S. DEPARTMENT OF JUSTICE

COSSA requests that the Committee appropriate at least \$50 million for the National Institute of Justice (NIJ) within the U.S. Department of Justice’s (DOJ) Office of Justice Programs (OJP). NIJ provides funding for research, development, and evaluation projects at institutions across the country to shed light on the most pressing issues facing our Nation’s criminal justice system today, including the drivers of domestic radicalization, responses to the opioid epidemic, improving school safety, advancing forensic science, and fostering positive relationships between law enforcement and the communities they serve—not to mention our urgent need to better understand and respond to the impacts of the COVID–19 pandemic on the incarcerated population and on our court systems.

We recognize that tough funding tradeoffs must be made each year; however, we were disappointed to see the 19 percent cut to NIJ in the final FY 2022 appropriations bill. Despite our growing need for objective, science-backed solutions, over the past decade, NIJ’s purchasing power has dropped by 40 percent due to the combined effect of declining appropriations and inflation. Compounding this pressure are Congressionally mandated directives for specific activities, nearly always without the inclusion of additional funding to the agency’s bottom line. As a result, 60 percent of NIJ’s FY 2022 appropriation will be directed to Congressionally requested research, not including a number of additional projects requested without a specifically allocated funding level. An increase to the NIJ base budget would give the agency the flexibility to direct funding to the most pressing and promising areas of science across all domains of justice research, while still being responsive to topics of Congressional concern.

BUREAU OF JUSTICE STATISTICS, U.S. DEPARTMENT OF JUSTICE

Similarly, we were disappointed by the 11 percent cut to the Bureau of Justice Statistics in the FY 2022 appropriations bill. As the Department’s principal statistical agency, the Bureau of Justice Statistics produces high-quality data on all aspects of the United States criminal justice system, including corrections, courts, crime type, law enforcement personnel and expenditures, Federal processing of criminal cases, Indian country justice statistics, and victims of crime. COSSA urges the Committee to appropriate at least \$60 million for the Bureau of Justice Statistics (BJS).

Steady declines in funding have resulted in antiquated systems and, especially, staffing shortfalls, which can only be resolved by sustained investment. Despite a growing demand from policymakers, researchers, and other stakeholders for high-quality criminal justice data across an expanding array of variables, BJS’ purchasing power has dropped by nearly one-third (32.7 percent) since FY 2012 due to the combined effect of declining appropriations and inflation. Additional funding would allow the agency to modernize its data collection and dissemination systems, hire the necessary experts, and to begin to develop the next generation of statistical products to keep pace with the ever-changing criminal justice environment.

Thank you for the opportunity to offer this statement. Please do not hesitate to contact me should you require additional information.

[This statement was submitted by Wendy A. Naus, Executive Director]

PREPARED STATEMENT OF DAUGHTERS OF PENELOPE

Chair Jeanne Shaheen, Ranking Member Jerry Moran, and distinguished members of the Commerce, Justice, and Science Appropriations subcommittee, the Daughters of Penelope (DOP), an international service organization for women of Greek heritage and Philhellenes, which is dedicated, in part, to supporting victims of domestic violence, is requesting meaningful support for Victims of Crime Act

(VOCA) (Office of Justice Programs—OVC) and Violence Against Women Act (VAWA) (Office of Violence Against Women—OVW) programs at the Department of Justice.

We thank Congress for passing the VOCA Fix to Sustain the Crime Victims Fund Act of 2021, which will stabilize the Crime Victims Fund. To continue funding the essential and lifesaving services to crime victims, Congress must provide a Crime Victims Fund cap for FY2023 that is set at \$2.65 billion; and as the President's FY2023 budget rightfully proposes, without any transfers to programs not authorized under the VOCA statute. Moreover, we also are grateful to Congress for passing a strong bipartisan-backed reauthorization of VAWA through 2027. Now, it must be properly funded. Therefore, we support-at a minimum-the President's strong proposed investment FY23 request of \$1 billion for VAWA programs.

VOCA PROGRAMS & CRIME VICTIMS FUND

The Victims of Crime Act (VOCA) created the Crime Victims Fund (CVF), which serves as a mechanism to fund compensation and services for the Nation's victims of Federal crime. The Fund is comprised of money from criminals, and by law, the Fund is dedicated solely to victim services. For example, the Fund is used to help pay for state victim compensation and assistance programs and grants to victim service providers. A considerable amount supports victims' out-of-pocket expenses such as medical and counseling fees, lost wages, and funeral and burial costs. In FY2019, 6.5 million victims of violent crime, including domestic violence, received services through Victim Assistance programs, according to the Department of Justice.¹ The Fund provides formula grants to over 11,000 local victim assistance programs.² These agencies provided services to nearly millions of victims of crime, including victims of murder, assault and sexual assault, domestic violence, child abuse, stalking and elder abuse, and others.

The Crime Victims Fund is financed by fines, forfeitures, or other penalties paid by Federal crime offenders. Therefore, the Crime Victims Fund is not funded by taxpayer dollars. However, it is unfortunate Congress often carves out funds from the CVF to use as offsets for other government programs. Because CVF is comprised of non-taxpayer dollars, it should not be considered available for use for non-VOCA programs in the Federal budget. Moreover, as the former Congressional Victims' Rights Caucus would advocate, "not only does raiding the Crime Victims Fund violate the intent of the law, but it violates the [VOCA] statute itself" Therefore, we recommend to the subcommittee that the Fund be used only for programs authorized under the VOCA statute. However, recent appropriations bills passed by Congress, and previous administrations' budget requests, have carved out funds from the Crime Victims Fund for non-VOCA authorized programs. As example, in FY2022, Congress transferred \$575 million from the CVF to VAWA programs, the highest level. We applaud the President's budget for rightfully eliminating transfer, and we request the elimination of transfers that harm the Fund's long-term viability and ability to commit fully to crime victims.

Finally, we recommend setting the Crime Victims' Fund cap to at least \$2.65 billion. Congress established an appropriation cap on funds available for distribution intended to maintain the CVF as a stable source of support for future victim services. At the cap level, Congress will not only ensure the continuation of enhanced services to victims to meet their needs, but it also does not contribute or add to the National debt or deficit because these are non-taxpayer funds.

VAWA PROGRAMS

Domestic violence is a pervasive, life-threatening crime affecting millions of individuals across our Nation regardless of age, gender, socio-economic status, race or religion. The statistics are alarming. According to the National Network to End Domestic Violence (NNEDV)³:

- More than 1 in 3 women have experienced rape, physical violence, and/or stalking by an intimate partner in their lifetime.
- Approximately 8 million women are raped, physically assaulted, and/or stalked by a current or former intimate partner each year.
- 1 in 5 women and 1 in 71 men have experienced rape in her or his lifetime.
- Nationwide, an average of 3 women are killed by a current or former intimate partner every day.

¹ <https://www.justice.gov/doj/page/file/1249306/download>, Page 17.

² <https://www.justice.gov/jmd/page/file/1489521/download>, Page 144.

³ NNEDV Domestic Violence Fact Sheet, accessed https://nnedv.org/wp-content/uploads/2019/07/Library_General_DV_SA_Factsheet.pdf.

According to the Centers for Disease Control and Prevention (CDC) and The National Intimate Partner and Sexual Violence Survey (NISVS) 2015 Data Brief:

- In the United States, intimate partner contact sexual violence, physical violence, and/or stalking was experienced by 36.4% (or 43.6 million) of U.S. women during their lifetime.⁴
- One in 4 women and 1 in 7 men have experienced physical violence by an intimate partner during their lifetime.⁵

Also, of concern, are the following stats:

- On average, nearly 20 people per minute are physically abused by an intimate partner in the United States. During 1 year, this equates to more than 10 million women and men.⁶
- Nationwide, an average of 3 women are killed by a current or former intimate partner every day.⁷
- Approximately 15.5 million children are exposed to domestic violence annually.⁸

Our nation's response to intimate partner and domestic violence is driven by VAWA programs. Each of these programs is critical to ensuring that victims are safe, that offenders are held accountable, and that our communities are more secure. Thanks to VAWA, steady progress has been made there are many victims who still suffer in silence. A 2021 24-hour survey of domestic violence programs across the U.S. found that although 20,701 Hotline calls were received (averaging more than 14 calls every minute). However, 9,444 requests for services (such as emergency shelter, transportation, or legal representation) went unmet because programs lacked the resources to provide them.⁹ Sixty-four percent of the unmet services were for Housing and Emergency Shelter. In total, 70,032 victims were served in one day. The unconscionable gap between need and resources only widens.

DAUGHTERS OF PENELOPE'S WORK TO SUPPORT DOMESTIC VIOLENCE SHELTERS

Why are VAWA and VOCA programs important to the Daughters of Penelope? In addition to our chapters supporting domestic violence shelters in their respective local communities, the Daughters of Penelope is a national sponsor and stakeholder of two domestic violence shelters—Penelope House in Mobile, Alabama, and Penelope's Place in Brockton, Massachusetts. In the past, the Daughters of Penelope has supported WIN Hellas, which is an NGO based in Athens, Greece, that is active in the prevention of violence against women.

Penelope House was the first shelter established in Alabama when it opened its doors in 1979. Since then, Penelope House is recognized as a model shelter for others to emulate. VAWA and VOCA grant funding has been critical in helping Penelope House to meet its mission of providing safety, protection, and support to victims of domestic violence and their children through shelter, advocacy, and individual and community education. Penelope House has been awarded VAWA and VOCA grants from the following programs: Shelter Services, Court Advocate Program, and Transitional Living Program. Portions of these grants help to fund the case managers, case and court advocates, and children's counselors and program coordinators, among other employees who help to provide the life-saving support to domestic violence victims and their children.

STATISTICS—EFFECTIVENESS AND IMPORTANCE OF VAWA & VOCA GRANT FUNDING

- Historically, VOCA/VAWA grant funding more than 25% of Penelope House's budget.

Penelope House's Court Advocacy Program is funded by VOCA & VAWA. Its 2021 stats, which were all increases, yet still impacted by the coronavirus pandemic, for clients served were:

- Adult Clients: 8,251
- Children: 7,080
- Court Appointments with Clients: 6,761
- Clients Assisted to obtain protection from abuse or no contact orders: 1,358

⁴ <https://www.cdc.gov/violenceprevention/pdf/2015data-brief508.pdf>.

⁵ <https://www.cdc.gov/violenceprevention/intimatepartnerviolence/fastfact.html> f.

⁶ https://www.cdc.gov/violenceprevention/pdf/nisvs_report2010-a.pdf.

⁷ NNEDV Domestic Violence Fact Sheet, <https://nnedv.org/wp-content/uploads/2020/07/DVSA-Fact-Sheet-July-2020.pdf>.

⁸ Ibid.

⁹ 16th Annual Domestic Violence Counts Report, accessed <https://nnedv.org/wp-content/uploads/2022/03/16th-Annual-Domestic-Violence-Counts-National-Summary-FINAL.pdf>.

VOCA supports the salaries and benefits for seven Court/Victim Advocates who provide services to victims of domestic violence throughout Mobile, Washington, Clarke, and Choctaw Counties of Alabama as they navigate within the court system. (VOCA grant funding has become increasingly important to Penelope House because its services were expanded to include more counties in Alabama.)

VAWA supports a full-time Court Advocate Administrative Assistant and a portion of the salary for a Court/Victim Advocate for the Court Advocacy Program. The Court Advocate Administrative Assistant provides administrative support to Court/Victim Advocates and assistance to the Court Advocacy Supervisor. The assistant also collects and compiles program data needed for the evaluation of the Court Advocacy Program. The Court Advocate Administrative Assistant is dually trained to serve as a Court/Victim Advocate when necessary, in case of illness or any other absence of court advocates. Thus, a victim will not have to be alone as he/she attempts to navigate within the court system.

Penelope House's Emergency Shelter Program is funded by VOCA. It's 2021 service stats-again impacted due to the pandemic-were:

- Adults sheltered: 233
- Children sheltered: 252
- Total Client Service Hours: 4,226.24
- Total Nights of shelter provided: 5,989
- Crisis calls: 1,573
- Meals Served: 15,824

RECOMMENDATION

The Daughters of Penelope (DOP) is requesting support for Victims of Crime Act (VOCA) and Violence Against Women Act (VAWA) programs, which are vital to DOP programs that serve its mission. Specifically, we request a Crime Victims Fund cap for fiscal year 2023 to be set at least at \$2.65 billion and without any transfers to programs not authorized under the VOCA statute, as rightfully proposed by the President's FY23 budget. The Fund is not funded by taxpayer dollars. Therefore, the cap can be sustained or raised without adding to the National debt or deficit. We also support the Biden administration's strong investment request of \$1 billion for VAWA programs, at a minimum.

Clearly, as the missions of domestic violence centers across the country, such as Penelope House, have expanded into jurisdictions due to the unfortunate increased need to provide victims' services, the viability of VOCA and VAWA grants have become increasingly important to meet the victims' needs.

Thank you for the opportunity to present and submit our written testimony before the subcommittee.

[This statement was submitted by Kathy Bizoukas, National President]

PREPARED STATEMENT OF DEMAND PROGRESS

Dear Chair Shaheen, Ranking Member Moran, and members of the committee:

Thank you for the opportunity to submit testimony on improving transparency and accountability at the Department of Justice (DOJ). My name is Daniel Schuman and I serve as Policy Director at Demand Progress. We urge you to ensure congressional and public access to legal opinions rendered by the Office of Legal Counsel (OLC) at the Justice Department that are afforded the force of law.

Before I begin, please allow me to thank you for including language in the FY 2022 and FY 2021 Commerce, Justice, Science Appropriations Committee Joint Explanatory Statement concerning OLC opinions. We urge you to further strengthen that language.

BACKGROUND

OLC's core function, according to an OLC memoranda, is to provide "controlling advice to Executive Branch officials on questions of law that are centrally important to the functioning of the Federal Government."¹ This legal advice "may effectively be the final word on the controlling law," yet it is routinely withheld from both Con-

¹Department of Justice, Memorandum for Attorneys of the Office re: Best Practices for OLC Advice and Written Opinions, July 16, 2010, available at: <https://www.justice.gov/sites/default/files/olc/legacy/2010/08/26/olc-legal-advice-opinions.pdf>.

gress and the public.² This withholding in effect creates secret law that controls agency actions but is shielded from both public debate and Congressional oversight.

Secrecy undermines accountability. Congress must understand how the Executive branch interprets the Constitution and implements laws enacted by Congress. Allowing legal opinions that are accorded precedential value and the force of law to remain the sole province of the Executive branch thwarts Congress's lawmaking and oversight prerogatives. It removes consequences for agency decisions and short-circuits the public feedback process integral to a functioning democracy.

Secrecy also poisons the operations of the Office of Legal Counsel. Public scrutiny would create persistent pressure for the promulgation of responsible, high quality, objective legal opinions. By contrast, OLC legal opinion secrecy ensures the most salient incentive for OLC attorneys is to lean towards a legal opinion that a given administration desires—not the legal opinion that best reflects the law. There are high profile examples of this happening.³ In some instances, the OLC ultimately withdrew its own legal opinions when they came to light; in at least one instance, the OLC secretly concluded explicit statutory language was unconstitutional and, therefore, inapplicable to the Executive branch.⁴ Building transparency into the process helps ensure that OLC legal analyses face scrutiny by Congress, scholars, and members of the public.

In December 2004, 19 former senior DOJ officials—including the now-Assistant Attorney General for the Office of Legal Counsel, Christopher Schroeder—endorsed a document calling for increased transparency, entitled *Principles to Guide the Office of Legal Counsel*.⁵ One principle was that “OLC should publicly disclose its written legal opinions in a timely manner, absent strong reasons for delay or nondisclosure.”⁶ According to the *Principles* document, public disclosure of written legal opinions is important because:

Such disclosure helps to ensure executive branch adherence to the rule of law and guard against excessive claims of executive authority. Transparency also promotes confidence in the lawfulness of governmental action. Making executive branch law available to the public also adds an important voice to the development of constitutional meaning—in the courts as well as among academics, other commentators, and the public more generally—and a particularly valuable perspective on legal issues regarding which the executive branch possesses relevant expertise.⁷

A similar statement on the Office of Legal Counsel and the rule of law was released in October 2020, with significant contributions from a comparable array of legal experts.⁸ It endorsed publication of and transparency for OLC opinions. Specifically, the statement endorsed: a strong presumption in favor of publishing final OLC opinions; disclosing OLC advice deemed classified, privileged, or sensitive to congressional committees when an agency relies upon that advice to justify a major policy decision or executive action; and releasing a public index of its memoranda. “OLC exercises a form of public trust, and because its views of the law’s meaning shape executive action and policy, Congress and the public both have compelling interests in understanding the legal basis of executive action.”

² *Id.*

³ See, for example, a Statement by Sen. Patrick Leahy at a February 26, 2010 hearing before the Senate Committee on the Judiciary entitled *The Office of Professional Responsibility Investigation into the Office of Legal Counsel Memoranda*, in which he said, “The fundamental question here is not whether these were shoddy legal memos. They were shoddy legal memos. Everybody knows that.... It failed to cite significant case law; it twisted the plain meaning of statutes. The legal memoranda were designed to achieve an end.” (emphasis added). See also a letter from select members of the Senate Committee on the Judiciary to Attorney General Garland urging the Department of Justice to not appeal D.C. District Judge Amy Berman Jackson’s May 3, 2021 decision ordering the release of an OLC memorandum (May 14, 2021), available at <https://www.durbin.senate.gov/imo/media/doc/2021-05-14%20Letter%20to%20AG%20Garland.pdf>.

⁴ “Report on the President’s Surveillance Program,” by the Offices of the Inspectors General of the Department of Defense, the Department of Justice, the Central Intelligence Agency, the National Security Agency, and the Office of the Director of National Intelligence (July 10, 2009), at 14, available at <https://oig.justice.gov/reports/2015/PSP-09-18-15-full.pdf>.

⁵ “*Principles to Guide the Office of Legal Counsel*” (Dec. 21, 2004), available at: https://scholarship.law.duke.edu/cgi/viewcontent.cgi?article=2927&context=faculty_scholarship.

⁶ *Id.*

⁷ *Id.* (emphasis added).

⁸ “*The Office of Legal Counsel and the Rule of Law*,” American Constitution Society (October 2020), available at: <https://www.acslaw.org/wp-content/uploads/2020/10/OLC-ROL-Doc-103020.pdf>.

Transparency strengthens our constitutional order. It helps ensure that the checks and balances between the Legislative and Executive branches function as the framers intended. Congress must have visibility into how the Executive branch interprets the Constitution and implements laws enacted by Congress.⁹ The OLC must be incentivized to render legal opinions that apply the law without fear or favor.

We note that OLC legal opinions are rendered both as “formal opinions” and “informal advice.” Both constitute legal advice that is binding within the Executive branch, follow a formal approval process, have precedential value within OLC, and are tracked in an OLC database. The major distinction is only the format in which the advice is rendered: a “formal opinion” is turned into a carefully formatted, written document and some are published online, whereas “informal advice” may be rendered as an email or in verbal form, which is then reduced to a memo for the record. Accordingly, we would apply the principle of transparency articulated in the Principles document to disclosure of OLC legal opinions regardless of format.

We are aware of some limited disclosure provisions within the 2010 Office of Legal Counsel Memorandum for Attorneys of the Office: Best Practices for OLC Legal Advice and Written Opinions.¹⁰ However, the last dozen years have demonstrated that this memorandum does not go far enough to protect the integrity of OLC legal opinions or confidence in the work of OLC attorneys. Indeed, the 2020 statement by legal experts declares “OLC itself has been in crisis for some time.” The process outlined in section III of the 2010 Memorandum, under a heading entitled Opinion Publication and Other Public Disclosure, is exactly the wrong approach. It describes a system that creates a presumption that OLC opinions will be withheld unless an arduous process is followed, with multiple consultations and veto points, and no end date. It requires that the publication committee affirmatively decide to publish an opinion.

RECOMMENDATIONS

Our request is twofold. First, we ask you to direct the Office of Legal Counsel to make its opinions publicly available upon issuance, except in narrow circumstances. The default for the government should be openness.¹¹ Second, we request you direct the Office of Legal Counsel to release an index of all current OLC opinions and to update that index on a regular basis.

The default rule must be that OLC legal opinions will be made publicly available contemporarily with their issuance. While there necessarily will be exceptions to disclosure, those exceptions should be narrow, constrained, and used only when necessary. Only Congress can guarantee this will happen. The FOIA is a powerful remedy, but it is slow, limited, and evaded by the Executive branch. The language included in the Joint Explanatory Statements accompanying the FY 2021 and FY 2022 Appropriations bills has thus far been unavailing on OLC opinion transparency.¹²

⁹For example: the Department of Justice issued a secret Office of Legal Counsel opinion at the request of the Executive branch that authorized Executive branch employees to engage in torture. The opinion was unfounded and withdrawn when it came to light. Nevertheless, the DOJ would not prosecute the officials who obtained the advice because they were acting in conformity with an OLC opinion and the DOJ as a policy declines to prosecute those who follow its advice. This kind of circular reasoning undermines the rule of law. See “Statement of the Attorney General Regarding Investigation into the Interrogation of Certain Detainees,” Office of Public Affairs (June 30, 2011) “I made clear at that time that the Department would not prosecute anyone who acted in good faith and within the scope of the legal guidance given by the Office of Legal Counsel regarding the interrogation of detainees.” <https://www.justice.gov/opa/pr/statement-attorney-general-regarding-investigation-interrogation-certain-detainees>.

¹⁰See “Best Practices for OLC Legal Advice and Written Opinions,” Office of Legal Counsel (July 2010), available at <https://www.justice.gov/sites/default/files/olc/legacy/2010/08/26/olc-legal-advice-opinions.pdf>

¹¹See “Freedom of Information Act, Memorandum for the Heads of Executive Departments and Agencies,” The White House (January 21, 2009), available at <https://obamawhitehouse.archives.gov/the-press-office/freedom-information-act>; “Freedom of Information Act Guidelines,” Office of the Attorney General (March 15, 2022), available at <https://www.justice.gov/ag/page/file/1483516/download>.

¹²While the report language included by the CJS Appropriations subcommittee in the House of Representatives addressed these issues squarely, the superseding Joint Explanatory Statement language on OLC opinions provides wiggle room and defers to the DOJ. See Report, Commerce, Justice, Science and Related Agencies Appropriations Bill, 2021, H. Rpt. 116–455, p. 59, <https://www.congress.gov/116/crpt/hrpt455/CRPT-116hrpt455.pdf>, superseded by Joint Explanatory Statement, p. 61, <https://docs.house.gov/bills/20201221/BILLS-116RCP68-JES-DI-VISION-B.pdf>; see Report, Commerce, Justice, Science and Related Agencies Appropriations

Continued

To address disclosure exceptions, Congress should direct the OLC to publicly release and maintain an index of all its opinions. OLC should publish the name of the opinion; the date it was finalized or revised; the author's name (i.e., the person who signed it); each recipient's name; identify whether the opinion has been withdrawn; and other salient information. Congress and the public should know how many OLC legal opinions exist. It is astonishing that there has yet to be a full accounting of the opinions.¹³

There is precedent for an index. The FOIA Improvement Act, enacted in 2016, established a 25-year limit for the Executive branch to assert deliberative process privilege as an exemption to a FOIA request.¹⁴ A recent lawsuit brought by the Knight First Amendment Center, *Francis v. DOJ*, resulted in an agreement whereby the DOJ is producing indexes of OLC opinions more than 25 years old.¹⁵ Similarly, the 2020 statement by legal experts endorsed indices.

We urge that you adopt more vigorous language concerning the Office of Legal Counsel contained in the report (H. Rept. 117–97) that accompanied the House Commerce, Justice, Science, and Related Agencies Appropriations Act for FY 2022. It would fully address the issues raised above and limit the Justice Department's ability to evade Congress's directive to make OLC opinions publicly available.

Thank you again for the opportunity to submit this testimony.

PREPARED STATEMENT OF ENTOMOLOGICAL SOCIETY OF AMERICA

The Entomological Society of America (ESA) respectfully submits this statement for the official record in support of funding for the National Science Foundation (NSF). ESA joins the research community by requesting a robust fiscal year (FY) 2023 appropriation of \$11 billion for NSF, including strong support for the Directorate for Biological Sciences (BIO). Through activities within BIO, NSF advances the frontiers of knowledge about complex biological systems at multiple scales, from molecules and cells to organisms and ecosystems. In addition, the Directorate contributes to the support of essential research resources, including biological collections and field stations. NSF BIO is also the Nation's primary funder of fundamental research on biodiversity, ecology, and environmental biology.

NSF is the only Federal agency that supports basic research across all scientific and engineering disciplines, outside of the medical sciences. Each year, the Foundation supports an estimated 300,000 researchers, scientific trainees, teachers, and students, primarily through competitive grants to approximately 2,000 colleges, universities, and other institutions in all 50 States. NSF also plays a critical role in training the next generation of scientists and engineers through programs like the Graduate Research Fellowship Program (GRFP), ensuring that the United States will remain globally competitive in the future.

NSF-sponsored research in entomology and other basic biological sciences, primarily supported through NSF BIO, provides the fundamental discoveries that advance knowledge and facilitate the development of new technologies and strategies for addressing societal challenges related to economic growth, national security, and human health. Because insects constitute two out of every three species, fundamental research on their biology has provided foundational insights across all areas of biology, including cell and molecular biology, genomics, physiology, ecology, behavior, and evolution. In turn, these insights have been applied toward challenges in a wide range of fields, including conservation biology, habitat management, livestock production, and pest management.

Insects have long played an essential role as model organisms for understanding basic biological processes across all organisms and as sentinel species to give indications of potential environmental risks to human populations. For example, insect behavior patterns can be an indicator of climatic and environmental conditions, as many species and populations are forced to migrate or adapt due to the impacts of

Bill, 2020, H. Rpt. 116–101, pp. 45–46, <https://www.congress.gov/116/crpt/hrpt101/CRPT-116hrpt101.pdf>, superseded by Joint Explanatory Statement, p. 30, <https://appropriations.house.gov/sites/democrats.appropriations.house.gov/files/HR%201158%20-%20Division%20B%20-%20CJS%20SOM%20FY20.pdf>.

¹³ Congress has previously considered legislation on OLC opinions. For example, the Senate Judiciary Committee favorably reported the OLC Reporting Act of 2008 (S. 3501, 110th Congress). We note the introduction in the 117th Congress of the DOJ OLC Transparency Act (S. 3858) and the SUNLIGHT Act of 2022 (H.R. 7619).

¹⁴ Public Law 114–185 (114th Congress). <https://www.congress.gov/bills/114th-congress/senate-bill/337>.

¹⁵ The Knight First Amendment Institute at Columbia University is publishing the index on its website. <https://knightcolumbia.org/reading-room/olc-opinions>.

climate change. One area of NSF-supported research worthy of continued support is advancing our knowledge of the impact of environmental changes on important pollinators, including bumblebees. Better understanding how various factors, including those induced by climate change, impact bumblebee feeding behavior can help advance innovative methods to protect these insects and the agricultural economies that rely heavily on them for pollination.¹ One recent study funded by the Systematics and Biodiversity Science cluster within BIO observed changes in the feeding behavior of bumblebees in response to changes in both the microbial and sugar content of nectar due to increases in temperature. This study, in conjunction with other ongoing research in this complex area, could have significant implications for the agricultural industry as it seeks to adapt to the impacts of climate change.²

NSF also supports the development of technologies and methods that directly impact economic sectors that are highly dependent on entomology. For example, recent GRFP recipients have explored innovative approaches to managing pest-induced agricultural damage to commodity crops and insects' behavioral responses to external stimuli, with significant economic and human health implications. A recent study led by an NSF GRFP recipient investigated the effectiveness of post-harvest cold storage in spotted-wing drosophila control. Spotted-wing drosophila is a uniquely devastating pest of small fruits like blueberries, raspberries, and strawberries owing to its ability to lay eggs in ripening fruit. The estimated revenue losses of wild blueberries due to spotted wing drosophila to amount to nearly \$7 million in the State of Maine alone.³ The study found that storing fruit at or near freezing temperatures for 3–5 days resulted in decreased pest survival. After accounting for slight daily cost depreciation from holding the crop and the initial investment of purchasing a cold storage system, farmers could realize individual net profits of \$88,000 to \$483,000 over 20 years by utilizing these post-harvest cold storage protocols.⁴ This practice also has the potential to reduce the need for pesticides and could prevent unintentional spread of the pest through shipment and trade.

Another study led by a GRFP recipient sought to determine whether certain compounds on the outer surface of German cockroaches play a role in shelter choice and aggregation. These insects are an abundant household and commercial pest globally, accounting for 15 percent of pest control industry sales across the U.S. and 40 percent of insect-related household and structural damage in some States.⁵ Beyond these economic impacts, German cockroaches also pose health risks as both an asthma-causing allergen and a potential route of transmission for bacteria and other pathogens. Determining how cockroaches choose where to shelter could inform innovative control strategies. The study demonstrated that one candidate category of compounds, cuticular hydrocarbons, were not effective in causing the cockroaches to aggregate.⁶ The chemical cues important for inducing aggregation in German cockroaches remain unresolved, presenting an important challenge in urban pest biology and control that requires continued support from Federal research programs to promote health, well-being, and scientific understanding.

In addition to funding research, NSF BIO plays a critical role in the curation, maintenance, and enhancement of physical-biological collections. These collections and their associated data sets serve a variety of purposes, and while they are particularly important to the field of entomology, their value to the broader scientific enterprise cannot be overstated. Physical collections enable the rapid identification and mitigation of costly invasive pests that affect agriculture, forestry, and human and animal health. This is only achievable because such collections are continuously

¹Main, Douglas. Bumblebees Are Going Extinct in a Time of 'Climate Chaos'. *Animals*, National Geographic, 4 May 2021, <https://www.nationalgeographic.com/animals/article/bumblebees-going-extinct-climate-change-pesticides>.

²Russell, Kaleigh A., and Quinn S. McFrederick. Elevated Temperature May Affect Nectar Microbes, Nectar Sugars, and Bumble Bee Foraging Preference—Microbial Ecology. *SpringerLink*, Springer US, 1 Oct. 2021, <https://link.springer.com/article/10.1007/s00248-021-01881-x>.

³Yeh, D. Adeline, Drummond, Francis A., Gómez, Miguel I., and Fan, Xiaoli. The Economic Impacts and Management of Spotted Wing Drosophila (*Drosophila suzukii*): The Case of Wild Blueberries in Maine. *Journal of Economic Entomology*, 6 Jun. 2020, <https://pubmed.ncbi.nlm.nih.gov/31943106/>.

⁴Kraft, L.J. et al. Determining the effect of postharvest cold storage treatment on the survival of immature *Drosophila suzukii* (Diptera: Drosophilidae) in small fruits. *Journal of Economic Entomology*, 11 Sept. 2020, <https://doi.org/10.1093/jee/toaa185>.

⁵Lee, C.Y. and Wang, C. German cockroach infestations in the world and their social and economic impacts. In: *Biology and Management of the German Cockroach*, 2021, eds: Wang C, Lee CY, and Rust MK.

⁶Hamilton, J.A., Wada-Katsumata, A., and Schal, C. Role of cuticular hydrocarbons in German cockroach (Blattodea: Ectobiidae) aggregation behavior. *Environmental Entomology*, 28 Apr. 2019, <https://doi.org/10.1093/ee/nvz044>.

being updated to reflect environmental changes, evolutionary developments, and shifting migratory patterns of invasive species around the world. Furthermore, new and emerging technologies enable scientists to gain novel insights from physical historic samples in an ongoing manner.

While collections-focused awards are encouraging, ESA is concerned by the inconsistent Federal support for biological collections. Recent advancements in imaging, digitization, and data collection and storage technologies have caused some to question the necessity of continued support for existing biological collections. ESA recognizes that technological development is spurring substantive discussion about the future of biological collections. However, while these new developments and advancements will hopefully yield new benefits for biological research, they are not a replacement for physical biological collections. Furthermore, new and emerging technologies enable scientists to gain novel insights from physical historic samples in previously unanticipated way. Given their continuing relevance and broad application to domestic homeland security, public health, agriculture, food security, and environmental sustainability, ESA firmly supports continued Federal investment in programs supporting collections such as NSF's Infrastructure Capacity for Biological Research.

Given NSF's critical role in supporting fundamental research and education across science and engineering disciplines, ESA supports an overall FY 2023 NSF budget of \$11 billion. ESA requests robust support for the NSF BIO Directorate, which funds important research studies and biological collections, enabling discoveries in the entomological sciences to contribute to understanding environmental and evolutionary biology, physiological and developmental systems, and molecular and cellular mechanisms.

ESA, headquartered in Annapolis, Maryland, is the largest organization in the world serving the professional and scientific needs of entomologists and individuals in related disciplines. As the largest and one of the oldest insect science organizations in the world, ESA has over 7,000 members affiliated with educational institutions, health agencies, private industry, and government. Members are researchers, teachers, extension service personnel, administrators, marketing representatives, research technicians, consultants, students, pest management professionals, and hobbyists.

Thank you for the opportunity to offer the Entomological Society of America's support for NSF research programs. For more information about the Entomological Society of America, please see <http://www.entsoc.org/>.

[This statement was submitted by Jessica Ware, PhD, President]

PREPARED STATEMENT OF ENVIRONMENTAL AND ENERGY STUDY INSTITUTE

Thank you for the opportunity to submit written testimony for the record in support of programs under the subcommittee's jurisdiction at the National Oceanic and Atmospheric Administration (NOAA) that support climate change mitigation and adaptation. The Environmental and Energy Study Institute (EESI) is a non-profit organization founded in 1984 on a bipartisan basis by members of Congress to help educate and inform policymakers, their staff, stakeholders, and the American public about the benefits of a low-emissions economy that prioritizes energy efficiency, renewable energy, and new clean energy technologies. In 1988, EESI declared that addressing climate change is a moral imperative, and that has since guided our work.

Climate adaptation and resilience work should complement and, when possible, contribute to a decarbonized, clean energy economy. From droughts to wildfires and hurricanes to extreme heat, different regions, States, and communities will experience different climate change-related threats. Communities need locally-tailored, accessible, and actionable data and support to make informed decisions to reduce their climate risks and safeguard the ecosystems on which they depend.

This testimony is informed by EESI's report, *A Resilient Future for Coastal Communities: Federal Policy Recommendations from Solutions to Practice*.¹ This report is based on EESI's 16-part Congressional briefing series that featured 42 coastal resilience experts discussing federal, State, and local programs and policies conducting effective climate adaptation to coastal hazards. The testimony is also informed by EESI's 2021 article series on Federal resilience programs.² This nine-part series reviews program background information, the program connection to adaptation and

¹A Resilient Future for Coastal Communities: Federal Policy Recommendations from Solutions to Practice: <https://www.eesi.org/papers/view/a-resilient-future-for-coastal-communities>.

²EESI Federal Resilience Programs article series: <https://www.eesi.org/federal-resilienceprograms>.

resilience, an example of the program in action, and results of the program for six NOAA programs.³

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA)
CLIMATE-RELATED PROGRAMS

EESI supports the Biden-Harris Administration's budget, which would provide \$6.9 billion for NOAA in fiscal year 2023. This would represent a \$800 million increase from the 2022 enacted level of \$6.1 billion. The budget also calls for \$376 million specifically for climate resilience. NOAA plays a critical role in climate resilience work, in conjunction with other Federal agencies, and this amount of funding should be seen as a floor, not a ceiling, for what is needed to support U.S. communities as they adapt to the impacts of climate change.

EESI's Congressional briefing on March 18, 2022, Climate Adaptation Programs Across Agencies,⁴ outlined NOAA's role in advancing adaptation and resilience work. Key NOAA tools highlighted in the briefing include Climate.gov, Drought.gov, Atlas 14, and the Digital Coast Sea Level Rise Viewer. These critical tools require funding to ensure they are up-to-date and accessible to people who want to apply the information to their work.

The 2020s must be the decade where significant strides are made on climate adaptation and resilience planning, data, project implementation, and evaluation. All these efforts must be scaled up to meet the magnitude of the challenge we face. This is only possible with adequate, sustainable funding from Congress in support of this work.

Thank you for your consideration.

[This statement was submitted by Daniel Bresette, Executive Director]

PREPARED STATEMENT OF FAMILY BASED ALTERNATIVE SENTENCING (FBAS)

Chairwoman Shaheen, Ranking Member Moran, and members of the subcommittee, I offer my written testimony in support of the request for \$10 million for Family Based Alternative Sentencing (FBAS) currently funded through the Byrne Grant Program and administered by the Office of Juvenile Justice and Delinquency Prevention (OJJDP) in the Department of Justice, to be used to fund State, local, and community agencies to replicate successful parenting sentencing alternative programs. FBAS corrects the systemic failure of American criminal justice to take the needs, emotions and well-being of families into account after arrest, pretrial and at sentencing following conviction, a failure which contributes to family disruption, alienation among children and community harm.

I submit my testimony as a lawyer who has been active in, and a close observer of, criminal and juvenile justice in the United States for more than 45 years. I began my career as a criminal defense attorney with community based and law school legal clinics in Chicago, Illinois, and as staff attorney with the National Legal Aid and Defender Association in Washington, DC where I specialized in sentencing in criminal case. For 19 years I was the founding Executive Director of The Sentencing Project, also in Washington, DC. I also served as Executive Director of the John Howard Association of Illinois, an adult and juvenile corrections oversight organization. More recently I was Project Director for the New York based Center on Community Alternatives' Project New Opportunity in Washington, DC, a reentry program staffed principally by previously-incarcerated individuals which achieved highly successful outcomes for persons released from the Federal Bureau of Prisons in 2017-2018.

Over my career I have been the attorney for parents facing separation from their children at sentencing, spoken with scores of incarcerated parents and with their

³NOAA National Sea Grant College Program: <https://www.eesi.org/articles/view/federal-resilience-series-noaa-national-sea-grant-college-program>. NOAA Coral Reef Conservation Program: <https://www.eesi.org/articles/view/federal-resilience-programs-noaa-coral-reef-conservation-program>.

NOAA Coral Reef Conservation Program: <https://www.eesi.org/articles/view/federal-resilience-programs-noaa-coral-reef-conservation-program>. NOAA National Centers for Coastal Ocean Science: <https://www.eesi.org/articles/view/federal-resilience-programs-noaa-national-centers-for-coastal-ocean-science>.

NOAA Cooperative Institutes: <https://www.eesi.org/articles/view/federal-resilience-programs-noaa-cooperative-institutes>. National Centers for Environmental Information: <https://www.eesi.org/articles/view/federal-resilience-programs-national-centers-for-environmental-information>. Mission "Iconic Reefs:" <https://www.eesi.org/articles/view/federal-resilience-programs-mission-iconic-reefs>.

⁴Climate Adaptation Programs across Agencies: <https://www.eesi.org/briefings/view/031822fed>.

children, and represented and interviewed youth struggling with the emotional consequences of the incarceration of at least one parent. At Project New Opportunity, I saw up close how difficult family reunification could be after years of a parent's incarceration.

My experience confirms the pain and adverse impacts that a parent's incarceration brings down upon their children which is described in research provided by others to the subcommittee.¹ As a third-party witness, however, I cannot match the power of the voices of the formerly incarcerated parents and the children of incarcerated parents when they testify to their experience and to the damage to a child's social and emotional development, health, education, finances and housing stability that flows from incarceration of a parent.

But as a former practitioner who has had much opportunity to observe criminal court processes and corrections operations, I would like to offer that Family Based Alternative Sentencing programs will help correct for a systemic failure, a deficiency in justice if you will, long present in criminal justice as it operates in this country.

Historically and to my observation, criminal courts have not taken factors such as parental status and family relationships into account during the pendency of a case, in deciding pretrial release, or at sentencing after conviction.

Surprisingly, being a parent with custody of a child is not one of the codified mitigating factors a court need consider in order to mitigate or help define an appropriate sentence.

Similarly, criminal courts and the probation agencies under their supervision typically have not attempted to fashion sentences or administer supervision in ways that ameliorate the adverse impact of incarcerating a parent upon their children. As the research details, criminal courts have been quite content to leave the fate of children of parents they incarcerate to family courts, guardians at litem, child welfare case workers and foster parents, sometimes but not nearly often enough, with good effect.

It may well be that these deficiencies came about because, in large part, current sentencing practices and sentences were shaped in the years before the dramatic increase in the number of women in State and Federal prisons—800% from 1978 to 2016.² The fact is that as late as the early 1970's criminal courts and sentencing were dominated by males. Fewer women were being sentenced to prison, and men were less likely to be, or at least to be considered to be, the primary caregivers of their children.

The responsibility for a failure of the system to take into account the needs of the children of parents facing incarceration is shared. Defense attorneys such as myself focused on our clients' legal defenses. With a few remarkable exceptions, most of us did not attend to family dynamics or to the trauma, disruption, or the psychological impact our client's case had on her or his child. Moreover, most defense attorneys—particularly over-extended and understaffed public defenders—were not equipped by training or with resources to take on the challenge of minimizing damage to a child when a parent is incarcerated, pretrial or after conviction.

As for corrections, few state prison systems provide accommodations or material support for parents, even for incarcerated mothers, to help sustain family relationships.³

¹For an earlier research-based study which sounded the alarm about the negative impact of incarcerating a parent, see: Allard, Patricia and Greene, Judith *Children on the Outside: Voicing the Pain and Human Costs of Parental Incarceration*, Justice Strategies (January 2011).

²Carson, E., *Prisoners under the jurisdiction of State or Federal correctional authorities*, December 31, 1978–2016, Washington, DC: Bureau of Justice Statistics (2017).

³The exceptions demonstrate the rule. For example, the "Moms and Babies" program which the Illinois Department of Corrections launched in 2007, which I visited it while in Illinois, claimed a "Zero Percent Recidivism Rate" after 4 years. It is regarded in many respects a model for programs that keep infants united with their mothers, of which there are only about seven others nationally. Yet, housed in Illinois' Logan Correctional Center which holds more than 1,000 women, of whom about 70% have been mothers, after 11 years Moms and Babies reported having served just 90 mothers, on average less than 9 per year. Illinois did not invest heavily in the program, claiming that it was "budget-neutral" and sustained by community donations and volunteers. Meanwhile, support for the hundreds of mothers not in the program and their families lagged. In 2015, a Gender Informed Practices Assessment (GIPA) conducted at Logan with technical assistance from National Institute of Corrections and the National Resource Center on Justice-Involved Women (NRCJIW) found major deficiencies in support for families, including termination of state-funded transportation for families seeking to visit incarcerated mothers. Prompted in part by the GIPA, Illinois enacted the Women's Correctional Services Act in 2017 which directed the Illinois Department of Corrections to implement "gender responsive policies, practices, programs, and services [that are] considered relational, culturally competent, family-centered, holistic, strength-based, and trauma-informed." Yet as basic as its efforts were, Illinois is one of just a handful of States with any correctional programs or legislated mandates

My experience with reentry, in which family reunification is important, drove home the deficiencies of our courts and correctional agencies to address the issue while a parent is incarcerated. Personally, I observed parents released from Federal prison struggling to reconnect with children who had rejected them, were angry, had themselves become substance abusers, or who had bonded with another family. For all the years of their incarceration, often hundreds of miles from their children, these parents had not been counseled or assisted by programs designed to mitigate the pain and harm of separation. The closest to any kind of program of assistance were volunteer and non-profit-sponsored family bus trips to prison; multiple hours both ways that were themselves sometimes so trauma-inducing that incarcerated parents urged their children not to visit.

The appropriations legislation you are considering is encouraging, a bright promise of improvement in justice. As the subcommittee will hear, there are now programs which provide alternatives to incarcerating parents. Programs in California, Illinois, Massachusetts, Tennessee, Oregon, and Washington are giving children greater stability and sense of belonging, contributing to family success, and, I have no doubt by doing so, helping to reduce crime, support families and improve communities. These programs have been shown to have high success rates compared to outcomes where there is no assistance or alternative to incarceration.

The legislation before this subcommittee will provide support for programs that build upon these recent successes. That is why I respectfully urge the subcommittee to support \$10 million in funding for programs that will help keep families together, will assist the children of incarcerated parents, and will encourage alternatives to incarceration for parents of children whenever possible.

Respectfully submitted,
Malcolm C. Young, Attorney at Law

PREPARED STATEMENT OF FEDERATION OF AMERICAN SOCIETIES
FOR EXPERIMENTAL BIOLOGY

Dear Chair Shaheen and Ranking Member Moran:

As the largest coalition of biomedical researchers in the United States, representing 28 member societies and 115,000 individual scientists, the Federation of American Societies for Experimental Biology (FASEB) recommends at least \$11 billion for the National Science Foundation for FY 2023.

Federal investments in fundamental research have led to remarkable progress in the biological and biomedical sciences. Basic research was the groundwork for the speed—months instead of years—that led to the development of COVID-19 vaccines and also supports pre-clinical research involving the use of animal studies to achieve medical progress.

Despite Congress' bipartisan support for investing in science, Federal funding for research has not kept pace, posing a threat to our Nation's competitiveness. We face a real threat of losing our edge in industries such as biotechnology if we do not prioritize increasing investments in science, research infrastructure such as core facilities, and building a diverse workforce.¹ The U.S. spends less on research and development (R&D) than many countries. If the U.S. is to be prepared to respond to future threats, our scientific leadership must progress. According to Science Is Us, there is the added benefit of jobs. STEM supports 69 percent of U.S. gross domestic product, touches two out of three workers, and generates \$2.3 trillion in tax revenue.²

With a mandate to support fundamental research across all fields of science, engineering, and mathematics, the NSF is the cornerstone of our Nation's scientific and innovation enterprise while also advancing our security and economic interests. Through a new technology, innovation and partnerships directorate it will be better able to collaborate with other stakeholders to translate fundamental research into commercially viable products and services enhancing our competitiveness on the global stage. At current funding levels, NSF is not meeting the needs of researchers with innovative ideas bridging multiple disciplines that could bring forth new tech-

addressing the challenges confronting incarcerated parents and their children. A description of the advantages and limitations of the Logan program and the National context is provided in: Dworsky, A., Fedock, G., Schlecht, C., Malcome, M., Murray, C., & Hazel, C., Addressing the needs of incarcerated mothers and their children in Illinois, (Chapin Hall at the University of Chicago and the University of Chicago's School of Social Service Administration) 2020.

¹ <https://nces.nsf.gov/pubs/nsb20201/executive-summary>.

² STEM and the American Workforce. You've heard it before: STEM jobs - . . . | by Science is US | Medium.

nologies and industries. Doubling NSF's grant award amounts and increasing their duration to 4 years from 3 years is needed.³ Many potentially fundable proposals are declined each year.

Among Federal science agencies, NSF has the unique capacity to:

Support Multi-Disciplinary Research.—By leveraging its portfolio across the sciences, NSF funds cutting-edge research at the interface of the physical, biological, and social sciences to tackle challenges in creative ways, including climate change, biodiversity loss, and one health.⁴

Organize and Lead Research Partnerships at Speed and Scale.—The NSF coordinates and leads interagency research endeavors, including partnerships with NIH and DOE SC. These collaborations advance public health and clean energy, the development of artificial intelligence, and other national priorities.⁵

Train the Next Generation of Scientists From Diverse Backgrounds.—NSF plays a key role in creating educational pathways and supporting the accessibility of scientific education, training scientists from diverse backgrounds to increase inclusivity in science. These scientists—some of whom will become entrepreneurs—will work across different scientific disciplines, broaden participation in science and engineering among underrepresented and diverse groups.⁶

Despite its critical role in accelerating science and innovation, NSF's budget has been flat in constant dollars since the 2010 COMPETES Act.⁷ There is also a pressing need to expand our scientific enterprise across all disciplines as well as diversify the STEM workforce. Recent data demonstrates that NSF was able to fund only 28 percent of the high-quality research proposals that were submitted, rather than the National Science Board recommendation of 30 percent.⁸ According to the FY 2020 Merit Review Digest from NSF, approximately \$3.9 billion was requested for declined proposals that were rated Very Good or higher in the merit review process (about 4,233 declined proposals received ratings of 4.0 or greater). These declined proposals represent a rich portfolio of unfunded opportunities—proposals that, if funded, may have produced substantial research and education benefits.⁹

Meanwhile, according to the National Science Board's Science & Engineering (S&E) Indicators 2022 report, the US is falling behind at 10 percent compared to China's 49 percent of international patents received from 2010 to 2020.²⁵ The publication of research in peer-reviewed literature—the primary mechanism for disseminating new S&E knowledge—grew at an annual average rate of three percent for high-income countries such as the US compared 11 percent for upper middle-income countries such as China, Russia and Brazil over a 10 year period.¹⁰

Our recommendation of at least \$11 billion, will allow NSF to establish a new grant program for early-career fellowships as envisioned in congressional legislation, fund more high-quality research proposals, and increase NSF's average award size.^{11,12} In addition, this funding level will support NSF's new technology, innovation and partnerships directorate (TIP) which will work with all of NSF's directorates and offices to advance the impacts of NSF-funded research by accelerating the translation of fundamental science and engineering discoveries into innovative new technologies and solutions. TIP will provide an optimized lab-to-market platform, fund the successful Partnerships for Innovation, Small Business Innovation Research, and Small Business Technology Transfer programs. NSF could also accelerate key priorities, including Big Ideas that include understanding the rules of life, future of work at the human-technology frontier, mid-scale research infrastructure, inclusion across the Nation, Innovation Corps, biotechnology and harnessing the

³ Senate Appropriations Committee's Commerce, Justice, Science and Related Agencies explanatory language for FY 2022, page 2 released Oct. 15, 2021.

⁴ NSF's 10 Big Ideas, National Science Foundation, Alexandria, VA.

⁵ NSF Collaborations with Federal Agencies and Others, National Science Foundation, Alexandria, VA.

⁶ Education and Human Resources Directorate, National Science Foundation, Alexandria, VA.

⁷ Subcommittee Report H.R. 2225—National Science Foundation for the Future Act July 2021.

⁸ <https://www.nsf.gov/pubs/2021/nsf21002/tables.jsp> Figure 1.5 NSF Competitive Proposals, New Awards, and Funding Rate.

⁹ National Science Foundation, National Science Board, "Merit Review Process Fiscal Year 2020 Digest", page. 42.

²⁵ SCIENCE & ENGINEERING INDICATORS 2022. Figure 25—Shares of international patents granted to inventors, by selected country or economy: 2010 and 2020.

¹⁰ SCIENCE & ENGINEERING INDICATORS 2022.

¹¹ American Innovation Act, S. 1249.

¹² Supporting Early Career Researchers Act, H.R. 144, Section 3—Supporting early-career research fellowship program.

data revolution for 21st Century Science and Engineering and major investments in graduate education.¹³

[This statement was submitted by Ellen Kuo, Associate Director, Legislative Affairs]

PREPARED STATEMENT OF FEDERATION OF ASSOCIATIONS IN
BEHAVIORAL AND BRAIN SCIENCES

The Federation of Associations in Behavioral and Brain Sciences (FABBS) is grateful for the opportunity to submit testimony for the record in support of the National Science Foundation (NSF) budget for fiscal year 2023. FABBS represents twenty-seven scientific societies and over fifty university departments whose members and faculty share a commitment to advancing knowledge of the mind, brain, and behavior. As a leading member of the Coalition for National Science Funding, FABBS joins the broader scientific community in urging Congress to fund NSF with at least \$11 billion in FY 2023.

NSF-funded research pays long-term dividends in innovation and technologies driving our economy, national security, well-being, and other areas of significant importance to our Nation. In addition, NSF research and programs provide the tools to develop a workforce equipped for the challenges and technologies of the future and foster the next generation of scientists—with a commitment to broad participation—whose work will keep this country at the forefront of discovery.

We are grateful for the four percent increase provided to NSF in the FY 2022 omnibus spending legislation. Nonetheless, NSF needs more consistent and ambitious funding increases to meet our country's needs and to re-invigorate Federal research and development at a time when our global competitors are looking to surpass American investments. Funding for the NSF has remained stagnant over the past decade despite established bipartisan and bicameral support for the NSF, including essential contributions to prevent and address COVID-19, spark economic growth, and strengthen national security; and despite evidence that the U.S. has lost standing in international competitiveness.

As the House and Senate move to conference on the America COMPETES Act and the United States Innovation and Competition Act, it is clear that now is the time to increase Federal support for the NSF to ensure the future health, security, and economic well-being of our Nation. While Congress provides an expanded vision for NSF, the agency requires additional resources to realize the potential of its existing programs. One out of every four basic research projects at higher learning institutions across the United States is supported by the NSF and the Foundation's merit review process is the international gold-standard. However, in FY 2020, almost \$4 billion worth of proposals were rated very good but were declined due to inadequate resources.

NSF Director Panchanathan has stated that proposals that do receive funding could produce better research outcomes and provide better value by increasing the size and duration of grants. In fact, he has said that NSF could double their budget on the current research and researchers that go unfunded, and “a quadrupling of the funding is just barely enough to be able to take us to all the ideas being unleashed so that we might be far ahead of the competition.”

SOCIAL, BEHAVIORAL, AND ECONOMIC SCIENCES

FABBS scientists have a particular interest in the Social, Behavioral and Economic (SBE) Sciences directorate, which provides an estimated 64 percent of the Federal funding for fundamental research in SBE sciences at academic institutions across the country.¹ Thus, our fields are heavily dependent on the NSF to inform discoveries from expanding our understanding of the mechanisms of memory underlying brain activity, to contributing to the design and assessing the social and ethical consequences of new technologies.

Findings from the brain and behavioral sciences have extensive reach and applicability. For example, SBE funded researchers studying violent extremism delivered new insights that the National security community is now using to develop more effective strategies to disrupt recruitment and counter extremism.

During the COVID-19 pandemic, SBE scientists contributed in many ways, including through the Societal Experts Action Network (SEAN). This partnership between NSF's SBE directorate and the National Academies of Science, Engineering,

¹³ NSF Budget FY 2022.

¹ https://www.nsf.gov/about/budget/fy2023/pdf/74_fy2023.pdf.

and Medicine provided actionable responses to urgent policy questions. Consulting leading researchers in the social, behavioral, and economic sciences, SEAN has published guidance to inform more effective public policy.² The National Science Foundation's ability to conduct rapid-response programs such as SEAN is just one example of the many ways in which NSF is uniquely suited to capitalize on scientific discovery for the betterment of society.

SBE is also home to the National Center for Science and Engineering Statistics (NCSES), a Federal statistical agency that provides statistical information about the United States' science and engineering (S&E) enterprise. NCSES collects, analyzes, and disseminates data on research and development (R&D), the S&E workforce, the condition and progress of science, STEM education, and U.S. competitiveness in science, engineering, and technology R&D.

TECHNOLOGY, INNOVATION, AND PARTNERSHIPS

On March 16, NSF officially launched a new Directorate for Technology, Innovation, and Partnerships (TIP). This exciting new venture will take a cross-cutting approach to speed the translation of basic research to make a difference in American's lives. By building on existing multidisciplinary programs, such as the Convergence Accelerator, TIP will integrate the expertise of all NSF directorates to spearhead new use-inspired research.

To maximize the benefits of the TIP directorate, NSF must make sure to take full advantage of the behavioral and brain sciences. All of the directorate's target focuses, such as clean energy, quantum science, artificial intelligence, supercomputing, etc., have human components. Whether it is optimizing the user interface for a new technology or finding the most effective way to communicate with lay audiences, brain and behavioral scientists should be included to help maximize the return on investment for these new programs.

Substantial, sustained funding increases will allow NSF to realize the full potential of the TIP directorate by investing in critical new programs while bolstering the existing investments in basic research—including in the social, behavioral, and economic sciences—which underly future societal, economic, and technological advances.

In addition to receiving support from SBE, FABBS members appreciate critical funding from the Computer and Information Science and Engineering Directorate (CISE), which funds research on topics such as human-technology interaction and cyber-assisted learning, the Biological Sciences (BIO) Directorate, which funds research on topics such as sleep and circadian rhythms and sex differences in responses to stress, and the Education and Human Resources (EHR) Directorate, which funds research on increasing America's human capital through effective education in science, technology, engineering and mathematics. EHR is especially vital to expanding participation in science through programs such as S-STEM, which provides scholarships to enable low-income students with academic ability, talent, or potential to pursue successful careers in promising STEM fields.

Increasing Federal investment in fundamental scientific research across all sciences is critical to ensuring the future prosperity, security, and health of our Nation and its people. We urge you to provide NSF with at least \$11 billion for FY 2023. Along with the broader scientific community, we believe that increased funding for fundamental scientific research would set the NSF on a path to yield transformative benefits to the country. We thank you in advance for your commitment to robust funding in fiscal Year 2023 and efforts to complete the budget in a timely manner.

Thank you for considering this testimony.

FABBS Member Societies:

Academy of Behavioral Medicine Research, American Educational Research Association, American Psychological Association, American Psychosomatic Society, Association for Applied Psychophysiology and Biofeedback, Association for Behavior Analysis International, Behavior Genetics Association, Cognitive Neuroscience Society, Cognitive Science Society, Flux: The Society for Developmental Cognitive Neuroscience, International Congress of Infant Studies, International Society for Developmental Psychobiology, National Academy of Neuropsychology, The Psychonomic Society, Society for Behavioral Neuroendocrinology, Society for Computation in Psychology, Society for Judgment and Decision Making, Society for Mathematical Psychology, Society for Psychophysiological Research, Society for the Psychological Study of Social

² <https://www.nationalacademies.org/our-work/societal-experts-action-network>.

Issues, Society for Research in Child Development, Society for Research in Psychopathology, Society for the Scientific Study of Reading, Society for Text & Discourse, Society of Experimental Social Psychology, Society of Multivariate Experimental Psychology, Vision Sciences Society

FABBS Affiliates:

APA Division 1: The Society for General Psychology; APA Division 3: Experimental Psychology; APA Division 7: Developmental Psychology; APA Division 28: Psychopharmacology and Substance Abuse; Arizona State University; Binghamton University; Boston College; Boston University; California State University, Fullerton; Carnegie Mellon University; Duke University; East Tennessee State University; Florida International University; George Mason University; George Washington University; Georgetown University; Harvard University; Indiana University Bloomington; Johns Hopkins University; Lehigh University; Massachusetts Institute of Technology; Michigan State University; New York University; North Carolina State University; The Ohio State University; Center for Cognitive and Brain Sciences; Pennsylvania State University; Princeton University; Purdue University; Rice University; Southern Methodist University; Syracuse University; Temple University; Texas A&M University; Tulane University; University of Arizona; University of California, Berkeley; University of California, Irvine; University of California, Los Angeles; University of California, Riverside; University of California, San Diego; University of Chicago; University of Delaware; University of Illinois at Urbana-Champaign; University of Iowa; University of Maryland, College Park; University of Michigan; University of Minnesota; University of Minnesota, Institute of Child Development; University of North Carolina at Greensboro; University of Oregon; University of Pennsylvania; University of Texas at Austin; University of Texas at Dallas; University of Virginia; University of Washington; Virginia Tech; Wake Forest University; Washington University in St. Louis; Western Kentucky University; Yale University

[This statement was submitted by Juliane Baron, Executive Director]

PREPARED STATEMENT OF FLORIDA AGRICULTURAL AND MECHANICAL UNIVERSITY

Chairman Leahy, Chairman Shaheen, Vice Chairman Shelby, Ranking Member Moran, and Members of the Commerce, Justice, Science, and Related Agencies subcommittee, thank you for the opportunity to submit public testimony on the Fiscal Year (FY) 2023 Commerce, Justice, Science, and Related Agencies Appropriations bill. Florida A&M University (FAMU) is grateful for the historic support of Congress during the pandemic. Increased funding for the National Oceanic and Atmospheric Administration's (NOAA) Education Partnership Program with Minority Serving Institutions (EPP/MSI) and the National Sea Grant College Program, as well as the National Science Foundation's (NSF) Education and Human Resources will have a direct impact on our University, our students, our region, and our Nation.

Florida A&M University, based in the State capital of Tallahassee, Florida, was founded in 1887 with only 15 students and two instructors. Today, FAMU offers 95 degree programs to nearly 10,000 students. We are proud to be the highest ranked among public Historically Black Colleges and Universities (HBCU) for three consecutive years, according to the 2022 U.S. News and World Report National Public Universities. The University is a leading land-grant research institution with an increased focus on science, technology, research, engineering, agriculture, and mathematics. As noted by Diverse Issues, FAMU is a top producer of African American undergraduate degrees and doctoral degrees in pharmacy and pharmaceutical sciences.

The Federal Government is a key partner and resource for FAMU. The Federal science agencies, in particular, support a wide range of the University's education, research, and training programs. In turn, we produce highly-skilled graduates in critical disciplines and conduct cutting edge research benefitting the Federal Government as well as the Nation. FAMU strongly supports funding for two important education programs under the Department of Commerce National Oceanic and Atmospheric Administration (NOAA), as well as education programs under the National Science Foundation Directorate for Education & Human Resources (EHR).

NOAA EDUCATION PARTNERSHIP PROGRAM WITH MINORITY SERVING INSTITUTIONS

FAMU is one of the four lead universities for the NOAA Education Partnership Program with Minority Serving Institutions (EPP/MSI) Cooperative Science Centers (CSCs), and as such we support the FY 2022 Senate recommended allocation of \$22

million for the program. The goal of the EPP/MSI is to increase the number of students, particularly from underrepresented communities, who attend MSIs and graduate with degrees in science, technology, engineering, and mathematics (STEM) relevant to NOAA's mission.

In August 2016 under the EPP/MSI program, NOAA awarded Cooperative Science Centers (CSCs) to four universities under 5-year cooperative agreements. This was the latest round of CSC awards since the program was first established in 2001. FAMU is the lead university for the Center for Coastal and Marine Ecosystems, one of the four CSCs. Our partners include Bethune Cookman University, California State University Monterey Bay, Jackson State University, Texas A&M University (Corpus Christi), and the University of Texas Rio Grande Valley. The annual appropriation supports FAMU, along with other lead MSIs, which partner with 24 additional U.S. colleges and universities as part of the CSC program with faculty and students conducting research that further supports NOAA's mission.

In April 2022, FAMU hosted Phase II of the Tenth Biennial NOAA EPP/MSI Education and Science Forum with over 460 registrants after holding the first phase virtually in 2021 due to COVID-19 concerns. The focus of the Forum is expanding academic training in NOAA-mission STEM disciplines, through partnership activities as well as promoting career opportunities for STEM graduates in the public, private, and academic sectors.

Since 2001, NOAA EPP/MSI Cooperative Science Centers institutions have awarded post-secondary degrees to over 2,500 students in fields that support NOAA's mission. Over the same time period, these institutions awarded over half of the doctoral degrees that were earned by African Americans in both atmospheric science and marine science in the United States. We support an increase in funding for this critical program, which supports NOAA-related research, increases diversity of the STEM workforce and fosters American competitiveness in STEM fields. We urge the subcommittee to again recommend an allocation of \$22 million for the NOAA EPP/MSI program.

NOAA NATIONAL SEA GRANT COLLEGE PROGRAM

FAMU also strongly supports the subcommittee providing the FY 2022 Senate recommended allocation of \$90 million for NOAA's National Sea Grant College Program, which works to create and maintain a healthy coastal environment and economy. The Sea Grant network consists of a federal/university partnership between NOAA and 34 university-based programs in every coastal and Great Lakes state, Puerto Rico, and Guam. The network draws on the expertise of more than 3,000 scientists, engineers, public outreach experts, educators, and students to help citizens better understand, conserve, and utilize America's coastal and Great Lakes resources.

The Florida Sea Grant program is a Statewide program headquartered at the University of Florida. The program supports research, education and extension to conserve coastal resources and enhance economic opportunities for the citizens of Florida. Since 1997, faculty and students at 13 participating institutions, including FAMU, have received Federal funding from the Florida Sea Grant. In 2020, the economic impact of the Florida Sea Grant program was \$16.6 million and resulted in 465 jobs created or sustained. The program also supported a variety of research and training relevant to Florida's coastal communities and related industries, including developing a model to project future flood risks to support Florida's coastal resiliency plans. The program augments the State's artificial reef efforts and helps to protect, enhance and restore coastal habitat. Nationally, the Sea Grant program had an economic impact of \$519.5 million in 2021, far exceeding the Federal investment in the program. The national program helped to create or sustain 11,044 jobs and 1,332 businesses. It also supported over 2,000 graduate and undergraduate students and fellows.

Last year, the Senate proposed to substantially increase funding for the National Sea Grant College Program under NOAA's Office of Oceanic and Atmospheric Research (OAR). Continued funding for this program, which has been in existence for more than 50 years, is critical to supporting Great Lakes and coastal communities, including those in Florida, through research, extension and education. FAMU, as a member of the Florida Sea Grant program, urges the subcommittee to again recommend an allocation of \$90 million for the Sea Grant program.

NATIONAL SCIENCE FOUNDATION EDUCATION PROGRAMS

The NSF Directorate for Education and Human Resources (EHR) supports a wide variety of programs across all levels of education in science, technology, engineering and mathematics (STEM). In particular, FAMU supports funding for the broadening

participation programs aimed at increasing the participation of underrepresented populations in STEM education and, ultimately, the STEM workforce. These programs include the Historically Black Colleges and Universities Undergraduate Program (HBCU-UP). FAMU urges the subcommittee to support the President's budget request of \$48.5 million for HBCU-UP.

FAMU has received significant research funding through NSF, which has supported various research projects as well as programs to promote underrepresented minorities in STEM careers. FAMU continues to pursue NSF resources for innovative projects and encourages the subcommittee to provide robust funding for NSF's education programs.

The President's FY 2023 budget requests \$1.38 billion for NSF's EHR programs. The budget also proposes an increase in the HBCU-UP program. Funding at the President's budget request for EHR and the HBCU-UP would allow NSF to expand its important work of supporting STEM education programs, particularly its broadening participation programs directed at underrepresented populations.

We urge the subcommittee to support funding increases for these critical NOAA and NSF education programs. We thank you for your continued support of Federal postsecondary initiatives that not only directly benefit our University but our region and our Nation as well. Thank you for your consideration.

[This statement was submitted by Larry Robinson, PhD, President]

PREPARED STATEMENT OF THE GEOLOGICAL SOCIETY OF AMERICA

The Geological Society of America (GSA) supports increased investments in geoscience research and education at the National Science Foundation (NSF) and National Aeronautics and Space Administration (NASA). GSA encourages Congress to appropriate at least \$11 billion for NSF in Fiscal Year 2023 and provide increases to NASA's Science Mission Directorate and its Earth Science and Planetary Science Divisions. Investment in NSF and NASA is necessary to secure America's future economic leadership, both through the discoveries made and the talent developed through their programs. For the United States to remain a global leader, the Nation must provide greater investment in its people, particularly women and individuals from other groups traditionally underrepresented in STEM fields. Earth and space science at these two agencies play a vital role in American prosperity and security through understanding and documenting mineral and energy resources that underpin economic growth; researching and monitoring potential natural hazards that threaten U.S. and international security; informing communities about the impacts of a changing climate; and determining and assessing water quality and availability.

GSA is a scientific society with members from academia, government, and industry in more than 100 countries. Through its meetings, publications, and programs, GSA enhances the professional growth of its members and promotes the geosciences in the service of humankind. GSA encourages cooperative research among earth, life, planetary, and social scientists, fosters public dialogue on geoscience issues, and supports all levels of earth science education.

NATIONAL SCIENCE FOUNDATION

The Geological Society of America (GSA) appreciates the increase to the National Science Foundation (NSF) budget in FY 2022 and thanks the Committee for recognizing the important role that the agency plays in our country's global competitiveness. We urge Congress to provide NSF at least \$11 billion in FY 2023. Increases in funding will allow NSF to continue to support its core basic research in addition to growing investments in its Ten Big Ideas and other transformational research, such as that funded by the new Directorate for Technology, Innovation and Partnerships (TIP).

Sustained increases beyond inflation are necessary to regain America's science and technology leadership and to enable the discoveries that lead to future innovations and industries. Data from the Merit Review Process Fiscal Year 2020 Digest show that NSF receives many more high-quality proposals than it can fund. In FY 2020, NSF was only able to fund 28% of the proposals received. The report noted, "Approximately \$3.9 billion was requested for declined proposals that were rated Very Good or higher in the merit review process—proposals that, if funded, may have produced substantial research and education benefits."

Geoscience research is a critical component of the overall science and technology enterprise and a key contributor to groundbreaking research across disciplines at NSF. Increased investments in NSF's geoscience portfolio are necessary to address

pressing issues including natural hazards, energy and minerals, water resources, and education.

- There is a vital need to understand the abundance and distribution of critical mineral resources, as well as the geologic processes that form them, as articulated in the Energy Policy Act of 2020. NSF's Division of Earth Sciences supports research on the structure, composition, and evolution of the Earth and the processes that govern the formation and behavior of the Earth's materials. This research contributes to a better understanding of the natural distribution of mineral and energy resources.
- The quality and quantity of surface water and groundwater have a direct impact on the wellbeing of societies and ecosystems, as evidenced by flooding and drought impacts experienced across the U.S. during the past year. NSF's research addresses major gaps in our understanding of water availability, quality, and dynamics, including the impact of both a changing climate and human activity on the water system.
- The Division of Atmospheric and Geospace Sciences provides critical infrastructure and research funding for understanding our planet, including weather and precipitation variability, atmospheric conditions, and space weather hazards. NSF is a key partner in obtaining data necessary to predict severe space weather events, which affect the electric power grid, satellite communications, and navigation systems, as noted in The Promoting Research and Observations of Space Weather to Improve the Forecasting of Tomorrow Act (PROSWIFT Act), which was signed into law in October of 2020.
- Understanding the oceans is key to a sustainable future. The National Research Council report *Sea Change, 2015–2025 Decadal Survey of Ocean Sciences* highlights areas of research that are needed to make informed decisions. These include better characterizing risk and the ability to forecast geohazards such as earthquakes, tsunamis, undersea landslides, and volcanic eruptions; rates, mechanisms, impacts, and geographic variability of sea level change; and changes in the marine food.
- Natural hazards are a major cause of fatalities and economic losses. NOAA found in 2021 alone, 20 weather/climate disaster events with losses greater than \$1 billion. An improved scientific understanding of hazards will reduce future losses by informing effective planning and mitigation. We urge Congress to support NSF investments in fundamental Earth science research and facilities that underpin innovations in natural hazards monitoring and warning systems. For example, the Coastlines and People Hubs for Research and Broadening Participation initiative aims to understand the impacts of coastal environmental variability and natural hazards on populated coastal regions.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

GSA appreciates past committee support of NASA Science and requests increases to NASA's Science Mission Directorate and its Earth Science and Planetary Science Divisions in FY 2023 as proposed in the President's budget request. Increased funding will be critical to implement the recommendations of the National Academy of Sciences report, *Thriving on Our Changing Planet: A Decadal Strategy for Earth Observation from Space*. The report notes:

"Earth science and derived Earth information have become an integral component of our daily lives, our business successes, and society's capacity to thrive. Extending this societal progress requires that we focus on understanding and reliably predicting the many ways our planet is changing."

The data and observations from Earth observing missions and research are a tremendously important resource for natural resource exploration and land use planning, as well as assessing water resources, natural disaster impacts, global agriculture production. The Landsat satellites have amassed the largest archive of remotely sensed land data in the world. On September 27, 2021, the NASA/USGS Landsat program launched its ninth satellite in its 50 year program that will operate in tandem with Landsat 8 and replace Landsat 7. GSA supports interagency efforts to ensure the future viability of Landsat satellites as well as funding to increase the capabilities and uses of multi-spacecraft constellations of small scientific satellites.

By looking at our planet as an integrated system, NASA's Earth and climate science efforts are among the Nation's most effective tools to understand and tackle climate change. For example, NASA's new Earth System Observatory consists of a series of Earth-focused missions that will create a holistic view of the Earth to provide key information related to climate change, natural hazards and agricultural

processes. In addition, NASA's proposal to create an Earth Information Center will make data more accessible to communities most affected by climate change.

Planetary research is directly linked to Earth science research and cuts in either program will hinder the other. In order to support missions to better understand the workings of the entire solar system, planetary scientists engage in both terrestrial field studies and Earth observation to examine geologic features and processes that are common on other planets, such as impact structures, volcanic constructs, tectonic structures, and glacial and fluvial deposits and landforms. In addition, geochemical planetary research studies include investigations of extraterrestrial materials now on Earth, including lunar samples, meteorites, cosmic dust particles, and, most recently, particles returned from comets and asteroids. We appreciate past congressional support for Planetary Science and urge you to continue to investment to allow NASA to move forward with priority missions as identified in the recent decadal survey, *Origins, Worlds, and Life: A Decadal Strategy for Planetary Science and Astrobiology 2023–2032*.

SUPPORT NEEDED TO EDUCATE FUTURE INNOVATORS

For the United States to remain a global leader, the Nation must provide greater investment in its people, including women and individuals from other groups traditionally underrepresented in STEM fields. NSF's Education and Human Resources Directorate researches and improves the way we teach science and provides research and fellowship opportunities for students that encourage them to continue in the sciences. Similarly, NASA's educational programs, led by NASA's Office of STEM Engagement and directorates, have inspired and led many into science careers. GSA fully supports these efforts, as well as additional programs to make the geoscience workforce more diverse, such as NSF INCLUDES. Inclusion across the Nation of Communities of Learners of Underrepresented Discoverers in Engineering and Science.

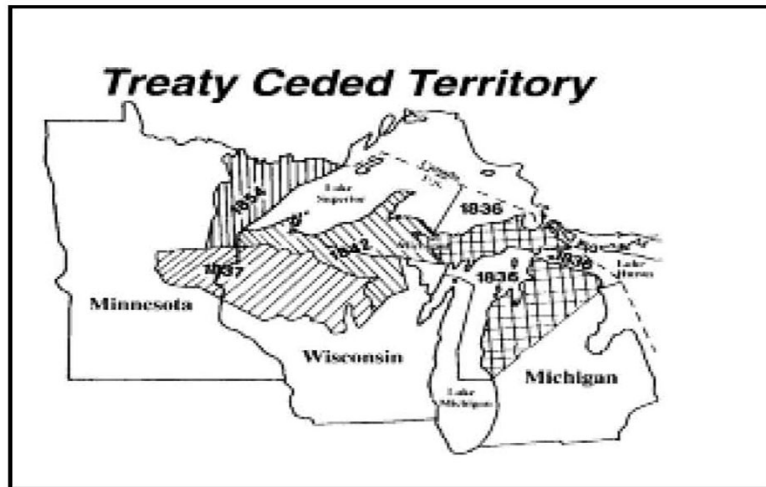
Please contact GSA Director for Geoscience Policy Kasey White to learn more about the Geological Society of America—including GSA Position Statements on water resources, planetary research, energy and mineral resources, natural hazards, climate change, and public investment in Earth science research.

PREPARED STATEMENT OF GREAT LAKES INDIAN FISH AND WILDLIFE COMMISSION (GLIFWC)

Summary of GLIFWC'S FY 2023 Testimony.—GLIFWC supports sustained funding for the TRGP at no less than the FY 2022 enacted funding level. GLIFWC is closely monitoring misinformation and harassment related to the exercise of treaty rights and is working proactively with other jurisdictions to address social conflict and prevent its potential progression into extremism. This program has enabled GLIFWC to solidify its communications, training, and equipment requirements, essential to ensuring the safety of GLIFWC officers and the role of GLIFWC Conservation officers within the proper functioning of interjurisdictional emergency mutual assistance networks in the treaty ceded territories.

Ceded Territory Treaty Rights and GLIFWC'S Role.—GLIFWC was established in 1984 as a "Tribal organization" within the meaning of the Indian Self-Determination Act (Public Law 93–638). It exercises authority delegated by its member Tribes to implement Federal court orders and various interjurisdictional agreements related to their treaty rights. GLIFWC assists its member Tribes in:

- X securing and implementing treaty guaranteed rights to hunt, fish, and gather in Chippewa treaty ceded territories; and
- X cooperatively managing, restoring and protecting ceded territory natural resources and their habitats.



For over nearly 40 years, Congress and various Administrations have funded GLIFWC through the BIA, the Department of Justice, and other agencies to meet specific Federal obligations under: (1) a number of US/Chippewa treaties;¹ (2) the Federal trust responsibility; (3) the Indian Self-Determination and Education Assistance Act, the Clean Water Act, and other Federal legislation; and (4) various court decisions, including a 1999 US Supreme Court case, that affirmed the treaty rights of GLIFWC's member Tribes. Under the direction of its member Tribes, GLIFWC operates a ceded territory hunting, fishing, and gathering rights protection/implementation program through its staff of biologists, scientists, technicians, conservation enforcement officers, and public information specialists.

Community-Based Policing.—GLIFWC's officers carry out their duties through a community-based policing program. The underlying premise of that program is that effective detection and deterrence of illegal activities, as well as education of the regulated constituents, are best accomplished if the officers work within the Tribal communities they primarily serve. The officers work with reservation communities of the following member Tribes: in Wisconsin—Bad River, Lac Courte Oreilles, Lac du Flambeau, Red Cliff, Sokaogon Chippewa (Mole Lake), and St. Croix; in Minnesota—Fond du Lac and Mille Lacs; and in Michigan—Bay Mills, Keweenaw Bay, and Lac Vieux Desert. To help develop mutual trust between GLIFWC officers and Tribal communities, officers provide outdoor skills workshops and safety classes (hunter, boater, snowmobile, ATV) to Tribal youth in grades 4–8. GLIFWC's officers also actively participate in summer and winter youth outdoor activity camps, kids fishing events, workshops on canoe safety and rice stick carving, and seminars on trapping and archery/bow safety.

During the COVID-19 pandemic, GLIFWC's member Tribes saw a rise in harassment incidents across the ceded territory. GLIFWC's Conservation Officers have responded by increasing their coordination and cooperation with local law enforcement and by documenting and mapping the locations of these incidents. In May 2021, a roundtable discussion was held that included Senator Tammy Baldwin, Wisconsin Governor Tony Evers, DNR Secretary Preston Cole, Tribal leaders, and State and Tribal law enforcement to discuss how best to prevent and respond to these incidents. GLIFWC Conservation Officers have also increased their outreach to county sheriff's departments.

GLIFWC's member Tribes realize it is critical to build relationships between Tribal youth and law enforcement officers as a means of combatting gang recruitment and drug/alcohol abuse in reservation communities. GLIFWC is continuing to implement community policing strategies to build community relationships targeting

¹Specifically, the Treaty of 1836, 7 Stat. 491; Treaty of 1837, 7 Stat. 536; Treaty of 1842, 7 Stat. 591; and Treaty of 1854, 10 Stat. 1109. The rights guaranteed by these treaties have been affirmed by various court decisions, including a 1999 U.S. Supreme Court case.

Tribal youth. GLIFWC Conservation Officers continue to work to improve and expand youth outdoor recreation activities to help prevent violations of Tribal off-reservation codes, improve public safety and promote an outdoor lifestyle as an alternative to potentially turning to violence² and substance abuse³. GLIFWC, in partnership with the U.S. Forest Service, plans to resume its Camp Onji-Akiing (From the Earth) in 2022.

Interaction With Law Enforcement Agencies.—GLIFWC's Conservation Officers are integral members of regional emergency services networks in Minnesota, Michigan, and Wisconsin. They not only enforce the Tribes' conservation codes but are fully certified officers who work cooperatively with authorities from other jurisdictions when they detect violations of State or Federal criminal and conservation laws. These partnerships evolved from the inter-governmental cooperation required to combat the violence experienced during the early implementation of treaty rights in Wisconsin. As time passed, GLIFWC's professional officers continued to provide a bridge between local law enforcement and many rural Indian communities.

GLIFWC remains at this forefront, using DOJ funding to develop interjurisdictional legal training that is attended by GLIFWC officers, Tribal police and conservation officers, Tribal judges, Tribal and county prosecutors, and State and Federal agency law enforcement staff. DOJ funding has also enabled GLIFWC to certify its officers as medical emergency first responders, and to train them in search and rescue, particularly in cold water rescue techniques. When a crime is in progress or emergencies occur, local, State, and Federal law enforcement agencies look to GLIFWC's officers as part of the mutual assistance networks. In fact, the role of GLIFWC's officers in these networks was further legitimized in 2007 by the passage of Wisconsin Act 27, which affords GLIFWC wardens the same statutory safeguards and protections that are afforded to their DNR counterparts. GLIFWC wardens now have access to the criminal history database and other information to identify whom they are encountering in the field so that they can determine whether they are about to face a fugitive or some other dangerous individual.

GLIFWC's participation in mutual assistance networks located throughout a 60,000 square mile region increases public safety in an effective and cost-efficient manner. In 2020, GLIFWC officers utilized prior DOJ funded training and equipment to assist in the patrol of 276,345 vehicle miles. GLIFWC officers continued to assist federal, State and local officers in: (1) responding to emergency backup requests from other law enforcement agencies; (2) accidents; (3) search and rescue operations; (4) medical calls including requiring CPR and an AED to resuscitate citizens; and (5) removing commercial fishing nets that have been damaged due to Lake Superior's strong storms or vandalism which pose navigation hazards.

Looking to the Future.—Tribal members are relying more heavily on off-reservation treaty harvesting activities, especially given the ongoing pandemic and rapidly increasing food costs. This necessitates more outreach to Tribal members to ensure they are exercising their rights safely and within Tribal regulations. It also requires education of the non-Tribal public about treaty rights. This work will proactively prevent and deter social conflict. GLIFWC's Conservation Officers are an integral part of this work and work closely with GLIFWC's public information staff to ensure that timely and accurate information about treaty rights is provided through GLIFWC media as well as the media outlets of other jurisdictions.

[This statement was submitted by Michael J. Isham, Executive Administrator]

PREPARED STATEMENT OF HUMAN FACTORS AND ERGONOMICS SOCIETY

On behalf of the Human Factors and Ergonomics Society (HFES), we are pleased to provide this written testimony to House Appropriations subcommittee on Commerce, Justice, and Science, and Related Agencies for the official record. HFES urges the subcommittee to provide at least \$11 billion for the National Science Foundation (NSF) in the fiscal year (FY) 2023 appropriations process. In addition, HFES supports efforts by NSF to broaden participation in science for underrepresented groups to ensure a diverse, equitable, and inclusive workforce and research

²The American Indian and Alaska Native (AI/AN) youth population is more affected by gang involvement than any other racial population. 15% of AI/AN youth are involved with gangs compared to 8% of Latino youth and 6% of African American youth nationally. (National Council on Crime and Delinquency: Glesmann, C., Krisberg, B.A., & Marchionna, S., 2009).

³22.9% of American Indian and Alaska Native (AI/AN) youth aged 12 and older report alcohol use, 18.4% report binge drinking and 16.0% report substance dependence or abuse. In the same group, 35.8% report tobacco use and 12.5% report illicit drug use. (2010 National Survey on Drug Use and Health: Summary of National Findings).

enterprise, such as the INCLUDES and ADVANCE initiatives. These efforts are critical to not only fixing inequities in the U.S. research enterprise but also to ensuring that the U.S. has the robust, 21st Century workforce needed to maintain its competitive edge in technological innovation.

HFES is a multidisciplinary professional association with over 3,000 individual members worldwide, comprised of scientists and practitioners, all with a common interest in enhancing the performance, effectiveness, and safety of systems with which humans interact through the design of those systems' user interfaces to optimally fit humans' physical and cognitive capabilities. The Society and its members strongly believe that investment in scientific research serves as an important driver for innovation and the economy, national security, and maintaining American global competitiveness. Funding for fundamental research at NSF to address national and societal needs will be critical as Congress looks at legislation to ensure the U.S. remains the global leader in advancing science and technology. We thank the subcommittee for its longtime recognition of the value of scientific and engineering research and its contribution to innovation in the U.S.

HUMAN FACTORS AND ERGONOMICS AT THE NATIONAL SCIENCE FOUNDATION

HFES and its members strongly believe that Federal investment in NSF will have a direct and positive impact on the U.S. economy, national security, and the health and well-being of Americans. It is for these reasons that HFES supports robust funding for the Foundation to encourage further advancements in the fields of technology, education, defense, and healthcare, among others. In the past, NSF funding for HF/E basic research has strengthened interdisciplinary partnerships allowing for a multilateral approach to technology research and development, including the human and user perspectives. The benefits of this research are not confined to one field but rather span across a range of disciplines to increase understanding of the way humans interact with technology, as well as with each other.

In particular, NSF funds HF/E research to:

- Better understand and improve the effectiveness of how individuals, groups, organizations, and society make decisions.¹
- Improve understanding of the relationship between science and engineering, technology, and society, in order to advance the adoption and use of technology.²
- Gain a better understanding of how humans and computers interact to ensure the development of new devices or environments that empower the user.³
- Inform decision making in engineering design, control, and optimization to improve individual engineering components and entire systems.⁴

HF/E research will be especially critical as Congress and the Federal Government work to develop, adopt, and broadly integrate emerging technologies such as artificial intelligence (AI). HFES recognizes that most systems that rely on AI will not operate independently but will be initially programmed and trained by humans to augment, collaborate, or perform specific tasks.

The HF/E profession has conducted detailed research on impacts of AI on human performance, and HFES believes AI must be designed to successfully support human capabilities and overcome known human cognitive limitations, so that humans can understand the actions and intentions of AI. More research is needed to understand how systems can be designed to overcome AI biases, provide transparency and explainability for human use, and provide clear interfaces for human-AI interactions. Interdisciplinary research programs at NSF to address these challenges, such as its Fairness in Artificial Intelligence program⁵ and the AI Research Institutes⁶, will be critical to ensuring the U.S. achieves the promised benefits AI can bring to society.

THE VALUE OF HUMAN FACTORS AND ERGONOMICS SCIENCE

For over 50 years, the U.S. Federal Government has funded scientists and engineers to explore and better understand the relationship between humans, tech-

¹Decision, Risk & Management Sciences (DRMS) Program (http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5423).

²Science and Technology Studies (STS) Program (https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505697).

³Human Centered Computing (HCC) Program (https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504958).

⁴Operation and Design Cluster (http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13473).

⁵NSF Program on Fairness in Artificial Intelligence in Collaboration with Amazon (FAI) (https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505651).

⁶Artificial Intelligence Research Institutes (https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505686).

nology, and the environment. Originally stemming from urgent needs to improve the performance of humans using complex systems such as aircraft during World War II, the field of human factors and ergonomics (HF/E) works to develop safe, effective, and practical human use of technology. HF/E does this by developing scientific approaches for understanding this complex interface, also known as “human-systems integration.” Today, HF/E is applied to fields as diverse as transportation, architecture, environmental design, consumer products, electronics and computers, energy systems, medical devices, manufacturing, office automation, organizational design and management, aging, farming, health, sports and recreation, oil field operations, mining, forensics, and education.

With increasing reliance by Federal agencies and the private sector on technology-aided decision-making, HF/E is vital to effectively achieving our National objectives. While a large proportion of HF/E research exists at the intersection of science and practice—that is, HF/E is often viewed more at the “applied” end of the science continuum—the field also contributes to advancing “fundamental” scientific understanding of the interface between human decision-making, engineering, design, technology, and the world around us through research funded by NSF. The reach of HF/E is profound, touching nearly all aspects of human life from the health care sector to the ways we travel, to the hand-held devices we use every day.

CONCLUSION

Given NSF’s critical role in supporting fundamental research and education across science and engineering disciplines, HFES supports an overall FY 2023 NSF budget of at least \$11 billion. This investment funds important research studies, enabling an evidence-base, methodology, and measurements for improving organizational function, performance, and design across sectors and disciplines.

On behalf of HFES, we would like to thank you for the opportunity to provide this testimony. Please do not hesitate to contact us should you have any questions about HFES or HF/E research. HFES truly appreciates the subcommittee’s long history of support for scientific research and innovation.

[This statement was submitted by Steven C. Kemp, CAE, Executive Director]

PREPARED STATEMENT OF HUMANE SOCIETY LEGISLATIVE FUND AND THE HUMANE SOCIETY OF THE UNITED STATES

Chair Shaheen, Ranking Member Moran, and Members of the subcommittee, thank you for this opportunity to offer testimony on matters of importance to our organizations and to our millions of supporters. We thank you for the support and investment in animal protection in the subcommittee’s Fiscal Year 2022 appropriations bill. We appreciate your continued consideration for the following requests in the Fiscal Year 2023 Department of Commerce, Justice, Science, and Related Agencies budget:

- NOAA North Atlantic Right Whales: at least \$26 million
- NOAA Protected Resources: increase of at least \$30 million
- NOAA John H. Prescott Marine Mammal Rescue Assistance Grant Program: \$8 million
- Marine Mammal Commission: \$6 million
- DOJ Animal Welfare Act enforcement: report language for DOJ–USDA MOU

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION—NORTH ATLANTIC RIGHT WHALE CONSERVATION

We, along with coalition partners, request at least \$26 million in the National Oceanic and Atmospheric Administration (NOAA) budget to support the recovery of the critically endangered North Atlantic right whale, which is plunging ever closer to extinction due to fishing gear entanglements and vessel strikes. Recently updated estimates for the species indicate that from January 2019 to January 2020, the population plummeted by eight percent to 336 individuals—a rate of decline forty times the legal limit. This is the lowest assessment in decades.

Within the \$26 million for North Atlantic right whale conservation, we request the following allocations:

Within Marine Mammals, Sea Turtles, and Other Species

- \$12,000,000 for the continued development and implementation of new rules from NOAA aimed at reducing the mortality rate of North Atlantic right whales by vessel strikes, fishing gear entanglements, and other threats to their survival. This funding should also be used for regulatory and management support to both reduce vessel-strike risk in high-traffic areas and to facilitate a transi-

tion to commercial fishing gear known to reduce gear entanglement risk with a strong focus on fishermen education and outreach.

- \$8,000,000 to expand the pilot program to refine and field test innovative fishing gear technologies designed to reduce North Atlantic right whale entanglements. As determined by the agency's needs, some funding within this amount should be directed towards the development of geolocation technologies and mapping. Lastly, research on how to lower the cost of new gear technologies should also be included.
- \$3,000,000 for: (1) Enforcement activities of offshore lobster fisheries in Massachusetts and Maine, related to personnel and vessel needs, monitoring, gear removal, and surveys (2) Enforcement activities of current and future vessel speed restrictions.
- \$2,000,000 for surveys and monitoring, including underwater acoustic gliders, of North Atlantic right whales in Atlantic coastal waters.
- \$1,000,000 for disentanglement, stranding response, and necropsy activities.
- 3 percent cap on the amount of funds NOAA can use internally.

Within Fisheries Data Collections, Surveys, and Assessments

\$300,000 to continue conducting the continuous plankton recorder survey that will enhance our understanding of the distribution and movement of *Calanus* spp., the primary prey of the North Atlantic right whale.

We thank the subcommittee for its continued commitment to ensuring the survival of the critically endangered North Atlantic right whale.

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION—OFFICE OF PROTECTED RESOURCES

In the last few years, we have seen other imperiled marine species reach crisis status. The Southern Resident killer whale population is at its lowest levels in 20 years. The number of vaquitas—the smallest and most endangered marine mammal on Earth—has plummeted by 90 percent in recent years; scientists estimate that a mere 10 vaquitas might remain in the world. Without bold, immediate action, their extinction is virtually assured. Each of these tragic declines underscores the danger of being complacent and failing to provide robust funding to the National Marine Fisheries Service. Thus, we recommend a \$30 million increase in funding to the agency's protected resources budget to prevent any more of our amazing marine species slipping irrevocably to extinction.

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION—JOHN H. PRESCOTT MARINE MAMMAL RESCUE ASSISTANCE GRANT PROGRAM

We request \$8 million in FY23 for the John H. Prescott Marine Mammal Rescue Assistance Grant Program, an increase from \$4 million in FY22. The Prescott program provides competitive grants to marine mammal stranding organizations to rescue, rehabilitate, or investigate sick, injured, or distressed live marine mammals, and to investigate and determine the cause of death or injury to these animals. The program is the sole source of Federal funding for the National Marine Mammal Stranding Network, comprising more than 90 member organizations in 26 States, the District of Columbia, two territories, and two Tribes. Funds are awarded only if at least 25 percent of non-federal matching funds are also committed, and no single award may exceed \$100,000. To date, NOAA has issued 794 Prescott program awards to the National stranding network, totaling over \$67 million in Federal funding and over \$28 million in non-federal funding.

MARINE MAMMAL COMMISSION

For FY23, we urge that the Marine Mammal Commission (MMC) budget be increased to \$6 million to help restore the Commission's key oversight role in conserving marine mammals. The U.S. taxpayer contributes just over 1 cent per year to fund this agency and its work. Starting in FY15, the MMC had been flat-funded at \$3.43 million. MMC funding increased slightly to \$3.769 million in FY21, and to \$4.2 million in FY22. Despite that, the agency's actual discretionary funding has declined due to rising fixed costs such as salaries and rent. Providing \$6 million in funding for FY23 would enable the MMC to fulfill its obligations under the Marine Mammal Protection Act.

DEPARTMENT OF JUSTICE—ANIMAL WELFARE ACT ENFORCEMENT

The Animal Welfare Act (AWA) sets basic standards of care for animals used in research, exhibition, transport, and sales. This law is crucial to protecting over a million animals from inhumane care and treatment. Yet many dealers, exhibitors,

and research facilities are getting away with egregious abuses. Enforcement of the AWA must be strengthened because the U.S. Department of Agriculture's (USDA) enforcement actions have not been frequent or strong enough to stop those engaging in abuse or to deter potential violators of the law. Without vigorous enforcement of this important law, there is no deterrent for violators and animals will continue to suffer. To keep up with the sheer number of animals in need of AWA protection, the USDA needs help.

The Department of Justice's Environment and Natural Resources Division (DOJ) already works tirelessly to ensure that full effect is given to the Federal statutes and enforcement regimes that provide for the humane treatment of captive, farmed, and companion animals across the United States—including sections of the AWA. However, to provide the Department with additional tools to take action against dealers, exhibitors, and research facilities that violate the AWA, we encourage the inclusion of report language calling on USDA and DOJ to develop a Memorandum of Understanding to facilitate a partnership in enforcing the AWA, and to create a formalized structure for USDA to partner and share information on AWA violators with DOJ.

As such, we urge the inclusion of this report language: The Committee urges the Department to enter into a memorandum of understanding with the Secretary of Agriculture to encourage greater collaboration on Animal Welfare Act enforcement and ensure that the Department of Justice has access to evidence needed to initiate cases.

[This statement was submitted by Jocelyn Ziemian, Senior Legislative Specialist, Humane Society Legislative Fund]

PREPARED STATEMENT OF INDIGENOUS CANNABIS COALITION

Dear Chairman Shaheen and Ranking Committee Members,

As Tribal leaders, Tribal citizens, organizations and cannabis advocates, we publicly endorse the Fiscal Year 2023 appropriations legislation for the Commerce Justice and Science subcommittee and the support for Tribal sovereignty and the implementation of Indian treaty rights and self-determination in cannabis commerce. We believe that responsible regulation and control of marijuana by Tribes in their respective homelands is beneficial to society and the public's health, and provides safer alternatives to the illicit cartel economies that occur in States that continue the practice of criminalizing black and brown communities with failed marijuana policies.

We support the 2023 appropriations bill's new policy language that says no Federal funds appropriated to agencies within Interior, Justice Department, Bureau of Indian Affairs or Office of Justice Services could be used to "enforce Federal laws criminalizing the use, distribution, possession, or cultivation of marijuana against any person engaged in the use, distribution, possession, or cultivation of marijuana in Indian country" where such activity is authorized, we are highly concerned that the new contingencies create further discriminatory practices and fails to protect Tribal sovereignty.

We ask that the members of this committee pass this House measure specifically regarding provisions on the Federal enforcement of cannabis on Indian lands. The language reflects Tribal sovereignty for all 574 federally recognized Tribes and does not allow for State law to supersede Tribal law regarding trade and commerce in cannabis, an imperative aspect of upholding the trust responsibility and uplifting self-determination.

[This statement was submitted by Mary Jane Oatman, Executive Director (Nez Perce/Delaware) Kamiah, ID]

PREPARED STATEMENT OF INSIGHTS ASSOCIATION

On behalf of the Insights Association (IA), the leading nonprofit trade association for the market research and data analytics industry, I am respectfully submitting testimony on the U.S. Census Bureau's "Ask U.S. Panel" project and the bill language and committee report language we are seeking. The project is presumably funded through the Current Surveys and Programs account, though the President's FY23 budget request makes no mention of it.

IA defends and promotes the indisputable role of insights in driving positive impacts on society and consumers. Our more than 7,000 company and individual members are the world's leading producers of intelligence, analytics and insights defining

the needs, attitudes and behaviors of consumers, organizations and their employees, students and citizens. With that essential understanding, leaders can make intelligent decisions and deploy strategies and tactics to build trust, inspire innovation, realize the full potential of individuals and teams, and successfully create and promote products, services and ideas.

The Ask U.S. Panel is being developed by the Bureau through a cooperative agreement to create a new “nationally representative survey panel for tracking public opinion on a variety of topics of interest to numerous Federal agencies and their partners, and for conducting experimentation on alternative question wording and methodological approaches.” The Bureau intends to spend at least the first 2 years of the project on a pilot before trying to make their panel probability-based in the third year (or later).

This lead time is particularly galling since numerous private sector insights companies and organizations currently provide well-established high-quality probability-based panels to the Federal Government and other customers without needing Federal subsidy and multiple years of development time. At best, the plan for the Census Bureau to develop a probability-based research panel is duplicative. It is also anti-competitive, given these existing panels and the Bureau’s intent to fund an additional insights organization (Research Triangle Institute) to spend years building one, whose intellectual property and technology that organization would get to keep for its own purposes.

Our industry is not the only interest raising concerns about the project. The Department of Commerce’s Office of the Inspector General (OIG) has initiated “an evaluation” of the “award and use of a cooperative agreement to participate in a joint statistical project with Research Triangle Institute, an independent nonprofit institution.” The OIG’s “objective is to determine whether the cooperative agreement was properly authorized, executed, and administered in accordance with relevant laws and regulations.”¹

Recent Congressional inquiries to the Bureau have been met with reference to this OIG evaluation as the reason for the Bureau’s inability to answer questions. However, if the OIG evaluation somehow prevents the Census Bureau from discussing the Ask U.S. Panel, should it not also prevent the continued pursuit of the project?

IA has requested bill language in CJS: “No funds in this bill may be spent in support or development of the Ask U.S. Panel or any similar effort to develop a survey, opinion or market research service duplicative of private sector offerings.”

Along with the prohibition on funds, IA also requested committee report language: “Ask U.S. Panel Survey. The Committee is concerned about the lack of transparency related to the Census Bureau’s plans for implementation of the Ask U.S. Panel Survey, particularly given the lack of congressional authorization and the expanding scope of the project since it was initially announced. The Committee also is concerned about the use of taxpayer dollars for the development of a panel survey given the wide range of options that currently exist in the private sector for these types of activities. The Committee directs the Census Bureau to provide a report to the Committee within 60 days about the panel’s methodology, data collection processes, implementation, and procurement strategy to allow the Committee to evaluate the project’s use of Federal resources.”

IA’s concerns include:

1. *Federal agencies can (and already do) purchase such services from the private sector.*—The ultimate goal of the Ask U.S. Panel project—to create a probability-based nationwide representative survey panel for tracking public opinion—is already being fulfilled utilizing numerous non-governmental sources. Insights providers such as Dynata, Gallup, Ipsos, NORC at the University of Chicago, SSRS, the University of Southern California, and others maintain probability-based research panels that could meet any needs of the Bureau or other Federal agencies. Most of them already successfully provide such services to Federal agency clients, including the Bureau itself. Plenty of other insights companies and organizations with panels could also adapt to provide probability-based panels if requested.

Since these insights providers offer their services commercially on the open market, the Census Bureau could acquire such panel research services with full and open competitions. So why does the Bureau feel the need to disregard the availability of ready commercial alternatives and develop its own panel?

¹Evaluation of the U.S. Census Bureau’s Award and Use of a Cooperative Agreement (#2022–420). January 14, 2022. <https://www.oig.doc.gov/OIGPublications/Evaluation-of-Census-Cooperative-Agreement.pdf>.

2. *The Ask U.S. Panel is an unnecessary financial burden on Federal taxpayers.*—Besides just the cost and expertise involved in establishing this duplicative service, the Census Bureau has not considered the immense expertise in data quality, incentive management and delivery, fraud detection, and privacy and permissions management required to successfully maintain this kind of panel. The Bureau has mentioned no planned procedures to monitor and mitigate attrition of panelists and how it would refresh the pool of available respondents. The multi-year pilot plan suggests they just hope to learn on the fly (an expensive gamble). Why should taxpayers fund the lengthy creation and complicated maintenance of such a duplicative service when it could be simply purchased in the open market for a tiny fraction of the cost?

The Bureau's supporting Statement to OMB estimates that the pilot will cost a mere \$3.5 million,² but this hides the true cost of the overall project, since actually building the panel, which the Bureau doesn't propose to even do until at least year three, would cost a massively greater amount. NORC estimates it would cost at least \$25 million to build this kind of online panel, with annual maintenance costing as much as \$2 million per year.³ Meanwhile, NORC estimates that studies from pre-existing probability-based panel providers could "be purchased for as little as \$100,000."⁴

3. *The Federal Government should not compete against the private sector.*—According to the original Notice of Federal Funding,⁵ the Ask U.S. Panel would be "open to government and other non-profit researchers and policy makers," meaning that the Bureau's proposed panel itself could compete directly with private sector insights providers.

Since 1955, Federal agencies have been charged with avoiding "activities conducted by the Government that provide services or products for its own use which could be procured from private enterprise through ordinary business channels".⁶ The policy required the head of an agency to make any exception to such restrictions "only where it is clearly demonstrated . . . that it is not in the public interest to procure such product or service from private enterprise." This policy was reiterated by every Administration following, including in OMB Circular A-76⁷ and other policies specifically requiring competitive sourcing.

The Census Bureau implies in a supporting Statement to OMB that it has conducted a competitive sourcing analysis, but in fact has only checked to see if the data to be collected in the pilot project stage is duplicative of other Federal Government agencies.⁸ That is no substitute for an actual competitive sourcing analysis.

4. *Government should not subsidize a private entity to develop (and keep for its own use) duplicative intellectual property.*—By using a cooperative agreement, under which the intellectual property (IP) developed is owned not by the Federal Government but by the awardee, the Census Bureau is using taxpayer funds to establish a panel that is free to be used by a private entity for its own work long after the contracted work is complete. Per the Department of Commerce Financial Assistance Standard Terms and Conditions (December 26, 2014, §D.03.a), the awardee "owns any work produced or purchased under a Federal award."

How could the best or most cost-effective way of pursuing the Census Bureau's research goals involve directly subsidizing a private entity to spend years developing a service already offered by other private entities?

CONCLUSION

We applaud the Census Bureau for their ongoing innovation and dedication to serve as the leading source of the highest quality and most representative data for

²Page 17. Supporting Statement Part A Ask US Pilot_4_4—22.docx https://www.reginfo.gov/public/do/PRAViewDocument?ref_nbr=202202-0607-008.

³NORC comments. February 22, 2022. Page 3. <https://www.regulations.gov/comment/USBC-2021-0024-0004>.

⁴NORC comments. February 22, 2022. Page 2. <https://www.regulations.gov/comment/USBC-2021-0024-0004>.

⁵CENSUS-ADR-ADRM-2020-2006579. U.S. Census Bureau Research and Methodology Directorate Cooperative Agreements. Department of Commerce. Page 10. <https://www.grants.gov/web/grants/search-grants.html?keywords=CENSUS-ADR-ADRM-2020-2006579>.

⁶Bureau of the Budget Bulletin 55-4. January 15, 1955. https://www.governmentcompetition.org/wp-content/uploads/2018/11/Bureauof_the_Budget_Bulletin_55-4_January_15_1955.pdf.

⁷<https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/circulars/A76/a076.pdf>.

⁸Page 5. Supporting Statement Part A Ask US Pilot_4_4—22.docx https://www.reginfo.gov/public/do/PRAViewDocument?ref_nbr=202202-0607-008.

America's people and economy. The Insights Association dedicates much of our daily advocacy to supporting the decennial census and the American Community Survey (ACS), the two essential Federal data sources underpinning statistical sampling/representativeness in almost all U.S. research studies.

The insights industry is no stranger to the importance of the Bureau and its core work; we want the Bureau to focus on that work and do it well.

IA remains gravely concerned about the shaky rationale and lack of need for the Ask U.S. Panel given numerous commercially-viable alternatives. The Census Bureau should be using the competitive marketplace of available insights services to acquire pre-existing research services on an as-needed basis, which would reduce public burden, save years of development time, and ultimately cost taxpayers a lot less money.

Thank you for allowing IA to testify on the Ask U.S. Panel project, an important under-the-radar issue in the FY23 CJS Appropriations legislation.

[This statement was submitted by Howard Fienberg, Senior VP Advocacy]

PREPARED STATEMENT OF INTERNATIONAL FUND FOR ANIMAL WELFARE

Chairwoman Shaheen, Ranking Member Moran, and Members of the subcommittee:

Thank you for the opportunity to offer testimony on the FY23 Commerce, Justice, Science, and Related Agencies Appropriations Act. The International Fund for Animal Welfare (IFAW) has 15 offices globally and works in more than 40 countries around the world. IFAW takes a holistic approach to innovating solutions for tough conservation challenges like conflicts between humans and wildlife, and illegal wildlife trafficking. IFAW's Marine Mammal Rescue Team, based on Cape Cod, Massachusetts, has also served as a first line of defense for stranded marine mammals in distress for more than 20 years. Our team investigates incidents involving human interactions with marine mammals, and, rescues dolphins, whales, seals, and other marine mammals, releasing them, whenever possible, back into the wild.

IFAW is grateful for this subcommittee's championship of strong marine conservation and research funding for the current fiscal year (FY22), and requests additional support for these programs in FY23 to meet urgent and growing needs.

Our oceans are in trouble. From the depletion of fish stocks to climate change, increasing ocean temperatures, noise pollution, and acidification, human activity threatens marine ecosystems that are vital to the health of our oceans and to all life on earth. Marine mammals are further impacted by changes that are occurring rapidly, such as increases in offshore wind energy and aquaculture, potentially exacerbating existing threats.

Fortunately, just as human activities are responsible for many of the current ocean threats, it is within our power to change our shared trajectory, and this subcommittee has jurisdiction over critical programs that can help to do just that. Given the severity of the challenges we face, IFAW respectfully asks the subcommittee to exert its leadership in order to reverse the alarming and interrelated climate and biodiversity emergencies by making substantial increases in funding for the important marine conservation programs within your purview. Doing so will help to protect ocean biodiversity, and will in turn have significant positive effects, including promoting healthy fish stocks, fighting climate change, and safeguarding human health and wellbeing.

For FY23, IFAW requests the following direction from the subcommittee within the National Oceanic and Atmospheric Administration's (NOAA) National Marine Fisheries Service Marine Mammals, Sea Turtles, and Other Species conservation programs:

NORTH ATLANTIC RIGHT WHALES: \$26.3 MILLION

Recent population surveys have found a decline in North Atlantic right whale (NARW) populations, and suggest that there are currently fewer than 340 individuals remaining. Urgent action must be taken NOW in order to save these iconic animals from extinction.

The NARW faces ongoing threats from fishing gear entanglement and vessel strikes, amongst other stressors. It is imperative that we continue to provide significant funding to conserve this imperiled species, better understand how it interacts with commercial fisheries and vessel traffic, and if needed, support the fishing industry in complying with last year's Atlantic Large Whale Take Reduction Plan (ALWTRP) rule.

Critical habitat for right whales frequently overlaps with commercial fishing grounds and areas of high vessel traffic, leaving the whales vulnerable to vessel col-

lisions and fishing gear entanglements, the two leading causes of injury and death to the species. Whales that survive these dangers are often subject to chronic stress and reproductive failure, further inhibiting the species' ability to recover. Due to human-caused threats, the population's mortality rate still exceeds the birth rate by a ratio of three to two.

By providing funding for NARW research and prioritizing cooperative research with fishermen, Congress can help generate innovative and long-term solutions for saving this endangered species—while preserving the essential economic activity of commercial fishing and shipping.

- \$12,000,000 for the continued development and implementation of new rules from NOAA to reduce mortality of NARWs from vessel strikes, fishing gear entanglements, and other threats to their survival. This funding should also be used to provide regulatory and management support to both reduce vessel-strike risk in high-traffic areas and to facilitate a transition to commercial fishing gear known to reduce gear entanglement risk, with a strong focus on fishermen education and outreach;
- \$8,000,000 to expand the existing pilot program to field test and refine innovative fishing gear technologies intended to reduce NARW entanglements. As determined by the agency's needs, some funding within this amount should be directed towards the development of gear geolocation technologies and toward strategies for lowering the cost of adoption of new gear technologies;
- \$3,000,000 for enforcement of current and future vessel speed restrictions and offshore lobster fisheries in Massachusetts and Maine, related to personnel and vessel needs, monitoring, gear removal, and surveys;
- \$2,000,000 for surveys and monitoring, including but not limited to underwater acoustic detection technologies, of NARW in Atlantic coastal waters;
- \$1,000,000 for disentanglement, stranding response, and necropsy activities;
- 3% cap on the amount of funds NOAA can use internally.

We also request an additional \$300,000 within Fisheries Data Collections, Surveys, and Assessment in order to continue conducting the continuous plankton recorder survey that will enhance our understanding of the distribution and movement of *Calanus finmarchicus*, the primary prey of the NARW.

JOHN H. PRESCOTT MARINE MAMMAL RESCUE ASSISTANCE GRANT PROGRAM:
\$15 MILLION

The Prescott Grant Program provides grants or cooperative agreements to eligible stranding network participants for the recovery and treatment of stranded marine mammals; the collection of data from living or dead stranded marine mammals; and for facility upgrades, operation costs, and staffing needs directly related to the recovery and treatment of stranded marine mammals and the collection of data from living or dead stranded marine mammals. In FY22, the Committee provided \$5 million for this important program. This year IFAW is requesting a significant increase to \$15 million.

The National Marine Mammal Health and Stranding Network provides critical services that allow NOAA to fulfil its duties under the Marine Mammal Protection Act (MMPA). Under the MMPA, the Secretary is responsible for the establishment of the Marine Mammal Health and Stranding Response Program (MMHSRP), composed of marine mammal experts including stranding response programs, scientists, and veterinarians who are charged with data collection on the health of marine mammals, observed trends of wild populations, and effective responses to unusual mortality events (UMEs) to better inform the collective management and conservation of marine mammal species. Without the support and efforts of stranding organizations who are fundamental to the collection and reporting of this data, NOAA's understanding of marine mammal health trends would be fatally flawed, putting NOAA at risk of violation of the MMPA. In addition, responders provide a crucial service that supports public safety, a timely and humane response, and life-saving care for marine mammals—including a variety of cetaceans and pinnipeds and endangered and threatened species—along the whole of the United States coast.

As threats to marine mammals are increasing, the financial constraints on the stranding network are also going up. It is estimated that for every entangled whale that is reported, another 10 are unseen. As a result of the COVID-19 pandemic, supply chain shortages and increased shipping costs are driving up prices in a realm that is already expensive. The provision of high-quality food and medication is key to the successful care and rehabilitation of all marine mammals in rehabilitation. Depending on the case, the testing necessary to reach a diagnosis for a patient can include radiology or advanced imaging (such as MRI or CT scans) in addition to the baseline diagnostics of complete blood counts, serum chemistry profiles, parasite

screens, and microbiology. Members maintain fleets of rescue vehicles to safely transport patients, and a hospital in which to care for them. The hospitals include pens with enclosed pools through which water is circulated. That water is filtered through a sophisticated system of filters before being sanitized and returned to the patient pools. This is key to maintaining good health for the patients, and the approach is one that importantly considers the environment in that water is conserved by this recirculation process.

Given the condition of our ocean and the threats to marine mammals currently, and in the future, reinforcing and appropriately building out the MMHSRP for timely, effective response in the interest of public service, animal welfare, disease surveillance, science and conservation will likely require a Federal investment of at least \$30 million. For FY23, IFAW respectfully asks for a significant investment of \$15 million in the Prescott Grant Program toward that total figure.

UNUSUAL/LARGE WHALE RESPONSE FUNDS: \$1 MILLION

A recent increase in large whale strandings along the Northeastern coast of the US has led the Federal Government to declare three separate, concurrent UMEs for minke whales, humpback whales, and the endangered NARW, respectively to further assess these mortalities. The primary cause of the NARW UME is human interaction, including vessel strikes and entanglements, and a number of live entangled NARW have also been included in the event. As fishing ropes have gotten stronger, entanglements have become more severe and it is increasingly more difficult for whales to break or shed the gear themselves. The likelihood of entanglement has also increased as right whale habitat and fisheries increasingly overlap due to changing ecosystems and climate change. Entanglement can lead to reductions in feeding capability, swimming efficiency, nutritional status, and fecundity and, in many cases, results in death. In fact, between 2010 and 2018, entanglements caused 72% of known-cause right whale deaths. Furthermore, observed deaths due to entanglement alone have exceeded the potential biological removal (PBR) levels, for both right and humpback whales in the Northwest Atlantic for nearly two decades, meaning that these human impacts are simply unsustainable for this population and have been ongoing for far too long. With the NARW on the brink of extinction, it is critical that action be taken now to address entanglements or this species will be lost forever.

Unfortunately, despite the importance of conducting thorough exams and necropsies on these critical cases and the technical expertise of stranding networks, effective large whale stranding response has become increasingly difficult. An increase in dead whale events, a lack of resources, including adequate staffing, necessary heavy equipment, appropriate carcass landing sites, and disposal options, as well as the expense associated with aerial surveys to locate carcasses, on-water towing, over-land hauling, heavy equipment hire, disposal and sample processing are critical limiting factors. While limited Federal funding is available for response to specific UME events, resources often are not sufficient to respond to every event sufficiently or for non-UME whale species.

The cost of a single stranding event involving a large whale can be as much as \$50,000 or more, making it difficult for responders to meet not only our country's legal conservation obligation to these large whales, but also a moral animal welfare obligation by expanding detection and mitigation of anthropogenic threats to these federally protected animals. IFAW therefore requests \$1 million for FY23 to be directed specifically to unusual or large whale stranding responses.

CONCLUSION

In closing, thank you for the opportunity to share IFAW's funding priorities to promote conservation in the FY2023 Commerce, Science, Justice and Related Agencies Appropriations Act. Our oceans and native marine species are more than our National heritage; they are essential aspects of the healthy ecosystems on which we all rely. We appreciate the continued leadership of this subcommittee on conservation efforts. With your support, we can reverse the tide of extinction, protect human health, and promote a better future for generations of wildlife lovers and Americans yet to come. Thank you.

[This statement was submitted by Kate Wall, Senior Legislative Manager]

PREPARED STATEMENT OF JAMESTOWN S'KLALLAM TRIBE

On behalf of the Jamestown S'Klallam Tribe, I am pleased to submit this written testimony on our funding priorities and requests for the Fiscal Year 2023 for the

Department of Justice and the Department of Commerce Budgets. Our Budget Request endorses the requests and recommendations of our international, regional, and national partners, the Pacific Salmon Commission, the Northwest Indian Fisheries Commission, the Affiliated Tribes of Northwest Indians and the National Congress of American Indians.

The moral compass of our Nation is expressed annually when Congress exercises its authority to appropriate funding to support certain programs and services. The Constitution, Treaties, Executive Orders, and numerous court decisions established the legal and moral foundation for prioritizing funding for American Indian/Alaska Natives (AI/AN). Yet, as documented by two Reports that were issued by the U.S. Civil Rights Commission, a quiet crisis of unfulfilled Federal obligations has persisted for decades across Indian Country and has left our Tribal citizens and communities vulnerable to the current public health crisis and economic devastation. The COVID-19 pandemic's disproportionate impact on AI/AN resulted in the highest rates of infection, hospitalizations, and deaths compared to any other racial and ethnic group in the U.S. And these harrowing statistics are likely much worse given the lack of accurate, reliable, quality data on AI/AN.

The Biden Administration has committed to respect Tribal sovereignty, as well as, uphold the trust responsibility, strengthen the Nation-to-Nation relationship, and empower Tribal communities through Self-Governance and Self-Determination to make their own decisions and govern their own communities. We urge Congress to follow suit and pass a Federal budget for AI/AN that is reflective of the solemn promises made by the U.S. We have proven time and again that when you invest in Jamestown and empower our Tribe to exercise our inherent right of Self-Governance we become strong economic development drivers for our community and the surrounding region by growing our resource base and creating jobs. Tribes are a critical governmental partner in our Nation's quest to "Build Back Better".

UPHOLD TRUST AND TREATY OBLIGATIONS

1. Provide Recurring Base Funding for Tribal Programs
2. require All Agencies to Provide an Annual Estimate of the Costs to Fully Fund Tribal Programs & Improve Data Collection to Support Tribal Funding Requests
3. Provide Mandatory Funding for Tribal Programs and Services

TRIBAL REQUESTS AND RECOMMENDATIONS—DEPARTMENT OF COMMERCE

(Support the FY 2022 request of the Pacific Salmon Commission)

1. Provide \$110 million for the Pacific Coastal Salmon Recovery Fund (NOAA/NMFS)
2. Provide \$43.5 million for the Pacific Salmon Treaty
3. Provide \$26.5 million for the Mitchell Act Hatchery Program (NOAA/NMFS)

NATIONAL REQUESTS AND RECOMMENDATIONS—DEPARTMENT OF JUSTICE

1. Fully Fund the Tribal Law and Order Act (TLOA)
2. Fully Fund Violence Against Women Act (VAWA)
3. Office of Justice Programs (OJP)—Create a Ten Percent (10%) Tribal Set-Aside for Tribes
4. Victims of Crime Act Funding—Provide a five percent (5%) set aside
5. Fund COPS Program—\$52 million

UPHOLD TRUST & TREATY OBLIGATIONS

1. Provide Recurring Base Funding for Tribal Programs

Stable base funding at sufficient levels is essential for viable and effective Tribal programs and services. Grant funding is highly competitive, short-term, the application process is complex, the administrative burden on Tribes is excessive and there are numerous restrictions imposed on how Tribes may use the funds. Simply put, competitive grants create barriers to effectively and efficiently providing programs and services in Tribal communities. Reducing Administrative inefficiencies would improve program effectiveness and increase the ability of Tribes to leverage the Federal dollar. Base funding coupled with more flexibility allows for more effective and efficient use of the Federal dollar and stronger Tribal governmental systems resulting in strong and self-reliant Tribal citizens and communities.

2. *Require All Agencies to Provide an Annual Estimate of the Costs to Fully Fund Tribal Programs & Improve Data Collection to Support Tribal Funding Requests*

It is incumbent upon the agencies, as trustees, to work collectively with the Tribes to quantify the true unmet need/unfulfilled Federal obligation with credible metrics that will demonstrate an accurate community profile for each Tribe. We need economic statistics and data that establish and drive policy goals, ensure effective implementation of programs and services, measure funding impacts, prove effective and efficient use of funding, and to demonstrate program success. These data metrics, however, are not a “justification” of whether Tribes deserve funding. The Federal obligation does not dissipate if a Tribe performs poorly in any area. Rather, a heightened response by the government is required to identify the challenges that impede a Tribe’s success and to build greater capacity at the local level, if necessary. At this point in time, there is not a system in place that captures the data needed. There is an absence of good data agency-wide with some agencies under the prior Administration having imposed a moratorium on the collection of needs-based data for Tribes. The Federal Government needs to be held accountable and directed to work in partnership with Tribes to collect data that quantifies the true unmet needs/unfulfilled Federal obligations in Indian country.

3. *Provide Mandatory Funding for Tribal Programs and Services*

Trust and Treaty obligations are not discretionary; these are mandatory obligations. On an annual basis Tribes are required to “justify” their budgetary needs and prove to the Federal Government that the Federal investment in Tribal communities is a good investment. We have shown time and again that the Federal investment in Jamestown is a good investment but the narrative about funding needs to be re-written because it is mischaracterizing the Federal trust obligation. Tribes relinquished their lands and resources in exchange for funding and services from the Federal Government in perpetuity and that obligation has not changed with time. It is solidified in our Constitution, Treaties, Executive Orders, and countless legal opinions.

DEPARTMENT OF COMMERCE TRIBAL REQUESTS AND RECOMMENDATIONS

1. *\$110 million for the Pacific Coastal Salmon Recovery Fund (NOAA/NMFS)*

The Pacific Coastal Salmon Recovery fund was established to reverse the decline of salmon and steelhead in the Pacific Northwest. Jamestown uses the funds to restore wild salmon populations and to protect and restore important habitat in the Puget Sound coastal plains. These funds also support our policy development and help to build the technical capacity of our Natural Resource staff charged with planning, implementation, and monitoring recovery activities.

2. *\$43.5 million for the Pacific Salmon Treaty—The U.S. Section estimates that this funding is needed to implement national commitments created by the Treaty (NOAA/NMFS)*

The Pacific Salmon Treaty provides the framework for international collaboration and cooperation to conserve and manage Pacific Salmon. The Pacific Salmon Commission (PSC) works together to establish fishery regimes, develop management recommendations, assess each country’s performance and compliance with the Treaty, and is the forum for all entities to work towards reaching an agreement on mutual fisheries issues.

3. *\$26.5 million for the Mitchell Act Hatchery Program (NOAA/NMFS)*

Jamestown hatchery operations have elevated our success and generated a substantial return on our investment in our aquaculture business. The Tribe operates three hatcheries, two in Washington state and one in Hawaii that produce shellfish and sablefish seeds. The seedlings help to replenish fish and shellfish stocks that have been depleted due to loss of ecosystems and natural habitats. Tribes depend on hatcheries to support Treaty fishing rights, protect our culture and traditional ways of life, and to bolster our commercial fishery operations at home and trade abroad.

NATIONAL REQUESTS AND RECOMMENDATIONS DEPARTMENT OF JUSTICE

1. *Fully Fund the Tribal Law and Order Act (TLOA)*

The Tribal Law and Order Act (TLOA) was an important step in empowering Tribes to better address the unique public safety challenges and reduce the prevalence of violent crime in Indian country. However, effective implementation of TLOA is contingent upon adequate Federal funding for law enforcement, courts, detention facilities and the provision of rehabilitative and preventative services. Full Funding

is needed to effectively and efficiently implement the comprehensive and improved measures that were enacted to address the public safety crisis in Tribal communities.

2. Fully Fund Violence Against Women Act (VAWA) Including \$5 million for VAWA Special Domestic Violence Criminal Jurisdiction

The Office on Violence Against Women provides funding for Tribes to address violence against women in their communities. The incidence of domestic violence in Tribal communities is staggering and it is estimated that over 85% of American Indians/Alaska Natives (AI/AN) will be victims of intimate partner violence, stalking and/or sexual violence in their lifetime. Over 90% of these crimes are committed by non-Natives who were outside of the jurisdictional authority of the Tribes. In 2013, Congress afforded AI/AN judicial recourse by reaffirming the inherent sovereign authority of Tribes to exercise Special Domestic Violence Criminal Jurisdiction over Indians and Non-Indians who commit certain crimes in Indian country. Although Congress authorized \$5 million for Tribes to exercise this new jurisdictional authority, in FY2021 only \$4.3 million was appropriated. Tribal justice systems need additional resources to fully implement this authority and we therefore urge Congress to appropriate \$5 million.

3. Office of Justice Programs (OJP)—Create a 10% Tribal Set-Aside for all (OJP) Programs and Allow for Greater Flexibility

Jamestown is advocating for a 10% Tribal set-aside from all OJP discretionary programs to provide Tribes base funding and maximum flexibility including the ability to combine DOJ funding with other sources of funding and allow Tribes to develop comprehensive holistic strategies to address public safety and justice in their communities. Stable funding for Tribal public safety and justice is a prerequisite to ensure a safe, healthy, and thriving Tribal community.

4. Provide a Five Percent (5%) Tribal Set-Aside for Victims of Crime Act Funding

The Victims of Crime Act funding is financed by fines and penalties imposed on convicted Federal offenders and is the largest source of Federal funding for crime victims. As of 2020, the fund balance was over \$6 billion. Although the fund was established in 1984 and despite the staggering rates of violent crimes in Indian country, Tribes were not authorized as direct recipients of funding until recently. For the past 5 years, Congress has authorized and appropriated a portion of the fund directly to Tribal Nations. We urge Congress to continue to provide a 5% Tribal Set Aside on a recurring annual basis.

5. Fund the COPS Program—\$52 million

The COPS Office provides funding to Tribes for law enforcement officers. Since the creation of the COPS program Tribes have hired more than 1700 law enforcement officers. COPS funding is also used for police training, equipment, vehicles, and technology. Although there is a great need for additional law enforcement officers throughout Indian Country, limited resources has hindered Tribe's ability to hire, retain, and train law enforcement officers. It is imperative for the safety of Tribal citizens, Indian communities, and surrounding neighboring communities that a significant increase in funding is allocated for Tribal law enforcement officers and programs.

We thank you for the opportunity to provide this written testimony.

[This statement was submitted by Hon. W. Ron Allen, Tribal Chairman/CEO]

PREPARED STATEMENT OF THE JOINT OCEAN COMMISSION INITIATIVE

Chairman Shaheen, Ranking Member Moran, and other members of the subcommittee, we commend your long-standing support for key ocean accounts, and thank you for the opportunity to submit testimony regarding the Fiscal Year 2023 CJS appropriations bill.

Our oceans hold some of our most viable solutions to address climate impacts. These impacts are already exacting an enormous and unacceptable toll on our economy and our communities. The agencies under your charge are required by law to respond to the domestic and global crisis in our oceans, which is inextricably linked to climate. We urge you to ensure that all have sufficient resources to take the necessary actions. You have an opportunity to reassert global leadership that will steer the planet, including the stewardship of our oceans, back to a just, sustainable, and more secure future.

We are encouraged by the Administration proposal for nearly \$7 billion for NOAA, as well as significantly increased support for the National Science Foundation and

NASA's Earth Science Division. However, we ask your committee to critically examine funding for these front-line agencies in FY 2023 to determine if additional resources are required to empower them to confront the unprecedented challenges posed by a rapidly changing climate, including more than a foot of sea level rise by 2050, as recently documented by NOAA.

The Joint Ocean Commission Initiative (Joint Initiative) is a collaborative, bipartisan effort to catalyze action on meaningful ocean policy reform. We believe that providing the necessary funding for core programs at NOAA, NSF, and NASA is an essential investment that will save lives, protect national security, grow our economy, increase justice and equity, mitigate climate change, and preserve the health of our oceans, coasts, and communities.

Ocean and coastal environments are often the first line of defense in promoting resilience and protecting American communities from severe weather events. The oceans are disproportionately impacted by increasing emissions from human activities, but also have immense potential to reduce carbon emissions by as much as 21 percent, and play an instrumental role in mitigating the climate crisis. For example, with adequate funding US agencies can exert global leadership to significantly reduce emissions from marine transportation and ports, which now account for nearly 3 percent of global GHG emissions.

Likewise, your budget should provide funding to encourage action to advance offshore renewable energy to create new clean energy sources and invest in coastal communities. With a clear nexus of climate and oceans, a failure to take decisive action would severely impact the health and livelihoods of millions of Americans, with the largest impact on historically underserved communities, especially Black, Indigenous people of color, and low-income environmental justice communities. Programs should be designed to create just and equitable policy solutions and empower these communities to take decisive action to restore and protect the places they live, work, and recreate.

The Biden Administration's proposed topline budget makes significant strides toward re-establishing NOAA, NSF, and NASA Earth Sciences as premier science agencies that provide the underpinning to address the global climate crisis, while restoring and protecting the Nation's oceans. However, we strongly urge the Committee to consider strategic investments above this level in critical accounts such as ocean acidification, managing fish stocks, addressing the ocean/climate interface for wind power and shipping decarbonization, and empowering oceans and coasts to mitigate climate impacts.

RESEARCH, EXPLORATION, AND OBSERVATION

A critical component of America's economic, military, and diplomatic power lies in its ocean research, education, exploration, and observation enterprises. Especially given the pace of observed changes in climate and ocean chemistry, we strongly urge the subcommittee to protect vital ocean science and research capabilities. To make the best, proactive management decisions possible, it is necessary that we first explore, map, observe, and understand our ocean.

Observation and monitoring programs are integral to NOAA's ability to accurately forecast weather, for NOAA's protection and management of America's ocean resources, and for the U.S. military's navigation and extreme weather preparedness. We ask that your committee continue to fully support enhanced capabilities for observation and monitoring by NOAA's Office of Oceanic and Atmospheric Research (OAR) and NOAA's Sustained Ocean Observations and Monitoring Program. We also suggest the committee continue its support for the Ocean Exploration program to maintain the pace, scope, and efficiency of exploration. It is also critical to fund climate research at OAR. This is essential to promote high-priority climate science that advances our understanding of Earth's climate system.

Likewise, we support the FY 2023 proposed increase in NSF's overall budget to \$10.5 billion, recognizing that developing sufficient capabilities to sustain ocean-based economies and protect our coasts and coastal communities from natural and man-made hazards will require a sustained investment in the geosciences, essential to economic development and the safety and security of our citizens. NSF's investment in the geosciences—which includes ocean sciences—has spurred innovations, addressed salient national and global challenges, galvanized new economic sectors, generated countless jobs, and led to the development and implementation of advanced technologies.

We are highly supportive of the proposed increase in NASA's Earth science funding for climate and weather monitoring and measurement. The recommended \$2.4 billion for Earth-observing satellites and related research will enhance NASA's abil-

ity to improve national capabilities to predict climate, weather, and natural hazards, and better manage resources.

EDUCATION AND EXTENSION

The National Sea Grant College Program works to better research, understand, conserve, and utilize America's coastal resources, making it critical to coastal States, communities, and economies. Given Sea Grant's critical importance, we urge this committee to strongly support Sea Grant in FY 2023, including funding for marine aquaculture education and extension programming.

NOAA's environmental education and ocean stewardship programs increase essential access to STEM education and cultivate environmental stewardship. We request that the committee continue its support for Bay-Watershed Education and Training (B-WET) programs and Environmental Literacy Programs (ELP). These vital programs increase equity through inspiring and educating future ocean leaders who represent all Americans.

RESILIENCE AND SECURITY

Sufficient funding must be dedicated to strengthening the resiliency of coastal communities and ocean ecosystems to combat dramatic, climate driven changes in our oceans. We ask this subcommittee to continue leading on ocean and coastal security by funding over historical levels the National Ocean and Coastal Security Fund (NOCSF) in FY 2023. We further recommend continued support for regional data portals used to support critical ocean partnerships that encourage collaboration and data sharing on the regional scale. In addition, we recommend continued support of Coastal Management Grants and the National Estuarine Research Reserve System, which preserve millions of acres of coastal habitat, buffering against rising seas and storm events.

NOAA's National Ocean Service (NOS) is a front-line agency for sustained resilience and security. We strongly recommend that NOS be adequately funded commensurate with its sobering responsibilities. NOS also supports the Integrated Ocean Observing System (IOOS), which collects and distributes data that is used at the National, regional, State, and local levels. We recommend you strongly support IOOS to meet the safety, economic and stewardship needs of the Nation.

The NOS also administers the Office of National Marine Sanctuaries and key restoration projects that dramatically enhance the resilience of coastal communities and ocean environments. National Marine Sanctuaries require continued congressional support to protect and steward special marine spaces, especially in the face of climate change, and develop the next generation of ocean stewards.

OCEAN ACIDIFICATION

Ocean acidification is evident along every shoreline and is impacting economies worldwide. By changing the chemistry of seawater, ocean acidification endangers shellfish, corals, and other marine life and disrupts marine food webs. Ocean acidification poses a fundamental risk to fisheries and aquaculture industries and to human health, as well as a potentially catastrophic risk to our economy. We strongly urge you to increase funding for NOAA's Integrated Ocean Acidification program to support critical research, monitoring, education, and outreach. The potential devastating impact from ocean acidification requires an unequivocal response to prevent catastrophe.

SUSTAINABLE FISHERIES & AQUACULTURE

Fishing is a cornerstone of the ocean economy and an important aspect of American history and culture. Since 1976, we have seen tremendous progress toward creating and maintaining sustainable fisheries domestically and internationally, in part due to your subcommittee's commitment to scientifically-sound fishery management. Aquaculture is also a growing aspect of America's seafood economy. We are encouraged by NOAA's strong support for sustainable, environmentally sound aquaculture.

However, America's seafood industry is currently being challenged by changing ocean conditions, shifts in historic stock distributions, and increasingly complex data requirements. NOAA Fisheries requires elevated funding to address these challenges. We thank you for responding to our testimony from year's past and many other organizations, increasing funding for the NOAA Fisheries to over \$1 billion. We ask you to continue this trend in fiscal Year 2023, to fully implement the Magnuson-Stevens Fishery Conservation and Management Act. We also urge you to support full implementation of the U.S. Seafood Import Monitoring Program to address

IUU fishing and other initiatives to spread sustainable fisheries management globally. Further, we recommend funding the research and expansion of aquaculture to increase sustainable American seafood, and provide a low-carbon source of protein for the planet's projected 10 billion people. These initiatives will not only increase sustainability but also create quality jobs for coastal Americans.

CONCLUDING REMARKS

The Joint Initiative greatly appreciates your commitment to addressing the challenges of our maritime nation, and to the ocean-climate nexus, so critical to the future of our blue planet. We appreciate your consideration of our fiscal Year 2023 budget request. We will continue to track progress on key ocean and coastal programs and accounts in fiscal Year 2023 and beyond, and we stand ready to assist you in advancing positive and lasting changes in the way we manage our Nation's oceans and coasts.

Joint Initiative Leadership Council Members
The Honorable Christine Todd Whitman, Co-Chair

Maite Arce | Frances Beinecke | Don Boesch The Honorable Norm Dicks | Quenton Dokken | Robert Gagorian | Sherri Goodman | Scott Gudes | The Honorable Conrad Lautenbacher | Margaret Leinen | Julie Packard | The Honorable Leon Panetta | John Pappalardo | The Honorable Pietro Parravano | Queen Quet | Randy Repass | Larry Robinson | Andrew Rosenberg Paul Sandifer

[This statement was submitted by Christine Todd Whitman and Leon Panetta]

PREPARED STATEMENT OF THE LEARNING AND EDUCATION ACADEMIC RESEARCH NETWORK (LEARN)

We are writing on behalf of the Learning and Education Academic Research Network (LEARN) Coalition to express our support for increased funding for several key STEM related research programs that your subcommittee will debate as part of the Fiscal Year (FY) 2023 appropriations process. LEARN, a coalition of 41 leading research colleges of education across the country, supports critical investments in research aimed at advancing the scientific understanding of learning and development. We advocate for greater funding for these priorities across all Federal agencies, including the National Science Foundation (NSF). Specifically, LEARN is requesting \$11 billion be allocated to NSF overall, and for Congress to match the President's FY2023 budget proposal by providing \$1.37 billion towards the Directorate for Education and Human Resources (EHR), which the Administration's FY2023 budget request be renamed the Directorate for STEM Education (EDU), and robust funding for the new Directorate for Technology, Innovation and Partnerships (TIP). While advocating for these increased resources for FY2023, we want to express our appreciation for the increases for NSF provided in FY2022.

While we are grateful for the funding NSF was appropriated in FY2022, we respectfully recognize that increased funding is required to address the effects of historical underinvestment in fundamental research in the United States as well as to support COVID-19 recovery. According to the National Science Board, more than \$3 billion in high-quality proposals are submitted each year that cannot be funded with current appropriations. The potential impact of these missed opportunities is even starker when considering the return on investment of fundamental scientific research and the significant investments that other nations -both allies and adversaries-are making in comparable research areas.

In addition to our call for a \$11 billion funding level for NSF, LEARN supports funding for NSF's EDU directorate at \$1.37 billion in FY2023. EDU works to prepare the next generation of STEM professionals by conducting rigorous research and evaluation of STEM education. Over the past 20 years, the share of U.S. research and development funded by the Federal Government has declined; this decline has disproportionately impacted the higher education sector reducing resources to the sector that drives the most innovation in this area. Stagnation in these key U.S. talent development programs come as our National security leaders are sounding alarm bells over foreign talent recruitment programs which are effectively siphoning STEM capacity from the United States and elsewhere to countries that are strongly investing while we remain complacent. As Congress considers making a large investment in STEM education through the America Creating Opportunities to Meaningfully Promote Excellence in Technology, Education, and Science (COMPETES)/United States Innovation and Competition (USICA) Act, we urge you to first invest

in EDU which has been successfully supporting STEM education research and dissemination to ensure the creation of an adept and diverse STEM workforce.

Finally, LEARN members are invigorated by the Administration's new call for funding for the TIP directorate. As noted in the President's FY2023 budget, a portion of TIP's mission is to "cultivate new education pathways leading to a diverse and skilled future technical workforce comprising researchers, practitioners, technicians and entrepreneurs." The newly proposed funding for TIP would allow for work across the public and private sector to provide practical experiences to learners and encourage strategic cross-sector partnerships. By targeting a range of educational institutions from community colleges and vocational schools to graduate schools, adequate funding for TIP would ensure that the Nation's STEM workforce is as diverse as it is strong. As a nascent directorate, we urge Congress to provide TIP with robust funding so it can accomplish its innovative goals.

The LEARN Coalition believes strongly that collectively these key investments will advance scientific learning and development to ensure a globally competitive, STEM-educated workforce in the long run. Thank you for considering these requests and please contact us if we can be of any assistance.

Sincerely,
Camilla P. Benbow, EdD
Co-Chair, Learning and Education Academic Research Network (LEARN)

Patricia and Rodes Hart
Dean of Education and Human Development of the Peabody College of Education
and Human Development, Vanderbilt University

Rick Ginsberg, PhD
Co-Chair, Learning and Education Academic Research Network (LEARN)
Dean of the School of Education, University of Kansas

Glenn E. Good, PhD
Co-Chair, Learning and Education Academic Research Network (LEARN)
Dean of the College of Education, University of Florida

PREPARED STATEMENT OF MONTEREY BAY AQUARIUM

The Monterey Bay Aquarium is pleased to submit this statement in support of President Biden's \$6.9 billion budget for the National Oceanic and Atmospheric Administration (NOAA) within the FY 2023 Commerce-Justice-Science Appropriations Act. The following testimony outlines several specific requests within NOAA that support vital research, education and grant programs that are needed in California, the West Coast and nationwide.

The mission of the Aquarium is to inspire conservation of the ocean. In a typical year, we welcome 2 million visitors annually, provide more than 91,000 students and 5,000 teachers with award-winning education programs at no cost, and continue to produce valuable data, tools and approaches at local to global scales through our conservation and science programs.

NOAA is a crucial leader and frequent partner in our mission-driven work. As the Nation's lead science agency for oceanic and atmospheric matters, NOAA provides important tools and services that are necessary to supporting safe communities across the United States and creating a sustainable future for all. NOAA's research, environmental observations and predictions, marine resource conservation and management and education programs and services shape the way we live today and guide decision-making about how to maintain the health and function of coupled ocean and climate system.

The Aquarium strongly supports the President's budget request of \$6.9 billion dollars for FY23 and encourages the subcommittee to continue its balanced and strategic investment strategy for NOAA. Significant congressional investment in NOAA is needed to ensure that the Nation's ocean agency can continue to provide vital science and management services into the future and act for the health and safety of our citizens and rich natural resources. The Aquarium urges the subcommittee to support priority requests for research, education, management, and grants in FY23 that are particularly important for California and West Coast communities.

Pacific Highly Migratory Species.—Pelagic and highly migratory fisheries in the Pacific Ocean support thousands of jobs and generate hundreds of millions in revenue related to commercial and recreational fishing, as well as related seafood industries along the West Coast. These highly migratory species (HMS) include valuable tunas (albacore, bluefin), swordfish, marlin, and pelagic sharks that are man-

aged through international agreements and rely on scientific contributions from all nations.

Federal funding opportunities for non-federal scientists in pelagic and HMS research programs in the Pacific have declined considerably since the Pacific Fisheries Research Program (PFRP) ended in 2013. This has resulted in significantly fewer public-private research collaborations with NOAA and a lack of independent science to address critical and timely management questions that directly impact U.S. stakeholders and the health of the Pacific Ocean ecosystem. In the Atlantic, NOAA Fisheries (NMFS) currently has dedicated Federal research programs for HMS fisheries, notably the Atlantic Bluefin Tuna Research Program, as well as a recent HMS Research Program through Sea Grant. Priority HMS fisheries research questions remain unanswered in the Pacific region, but there are no dedicated Federal programs to address life history and other questions central to ensuring international management is sustainable.

We are very grateful that Congress included Pacific HMS research grants alongside the existing Atlantic and Gulf of Mexico HMS research programs within the FY22 Senate Commerce Justice Science report. Additional funding should be provided to ensure that Pacific HMS research needs are addressed alongside the existing HMS priorities in the Atlantic and Gulf of Mexico.

Request.—We urge the subcommittee to provide an additional \$2 million and report language to NOAA to support independent HMS research grants for the Pacific region to address key science in support of sustainable international management.

Corresponding Report Language Request:

Highly Migratory Species: Migratory Species (HMS) Research Initiative for Atlantic, Pacific, and Gulf of Mexico HMS. The Committee notes lack of funding for Pacific HMS independent research that supports ecologically and economically important species such as tuna, swordfish, marlin, and pelagic sharks. Within funding for the Sea Grant program, the Committee provides \$2,000,000 over FY22 for research grants to non-federal entities to improve science-based management of domestic and international HMS in the Pacific region.

Bycatch Reduction.—We recommend that the subcommittee include an increase of \$2 million over FY22 funding for bycatch reduction competitive grants to non-federal researchers for the development and implementation of practical bycatch solutions that support sustainable U.S. fisheries. The program was again funded at the same level in FY22. We request that the subcommittee increase funding for NOAA's bycatch reporting and reduction programs to accelerate technology improvements and help U.S. fishermen achieve greater environmental sustainability while protecting living marine resources, particularly endangered, protected and threatened species.

Seafood Import Monitoring Program.—We support an additional \$5 million for NMFS to implement the Seafood Import Monitoring Program (SIMP). Increasing funding for NMFS and specifically for SIMP implementation is essential for safeguarding the integrity of seafood imports in the U.S. and leveling the playing field for U.S. fishermen undercut by illegal, unreported, and unregulated seafood products in the market.

Climate-Ready Fisheries.—The Aquarium supports advancing climate-ready fisheries management in the Fiscal Year 2023 Commerce, Justice, Science, and Related Agencies appropriations bill. This should include full funding for NOAA's Climate, Ecosystems, and Fisheries Initiative and enhanced support for fisheries surveys. We specifically request the following investments to support climate-ready fisheries:

1. National Marine Fisheries Service, Fisheries and Ecosystem Science Programs and Services: \$180 million, of which \$10 million is dedicated to Climate-Informed Fisheries Assessment and Management Strategies for Changing Oceans;
2. National Marine Fisheries Service, Fisheries Data Collections, Surveys, and Assessments: \$212 million; and
3. Oceanic and Atmospheric Research, Climate Competitive Research: \$91.5 million, of which \$10 million is dedicated to Marine Ecosystem Responses to Climate Change.

Ocean Science and Technology.—The Aquarium collaborates with the Monterey Bay Aquarium Research Institute (MBARI) on science and conservation issues of mutual interest. The success of our efforts to harness cutting edge research to address challenging ocean-related issues is dependent on a vibrant ocean science and technology enterprise. To continue to generate science-based solutions to restore our ocean, and support a robust U.S. role in global efforts, we urge the subcommittee to bolster funding for essential new science and technology. Through NOAA and the

other relevant agencies, including NSF and NASA, we recommend the subcommittee provide support for research and technology development and ocean science.

NOAA Education.—The Aquarium is a long-time partner of NOAA's Education programs. We also share NOAA Education's commitment to ensuring diversity among our staff and within the professional spheres of our field. NOAA's José E. Serrano Educational Partnership Program (EPP) with Minority Serving Institutions (MSI) provides STEM education and future workforce training, benefiting both the agency and other organizations by creating a pool of diverse, qualified candidates for the future workforce. We are proud to work with the EPP centers and urge the subcommittee to provide additional funding for the EPP-MSI program to support expansion of the EPP network, particularly to build professional opportunities on the west coast, and build technical capacity within the next generation to address emerging challenges.

National Marine Sanctuaries.—The Aquarium collaborates with the Monterey Bay National Marine Sanctuary (MBNMS) program to provide public education and research connected to the MBNMS and in support of its living marine resources. We also support the designation of the Chumash Heritage National Marine Sanctuary, also in California's waters. We recognize the constraints on this important program and support an increase in appropriations for the NOAA Sanctuaries program, including \$87 million for Sanctuaries and Marine Protected Areas within NOAA's Operations, Research, and Facilities (ORF) account.

Marine Debris Program.—According to the 2021 National Academies of Sciences, Engineering, and Medicine (NASEM) report undertaken as directed by the Save Our Seas 2.0 Act enacted in 2020, ocean plastic pollution continues to increase, as does the United States' role as a major contributor in this global plastic crisis. The Aquarium urges the subcommittee to provide \$15 million for the Marine Debris Program (MDP) to provide frontline services, funding, and science to meet the demands of plastic pollution challenges along our coastline. Additional funding above \$15 million is necessary in order to meet two recommendations generated by the NASEM report: (1) for the MDP Marine Debris Monitoring and Assessment Project to conduct scientifically designed national marine debris shoreline surveys every 5 years using standardized protocols; and (2) for MDP to contribute to a Federal research and policy strategy focused on identifying, implementing, and assessing equitable and effective interventions across the entire plastic life cycle to reduce the U.S. contribution of plastic waste to the environment.

Thank you for your consideration of these requests.

[This statement was submitted by Ms. Margaret Spring, Chief Conservation & Science Officer]

PREPARED STATEMENT OF THE NATIONAL ASSOCIATION OF LATINO ELECTED AND APPOINTED OFFICIALS (NALEO) EDUCATIONAL FUND

Chair Shaheen, Ranking Member Moran, and Members of the subcommittee:

On behalf of the National Association of Latino Elected and Appointed Officials (NALEO) Educational Fund, thank you for the opportunity to submit testimony on the U.S. Census Bureau's budget for fiscal year 2023. As you consider appropriations for fiscal Year 2023, NALEO Educational Fund urges this subcommittee to provide \$2 billion in funding for the U.S. Census Bureau, which represents a \$495 million increase over the President's budget request and \$646 million over the agency's fiscal Year 2022 enacted level. We believe that the \$2 billion funding level is necessary to support the Bureau's efforts to address and ameliorate the significant undercount of our Nation's Latino population and other population groups in the 2020 Census. In addition, we believe there needs to be more robust investment to enhance the accuracy of other Bureau data products. Finally, a higher level of funding would help the Bureau continue to assess and start to make the fundamental changes needed to modernize the census and count all of our Nation's residents fairly and accurately.

NALEO Educational Fund is the Nation's leading nonprofit organization that facilitates the full participation of Latinos in the American political process, from citizenship to public service. Our Board members and constituency encompass the Nation's more than 7,000 Latino elected and appointed officials, and include Republicans, Democrats, and Independents. Since the 1990 Census, our organization has conducted outreach campaigns to promote the full and accurate count of the Latino community. In addition, NALEO Educational Fund is a leading expert on Census policy development, with a long record of service on the Bureau's National Advisory Committees. The organization serves as co-chair of the Leadership Conference on

Civil and Human Rights' Census Task Force, a Steering Committee member of the Census Counts Campaign, and the co-chair of the National Hispanic Leadership Agenda's Census Task Force.

ADDRESSING AND AMELIORATING THE SEVERE UNDERCOUNT OF
LATINOS IN CENSUS 2020

In March, the Census Bureau released its initial findings from its Post-Enumeration Survey (PES), which revealed a massive 4.99 percent national undercount of Latinos in Census 2020, which is more than triple the percentage of Latinos undercounted in Census 2010. The PES also revealed a 2.79 percent undercount of very young children (ages 0–4); a 3.30 percent undercount for Blacks; and a 5.64 percent for American Indians or Alaska Natives living on reservations. The undercount of very young children, which increased more than threefold from 2010, is very salient for the Latino population and the Nation as a whole. First, the 2020 Census shows that slightly more than one in four children under 18-years-old is Latino (25.7 percent). In addition, 2016 research spearheaded by demographer Dr. William O'Hare found that the net undercount rate in 2010 for very young Latino children (ages 0–4) was 7.1 percent, compared to 4.3 percent for non-Latinos—with Census 2010 missing nearly 400,000 very young Latino children. While more research is needed to determine the undercount of very young Latino children in Census 2020, the initial PES findings raise serious concerns about the size and scope of this undercount.

The historic undercount of Latinos and other population groups has serious implications for the full range of programs, activities, and decisions for which census data are used. These data guide the distribution of more than \$1.5 trillion in annual Federal funding to States and localities, and flawed data will lead to a potential misallocation of resources that could have a detrimental effect on our schools, healthcare systems, infrastructure, and programs essential for the future prosperity and well-being of Latino families and all of our Nation's residents. The undercount of Latinos and other people of color could also dramatically erode the ability of government agencies to monitor and enforce civil rights protections. As a result, our Nation could see existing ethnic and socio-economic inequities in areas such as employment, education, housing, and health care grow far worse.

The undercount of Latinos and other people of color could also lead to a vast number of unsound decisions being made in the public and private sector. Furthermore, data from Census 2020 have already been used to apportion the U.S. House of Representatives and for redistricting, despite the fact that such data do not reflect the actual growth of the Latino population. Without a thorough understanding of the factors which contributed to the Census 2020 undercount, we cannot take the action needed to improve the accuracy of the Census 2030 data which will be used for apportionment and redistricting at the start of the next decade.

Our funding request for fiscal year 2023 would help support the Bureau's efforts to continue to conduct a comprehensive analysis of the effect of the undercount on the Latino community and the implications of the undercount for all of the activities for which census data are used. This would include the Bureau's continued work to examine options to ameliorate the undercount.

Additionally, in May, the Bureau released PES estimates for the undercount of the total population in each State and the District of Columbia. These estimates indicated statistically significant undercounts in six States (Arkansas, Florida, Illinois, Mississippi, Tennessee and Texas), but did not include demographic characteristics such as age, race and Hispanic origin. In addition, the estimates were not available for geographies below the state level. Moreover, the PES state estimates are net figures derived in part from both the 2020 Census omissions and persons overcounted in the enumeration. Thus, the persons overcounted in the state may mask the impact of the persons missed in the enumeration and other significant problems with the overall accuracy of state census data.

Based on our work with and research on historically undercounted communities, we believe it is likely that Census 2020's accuracy varied in different regions of the States. For example, areas with large concentrations of Latinos, Black residents, and young children are likely to have had the highest undercounts, while places with large concentrations of non-Hispanic whites and wealthy residents likely had overcounts. However, without specific Latino undercount data and data on other population groups throughout each State, we cannot determine precisely where and to what extent these population groups were missed.

We understand the Census Bureau's position that the PES sample size is not adequate enough to produce data that meet the Bureau's standards for every demographic group in each State or many localities in the Nation. Thus, our funding request would support much-needed Bureau efforts to research and make available

data from other sources that could help illuminate the accuracy of Census 2020 data for various demographic groups and localities. Finally, our funding request would also enhance the Bureau's ability to engage stakeholders in its efforts to evaluate the implications of the National undercounts and the state PES estimates for different population groups, examine options to mitigate the effect of the undercounts on funding formulas and the fair allocation of resources, and plan for Census 2030.

STRENGTHENING POPULATION ESTIMATES AND THE AMERICAN COMMUNITY SURVEY

The Bureau's Population Estimates play a critical role in determining the allocation of Federal funding, and the next annual series of Population Estimates is the basis for all subsequent annual estimates for the next decade. The Bureau will use Census 2020 data in its determination of the next annual series of Population Estimates and given the severe undercount of Latinos and other population groups, the agency needs resources to strengthen the accuracy of the next annual series. This funding would also support expanded and enhanced opportunities for cities, counties, towns, Tribal governments, and other localities to help ensure the accuracy of their annual estimates, through the Population Estimates Challenge Program and other activities. This will help ensure that trillions of Federal funds over the decade can reach the communities needing them the most.

In addition, we believe that the American Community Survey (ACS) is in dire need of additional resources to implement several critical enhancements to the survey. The ACS provides updated data on a wide range of demographic and housing characteristics that are crucial for sound public and private decision-making which affects all aspects of the lives of Latinos, including income, employment status, educational attainment, language proficiency, and nativity. Additional funding would help with such enhancements as increasing the ACS' sample size, improving its non-response follow up operations, addressing steadily declining response rates, revising content, and making other methodological and operational improvements.

MODERNIZING THE CENSUS

The massive net national undercount of our Nation's Latino population and other people of color in the 2020 Census demonstrates the need for the Census Bureau to make fundamental changes to how it counts the U.S. population. It can no longer simply rely on the traditional methods of mailing forms out to households and encouraging the public to respond. Thus, our funding request also aims at providing the Census Bureau resources for the purpose of informing its planning for future census data collection programs and surveys. Modernizing the census will involve research, evaluation and testing of a broad range of initiatives and approaches, including modernizing the Bureau's information technology infrastructure, and assessing the use of machine learning and Big Data methodology.

In addition, as part of its modernization activities, the Bureau intends to examine the expanded use of administrative records for various purposes. However, these records have serious limitations with respect to the accuracy and completeness of information on Latinos and other people of color, young children, low-income residents, and other underrepresented populations. Thus, the Bureau needs resources to continue to assess the appropriate use of administrative records for its data compilation and analysis activities.

Finally, the Bureau's efforts to modernize the census could result in approaches that would enable the agency to achieve cost-savings for its Census 2030 operations. However, the agency must start several years before Census 2030 to thoroughly test and evaluate these approaches if they are to be used in a sound and effective manner. Thus, more robust funding for the Bureau in FY 2023 is an investment which would lead to more efficient and cost-effective operations in the next enumeration.

CONCLUSION

Census data are the basis of our representative democracy, and our Nation's well-being and prosperity depend in part on the accuracy of the data collected by the Census Bureau. These data guide a wide range of decisions made in the public and private sectors that affect the lives of all Americans. Latinos are the Nation's second-largest population group, and the Bureau cannot produce accurate data on all of our country's residents without accurate data on Latinos. However, as the PES undercount estimates indicate, the Bureau faced significant challenges in accurately enumerating Latinos and other population groups, and these challenges have important implications for other Census activities and products. In addition, evolving demographic, economic, technological and statistical trends require the Bureau to continue its work to modernize the census. We believe that the \$2 billion level of funding we are requesting for fiscal Year 2023 will help the Bureau carry out a more

robust range of activities to make progress in providing the most accurate data possible for our Nation. We appreciate this subcommittee's attention to these important matters and look forward to working with you and other Members of Congress to achieve this important goal.

[This statement was submitted by Arturo Vargas, Chief Executive Officer]

PREPARED STATEMENT OF THE NATIONAL CONGRESS OF AMERICAN INDIANS

On behalf of the National Congress of American Indians (NCAI), this testimony addresses important programs in the U.S. Department of Justice (DOJ), U.S. Department of Commerce (DOC), and the National Science Foundation (NSF). As the most representative organization of American Indian and Alaska Native (AI/AN) Tribal Nations, NCAI serves the broad interests of Tribal governments across the United States. As Congress considers the FY 2023 budget and beyond, leaders of Tribal Nations call on decision-makers to ensure that the promises made to Indian Country are honored in the Federal budget.

DEPARTMENT OF JUSTICE

The public safety problems that continue to plague Tribal communities are the result of decades of gross underfunding for Tribal criminal justice systems, a uniquely complex jurisdictional scheme, and the historic, abject failure by the Federal Government to fulfill its public safety obligations on AI/AN lands. Crime rates in Tribal communities are among the highest in the Nation, and AI/ANs experience rates of violent crime that are 2.5 times the National average. The 2022 reauthorization of the Violence Against Women Act reaffirms the jurisdiction of all Tribal Nations to prosecute certain crimes. Congress must now appropriate and streamline public safety funds to ensure that Tribal Nations can implement their jurisdiction and increase safety in Tribal communities.

Include Tribal governments in disbursements from the Crime Victims Fund (CVF)—a mandatory account. The CVF is the Federal Government's primary funding source for providing services to victims of crime, and we express our sincere gratitude to appropriators for providing direct funding to Tribal governments from the CVF for the past 5 years. For this funding to fully achieve its purpose, Tribal Nations need the disbursements from the CVF to be recurring in order to ensure long term program stability for victims. We urge this subcommittee to direct an amount equal to 5 percent of overall CVF disbursements to Tribal Nations again this year.

Create a streamlined Tribal allocation across Office of Justice Programs (OJP) programs. For several years, both this subcommittee and its Senate counterpart have supported requests to streamline and consolidate OJP Tribal programs by allocating 7 percent from all discretionary OJP programs to address Indian Country public safety and Tribal justice needs. Despite the subcommittees' support, the request has never been enacted. One of the biggest shortcomings of DOJ Tribal funding is that it is administered as competitive funding that must fit with DOJ established priorities and guidelines. This requires Tribal Nations—on behalf of their Tribal justice systems—to compete against each other and develop projects that align with changing DOJ priorities. Often, Tribal Nations cannot count on funding continuing beyond the current grant period further limiting the ability to effectively address public safety in the long term. A streamlined OJP Tribal allocation would significantly improve the Federal funding process by which Tribal Nations receive resources to establish Tribal courts, assist in developing detention facilities, provide legal assistance, develop and maintain juvenile delinquency prevention programs, and provide substance abuse prevention programs. Further, this type of Tribal allocation would give Tribal Nations the flexibility to develop a detailed strategic plan on how best to spend those resources. We urge the subcommittees to continue to support this request and work with the appropriate authorizing committees to include it.

Increase funding for Tribal law enforcement programs under DOJ's Community Oriented Policing Services (COPS) grants to \$52 million. Since the creation of the COPS Office, more than 2,000 grants totaling over \$400 million have been awarded to Tribal Nations to hire more than 1,700 new or redeployed law enforcement officers. COPS grants have also helped Tribal Nations to obtain necessary law enforcement training, equipment, vehicles, and technology. Yet, there is still a tremendous unmet need within Tribal justice systems for more COPS funding. The COPS Office has acknowledged that due to limited resources, it has not been able to adequately fund Tribal justice systems particularly in the area of hiring and retaining Tribal

law enforcement officers. In a report released in December 2010, the COPS Office described its practice of intermittent funding as “problematic,” especially “when referring to hiring of officers.”¹ Indian Country urges Congress to significantly increase funding for Tribal law enforcement programs under the COPS program.

Fully fund the programs authorized in the Violence Against Women Act (VAWA), including the funds authorized for Tribal implementation of VAWA Special Tribal Criminal Jurisdiction. Over 85 percent of AI/AN women are estimated to experience violent victimization in their lifetimes. The DOJ Office of Violence Against Women (OVW) provides funding to Tribal governments to address violence against women in their communities. OVW’s largest source of funding for Tribal governments is the Grants to Tribal Governments Program, which is funded via statutory allocations from other OVW programs. Fully funding these OVW programs results in full funding for the Grants to Tribal Governments Program.

The Violence Against Women Reauthorization Act of 2022 (VAWA 2022) recognized and affirmed the inherent sovereign authority of all Tribal Nations to exercise Special Tribal Criminal Jurisdiction (STCJ) over all persons—Indian and non-Indian—who commit certain crimes within Indian country and designated lands. VAWA 2022 included a new STCJ pilot program for Alaska Native Villages and increased authorization levels to support Tribal public safety in Alaska and in the lower 48. The law authorizes \$25 million a year for 5 years for Tribal Nations to implement the STCJ, receive reimbursements for certain costs, and strengthen Tribal justice systems. We urge this subcommittee to appropriate the full amount authorized for VAWA 2022 implementation purposes so that more Tribal communities are able to take advantage of this lifesaving law.

DEPARTMENT OF COMMERCE

Beginning in February 2022, the Bureau of Labor Statistics published monthly data on AI/AN employment, using data that was previously available through the U.S. Census Bureau’s Current Population Survey. The newly published data reveals a labor market that would be considered catastrophic if it were representative of the full U.S. economy—Indian Country has an unemployment rate more than double national rate.² The data further highlights that Indian Country is still recovering from the effects of the pandemic, with unemployment rates reaching 28.6% during the peak of the pandemic fallout—an amount comparable to the National unemployment rate during the Great Depression.³ As of January 2022, the unemployment rate for Native Americans was still greater than the peak unemployment rate for white workers during the pandemic.⁴

Even when controlling for a host of factors, the Brookings Institute posits that structural racism in the U.S. economy affects AI/AN access to education and attainment as well as employment opportunities.⁵ As traditionally place-based peoples with strong cultural and historical ties to the land, AI/ANs do not tend to move away regardless of economic situations. This means that the structural impediments to economic growth are focused and exacerbated on Tribal lands, underscoring the importance of Federal investment through regular Federal appropriations. Unfortunately, cross-referencing Office of Management and Budget data with Appropriations Committee reports reveals that regular appropriations for the benefit of Native Americans represents approximately 0.19% of total regular appropriations budget authority in the fiscal Year 2022 Omnibus. With Federal investment metrics such as these, it is no surprise that Indian Country is in a State of catastrophe by national standards. These broken promises of the United States dampen local, regional, and national U.S. economic productivity and negatively impact the safety and wellbeing of Americans—Native and non-Native alike.

The U.S. Department of Commerce administers programs that could greatly benefit Indian Country, for example, the National Telecommunications and Information Administration (NTIA), International Trade Administration, Economic Development Administration, Minority Business Development Agency (MBDA), Census Bureau,

¹ U.S. Department of Justice, COPS Office report to Congress as required by Tribal Law and Order Act of 2010, available at: <https://www.justice.gov/sites/default/files/tribal/legacy/2014/02/06/cops-congress-report.pdf>, Accessed: May 13, 2022.

² Robert Maxim, Randall Akee, and Gabriel R. Sanchez, For the first time, the government published monthly unemployment data on Native Americans, and the picture is stark, available at: <https://www.brookings.edu/articles/despite-an-optimistic-jobs-report-new-data-shows-native-american-unemployment-remains-staggeringly-high/#:text=Prior%20to%20the%20pandemic%2C%20Native,unemployment%20during%20the%20Great%20Depression>, Accessed: May 4, 2022.

³ *Id.*

⁴ *Id.*

⁵ *Id.*

and the National Oceanic and Atmospheric Administration (NOAA). However, the funding for these programs benefiting Native Americans must increase from the trickle of past years to a more robust distribution for broadband deployment, economic and business development assistance, trade and tourism promotion, fisheries programs, and Tribal government data collection and analysis capacity.

This subcommittee can correct this investment deficiency by providing: at least \$1 billion to NTIA's Tribal Broadband Connectivity Grant Program to reduce the backlog of at least \$5 billion of identified, unfunded broadband projects; \$70 million to continue supporting MBDA Business Specialty Centers, and set aside at least \$5 million in grants for Native American business and procurement assistance; \$5 million for the Office of Native American Business Development (ONABD) to coordinate within Commerce and with other Federal agencies to promote and support Native American business development, trade, and tourism; at least \$110 million for the Pacific Coastal Salmon Recovery Fund; \$25.9 million for NOAA Mitchell Act Hatchery Programs; and at least \$100 million for Census Bureau grants to Tribal Nations to improve internal government data capacity.

NATIONAL SCIENCE FOUNDATION

NSF has dedicated funding for Tribal Colleges and Universities (TCUs) and other research activities related to arctic social sciences to promote high-quality science and educational opportunities in social and behavioral sciences, natural sciences, computer sciences, as well as supporting science, technology, engineering and mathematics (STEM) and STEM education, research, and outreach. As traditionally place-based peoples with strong cultural and historical ties to the land, investments in TCUs promote economic growth, education, career training, social wellbeing, and cultural preservation directly within Native communities. Similar to many Federal investments through the regular appropriations process, cross-referencing Office of Management and Budget data with Appropriations Committee reports reveals that regular appropriations for NSF for the benefit of Native Americans represents approximately 0.27% of total regular appropriations budget authority in the FY 2022 Omnibus.

This subcommittee must increase its investment into Native Higher Education by providing \$100 million for the Tribal Colleges and Universities Program, which includes funding for Alaska Native-Serving institutions and Native Hawaiian-serving institutions, and \$10 million for the Arctic Social Sciences Program to support research on social and cultural systems of the Arctic, present and past.

CONCLUSION

Tribal Nations are uniquely reliant on the Federal Government to fulfill its promises made in exchange for the land that created the foundation of the bounty and wealth of the United States. Our people have paid for every penny obligated to Indian Country hundreds of times over by providing this Nation with our land. In order to uphold this Nation's promises to its people, it must first uphold its promises to this land's First Peoples. We expect to continue to be treated as sovereign nations with governmental parity. We must continue down that path of Nation-to-Nation growth, and only then will all of our people be able to fully flourish.

For more information, please contact Kelbie Kennedy, Policy Manager and Policy Lead—National Security and Community Safety, at kkennedy@ncai.org; C.C. Wright, Policy Lead—Community Development & Infrastructure, at cwright@ncai.org; Julia Wakeford, Policy Lead—Social and Cultural Resources at jwakeford@NCAI.org; or Tyler Scribner, Policy Lead—Federal Revenue & Appropriations, tscribner@ncai.org.

[This statement was submitted by Dante Desiderio, Chief Executive Officer]

PREPARED STATEMENT OF NATIONAL COURT APPOINTED SPECIAL ADVOCATE (CASA)/ GUARDIAN AD LITEM (GAL) ASSOCIATION FOR CHILDREN

Chairman Leahy, Chair Shaheen, Vice Chairman Shelby, Ranking Member Moran, and Members of the Commerce, Justice, Science, and Related Agencies subcommittee, thank you for the opportunity to submit remarks on the Department of Justice (DOJ) FY 2023 budget including funding of the Court Appointed Special Advocates (CASA) Program through the Office of Justice Programs' State and Local Law Enforcement Assistance Account.

CASA/GAL advocacy is a well-established model strongly associated with improved long-term outcomes for child victims, for which the need continues to be critical. With Congressional support at the requested level of \$15 million, the CASA/

GAL network in 49 States and the District of Columbia will enhance and advance specialized training, tools, and resources to continue delivering vital one-on-one best-interest advocacy that addresses the complex and ever-evolving needs of children who have suffered trauma after experiencing abuse or neglect by one or more primary caregivers.

Emerging issues such as the commercial sexual exploitation of children and our Nation's growing opioid epidemic—for which children account for an increasing number of victims—both necessitate a greater specialization within one-on-one advocacy, with a keen and deliberate focus on progressing toward the call within the Victims of Child Abuse Act to serve every child victim. As we enrich CASA/GAL advocacy to encompass evolving direct service needs, our National network will further strengthen its capacity to serve over 250,000 child victims of abuse and neglect.

Child victimization and maltreatment by primary caregivers remains all too prevalent in our country and the negative impacts on children, their families and society are significant. Traumatized victims of child abuse and neglect face significant and multiple risk factors, most notably, juvenile delinquency, adult criminality, and poor educational performance that affects future employment and stability. These issues result in a hefty impact on federal, State and local spending—at least one-quarter of the DOJ budget is dedicated to our Nation's prison system, and at the same time, the Centers for Disease Control and Prevention (CDC) estimates the economic and social costs of child abuse and neglect to total \$124 billion nationwide per annum. Local CASA/GAL programs offer an effective service to child victims of abuse and neglect that improves outcomes, increases the efficient functioning of our court systems, and saves millions in Federal and State taxpayer dollars annually in the process.

CASA/GAL programs are, at the heart of their operation, a highly effective leveraging of community-based resources to provide dedicated and sustained one-on-one advocacy for child victims and advise the courts of the child's best interests and needs throughout abuse and neglect proceedings. Research has shown that the presence of a caring, consistent adult in the life of a child victim is associated with improved long-term outcomes. These efforts, which focus on helping the child find a safe, permanent home where they can both heal and thrive, require thorough background screening, specialized training, and resources to promote a nationwide system of programs that adhere to and assure the highest quality of services and care for the child victim.

CASA Program funds through DOJ achieve and uphold national standard setting, assessment, accountability, and evaluation across 950 local, State, and Tribal programs to promote improved child outcomes and effective stewardship of public investments in victim advocacy. Evidence-based practices, intensive technical assistance, direct program guidance and partnerships, and national program standards and quality assurance processes all lie at the foundation of effective CASA/GAL program service delivery in communities across the Nation.

Given the nature of the CASA/GAL advocates' intensive work with child victims of abuse and neglect, standards of rigorous screening, training, supervision, and service are implemented nationwide, with Congressional support, to ensure consistent quality for victims who directly benefit from having their needs and rights championed in the courtroom and in the community. Comprehensive pre-service, in-service, and issue-focused training curricula—including training in disproportionality, cultural competency, and working with older youth—ensures a cutting edge approach to victim services centered on the child thriving well into the future as a member of the community. Federal support is foundational to the solid and high-quality functioning of a national child advocacy network for victims of abuse and neglect.

As the needs of child victims of abuse and neglect grow and change, so must the specialization of one-on-one advocacy and services by CASA/GAL programs. Since the Victims of Child Abuse Act was passed, the landscape of victims' services for children has evolved significantly. Researchers and practitioners know more now than ever about trauma, and its associated impacts on child development, as well as the significant and multiple risk factors and issues faced by abused and neglected children such as mental health/post-traumatic stress disorder (PTSD), commercial sex trafficking, overmedication, and the growing effects of substance abuse and the opioid epidemic in particular. Further, we know that youth of color in particular face very significant challenges—in addition to victimization—on their path to a thriving adulthood. CASA/GAL advocates bring one-on-one attention and a dedicated focus to each of the issues that the child victim faces, but additional resources are needed to enhance and build their knowledge base as part of a continuous advocacy development process.

These complex issues warrant adaptive and responsive training, technical assistance, and resources, while continuing on a trajectory of maintaining quality care and services within current CASA/GAL caseloads and also simultaneously building the capacity to take on additional cases when appointed by the court. National CASA/GAL Association is committed to continuous improvement of training, technical assistance, and resource delivery to strengthen and support local CASA/GAL programs and state organizations to help advocates remain at the forefront of emerging child welfare issues.

Federal support at the requested level is instrumental to bridging advocacy training and best practice tools into multiple and new emerging issue areas including child sex trafficking, substance abuse and opioid-overuse, and the overmedication of child victims, for example. Advocates need to be well versed in warning signs for these issues, as well as the available services, resources, and coordination of community and court efforts in order to best address the child victim's case.

FY 2023 funding of \$15 million will be targeted to fortifying resources and training generally for CASA/GAL programs, and in key focus areas including commercial sexual exploitation, children impacted by substance abuse disorders, children of incarcerated parents and young people aging out of foster care, based upon existing best practices and models. In addition, this Federal funding will be used to target resources to serve over 250,000 child victims of abuse and neglect, and continue efforts toward the development of strong state CASA/GAL organizations in the States currently under resourced, that will enhance support of program service delivery in local communities. Additional projects include sustaining development of training on best practices in addressing the needs of children impacted by the opioid epidemic and other forms of substance abuse, child sex trafficking, unaccompanied children and addressing racial disproportionality in child welfare and the need for racially and culturally sensitive recruitment and matching of CASA/GAL advocates.

According to the most recent government data available, the number of child maltreatment cases was 656,000 in 2019. This remains a significant population with equally significant and complex issues and risk factors. Without the benefit of a specially trained CASA/GAL advocate that is able to devote dedicated time and attention to the details of the case, the child victim faces a complex court process and child welfare system that is overwhelmed, under resourced and challenging to navigate. Our ability as a national network to serve every child victim of abuse and neglect is directly tied to strengthening and expanding a foundational and interwoven program of advocate training, technical assistance, standards, tools, and resources that are funded with DOJ support.

While children who are the victims of maltreatment have suffered deep layers of trauma, these experiences do not have to be their only life story. Juvenile detention and adult incarceration do not have to be the path to their future. Substance abuse, PTSD, homelessness, and joblessness do not have to be the basis of their experiences. We can change their trajectory, together, with Congressional support.

Caring, dedicated, and extensively trained CASA/GAL advocates bring about positive changes in the lives of child victims. Full funding is needed to continue expanding the advocate pipeline, enhance the training, resources, and services provided to and through CASA/GAL programs, and strengthen outcomes for future members of our Nation's workforce.

We urge the subcommittee to allocate \$15 million for the Court Appointed Special Advocates Program to address the overwhelming need for dedicated advocacy on behalf of child victims of abuse and neglect. Thank you for your consideration.

[This statement was submitted by Tara L. Perry, Chief Executive Officer]

PREPARED STATEMENT OF NATIONAL FISH AND WILDLIFE FOUNDATION

Chair Shaheen, Ranking Member Moran and Members of the subcommittee:

Thank you for the opportunity to submit testimony regarding FY 2023 funding that impacts the National Fish and Wildlife Foundation (NFWF). We respectfully request your approval of robust funding throughout the National Oceanic and Atmospheric Administration's (NOAA) budget, particularly for the National Ocean Service and National Marine Fisheries Service to allow for continued and expanding partnerships that deliver high quality ocean and coastal conservation.

NFWF and NOAA have been strong partners since 1996 and the Foundation continues to administer programs with NOAA that address ongoing and emerging issues. We believe that NFWF is a sound investment because of our proven track record for leveraging Federal funding with private contributions to maximize the impact Federal resources can achieve. We appreciate the subcommittee's past sup-

port and respectfully request continued funding for the following programs and partnerships.

NATIONAL COASTAL RESILIENCE

Resilient communities are better prepared to adapt to changing natural resource conditions, infrastructure threats and impacts to local economies. NFWF and NOAA working together through the National Coastal Resilience Fund (NCRF) provide communities with invaluable resources for restoring, enhancing, and strengthening natural infrastructure—the natural features that help reduce the impacts of coastal storms and floods—protecting communities while also enhancing habitats for fish and wildlife, addressing climate change, and sequestering carbon. NFWF also leads significant monitoring and evaluation efforts that measure the enhanced resilience of the restored coastal systems, including carbon sequestration. This helps improve our understanding of which activities are associated with the greatest and most cost-effective reductions in storm risk and storm damage.

Through the NCRF in 2021, NFWF, NOAA, and other partners awarded \$40.5 million in new grants that will support projects in 28 States and U.S. territories. The 49 grants announced will generate more than \$58.3 million in matching contributions for a total conservation impact of nearly \$98.8 million. These investments will support the restoration or expansion of natural features such as coastal marshes and wetlands, dune and beach systems, oyster and coral reefs, coastal rivers, and barrier islands that minimize the impacts of storms, flooding and other coastal hazards. In addition to NOAA, 2021 partners included the Department of Defense, Environmental Protection Agency's Gulf of Mexico Office, TransRe, AT&T and Shell USA, Inc. These partners pooled resources to promote projects that advance innovative approaches to protect communities against regional threats resulting from climate change.

The demand for this program's financial resources continues to significantly exceed the amount of annual funding available - in 2021, NFWF received 269 proposals seeking more than \$178 million in funding, with only \$41 million in available resources to meet this need. NFWF expects that demand will only increase as climate related risks increase and more communities develop capacity to utilize nature-based infrastructure to protect lives and infrastructure from these risks. The Foundation fully expects that even with additional funding provided from the Bipartisan Infrastructure Law (BIL) that demand will continue to greatly surpass available funding.

FISHERIES ELECTRONIC MONITORING AND REPORTING

Since 2010, NFWF has invested significantly in fisheries around the U.S. to catalyze projects that are modernizing the way vital fisheries data are collected, shared, and analyzed. High quality, timely and accurate fisheries information is critical to maintaining sustainable U.S. fisheries. Fishermen and seafood marketers are increasingly using information about their fishing activity to improve the efficiency and effectiveness of their operations and to satisfy their customer demands for legally and sustainably caught seafood.

From 2015 to 2021, the Electronic Monitoring and Reporting (EMR) grant program has funded \$25.1 million across 75 projects that modernize U.S. fisheries data collection and received \$26.3 million in matching funds to leverage these investments. Innovation and technology have the potential to reduce the cost of fishery monitoring; increase the speed, reliability and transparency of fisheries data; and enable managers and fishermen to address management challenges more effectively. EMR isn't one size fits all. NFWF projects represent a cross section of the advancements being made around the U.S. in fisheries management.

CORAL REEF CONSERVATION

Since 2000, NFWF has partnered with NOAA, FWS, and USDA–NRCS to respond to the alarming decline in both the quantity and productivity of the Nation's coral reef ecosystems through multiple coral conservation initiatives that aim to improve management, increase public awareness, and reduce threats to coral reefs. NFWF works with local, State, territorial, Federal and regional partners to achieve its goals in coral conservation and bolsters multi-agency initiatives like the U.S. Coral Reef Task Force Watershed Partnership Initiative. The program supports reef resiliency by reducing local stressors from unsustainable harvest and land-based pollution. In 2020 the program added a new funding priority to build capacity for direct reef restoration efforts and launched a separate emergency funding solicitation to respond to events like Stoney Coral Tissue Loss Disease which can be time sensitive.

Since the creation of NFWF's coral program in 2000, the program has awarded \$22 million across 408 projects, leveraging more than \$29 million in conservation resources. Funds have assisted broad-scale coral reef management by establishing new techniques for assessing and monitoring reef health and new fishery management models. Site-specific initiatives have developed and implemented watershed management plans, reduced sediment erosion through stream bank stabilization, provided incentives or best management practices on agricultural lands, and supported capacity-building of management and conservation organizations to sustain conservation outcomes.

KILLER WHALE CONSERVATION

NFWF partners with NOAA's Office of Protected Resources, SeaWorld Entertainment and BNSF Railway on the Killer Whale Research and Conservation Program to aid in the recovery of the Southern Resident killer whale population in the Pacific Northwest. The program prioritizes the highest impact activities called for in the recovery plan as more funding is sought to fund additional actions beyond traditional management and conservation measures.

In the first 7 years, the program has awarded 46 grants totaling \$5.3 million, drawing an additional \$9.2 million in grantee match for a total conservation investment of more than \$14.5 million. These awards have fostered collaborative efforts in the three priority action areas of recovery to increase prey availability through restoration of important salmon runs; improve water quality and reduce disturbance in critical habitat; and fill critical research gaps in health, demographics and stressors. All three strategies work to partner science with management action and restoration activities. NFWF has taken a comprehensive food-web approach to recovering this apex predator and works with state and transboundary managers to implement recovery actions. DoD is expected to join this program in 2022 to further advance the food-web approach.

PAPAHĀNAUMOKUĀKEA RESEARCH AND CONSERVATION

NFWF's and NOAA's partnership on the Papahānaumokuākea Research and Conservation Fund provides coordinated and collaborative research and conservation in support of effectively managing the species and habitats in the Papahānaumokuākea Marine National Monument. One of the key challenges for NOAA and its partners managing this expansive area is its remote location. Past agency funding only allowed for a single voyage to the Marine Monument in the Pacific Ocean to address multiple needs and locations per year, making it difficult to do the in-depth studies managers need. NFWF and NOAA initiated a new model for investments to go deeper, learn more and further expand the existing program and research dollars that are currently invested to maximize the conservation impact.

The partnership supports collaborative research and conservation actions to galvanize funding around a critical management theme. For example, prioritized research on the algae *Chondria* is helping managers explore mitigation of the recent unprecedented algae invasion while support of marine debris removal cruises works to remove the significant amounts of debris accumulating in the monument. Throughout all investments, the program seeks to maximize conservation impact, management capacity and cultural and outreach opportunities.

MARINE DEBRIS

NFWF and NOAA have several ways in which we are working together to combat the problem of Marine Debris. Starting over two decades ago, NFWF administered a Marine Debris Program to help NOAA's new program understand the scope of marine debris across the Nation by advancing science around sources, sinks and impacts to both habitats and wildlife. These early efforts transitioned into the Fishing for Energy program which prioritized removal and prevention of derelict fishing gear as one of the most destructive types of marine debris. This programmatic funding and disposal infrastructure has helped to expand and institutionalize marine debris removal and disposal efforts in several coastal States and port communities.

Building off this extensive experience, in 2020 NOAA asked NFWF to assist in administering approximately \$10 million in 2019 supplemental funding to remove damaging marine debris from coastal areas of communities impacted by hurricanes Florence and Michael, and Typhoon Yutu and reduce impacts to communities, industry and further harm to habitats and fish and wildlife populations. The Hurricane Response Marine Debris Removal Fund is a partnership between NFWF and the NOAA Marine Debris Program that awards grants to assess, remove and dispose of marine debris caused by severe storms. Grants are awarded based on the

targeted debris' existing or potential impact to coastal communities and resources, and to prevent further harm to sensitive marine habitats and species listed under the Endangered Species Act. NOAA has again requested assistance with administration of the 2021 supplemental funding which will award grants in 2022.

NFWF BACKGROUND

NFWF was established by Congress in 1984 to catalyze private investments to conserve fish, wildlife and their habitats. In addition, every dollar directly appropriated to NFWF by Congress goes to on-the-ground conservation projects and NFWF charges no administrative costs. NFWF raises private funds not only to leverage Federal dollars, but also to support the associated management costs of implementing the Federal funds. Since Congress created the foundation in 1984, NFWF and its grantees have invested \$7.4 billion in to more than 20,400 projects while partnering with 6,000+ organizations.

NFWF remains fully transparent and is required by law to notify Congress 30 days in advance of every grant that exceeds \$10,000 in Federal funds. Details of all projects awarded during FY 2021 can be found in NFWF's annual investment guide and all NFWF's grants can be found on our website: <https://www.nfwf.org/grants/grants-library>.

In FY 2021, NFWF was audited by an independent accounting firm, and they issued an unqualified report with no material weaknesses identified and no deficiencies identified. This is the THIRTEENTH consecutive year of unqualified audits. In addition, NFWF has continually qualified as a low-risk auditee under OMB guidelines.

In FY 2021, through discretionary cooperative agreements, NFWF partnered with 15 Federal and State agencies or departments and more than 30 corporations and foundations to support implementation of Federal conservation priorities. These efforts focused on working landscapes, private lands, natural resource conservation, coastal resilience and community-based restoration.

Chair Shaheen, Ranking Member Moran and members of the subcommittee, we appreciate your continued support and stand ready to answer any questions you or your staff might have.

[This statement was submitted by Will Heaton Director, External Relations]

PREPARED STATEMENT OF NATIONAL LEGAL AID & DEFENDER ASSOCIATION (NLADA)

NLADA is America's oldest and largest national organization whose resources are exclusively dedicated to excellence in the delivery of legal services. Our comments concern the Legal Services Corporation (LSC) and U.S. Department of Justice (DOJ) programs.

LEGAL SERVICES CORPORATION

Civil legal problems jeopardize the housing, income, physical safety and other basic human needs of millions of Americans every year. When people have access to legal help, these problems are often resolved positively, but people who are forced to face courts and complex legal processes alone are more likely to experience severe consequences that create deep unnecessary hardship for themselves and their families. The latter is unfortunately the reality for a large majority of low-income Americans, and the problem is growing. In 2017, LSC published data showing that low-income Americans received no help or inadequate help with 86 percent of their civil legal problems. This is because despite overwhelming evidence for both the effectiveness of civil legal aid, and the considerable social and economic return on investment that it produces,¹ our country has failed in recent years to provide a level of resources for legal aid that is remotely commensurate with the level of need.

While we are grateful to Congress for providing modest increases in funding in recent years, this has not been sufficient to address the current resource shortfall, because prior funding losses were never rectified. Demonstratively, the appropriation level for FY2019 was the exact dollar amount as it was in FY1994. Therefore, simply as a result of inflation LSC is badly underfunded compared to its level almost three decades ago, and for much of that period it was considerably lower in real terms also. This historical understanding underpins the current crisis, but present conditions have deepened it considerably. In April, LSC released new data

¹Moore, L. and Phyper, M., Aug 2019, Return on Investment in Civil Justice Services and Programs; Selected Annotated Bibliography of Existing Research; Canadian Forum on Civil Justice; see pages p10–26.

showing the extent to which this has occurred. Last year, low-income Americans received little or no legal help with 92 percent—more than nine in ten—of their civil legal problems.²

This is not because people are simply uneducated about the availability of legal help, though this is true for many. Rather, people facing serious legal problems are seeking help but denied it because their local legal aid organization does not have the resources needed to assist: programs had to turn away 49 percent of eligible clients seeking help, and could not fully resolve 44 percent of the problems of the clients they could serve. Even prior to the release of LSC's new data, NLADA calculated LSC would need to provide \$1.36 billion for FY2023 in order to provide adequate service to every eligible person seeking help from one of its grantees. This was based in part on a projection of the level of need in FY2023, and in part on our understanding that it is not possible to avoid addressing the consequences of prior underfunding any longer.

An elevated level of legal need and demand for services.—The severe disruption caused by the COVID-19 pandemic has subsided, but it has created lasting consequences for many of our country's poorest families and the overall financial situation of low-income Americans is becoming even more precarious. The Census Bureau Household Pulse survey data collected at the start of April found increases of more than 30 percent in the number of households relying on credit or personal loans to make ends meet, with far higher rates experienced by people of color³. This limits the ability of families to resolve their problems before they reach the stage at which legal assistance becomes necessary.⁴ In particular, an eviction crisis that was blunted but not halted⁵ by Federal eviction moratoria and emergency rental assistance continues to create widespread unmet legal need. Household Pulse data from the same period suggests that around 28 percent of American households “are not current on rent or mortgage where eviction or foreclosure in the next 2 months is either very likely or somewhat likely”.⁶ Eviction cases where tenants are represented are overwhelmingly likely to resolve with the eviction avoided, but the opposite is true when they are not,⁷ as is the case for 90 percent of tenants.⁸

Addressing the consequences of underfunding. The insufficiency of resources provided for civil legal aid has forced many providers to “triage” clients, prioritizing the most urgent cases at the expense of other worthy seekers of assistance. It has also come at the expense of investing in other organizational needs that are nonetheless required to provide adequate services. Most notably, compensation for attorneys and other important staff at legal aid organizations is currently not sufficient to recruit and retain the workforce they need. The median starting salary for a legal services attorney in 2021 was less than \$55,000.⁹ Combined with the high student debt burden required for a law degree, it is unaffordable for many to accept these positions or remain over the long-term. Also affected by resource limitations is the ability of organizations to educate their communities about available services, contributing to the fact that 53 percent of people did not feel confident they could find a lawyer they could afford to help with their legal problem.¹⁰

U.S. DEPARTMENT OF JUSTICE PROGRAMS

Tribal Civil and Criminal Legal Assistance, Training and Technical Assistance

We request that FY 2023 funding be maintained for the Department of Justice, Office of Justice Programs, within the State and Local Law Enforcement Assistance

²Legal Services Corporation, Apr 2022, The Justice Gap: The Unmet Civil Legal Needs of Low-income Americans.

³Pete Gannon, Apr 26, 2022, Warnings Appear in Household Finances, Axios.com.

⁴This intersects with the economic hardship caused by the expiry of the Federal child tax credit, which alone increased the number of children in poverty by almost 4 million. See: Parolin, Z., Collyer, S., and Curran, M., Feb 17, 2022, Absence of Monthly Child Tax Credit Leads to 3.7 Million More Children in Poverty in January 2022, Columbia University Center on Poverty and Social Policy.

⁵Tenants were often refused the opportunity to renew their lease, which Federal moratoria did not protect against.

⁶Data taken from week 44 of the Household Pulse survey, at: <https://www.census.gov/data-tools/demo/hhp/#/?measures=EVICTFOR>.

⁷For a review of recent studies finding this, see pages 50–53 in: The Economic Impact of an Eviction Right to Counsel in Baltimore City; Prepared for The Public Justice Center, May 8, 2020, Stout Risius Ross.

⁸Desmond, M., Mar 2015, Unaffordable America: Poverty, housing, and eviction, Fast Focus, Volume 22, Institute for Research on Poverty, University of Madison-Wisconsin, p.5.

⁹National Association for Law Placement, Inc., Sept 2021, Starting Salaries—Class of 2020.

¹⁰Legal Services Corporation, Apr 2022, The Justice Gap: The Unmet Civil Legal Needs of Low-income Americans, p.52.

appropriations account, at a level similar to that provided in recent years, which is approximately \$1 to 2 million, for the Tribal Civil and Criminal Legal Assistance, Training and Technical Assistance grant program (TCCLA). This should continue to include funding in FY 2023 to support the work done on behalf of Native Americans by Indian Legal Services programs that are connected with the Legal Services Corporation. This FY2023 funding could be either within a specified line item for “assistance to Indian Tribes,” such as the \$50 million Congress appropriated in the FY2022 Consolidated Appropriations Act, and was included in the President’s Budget for FY2023, or within a Tribal set-aside percentage of Office of Justice Programs accounts, as this subcommittee has recommended in prior years. The consortium of 24 Indian Legal Services programs operating in 23 States provides legal representation to thousands of American Indian and Alaska Native individuals in Tribal and State courts, and assists more than 160 Tribal governments and/or Tribal judicial systems to enhance or develop their justice systems. In at least 46 Tribal courts, these Indian Legal Services programs provide the only public defender services available. Many of these Indian Legal Services programs have been awarded funding under the TCCLA grants program, most recently for FY 2021 for both Tribal civil and criminal legal assistance:

Recent examples of civil legal assistance work done under TCCLA funding awards include drafting model domestic violence protective order codes, as well as drafting Tribal laws and revisions to civil codes, policies and procedures; providing representation to children within the juvenile systems of Tribal courts as guardians ad litem; handling Indian wills, which has included drafting Advanced Directives for Tribal members; and collaborating and maintaining relationships with Tribal domestic violence advocates, Tribal crime victims’ advocates, urban Indian organizations, prosecutors, Tribal public defenders, State and Tribal social service agencies, Tribal housing authorities, senior center staff, staff at local Bureau of Indian Affairs and Department of the Interior Office of Special Trustee offices, the Tribal bar, and others to improve community awareness about available legal services and provide more comprehensive services.

Recent examples of programs’ criminal legal assistance work conducted under TCCLA funding awards include representation of defendants in a tribal/State court dual-jurisdiction DWI hearing to wellness court; presenting on the U.S. v. Cooley case and impacts on Tribal law enforcement when encountering non-Indians on non-Tribal lands within the boundaries of a reservation; handling cases related to the expungement of criminal records; providing a Public Defender for Tribal members in the Chickasaw Nation Tribal Court pursuant to the June, 2020, U.S. Supreme Court ruling in *McGirt v. Oklahoma*; assisting juvenile Tribal members in criminal defense and court appointments of guardian ad litem cases when parents faced criminal prosecution or incarceration; and handling trial level casework regarding unlawful pre-trial detention.

In FY 2023, whether the subcommittee recommends funding to DOJ for Indian Country Tribal justice and law enforcement programs as an overall sum, as in fiscal year 2022, or as a Tribal set-aside percentage of overall DOJ funding, as has been proposed in prior fiscal years, we request that both bill and report language direct that some DOJ funding be allocated for the purpose of the provision of both Tribal civil and criminal legal assistance to individual Tribal citizens and to Tribal judicial systems pursuant to the Indian Tribal Justice Technical and Legal Assistance Act.

PUBLIC DEFENDER IMPROVEMENT

The Federal Government has an important role in ensuring quality in State and local public defense systems, and the President’s Budget for FY2023 included \$25 million for public defender improvement. We urge the committee to fully fund this program. DOJ has previously undertaken initiatives to support state, Tribal, and local public defense systems, including the Smart Defense Initiative, which focused on upholding the Sixth Amendment right to counsel, and on fostering defender-researcher partnerships; and the Sixth Amendment Initiative, which focused on the protection of all Sixth Amendment rights via strategic planning, implementation of strategic plans, and innovative partnerships between public defense service providers and other criminal legal system stakeholder groups. These initiatives have yielded substantial benefits for criminal legal systems and for communities more broadly. For example, a pilot program under the Smart Defense Initiative to provide representation at all felony arraignments in Alameda County, CA reduced unnecessary pretrial incarceration and provided substantial cost savings: the percentage of cases where accused individuals were released at arraignment increased from less than 1% to 20%; motions to reduce bail (which were virtually nonexistent without

counsel) had an 83% success rate; and the assistance of counsel avoided 2,974 days of incarceration, translating to a savings of \$422,308 in a single year.

VIOLENCE AGAINST WOMEN ACT (VAWA) PROGRAMS

More than 1 in 3 women and more than 1 in 4 men in the United States had experienced rape, physical violence, and/or stalking by an intimate partner. Civil legal aid helps survivors secure their physical safety, break legal links with their abuser, and rebuild their lives over the long term. We urge the committee to provide \$100 million for civil legal assistance for victims, as requested by the President. None of this appropriation should be drawn from the Crime Victims Fund administered by the Office for Victims of Crime, because this reduces the total amount available to serve victims of crime and jeopardizes the sustainability of Crime Victims Fund over the long-term. The sustainability of the Crime Victims Fund is a bipartisan concern, as shown by the enactment of H.R. 1652, the VOCA Fix to Sustain the Crime Victims Fund Act.

JOHN R. JUSTICE STUDENT LOAN REPAYMENT ASSISTANCE PROGRAM

As the cost of law school continues to rise, new lawyers are increasingly reliant on student loans to obtain a law degree: a 2021 report shows that the average law school student borrows over \$118,000 just to attend law school, and 74.1% of law school students graduate in debt.¹¹ Salaries for public defenders and prosecutors are low, so sustaining a career in public service is often impractical if not impossible, leading to public defender programs and prosecution offices being unable to retain talented attorneys. The John R. Justice Student Loan Repayment Assistance Program (JRJ) offers critical support to relieve the pressure of student loan debt for public defenders and prosecutors. We are grateful that the committee has doubled the appropriation level for the John R. Justice program to \$4 million for this year, but for this program to have a meaningful national impact, it should be funded at the authorized level of \$25 million.

[This statement was submitted by Radhika Singh, Vice President]

PREPARED STATEMENT OF NATIONAL MARINE SANCTUARY FOUNDATION

Chairwoman Shaheen, Ranking Member Moran, and members of the subcommittee, thank you for the opportunity to submit written testimony regarding appropriations for the National Oceanic and Atmospheric Administration (NOAA) in Fiscal Year (FY) 2023. On behalf of the National Marine Sanctuary Foundation, I thank the subcommittee for the \$4.5 million increase in the Marine Sanctuary Program (ORF) funding and \$1 million increase in Marine Sanctuaries Construction (PAC) funding for FY 2022, and language supporting expansion of the National Marine Sanctuary System. As supporters, stakeholders, and partners of America's National Marine Sanctuary System, we strongly urge the Committee to:

1. Appropriate at least \$95.5 million in National Marine Sanctuaries in FY 2023.
2. Direct NOAA to prioritize programs in sanctuaries.
3. Cap corporate fees to no more than 5 percent of the annual appropriations.
4. Address Section 304(f) of the National Marine Sanctuaries Act.

OFFICE OF NATIONAL MARINE SANCTUARIES

NOAA's Office of National Marine Sanctuaries (ONMS) serves as the trustee for a network of 15 national marine sanctuaries and two marine national monuments that encompass over 620,000 square miles of marine and Great Lakes waters. The National Marine Sanctuary System conserves some of the Nation's most critical natural, historic, and cultural resources.

The conservation of marine ecosystems is vital to maintaining a healthy ocean and Great Lakes, sustaining productive coastal economies, and addressing climate change. According to the Bureau of Economic Analysis, the marine economy accounted for \$397 billion of U.S.GDP in 2019. Tourism and recreation accounted for the most significant portion, \$234 billion of the gross output, and marine living resources accounted for \$26.6 billion. Both sectors depend on a healthy ocean. Sanc-

¹¹ See e.g.; Hanson, M., December 5, 2021, Average Law School Debt, Education Data Initiative, EducationData.org; and Hess, A. J., Dec 22, 2022, U.S. Student Debt Has Increased by More than 100 percent Over the Past 10 Years, CNBC.com.

tuaries drive the growth of the blue economy through fishing, diving, recreation, hospitality, and tourism.

The ocean is central to mitigating climate change, absorbing 90 percent of the climate system's excess heat. Climate change is disproportionately impacting the ocean and its impacts threaten the physical well-being, economic prosperity, and food security of communities along our coasts and businesses that rely on marine resources. National marine sanctuaries and marine national monuments are a key part of the solution to ocean climate impacts. They protect ecosystems that remove atmospheric carbon and store it in marine sediments and habitats, safeguard coastal communities from flooding and storms and reduce non-climate stressors to support ecosystem resilience.

For Sanctuaries and Marine Protected Areas ORF account, we urge Congress to provide at least \$87 million. ONMS manages more ocean and Great Lakes area than the entire National Park Service on a significantly lower budget. This is the minimum level of funding necessary to advance conservation and restoration in U.S. waters while addressing the threats of biodiversity loss, climate change, and inequitable access to nature. There are three sites currently in the designation process as national marine sanctuaries, four sites on the nomination inventory awaiting action, and one site under consideration for the inventory. These sites have strong community-based support and four were nominated by Indigenous communities. Engaging communities as stewards of these protected waters make sanctuaries unique and provides a participatory approach to conservation. With additional resources, ONMS can engage communities throughout the sanctuary nomination and designation processes.

For Marine Sanctuaries PAC, we urge Congress to provide at least \$8.5 million. This funding will support the replacement or repair of vessels that are mission-critical. ONMS maintains a fleet of small boats that allows managers and partners to assess, monitor, research and protect national marine sanctuaries. These efforts include responding to entangled whales, conducting scientific missions, maintaining mooring buoys, and enforcing regulations. Increasing demands on an aging fleet lead to higher operating costs and challenges to maintaining safe, efficient, and effective operations. To continue on-the-water science and conservation programs that strengthen the management of our ocean and Great Lakes, investment in recapitalizing aging vessels across the National Marine Sanctuary System in addition to upgrades, retrofits, and life-cycle extensions is critical. Funding would also support improvements for visitor centers, facilities and signage, and ADA compliance that anchor tourism and recreation in communities and enhance equitable access to nature.

In October 2022, the Nation will mark the 50th anniversary of the National Marine Sanctuaries Act. As we move towards this anniversary, we need to invest in America's protected waters, and the communities and businesses that depend upon them. The Build Back Better bill proposed critical investment in ONMS facilities across the country. For the anniversary, we urge the subcommittee to create a special investment of \$25 million in PAC for the next 5 years to improve facilities.

PRIORITIZING NATIONAL MARINE SANCTUARIES AND MARINE NATIONAL MONUMENTS

Marine sanctuaries and monuments protect nationally significant areas in our ocean and Great Lakes akin to national parks and national wildlife refuges. Because of their special designation and NOAA's responsibility to hold them in trustee, the Department of Commerce and the agency should prioritize investment in these areas. We appreciate Congress including report language in Consolidated Appropriations Act for FY 2022 for National Ocean Service (NOS) to prioritize marine debris cleanup efforts within marine sanctuaries and marine national monuments. We request the subcommittee expand this language to include other accounts within NOAA, specifically, Navigations, Observation and Positioning, Coastal Science and Assessment and Coral Reef Conservation Program within NOS, Protected Resource Science and Management and Habitat Conservation and Restoration within NMFS, and Climate Research and Ocean, Coastal and Great Lakes Research within OAR. In addition to the general provision above, we respectfully request funding for sanctuaries Line Offices. We request this funding above the President's FY 2023 Budget request.

National Ocean Service (NOS).—We commend the Coral Reef Conservation Program and the Office of Response and Restoration's Marine Debris Program for supporting work in sanctuaries and monuments. We request support in the following accounts:

- \$15 million within the Navigation, Observation, and Positioning to: characterize and monitor marine ecosystems and living resources; understand and predict impacts from climate change; prioritize and synthesize long-term data collec-

tions; advance technologies for biological observing; and develop targeted modeling, web-enabled ecosystem trends, and other tools to inform adaptation strategies.

- \$5 million within the Office of Response and Restoration for marine debris removal in sanctuaries and monuments to enhance water quality and reduce the impacts of debris on resources.
- \$1 million within the Coral Reef Conservation Program to support the MPA Center providing technical assistance to Pacific Islands, Caribbean, and international partners, complementing USAID.
- \$10 million within National Centers for Coastal Ocean Science (NCCOS) for biogeographic assessments and characterizations in sanctuaries and monuments to evaluate regulatory and management decisions, and grants to non-federal partners for targeted research on priority management issues.
- \$5 million within the Integrated Ocean Observing System (IOOS) program to support the collection, management, accessibility and distribution of critical natural and archaeological data and information.

National Marine Fisheries Service (NMFS).—We commend the Office of Habitat Conservation for their strong support for work in sanctuaries. We request support in the following accounts:

- \$100 million for Habitat Conservation and Restoration within the National Marine Fisheries Service and dedicate \$40 million to support habitat restoration in U.S. waters, with the increase directed for restoration in national marine sanctuaries and marine national monuments and assessing blue carbon sequestration.
- Funding for the Office of Law Enforcement to increase enforcement in sanctuaries, especially those like the Florida Keys where there are zone programs.
- For Protected Resources Science and Management, we request an increase of \$10 million to support species recovery grants. Sanctuaries facilitate partnerships across sectors and can effectively develop best practices and models for improving science and management for protected species.
- For the Integrated Ecosystem Assessment Program, we request \$5 million to directly support the science needs and management of sanctuaries and monuments.

Oceanic and Atmospheric Research (OAR).—Sanctuaries act as living laboratories for stewardship, education, restoration, and science to address climate impacts. Scientists across NOAA are increasing our understanding of the climate drivers, conditions, trends, and predictions affecting our ocean through research conducted in sanctuaries.

- Within OAR's climate research, we request \$5 million to support climate science in sanctuaries and monuments.
- Within the Office of Exploration and Research, \$6 million to support and conduct critical operations in the National Marine Sanctuary System, with emphasis on the Pacific Islands Region, Great Lakes, and Gulf of Mexico.
- \$3 million in the Ocean Acidification Program to focus research on sanctuaries and monuments aligned with the current OAP Strategic Plan.
- \$3 million for NOAA Research Laboratories to support the design, construction, and installation of research and monitoring instruments in sanctuaries and monuments.

OFFICE OF MARINE AND AVIATION OPERATIONS (OMAO)

Within OMAO, we request \$3 million in dedicated funds to support operations in the National Marine Sanctuary System using NOAA Ships and uncrewed systems to address science and management needs and provide increased access to and on water presence for NOAA and partners in these protected areas.

CAP FOR NOAA ADMINISTRATIVE COSTS

We urge the subcommittee to cap NOAA's and NOS's corporate and administrative costs at five percent of total ORF appropriations for the account. In fiscal year 2021, ONMS paid over \$7 million in administrative and corporate costs to NOAA. ONMS shoulders a disproportionate share of corporate expenses and direct bills because other programs are exempt from such fees. Rather than ONMS and other non-exempt programs shouldering these costs, we urge this subcommittee to cap costs and require NOAA budget these expenses directly. Direct accounts for NOAA's and Line Offices' Administration, management, and corporate services would be transparent and allow Congress to appropriate actual costs for these expenses. More im-

portantly, it ensures NOAA has the necessary and deserved budget for administration and management without impacting program and mission delivery.

Suspend Section 304(f) of the National Marine Sanctuaries Act

Section 304(f) of the National Marine Sanctuaries Act is outdated and should be repealed as demonstrated in NOAA's findings for Malloys Bay-Potomac River and Wisconsin Shipwreck Coast National Marine Sanctuaries. With only 1.9% of the U.S. marine environment protected outside of the central Pacific, our Nation needs to increase the level and scale of marine protected areas to conserve biodiversity and all its contributions to people and the economy. National marine sanctuaries are an effective and cooperative approach to increase protection. We urge the subcommittee to include language to strike Section 304(f) or suspend the provision in FY 2023.

Thank you for this opportunity to provide testimony. Robust funding will ensure sound management of these treasured places through strong community engagement in stewardship; support of mission-critical tools; active restoration of marine environments; preservation of maritime resources; and improved understanding of ecosystems. We look forward to working with the subcommittee during the FY 2023 appropriations process.

[This statement was submitted by Ms. Kristen J. Sarri, President and CEO]

PREPARED STATEMENT OF THE NATIONAL OCEAN AND COASTAL SECURITY

Mrs. Chairwoman and Members of the subcommittee, this joint statement is submitted on behalf of the non-profit organizations listed above who share a deep concern for the health of the Nation's oceans, coasts, and Great Lakes.

The ocean, coasts, and Great Lakes are experiencing dramatic changes from sea level rise, increasing coastal storm frequency, coastal flooding, erosion, hypoxia, harmful algal blooms, ocean acidification, biodiversity loss, and more. Many of these changes are caused by climate change, which is disproportionately impacting the ocean. Warming waters are changing ocean circulation and chemistry, raising sea levels, increasing storm intensity, and changing the diversity and abundance of marine species. These impacts weaken marine ecosystem's ability to provide critical ecological services and natural infrastructure for climate resilience. This threatens the physical well-being, economic prosperity, and food security of communities along our coasts and businesses that rely on marine resources and transportation.

The most recent State of U.S. High Tide Flooding report recorded record high global sea levels and some regions across the country are seeing up to 1,100 percent increases in high tide flooding. At the same time, the population in coastal areas continues to increase and nearly 40 percent of coastal residents are vulnerable communities—the elderly, children, and the poor. This interface of coastal change and increasing coastal populations is driving the need to enhance coastal community adaptation, mitigation, and resilience capacity. Our coastal organizations, in partnership with the National Oceanic and Atmospheric Administration (NOAA), are poised to play a leading role in addressing these continually evolving ocean, coastal, and Great Lakes challenges and helping people where they live.

The Infrastructure Investment and Jobs Act (IIJA) recognizes the importance of coastal infrastructure—and the critical role of NOAA and its partners—in addressing coastal community adaptation, mitigation, and resilience. The IIJA included one-time investments of \$47 billion for resiliency with \$2.6 billion of that amount going to NOAA. The NOAA funds include amounts for data acquisition, marine debris, forecasting and modeling, regional management, projects for habitat restoration and community resilience and coastal and ocean observing. Our organizations thank Congress for making these significant investments.

The IIJA makes impressive strides to advance ocean, coastal, and Great Lakes resilience, yet these investments are only an initial down payment on the full need. Coastal communities are looking at multi-billion dollar price tags to bolster themselves from rising seas and associated coastal hazards. For example, Harris County, Texas planners estimate it will cost more than \$30 billion to provide protection against major 100-year flood events. This is over 10 times the investment to NOAA under IIJA. The economic and social cost of inaction is exorbitant—Hurricane Harvey in 2017 cost \$125 billion in damages and led to the deaths of 68 people while causing the third 500-year-flood in a 3 year period. Studies show that investments in coastal resilience work. A project supported by NOAA and its partners in Harris County—Exploration Green—created a wetland to absorb floodwaters, and even though the project was in the early stages of development when Hurricane Harvey hit, it protected 150 homes from flooding, and now it protects over 3,000 homes from 100-year and 500-year flood events.

Our annual appropriations request for FY 2023 and ensures the full impact of the IJJA investments are realized. The immediate and long term success of infrastructure investments depend on community engagement, planning, analysis of options and implementation, and stewardship of newly restored areas—all activities that were not supported under the IJJA. Increased capacity is needed to work with local communities to support and implement these projects, as well as manage the restored areas. Furthermore, many of our programs have significant educational and outreach mandates that complement the development of coastal infrastructure, but were not funded in the IJJA. Education, outreach, and training within coastal communities can both explain the value of coastal infrastructure and improve community resilience through planning and preparedness.

Our organizations stand in strong support of NOAA's ocean, coastal, and Great Lakes research, observing, conservation, management, stewardship, training, and education programs which advance coastal resilience. We support the following investments in FY 2023 appropriations to ensure robust investments in coastal resilience as well as capacity to implement the IJJA:

\$140 million for the National Sea Grant College Program and \$18 million for Sea Grant Aquaculture..	\$108.5 million for Coastal Management Grants and \$64.782 million for Coastal Zone Mgmt. and Services
\$87 million for National Marine Sanctuaries operations, research, & facilities and \$8.5 million for procurement, acquisition & construction.	\$42.5 million for National Estuarine Research Reserve System operations and \$10 million for procurement, acquisition & construction
\$75.3 million for the Regional Integrated Ocean Observing Program.	\$34 million for National Ocean and Coastal Security Fund
\$2.5 million for Regional Ocean Partnerships	

National Sea Grant College Program.—The National Sea Grant College Program Act authorizes the awarding of grants and contracts to initiate and support programs at Sea Grant colleges and other institutions for research, education, and advisory services in any field related to the conservation and development of marine resources. A joint federal, State, and local investment, Sea Grant provides solutions for the issues affecting our Nation's coastal communities (including the Great Lakes, Gulf of Mexico, and communities on the Atlantic, Caribbean, and Pacific coasts), yielding quantifiable economic, social, and environmental benefits. Sea Grant is a unique university-based program within NOAA that awards over 90% of its appropriated funds to coastal States through a competitive process to address issues identified as critical by coastal communities throughout the United States. Sea Grant fosters cost-effective partnerships among State universities, State and local governments, NOAA, and coastal communities and businesses, leveraging nearly \$3 for every \$1 appropriated by Congress. In 2020 the Sea Grant program helped generate an estimated \$520 million in economic benefits; created or supported 11,000 jobs; created or sustained 1332 businesses; provided 34 State-level programs with funding that assisted 285 communities improve their resilience; helped over 11,000 people adopt safe and sustainable fishing practices; helped restore or protect an estimated 4.2 million acres of habitat; and supported the education and training of nearly 2000 undergraduate and graduate students.

The Integrated Ocean Observing System (IOOS).—The IOOS Regional Associations (RAs) work with Tribal, State, regional and Federal agencies to design and operate regional observing systems which provide actionable information to a variety of stakeholders. IOOS efficiently links observation to modeling via data management in order to improve the safety and efficiency of maritime operations, more effectively protect and restore healthy coastal ecosystems, reduce public health risks, and to mitigate the effects of coastal hazards including flooding. The IOOS regional network enables NOAA to more efficiently achieve their goals by increased access to non-Federal data sources and by developing tailored information products that address the unique needs of users around the Nation. The FY 2023 request supports the core operation of these regional systems allowing them to continue critical observations and to provide that information in useful formats, in a timely manner. In addition, the support will allow for repairs to aging infrastructure and modernization of the system to better provide information on changing conditions including biology and marine life.

Coastal Zone Management (CZM) Programs.—The 34 State and Territory CZM Programs, in partnership with the National CZM Program, support the congressionally recognized priority of the effective management, beneficial use, protection, and development of the coastal zone. The demands on CZM Programs have increased with continuously more complicated balancing of coastal zone uses and needs for conservation, while emerging issues including sea level rise, increased coastal storm frequency, and other coastal hazards such as coastal flooding and erosion threaten the lives and livelihoods of coastal communities. Additionally, IIJA provided for \$207 million for habitat restoration projects under the CZMA placing increased demands for directed project execution on the CZM Programs without providing resources to address basic capacity needs. While the IIJA funds do address some components of the extensive needs for coastal resilience, there remain critical gaps that are not addressed which are supported by the annual appropriations for Coastal Management Grants. These gaps include vulnerability assessments; long-term resilience planning; and project planning, design, engineering, and implementation for green and gray infrastructure projects with coastal community resilience benefits. To ensure the effective implementation of this new legislation and the continuation of comprehensive coastal resilience efforts, it is imperative that the Coastal Management Grants be funded at a level that ensures the States and Territories have the necessary capacity to meet these mandates.

The National Estuarine Research Reserve System (NERRS).—The NERRS include 30 special coastal places (Reserves), encompassing more than 1.4 million acres. Over 50 years, and in times of crisis, Reserves have become trusted members of coastal communities. The NERRS is a time-tested, mission-ready program that is prepared for growth and has a proven track record of delivering the information and solutions communities need to address climate change and many other challenges. Communities look to Reserves as partners in addressing the challenges of a changing coast and as places for safe outdoor experiences that are essential to public health. An increase in program funding will send more dollars to each State and enhance the NOAA services each Reserve and its communities receive. The increase will support NERRS geographic growth: there are two proposed reserves in Louisiana and Wisconsin in the designation pipeline. A funding increase will also deepen and broaden the impact of national programs that make coastal communities and the Nation more resilient, including the NERRS System-Wide Management Program, Coastal Training Program, Collaborative Research competitive grant program, and Davidson Graduate Research Fellowship. Additionally, funding for the NERRS will strengthen the impact of investments made through the infrastructure bill. Reserves support jobs, contribute to the economy, and provide much-needed refuge, especially during the pandemic.

National Marine Sanctuaries Program and Habitat Restoration.—The National Marine Sanctuary System encompasses over 600,000 square miles of marine and Great Lakes waters protecting ecologically and biologically significant habitats. Sanctuaries serve as living laboratories for stewardship, education, restoration, and science to address climate impacts. Sanctuaries also bolster tourism and robust recreational industries, promote sustainable visitation, engage businesses in stewardship, and drive the growth of the blue economy. Communities across the Nation can nominate their most treasured marine and Great Lakes places for consideration as sanctuaries. Engaging communities as stewards of these protected waters provides a comprehensive, highly participatory approach to managing and conserving marine and Great Lakes ecosystems. The Office of National Marine Sanctuaries (ONMS) needs the resources to properly engage communities throughout the sanctuary nomination and designation process.

ONMS did not receive any IIJA funds. The FY23 request will ensure that ONMS has the resources to conduct scientific research, effectively manage sanctuaries and designate new ones, enforce regulations, and engage the public in stewardship. Funding would support the Administration's initiation of the designation process for sanctuaries in the ONMS Inventory and complete the proposed Papahānaumokuākea, Lake Ontario, and Chumash Heritage sanctuaries' designation. There are an additional four sites nominated for designation in inventory awaiting action, and one site under consideration for the inventory. This funding level would also support the replacement or repair of vessels that are mission-critical to operations, management, and enforcement and provide investments that create jobs through shipbuilding.

The Regional Ocean Partnerships (ROPs).—The four ROPs play a unique role in facilitating collaboration across State coastal agencies, including State and Territory CZM Programs, Tribes, Federal agencies, and other stakeholder groups, to manage the Nation's coast and enhance coastal resilience. The IIJA provides significant resources to support the four ROPs, Tribal engagement, and ROP equivalents in re-

gions without an ROP. IIJA funding together with sustained annual appropriations will enable the ROPs and their equivalents to tackle increasingly complex coastal issue in a coordinated way and to engage Tribes who are a critical partner in managing the Nation's coasts who have often been left out of these coastal management discussions.

The National Ocean and Coastal Security (NOCSA) Fund.—The NOCSA Fund provides grants to non-profit organizations, academic institutions, for-profit organizations, and State, Territory, local, municipal, and Tribal governments for the purpose of investing in conservation projects that restore or expand natural coastal features that minimize the impacts of storms and other naturally occurring events on nearby communities. Increased resources under IIJA and sustained annual appropriations will enable coastal communities to tackle the vast need for coastal habitat restoration and community resilience projects across the Nation's coasts.

Ocean, coastal, and Great Lakes research, education, conservation, and resource management programs funded by this subcommittee are investments in the future health, resiliency, and well-being of our coastal communities which will result in returns of improved quality of life, as well as environmental and economic outcomes many times over the Federal investment.

Thank you for the opportunity to provide this joint statement.

PREPARED STATEMENT OF NATIONAL OPINION RESEARCH CENTER (NORC)

The National Opinion Research Center (NORC) at the University of Chicago appreciates the opportunity to provide testimony on the fiscal Year 2023 Census Bureau (“the Bureau”) budget request. In particular, we focus on the Bureau’s proposed “Ask U.S. Panel” pilot project, for which the Bureau has not requested funding as part of its FY 2023 request despite its stated plans to continue to expand the Program and Pilot over the next year.

ABOUT NORC

NORC is an objective, non-partisan research institution that delivers reliable data and rigorous analysis to guide critical programmatic, business, and policy decisions. We have been successful in utilizing our well-established surveys to compile reliable data for Federal agencies, private sector clients, and others for over 75 years. This collection of surveys includes the “AmeriSpeak” online probability-based panel for rapid turnaround studies, which has been in place since 2016. Given our experience with the “AmeriSpeak” panel, we have firsthand knowledge of the time, resources, and plans needed to successfully execute a panel like the one the Bureau is seeking to create via the Ask U.S. Panel.

CONCERNS ABOUT THE ASK U.S. PANEL

The Ask U.S. Panel, first proposed under the Bureau’s June 2020 Notice of Funding Opportunity, was intended to “establish a research platform that is developed and maintained by a third-party collaborator but, open to government and other non-profit researchers and policy makers that can allow a more frequent measurement of the population and can include repeated measures designs.” The Bureau awarded the project to RTI International through a cooperative agreement.

We have numerous concerns regarding the development of the Panel, including the use of a cooperative agreement, the duplication of resources already existing in the private sector, and the diversion of taxpayer dollars and Bureau personnel from other important priorities related to the Bureau’s unique functions. However, our main concern is the lack of transparency surrounding the Bureau’s plans for the Panel. Since awarding the cooperative agreement in 2020, the Bureau has avoided numerous requests from stakeholders for information about its methodology, data collection processes, and intended uses for the Panel.

This lack of transparency, combined with the rapid implementation of the Panel, raises concerns regarding the need, validity, and usability of the Panel. The Bureau has pursued rapid implementation of new data products and data collection programs in recent years. While NORC applauds the Bureau’s recent innovations, we suggest that additional diligence may be necessary to ensure the Ask U.S. Panel fulfills its intended purposes and that the Bureau communicates with its users on the best fit for each of its products. Recent Federal Register Notices and statements under the Paperwork Reduction Act (PRA) from the Bureau on the Ask U.S. Panel indicate that the plans and methodology are rapidly evolving. The Bureau must be transparent about its methodology and planned implementation to ensure this product produces valid and usable results and is not a waste of taxpayer dollars.

To this end, stakeholders have repeatedly reached out to the Bureau for additional information on this project and the Bureau has been dismissive and/or non-responsive to these requests. This lack of transparency by the Bureau is evidenced in their lack of response to stakeholder comments through the PRA process (comments submitted on February 4, 2022; March 29, 2022; and May 3, 2022). The lack of consideration by the Bureau of public comments calls into question its commitment to the consultative process established by the PRA and the transparency of the Bureau in its actions. We note that in a recent Director's blog post Director Santos stated, "An important aspect of that is cultivating trust with all our Nation's communities, be they urban or rural, low-income or high income, and regardless of race or ethnicity or other socio-demographic groups. That is why seeking, listening to and incorporating feedback is critical to garnering trust from the full range of our Nation's communities. It also promotes the production of relevant, quality data and therefore facilitates excellence at the Census Bureau."¹ NORC agrees with this perspective and believes meaningful engagement with the Bureau's stakeholders and transparency in the Bureau's operations are essential factors in engendering trust and confidence in the Bureau's programs and products. In the case of inquiry and feedback regarding the Ask U.S. Panel, the Bureau's actions to date, both through the PRA process and other channels, do not meet the standard laid out in the Director's blog post.

It also is notable that the Bureau did not include any references to the Ask U.S. Panel in its FY 2023 budget request despite recent Federal Register Notices indicating its plans to implement the Panel. It is unclear to us and other stakeholders how the Bureau plans to fund the Panel and how this effort fits in with the Household Pulse Surveys and High Frequency Data Program. Despite approaching the Bureau through various channels, both directly and indirectly, we have not received any clarity about how these programs interact and what funding the Bureau plans to utilize to build out the Ask U.S. Panel in the next year.

REQUEST FOR THE FISCAL YEAR 2023 CJS APPROPRIATIONS BILL

Given these concerns, we respectfully ask the Committee to instruct the Bureau to be more transparent with stakeholders, as well as provide more detailed information about its plans for the Panel. Providing proper oversight of the implementation of this project will ensure the scope of the Ask U.S. Panel stays within its parameters and does not waste public funds.

To that end, we request the Committee include the following language in the report accompanying the fiscal Year 2023 CJS appropriations bill.

Ask U.S. Panel Survey. The Committee is concerned about the lack of transparency related to the Census Bureau's plans for implementation of the Ask U.S. Panel Survey, particularly given the lack of congressional authorization and the expanding scope of the project since it was initially announced. The Committee also is concerned about the use of taxpayer dollars for the development of a panel survey given the wide range of options that currently exist in the private sector for these types of activities. The Committee directs the Census Bureau to provide a report to the Committee within 60 days about the panel's methodology, data collection processes, implementation, incurred and projected costs, and procurement strategy to allow the Committee to evaluate the project's use of Federal resources.

CONCLUSION

While the Census Bureau should be lauded for its recent innovations, the lack of transparency surrounding the Ask U.S. Panel raises serious concerns, which ultimately question the need for the Panel as a government developed program. We hope the Committee will provide active oversight to ensure the Bureau is fully transparent about its plans for this product, including responding to stakeholder requests.

Thank you for the opportunity to offer testimony on the Ask U.S. Panel.

¹ <https://www.census.gov/newsroom/blogs/director/2022/02/thinking-differently-perpetuating-excellence.html>, February 14, 2022.

PREPARED STATEMENT OF THE NATIONAL SEAFOOD MARKETING COALITION

Dear Chairman Shaheen and Ranking Member Moran:

As you begin to prepare the fiscal Year 23 Appropriations bill, the National Seafood Marketing Coalition (NSMC) requests that you work with all of your colleagues to ensure increased funding for the Saltonstall-Kennedy (S-K) Grant Program. The NSMC includes 70 US Fisheries organizations from across the country as well as signed support from 9 separate State Legislatures.

Enacted in 1954, the S-K Act aims to “. . . aid the American commercial fishing industry by promoting the free flow of domestically produced products in commerce and developing and increasing markets for those products,” through a federal, competitive grant program. As you know, the S-K Grant Program is funded by a tariff on imported seafood and these funds are transferred from USDA into NOAA’s “Promote and Develop Seafood Products” account. The tariffs capitalizing the Promote and Develop account have increased almost every year from \$82 million in 2007 to now over \$240 million in 2021. Regardless of this dramatic and consistent increase, the S-K Grant program has stayed in the \$8M—\$12M range of Congressional funding. The fiscal year 2022 funding for the S-K Grants turned out to be \$11.8M, which is approximately 4.8% of the “transfer” from USDA. However, the S-K Act clearly States that:

(e) Allocation of fund moneys

(1) Notwithstanding any other provision of law, all moneys in the fund shall be used exclusively for the purpose of promoting United States fisheries in accordance with the provisions of this section, and no such moneys shall be transferred from the fund for any other purpose(A) the Secretary shall use no less than 60 per centum of such moneys to make direct industry assistance grants to develop the United States fisheries and to expand domestic and foreign markets for United States fishery products pursuant to subsection (c) of this section;

Increased S-K funding is needed for the U.S. seafood industry now more than ever. World events have closed markets and significantly raised tariffs on many U.S. seafood exports. Moreover, because of the war in Ukraine and other U.S. policies, several foreign nations have severely restricted the import of our US seafood products and at the same time, the US Seafood market is a “center or the target” for all other foreign seafood products! (The U.S. imports approximately 90% of seafood consumed domestically). Increased S-K funding should focus on increasing domestic consumption of U.S. produced seafood as well as the secondary processing of seafood within the U.S. American fisheries are also challenged by disproportionate foreign government spending to support their fishing industries. For example, Norway spends more than 10 times the amount of money on marketing Norwegian salmon in U.S. markets as the US does on all of our seafood products, everywhere. Increased S-K allocations could, in part, help to level the playing field in promotion of U.S. produced seafood.

Recently, Congress re-established the American Fisheries Advisory Committee (AFAC Committee) to work with NOAA to prioritize and direct S-K funding. The NSMC as a representative of the Alaska and US Seafood Industry, is looking forward to AFAC’s new leadership role in the application of S-K funding. It has been 50 years since S-K funding decisions have had the industry input that was intended by the 1954 enabling legislation. According to the legislation, the purpose of S-K funding is “to assist persons in carrying out research and development projects addressed to any aspect of United States fisheries, including, but not limited to, harvesting, processing, marketing, and associated infrastructures.” The AFAC Committee, as designed, will have both geographical and experiential diversity including fishermen, scientists and regulators drawing from six regions across the country. As such, AFAC will be an effective advisory body, ensuring that increased S-K funding is strategically invested to return maximum benefit to the American Seafood Industry.

As one of the US Seafood industry’s representatives and advocates, we would like to see the S-K Grant funding begin to approach the percentage of U.S. tariffs on imported seafood that were envisioned when the original statute was passed. For FY 23, UFA encourages you to consider funding the S-K Grant program at no less than 15% of the transfer to NOAA’s “Promote and Develop Seafood Products” account derived from tariffs on imported seafood as a specific Lt numbered line item in the FY23 budget. This equates to approximately 35 million dollars, and is a step in the right direction towards the 60% language contained in the S-K Act. In future years, we recommend continued incremental increases towards the statutory 60% allocation in the SK Act.

We very much thank you for being the champion you have been for so long in our request for increased S-K Grant funding that will address the new and increased needs of America's fishing industry and ensure the new AFAC Committee's ability to maximize a newly refreshed desire for a National Seafood Marketing campaign and to finally begin addressing the rebuilding and expansion of America's Seafood markets.

[This statement was submitted by Bruce Schactler, Director]

PREPARED STATEMENT OF NATURAL SCIENCE COLLECTIONS ALLIANCE

The Natural Science Collections Alliance appreciates the opportunity to provide testimony in support of fiscal year (FY) 2023 appropriations for the National Science Foundation (NSF). We encourage Congress to provide the NSF with at least \$11 billion in FY 2023.

The Natural Science Collections Alliance is a non-profit association that supports natural science collections, their human resources, the institutions that house them, and their research activities for the benefit of science and society. Our membership consists of institutions that are part of an international network of museums, botanical gardens, herbaria, universities, and other institutions that contain natural science collections and use them in research, exhibitions, academic and informal science education, and outreach activities.

Scientific collections, and the collections professionals and scientists who make, care for, and study these resources, are an important component of our Nation's research infrastructure. These collections and their associated experts contribute to the expansion of our bioeconomy. Whether held at a museum, government managed laboratory or archive, or in a university science department, these scientific resources form a coordinated network of specimens, samples, and data (for example, genetic, tissue, organism, and environmental) that are a unique and irreplaceable foundation from which scientists are studying and explaining past and present life on earth.

Natural science collections advance scientific research and education, and that informs actions to improve public health, agricultural productivity, natural resource management, biodiversity conservation, and American economic innovation. Current research involving natural science collections also contributes to the development of new cyberinfrastructure, data visualization tools, and improved data management practices. A few examples of how scientific collections have saved lives, enhanced food production, and advanced scientific discovery include:

- Scientists used museum specimens in U.S. collections to gather data on the distribution of the mosquito *Culex quadrofaciatus*, which is known to carry West Nile Virus and other pathogens. They then modeled the distribution under different scenarios of changing climates to predict regions where the species may expand in the future. Predicting the spread of disease vectors such as these mosquitoes helps the health care community prepare for disease outbreaks and where they will happen.
- Researchers from Boston University documented Tau proteins in the brains of fluid preserved museum specimens of Downy Woodpecker. These proteins are also found in traumatic brain injuries in humans. Because of the life history traits of woodpeckers, the researchers argue these birds may have evolved a level of resistance to traumatic head injuries that could have implications for treatments for humans.
- Citrus bacterial canker disease wreaks havoc on fruit crops in Florida. Using plant specimens collected a century ago, scientists have analyzed the bacterium and traced its source. Knowledge of how the bacteria spreads allows scientists to develop effective control methods and to protect the U.S. citrus industry.
- When the 2001 anthrax attacks happened in the United States, specimens collected decades earlier allowed researchers from the Centers for Disease Control and Prevention to quickly identify the strain involved.

Scientific collections enable us to tell the story of life on Earth. There are more than 1,600 biological collections in the United States. These resources are the result of more than 200 years of scientific investigation, discovery, and inventory of living and fossil species. Scientists have collected and curated more than one billion specimens within those collections. This work is on-going as new questions continue to be asked and answered.

The institutions that care for scientific collections are important research infrastructure that enable other scientists to study the basic data of life; conduct biological, geological, anthropological, and environmental research; and integrate research

findings from across these diverse disciplines. Their professional staff members train future generations with the tools and expertise required to move science forward. In-house institutional staff expertise is vital to the development and deployment of this critical research infrastructure.

Recent reports highlight the value of mobilizing biodiversity specimens and data in spurring new scientific discoveries that grow our economy, improve our public health and wellbeing, and increase our National security. In 2019, the Biodiversity Collections Network issued a community-informed call for the development of an Extended Specimen Network. The report, “Extending U.S. Biodiversity Collections to Promote Research and Education,” outlines a national agenda that leverages digital data in biodiversity collections for new uses and calls for building an Extended Specimen Network. This endeavor requires robust investments in our Nation’s scientific collections, whether they are owned by a Federal or state agency or are part of an educational institution or free-standing natural history museum or another research center.

A 2020 report by the National Academies of Science, Engineering and Medicine, “Biological Collections: Ensuring Critical Research and Education for the 21st Century,” provides guidance to the NSF regarding the sustainability of living stock and natural history collections. The report argues that collections are a critical part of our Nation’s science and innovation infrastructure and a fundamental resource for understanding the natural world.

According to the U.S. Interagency Working Group on Scientific Collections (IWGSC), “scientific collections are essential to supporting agency missions and are thus vital to supporting the global research enterprise.” A 2020 report by the IWGSC, “Economic Analyses of Federal Scientific Collections,” presents a framework for estimating and documenting the long-term benefits, both monetary and non-monetary, generated by Federal institutional collections.

The NASEM, BCoN, and IWGSC reports, articulate a common vision of the future of biological collections and define a need to broaden and deepen the collections and associated data to realize the potential for biodiversity collections to inform 21st century science. Because the NSF is the only agency that supports research in all fields of science, it is ideally suited lead a national effort to build the Extended Specimen Network, which will require the engagement of computer and information scientists, geoscientists, life and environmental scientists, and anthropologists.

Collections are a critical resource for advancing the knowledge needed to address current global challenges such as climate change, biodiversity loss, and pandemics. The COVID-19 crisis has illustrated how inextricably linked humans are to the natural world. Biological collections, their extended data, and the experts that build and study them are globally important for understanding where viruses such as SARS-CoV-2 exist in nature or when they cross from their current hosts to humans.

The United Nation’s (UN) Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) has warned that about a million species of plants and animals worldwide face extinction within the next few decades. This would not only be an unprecedented loss of global biodiversity but also a loss of valuable genetic diversity that has implications for human health and well-being. Robust investments must be made to support efforts to grow and digitize natural history collections and conduct critical collections-based science that can help prevent these losses.

The NSF plays a unique role in protecting and expanding access to our Nation’s scientific collections. It supports research that uses existing collections as well as studies that gather new natural history specimens. NSF’s Directorates for Biological Sciences (BIO), Geosciences (GEO), and Social and Behavioral and Economic sciences support research and student training opportunities in natural history collections. The NSF is also an important supporter of national biological research infrastructure that houses natural history collections, such as living stock collections and field stations.

The NSF funds evolving work to digitize high priority specimen collections. The result of this effort is that irreplaceable biological specimens and their associated data are now accessible through the Internet to researchers, educators, and the public. More than 130 million specimens are now online, with millions more awaiting digitization. This project involves biologists, computer scientists, and engineers in multi-disciplinary teams who develop innovative imaging, robotics, and data storage and retrieval methods. Resulting new tools and approaches expedite the digitization process and contribute to the development of new products and services of value to other industries. Museum specimens and associated data also represent an extraordinary resource for teaching core concepts in science.

An example is the multi-institutional openVertebrate (oVert) project, which creates high-resolution 3D anatomical data for scientific specimens of amphibians, rep-

tiles, fishes, mammals, and birds held in U.S. museums. Through its NSF-supported partner MorphoSource, an open-access online repository, these data have been downloaded more than 100,000 times and viewed over 1 million times by faculty, veterinarians, exhibit designers, K12 teachers, and artists resulting in more than 200 scientific publications. In addition, more than 2,000 undergraduate students have learned from these data and visualizations while studying zoology, veterinary science, art, and design.

In addition to supporting research, NSF's science, technology, engineering, and mathematics (STEM) education programs enhance the ability of museums, botanic gardens, zoos, and other research institutions to provide science learning opportunities for students. NSF's Advancing Informal STEM Learning program furthers our understanding of informal science education outside of traditional classrooms. The program makes important contributions to efforts to make STEM more inclusive of historically underrepresented groups.

CONCLUSION

Investments in NSF have always been in the National interest and their value continues to grow. Scientific collections contribute to improved public well-being and national economic security. It is not possible to replace this important documentation of our Nation's heritage. Specimens collected decades or centuries ago are increasingly used to develop and validate models that explain how species, including viruses, parasites, and pathogens have dispersed around the world, as well as how and when they might infect humans now and in the future. NSF is the primary funding source that provides support to institutions that preserve at-risk scientific collections. These small grants help ensure these collections are not destroyed and their data lost.

Please support funding of at least \$11 billion for NSF in FY 2023. Investments in NSF programs that support natural science collections research and education are essential if we are to maintain our global leadership in innovation and biodiversity research.

In addition to appropriations, Congress is currently considering multiple proposals to significantly expand NSF's mission and budget. The proposed investments in technological research will enable the biodiversity collections community to build the cyberinfrastructure and databases necessary to mobilize biodiversity data in ways that bolster 21st century science and drive innovation. We applaud these efforts to invest in our Nation's scientific and technological enterprise and urge that robust investments also be made in basic and foundational research.

Furthermore, we also request that Congress provide additional economic relief—such as the provisions outlined in the RISE Act (HR.869, S.289) that are now part of the U.S. Innovation and Competition Act (S. 1260)—to the U.S. research community, including natural history museums, botanical gardens, and other science centers, that have suffered significant budget disruptions resulting from reduced public attendance or closures associated with responding to the COVID-19 pandemic.

Thank you for your thoughtful consideration of this request and for your prior support of the National Science Foundation.

[This statement was submitted by Gil Nelson, PhD, President]

PREPARED STATEMENT OF THE NATURE CONSERVANCY

Chair Cartwright, Ranking Member Aderholt and members of the subcommittee, thank you for the opportunity to comment on the fiscal year 2023 (FY2) appropriations for the National Oceanic and Atmospheric Administration (NOAA). The Nature Conservancy (TNC) is a nonprofit working around the world to conserve the lands and waters on which all life depends. TNC appreciates Congress's work last year to pass the bipartisan Infrastructure Investment and Jobs Act (IIJA). These investments complement but do not supplant the need for ongoing program funding through the appropriations process. The subcommittee acknowledged that need when it included moderate but necessary program increases for NOAA in the FY22 omnibus spending bill. We again ask you to provide a robust appropriations package that will serve as the foundation for implementing the IIJA and ensuring long-term success for critical programs under the subcommittee's jurisdiction.

Investment in ocean, coastal and Great Lakes restoration and management can be part of the country's economic recovery. Each year, the ocean and coastal economies contribute \$304 billion to the Nation's GDP and 3.3 million jobs. NOAA's funding keeps that economic engine running. It helps NOAA catalyze local and regional action and reduces risk and saves money based on the tangible economic and soci-

etal benefits that natural resources provide. The demand for NOAA's products and technical and financial assistance exceeds available funding. The NOAA budget levels detailed below represent a prudent investment in the United States' future.

NATIONAL OCEAN SERVICE

Title IX Fund—National Coastal Resilience Fund Grants.—TNC supports no less than the FY22 enacted funding of \$34 million, and requests at least \$5 million be set aside for planning, technical assistance, and assessment activities. In an otherwise strong budget, the administration has proposed to terminate this critical grant program. The National Coastal Resilience Fund provides the resources and tools to build coastal resilience to avoid costly Federal disaster assistance and sustain healthy fisheries, maintain robust tourism opportunities, provide for increased shipping demands and support other coastal industries. Throughout its budget request, NOAA emphasizes the need to make its climate products and services more available to the communities that need them. It is profoundly inconsistent with that need to terminate the very grants that enable communities to reduce their climate risks. While ILJA did provide temporary supplemental funding for these grants, the reality is demand for this funding far exceeds even this increased amount at a time when the country is facing an increase in billion-dollar climate-related disasters. More funding for planning and technical assistance will help more communities access future grants and leverage other funding to implement the resulting risk reduction projects. This is particularly important in under-resourced communities that do not have the capacity to begin this work on their own and may be particularly vulnerable to disasters. TNC appreciates Congress's support for this transformational program and urges the subcommittee to continue to fund it.

Coastal Zone Management and Services.—TNC supports funding of no less than the requested level of \$49.48 million. This level of funding will provide for continued capacity to provide coastal resilience technical assistance to communities across the country, including additional emphasis on under-resourced and underserved communities. Continued funding of at least \$3 million for the Digital Coast Partnership will support new and improved products, services and technical assistance to communities through this public-private partnership. Funding would also support communities through the development of the next generation of coastal managers via the Coastal Management and Digital Coast Fellows programs. Providing competitive salaries and expanded recruitment efforts will enhance the ability to reach under-represented communities. This increase will support the designation process for three new National Estuarine Research Reserves in Louisiana and Wisconsin to provide better representation and connectivity of habitats across the system.

Coastal Management Grants.—TNC supports funding of no less than the FY22 enacted level of \$79 million for coastal zone management grants. TNC collaborates with State and territorial coastal programs around the country to meet multiple goals for coastal communities, including economic development, enhancement of public access and recreation, coastal resilience and conservation of coastal resources. After years of essentially flat funding, the ILJA provided additional but temporary funding to support State and territorial coastal zone management programs expanding coastal resilience and restoration projects. Continued funding for core grants is necessary to address the full suite of activities in the approved coastal programs.

National Estuarine Research Reserve System (NERRS).—TNC supports funding of no less than the FY22 enacted level of \$29.7 million. NERRS partners with States and territories to ensure long-term education, stewardship and research on estuarine habitats. The reserves advance knowledge and estuary stewardship and serve as a scientific foundation for coastal management decisions. By using local management needs to help shape research, NERRS aims to fill critical gaps. This funding would maintain the capacity of NERRS to conduct research and monitoring and incorporate this research into training and technical assistance to local communities. With the designation of the new NERRS in Connecticut earlier this year, it is important to maintain core funding so as not to dilute efforts across the system.

Coral Reef Conservation Program.—TNC supports the requested level of \$34 million. The modest increase will help NOAA, States, territories and community, research, and non-governmental partners address the continued decline of coral reefs. This decline has had significant social, economic and ecological impacts on people and communities in the United States and around the world. TNC works with NOAA's Coral Reef Conservation Program under a competitively awarded, multiyear cooperative agreement to address the top threats to coral reef ecosystems: changing ocean conditions, overfishing and land-based sources of pollution. Together, TNC and NOAA develop place-based strategies, measure the effectiveness of management efforts, and build capacity among reef managers.

Sanctuaries and Marine Protected Areas.—TNC supports the requested level of \$86.771 million. National marine sanctuaries support economic growth and hundreds of coastal businesses in sanctuary communities, preserve vibrant underwater and maritime treasures for Americans to enjoy and provide critical public access for more than 42 million visitors each year. Through a transparent, inclusive approach, the marine sanctuaries provide for the conservation of marine resources while balancing multiple uses and diverse stakeholder needs. The increased funding would enable expanded engagement with partners, underrepresented communities, Tribes and Indigenous communities; increase capacity for protection, conservation and stewardship; and support the designation process for five community-nominated candidate sites.

NATIONAL MARINE FISHERIES SERVICE (NMFS)

Fisheries and Ecosystem Science Programs and Services.—TNC supports the requested level of \$180.246 million. Science is the foundation of successful fisheries management. While many gains have been achieved, there remain unfunded opportunities in each NMFS region, especially related to electronic monitoring and reporting (EM/ER). NMFS has also begun a fisheries information management modernization effort that would enhance its capacity to take in, integrate and make accessible data from a variety of sources to improve management. Modernizing data management would support the implementation of related science efforts. This includes the proposed \$10 million for enhanced science and assessments as part of the cross-program Climate, Ecosystems, and Fisheries Initiative and the proposed \$8.669 million to enhance the ability to conduct offshore wind assessments to understand and mitigate potential impacts in support of these vital renewable energy developments. The enhanced research capacity would help fill gaps in stock productivity, fisheries adaptations, improve future projections and risk assessments and translate these efforts into management strategies to support decision-makers.

Habitat Conservation and Restoration.—TNC supports no less than the requested level of \$61.353 million. NOAA funding for coastal habitat restoration supports, on average, 15 jobs per \$1 million invested and up to 30 jobs per \$1 million spent on labor-intensive restoration projects. Project funds are awarded on a competitive basis and typically leverage the resources and capacity of multiple partners. While habitat restoration activities did receive a temporary supplemental increase through the IIJA, base program funding is necessary to support the timely implementation of those awards and the other core functions of the program. This includes NOAA's consultations on and implementation of Essential Fish Habitat. The Regional Fishery Management Councils address fishing impacts on these areas, and NOAA must have sufficient capacity to provide technical assistance to the councils and to work with Federal agencies to avoid, minimize and mitigate non-fishing impacts on these important fishery habitats. The proposed funding would support large-scale habitat restoration to build climate resilience as well as competitive grants for multiyear awards to develop restoration planning, project design and permitting and project implementation.

Fisheries Management Programs and Services.—TNC supports no less than the requested level of \$149.081 million. With a \$214 billion fisheries and seafood sector, U.S. fishing communities rely on management services and information from NOAA to make the most informed decisions on where, how and when to fish. NOAA Fisheries has made important strides in addressing these challenges and strengthening fisheries management. Support for these efforts is necessary to recover fish stocks so they can provide food and jobs now and in the future. Increased funding will enable NOAA to take the next steps to better incorporate ecosystem and changing climate considerations into management activities. The proposed \$6.155 million in funding would increase consultation capacity to assess the effects of planned renewable offshore energy activities.

Observers and Training.—TNC supports no less than the FY22 enacted level of \$57 million, including \$10.3 million to fully fund industry costs for at-sea monitoring in the New England multispecies fishery. This funding should cover both electronic monitoring and observers. After several years of collaborative work with fishery participants, scientists and other stakeholders, NOAA approved the New England Fishery Management Council's proposal to increase monitoring on groundfish vessels to 100 percent for a period of at least 4 years if, and only if, funding is available to support it. Because of ongoing support from Congress to develop electronic monitoring systems, fishermen can now meet the at-sea monitoring requirement with these systems or observers. Continued funding along with leveraged private funding should provide sufficient resources to aid in the near-term transition to increased monitoring and expand the use of electronic monitoring.

Fisheries Data Collections, Surveys and Assessments.—TNC supports no less than the requested level of \$212,095 million. Limited or poor-quality information on the status of fishery stocks undermines the effectiveness of fisheries management and can erode community support for conservation measures. Within this proposed increase, \$11.5 million would provide long-needed funding to expand surveys, sampling and analysis capabilities to better track shifting species as part of the cross-program Climate, Ecosystems and Fisheries Initiative. The funding would increase the use of technology to conduct surveys, a capacity that became increasingly important when the pandemic disrupted data collection. Also within the proposed increase, \$17.38 million would establish a national program to mitigate the potential impacts of renewable energy activities on NMFS scientific surveys.

Pacific Coastal Salmon Recovery Fund (PCSRF).—TNC supports the request level of \$65 million. PCSRF has funded hundreds of successful on-the-ground salmon conservation efforts, but habitat project needs exceed available funding. PCSRF has catalyzed thousands of partnerships among federal, State, local and Tribal governments and conservation, business and community organizations.

Protected Resources Science and Management.—TNC supports the requested level of \$239.965 million. Within this increase is \$10 million for the competitive Species Recovery Grants to enable the agency to strengthen and expand state, Tribal and territorial partnerships to address the growing number of listed species and allow for larger-scale, ecosystem-level recovery efforts. Additional listed species and emerging offshore wind activities have increased the number and complexity of NOAA's consultation and permitting requirements. Funding is needed to aid NOAA's ability to complete these requirements in a timely and predictable manner.

Thank you for this opportunity to share TNC's priorities. Please contact me if you have questions or would like additional information.

[This statement was submitted by Stephanie Bailenson, Senior Policy Advisor for the Ocean and Coasts]

PREPARED STATEMENT OF NEW ENGLAND INNOCENCE PROJECT AND THE NATIONAL INNOCENCE NETWORK

My name is Cynthia Mousseau and I serve as a Staff Attorney at the New England Innocence Project (NEIP). On behalf of NEIP and as a member of the Innocence Network, a coalition of approximately 60 local innocence organizations working to exonerate the innocent and prevent wrongful convictions nationwide, thank you for the subcommittee's critical funding increases and strong support for innocence and forensic science programs in FY22. Thank you also for allowing me to submit written testimony for the record as you consider appropriations requests for FY23. I urge you to please increase funding for the following programs at the Bureau of Justice Assistance at the Department of Justice and at the National Institute of Standards and Technology at the Department of Commerce, including:

- \$20 million for the Wrongful Conviction Review Program at the Department of Justice's (DOJ) Bureau of Justice Assistance (BJA) (the Wrongful Conviction Review Program is part of the Capital Litigation Improvement Program);
- \$20 million for the Kirk Bloodsworth Post-Conviction DNA Testing Program at DOJ/BJA
- \$25 million for the Department of Commerce's National Institute of Standards and Technology (NIST) to support and conduct foundational forensic science research, including \$2 million for technical merit evaluations.

These innocence and forensic science programs endeavor to increase the fairness and accuracy of the criminal legal system; address arbitrary racial disparities and inequities; provide the strongest possible forensic science tools to legal system stakeholders; and generate greater public safety for our Nation.

Data from the National Registry of Exonerations show that the number of exonerations has significantly increased since Federal innocence programs—the Bloodsworth Post-Conviction DNA Testing and Wrongful Convictions Review programs—began receiving funding in 2008 and 2009, respectively. Between 2009 and 2016, the total number of exonerations increased by 84%. This dramatic increase is in part a result of the decision to invest in these programs.

2020 set the record for the highest number of years individuals lost to being wrongfully convicted—an average of 13.4 years per exoneratee. More than 27,000 life years have been lost to wrongful incarceration. The National Registry of Exonerations currently lists more than 3,100 exonerations since 1989. Half of the people exonerated are Black, and innocent Black people spend approximately 45% longer wrongfully imprisoned than innocent white people. This racial disparity holds true

across different types of convictions. Investing in innocence and forensic science programs helps to increase the accuracy, equity, and integrity of the criminal legal system.

The New England Innocence Project (NEIP), headquartered in Massachusetts, is the only innocence organization serving Vermont, Maine, Rhode Island, and New Hampshire. Federal grant funds help expand its reach into States that have insufficient resources to meet their needs. In fact, as a direct result of a grant from FY21, NEIP will be litigating its first case in New Hampshire, a State that has not enjoyed robust post-conviction litigation to date. With the support of Federal funds, NEIP has provided direct representation and/or support that has resulted in 16 exonerations over the past 17 years. 5 recently released exonerees collectively spent 160 years in prison. Additionally, NEIP has: (1) been able to provide more significant support to exonerees upon their release from prison through our Exoneree Network, which is lead and run by exonerees; (2) conducted numerous trainings throughout New England for prosecutors, defense attorneys, law enforcement, judges, and the public to raise awareness and prevent causes of wrongful conviction; and (3) expanded our staff to include work on pre-trial issues that will prevent wrongful convictions from occurring.

Cases without DNA evidence are difficult and often take many years to complete. It is a long, arduous, and resource intensive process to prove an individual's innocence after he/she has been wrongfully convicted. An average case at NEIP requires years of work and thousands of dollars to adequately investigate and litigate. During this long time period, the innocent person is languishing behind bars.

Freeing innocent individuals and preventing wrongful convictions through reform also greatly benefits public safety. Every time DNA identifies a wrongful conviction, it enables the possible identification of the person who actually committed the crime. Such true perpetrators have been identified in more than half of the 375 DNA exoneration cases. Unfortunately, many of these individuals went on to commit additional crimes while an innocent person was convicted and incarcerated in their place.

The value of Federal innocence programs and forensic science research is not only for exonerated people, but for all stakeholders in the criminal justice system. It is important to fund these important Federal programs because reforms and procedures that help to identify, remediate, and prevent wrongful convictions also enhance the accuracy of criminal investigations, strengthen criminal prosecutions, and result in a fairer and more accountable system of justice that provides true justice to victims of crime.

WRONGFUL CONVICTION REVIEW PROGRAM

We know that wrongful convictions occur in cases where DNA evidence may be insufficient or unavailable to prove innocence. The National Registry of Exonerations currently lists more than 3,100 exonerations since 1989, the vast majority of which did not have the presence or benefit of testable DNA. The Wrongful Conviction Review Program provides critical support to ensure that experts are available to navigate the complex landscape of post-conviction litigation, as well as oversee the thousands of volunteer hours local innocence organizations leverage to help investigate these complex non-DNA cases and support the significant legal work they require. The Wrongful Conviction Review Program has contributed to approximately 50 exonerations over the past few years with more in the pipeline.

For example, in 2019, Darrell Jones, who was wrongfully convicted of murder and served 32 years, was freed as a result of the work of the Committee for Public Counsel Services Innocence Program. The Wrongful Conviction Review Program provided funding that enabled his team to hire an investigator who identified exculpatory witnesses as well as two forensic experts. In 2020, Arturo Jimenez, who was wrongfully convicted of murder and served 25 years, was freed because the Wrongful Conviction Review program funded an investigator who uncovered key evidence that helped the Northern California Innocence Project secure his exoneration.

The Wrongful Conviction Review Program provides funding to local innocence organizations, such as NEIP, so that they may provide this type of expert, high quality, and efficient representation for innocent individuals. The program's goals also are to help alleviate burdens placed on the criminal legal system through costly and prolonged post-conviction litigation and to identify, when possible, the person who actually committed the crime.

In recent years, only a few local innocence organizations received Wrongful Conviction Review funding during each grant cycle. Even with the FY22 funding increase, there is still a need to expand this program further to resolve the long waiting lists of wrongfully convicted individuals—lists that are often hundreds of indi-

viduals long for just an individual innocence organization. These cases require evaluation, investigation, and often representation, which helps to improve the fairness and reliability of the criminal legal system. We urge you to provide \$20 million for the Wrongful Conviction Review Program in FY23. (Please note that the Wrongful Conviction Review grant program is a part of the Capital Litigation Improvement Program.)

I also urge you to include in the FY23 report for the Commerce, Justice, Science, and Related Agencies Appropriations bill the final FY22 report language for the Wrongful Conviction Review program. It described the need for legal representation and investigation services for individuals with post-conviction claims of innocence. It also directed at least 50 percent of funds appropriated to the Capital Litigation Improvement and Wrongful Conviction Review grant programs support Wrongful Conviction Review grantees providing high quality and efficient post-conviction representation for defendants in post-conviction claims of innocence. It also clarified that Wrongful Conviction Review grantees shall be nonprofit organizations, institutions of higher education, and/or State or local public defender offices that have in-house post-conviction representation programs that show demonstrable experience and competence in litigating postconviction claims of innocence. Finally, the report language directed that grant funds shall support grantee provision of post-conviction legal representation of innocence claims; case review, evaluation, and management; experts; potentially exonerative forensic testing; and investigation services related to supporting these post-conviction innocence claims.

THE BLOODSWORTH POST-CONVICTION DNA TESTING PROGRAM

The Bloodsworth Program supports States and localities that want to pursue post-conviction DNA testing in appropriate cases, and grantees range from State and local prosecutor offices to law enforcement agencies and crime labs. These grantees can collaborate with local innocence organizations when appropriate. For example, a grant to Arizona allowed the State's Attorney General's Office to partner with the Arizona Justice Project to create the Post-Conviction DNA Testing Project. This effort canvassed incarcerated individuals in Arizona, reviewed cases, located evidence, and filed joint requests with the court to have evidence released for DNA testing. In addition to identifying the innocent, Arizona Attorney General Terry Goddard noted that the "grant enable[d] [his] office to support local prosecutors and ensure that those who have committed violent crimes are identified and behind bars."

The Bloodsworth program is a powerful investment for States seeking to free innocent individuals and identify the individuals who actually committed the crimes. The program has resulted in the exonerations of at least 54 wrongfully convicted persons in 14 States. The person who actually committed the crime was identified in 13 of those cases. In 2020, an additional 5 people were exonerated through the program. The success of this program both in generating individual exonerations while supporting broader system review when problems arise has made it popular—DOJ has reported previously that it has received twice as many qualified applicants as it has funding to grant.

For example, Virginian Thomas Haynesworth, who was wrongfully incarcerated for 27 years, was freed thanks to Bloodsworth-funded DNA testing that also revealed the person who actually committed the crime. The culpable person in that case went on to terrorize the community by attacking 12 women, with most of the attacks and rapes occurring while Mr. Haynesworth was wrongfully incarcerated. Given the importance of this program to both innocent individuals and public safety, I urge you to provide the \$20 million to continue and expand the work of the Bloodsworth Post-Conviction DNA Testing Program in FY23.

FORENSIC SCIENCE IMPROVEMENT

To continue the critical work to improve forensic science, and help prevent wrongful convictions, I urge you to provide \$25 million for NIST to support foundational forensic science research, including \$2 million to conduct technical merit evaluations.

As the Federal entity that is both perfectly positioned and institutionally constituted to conduct foundational forensic science research, NIST's work will improve the validity and reliability of forensic evidence, a need cited by the National Academy of Sciences 2009 report, *Strengthening Forensic Science in the United States: A Path Forward*. NIST's reputation for innovation will result in technological solutions to advance forensic science applications and achieve a tremendous cost savings by reducing court costs posed by litigating scientific evidence.

Additionally, some forensic science methods have not yet received an evaluation of their technical merit and NIST needs additional support to conduct these vital

reviews. The forensic science activities and research at NIST will help to improve forensic disciplines and propel forensic science and the criminal legal system toward greater accuracy and reliability, and as a result, help prevent wrongful convictions and improve system equity.

CONCLUSION

Thank you for your leadership in ensuring the accuracy, equity, and integrity of our Nation's criminal justice system. I urge you to support all of the aforementioned programs, including the Wrongful Conviction Review and Bloodsworth grant programs, as well as NIST forensic science research. If you have questions or need additional information, please contact Jenny Collier, Federal Policy Advisor to the Innocence Project, at jcollier@colliercollective.org.

[This statement was submitted by Cynthia Mousseau, JD]

PREPARED STATEMENT OF NEW HAMPSHIRE SUPERIOR COURT

Chairwoman Shaheen, Ranking Member Moran, and distinguished members of the subcommittee, I am honored to have the opportunity to submit my testimony on behalf of our country's nearly 4,000 treatment court programs and the 150,000 people they will connect to lifesaving addiction and mental health treatment this year alone. Given the ongoing substance use crisis, I am requesting that Congress provide funding of \$95 million for the Drug Court Discretionary Grant Program and \$29 million for the Veterans Treatment Court Grant Program at the Department of Justice for fiscal year 2023.

I serve as Chief Justice of the New Hampshire Superior Court. In nearly two decades on the bench, I have never seen a program more effective than treatment courts, including drug courts and veterans treatment courts, at promoting public health while upholding the justice system's promise to protect public safety. Like many of my fellow judges, I felt frustrated by the limited options available in the traditional court model to change the behavior of offenders I was seeing in the court room repeatedly. When I began presiding over drug court in Rockingham County in 2006, I saw a new, more effective approach. Treatment court programs address the unique underlying conditions of each participant. Strong empirical evidence shows that treatment courts not only reduce crime, but also save lives and reunite families by connecting participants to evidence-based treatment services and recovery support. In my home state of New Hampshire, treatment court graduates have a 90 percent employment rate, and 78 percent of graduates do not reoffend within 2 years. New Hampshire treatment courts cost \$9 per day compared to \$84 per day it costs to incarcerate someone.

Just one of many success stories from New Hampshire is Nick, who was just 13 when his relationship with alcohol started. From there, he became more and more dependent on different substances. For a long time, he was able to hold down a job while trying to raise two children with his partner, who also struggled with addiction. But Nick's substance use caught up to him in 2012, when he was sent to prison for the first time. Nick said his time in prison hardened him, and instead of turning his life around, he just "learned new tricks" to keep up his old habits. After his first 2 years in prison, he turned to methamphetamine and heroin. He lost custody of his children and experienced homelessness and more stints in jail. Nick tried treatment but could not stay sober for long. When he came to treatment court, he was feeling hopeless and suicidal. The treatment court program provided both the accountability and the treatment he needed to change. In treatment court, Nick, like other participants, was assessed by a multidisciplinary team and given an individualized treatment plan designed by substance use treatment professionals using evidence-based methods. Instead of being put behind bars, they set a goal of and path to long-term recovery and supervised him every step of the way. The treatment court team gave Nick a new understanding of his substance use disorder and a real desire for change. Drug court also gave him something else he'd been missing: hope. I'm happy to say that Nick has been in active recovery for years. He got his driver's license back, started his own carpentry business, and got engaged. Most importantly, he was reunited with his two children, of whom he now has full custody. He is proud to be a father and says he is now "someone who shows up, and who is responsible, peaceful, and kind."

Nick isn't alone in his success. Treatment courts have connected 1.5 million people struggling with substance use and mental health disorders with evidence-based treatment options, including medication for addiction treatment when appropriate, tailored to their specific needs. Together, the court team offers the tools to overcome

substance use disorder and past trauma to create true recovery and healthy relationships.

I have seen hundreds of individuals in our justice system overcome their substance use or mental health disorders and became productive citizens in their communities. Most, like Nick, go on to start careers and raise families, and many now help others in the horrible position they were once in themselves. I can say for certain that the treatment court model deserves credit for the health and restored lives of these individuals. I can also say that New Hampshire, like many other States, is not immune to the deadly opioid epidemic. This crisis continues to bring to the fore the critical need to ensure all people, even those whose substance use leads to trouble with the law, have access to treatment, including medication for addiction treatment when appropriate. While there is no single solution to the opioid crisis, for individuals before the courts with a severe substance use or mental health disorder, treatment courts are a key solution to the crisis.

There is overwhelming empirical evidence that shows the effectiveness of treatment court programs. The Government Accountability Office finds the drug court model reduces crime by up to 58 percent. Further, the Department of Justice's Multi-Site Adult Drug Court Evaluation confirmed drug treatment courts significantly reduce both drug use and crime, while saving taxpayer money—an average of \$6,000 saved for every individual served. Other benefits include improved employment, financial stability, housing, and family reunification. Veterans treatment courts expand on the drug court model to include veteran justice outreach specialists from the Department of Veterans Affairs, volunteer veteran mentors from the community, and other local, State, and Federal resources, and have proven equally effective. It is critical that we have interventions like veterans treatment court in place to ensure that when our heroes return home, if they do struggle, they have the treatment, structure, and support to transform their lives.

Continued support for the Drug Court Discretionary Grant Program at the Department of Justice ensures the nearly 4,000 treatment courts in the United States today provide critical services to those in need, while keeping communities safe. But we know there are many individuals who still need this opportunity. I strongly urge this subcommittee to recommend funding of \$95 million to the Drug Court Discretionary Grant Program and \$29 million to the Veterans Treatment Court Grant Program in fiscal year 2023 so treatment courts in New Hampshire and across the country can continue to save lives, reunite families, and keep our communities healthy and safe.

[This statement was submitted by the Honorable Tina Nadeau, Chief Justice]

PREPARED STATEMENT OF NORTHWEST INDIAN FISHERIES COMMISSION (NWIFC)

Chair Jeanne Shaheen, Ranking Member Kerry Moran and Honorable Members of the subcommittee, my name is Ed Johnstone, and I am the Chair of the Northwest Indian Fisheries Commission (NWIFC). The NWIFC is composed of the 20 Tribes that are party to *United States v. Washington*, which upheld the Tribes' treaty-reserved right to harvest and manage various natural resources on and off-reservation, including salmon and shellfish. On behalf of the NWIFC, I'm providing testimony for the record on the natural resource and fishery management program funding requests for the National Oceanic & Atmospheric Administration (NOAA)/National Marine Fisheries Service (NMFS) Fiscal Year 2023 (FY23) appropriations. These programs support the management of salmon fisheries, which contribute to a robust natural resource-based economy and the continued exercise of Tribal treaty rights to fish. Given the onslaught of pressures we face, it is now more important than ever for the Federal trustee to support management, supplementation, and restoration of fisheries—vital to the Tribes physical, cultural and economic wellbeing, as well as an important link in our Nation's food supply chain.

SUMMARY OF FY23 APPROPRIATIONS REQUESTS

- \$70.0 million plus for NOAA Pacific Coastal Salmon Recovery Fund
- \$7.0 million for NOAA Hatchery and Genetic Management Plans
- \$43.5 million for NOAA Pacific Salmon Treaty
- \$26.5 million for NOAA Mitchell Act Hatchery Programs

The member Tribes of the NWIFC ceded much of the land that is now western Washington in exchange for reserving the continued right to harvest and manage various natural resources including salmon and shellfish. Salmon are the foundation of Tribal cultures, traditions and economies in western Washington. To ensure that Tribal treaty rights and lifeways are protected, it is essential that the Federal Gov-

ernment provide support to all aspects of salmon management including, harvest planning and implementation (e.g. Pacific Salmon Treaty), hatchery production, (e.g. Mitchell Act Hatchery Programs and Hatchery and Genetic Management Plans) and habitat protection and restoration (e.g. Pacific Coastal Salmon Recovery Fund).

JUSTIFICATION OF REQUESTS

Provide, at a minimum, \$70.0 million for NOAA Pacific Coastal Salmon Recovery Fund (PCSRF) and preferably restore funding to FY02 levels (\$110.0 million)

We respectfully request, at a minimum, \$70.0 million for PCSRF, which is an increase of \$5.0 million over the FY22 enacted level and President's Budget Request of \$65.0 million. It is worth noting that this request is a significant departure from the PCSRF peak level of \$110.0 million in FY02 or subsequent years in which appropriations were maintained upwards of \$80.0 million through FY11. We ultimately would like to see PCSRF funding fully restored to FY02 levels. This level of funding would help carry out the original congressional intent of these funds to support the Federal Government's obligations to salmon recovery and the treaty fishing rights of the Tribes. However, we understand that budget restriction may require Congress to take a more incremental approach toward this end goal.

The PCSRF is a multi-State, multi-Tribe program established by Congress in FY00 with a primary goal to help recover dwindling salmon populations throughout the Pacific coast region. Through PCSRF, Tribes work collaboratively to help protect and restore salmon habitat to increase natural salmon productivity. To accomplish this, Tribes implement scientifically based salmon recovery plans developed for each watershed in concert with federal, State, and local partners. Tribes also participate in sustainable harvest management activities such as monitoring fish abundance, which is then used to forecast adult returns and subsequently develop annual harvest rates that achieve conservation objectives and provide for Tribal and non-Tribal harvest opportunities. Since its inception, PCSRF has been the primary salmon recovery response. This has resulted in the restoration and protection of over 1.1 million acres of spawning and rearing habitat and re-established salmon access to more than 11,489 miles (as of FY20) of previously inaccessible streams in our region.

Provide \$7.0 million for NOAA Hatchery and Genetic Management Plans (within NOAA—Pacific Salmon)

We respectfully request \$7.0 million to support review, approval and implementation of Hatchery and Genetic Management Plans (HGMPs). We also respectfully request continued report language to ensure funding passed through to the Tribes can be used to implement approved HGMPs. We recommend that the overarching Pacific Salmon account be funded at \$78.0 million to accommodate this request and ensure maintenance of existing programs and agency requests. This recommendation is \$11.0 million above FY22 enacted level of \$67.0 million and \$4.858 million above the President's Budget Request of \$73.142 million.

Review and approval of HGMPs is necessary to provide hatcheries with Endangered Species Act (ESA) coverage and implementation of the plans is necessary to accomplish their conservation goals. NMFS uses the information provided by HGMPs to evaluate the impacts of State and tribally operated hatcheries on salmon and steelhead listed under the ESA and recommends improvements to operations to meet conservation objectives. With the lack of improvement in salmon stocks, hatchery operations have become even more important to achieving recovery goals and maintenance of salmon fisheries. However, the lack of improvement in natural origin salmon has also resulted in scrutinizing hatcheries for their potential genetic impacts on natural spawning populations. This has resulted in increasingly specific performance standards and management expectations included in Tribes' HGMPs.

Implementing the activities described in the HGMPs includes biological monitoring and evaluation of hatchery programs. Monitoring and evaluation assess whether the goals of the program are being met and ensures the compatibility of the program with regional and co-management salmon recovery plans. These monitoring and evaluation programs generally involve various methodologies to monitor the juvenile fish released by the hatchery, sample the returning adult fish, and evaluate the interactions of hatchery and wild fish.

Tribes need help addressing the escalating costs of hatchery management associated with the monitoring and adaptive management practices called for by HGMPs. For example, requirements to closely monitor natural and hatchery produced salmon interactions on the spawning ground are costly and time-intensive. Therefore, it is essential that HGMP funding is increased to address these rising costs and that flexibility is provided to ensure that funding can be used by the Tribes to implement

the plans' recommendations, which both the Federal Government and Tribes have extensively invested in.

Provide \$43.5 million to implement the National commitments in the Pacific Salmon Treaty agreements (within NOAA—Salmon Management Activities)

We support the Pacific Salmon Commission (PSC) U.S. Section's FY23 request of \$43.5 million for the Pacific Salmon Treaty line within Salmon Management Activities, an increase of \$4.0 million over the FY22 enacted level of \$39.5 million. Included in this request is \$3.06 million for annual operational costs for hatchery conservation programs, \$2.33 million for habitat restoration for Puget Sound critical stocks, \$4,110,000 for Southeast Alaska Chinook Salmon Fishery mitigation, and \$4,470,000 to increase prey availability for Southern Resident Killer Whales.

The FY23 request would support implementation of the National commitments in the renegotiated Pacific Salmon Treaty (PST) Annex Chapters. The recommended funding is also necessary to meet the requirements of the biological opinion for listed species and supports effective, science-based implementation of negotiated salmon fishing arrangements and abundance-based management approaches for Chinook, southern Coho, and Northern Boundary and Transboundary River salmon fisheries.

Adult salmon returning to most western Washington streams migrate through U.S. and Canadian waters and are harvested by fishers from both countries. For years, there were no restrictions on the interception of returning salmon by fishers of neighboring countries. Eventually, the U.S. and Canada agreed to cooperate on the management of salmon by developing and ratifying the PST in 1985. The PSC was created to implement the PST and is responsible for developing management recommendations and assessing compliance with the treaty. Negotiations to revise the provisions of the Annex Chapters were successfully completed in 2018 and 2019. These chapters contain the specifics for implementing the treaty for each species in each geographic area. These revised chapters represent the combined efforts of the participants to ensure healthy salmon populations for the next 10 years, and as such include commitments from the U.S. to improve current management strategies.

Provide \$26.5 million for NOAA Mitchell Act Hatchery Programs (within NOAA—Salmon Management Activities)

We respectfully request \$26.5 million for the Mitchell Act Hatchery Programs, an increase of \$3.5 million over the FY22 enacted level of \$22.0 million. The request for this additional increase in Mitchell Act funds is needed to ensure that mitigation hatcheries operate at full production level to meet Federal obligations. This program is funded through the Salmon Management Activities subactivity.

Mitchell Act hatchery production is intended to mitigate for fish and habitat loss caused by the Federal hydropower dam system on the Columbia River. Funding for these programs supports the operation and maintenance of hatcheries that release around 42 million juvenile salmon and steelhead in Oregon and Washington. This represents about 30 percent of the total hatchery salmon and steelhead released in the Columbia River Basin. Adequate funding for Mitchell Act hatcheries is of particular importance to us because it supports salmon production for Tribal treaty harvest along the Washington coast. Additionally, adequate funding to ensure full production from the Mitchell Act hatcheries dampens the impact of Canadian and Alaskan ocean fisheries on Washington and Tribal fisheries under the terms of the PST.

CONCLUSION

The treaties between the Federal Government and Indian Tribes, as well as the treaty-reserved rights to harvest, manage and consume fish and shellfish, are the "supreme law of the land" under the U.S. Constitution (Article VI). It is, therefore, critically important for Congress and the Federal Government to provide continued support in upholding the treaty obligations and carrying out its trust responsibilities. An important component of these obligations is to fully fund the sustainable salmon fisheries management programs that provide for improved harvest planning, hatchery production and habitat management. We respectfully urge you to continue to support our efforts to protect and restore our treaty-reserved rights and natural resources that in turn will provide for thriving ecosystems and economies for both Indian and non-Indian communities alike. Thank you.

[This statement was submitted by Ed Johnstone, Chairman]

PREPARED STATEMENT OF OPENSECRETS

Dear Chairman Shaheen, Ranking Member Moran, and distinguished members of the Senate Appropriations subcommittee on Commerce, Justice and Science, and Related Agencies:

Thank you for the opportunity to submit written testimony before the Committee to discuss fiscal year 2023 budget priorities regarding the modernization of the Foreign Agents Registration Act (FARA), a statute intended to inform the American public of foreign influence and lobbying operations attempting to impact U.S. policy or public opinion.

This written testimony is respectfully offered on behalf of OpenSecrets to the Committee for use during its consideration of Department of Justice funding and for inclusion in the official committee record.

OpenSecrets is a nonpartisan nonprofit research organization tracking money in U.S. politics and its effect on elections and public policy. Our vision is for Americans across the ideological spectrum to be empowered by access to clear and unbiased information about money's role in the U.S. political system and to use that knowledge to strengthen our democracy.

Activities of foreign agents and lobbyists divulged under FARA are a subject of sustained public interest. In this testimony, we respectfully request that the Committee include report language directing a review of the U.S. Department of Justice's implementation of FARA and a comprehensive audit of the use of the Lobbying Disclosure Act (LDA) exemption that will both be publicly accessible.

A publicly-accessible report to Congress is necessary to evaluate the feasibility and steps needed to require all filings by foreign agents to be made in an electronic, machine-processable electronic format yielding structured data. This would allow users to search and sort or download FARA data, ensuring the same level of accountability from lobbyists representing foreign interests as domestic ones.

The Justice Department Inspector General's 2016 "Audit of the National Security Division's Enforcement and Administration of the Foreign Agents Registration Act"¹ included 14 recommendations to improve NSD's enforcement and administration of FARA. With regard to e-filing, the inspector general report recommended "that e-file develop with timeliness as a consideration."

Despite recommendations from the Department's Inspector General and outside experts, the Justice Department has been slow to implement changes to improve the public's access to information about foreign influence and lobbying intended to impact U.S. policy or public opinion.

In September 2019, the Department of Justice launched new features enabling registrants to submit data through a web-form yielding some standardized data. While we believe this is a step in the right direction, only initial registrations are required to be submitted this way, so information reported in some of the most important records such as semi-annual supplemental statements may remain trapped in less accessible formats.

Continuing implementation of a modernized FARA reporting system that collects detailed structured data would provide the tools necessary for better oversight and ensure information about foreign influence is provided in an accurate, complete, and timely manner.

The current e-filing system requires filers to submit data in either image or PDF formats. Yet, much of the supplemental, registration, and amendment information is originally produced in electronic formats, such as CSV files. Image and PDF formatted files destroy critical aspects of the included data, and cannot be marked for sensitive information or be used for automated calculations. It is virtually impossible to transform a PDF into a structured spreadsheet that supports analysis and reuse of the information. Even the basic disclosure of how much money foreign actors spend to influence U.S. policy and public opinion can be obscured, leaving the American public in the dark about how our laws are shaped and influenced.

The DOJ FARA unit should continue developing systems for users to submit information in structured data formats. A sample template could allow registrants to standardize their responses in formats that could easily be processed by computers. This would streamline the processing of data by the FARA Unit, enabling faster review and more uniform reporting.

Structured data yielded from e-filing could optimize this process, improving the quality, utility, and clarity of information collected by the FARA Unit. Structured data would also enable Federal officials to more efficiently identify potential issues with filings as they come in or even set automated detection systems.

¹ <https://oig.justice.gov/reports/2016/a1624.pdf>.

Examples of problems that would be ameliorated by this change include the accidental release of sensitive personal information such as bank account numbers and the prevalence of inaccurate reports to Congress caused by miscalculations or incomputable data.

Registrants working on behalf of foreign principals are only required to file a supplemental statement every 6 months and registrants often wait even longer so reported dates of receipt can sometimes occur in a different year than the work happened.

Structured data on the payment amounts registrants report in question 14(a) of the supplemental statement shows when the payments actually took place rather than just the date at the end of the reporting period covered by the supplemental statement. This would ensure totals reflect amendments or retroactively filed supplemental statements that may be filed after the Report to Congress covering a period is compiled would allow for a more complete and accurate picture of activities reported under FARA. Sometimes amendments result in a lower amount of spending being reported than was in the initial supplemental statement and other times additional previously unreported spending is reported so it could cause differences in both directions.

Cataloging information about the purpose of receipts or disbursements in the structured data would streamline extrication of activities required to be reported under FARA from any non-FARA registerable activities that may also be included in a filing.

While it is a simpler system, by way of comparison, new registrations under the LDA must be filed to Congress electronically, are published as structured data, and made available to the public. More parity between disclosure requirements under the LDA and FARA is necessary to ensure at least the same level of transparency from lobbyists representing foreign interests as domestic.

We recognize the importance of addressing concerns about information security as part of modernization. A computer virus can hide inside most types of file formats.

When accessing those files, it is important to have an up-to-date virus scanner. However, there are file formats, known as "plain-text," that are generally recognized as safe. For spreadsheets, this includes files in CSV format. For documents, this includes documents in TXT format. In addition, generating spreadsheets as CSV files, and documents as TXT files, is widely supported across many platforms, including Microsoft Office and Google Docs, so it is easy for submitters to generate the files in the required format. In addition, problems of incomplete and inaccurate data can be addressed through use of better formats in which the data is filed, including the use of forms that ensure that users file valid information.

Increased use of unique or common identifiers to represent data, and wherever possible draw the identifiers from unique IDs used by other government entities or create crosswalks would allow for more interoperability of data and for FARA Unit to validate the data upon entry. It can also increase consistency and accuracy, while making the process easier on the filer.

Using web-forms or submitting data in other structured formats across the board would allow the government to provide this information in an accessible form with little or no additional burden. FARA reporting is already conducted through an e-filing system that requires a web browser unless a registrant demonstrates limited access to the internet. Modernizing FARA's e-filing system can ultimately help ease the administrative burden associated with FARA registration.

FARA also has a number of exemptions that can be misunderstood or exploited.

One commonly used exemption enables some foreign agents to claim an exemption from FARA registration and disclosure rules if they register as lobbyists under the LDA, a disclosure statute designed to regulate the activities of domestic lobbyists. Any individuals lobbying on behalf of a foreign commercial interest, rather than a foreign government or political party, may evade FARA disclosure requirements by merely registering under the LDA.

Domestic lobbying records are already required to be filed to Congress electronically and are immediately converted to structured data that are available to the public over the Internet. More parity between disclosure requirements under the LDA and FARA is necessary to ensure at least the same level of transparency from lobbyists representing foreign interests as domestic ones.

We respectfully urge the Committee to direct the Comptroller General of the United States, in consultation with the Inspector General of the Department of Justice, to conduct a comprehensive audit of the use of the LDA exemption examining (1) whether the LDA exemption has contributed to a decline in the number of registrations under FARA; (2) whether the LDA exemption has contributed to a lack of public awareness of lobbying activities on behalf of foreign entities; (3) the impact and feasibility of phasing out the LDA exemption; and (4) how to develop policy rec-

ommendations for increasing compliance with Federal lobbying registration and disclosure requirements.

We are confident that the report will provide valuable insight to the American people and pave the way to increased transparency of the activities disclosed by those foreign agents. We urge you to appropriate the funding necessary to evaluate modernizing this invaluable resource.

Our recommendations are based on our experiences using FARA, including efforts to republish FARA data online in ways that support greater access and meaningful analysis. OpenSecrets built the Foreign Lobby Watch database containing foreign lobbying documents and data. Our reviews of the DOJ's available foreign lobbying records found significant problems with how the data is currently structured. We've designed our databases to make up for some of the shortfalls in how foreign lobbying information is currently made available to the public. Structured data directly from the government could streamline this process, improving the quality, utility, and clarity of the information collected by the FARA Unit.

Thank you for your attention to our concerns on this critical issue. We would welcome the opportunity to work with you further on this issue and make any additional recommendations about this or other important issues before the Committee.

PREPARED STATEMENT OF THE PACIFIC SALMON COMMISSION

Mr. Chairman, and Honorable Members of the Committee, I am W. Ron Allen, the Tribal Commissioner and Chair for the U.S. Section Budget Committee of the Pacific Salmon Commission (PSC). I am also the Tribal Chairman/CEO of the Jamestown S'Klallam Tribe located on the Olympic Peninsula of Washington State. The U.S. Section prepares annual budgets for the implementation of the Pacific Salmon Treaty. The implementation of the Treaty is funded through the Departments of Commerce, Interior and State.

Department of Commerce funding in support of implementing the Pacific Salmon Treaty is part of the Salmon Management Activities account in the National Marine Fisheries Service (NMFS) budget. The United States and Canada completed negotiations of revised Annex Chapters to the Treaty in 2019. Funding in the Department of Commerce budget is for the programs to fulfill national commitments created by the revised Treaty Annex Chapters. The U.S. Section recommends FY 2023 funding of \$43,500,000 to implement national commitments created by the Treaty.

The Department of Commerce principally funds programs conducted by the States of Washington, Oregon, Idaho and Alaska and the NMFS. However, the cost of programs conducted by the States to fulfill national commitments created by the Treaty continue to be substantially greater than the funding provided in the NMFS budget. Consequently, the States have supplemented the Federal Treaty appropriations from other sources, including State general funds. Many of those funding sources are limited or no longer available and this has been exacerbated by the ongoing global pandemic.

The increases in the FY 2020 budget and in the FY 2021 budget were greatly appreciated, however it falls short of what the U.S. Section estimates is needed to fully implement the revised Annex Chapters to the Pacific Salmon Treaty.

The U.S. Section recommends that the Pacific Salmon Treaty line item in the Salmon Management Activities section of the NMFS budget be funded at \$43,500,000 for FY 2023. This line item includes \$21,400,000 to provide base support for the States of Alaska, Washington, Oregon, and Idaho. NMFS activities to implement the Treaty's conservation and allocation provisions for Coho, Sockeye, Chinook, Chum, and Pink salmon fisheries is funded through overhead fees. Effective, science-based implementation of negotiated salmon fishing arrangements and abundance-based management approaches for Chinook, southern Coho, and Northern Boundary and Transboundary River salmon fisheries.

The U.S. Section recommends annual operational costs of \$3,060,000 for hatchery conservation programs and \$2,330,000 for habitat restoration for Puget Sound critical stocks, \$5,990,000 for Southeast Alaska Chinook Salmon Fishery Mitigation, and \$4,470,000 to increase prey availability for Southern Resident Killer Whales. The recommended funding includes \$6,250,000 for sound science initiatives to fill key science gaps and improve fishery management effectiveness. The recommended funding helps meet requirements of the biological opinion for species listed as endangered or threatened under the Endangered Species Act.

The sound science funding includes recommends restoring the funding for the Chinook Salmon Agreement line item in Salmon Management Activities to \$1,800,000. This funding supports research and stock assessments necessary to acquire and analyze the technical information needed to fully implement the abundance-based

Chinook salmon management program provided for by the Treaty. The States of Alaska, Washington, Oregon, and Idaho, and the twenty-five Treaty Tribes conduct projects selected in a rigorous competitive process.

The International Fisheries Commissions line, under Regional Councils and Fisheries Commissions in the NMFS budget was funded at \$457,000 in FY 2022 and provides the U.S. contribution to bilateral cooperative salmon enhancement on the transboundary river systems, which originate in Canada and flow to the sea through Southeast Alaska. This project was established in 1988 to meet U.S. obligations specified in the Treaty and annual funding should continue at \$475,000 annually.

The core Treaty implementation projects included in the Pacific Salmon Treaty line, and the U.S. Chinook Agreement line under Salmon Management Activities, as well as the International Fisheries Commission line under Regional Councils and Fisheries Commissions consist of a wide range of stock assessment, fishery monitoring, and technical support activities for all five species of Pacific salmon in the fisheries and rivers between Cape Suckling in Alaska to Cape Falcon in Oregon. The States of Alaska, Washington, Oregon, Idaho, and the NMFS conduct a wide range of programs for salmon stock abundance assessment, escapement enumeration, stock distribution, and fishery catch and effort information. The information is used to establish fishing seasons, harvest levels, and accountability to the provisions of Treaty fishing regimes.

Prior to FY 2020, the base annual Treaty implementation funding remained essentially flat since the inception of the Treaty in 1985. In order to continue to fulfill the Federal international commitments created by the Treaty, as costs and complexity increased over time, the States had to augment Federal funding with other Federal and State resources. However, alternative sources of funding have seen reductions or, in some cases, have been eliminated. The increases for the last three Federal fiscal years to implement the revised Annex Chapters were a welcome change.

Negotiations to revise the provisions of the Annex Chapters to the Treaty, except for the Fraser River Chapter, were successfully completed in 2018. The revised provisions will last for 10 years. These chapters contain the specifics for implementing the Treaty for each species in each geographic area. The provisions for a revised Fraser River Chapter were completed in 2019. The revised chapters represent the combined efforts of the participants to ensure healthy salmon populations for the next 10 years. They require commitments to increase efforts to improve upon current management strategies for numerous salmon populations.

Finally, it is important to consider that the value of the commercial harvest of salmon subject to the Treaty and managed at productive levels under the Treaty, supports the infrastructure of many coastal and inland communities. The value of the commercial and recreational fisheries, and the economic diversity they provide for local communities throughout the Pacific Northwest and Alaska, is immense. The Pacific Salmon Commission recently funded an economic study of these fisheries and determined that this resource creates thousands of jobs and is a multi-billion dollar industry. The U.S. Section estimates these fisheries support 26,700 full-time equivalent jobs and generate \$3.4 billion in economic value annually. The value of these fish to the twenty-five Treaty Tribes in Washington, Oregon, Idaho and Alaska goes far beyond their monetary value, to the cultural and religious lives of American Indian and Alaska Native peoples. A significant monetary investment is focused on salmon due to the listings of Pacific Northwest salmon populations under the Endangered Species Act.

Given these resources, the U.S. Section will continue to utilize the Pacific Salmon Commission process to develop recommendations that help with the development and implementation of solutions to minimizing impacts on listed stocks. We will continue to work towards the true intent of the Treaty, and with your support, we will manage this shared resource for mutual enhancements and benefits.

This concludes the statement of the U.S. Section of the Pacific Salmon Commission submitted for consideration by your Committee. We wish to thank the Committee for the support given to us in the past. Please let us know if we can supply additional information or respond to any questions the Committee Members may have.

Thank you.

PREPARED STATEMENT OF PARTNERSHIP FOR AMERICA'S CHILDREN

Dear Chairs Shaheen and Cartwright, and Ranking Members Moran and Aderholt:

On behalf of the Partnership for America's Children, I am writing to urge you to provide \$2 billion in FY 2023 funding for the U.S. Census Bureau, \$495 million

more than the Administration's proposed budget, and \$646 million above the enacted FY 2022 level. Our support for this funding level is consistent with the position taken by The Census Project; we have also signed a group letter circulated by The Census Project concerning Census Bureau funding. I am submitting this testimony separately to emphasize the importance of this funding for children.

The Partnership's mission is to support its network of State and community multi-issue child advocacy organizations in effective advocacy. The Partnership has 49 member organizations in 40 States that advocate to improve policies for children at the State, local and Federal level. Collectively they represent over 90% of the Nation's children. Partnership members use Census data in their advocacy, and thirty Partnership members are also KIDS COUNT grantees in their state, serving as that State's data hub on children for policy makers, administrators, and nonprofits.

The Partnership for America's Children served as the National hub on the undercount of young children in the 2020 Decennial Census. In this role the Partnership formed and continues to co-lead a national working group of child-serving organizations that is working to improve the count of young children in all Census Bureau demographic products.

We are aware that funding for over 300 Federal spending programs is distributed based on figures compiled from the decennial census and other Census Bureau surveys, totaling \$1.5 trillion in FY 2017. Many of the programs utilizing these funds are especially important for children. Examples include Medicaid and community health programs, SNAP and child nutrition programs, housing, education and special education, child care funding, WIC, and much more.

Because the 2020 Census was beset by problems, the Bureau has reported that the undercount of young children, particularly young children of color, is dramatically higher than it was in 2010. Since young children were the age group most missed in 2010, and the number of young children missed has been growing steadily since 1980, this is very problematic for many of the purposes of the decennial census and particularly for funding allocation.

Therefore, it is vitally important that the Census Bureau do all it can to improve the accuracy of the count for young children, so that children most in need get their fair share of resources. The Census Bureau needs to invest in a number of approaches to compensate for the 2020 Census' inaccuracies, and to work towards a more accurate 2030 Census, to prevent inequitable distribution of Federal funds.

The Bureau has developed a blended base approach to the population estimates that are used to allocate some Federal funds and to design the American Communities Survey which is also used to allocate Federal funds. This approach is intended to correct the undercounts in the 2020 census, but more research is needed. We support \$10 million in additional funding beyond the President's request for the Population Estimates program, in order to mitigate the undercount in the 2020 Census. The annual Population Estimates can be used to better estimate the count for young children and racial and ethnic subgroups in geographic areas below the state level, and to identify new data sources that would improve the accuracy of the count.

The Partnership also supports a significant increase in funding for the American Community Survey of \$100—\$300 million beyond the Administration's request, to increase the ACS's sample size and to address its declining response rates. We believe the ACS needs to be expanded in order to be an accurate annual measure of income, poverty, and many other subject areas. Of particular importance for children, it needs to be expanded to be able to provide subgroup data including different age groups for children and data about smaller racial and ethnic groups within those age groups. We support the Administration's request for increased funding to improve the Current Population Survey and other Census products, and strongly favor the continuation of the Household Pulse survey for its timely responsiveness in showing levels of hardship and program utilization for children. It has been particularly important in showing the value of various Federal policies in reducing hardship for children.

The Partnership supports the Administration's requests for continued compilation of 2020 decennial data products and for a much higher increase for the 2030 Census than was provided in the FY 2013 year for the 2020 Census. We believe that much work must be done to learn from the mistakes of the 2020 Census and to incorporate the participation of non-federal partner groups at an earlier stage in the process, to allow for a more effective ramp-up of outreach activities to overcome decreasing response rates. The Partnership has been and remains a Census partner and believes the outreach by independent organizations helps build trust among community members who tend to be undercounted.

Thank you for considering the needs of the Census Bureau in relation to its vital role in assuring that Federal resources are fairly and accurately provided, with spe-

cial attention to the needs of children. If you have any questions you can reach me at dstein@foramericaschildren.org.

Sincerely,
Deborah Stein, Network Director

PREPARED STATEMENT OF POPULATION ASSOCIATION OF AMERICA/ASSOCIATION OF
POPULATION CENTERS

Thank you, Chair Shaheen and Ranking Member Moran and other distinguished members of the subcommittee, for this opportunity to express support for the Census Bureau, National Science Foundation (NSF), National Institute of Justice (NIJ), and Bureau of Justice Statistics (BJS). These agencies are important to the Population Association of America (PAA) and Association of Population Centers (APC), because they provide direct and indirect support to population scientists and the field of population, or demographic, research overall. In FY 2023, we urge the subcommittee to recommend the following funding levels for these agencies: Census Bureau, \$2 billion; NSF, \$11 billion; NIJ, \$50 million; and, BJS, \$60 million.

The PAA and APC are two affiliated organizations that together represent over 3,000 social and behavioral scientists and the over 40 population research centers that receive Federal funding and conduct research on the implications of population change. Its members, which include demographers, economists, sociologists, and statisticians, conduct scientific and applied research, analyze changing demographic and socio-economic trends, develop policy and planning recommendations, and train undergraduate and graduate students. Their research expertise covers a wide range of issues, including adolescent health and development, aging, health disparities, immigration and migration, marriage and divorce, education, social networks, housing, retirement, and labor. Population scientists compete for funding from the NSF and NIJ and rely on data produced by the Nation's statistical agencies, including the Census Bureau and BJS, to conduct research and research training activities.

THE CENSUS BUREAU

The Census Bureau is the premier source of data regarding U.S. demographic, socio-economic, and housing characteristics. While PAA/APC members have diverse research expertise, they share a common need for access to accurate, timely data about the Nation's changing socio-economic and demographic characteristics that only the U.S. Census Bureau can provide through its conduct of the decennial census, American Community Survey (ACS), and a variety of other surveys and programs.

PAA and APC understand that the Census Bureau's funding level declines dramatically in the initial years of the decennial planning cycle, and the Administration's request reflects, appropriately, this anticipated decrease in funding. Nonetheless, PAA and APC urge the subcommittee to support increased funding for the Census Bureau in FY 2023 above the Administration's request as recommended by The Census Project. In FY 2023, Congress has a unique opportunity to initiate multi-year funding for the Bureau, providing the agency with resources that it needs to not only sustain and strengthen its mission, but also to recover from years of postponed enhancements and pursue numerous necessary operational improvements. The ambitious FY 2023 funding recommendation (\$2 billion) that census stakeholders are supporting would enable the Bureau to pursue initiatives not only in the President's budget, but also additional activities recommended by census stakeholders, including:

—*The American Community Survey.*—While the President's budget requests an additional \$10 million to improve how the ACS measures the sexual orientation and gender identity (SOGI) population, census stakeholders and data users in the public, private, non-profit sectors believe the ACS needs an immediate infusion of substantial funding to pursue other long overdue enhancements to the survey. These enhancements include increasing the survey's sample size, improving its non-response follow up operations, addressing steadily declining response rates, revising content, and making other methodological and operational improvements. An independent report issued in 2022 by The Census Project urges an infusion of \$100 to \$300 million to protect the ACS from further data quality deficiencies and take up a long list of activities to ensure the survey is accurately capturing data about the Nation's increasingly complex population and households. PAA and APC support the report's recommendations and urge the Committee to provide the Bureau with additional funding

to pursue necessary innovations to the survey's content, operations, and data products.

- 2030 Census*.—The President's Budget proposes \$252 million for the 2030 Census in FY 2023 (a \$249 million increase from only \$3 million in FY 2022). This is nearly twice the increase requested a decade ago for the 2020 Census in the comparable cyclical year (FY 2013) (\$64.8 million), as the Bureau intends to continue research and testing to design the next decennial headcount, including work to develop and maintain the completeness of the address list (so that less of the country must be updated in the field), the use of administrative records as a source of data for enumeration, and bringing efficiencies to field operations to reduce non-response follow up. Early decade investments in the decennial census will allow the Bureau to sustain critical capabilities and, as a result reduce the risk of additional funding needs in the peak years later in the decade.
- Modernize and Sustain the Survey of Income and Program Participation (SIPP)*.—Policymakers, particularly as the economy emerges from the COVID-19 pandemic, need high quality, accurate data to assess the impact of government assistance programs on families and communities. The Survey of Income and Program Participation (SIPP) is designed to achieve that goal, yet its funding has fluctuated routinely, especially during years in which the government has been funded via a series of continuing resolutions. Stabilizing and increasing support for SIPP, to no less than \$48 million in FY 2023—an increase of \$1.4 million from FY 2022 enacted (\$46.6 million)—will help Congress make evidence-based policy decisions on the effectiveness of government assistance program. However, additional funding for SIPP would enable the Bureau to pursue necessary innovations designed to enhance the survey's sample, address decreasing response rates, and improve the survey's content. Restoring minor cuts to the SIPP program does not provide the resources necessary to modernize the survey and its operations. A bolder investment in the survey is warranted.
- Innovations to Existing Surveys and Programs*.—The President's fiscal Year 2023 budget proposes several initiatives that would improve existing surveys and programs, including: \$4.5 million to develop and test a self-response web-based instrument for the Current Population Survey (CPS), which is the primary source of information regarding national unemployment rate and provides other data regarding employment, unemployment, and people not in the labor force; an additional \$3.7 million to support the Community Resilience Estimates (CRE) program, which began during the pandemic to provide more granular population data; and, an additional \$66.6 million to support "critical updates to data collection methods for surveys that produce vital statistical data on the U.S. population and economy."

In sum, PAA and APC join other census stakeholders in urging the subcommittee to provide the Census Bureau with \$2 billion in FY 2023 to complete all 2020 Census operations and data delivery objectives; enhance the ACS, initiate planning for the 2030 Census; improve the SIPP; and, enrich the quality and granularity of all census data sets.

NATIONAL SCIENCE FOUNDATION (NSF)

For over 75 years the mission of NSF has been to promote the progress of science; to advance the National health, prosperity, and welfare; and to secure the National defense. Understanding the implications of complex population dynamics is vital to the agency's mission, and in particular the Directorate of Social, Behavioral and Economic (SBE) Sciences, which is the primary source of support for the population sciences within the NSF. The SBE Directorate funds critical large-scale longitudinal surveys, such as the Panel Study of Income Dynamics, which inform pressing policy decisions and provide the empirical evidence to help policy makers to formulate effective decisions. It also has participated in cross-cutting, interdisciplinary initiatives of interest to population scientists, such as the Coastlines and People program, which supports research on the implications of climate change on populations, and Mid-scale Infrastructure—two areas of emphasis among the agency's research priorities.

NSF is the funding source for about 27 percent of all federally supported basic research conducted by America's colleges and universities, including basic behavioral and social research. However, the SBE Directorate funds approximately 65 percent of basic, university-based social and behavioral sciences research in the Nation.

PAA and APC, as members of the Coalition for National Science Funding (CNSF), applaud the Administration's proposed NSF FY 2023 budget request, \$10.5 billion, which represents a 19 percent increase in funding over the FY 2022 enacted level.

Moreover, the budget request envisions an allocation for SBE of \$330 million, which would represent a historical high-water mark for this directorate, and an estimated increase of one-third over what we anticipate the FY 2022 allocation will be. We note that the PBR indicates that SBE priority investments include climate change research and a boost to the National Center for Science and Engineering Statistics (NCSES), which plays a key role in the development of the National Secure Data Service. We continue to support the Committee's longstanding practice of not stipulating specific funding levels for individual NSF directorates; however, it is helpful to understand the Administration's views on research priorities, and in this instance we concur.

We note that efforts are currently underway in Congress to reach bi-cameral agreement on legislation to advance translational and interdisciplinary research, emerging technologies, and public-private partnerships. Meanwhile, NSF has launched a new Technology, Innovation and Partnerships (TIP) directorate in anticipation of, and to dovetail with, enactment of this legislation. We urge the Committee to continue to ensure that funding for the TIP will not come at the expense of other, existing directorates.

We urge Congress to accelerate the growth of NSF's budget by providing NSF with at least \$11 billion in FY 2023. The funding level will enable the NSF SBE Directorate to continue its support of social science surveys and a robust portfolio of population research projects. The NSF also continues to focus on interdisciplinary research initiatives, recognizing that social and behavioral science contributes to many critical areas of research. For example, the Mid-scale Infrastructure program is currently funding broad-scale, sensor-based data collection projects that represent collaborations among population scientists and computer scientists. Increased funding in FY 2023 will allow NSF to continue funding the most promising grant applications and reduce the number of high caliber proposals that are rejected solely for lack of sufficient funds.

BUREAU OF JUSTICE STATISTICS AND NATIONAL INSTITUTE OF JUSTICE

After years of declining budgets, PAA and APC are participating in the new Office of Justice Programs Research and Statistics Coalition to raise awareness about the Bureau of Justice Statistics (BJS) and National Institute of Justice (NIJ). Both agencies are important sources of data and funding for population scientists conducting research on topics such as prisoner reentry, the social and environmental dynamics of health and crime, and the effects of incarceration across the lifespan. The coalition's recommendations, which PAA and APC support, would provide BJS with \$60 million and NIJ with \$50 million in FY 2023.

Thank you for considering our requests and for supporting Federal programs that benefit the population sciences under the subcommittee's jurisdiction.

[This statement was submitted by Mary Jo Hoeksema, Director, Government and Public Affairs]

PREPARED STATEMENT OF RESEARCH!AMERICA

Research!America appreciates the opportunity to submit testimony for the record regarding the FY23 Commerce, Justice, Science and Related Agencies appropriations deliberations. We are the Nation's largest nonprofit alliance advocating for science, discovery, and innovation to achieve better health for all. We greatly appreciate the subcommittee's dedicated stewardship over funding for such critical priorities as the National Science Foundation (NSF). As you consider fiscal year 2023 (FY23) allocations, we urge that the subcommittee allocate at least \$11 billion to the National Science Foundation in FY23, an increase of 20% over FY22, to advance the frontiers of research, deliver the benefits of research to society, develop STEM talent, and secure global leadership in science and engineering (S&E).

The NSF's strategic plan aligns with several national priorities, including pandemic response, global economic competitiveness, racial equity, and addressing climate change. Allocating robust funding for NSF is a sound strategy for advancing the United States' strategic interests in an ever-more complex international landscape and meeting the aspirations of the American people.

WHAT NSF PROVIDES

The NSF invests in S&E at over 2,000 funded academic institutions in all 50 States, the District of Columbia, and three U.S. territories. Research topics include important national priorities such as advanced manufacturing, infrastructure resilience & sustainability, innovations in AI decision-making, cybersecurity, and data

analytics, among others. The NSF allocates 94% of its budget to research projects, facilities, and STEM education, which supported over 300,000 students, postdoctoral fellows, researchers, trainees, and teachers in 2019. Since its inception in 1950, the NSF has supported more than 248 Nobel Prize winners, including six Nobel Laureates in 2019 alone. Continued NSF investments will fuel our economy for decades to come while producing high-paying jobs for American workers, improving American prosperity and quality of life, and enhancing national security.

NSF is at the Forefront of Research and Innovation

The NSF supports a broad spectrum of research and innovation in basic science, engineering, and STEM learning research, and it actively seeks research proposals for new tools, advanced instrumentation, data analysis, computation, and novel facilities. Furthermore, the NSF fosters a culture of smart risk-taking, looking for potentially high rewards that justify taking risks. For instance, the SARS-CoV-2 pandemic highlighted the need for more research on prediction and mitigation of current and future pandemics. It also demonstrated the need for research on remote distributed work and remote learning. NSF-funded researchers rapidly mobilized to conduct research that led to the development of the COVID Information Commons (CIC), an interactive platform that consolidated in one place information on the full range of COVID-related awards made by NSF. This tool and platform enabled researchers from all disciplines to efficiently search for information and discover linkages among highly varied, yet often complementary, efforts. This progress would not have been possible without NSF investment.

NSF is Essential to Training the Next Generation of American Scientists and Innovators

The U.S.'s global leadership is directly tied to its strength in the fields of Science, Technology, Engineering, and Mathematics (STEM). The NSF cultivates future American leaders in these strategically important disciplines. Since 1952, the NSF has supported more than 60,000 students through Graduate Research Fellowships and has provided grant support to thousands of postdoctoral fellows and young investigators.

NSF investments have also sustained and enhanced U.S. competitiveness on a global stage. In partnership with other sectors, the NSF has supported S&E research and innovation that has led to the development of breakthrough technologies and solutions to national and societal problems. This includes the new Technology, Innovation, and Partnerships (TIP) Directorate, which will enable the NSF to focus cross-disciplinary expertise and foster cross-sector partnerships to develop solutions at speed and scale. TIP will build on successful innovation programs such as the NSF Convergence Accelerator, as well as the world-leading Lab-to-Market Platform, which spans the NSF Innovation Corps, Partnerships for Innovation, Small Business Innovation Research and Small Business Technology Transfer programs.

Research!America appreciates the complex task facing the subcommittee as it seeks to prioritize funding in a manner that best serves the American people, and we thank you for your continued leadership and consideration of our funding request. Please call on us if we can be of any assistance.

Sincerely,
Mary Woolley
President and CEO

PREPARED STATEMENT OF THE SEA GRANT ASSOCIATION

The Sea Grant Association (SGA) recommends Congress appropriate \$140 million in FY 2023 for the National Oceanic and Atmospheric Administration's National Sea Grant College Program (Sea Grant) and \$18 million for Sea Grant Aquaculture Research. Sea Grant is funded through appropriations to NOAA's Office of Oceanic and Atmospheric Research in the Operations, Research, and Facilities account.

The SGA recommendation of \$140 million for Sea Grant is roughly equal to the total amount the Sea Grant program is managing in FY 2022 when one factors in funding provided in the Consolidated Appropriations Act, 2022 (Public Law 117-103) (\$76 million for Sea Grant and \$13.5 million for Sea Grant Aquaculture) and the Infrastructure Investment and Jobs Act (Public Law 117-58) (\$50 million for marine debris). The SGA's request includes funding to expand Sea Grant's capacity to address coastal resilience issues.

Sea Grant consists of a network of 34 university-based programs and has supported coastal and Great Lakes communities through research, extension, and education for over 50 years. SGA is a nonprofit association made up of the academic

institutions participating in the program dedicated to furthering Sea Grant's vision, mission, and goals. The SGA advocates for greater understanding, use, and conservation of marine, coastal, and Great Lakes resources.

Sustained, bipartisan congressional support for the program led to the enactment of a 5-year reauthorization, the National Sea Grant College Program Amendments Act of 2020 (Public Law 116–221). The legislation identified several priority activities for FY 2021–2025—including coastal resilience and sustainable aquaculture—and authorized additional funding for competitive grants in these areas. The request made in this testimony would provide the resources necessary for Sea Grant to meet those programmatic objectives.

Sea Grant Benefits

Economy: In 2020, it helped generate an estimated \$520 million in economic benefits, created or supported 11,000 jobs, and created or sustained 1,332 businesses.

Community: More than 90% of appropriated funds are competitively awarded, which is critical as our nation continues its economic recovery and addresses challenges posed by the pandemic. In 2020, Sea Grant helped 285 communities improve resilience and over 11,000 people adopt safe and sustainable fishing practices while also restoring or protecting an estimated 4.2 million acres of habitat.

Students: In 2020, Sea Grant supported education and training of nearly 2,000 undergraduate and graduate students. This is critical, as pandemic-related challenges across the education system have threatened to disrupt the STEM pipeline and future workforce.

By leveraging nearly \$3 for every \$1 appropriated by Congress, Sea Grant provides a remarkable return on the public's investment.

Justification for the FY 2023 SGA Request for Sea Grant

Throughout its 50-year history, Sea Grant has supported coastal communities, focusing on healthy coastal ecosystems, sustainable fisheries and aquaculture, resilient communities and economies, and environmental literacy and workforce development. However, the demand for services now outweighs existing capacity and resources. Additional funding would allow Sea Grant to better serve more diverse constituencies, including economically disadvantaged groups, land/property owners, businesses, Tribes, state/local planners, engineers, community leaders, fisheries coalitions, developers, and citizen community groups. SGA makes the following recommendations so that it can have the capacity to meet the needs of our coastal communities:

National Sea Grant College Program (Sea Grant): \$140 million

Sea Grant Resilient Coasts Initiative.—The last several years have brought unprecedented challenges to our Nation, from the ongoing human health crisis to increasing natural disasters. For those living in coastal areas—which is more than 40 percent of the United States' population—the 2022 hurricane season is expected to again pose a significant threat, with predictions indicating another above-average

season with 16–22 named storms and nine hurricanes, four to five of which are expected to be major ones. It is imperative that coastal communities have the resources to prepare for, mitigate the effects of, and recover from such events, as well as the many other challenges these communities face, including coastal inundation and erosion, oil and chemical spills, and harmful algal blooms.

Specifically, the funding requested in FY 2023 would enable a focus on capacity building to support recruitment of additional resilience extension, communication, or education staff in each State Sea Grant; to provide funding for a State-based national Sea Grant resilience coordinator; and to enable research, engagement, decision support, and implementation to support local State-based research, training, technical assistance, and coordination that enhance community resilience.

Racial Equity and Inclusion.—Sea Grant invests heavily in its people: those in its workforce and those in the communities they serve. There is more that must be done to ensure the Sea Grant workforce is representative of the broader communities they work with across the Nation and that underserved and underrepresented communities are not overlooked when addressing coastal issues.

Sea Grant already has long-standing and trusted relationships with local, Tribal, and indigenous communities that depend on the coastal and marine environment for livelihood and substance and whose cultures are deeply tied to it. Funds appropriated for FY 2023 would advance innovative initiatives to further connect to, learn with, and empower historically marginalized communities by supporting research, training, mentorship, and fellowship opportunities supporting underserved and underrepresented communities.

Sustainable Aquaculture: \$18 million

Enhancing Sea Grant's aquaculture program will enable local farmers to produce sustainable seafood for the growing population while also helping lessen our Nation's seafood trade deficit, which was over \$16.9 billion in 2019. In FY 2020, Sea Grant turned a \$13 million appropriation into over \$80 million in economic impact, creating or sustained over 1,000 aquaculture-related jobs and over 400 related businesses.

Sea Grant's work around aquaculture includes support and assistance to those across the food chain. The program supports research, education, and workforce development on issues of importance to State and local communities, including farm siting and permitting, production technologies, seafood safety and quality, environmental risks, user conflicts within coastal communities and working waterfronts, animal welfare, and food security. Through research and extension services, Sea Grant assists in increasing sustainable domestic production of currently farmed and promising new species through improvements in feeds and feeding practices, reproduction, larval rearing and genomics, and animal health and through growing adaptations to changing environmental conditions. Sea Grant conducts research and provides technical assistance and outreach to aquaculture producers, resource managers, scientists, and consumers to ensure the safety and quality of sustainably cultured seafood products. Finally, Sea Grant also provides aquaculture literacy programs for the next generation of farmed seafood producers through K–12 education. The funding requested for FY 2023 would expand the Sea Grant aquaculture program, further enabling farmers to produce sustainable seafood that competes with imports and provides a safe and nutritious source of protein.

Examples of Recent Sea Grant Accomplishments

- Alaska Sea Grant is funding a project to help communities adapt and respond to the changing climate, with a goal of providing communities in Bristol Bay with specific data to inform build solutions and to budget and apply for grant funds¹.
- Connecticut Sea Grant, with National Sea Grant Law Center and state Bureau of Aquaculture, developed a best practice guide for regulating raw seafood for human consumption and developed the first domestic public health hazards guide for seaweed aquaculture².

¹ A. Gore, "Storm-related data help Bristol Bay communities plan for change," 2022, available at: <https://alaskaseagrant.org/2022/04/26/storm-related-data-help-bristol-bay-communities-plan-for-change/>.

² Sea Grant Connecticut Annual Report, 2021, available at: <https://seagrant.uconn.edu/wp-content/uploads/sites/1985/2022/02/2021.AR—webversion.pdf>.

- Mississippi-Alabama Sea Grant Consortium awarded the first Clean and Resilient Marina certification to Saunders Yachtworks for its best management practices to protect and promote clean water and to reduce water pollution³.
- New Hampshire Sea Grant partnered with oyster growers to provide financial relief and to encourage participation in research and conservation, which provided immediate economic relief for growers during the pandemic and explored alternate revenue streams to help oyster growers build economic resilience⁴.

CONCLUDING THOUGHTS

The Sea Grant Association is grateful for the long-standing consistent support this subcommittee has provided the program. Our “on the ground” efforts in coastal resilience, sustainable aquaculture, and other key Sea Grant objectives could not happen without the guidance and support this subcommittee and the rest of the Congress has provided over the years. The Sea Grant Association’s request for the National Sea Grant College Program of \$140 million, while more than the amount requested by the Administration for FY 2023, is similar to the request the Administration submitted in FY 2022 and is close to the total amount the Congress has entrusted Sea Grant to manage in FY 2022 when one views the program through the lens of the omnibus appropriations act and the Infrastructure Investment and Jobs Act.

Thank you again for your time and for your consideration of this request. SGA would be happy to answer any questions or provide any additional information.

[This statement was submitted by Dr. Susan White, President]

PREPARED STATEMENT OF SEATTLE INDIAN HEALTH BOARD

Chair Shaheen, Ranking Member Moran, and members of the Senate Committee on Appropriations—Subcommittee on Commerce, Justice, Science, and Related Agencies, my name is Esther Lucero. I am Diné, of Latino descent, and third generation in my family living outside of our reservation, I strongly identify as an urban Indian. I serve as the President & CEO of the Seattle Indian Health Board (SIHB), one of 41 Urban Indian Organizations (UIO) nationwide. I have had the privilege of serving SIHB for 6 years and have been providing congressional testimonials for the past 4 years. I am honored to have the opportunity to submit my testimony today requesting the Department of Commerce appoint a Senior Advisor for the Office of Native American Affairs.

SIHB is an Indian Health Service (IHS)-designated UIO and a Health Resource and Service Administration (HRSA) 330 Federally Qualified Health Center, which serves nearly 5,000 AI/AN living in the Greater Seattle Area in Washington state. Nationwide, UIOs operate 74 health facilities in 22 States and offer services to over 5.4 million AI/AN people in select urban areas. As a culturally attuned service provider, we offer direct medical, dental, traditional health, behavioral health services, and a variety of social support services on issues of gender-based violence, youth development, and homelessness. We are part of the Indian healthcare system and honor our responsibilities to work with our Tribal partners to serve all Tribal people, wherever they may reside.

We are home to a Tribal public health authority, Urban Indian Health Institute (UIHI), 1 of 12 Tribal Epidemiology Centers (TEC) in the country and the only TEC with a national purview- serving both rural and urban AI/AN’s. For over 20 years, UIHI has managed public health information systems, managed disease prevention and control programs, communicated vital health information and resources, responded to public health emergencies, and coordinate these activities with other public health authorities and UIO’s nationwide. Due to a lack of access to disease surveillance data, UIHI released the only AI/AN COVID-19 Data Dashboard,¹ utilizing the over 45 UIO service areas providing direct service to communities combating COVID-19.

³ K. Maghan, “Saunders Yachtworks named Alabama’s first clean and resilient marina,” 2021, available at: <https://masgc.org/news/article/saunders-yachtworks-named-alabamas-first-clean-and-resilient-marina>.

⁴ New Hampshire Sea Grant, “NH oyster COVID relief and restoration,” 2021, available at: <https://seagrant.unh.edu/blog/2021/12/nh-oyster-covid-relief-restoration>.

¹ Urban Indian Health Institute (April 2022) COVID-19 Among American Indian/Alaska Natives. Retrieved from: <https://www.uihi.org/covid-19-data-dashboard/>.

ECONOMIC INVESTMENTS IN INDIAN COUNTRY BY THE DEPARTMENT OF COMMERCE

To advance economic wellbeing of AI/AN populations, the Department of Commerce previously maintained the appointment of a Senior Advisor for Native American Affairs. Today, in lieu of a Senior Advisor, the Department of Commerce holds multiple Tribal liaison positions. I believe this is insufficient to meet the economic demands of Indian Country. I insist a Senior Advisor be appointed to: lead the coordination and communication of AI/AN issues with Tribes, Tribal organizations, and UIOs; implement the department's Tribal Consultation Policy Plan, and; guide combined efforts of the Federal Government, Tribal governments, and private sectors to promote economic growth for Tribes, UIOs, and AI/AN people nationwide.

To increase economic advancement in Indian Country, we also request the Department of Commerce support economic advancement initiatives for marginalized communities with funding through the Economic Development Administration (EDA), Minority Business Development Agency (MBDA), and the U.S. Census Bureau. Economic advancement for AI/AN populations can be achieved through investing in healthcare, education, housing, and supporting economic sustainability of AI/AN communities. Economic advancement can also be achieved through budgetary earmarks and grant carve outs support AI/AN populations. SIHB encourages the use of the Federal statute language of Tribes, Tribal organizations, and urban Indian organizations as defined by 25 U.S.C. § 1603.

A persistent barrier for Indian Country's economic development is Federal dollars not reaching urban AI/AN communities in the intended amount. For example, the Department of Commerce's Federal funding can be channeled through State and local governments before being allocated community-based organizations, like SIHB and UIHI. Due to indirect State and local administrative processes, reduced funding is allocated to community-based organizations to implement Federal initiatives. To increase funding for community-based organizations, Federal agencies need to combine resources and provide direct funding to UIOs and BIPOC organizations conducting Federal initiatives. Together, we can properly channel Federal dollars to foster economic empowerment and advancement in Indian Country.

ECONOMIC INEQUITIES EFFECTING AI/AN LIVELIHOOD

The Commission on Civil Rights documented the history of unmet Federal obligations to Tribal nations in a report titled *Broken Promises*,² which included lack of investment to improve Indian Country's economic wellbeing. In alignment with Executive Order 13985: Advancing Racial Equity and Support for Underserved Communities Through the Federal Government and the Department of Commerce's Strategic Goal 2: Fostering Inclusive Capitalism and Equitable Economic Growth, we request the Department of Commerce strategize and evaluate opportunities to promote economic growth within AI/AN communities both on and off Tribal territories.

Economic growth of AI/AN people has been stunted due to social determinants of health impacting economic outcomes, resource extraction on Tribal lands, and limited funding for AI/AN communities. AI/AN populations have the highest poverty rate among all minority groups and nationally, 22.7% of urban AI/AN people live in poverty compared to 6.9% for Non-Hispanic White (NHW) populations.³ Additionally, nearly one in six AI/AN families live in poverty, which is 4.8 times the proportion of NHW families.⁴ Of our relatives (patients) served at SIHB, 84% fell 200% below the Federal poverty level (FPL). Poverty can limit a family's access to health services, nutrition, quality housing options, and economic opportunities to build wealth and assets.

The social and economic consequences of poverty are inextricably connected to health outcomes.⁵ In the Nation, Medicaid is a major source of financing maternal and infant health with 42% of all births covered by Medicaid.⁶ Of our relatives

²U.S. Commission On Civil Rights (December 2018). *Broken Promises: Continuing Federal Funding Shortfall for Native Americans*. Retrieved from: <https://www.usccr.gov/files/pubs/2018/12-20-Broken-Promises.pdf>.

³American Community Survey. (2018). American Community Survey: 2013–2017 5-year Data Release.

⁴American Community Survey. (2018). American Community Survey: 2013–2017 5–Year Data Release.

⁵Urban Indian Health Institute. Data Dashboard, Poverty in Seattle. <https://www.uihi.org/urban-indian-health/data-dashboard/>.

⁶Centers for Disease Control and Prevention—National Center for Health Statistics. (2020). Birth in the United States. NCHS Data Brief. No 387. Retrieved from: <https://www.cdc.gov/nchs/data/databriefs/db387-H.pdf>.

served at SIHB, 54.8% are on Medicaid/Children's Health Insurance Program, 10.7% are on Medicare, 5.3% are dual eligible, and 19.4% are uninsured. As the President and CEO of a UIO offering health and human services, I recognize our relatives have limited resources and accessibility to the services they need, which is why I adamantly increase our wraparound services with nutrition, behavioral health, gender-based violence, and homelessness investments.

To address economic discrepancies children born under Medicaid experience in their lifetime, Washington State is leading economic equity policy initiatives through the proposed Future Fund Trust which will aid children born under Apple Health Coverage with \$3,000 upon reaching 18, to spend on higher education, housing payments, and business initiatives. Nationally, Senator Booker has introduced the American Opportunity Accounts Act which provides children with \$1,000 savings account upon birth with annual contributions up to \$2,000 depending on a family's income. These types of initiatives provide economic empowerment to children potentially affected by inter-generational poverty and can support their access to education, housing, and health services to improve their wellbeing.

SIHB has taken steps to support financial capital of AI/AN populations by providing career advancement opportunities for urban AI/AN through healthcare workforce development. Nationally, 20.5% of AI/AN people aged 25 and older in UIO service areas did not complete high school or pass the General Education Development (GED) exam compared to the 5.5% of Non-Hispanic White population.⁷ SIHB's workforce development program currently supports 6 family medicine residents, 6 public health interns, and 4 Master of Social Work program students. Of our 6 family residents, 4 identify as AI/AN and recent graduation rates show 80% of our previous residents go on to work in communities of color and 50% go on to work in Native communities. These types of training programs increase AI/AN representation in healthcare provider positions, support financial capital built by AI/AN professionals, and improve economic equity amongst AI/AN populations.

U.S. CENSUS AND AMERICAN INDIAN AND ALASKA NATIVE REPRESENTATION

The most recent 2020 U.S. Census reported the largest increase in AI/AN representation, thanks, in part, to trusted community messengers' educating and incentivizing accurate and appropriate data collection practices for Tribal community members. Key census findings reported that 76% of AI/AN populations reside outside of Tribal regions, within urban areas.⁸ King County, the 13th most populous county in the Nation,⁹ has a population of over 39,000 AI/AN's residing in the region.¹⁰ Coinciding with the Department of Commerce Strategic Objective 4.1, we support increased funding for culturally attuned data collection practices on AI/AN populations to better document existing social determinants of health in our community and ensure Federal resources reach our AI/AN populations to address systemic inequities.

UIHI supported the 2020 Census by partnering with 42 health centers to award subcontracts for organizations to promote the National 'We Count' campaign and strengthen AI/AN participation in the census.¹¹ Additional efforts included UIHI partnering with other Indian healthcare providers and Native leaders to produce culturally attuned media, educational campaigns, and monetary incentives to encourage participation in the 'We Count' census campaign. These national community-based efforts resulted in an 86.5% increase in the AI/AN population from the 2010 Census.¹²

To build upon 2020 Census efforts, increased investments into improving data collection practices are needed to accurately report on social demographics of AI/AN populations. Previous Census barriers to report accurate AI/AN population statistics

⁷Urban Indian Health Institute. (October 2021) Community Health Profile, National Aggregate of Urban Indian Organization Service Areas. Retrieved from: <https://www.uihi.org/urban-indian-health/urban-indian-health-organization-profiles/>.

⁸U.S. Census Bureau. (2021). County Population by Characteristics: 2010–2020. <https://www.census.gov/programs-surveys/popest/technical-documentation/research/evaluation-estimates/2020-evaluation-estimates/2010s-county-detail.html>.

⁹U.S. Census Bureau (2020). State and County Quick Facts King County, Washington. Retrieved from: <https://www.census.gov/quickfacts/fact/table/kingcountywashington/PST045221>.

¹⁰Urban Indian Health Institute (March 2012). American Indian/Alaska Native Population by Census Tract- Seattle Indian Health Board Service Area, Seattle WA, 2010 Census. Retrieved from: <https://www.uihi.org/uihp-profiles/seattle/>.

¹¹Urban Indian Health Institute. (April 2020) We Count. Retrieved from <https://wecount.uihi.org/#engage>.

¹²U.S. Census Bureau (August 2021). 2020 Census Results on Race and Ethnicity. Retrieved from: <https://www.census.gov/content/dam/Census/newsroom/press-kits/2021/redistricting/20210812-presentation-redistricting-jones.pdf>.

include lack of community-based resources, technological limitations, and general mistrust from the community. Inaccurate reporting leads to government agencies undercounting AI/AN populations and misinterpreting AI/AN social demographics, which drastically impacts the allocation of resources and funding reaching Indian Country.

Taken collectively and intentionally implemented, these requests will help address barriers to economic development impacting AI/AN populations. Together, we can advance economic well-being for Indian Country and support equity across BIPOC communities.

[This statement was submitted by Esther Lucero, MPP, President & CEO]

PREPARED STATEMENT OF SOCIETY FOR INDUSTRIAL AND APPLIED MATHEMATICS
(SIAM)

Summary

This written testimony is submitted on behalf of the Society for Industrial and Applied Mathematics (SIAM) to ask you to continue your support of the National Science Foundation (NSF) in fiscal year (FY) 2023 by providing NSF with at least \$11 billion. In particular, we urge you to provide strong support for the Research and Related Activities Account (R&RA) that supports key applied mathematics and computational science programs in the Division of Mathematical Sciences and the Office of Advanced Cyberinfrastructure. SIAM also requests your support for the Education and Human Resources (EHR) directorate that addresses fundamental challenges in mathematics and STEM education.

Full Statement

On behalf of SIAM, we submit this written testimony for the record to the subcommittee on Commerce, Justice, Science, and Related Agencies of the Committee on Appropriations of the U.S. Senate.

SIAM has over 14,000 members, including applied and computational mathematicians, computer scientists, numerical analysts, engineers, statisticians, and mathematics educators. They work in industrial and service organizations, universities, colleges, and government agencies and laboratories all over the world. In addition, SIAM has almost 500 institutional members, including colleges, universities, corporations, and research organizations. SIAM members come from many different disciplines but have a common interest in applying mathematics in partnership with computational science to solve real-world problems, which affect national security and industrial competitiveness.

First, we would like to emphasize how much SIAM appreciates your Committee's continued leadership on and recognition of the critical role of the National Science Foundation (NSF) and its support for mathematics, science, and engineering in enabling a strong U.S. economy, workforce, and society.

Today, we submit this testimony to ask you to continue your support of NSF in FY 2023 and beyond. In particular, we join with the research and higher education community and request that you provide NSF with at least \$11 billion in funding for FY 2023. This is \$500 million over the President's budget request for FY 2023 that calls for \$10.49 billion. After years of inadequate funding, NSF needs bold growth to protect U.S. competitiveness as countries such as China are rapidly increasing their science and engineering investments. According to the National Science Board, in FY 2020, NSF rejected close to four billion dollars of proposals rated "very good or higher" due to budget constraints. At least \$11 billion in funding is needed to ensure NSF can meet Congress's vision for the agency, launch new programs in priority areas such as Regional Innovation Engines to transform regional economies in critical technology areas, invest in revolutionary breakthroughs to address resilience and catalyze clean energy innovation, and provide sustainable growth to the core research and education activities undergirding our science and technology ecosystem.

As we are reminded every day, the Nation's health, economic strength, national security, and welfare are being challenged in profound and unprecedented ways. Many of these challenges are fueled by gaps in our understanding of complex systems such as biologic processes, the energy grid, cyberspace, terrorist networks, or the human brain. Mathematics and computational science play a foundational and cross-cutting role in understanding these systems through advanced modeling and simulation, developing techniques essential to designing new breakthrough technologies like artificial intelligence (AI), and providing new tools for managing resources and logistics. Progress in computational sciences and applied mathematics

also underpins advances across an array of fields and challenges in computing, materials, biology, engineering, and other areas.

NATIONAL SCIENCE FOUNDATION

NSF serves a unique and critical function supporting all areas of science and engineering to further innovation and seed the knowledge and technologies for a strong future America. NSF provides essential Federal support for applied mathematics and computational science, including more than 60 percent of all Federal support for basic academic research in the mathematical sciences. Of particular importance to SIAM, NSF funding supports the development of new mathematical models and computational algorithms, which are critical to making substantial advances in such fields as neuroscience, energy technologies, genomics, and nanotechnology. In addition, new techniques developed in mathematics and computing research often have direct application in industry. Modern life as we know it—from search engines like Google to the design of modern aircraft, from financial markets to medical imaging—would not be possible without the techniques developed by mathematicians and computational scientists using NSF funding. NSF also supports mathematics education at all levels, ensuring that the next generation of the U.S. workforce is appropriately trained to participate in cutting-edge technological sectors and that students are attracted to careers in mathematics and computing.

SIAM supports NSF's efforts to launch the Directorate for Technology, Innovation, and Partnerships and encourages Congress to give NSF the resources it needs to truly launch new programs such as Regional Innovation Engines and enabling support for NSF priorities in climate, clean energy, emerging industries, and broadening participation. While investment in these priority areas is important, SIAM urges Congress to provide sufficient NSF support for core programs, such as those funded by the Division of Mathematical Sciences (DMS) and the Office of Advanced Cyberinfrastructure (OAC), which have stagnated in recent years and whose foundational investments underpin advances across many science and engineering challenges.

SIAM urges strong investment in the Research and Related Activities account (RRA) to enable robust funding for the Division of Mathematical Sciences (DMS), the Office of Advanced Cyberinfrastructure (OAC), and other core programs and crosscutting initiatives for essential mathematical and computational science research, workforce development programs, and early career researcher support.

NSF DIVISION OF MATHEMATICAL SCIENCES

The NSF Division of Mathematical Sciences (DMS) in the Directorate for Mathematical and Physical Sciences (MPS) provides core support for all mathematical sciences. DMS also funds national mathematical science research institutes; infrastructure, including workshops, conferences, and equipment; and postdoctoral, graduate, and undergraduate training. The activities supported by DMS and performed by SIAM members, such as modeling, analysis, algorithms, and simulation, underpin advancements across science and engineering and provide new ways of obtaining insight into the nature of complex phenomena, such as the power grid, software for military applications, and the human body.

Investment in DMS is critical because of the foundational and cross-cutting role that mathematics and computational science play in sustaining the Nation's economic competitiveness and national security, and in making substantial advances on societal challenges such as energy and public health. NSF, with its support of a broad range of scientific areas, plays an important role in bringing U.S. expertise together in interdisciplinary initiatives that bear on these challenges. DMS has taken a leadership role in promoting partnerships with other agencies and foundations to leverage Federal funding for maximum impact. In addition, DMS funding supports a broad array of activities in modeling, analysis, algorithms, and simulation that underpin advancements across science and engineering. Agencies such as the Department of Defense and National Institutes of Health depend on the NSF-supported applied math and computational sciences ecosystem to fulfill their missions as they build on NSF-funded modeling, algorithm, and simulation breakthroughs and leverage the workforce trained using NSF support. Both agencies and foundations partner with NSF thereby leveraging Federal funding for maximum impact, such as with the Joint NSF/National Institutes of Health Initiative Quantitative Approaches to Biomedical Big Data (QuBBDD).

NSF OFFICE OF ADVANCED CYBERINFRASTRUCTURE

Work in applied mathematics and computational science is critical to enabling effective use of the rapid advances in information technology and cyberinfrastructure.

Programs in the NSF Office of Advanced Cyberinfrastructure (OAC) in the Directorate for Computer and Information Science and Engineering (CISE) focus on providing research communities access to advanced computing capabilities to convert data to knowledge and increase our understanding through computational simulation and prediction. SIAM strongly endorses NSF's and OAC's role advancing high performance computing to meet critical national security needs, fully leverage computing technology for economic competitiveness and scientific discovery, and position the U.S. for sustained technical leadership. OAC funding will support its role as steward for computational science, building bridges across NSF to accelerate transformational science and engineering.

SUPPORTING THE PIPELINE OF MATHEMATICIANS AND SCIENTISTS

A lack of sufficient funding for NSF's Education and Human Resources (EHR) directorate has left critical gaps in addressing fundamental challenges for mathematics and STEM education across educational levels. SIAM supports EHR and its programs like Improving Undergraduate STEM Education (IUSE), which is key to both advancing STEM professional development and developing a STEM literate citizenry. SIAM notes that mathematical education is foundational to STEM learning across disciplines, and NSF should continue to fund development of mathematical and computational skills, including at the undergraduate level when young scientists and engineers gain critical interests and competencies. SIAM supports the NSF CAREER awards, Graduate Research Fellowships, and Mathematical Sciences Postdoctoral Research Fellowships (MSPRF) that are crucial to the training and professional development of the next generation of leadership in mathematical sciences research and education.

CONCLUSION

We would like to thank you again for your ongoing support of NSF that enables the research and education communities it supports, including thousands of SIAM members, to undertake activities that contribute to U.S. health, security, and economic strength. NSF needs sustained growth to maintain our competitive edge in science and technology, and therefore we respectfully ask that you continue robust support of these critical programs in FY 2023.

We appreciate the opportunity to provide testimony to the Committee on behalf of SIAM. SIAM looks forward to providing any additional information or assistance you may ask of us during the FY2023 appropriations process.

PREPARED STATEMENT OF SOCIETY FOR INDUSTRIAL AND ORGANIZATIONAL PSYCHOLOGY

On behalf of the Society for Industrial and Organizational Psychology (SIOP), we are pleased to provide this written testimony to the House Appropriations subcommittee on Commerce, Justice, and Science, and Related Agencies for the official record. In this testimony, SIOP urges the subcommittee to consider three requests:

- Provide the requested amount of \$11 billion for the National Science Foundation (NSF), including strong support for the Directorate for Social, Behavioral, and Economic Sciences (SBE), and the new Directorate for Technology, Innovation, and Partnerships (TIP) in the fiscal year (FY) 2023 appropriations process;
- Include report language to encourage NSF to more rigorously implement the science of team science in the agency's funding strategies for large-scale and multi-disciplinary research projects; and
- Support for workforce evaluation and technical assistance at the Department of Justice's Community Oriented Policing Services Office.

APPROPRIATIONS SUPPORT FOR NSF

SIOP is a community of nearly 10,000 members worldwide with a common interest in promoting the research, practice, and teaching of industrial and organizational (I-O) psychology to enhance human well-being and performance in organizational and work settings. SIOP provides a platform for scientists, academics, consultants, practitioners, and students to collaborate, implement, and evaluate cutting-edge approaches to workplace challenges across sectors.

We have evidence that Federal investment in social and behavioral science research directly and positively impacts the U.S. economy, national security, and the health and well-being of Americans. Through SBE, NSF supports basic research to develop a scientific evidence base for improving the performance, effectiveness, management, and development of organizations and the workforce. The methods, meas-

urements, and theories developed through this Federal investment enhance business practices, policymaking, and interprofessional collaboration. The evidence base derived from basic research in the science of organizations is applied throughout the public and private sectors.

SBE is critically important to NSF and has been highly responsive to the transformative events of the past few years. SBE rapidly responded to the challenges and opportunities posed by the COVID-19 pandemic, supporting the second most pandemic-related research grants among NSF Directorates. This included significant support for the field of I-O psychology as the nature of work has fundamentally shifted. SBE investments, particularly those from the Science of Organizations program, have allowed I-O psychologists to develop data-driven methods to address workplace disruption, issues of work-life balance, workforce participation by women and underserved populations, and the challenges and opportunities related to the shift to remote work. This research will be crucial as we continue to emerge from the pandemic and deal with its lasting effects on our workplaces and organizations.

NSF SBE has also provided the foundation for I-O psychologists to understand how our rapidly emerging technologies affect the workforce. As the rate of technological change continues to accelerate, I-O psychologists are already seeking to understand how technologies like Artificial Intelligence and automation affect American workers and develop responsive employee training programs necessary to reskill our workforce.

Continued Federal support for I-O psychology keeps its knowledge and expertise in the public domain and enhances shared workplace efficiency and understanding of worker well-being at all levels. Other applications of I-O psychology include transitioning veterans and service members to civilian jobs, managing age diversity in the workplace, and developing preventative sexual harassment workforce interventions, among many others.

NSF has also launched a new Directorate for Technology, Innovation, and Partnerships (TIP). SIOP applauds NSF and Congress for investing in TIP and encourages the new directorate to continue focusing on use-inspired research that will position the Foundation to drive innovation in industries and technologies of the future. In order to fully reach its potential, the TIP Directorate must incorporate social and behavioral science topics into its research agenda, particularly workforce needs and impacts to the workplace as a result of these new technologies or research advancements. Furthermore, as the TIP Directorate recruits and hires new staff, effort must be taken to ensure that the program officers are drawn from a broad variety of professional disciplines, including I-O psychology and other behavioral sciences. SIOP encourages NSF and TIP to utilize and support I-O concepts and research in its plans for the future success of the directorate, as well as employ I-O experts as part of its staff.

Given NSF's critical role in supporting fundamental research and education across science and engineering disciplines, SIOP supports an overall FY 2023 NSF budget of \$11 billion. SIOP requests robust support for the NSF SBE Directorate, which funds important research studies, enabling an evidence base, methodology, and measurements for improving organizational function, performance, and design across sectors and disciplines. SIOP also requests the new TIP Directorate be fully funded and empowered to support innovative research that will drive America's global competitiveness, including in the social and behavioral sciences.

SCIENCE OF TEAM SCIENCE

SIOP requests that Congress direct NSF to further adopt of the Science of Team Science (SciTS) in NSF programs and policies. SciTS is the empirical examination of the processes by which large and small scientific teams organize, conduct, and communicate research. I-O psychologists with expertise in SciTS have engaged with NSF program officers and leadership, as well as some congressional staff to ensure their findings are fully ingrained in the agency's new models and approaches for funding cross-disciplinary science and/or large-scale research projects. With the launch of the new Directorate for Technology, Innovation, and Partnerships (TIP), SIOP believes it is increasingly important that the agency take additional steps to ensure evidence-based team science is considered in multi-partner initiatives to improve communication between researchers, productivity, efficiency and cost-effectiveness. New programs focused on multi-disciplinary collaboration between academia, industry, and other community partners, such as the Regional Innovation Engines, require targeted SciTS approaches to ensure their success.

Team science is a well-known research subject at NSF and the language should be understood by the agency. NSF has funded several team science studies through SBE and program officers across directorates have expressed interest in leveraging

team science to improve multi-disciplinary awards, including participating in one-on-one conversations with SIOP experts and inviting them to present on NSF panels. SIOP appreciates NSF's interest in learning more about leveraging SciTS to improve programs and collaborations at the agency. While NSF has taken some steps forward to address the importance of team science in some multi-disciplinary awards, we feel that appropriations report language that specifically mentions the importance of team science would build on this existing momentum and further catalyze meaningful action.

For further reference, SIOP members served on the National Academies' Committee on the Science of Team Science, which produced the 2015 report on this topic: <https://www.nap.edu/catalog/19007/enhancing-the-effectiveness-of-team-science>. Also, slides and recordings from NSF's 2018 Accelerating Engineering Research Center Preparedness Workshop can be found at: <https://ercbiennial.asee.org/2018-pgw/program/>. SIOP members Drs. Steve Kozlowski and Kara Hall present on team science.

REQUESTED REPORT LANGUAGE

Team Science.—NSF is encouraged to continue to seek ways to implement the science of team science to improve scientific collaboration as the agency develops new models and approaches for funding large-scale and cross-disciplinary research projects, including via the Technology, Innovation, and Partnership (TIP) Directorate. In particular, NSF is encouraged to ensure that it is implementing the recommendations from the National Academies of Sciences, Engineering, and Medicine report, *Enhancing the Effectiveness of Team Science*.¹

DEPARTMENT OF JUSTICE (DOJ) COMMUNITY ORIENTED POLICING SERVICES (COPS) OFFICE

DOJ's COPS Office is responsible for advancing the practice of community policing by the Nation's State, local, territorial, and Tribal law enforcement agencies through information and grant resources. The COPS Hiring Program (CHP), the agency's signature initiative, provided \$165 million for law enforcement agencies in FY 2022. Hundreds of law enforcement agencies have benefited from this program since its inception, but little is known about these recipients and the unique issues they face in key areas like recruitment, retention, training and more. Collectively, CHP recipients make up an ideal study group to explore important questions over what factors and activities drive people toward careers in policing, as well as what may drive people away. When there is more evidence about what works and what some persistent issues are to be addressed, the COPS Office can better tailor technical assistance programming to meet the needs of law enforcement agencies.

To this end, Congress should provide funding for the COPS Office to support a volunteer evaluation study of CHP recipients to better understand common recruitment, hiring, and retention practices and leverage the findings to target future Federal assistance. Congress should also specify that the COPS Office work with an outside organization with expertise in workforce and workplace sciences. SIOP has a relationship with the COPS Office to provide expert input on priorities regarding hiring and selection, reducing officer burnout, providing meaningful training and professional development, and other topics of I-O expertise. SIOP could be key partners in assisting the COPS Office as they develop and carry out the study to ensure it is designed properly for impactful results.

REQUESTED REPORT LANGUAGE

Workforce Study.—The Committee recognizes that persistent recruitment, hiring, and retention issues are plaguing law enforcement agencies nationwide. The COPS Office provides support to address these issues through the COPS Hiring Program, but little is known about specific challenges facing grantees. With the appropriations provided, COPS should carry out a voluntary assessment of COPS Hiring Program recipients to understand workforce challenges facing police departments, identify best practices, and collect other findings to better target future technical assistance programming. In carrying out this study, the COPS Office shall enter into a partnership with qualified organizations with extensive expertise in workforce and workplace sciences, such as industrial and organizational psychology.

¹ <https://www.nap.edu/catalog/19007/enhancing-the-effectiveness-of-team-science>.

Thank you for the opportunity to offer SIOP's support for NSF and DOJ. Please do not hesitate to contact SIOP should you have any questions. Additional information is also available at www.siop.org.

[This statement was submitted by Dr. Mo Wang, President and Tracy L. Vanneman, Executive Director]

PREPARED STATEMENT OF SOCIETY FOR NEUROSCIENCE

Chair Shaheen, Ranking Member Moran, and members of the subcommittee, on behalf of the Society for Neuroscience (SfN), we are honored to present this testimony in support of robust appropriations for biomedical research at the National Science Foundation (NSF). SfN urges you to provide at least \$11 billion, an increase of approximately \$2.162 billion, in funding for NSF in FY23. As both a researcher and a Professor in the Department of Biology at Brandeis University, I understand the critical importance of Federal funding for neuroscience research in the United States. My own research identified the ability of brain circuits to “tune themselves” to maintain the appropriate level of excitability, which is critical for healthy brain function.

My research group, supported by NSF funding, made fundamental discoveries in how neurons self-adjust their excitability, making it easier or harder to send electrical messages to other neurons. Over the past two decades, we have unearthed a family of mechanisms that allow for this unique flexibility called “homeostatic plasticity”, so neurons can change the rate they send messages and protect communication in the face of outside disturbances. Our work has many wide-reaching implications: We are studying how learning and memory suffer when these mechanisms malfunction; We are exploring how being awake or asleep affects these mechanisms; and we are investigating how States of being too excitable or not excitable enough contribute to disorders like epilepsy and autism spectrum disorder. Basic research, like my own, is paramount to understanding the brain at a level deep enough to develop treatments and interventions for diseases and disorders.

SfN believes strongly in the research continuum: basic science leads to clinical innovations, which lead to translational uses positively impacting the public's health. Basic science is the foundation upon which all health advances are built. To cure diseases, we need to understand them through fundamental discovery-based research. However, basic research depends on reliable, sustained funding from the Federal Government. SfN is grateful to Congress for its support of the important mission of the NSF, which includes a focus on promoting the progress of science and advancing the National health, prosperity, and welfare, through increased appropriations in recent years.

THE IMPORTANCE OF THE RESEARCH CONTINUUM

NSF funding for basic research is critical for facilitating groundbreaking discoveries and for training researchers at the bench. For the United States to remain a leader in biomedical research, Congress must continue to support basic research fueling discoveries as well as the economy. The deeper our grasp of basic science, the more successful those focused on clinical and translational research will be. We use a wide range of experimental and animal models not used elsewhere in the research pipeline. These opportunities create discoveries—sometimes unexpected discoveries—expanding knowledge of biological processes, often at the molecular level. This level of discovery reveals new targets for research to treat all kinds of brain disorders that affect millions of people in the United States and beyond.

NSF basic research funding is also a key economic driver of science at universities and research organizations across the country. Federal investments in scientific research fuel the Nation's pharmaceutical, biotechnology and medical device industries. The private sector utilizes basic scientific discoveries funded through NSF to improve health and foster a sustainable trajectory for American's Research and Development (R&D) enterprise. Basic science generates the knowledge needed to uncover the mysteries behind human diseases, which leads to private sector development of new treatments and therapeutics. This important first step is not ordinarily funded by industry given the long-term path of basic science and the pressures for shorter-term return on investments by industry. Congressional investment in basic science is irreplaceable in the pipeline for development of drugs, devices, and other treatments for brain-related diseases and disorders.

Another example of NSF's success in funding neuroscience is the Brain Research through Advancing Innovative Neurotechnologies (BRAIN) Initiative. A part of the research landscape in neuroscience, the BRAIN Initiative has been critical in pro-

moting future discoveries across neuroscience and related scientific disciplines. By including funding in the 21st Century Cures Act, Congress helped maintain the momentum of this endeavor. Note, however, using those funds to supplant regular appropriations would be counterproductive. There is no substitute for robust, sustained, and predictable funding for NSF. SfN appreciates Congress' ongoing investment in the BRAIN Initiative and urges its full funding in FY22. Some recent exciting advancements in NSF funded neuroscience research include the following:

N95 MASK SMART MONITORING DEVICES

As SARS-CoV-2 is a respiratory virus, face masks have emerged as a protective mechanism. N95 masks are recommended by medical professionals. At Northwestern University, researchers have taken the N95 mask and engineered a smart monitoring device, calling it a "Fitbit for the face". The device is a small sensor that attaches to the inside of an N95 mask and can detect heart rate, respiration rate, and the mask wear time. These are all collected on a smart phone app, and the app can also alert users when there are mask leaks. The device's portability and ability to harvest energy from the heat and motion of mask wearers increases the sensors battery life of up to 11 days or more. Researchers hope this device will help medical professionals better detect Covid-19.

OPIOID EPIDEMIC MAY BE COUNTERED BY RESPIRATION-DETECTING TECHNOLOGY

There is an opioid epidemic in the United States. In 2019, the National Institute on Drug Abuse reported nearly 50,000 people in the United States died from opioid overdoses. The opioid crisis has only worsened over the course of the Covid-19 pandemic. However, scientists at the University of Washington have created a wearable device that can reverse an opioid overdose. When people overdose on opioids, this causes respiratory failure. The new device works by detecting respiration patterns and motions in its user during an opioid overdose. If the user stops breathing or moving, the device administers naloxone, a competitive antagonist that works to restore respiration. The researchers at the University of Washington have tested this device in both a supervised injection facility and a hospital. They found their closed-loop system accurately tracked breathing rate in self-injected and simulated opioid-induced apneas. This system has the potential to detect opioid overdoses before becoming fatal and could reduce the burden of the opioid epidemic.

FUNDING IN REGULAR ORDER

SfN joins the biomedical research community in supporting an increase in NSF funding to at least \$11 billion, a \$2.162 billion increase over FY22. This proposed increase is necessary to provide certainty to the field of science, allowing for the exploitation of new scientific opportunity, additional training of the next generation of scientists, increased economic growth and further improvements in the public's health. Equally as important as providing a reliable increase in funding for biomedical research is ensuring funding is approved before the end of the fiscal year. Continuing Resolutions have significant consequences on research, including restricting NSF's ability to fund grants. For some of our members, this means waiting for a final decision to be made on funding before knowing if their perfectly scored grant would in fact be realized or operating a lab with 90 percent of the awarded funding until appropriations are final. This negatively impacts all the positive benefits research provides the field. SfN strongly supports the appropriation of NSF funding in a timely manner which avoids delays in approving new research grants or causes reductions in funding for already approved research funding.

SfN thanks the subcommittee for your strong and continued support of biomedical research and looks forward to working with you to ensure the United States remains the global leader in neuroscience research and discovery. Collaboration among Congress, the NSF, and the scientific research community has created great benefits for not only the United States but also people around the globe suffering from brain-related diseases and disorders. On behalf of the Society for Neuroscience, we urge you to continue this critical cooperation and support of biomedical research.

[This statement was submitted by Gina Turrigiano, PhD, President]

PREPARED STATEMENT OF UNITED FISHERMEN OF ALASKA (UFA)

Dear Chairman Shaheen and Ranking Member Moran:

United Fishermen of Alaska (UFA) is the Alaska commercial fishing industry trade association, representing 37 commercial fishing organizations based in both

Alaska and Washington that participate in fisheries throughout the Alaska, and Federal fisheries off the Alaska and Washington/Oregon coasts.

As you prepare the FY 23 Commerce, Justice, Science, and Related Agencies (CJS) appropriations bill, UFA requests that you work with your colleagues to ensure increased funding in the CJS bill for the Saltonstall-Kennedy (S-K) Grant Program.

Enacted in 1954, the S-K Act aims to “ . . . aid the American commercial fishing industry by promoting the free flow of domestically produced products in commerce and developing and increasing markets for those products,” through a federal, competitive grant program. As you know, the S-K Grant Program is funded by a tariff on imported seafood, the revenues from which are transferred from USDA into NOAA’s “Promote and Develop Seafood Products” account. The tariffs capitalizing the Promote and Develop account have increased almost every year from \$82 million in 2007 to over \$240 million in 2021. Regardless of this dramatic and consistent increase, the S-K Grant Program has stayed in the \$8- \$12 million range of Congressional funding. The fiscal Year 22 funding for the S-K Grant Program is \$11.8 million, approximately 4.8% of the “transfer” from USDA. However, the S-K Act clearly States that:

(e) Allocation of fund moneys

(1) Notwithstanding any other provision of law, all moneys in the fund shall be used exclusively for the purpose of promoting United States fisheries in accordance with the provisions of this section, and no such moneys shall be transferred from the fund for any other purpose . . . (A) the Secretary shall use no less than 60 per centum of such moneys to make direct industry assistance grants to develop the United States fisheries and to expand domestic and foreign markets for United States fishery products pursuant to subsection (c) of this section;

Increased S-K funding is needed for the U.S. seafood industry now more than ever. World events have closed markets and significantly raised tariffs on many U.S. seafood exports. Moreover, because of the war in Ukraine and other U.S. policies, several foreign nations have been restricted from importing seafood to the U.S. (The U.S. imports approximately 90% of seafood consumed domestically). Increased S-K funding should focus on increasing domestic consumption of U.S. caught seafood as well as the secondary processing of seafood within the U.S. American fisheries are also challenged by disproportionate foreign government spending to support their fishing industries. For example, Norway spends more than 10 times the amount of money allocated to market U.S. produced salmon on marketing Norwegian salmon in U.S. markets. Increased S-K allocations could, in part, level the playing field in the promotion of U.S. produced seafood to U.S. markets.

Recently, Congress re-established the American Fisheries Advisory Committee (AFAC Committee) to work with NOAA to prioritize and direct S-K funding. UFA, as a representative of the Alaska Seafood Industry, is looking forward to AFAC’s new leadership role in the application of S-K funding. It has been 50 years since S-K funding decisions had industry input as was intended by the 1954 enabling legislation. According to the legislation, the purpose of S-K funding was “to assist persons in carrying out research and development projects addressed to any aspect of United States fisheries, including, but not limited to, harvesting, processing, marketing, and associated infrastructures.” The AFAC Committee, as designed, will have both geographical and experiential diversity including fishermen, scientists and regulators drawing from six regions across the country. As such, AFAC will be an effective advisory body, ensuring that increased S-K funding is strategically invested to return maximum benefit to the American seafood industry.

UFA, as the Alaska seafood industry’s representative and advocate, would like to see the S-K Grant funding begin to approach the percentage of U.S. tariffs on imported seafood that were envisioned when the original statute was passed. For FY 23, UFA encourages you to consider funding the S-K Grant Program at no less than 15% of the transfer to NOAA’s “Promote and Develop Seafood Products” account derived from tariffs on imported seafood as a specific line item in the budget. This equates to approximately \$35 million and is a step in the right direction towards the 60% language contained in the S-K Act. In future years, we recommend continued incremental increases up to 60%.

We thank you for considering UFA’s request for increased S-K Grant funding that will address the new and increased needs of America’s fishing industry and ensure the new AFAC Committee’s ability to maximize national seafood marketing as they begin to address the rebuilding and expansion of America’s seafood markets.

Sincerely,

Matt Alward, President
Tracy Welch, Executive Director

PREPARED STATEMENT OF UNIVERSITY CORPORATION FOR ATMOSPHERIC RESEARCH

On behalf of the University Corporation for Atmospheric Research (UCAR), a non-profit consortium of more than 122 North American colleges and universities focused on research and training in the Earth system sciences, I appreciate the opportunity to submit for the record our fiscal year (FY) 2023 funding priorities for the National Oceanic and Atmospheric Administration (NOAA), the National Science Foundation (NSF), and the National Institute of Standards and Technology (NIST). These agencies serve an incredibly—and increasingly—important role in our understanding of climate change and how we can mitigate its adverse effects. The below funding priorities reflect my view of what resources are needed so they can meet their missions.

By way of background, UCAR is the manager of the National Center for Atmospheric Research (NCAR) on behalf of NSF. Founded in 1960, we are trusted administrators of the financial, human resources, facilities, and information technology functions that are essential to NCAR's success.

We bring together the Earth system science community to exchange ideas, discuss challenges, and share what we've learned. By connecting researchers and educators with cutting-edge resources—and with the private sector—we take research out of the lab into the real world for the benefit of society. UCAR members constitute a self-governing body representing nearly all academic programs in Earth system science in North America. We provide a clear voice for our membership, in collaboration with the broader community, to convey the value of our research, education, and partnerships to policymakers and decision makers.

It is undeniable that we have entered a new era of extreme weather driven by climate change. While the U.S. is no stranger to extreme events, impacts from recent events have been unprecedented. Many parts of our country have been drowned in devastating floods, baked under deadly heat, suffered multi-year droughts, and burned from fast-moving and intensely hot wildfires. This includes many of our own staff who fled their homes in December, some of whom lost their homes, and many more who are still feeling the impacts to this day. In addition, new forms of extreme weather have appeared in recent years, including severe tornados that level entire towns and Arctic cyclones that erode coastlines.

These phenomena are just the beginning. Whereas the incremental warming of our Earth system may seem small, on-the-ground impacts are massive. In addition to local devastation, the impact of extreme weather reverberates through our natural, physical, and social systems. The Federal Government must not waver in its commitment to produce breakthrough research that benefits science, human safety, economic prosperity, and national security.

I appreciate and support the widespread increases to atmospheric research in the President's budget request. I respectfully request the subcommittee consider UCAR's recommendations regarding targeted investments, in the following areas of priority. I believe these modifications will better prepare the country to combat the growing climate-related challenges that will affect every American.

NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

I respectfully request at least \$975 million for Scientific and Technical Research and Services (equal to the request).

The formation and impacts of wildfire must be better understood to protect communities in the western United States that are dealing with the year-round threat of destruction and displacement from fire events. In particular, the wildland-urban interface must be studied to better understand air quality impacts and fuels composition. This should be part of a more comprehensive, all-of-government approach to addressing wildfires.

I appreciate the subcommittee significantly increasing funding for Scientific and Technical Research and Services (STRS) in its FY 23 request. I respectfully request that within the total for STRS, an additional \$25 million is designated for NCAR to begin the cross-disciplinary and interagency work necessary to protect life and property from the increasing threat of wildland fire.

The Fire Research Division develops, verifies, and utilizes measurements and predictive methods to quantify the behavior of fire and means to reduce the impact of fire on people, property, and the environment. This work involves integration of laboratory measurements, verified methods of prediction, and large-scale fire experiments to demonstrate the use and value of the research products.

Residents of Colorado are acutely aware of the dangers posed by wildland fire, in particular when wildfire encroaches on the urban environment. As a Colorado-based entity, NCAR is uniquely positioned to lead community efforts to better understand wildfire and develop an integrated approach to addressing impacts.

In the wake of the NCAR, Marshall, and Middle Fork fires, this issue is top of mind for not only Colorado and the organization, but scientists and policy makers across the American West. NCAR can use additional funding to build out a wildfire research test bed. Additional funding at NIST can allow for increased research into understanding wildfire interactions with the wildland urban interface (WUI). NCAR can also use increased funding to couple the CESM2 (Community Earth System Model Version 2) with local models like WRF-Fire (Weather Research and Forecasting—Fire) and WRF-Chem (Weather Research and Forecasting coupled with Chemistry) to understand how large-scale changes to the Earth system will impact local fire dynamics, air quality, and local decision making on the ground. NCAR is well positioned with its existing expertise to take advantage of additional funding to accelerate wildfire research, and to collaborate with others in the Earth system science community to address this critical issue.

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

I respectfully request at least \$7.2 billion for NOAA (6 percent more than the request).

NOAA plays a critical role in our efforts to both understand and mitigate the threat of climate change. To ensure that NOAA and its subagencies have the dedicated resources it needs to continue and expand upon its important work, I respectfully request at least:

- \$9 million for sustained funding of climate intervention research at NCAR, within the Office of Atmospheric Research (equal to the request). We have yet to achieve a full understanding of the impacts of climate intervention activities and their associated risks and benefits. Further research is needed to study climate dynamics and air chemistry impacts of geoengineering the Earth system. NCAR is uniquely positioned to study both the climate dynamics and air chemistry impacts of geoengineering on the Earth system.
- \$4.48 billion for Oceanic and Atmospheric Research (equal to the request), including at least \$16.27 million in dedicated funding to support NCAR's continued development of Airborne Phased Array Radar (APAR). These resources are needed in anticipation of NSF completing its award process in early 2023. APAR is a critical tool for studying weather and related hazards, especially over rugged terrain or the open ocean where operations are inherently challenging. Major advances in radar technology have paved the way for development of APAR to provide more detailed observations from within high-impact weather systems. An APAR system is currently being designed and developed by NCAR for installation on the NSF/NCAR C-130 aircraft. This will provide more agile scanning strategies and enhanced capabilities for researchers to advance science frontiers.
- \$15 million for NOAA-wide activities that support Software Development and Code Design of next generation predictive models. NCAR's Computational and Information Systems Lab (CISL) manages and operates two state-of-the-art supercomputers for the Earth system science community. However, supercomputing-built infrastructure is only as valuable as the code developed for advanced model runs. The research community plays a critical role in supporting the operational mission of NOAA, but more must be done to ensure continued community engagement with investments in training programs and sustainable pathways for the next generation of Earth system software developers. I respectfully request \$15 million in FY 2023 for additional investments in code design and software engineering, coupled with physical sciences, to advance predictability of high impact weather.

NATIONAL SCIENCE FOUNDATION

The National Science Foundation and its numerous facilities perform essential functions in our understanding of the physical world. In addition, Atmospheric and Geospace Sciences (AGS) are vital for tracking and analyzing extraterrestrial impacts to Earth's weather and climate. To help NSF meet its mission, I respectfully request at least \$301.4 million for AGS (equal to the request) and \$124.92 million for NCAR Operations and Maintenance of NCAR's Facilities (7.5% more than the request).

- I thank the subcommittee for its continued support of operations and maintenance of NCAR facilities. However, rising inflation means that more money will be needed to adequately maintain NSF facilities, including NCAR. This increase is necessary so that NCAR can continue to attract top scientists, while also modernizing NCAR's Mesa Laboratory in Boulder, Colorado. I respectfully request at least \$124.9 million (7.5% above the request) for NCAR Facilities.

—Funding for AGS should include dedicated support for further development of the Coronal Solar Magnetism Observatory (COSMO), a proposed suite of complementary ground-based instruments designed to study magnetic fields and plasma conditions in the Sun's atmosphere.

The impacts of space weather are felt across multiple sectors, including the growing aerospace industry, necessitating increased investments in research and observations of the Sun. Tiny, electrically-charged particles hurled toward Earth from a solar storm can disrupt radio communications, GPS signals, and other technologies that people rely on daily. Understanding solar storms and space weather will help protect electric grids that power communities in an increasingly telecommunication-reliant world.

I thank the subcommittee for providing a preliminary investment of \$5.6 million in FY 2021 to survey prospective locations for COSMO. Additional funding beyond the initial award is needed to complete site survey, choose a candidate site, and to finish construction design and get an accurate cost estimate of all remaining elements of COSMO. I respectfully request an additional \$8 million in FY 2023, specified in report language, to support this next stage of progress for this critical endeavor.

Again, I thank the subcommittee for its attention to these matters and commitment to ensuring NOAA, NSF, and NIST can continue and expand their increasingly important work. I am more than happy to be a resource for the subcommittee as it progresses through the FY 2023 appropriations process.

[This statement was submitted by Dr. Antonio J. Busalacchi, President]

PREPARED STATEMENT OF WESTERN GOVERNORS' ASSOCIATION

Chair Shaheen, Ranking Member Moran, and Members of the subcommittee, the Western Governors' Association (WGA) appreciates the opportunity to provide testimony on items within the jurisdiction of the subcommittee on Commerce, Justice, Science, and Related Agencies, all of which relate to the U.S. Department of Commerce. WGA is an independent organization representing the Governors of the 22 westernmost States and territories. The Association is an instrument of the Governors for bipartisan policy development, information sharing and collective action on issues of critical importance to the western United States.

Western Governors support strong and dedicated funding for the National Integrated Drought Information System (NIDIS) program under the National Oceanic and Atmospheric Administration (NOAA). WGA is well-acquainted with the significant environmental, economic, and social effects of drought on the West and its communities. Drought contributes to the incidence of forest and rangeland wildfire, impairs ecosystems and wildlife habitat, degrades agricultural productivity, and poses threats to municipal and industrial water supplies. A growing population's dependence on limited water resources creates challenges for water management across the West, from the Great Plains to the Intermountain West to the coastal, estuarine, and marine environments of the Pacific States and islands. Planning for an adequate, reliable, and clean water supply requires accurate and complete water and weather information.

NIDIS promotes a coordinated and integrated approach to managing future drought. This approach involves improved forecasting and monitoring to provide the kind of authoritative, objective, and timely drought information that farmers, water managers, decision-makers, and State and local governments require for effective drought preparation and response. Through NIDIS, NOAA is building a network of early warning systems for drought while working with local resource managers to identify and address unique regional drought information needs.

Western Governors value the approach used to build and improve NIDIS. Rather than creating a new NIDIS bureaucracy, the system draws from existing capacity in States, universities, and multiple Federal agencies, as called for in the original authorizing legislation. Given our shared fiscal challenges, WGA regards this as a model for Federal-State collaboration in shared information services.

Water users throughout the West—including farmers, ranchers, Tribes, land managers, business owners, recreationalists, wildlife managers, and decision-makers at all levels of government—must be able to assess the risks of drought before its onset to make informed decisions and implement effective mitigation measures. For these reasons, Western Governors request continued support and strong funding for the National Weather Service River Forecast Centers and Weather Forecast Offices and the NIDIS program, which perform a valuable role in western water management and drought response.

Many western communities, especially Tribal communities, lack access to broadband internet due to the high cost of infrastructure and the economic challenges of serving low customer densities in rural areas. When communities do have access to broadband, download and upload speeds are often insufficient to meet bandwidth demands. These realities have left many rural businesses at a competitive disadvantage and citizens without access to telework, telemedicine, and distance learning opportunities. Consequently, Western Governors support efforts to adopt a Federal definition of broadband that is higher and more scalable than 25/3 Mbps. In addition, the Governors support efforts to leverage state expertise through State block grants and opportunities to improve connectivity on rural and Tribal lands. To ensure that Tribal areas receive adequate investment, Federal broadband programs should allocate a designated portion of their available funding to Tribal projects. Western Governors applaud the historic level of broadband funding in the Infrastructure Investment and Jobs Act (IIJA, Public Law 117–58), particularly the funds allocated to the existing Tribal Broadband Connectivity Program and the new Broadband Equity, Access, and Deployment Program administered by the National Telecommunications and Information Administration (NTIA). The Governors look forward to engaging with NTIA on this funding and stand ready to implement projects for the benefit of rural and Tribal communities.

Deployment of broadband infrastructure to these underserved and unserved communities requires an accurate picture of nationwide broadband availability. Western Governors appreciate the Federal Communications Commission’s plans in 2022 to implement the Broadband Deployment Accuracy and Technological Availability Act, known as the Broadband DATA Act, and address the accuracy of broadband data coverage and mapping. The Governors support continued investment in these efforts, which are especially critical with the NTIA deploying the second disbursement of IIJA funds to States using a formula based on new FCC maps. WGA also encourages the coordination of data collection strategies among the Federal Communications Commission, U.S. Department of Agriculture, and other agencies involved in broadband mapping and deployment.

On the subject of data collection, Western Governors are supportive of the implementation of the Foundations for Evidence-Based Policymaking Act of 2018 (the Evidence Act, Public Law 115–435). The act established a new set of comprehensive requirements for Federal agencies regarding their collection, use, and management of data in evidence-building functions. One such requirement in the Evidence Act is for Federal agency heads to “consult with . . . State and local governments.” Western Governors have been actively engaging with Federal agencies as they carry out the provisions of the Evidence Act and are intent on assuring that States are robustly engaged by agencies in the required development of agency learning agendas. Overseen by the head of each Federal agency, the purpose of the learning agendas, according to the Evidence Act, is “identifying and addressing policy questions relevant to the programs, policies, and regulations of the agency.”

According to a recent Government Accountability Office (GAO) report, (GAO–20–119, Evidence-Based Policymaking), however, “evidence-building activities are fragmented within . . . agencies and occur at multiple levels and entities within and across the agencies” and that “uncoordinated or poorly coordinated efforts can waste scarce funds and limit their effectiveness.” The report went on to say that “[e]ffectively-coordinated [evidence building] processes can help agencies ensure they are comprehensively and systematically looking across their organizations to leverage their existing evidence and focus limited resources on building new evidence . . . Such processes can help ensure agencies are well positioned to meet forthcoming Evidence Act requirements related to assessing and prioritizing evidence across the entire agency.” GAO reiterated the importance of active Federal agency engagement, as “through this engagement, agencies may find that external stakeholders (and States), have, or are aware of, existing evidence that helps the agency meet its needs or provide a fuller picture of performance . . . [and] ensure it is meeting the evidence needs of decision makers.”

Given the numerous Federal agency programs, policies, and regulations that directly affect the collective States, agency coordination with States and the integration of state data into those relevant Federal programs is paramount to their success. For these reasons, Western Governors encourage the subcommittee to direct Federal agencies to improve their internal processes required in the Evidence Act to coordinate with States on Federal data policies and procedures and incorporate state data into Federal decision-making processes. Western Governors also support full and consistent Federal funding to carry out the requirements of this critical legislation and ensure that agencies have the capacity and resources required to fulfill GAO’s evidence-based policymaking recommendations.

Finally, the Economic Development Administration (EDA) plays a critical role in rural economic development, particularly in light of recently allocated supplemental funding that has significantly expanded assistance available to communities. Western Governors encourage increased flexibility in the allowable uses of EDA funds so rural communities can prioritize investments that improve quality of life and amenities. Relatedly, outcome metrics based solely on the absolute number of jobs created do not reflect the important economic benefits of such investments. Nor do they account for the relative effect of job creation in communities with small populations or areas with high unemployment or poverty rates.

Western Governors recommend an increase in the proportion of economic development and infrastructure funding that goes toward capacity building. Strengthening local capacity by providing ample and consistent Federal funding for institutions, training, and technical assistance is essential to maximize the effect of State and Federal resources and to ensure that assistance reaches the communities that need it most.

Western Governors recognize the enormous challenge you have in balancing competing funding priorities, and we appreciate the difficulty of the decisions the subcommittee must make. These recommendations are offered in a spirit of cooperation and respect, and WGA is prepared to assist you as the subcommittee discharges its critical and challenging responsibilities.

[This statement was submitted by James D. Ogsbury, Executive Director]

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