

S. HRG. 118–569

COMMERCE, JUSTICE, SCIENCE, AND RELATED
AGENCIES APPROPRIATIONS FOR FISCAL YEAR
2024

HEARINGS
BEFORE A
SUBCOMMITTEE OF THE
COMMITTEE ON APPROPRIATIONS
UNITED STATES SENATE
ONE HUNDRED EIGHTEENTH CONGRESS
FIRST SESSION
ON

H.R. 5893/S. 2321

AN ACT MAKING APPROPRIATIONS FOR THE DEPARTMENTS OF COMMERCE AND JUSTICE, AND SCIENCE, AND RELATED AGENCIES FOR THE FISCAL YEAR ENDING SEPTEMBER 30, 2024, AND FOR OTHER PURPOSES

Department of Commerce
Department of Justice
Federal Bureau of Investigation
National Aeronautics and Space Administration
National Science Foundation
Nondepartmental Witnesses

Printed for the use of the Committee on Appropriations



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¹ Died September 29, 2023.

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COMMERCE, JUSTICE, SCIENCE, AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 2024

TUESDAY, MARCH 28, 2023

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, Murray, Schatz, Manchin, Van Hollen, Merkley, Peters, Moran, Collins, Kennedy, Hagerty, and Britt.

U.S. DEPARTMENT OF JUSTICE

OPENING STATEMENT OF SENATOR JEANNE SHAHEEN

Senator SHAHEEN. The Senate Appropriations Subcommittee on Commerce, Justice, Science, and Related Agencies will come to order. We are very pleased to have the Attorney General, Merrick Garland, with us this afternoon.

And because we are starting late, I am going to submit my full statement for the record. But I would just like to make a few comments at the outset.

The first thing I would like to do is to recognize my Ranking Member, Senator Moran, for the great work that we have done together over the years, both when he was Chair and I was Ranking, and now that I am Chair and he is Ranking. We have worked in a collaborative, bipartisan manner that I think has been good for this Committee and good for the Senate. I would also——

Senator MANCHIN. And the country.

Senator SHAHEEN. And for the country. Thank you, Senator Manchin.

I would also like to point out that this is the anniversary of a hearing we did a year ago with the FBI Director Wray, which was right after the Uvalde shooting, and this is the day after the tragic school shooting in Nashville. And like everyone in the country I am sure, I am disappointed and saddened that once again we are discussing the aftermath of another school shooting tragedy.

We need to take action, and I think at some point we need to ask ourselves: if giving more firearms to people is the answer to making us safer, because so far it has made us less safe, not safer.

So obviously, we have a lot of work to do, and I know that the budget the Attorney General is going to talk about today makes

significant investments in safer communities, the legislation that we passed last year that I think is very important.

I also wanted to point out that this budget makes significant investments in addressing the substance use disorder crisis that we still have in this country. It is a huge issue in my home State of New Hampshire, the increasing availability and pervasiveness of fentanyl is something that we have got to figure out how we better address, in order to get ahead of this crisis. And I am pleased to see the investments in the budget in addressing that. And looking forward to hearing what more we can do.

The other thing I wanted to just point out, in terms of our ability to work together, is that we have new leadership in both the House and Senate Appropriations Committees. They have given us a very aggressive schedule, and said that we are going to return to regular order. We are going to go through the bills and bring them to the floor.

I think that is good news. And I would like to thank Ranking Member Collins who is here today, who is the other half of the leadership of the Appropriations Committee. And also, recognize that we have two new leaders in the House as well. And I am hopeful because all four of them are women so we expect a new approach. Right, Senator Moran?

Senator MORAN. I am the one who mentioned that when you didn't—

Senator SHAHEEN. Yes. Yes.

Senator MORAN [continuing]. Earlier today.

Senator SHAHEEN. Thank you. I thought I would beat you to it today.

Senator MORAN. You did.

Senator SHAHEEN. So we obviously have a lot of work to do and we look forward to beginning this process.

I will now turn it over to Ranking Member Moran.

STATEMENT OF SENATOR JERRY MORAN

Senator MORAN. Chairwoman, Thank you, very much for convening this meeting. Thank you for the cooperation. I intend to forego my opening statement to get us back on track, with the voting schedule that we have encountered again this afternoon.

But I would echo your comments in which you indicate the desire and evidence that we fulfill that desire on most instances of you and I working together, and this Committee working in a non-partisan way, a bipartisan way, to get at result.

And I appreciate your compliments of Senator Collins and Senator Murray, the Vice Chairman and the Chairman of the Full Committee. I am anxious for us to have a number in which you and I, and this Committee, can begin determining some important answers to some significant questions about the funding of the agencies, and departments under the jurisdiction of the subcommittee.

And I, again, thank you for your cooperation. Look forward to us, successfully, reaching a satisfactory result.

Senator SHAHEEN. Thank you, very much.

I will now ask the Attorney General if he would like to testify.

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

Attorney General GARLAND. Yes. Thank you, Senator. Before I begin, I do want to express my condolences to the families and loved ones of the victims in Nashville, for this horrific school shooting. I also want to express my condolences, specifically, to Senator Hagerty, who is on this subcommittee, and I know flew back to Nashville to be with the community at the time.

We have both ATF and FBI resources working hand-in-hand with the State and local police right now, and they will continue to do so as long as is necessary. And the Justice Department will do everything that we have within our power to try to prevent these kinds of, really, horrific shootings.

With that said, I want to thank the Chairman, the Ranking Member, and distinguished Members of the Subcommittee for the opportunity to speak to you today. This is for our funding request for fiscal year 2024.

Every day, the Justice Department works to keep our country safe from all threats, foreign and domestic. We work to protect the civil rights of everyone in the country; and every day, in everything we do, we work to uphold the rule of law that is the foundation of our system of Government.

The Justice Department's budget request seeks the resources we need to continue and to build on that work. To help keep our country safe, we are asking for more than \$21.3 billion to sustain and expand the capabilities of the FBI, DEA, ATF, U.S. Marshals Service, and of our 94 U.S. Attorneys' Offices.

These resources will help protect communities across the country. They will strengthen our efforts to counter threats posed by hostile nation-states, specifically the governments for the People's Republic of China, Russia, Iran, and North Korea. They will enable us to counter foreign and domestic terrorism. And they will sustain and expand our whole-of-department approach to combating violent crime, the epidemic of gun violence, and the scourge of drug trafficking.

The Department is also seeking \$2.7 billion for our Office of Community Oriented Policing Services, our COPS Office Hiring Program. This funding will enable us to help our State and local law enforcement agency partners hire more full-time law enforcement professionals.

As part of our efforts to disrupt drug trafficking, our budget requests \$3.3 billion for DEA's investigations, diversion control, and counter drug efforts across 241 domestic offices, and 92 offices in 69 countries around the world.

The Department is focused on getting fentanyl out of our communities and combating the violent cartels that are putting it there. Just last week, DEA issued an alert warning about the emerging threat posed by the deadly combination of fentanyl and xylazine, which increases the risk of fatal drug poisoning.

We also know that addressing the proliferation of deadly drugs requires more than just enforcement actions. So we are requesting more than \$646 million for grants to help address the drug overdose epidemic, and the public health challenges of addiction and drug use.

The Department's budget also requests significant investments in our efforts to combat economic crimes; protect the health, safety, and financial security of American consumers; and safeguard competition.

This includes a \$770 million request for our U.S. Attorneys' Offices to pursue investigations and prosecutions of complex economic crimes. These include COVID-19 pandemic fraud schemes that have exploited the pandemic and stolen millions of taxpayer dollars.

Protecting civil rights was a founding purpose of the Justice Department in 1870, and it remains our urgent challenge today. The Department's budget requests significant investments to advance that work. This includes our efforts to protect voting rights, combat hate crimes, foster trust and accountability in law enforcement, defend federally protected reproductive rights, advance environmental justice, and tackle the climate crisis.

Specifically, we are requesting a total of \$251.6 million for the Civil Rights Division, an increase of more than 32 percent, to carry out its important mission. We are also requesting \$127.6 million to support the FBI's investigations of civil rights violations.

Administering just and efficient immigration courts and correctional systems is another important area of Departmental focus, for which we are requesting additional resources.

We are requesting \$1.46 billion, a 69.2 percent increase for the Executive Office for Immigration Review to hire nearly 1,000 new staff. This includes 150 new immigration judges. These resources will support our efforts to apply the immigration laws justly and efficiently.

We are also seeking \$8.82 billion in funding for the Bureau of Prisons. These resources will help ensure the health, safety, and wellbeing of correctional staff and incarcerated individuals. They will help ensure transparency, accountability, and effective oversight of all Federal prisons and detention centers. And they will enable the Department to fully implement the provisions of the First Step Act, and increase programming to prepare individuals in Federal prisons for successful reentry.

I am extremely proud of the work the Department's employees are doing to uphold the rule of law, to keep our country safe, and to protect civil rights.

I respectfully ask for your support for the President's fiscal year 2024 budget request so that we may continue and build upon that request.

Thank you.

[The statement follows:]

PREPARED STATEMENT OF MERRICK B. GARLAND

Good afternoon, Chair Shaheen, Ranking Member Moran, and distinguished Members of the Subcommittee. I appreciate the opportunity to appear before you today to discuss the President's Fiscal Year (FY) 2024 funding request for the United States Department of Justice.

The responsibilities of the Justice Department are broad in scope. Every day, we work to keep our country safe from all threats, foreign and domestic. We work to protect the civil rights of everyone in our country. And every day, in everything that we do, the Justice Department adheres to and upholds the rule of law that is the foundation of our system of government.

I am proud of the work the 115,000 employees of the Justice Department have done on each of those fronts since I last appeared before you.

First, we have continued to uphold the rule of law by adhering to and strengthening the norms that ensure the Justice Department's independence and integrity. Those norms include treating like cases alike, applying the law in a way that strictly adheres to the Constitution, and as much as possible, speaking through our work and our filings in court so as not to jeopardize the viability of our investigations and the civil liberties of our citizens. We have worked to defend the rule of law from threats here at home. For example, in 2022, the Department charged more defendants in cases involving threats against those who serve the public than in any year in at least the last five. And we have worked to defend the rule of law from threats abroad. Since the start of Russia's full-scale invasion of Ukraine, the Department has investigated war crimes, seized assets worth hundreds of millions of dollars, executed arrests, and prosecuted individuals for sanctions violations.

Second, we have used every resource at our disposal to help protect the safety of our communities. We have continued to work 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 we have continued to work to counter persistent domestic-based threats—domestic violent extremist acts aimed at sowing fear; violent crime and gun violence that undermine our communities' trust in the rule of law; drug trafficking and drug poisonings that shatter communities; and corporate crime and fraud that threaten our economic institutions. And we have done this work in partnership with communities across the country.

For example, last year the Bureau of Alcohol, Tobacco, Firearms, and Explosives (ATF) and its partners removed tens of thousands of guns used in crimes off our streets, while the Drug Enforcement Administration (DEA) and its partners seized a quantity of fentanyl-laced pills and powder that could kill every single American.

Third, we have continued to advance the Justice Department's founding purpose to protect civil rights. The Department's Civil Rights Division has been at the forefront of our efforts to protect the right to vote; prevent and prosecute hate crimes; ensure constitutional policing; build trust between law enforcement and the communities they serve; enforce Federal statutes prohibiting discrimination in all its forms; and expand access to justice, including for veterans, servicemembers, and military families. Now more than ever, protecting civil rights is not only the obligation of the Civil Rights Division, but also the responsibility of every Justice Department employee, every single day. Today, the entire Department is part of our effort to vigorously protect and advance civil rights. For example, after launching an initiative to further coordinate and strengthen the Department's efforts to combat redlining, our prosecutors secured the largest settlement in Department history for neighborhoods of color facing lending discrimination. And last year, the Justice Department took action in Federal court to address the long-standing failures of the public drinking water system in Jackson, Mississippi.

To continue and build on this work in these and other critical areas of focus in FY 2024, the Justice Department requests a total of \$39.7 billion in discretionary resources. Our funding priorities are set forth as follows.

KEEPING OUR COUNTRY SAFE

Congress has 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. To continue these efforts, the Department's FY 2024 budget requests more than \$21.3 billion to sustain and expand the capacities of our law enforcement components and U.S. Attorneys' Offices to help keep our country safe. This funding includes:

- \$11.3 billion for the Federal Bureau of Investigation (FBI) to carry out its complex mission, including keeping our country safe from a multitude of serious and evolving threats—ranging from terrorism, espionage, and cyber threats; to violent crime; to the proliferation and potential use of weapons of mass destruction;
- \$2.9 billion for the United States Attorneys' Offices, including resources to prioritize the prosecution of violent crime;
- \$2.7 billion for the DEA, to combat drug cartels and the flow of deadly drugs into our communities (in addition to the \$621.7 million dedicated to DEA's diversion control efforts);

- \$1.9 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;
- \$1.9 billion for ATF, to expand multijurisdictional gun trafficking strike forces with additional personnel and support the National Integrated Ballistic Information Network (NIBIN) and the National Tracing Center.
- \$256.7 million for the Criminal Division to prosecute violations of Federal criminal law including cybercrime, drug trafficking, child exploitation, and gun-related violent crime; and
- \$144.8 million for the National Security Division to enhance its ability to pursue national security threats, including the threats posed by terrorism, cybercrime, and hostile Nation-States.

Today, I would like to highlight four significant areas of the Justice Department's focus on keeping our country safe: protecting national security; reducing violent crime and gun violence; disrupting drug trafficking networks and preventing overdose deaths; and protecting Americans from economic harm.

Protecting National Security

The Justice Department is committed to combating the wide range of complex and evolving threats facing the United States—while protecting civil rights and civil liberties. The Department's FY 2024 budget request includes nearly \$7.7 billion for national security programs across the Department to further these efforts. This includes \$1.6 billion to sustain our whole-of-Department commitment to countering foreign and domestic terrorism. These resources will support the counterterrorism work of our 94 U.S. Attorney's 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.

In addition to sustaining and strengthening our counterterrorism efforts, the Department's FY 2024 budget also requests investments in our efforts to investigate, prosecute, and otherwise disrupt the threats posed by hostile nations—specifically the governments of the People's Republic of China, Russia, Iran, and North Korea. To address these threats, the Justice Department is bringing prosecutions against foreign agents attempting to undermine the rule of law in the United States, enforcing violations of economic sanctions and export controls, and combating transnational repression. In addition, nation-states are increasingly using cyber operations to steal our intellectual property, target critical infrastructure, compromise our networks and supply chains, and cause significant economic harm. To meet the increasing and evolving cybercrime threat posed by nation-states and criminal groups, the Justice Department's FY 2024 budget request includes nearly \$1.4 billion to investigate, prosecute, and fight cybercrime and strengthen the Department's cybersecurity and cyber-resilience. The Department's FY 2024 budget also maintains critical resources for the Criminal and the National Security Divisions, as well as the FBI and our United States Attorneys' Offices, to pursue complex intellectual property crime investigations around the world.

Reducing Violent Crime and Gun Violence

The Justice Department is continuing to focus its efforts to confront the rise in violent crime that began in 2020. In May 2021, the Justice Department launched a comprehensive violent crime reduction strategy. As part of that strategy, all 94 of our United States Attorneys' Offices are working with their partners in state and local law enforcement to develop and implement district-specific, anti-violent crime policies. And the ATF, DEA, FBI, and USMS are partnering with state and local law enforcement agencies to embed agents, seize and trace guns used in crimes, disrupt violent drug trafficking, pursue fugitives, and provide other necessary support. Investments in both our U.S. Attorneys' Offices and our law enforcement agencies are needed to continue this essential work.

In addition, as part of our efforts to combat the scourge of gun violence, the Department's FY 2024 budget requests resources to continue to implement the Bipartisan Safer Communities Act (BSCA). In January 2023, the Eastern District of New York announced a seven-count indictment charging several individuals with allegedly conspiring to illegally traffic more than 50 firearms under new gun trafficking provisions of the BSCA. Our request seeks an additional \$114.2 million to continue our efforts to disrupt gun violence and implement the BSCA.

The Justice Department recognizes that our state, local, Tribal, and territorial law enforcement partners bear the brunt of keeping communities safe. And we are committed to doing everything in our power to provide our local law enforcement partners with the resources they need to do so.

The Department's request includes \$2.7 billion in discretionary and mandatory funding for the Office of Community Oriented Policing Services (COPS Office) Hiring Program in FY 2024 to enable law enforcement agencies across the country to hire more full-time law enforcement professionals, and a total of \$10.9 billion over 5 years in mandatory funding to support those efforts.

Our FY 2024 budget request reflects the Department's commitment to continuing to bring public safety resources to localities across the country that need it the most. To support critical longstanding Justice Department grant programs, including the Byrne Justice Assistance Grants and Project Safe Neighborhoods, a total of \$5.7 billion is requested in discretionary and mandatory funding for the Office of Justice Programs (OJP) in FY 2024. Those resources will also fund community violence intervention programs, as well as new programming that will provide state, local, Tribal, and territorial governments with additional resources to prevent crime, reduce gun violence, accelerate criminal justice system reform, and build the public trust that is essential to public safety. They will also support the Department's VALOR Officer Safety and Wellness Initiative, which provides trainings, research, and guidance on preventing violence against law enforcement and supporting officer wellness.

To further build on our efforts to meet the crisis of gun violence, the Department requests \$884 million in additional mandatory funding for a new gun crime prevention fund in FY 2024, and a total of \$4.4 billion over 5 years. That fund will provide grants for states and localities to address gun violence at the local level, including by deploying task forces to combat violent crime and supporting state and local justice systems.

Our FY 2024 budget request also reflects the Justice Department's commitment to meeting the unique public safety challenges facing Tribal communities in partnership with those communities. To build on that work, the Department's FY 2024 funding request seeks \$683.4 million across our law enforcement agencies, U.S. Attorneys' Offices, and grantmaking components to address the crisis of Missing or Murdered Indigenous Persons and to support public safety initiatives in Indian Country.

The Department's FY 2024 budget recognizes the important role that our Office on Violence Against Women (OVW) plays in our efforts to reduce violent crime. The Department's FY 2024 funding request includes \$1 billion for OVW—an increase of \$300 million above the FY 2023 enacted level—to support longstanding VAWA and other OVW programs. That includes 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 homicide and domestic violence reduction initiatives.

In addition, the President's FY 2024 Budget seeks key resources to support crime victims and protect vulnerable communities. That includes funding to combat child abduction and exploitation, protect victims of violence and abuse, and reform juvenile justice systems.

And as part of our work to defend vulnerable communities and keep our country safe, the Department's FY 2024 budget requests \$10 million to support the work of Task Force Alpha and the Department's international human rights efforts. In June 2021, we established Joint Task Force Alpha in partnership with the Department of Homeland Security. The task force works within the United States and with our foreign partners in the Northern Triangle countries and Mexico to dismantle the most dangerous human smuggling and trafficking networks. Additional resources will allow us to build on our efforts to disrupt and dismantle deadly transnational human smuggling and trafficking groups.

Disrupting Drug Trafficking Networks and Preventing Overdose Deaths

The Justice Department is using every tool at our disposal to save lives and get fentanyl out of our communities. This includes dismantling the violent cartels that flood communities with poison and dedicating our resources to addressing the public health challenges of addiction and drug use. The Department's agents and prosecutors are working with state, local, Tribal, and territorial partners to conduct investigations in communities across the country. In 2022, the DEA and its law enforcement partners seized more than 50.6 million fentanyl-laced, fake prescription pills. That is more than double the amount seized in 2021. The DEA has also seized more than 10,000 pounds of fentanyl powder. Together, these seizures represent more than 379 million potentially deadly doses of fentanyl. That much fentanyl could kill every single American.

To continue this essential work, the Department's FY 2024 budget requests critical resources to combat violent drug cartels and to stop the flow of deadly drugs into our communities.

This includes our request for:

- \$3.3 billion for DEA’s investigations, counterdrug efforts across 241 domestic offices and 92 foreign offices in 69 countries around the world, and diversion control;
- \$1.1 billion for the USMS’s efforts to capture drug trafficking fugitives;
- \$202.7 million for the FBI’s counterdrug operations, including targeting fentanyl and opioid trafficking on the Dark Web;
- \$550.5 million for the Department’s Organized Crime Drug Enforcement Task Forces (OCDETF) to combat transnational organized crime, money laundering, and major drug trafficking networks;
- \$50.3 million to support the Criminal Division’s efforts to disrupt and dismantle drug trafficking networks; and
- \$13.4 million for the Civil Division’s efforts to advance national chain pharmacy litigation and opioid related cases.

In addition to our enforcement efforts, we are committed to helping communities meet the public health challenges of addiction and substance abuse. For FY 2024, the Department is requesting more than \$646 million in grants to address the drug overdose epidemic, including to sustain the FY 2023 levels of the Comprehensive Opioid, Stimulant, and Substance Abuse Program, and to continue support for drug courts programs, the Justice and Mental Health Collaboration Program, the Veterans’ Treatment Court Programs, and Prescription Drug Monitoring Programs.

Protecting Americans from Economic Harm

The Justice Department’s FY 2024 budget request seeks significant investments in the Antitrust Division, Civil Division 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.

This includes:

- \$324.8 million for the Antitrust Division to help promote competition in the American economy and protect workers, consumers, and businesses alike;
- \$770 million to support our U.S. Attorneys’ offices’ efforts to bring cases combating economic crimes and fraud;
- \$495 million to support the FBI’s work to investigate corporate crime, fraud, money laundering, intellectual property theft, and other economic crimes;
- \$294 million for the Civil Division’s efforts to enforce laws that protect the health, safety, and financial security of American consumers;
- \$277 million for the United States Trustee Program, an important program devoted to protecting the interests of all stakeholders in the bankruptcy process by advocating for fair, equitable compliance with bankruptcy laws;
- \$43 million to support the Criminal Division’s anti-fraud efforts and its investigations and prosecutions of complex economic crime; and
- \$130 million for the Department’s Tax Division, to support its vital work of enforcing our tax laws fully, fairly, and consistently.

Beyond these resources, as part of the Pandemic Fraud Prevention and Enforcement proposal, the Administration requests \$300 million in mandatory funding to combat COVID fraud. In 2022, the Department established three COVID–19 fraud strike force teams. These teams have been highly effective and should be expanded to recover more stolen taxpayer dollars. One case alone, brought with the support of the COVID–19 Fraud Enforcement Task Force, recently seized and recovered \$286 million in stolen pandemic relief funds, and investigators have already identified several equally important cases. The Administration’s request includes resources to add at least ten strike forces to target criminal syndicates and major fraudulent actors. These funds would triple our capacity and ensure that the Department has the necessary resources to prosecute the full range of pandemic fraud, bring to justice the most egregious and sophisticated offenders, and recover stolen funds for the American people.

PROTECTING CIVIL RIGHTS

Protecting civil rights was a founding purpose of the Department in 1870, and it remains our urgent charge today. The Department’s FY 2024 budget requests significant investments to advance our essential work to protect voting rights, combat hate crimes, foster trust and accountability in law enforcement, expand access to justice, reform the criminal justice system, defend federally protected reproductive rights, and advance environmental justice and tackle the climate crisis.

To protect and advance civil rights, our FY 2024 budget request includes:

- \$251.6 million for the Civil Rights Division—an increase of \$62 million or 32.5 percent above the FY 2023 enacted level—to expand its efforts to deter and prosecute hate crimes, safeguard fair elections, and combat discrimination;
- \$127.6 million to support the FBI’s work to investigate alleged violations of civil rights laws;
- \$51.9 million to support the U.S. Attorneys’ offices civil rights protection work;
- \$28.1 million for the Community Relations Service to provide facilitated dialogue, mediation, training, and conciliation services to communities in conflict; and
- \$13.7 million for the Office for Access to Justice to expand equal access to justice for all.

Protecting Voting Rights

The Justice Department remains committed to using our resources to vigorously protect voting rights with the enforcement powers we have. The Department has increased the number of enforcement attorneys in the Civil Rights Division to scrutinize new laws that curb voter access or discriminate against Black voters and other voters of color. The Department has filed lawsuits across the country to protect the right to vote. It has also filed statements of interest and amicus briefs in Federal courts to weigh in on critical questions. The Justice Department stands ready to work with Congress to provide all necessary support to develop and advance Federal legislation to protect voting rights—including legislation that would restore critical tools in this effort.

Combating Hate Crimes

The entire Justice Department is hard at work maximizing our collective tools to prevent, deter, investigate, and prosecute hate crimes, which have significantly increased in recent years. The Department is also working to improve hate crime reporting, which will in turn promote more effective prevention and prosecutions of these crimes. Last September, the Justice Department officially launched the United Against Hate program in U.S. Attorneys’ offices across the country. The program brings together community groups, Federal hate crimes prosecutors, and law enforcement at every level. It seeks to strengthen coordination to combat hate crimes and hate incidents by helping individuals learn to identify, report, and prevent hate crimes. We have already launched the training in 39 offices, and it will be offered in all 94 by the end of this year. The Department’s FY 2024 funding request includes an increase of \$5 million for OJP’s Jabara-Heyer NO HATE Act grants and an increase of \$13.2 million for the Civil Rights Division’s work to address hate crimes.

Fostering Trust and Accountability in Law Enforcement

The Justice Department is committed to fostering trust between law enforcement and the communities we serve. In June 2021, the Department’s Federal law enforcement components were instructed to develop plans specific to their unique missions to expand the use of body-worn cameras. The Department’s FY 2024 budget requests \$89.2 million in new funding to strengthen trust and accountability in law enforcement by expanding, formalizing, and managing Body Worn Camera programs for the Department’s law enforcement agencies. In addition, the Department seeks \$28.1 million for the Community Relations Service to provide mediation and conciliation services to communities impacted by conflict.

Advancing Environmental Justice and Tackling the Climate Crisis

In May 2022, the Department established its first-ever Office of Environmental Justice (OEJ), which serves as a central hub for our efforts to advance our comprehensive environmental justice enforcement strategy. Through improved information sharing and coordination, that Office is helping Department components expand investigations and enforcement actions in overburdened and underserved communities suffering from harm caused by environmental crimes, pollution, and climate change.

ADDITIONAL AREAS OF DEPARTMENTAL FOCUS

Administering a Just and Efficient Immigration Court System

The Department’s FY 2024 budget request includes more resources to apply the immigration laws justly and efficiently, while ensuring due process under the law. The Executive Office for Immigration Review (EOIR) needs additional resources to address the case backlog, which has been growing for more than a decade. To help reduce this backlog, for FY 2024, the Department requests \$1.46 billion—a 69.2 percent increase—to enable EOIR to hire nearly 1,000 new staff, including 150 new im-

migration judge teams. The FY 2024 budget request also seeks funds for EOIR's Backlog Reduction Initiative, which, among other things, includes EOIR's virtual court initiative.

Maintaining a Safe and Humane Correctional System

Administering safe and humane Federal detention and prison systems is one of the Justice Department's essential responsibilities. Last year, I announced the selection of Colette Peters as Director of the Federal Bureau of Prisons (BOP). Under her leadership, BOP is working to ensure the rehabilitation, health, and safety of incarcerated individuals; a safe and secure work environment for correctional staff; and transparency and accountability across Federal detention facilities. The Department's FY 2024 budget requests \$8.82 billion for BOP to ensure the health, safety, and wellbeing of correctional staff and incarcerated individuals and to ensure transparency, accountability, and effective oversight of all Federal prisons and detention centers.

The request includes funding to enable the BOP to optimize its hiring efforts, supporting up to 2,250 new staff from now through the end of FY 2024. It also includes \$109 million for new hiring and retention incentives.

The Department is also requesting \$409.5 million to fully implement the provisions of the First Step Act and increase programming to prepare individuals in Federal prison for successful reentry. That includes funding for a continued partnership between the Justice Department and the Department of Labor to provide 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.

In addition, the Department's FY 2024 budget requests \$2.13 billion for the USMS for Federal prisoner detention.

Promoting Good Government

The Department's FY 2024 budget request includes funding that will help ensure the Department is both properly resourced in its various management functions and making efficient use of taxpayer dollars. The Department's FY 2024 budget requests \$212.5 million for the Department's Justice Operations, Management, and Accountability function, to ensure the Department's effective management and administration; \$161.6 million for the Department's Inspector General, to promote integrity, efficiency, and accountability within the Department; and \$193.6 million for Justice Information Sharing Technology, to ensure continued progress toward the Department's strategic goals by supporting agents, attorneys, analysts, and administrative staff in furtherance of our mission.

Ensuring Accountability for Russia's Invasion of Ukraine

The Justice Department has taken a series of actions to ensure accountability for Russia's unprovoked and unjust invasion of Ukraine. The Department launched Task Force KleptoCapture (TFKC) to further leverage our tools and authorities to combat efforts to evade or undermine U.S. sanctions and export controls. We also launched a War Crimes Accountability Team to centralize and strengthen the Department's ongoing work to hold accountable those who have committed war crimes and other atrocities in Ukraine.

Congress has passed important provisions that strengthen these efforts. In January 2023, the President signed into law the Justice for Victims of War Crimes Act, which enables the Department to prosecute war criminals present in the United States regardless of where the offense occurs. And on December 29, 2022, the President signed into law the Additional Ukraine Supplemental Appropriations Act of 2023. Among other things, that Act authorizes the Department to conduct certain transfers of forfeited Russian oligarch assets to the Department of State to remediate the harms of Russia's invasion of Ukraine. In February 2023, I authorized the first transfer under this new authority.

The Department greatly appreciates the \$126.4 million in supplemental funding that Congress provided it last year, and we will redouble our efforts to hold accountable those who have committed war crimes and other atrocities, as well as those who try to circumvent U.S. sanctions and export controls.

I am extremely proud of the work the Department's employees have done to uphold the rule of law, to keep our country safe, and to protect civil rights. I respectfully ask for your support for the President's FY 2024 funding request so that we may continue and build upon that work.

Senator SHAHEEN. Thank you very much. One of the concerns that I have about the budget process this year is just trying to ensure that we have some agreement between the House and Senate. And I have been troubled by some of the proposed cuts that I have heard from the House Republican leadership.

Can you give this subcommittee any real-life examples of the ways in which the cuts that have been suggested by the House Republican leadership would affect the Justice Department and impact our families and communities?

Attorney General GARLAND. Well, we were specifically asked to address a—Member DeLauro asked for us to address the consequences of a 22 percent cut, I am not sure if that is the one you are addressing.

Senator SHAHEEN. Yes.

Attorney General GARLAND. But that is one that we have addressed and we responded with a letter. But the bottom line is we—it is devastating to the Justice Department. It would lead to a loss of more than \$8 billion in our annual funding.

For the FBI it would mean a loss of 11,000 positions, and a loss of non-personnel costs of about one billion.

For the ATF it would lead to a loss of 190 agents and 113 industry operations investigators. It would—eliminating all State and local training at the National Center for Explosives Training and Research, and it would increase the amount of time necessary to trace crime guns by greater than 2 months.

The Marshals Service, it would lead to our inability to replace about 221 deputy U.S. marshals who are expected to leave by attrition in any particular year. It would slash the programs that we now have for the Violence Against Women Act, where they would not be able to be funded without reductions in other grant areas.

For the COPS Program, it would mean that we would not be able to provide funding for 300 to 400 law enforcement funded positions, so it would be 300 to 400 fewer positions; for the Office of Justice Programs it would lead to a \$650 million loss in OJP's annual appropriations; for the Byrne-JAG Formula Grants to local governments, it would reduce those grants to local governments by about \$30,000 each.

For State awards under Byrne-JAG it would mean a \$1 million loss of funds to each State. The DNA Backlog Reduction Program would lose \$205,000 per award; the U.S. Attorneys' Offices, 28 percent reduction of the workforce in a single year; for the DEA \$620 million in reductions to base resources. And it would really devastate everything we have done to build up our cybersecurity over the last 2 years.

Senator SHAHEEN. So do you think it is a fair statement to say if we experience those kinds of cuts with the Justice Department that it would have a real negative impact on our ability in communities to keep people safe, and uphold the law?

Attorney General GARLAND. Exactly right. That is exactly the consequence.

Senator SHAHEEN. Thank you. Last week, the Department of Justice Office of Inspector General released its review of the Federal Bureau of Prisons response to the COVID-19 pandemic. I am sure it comes as no surprise that the report found that the pan-

demic exacerbated existing staff shortages at the Bureau of Prisons. It is an issue that we have seen at FCI Berlin in New Hampshire, which has been identified as one of seven institutions with chronic hiring challenges.

I appreciate the Department's continued effort to help us with retention incentives, but can you describe what else the Department is doing to help address the shortages at the Bureau of Prisons?

Attorney General GARLAND. Well, you are definitely right, the pandemic had a devastating effect on our workforce, and on the conditions under which they were working, and therefore had difficulty—problems with respect to retention. The budget that we are asking for here requests sufficient funding for us to hire 2,250 new staff between fiscal year 2023 and the end of fiscal year 2024. That includes a new program of \$109 million for hiring and retention incentives.

We have worked out a deal with Office of Personnel Management to allow us to do this, and we are hopeful that that \$109 million will help us in a quite difficult area that we have had with respect to retention and hiring. Right now we have about 86 percent of authorized positions filled.

Senator SHAHEEN. Thank you.

Let me just recognize the Chair of the Appropriations Committee, Senator Murray who has joined us. I recognized your Vice Chair, Senator Collins earlier. So we are delighted to have both of you here for this hearing.

And I will now turn it over to Ranking Member Moran.

Senator MORAN. Chair, Thank you, very much.

Attorney General, I am a member, as is Senator Collins, of the Senate Select Committee on Intelligence. We have been trying from—for a number of weeks to get information from ODNI related to the classified documents in the presence—or in the location of the presence of the former Vice President, the former President, and the current President.

According to ODNI the Department of Justice is blocking them from providing the Committee access to these documents, and the explanation is there is an appointment of a special counsel, or the belief that it would otherwise compromise ongoing investigations. I would indicate that it is important for the Intelligence Committee to have access to these documents in our oversight capacity, and if there is, based upon those documents, a need for risk mitigation activities, the Intelligence Committee is obligated to oversee those activities.

I also would indicate that prior leadership of the Department was able to reach an accommodating circumstance with the Intelligence Committee during the Russia investigation, so there is precedent.

General, is it your position that the Senate Select Committee on Intelligence cannot have access to those classified documents recovered from the homes of, or offices of President Biden, and Trump, and Vice President Pence.

Attorney General GARLAND. Senator, I am surprised to hear that the DNI used the word "blocking", I don't want to—

Senator MORAN. Let me look and see if there is quotes, or whether that is my word.

Attorney General GARLAND. I would say we are working well with them. We believe that there is an accommodation possible. We have been trying to work towards an accommodation. We do have to balance the concerns of ongoing criminal investigations, but we also, well recognize the oversight responsibilities and obligations of the committee, and we intend to work out on an arrangement that will accommodate those interests.

We have been working with the Office—the Director of National Intelligence towards that, and we have been making quite a bit of progress recently, and we expect to make further progress.

Senator MORAN. I hope that that progress can occur. I appreciate your answer. That suggests that it will occur, and I hope it occurs in a timely fashion. I would indicate that the Intelligence Committee has no interest in asking who, what, or when, our interest is in oversight over the Intelligence Community. So I thank you, for that answer.

Let me turn to an experience I had, about a week ago, in Mexico City. It was a Sunday before last; I met, along with a number of my bipartisan and bicameral colleagues, with President López Obrador in Mexico. Something you have done on several occasions.

I indicated to him that we had work to do in the United States on keeping guns from crossing the border going south, that we needed to do more to help prevent and reduce the use of drugs in the United States, but if we—as we pursued those plans of action, could the President, President Obrador do more to encourage, and in fact insist; I hope the word I would use is “demand” China to eliminate the precursor chemicals coming from China to Mexico, before they then crossed the border to the United States.

He indicated he would formally request that China take action to reduce exportation of fentanyl precursors. I think that is a promising development. The fact remains the cooperation between our two countries on law enforcement matters are extremely important. They are also significantly strained.

The Drug Enforcement Administration remains severely constrained in its operational capabilities in Mexico—excuse me while I turn the page, slowly—one of the most significant lessons for me during that that trip to Mexico was just how critical it is that we work to improve coordination and cooperation on law enforcement matters.

Your first foreign visit to the—as U.S. Attorney was to Mexico, you visited again there just about two-and-a-half months ago; yesterday NBC News reported that we may be close to a major agreement with the Government of Mexico to address both the flow of fentanyl and illegal firearms trafficking.

General, what is your assessment of the State of U.S.-Mexico cooperation on law enforcement? Can you provide me any information about such a potential, or near agreement? And I guess I will follow up depending upon what your answers are.

Attorney General GARLAND. So I can't really say about a pending agreement, about those discussions, but I think I would align myself with every single thing that you said with respect to your visit to Mexico, and your concerns.

Look, the way fentanyl, in particular, travels is it comes—it begins with precursor sales from China to Mexico. In Mexico it is

made into fentanyl, either powder or pills, it crosses the border, and then transmitted to our communities.

The main runners are the Jalisco and the Sinaloa Cartels. We need Mexico at every stage to act. We need Mexico to destroy the labs. With respect to which we have had some success. The last time I went to Mexico, right before I went they destroyed major labs, we need them to crack down on the cartels; we need them to crack down on the precursor—purchases of precursor chemicals by Mexican companies, and the sales by the Chinese.

Likewise, we need to put as much pressure on China as we can, to not make those sales. The Treasury Department has recently issued sanctions against some of the precursor chemical dealers in China; we think that is a useful way to cut off some of that. And I know that Treasury will be doing more in that respect.

I also, agree that the United States has responsibilities to prevent the transshipment of arms from the United States to the cartels in Mexico. As we saw in a very recent arrest of some of the cartel leaders, the Mexican Military was almost outgunned by the weaponry that the cartels now have.

So I think I would align myself with everything that you have said.

Senator MORAN. Mr. Attorney General, Thank you, for your answer. My time has expired. If you need resources or tools that this Committee can help provide, please let us know. And I would ask you to specifically work to repair the relationship between the Mexican Government and the DEA. Thank you.

Senator SHAHEEN. Thank you, Senator Moran.

We will now go to Senators Murray, and then Collins. And then we will take other questioners in order of appearance. So, Senator Murray.

STATEMENT OF SENATOR PATTY MURRAY

Senator MURRAY. Well, thank you very much, Chair Shaheen, and to Ranking Member Moran. I think everybody on this dais knows really well that Senator Collins and I are returning this Committee to regular order, and I couldn't ask for two better members to help steer this Committee through. So thank you for the work you are doing to get that done.

I think we all realize we have a responsibility to get these funding bills done in a timely bipartisan way that really makes sure our country and our communities have the resources they need to keep people safe. It is no small task, and so I am glad to have both of you partners in getting this done.

And I think this discussion today makes clear: keeping our families safe doesn't just mean having a strong military, obviously that is important, but it also means having a fair, functioning system of justice, and safe communities.

We can't keep our families safe from threats like drug trafficking that is bringing the deadly fentanyl in, or White supremacy, and the uptick and hate crimes without investing in effective law enforcement.

And as we saw yesterday with the devastating shooting in Nashville, I think it is all too clear we have to do more to protect our kids, and our families, and our communities from gun violence,

which will require us to, of course, do more to strengthen our laws. But it also requires the resources we need to carry out the laws we already have on the books, and keep guns away from violent criminals.

And you know, we have made some progress to support State red-flag laws to protect survivors of domestic abuse, we have to do a lot better for women, and that includes in our indigenous communities where so many violent crimes against women have gone unsolved. And that this is something I am really focused on making sure that this unacceptable injustice on tribal lands is met with a strong work from our country now.

And of course we can't forget that we aren't protecting our families unless we are also supporting the Civil Rights Division in fighting against bigotry and discrimination. And we can't keep our democracy—a democracy if we are not protecting Americans most basic rights, the right to use your voice, the right to vote, and I am also, clearly, mean the right for women in every corner of our country to get the health care and family planning services that they need.

So these are really important challenges, and to meet them we need strong investments in the critical work of this subcommittee. So we have got a lot of work ahead of that.

So Attorney General Garland, thank you for being here. I do have a few questions. One of them on your budget, I was really glad to see an increase in the office for violence against women. I have long advocated for improvements in VAWA Grants, including the special tribal criminal jurisdiction, so indigenous women, and children, and survivors can seek justice in our courts.

I also authored and got signed into law legislation to make sure survivors of sexual assault can get medical exams when they need to be able to seek justice. So I want to ask you today, can you walk me through what your proposed budget does for investments in these critical areas?

Attorney General GARLAND. Right, so for the Office of Violence Against Women, we are for \$1 billion, which is a \$300 million increase over the previous enacted appropriation. This includes what you just mentioned, \$20 million in a new program for access to sexual assault and nurse exams. It includes \$147 million for reducing the DNA backlog for rape kits. This includes both Violence Against Women Act and Office of Justice Programs funds, collecting DNA, forensic research, training, testing, includes money for the Debbie Smith DNA Backlog Grant Program.

Then it includes \$300 million, which is a \$45 million increase in grants to combat violence against women, the so-called, "STOP Act". \$100 million for Sexual Assault Services, which is a \$21.5 million increase. That is for rape centers, and for non-governmental organizations that provide crisis intervention and victim assistance.

There is a Legal Assistance Program of \$95 million, which is a \$40 million dollar increase for civil legal aid for domestic violence and sexual assault victims and survivors; transitional housing for victims, \$95 million, which is a \$45 million increase.

Senator MURRAY. Okay.

Attorney General GARLAND. I mean, there are many more aspects to the program, but those are the big numbers.

Senator MURRAY. I really appreciate that, and I appreciate the focus on that. And I think those are critical investments that we need to really strongly consider in this Committee.

Senator Moran asked you about fentanyl from sort of policy perspective. Can I ask you, since this is something we are all concerned about, what is in the President's budget to address the opioid crisis?

Attorney General GARLAND. Yes. So obviously, there are two sides of this as you correctly said, one side is the law enforcement side, and the other is our effort to deal with opioid addiction, and abuse, and to make people whole, and to help them survive. On the law enforcement side we are asking for \$10.4 billion, which is a \$342.8 million dollar increase for all of our law enforcement.

So this includes DEA, both for its law enforcement agents, and for diversion control, which has been a serious problem, obviously, with respect to the opioids. Marshals Service, the FBI, which includes particular targeting of fentanyl and opioid trafficking on the dark web; our Office of—or our Organized Crime and Drug Enforcement Task Force, OCDETF, 550.5 million for their strike forces; the Criminal Division and the Civil Division, both of which provide law enforcement on both the criminal and the civil side. And then grants for the Bureau of Justice Assistance, and the COPS for anti-heroin and anti-meth; and for the health care, and fraud, and abuse control. So we have both the Appalachian Regional Opioid Task Force, and the New England Regional Task Force, and we are asking for money for both of those.

Senator MURRAY. Okay. And my time is up.

Attorney General GARLAND. Okay.

Senator MURRAY. But I will just say this, to this Committee as well, that we all want to make sure that we are doing everything we can with the opioid crisis; we need to have a strong budget capability to invest in these programs, they are a critical part of dealing with this crisis. Thank you.

Senator SHAHEEN. Thank you, Senator Murray.

Senator Collins.

Senator COLLINS. Thank you, Madam Chair.

Mr. Attorney General, let me begin by telling you that I appreciate the work that you described to Senator Moran in working with the Mexican Government to combat the very violent cartels that are smuggling drugs that are poisoning our children.

In the State of Maine a record 716 people lost their lives last year as a result of drug overdoses, and 80 percent of those deaths were linked to fentanyl. Nationwide, there were more overdose deaths last year than all homicides and traffic accidents' fatalities combined.

So this is, obviously, a very serious problem. The Drug Enforcement Administration is the agency that is focused on disrupting the cartels and the trafficking networks that are flooding our country with fentanyl and poisoning our children for profit. And that is why I am puzzled by the President's budget.

In a year in which the President is requesting almost 1,200 new attorneys for the Department of Justice, that same budget only re-

quests four new DEA special agents, and that does not seem to me to be commensurate with the challenges posed by the cartels and trafficking networks.

To give you another example; and I will make this the question: Why is the Department putting a greater focus on hiring 166 anti-trust attorneys than special agents to interdict dangerous drugs?

Attorney General GARLAND. So I don't think—if you compare the budget requests that we have for the Antitrust Division, I am trying to get the number, but it is nowhere near what we are asking for DEA, which is \$3.3 billion.

The total number of new agents is, actually, 131. We got some money at the end of fiscal year 2023, we haven't been able to hire the agents yet, so the total between fiscal year 2023 and fiscal year 2024 will be 131, but we are also adding a total of 216 positions for drug fighting, including 50 diversion investigators, and 35 intelligence analysts.

So we have a substantial number of DEA agents, and we are looking at, you know, a base of—already a 3.3 billion, we are asking for \$171 million increase, a 5.5 percent increase in their overall ability to fight narcotics, and that includes an increase of \$73 million for diversion control.

I feel deeply the same concern that you have about the consequences of fentanyl. It is, as the DEA Administrator points out, like playing Russian roulette if you get one of these pills, six in ten chance that it will kill you. And the vicious cartels which couldn't care less about their quote, "customers"; that is why I have, myself, traveled repeatedly to Mexico, that is why I continue to meet in the United States with the Mexican senior security officials.

That is why I have met with the Attorney General of Mexico three times, and in each case what we are trying to do is energize them to battle the cartels, energize them to help us extradite the leaders, and to take down the networks and energize them to take down the labs. So I don't think that anybody who looks at the amount of money we are spending overall for DEA, could think we didn't care about this issue. This is an issue of enormous importance to the country.

Senator COLLINS. And let me say that I know that you personally care deeply about this problem, but when I look at the budget, even though I realize we did authorize 121 new agents last year, I am talking about this year's budget, and when I see just four new DEA agents, I realize there is some investigative agents that you are proposing. But it just seems like a real imbalance compared to the almost 1,200 new attorneys.

But let me move on to another issue where there are steep cuts in a number of important programs that have always enjoyed broad bipartisan support, and that includes grants to support the NICS System to ensure efficient effective background checks, grants to address the rape kit backlog, grants to support victims of trafficking, the budget even proposes a 60 percent grant cut to the Shepard-Byrd Hate Crimes Prevention Act.

And once again, perplexing to me, given that we are in the midst of this opioid crisis, the budget proposes cuts to drug treatment courts, veterans treatments courts, prescription drug monitoring programs, and residential substance abuse treatment programs.

That is also on top of proposed cuts for the Anti-Meth Task Force, and the Regional Information Sharing Services, the RISS Program.

These are all critical programs that I have long supported. So it is very difficult for me to understand why the administration would propose cutting funds to help clear the rape kit backlog, to help veterans, to prevent hate crimes, and to address the opioid crisis.

My request to you, Mr. Attorney General, is that you work with us, and take a second look at these cuts, these grant programs have always been bipartisan, they have been proven effective, and I would argue, in many cases we need them now more than ever.

Attorney General GARLAND. We would be very happy to work with you. I think some of the cuts are offset by increases in other programs which have similar objectives. But I would be very happy to have our people work with yours.

Senator COLLINS. Thank you.

Senator SHAHEEN. Thank you, Senator Collins.

Senator Schatz.

Senator SCHATZ. Thank you, Chair.

Attorney General, thank you for being here. I want to start with the enforcement of the Prison Rape Elimination Act. There was a recent report from the Bureau of Justice Statistics that showed more than 2,000 incidents of sexual harassment and misconduct by corrections staff in Federal facilities. What is the Department doing to ensure that the Bureau of Prisons, corrections officers, and other staff members are taught from day one how to address, and more importantly, prevent PREA violations?

Attorney General GARLAND. PREA is an extremely important Act, and I know you had an important role in getting it passed. As you know, we have a new Director of the Bureau of Prisons, and she has committed herself to focusing on this problem like a laser. She is establishing new training programs in this area. Our Deputy Attorney General has set up a working group to go over all the problems that have been discovered in a series of our own U.S. Attorney's Office, and Inspector General Investigations to solve—to work on these problems.

As you know, all the Bureau of Prisons facilities are audited every 3 years under PREA, and we get reports every year, so that is how we know about these problems. But accountability is obviously another important factor here, and as I am sure you know, last week, on March 22, the former Warden at FCI Dublin, was sentenced to 70 months for multiple convictions involving sexual abusive conduct.

And we have a quite aggressive effort to root out those who are committing criminal acts in abuse of their positions of authority. So it is a combination of increasing the training, increasing the surveillance, and then increasing the punishment.

Senator SCHATZ. Thank you. Hawaii, as you know, has not had a Federal Halfway House since October of 2019, since then I have included report language in the CJS Appropriations Bill asking for an update. I have not received an update. Do you have one for me?

Attorney General GARLAND. Yes. So I share your frustration over this problem of not being able to get a Residential Re-Entry Center in Hawaii, and we do clearly need to find a way to solve this problem. We have a team at BOP that has been particularly tasked on

this question. As you know, there have been multiple solicitations for residential re-entry in Hawaii, which have not been successful.

This team is planning a trip to Hawaii in the near future to talk with stakeholders about what the problem is; obviously, an important part of the problem has to do with real estate and zoning issues in Hawaii. But we can't wait until we get that, so at the same time we are working on sort of almost work-around solutions, and one of those is to award a contract for a Day Reporting Center in Hawaii.

And we are hopeful that we are close to being able to do that. We have closed the solicitation on that. And we are hopeful we will be able to do that. Now, that does not meet the need for residential reentry, but it is what—it is one thing that we can do in the meantime.

I am grateful for your concern about this, this is certainly pushing us on this. And I would offer, when the Bureau of Prison team goes out to Hawaii, if you want to meet with them either before or after, I think it would be useful from both points of view.

Senator SCHATZ. Please, thank you. Let us talk a little bit about President Biden's Executive Order on Police Reform. We had some statutory changes, as well as some executive orders around the 1033 and 1122 Program. My specific question is: When the Department finds that State and local law enforcement agencies have engaged in a pattern of civil rights violations, what process does it follow to ensure that transferred equipment is returned to the Federal Government?

Attorney General GARLAND. So as, you know, the President's Executive Order prohibits transfers of certain military type equipment to law enforcement agencies, our own law enforcement agencies are in compliance. And from fiscal year 2022—excuse me—onward the Office of Justice Program the grants have restrictions that prohibit the purchase or transfer of the list of prohibited military type equipment.

From what I understand, we have not yet encountered a situation where equipment had to be returned under a pattern or practice finding the, EO provides that if there is a pattern or practice finding for newly transferred equipment, they would have to be returned. We made these restrictions clear to the law enforcement agencies in our grants, but we do not yet have a circumstance where it has been required.

Senator SCHATZ. Is there a regular period of oversight or audits, or is a pattern or practice finding something that just happens, episodically, on a sort of case-by-case basis?

Attorney General GARLAND. Yes. So I think the pattern-or-practice investigations, as you have no doubt—if you remember, we just opened one in Louisville. We just, in the last few days, mostly resolved an older one in Seattle, we have them in a number of other locations, but they are not routinely done across the country. They are where there is evidence to provide a credible concern about pattern-or-practice with respect to a particular law enforcement agency.

Senator SCHATZ. Thank you.

Senator SHAHEEN. Thank you, Senator Schatz.

Senator Kennedy.

Senator KENNEDY. Thank you, Madam Chair.

Thank you, General, for being here. General I want to ask you about the shooting at Covenant School, which is part of the Covenant Presbyterian Church. I realize that the shooter is dead, but the shooter could have had collaborators. Do you plan on opening a hate crime investigation for the targeting of Christians?

Attorney General GARLAND. The FBI and ATF are both on the scene, working with the local police. As of now, motive hasn't been identified, and the Police Chief said at the last—at his last press conference, that they don't yet have reached a conclusion with respect to a motive. We are certainly working fulltime with them to try and determine what the motive is. And of course motive is what determines whether it is a hate crime or not.

Senator KENNEDY. Okay. FBI Director Wray couldn't answer this at the time, for reasons that are not his fault but——

Attorney General GARLAND. I hope you will say the same thing if I can't answer it either.

Senator KENNEDY. Well, I think the coast is clear now. Michael Sussmann, you know who I am talking about?

Attorney General GARLAND. He was a defendant in a special counsel prosecution.

Senator KENNEDY. Right, right. He was with the private law firm, Perkins Coie, which is the main counsel for the National Democratic Party. He had a special badge to get him into the Justice Department, and/or the FBI building. Why did he have that special badge?

Attorney General GARLAND. I am afraid I, also, don't know anything about this. I assume from the reference, that this is something that Mr. Durham was investigating as part of his investigation.

Senator KENNEDY. No. I don't think he investigated the badge.

Attorney General GARLAND. I know he was investigating Mr. Sussmann, this goes back to, I think, 2020.

Senator KENNEDY. Right.

Attorney General GARLAND. But I don't, I don't know the answer to that.

Senator KENNEDY. Okay. Could you find out for me? At the time the trial was in progress, and Mr. Wray couldn't answer. But the trial is over. And I would like to know why Mr. Sussmann, a private citizen, had a special badge to get him into the FBI and the Department of Justice. And if there are other people out there who have special badges.

Attorney General GARLAND. Well, on the particular question about Sussmann, I think we are going to have to wait until Mr. Durham finishes his report, which should be relatively soon. And certainly don't, in any way, want to interfere with him.

Senator KENNEDY. Of course.

Attorney General GARLAND. And he is the one who would know the answer to that. On the more general question I can certainly ask my team to look into how lawyers have special badges.

Senator KENNEDY. Would you? That would be great. Thank you. I want to ask you about the China Initiative which, as you know, was started under the Department of Justice to counter the transfer of scientific research and intellectual property to China. At any

time did the investigations initiated under the China Initiative, by the Department of Justice, stem from racism?

Attorney General GARLAND. I have no evidence to suggest that they did.

Senator KENNEDY. Okay. At any time did the investigations, pursuant to the China Initiative and begun by the Department of Justice, were they ever inappropriately undertaken?

Attorney General GARLAND. Again, I have no evidence to suggest that they did. Obviously, some of the cases resulted in acquittals or dismissals by courts, but that doesn't mean that they were inappropriately begun.

Senator KENNEDY. Okay. Did any of the cases that the Department initiated under the China Initiative reflect the ancestry of the defendant charged, more than the seriousness of the allegations?

Attorney General GARLAND. I am not—not sure exactly what you are asking, but it sounds like it is the same question. And I would give the same answer. I don't have any reason to believe that anything was done inappropriately, or based on ancestry, or based on discrimination in those cases.

Senator KENNEDY. Okay. Do you agree with Chris Wray that China is the biggest threat to U.S. security?

Attorney General GARLAND. Yes. And I think the Director of National Intelligence also testified that it is our most dangerous near-peer—

Senator KENNEDY. Okay. Let me ask you this, because I have got 11 seconds.

Attorney General GARLAND. I am sorry.

Senator KENNEDY. I have got 11 seconds left.

Attorney General GARLAND. Okay.

Senator KENNEDY. Why did you get rid of the China Initiative then?

Attorney General GARLAND. Yes, so as you know, the new Assistant Attorney General for the National Security Division gave a long description of what was done. This was all folded into one nation-state initiative. We don't know sometimes when there is a cyber attack, when there is another kind of attack, which country is attacking us. And I believe he thought it was most efficient for us to focus our attention on the four main hostile state actors; China now in many ways affiliating with Russia, with some—

Senator KENNEDY. Some of your people said it was racist.

Attorney General GARLAND. I didn't say that. I don't know who "my people" are who said that.

Senator KENNEDY. Okay. Well, if I had more time, we can, we can find out here. Help me out Senator Manchin.

Senator SHAHEEN. Senator Kennedy, there will be a second round of questions.

Senator KENNEDY. Yes, ma'am.

Senator SHAHEEN. If you would like to stay.

Senator KENNEDY. Yes ma'am.

Senator SHAHEEN. Senator Manchin.

Senator MANCHIN. There is no way I could fill in for you, sir.

Senator KENNEDY. I don't know if that is good or bad.

Senator MANCHIN. That is a good one. That is a good one.

General Garland, thank you for your service. I really appreciate all the wonderful service you have given our country. I would like to say, first about West Virginia, and we have had—we are home to NASA, to the Customs and Border Protection, Bureau of Fiscal Services, we have the CJIS, FBI Center. The people there are concerned, they are hearing rumors there is going to be some cutbacks and movement of personnel in CJIS, if you could check that out; that has been tremendously—I understand certainly, tremendously effective agencies that have been working there.

And Director Wray has just come down and spent some time there, we went together through it. And all of sudden we have heard that CJIS may have some loss of jobs, or transfer of jobs. And the people, they are hearing these rumors. So if you could help me relieve them of that fear it would be very much appreciated.

Also, the Hazelton Prison, we have in the prison system, Hazelton, has had some violent crimes there, but they are having a tremendous problem with shortages of personnel. And there is a law—and we have directed money to be spent there, and it has been in your budget, but for some reason they are not able to either find employees that want to work there, or the environment, or whatever it may be. And I would hope that you would look into that personally, because that has been a very important system for the Bureau of Prisons, but it has been very troubled.

Attorney General GARLAND. Yes. This question of retention and hiring has been a big problem in all the prisons. And as I mentioned, we have a new program which we worked out with the Office of Personnel Management to allow us to provide incentives for retention and hiring.

Senator MANCHIN. What we need is a maximum security thing, and that gets some pretty rough—some pretty rough characters come through there. And I meet with the staff quite frequently, and they have very much, concerns. They would love to have your attention and your help.

The drug epidemic, I can't speak enough about the problems, where ground zero is West Virginia. And in that situation, that scenario we have, we know, as you said, the precursors are coming from China. Is there no way that we can do anything to stop that, or have China be responsible knowing that it has been going into the cartels for the manufacturing of fentanyl? We know what is happening. And is there any chance at all the United States Government can just say: Hey, enough is enough? I mean we have lost more people to these overdoses than any war we have ever fought, and to sit back and do nothing.

Can we send Special Ops, Special Forces to match up with the Mexican Government if they have a determination to do something? If not, can we, for the benefit of America, do it on our own? Can we go in there, take care of the problem, and root it out, if they are not going to do it?

Attorney General GARLAND. Well, let me just start with the drug problems in West Virginia, as I hope you were advised, we have just arrested organization—

Senator MANCHIN. It was a big—it was a very big op, yes.

Attorney General GARLAND. Yes; the largest methamphetamine seizure in West Virginia history, of well over 200 pounds.

Senator MANCHIN. You have a good man there, U.S. Attorney Will Thompson, he used to be a Federal judge, and he is just a wonderful person.

Attorney General GARLAND. Yes.

Senator MANCHIN. The right person; did a heck of a job.

Attorney General GARLAND. So we are doing the right thing in West Virginia.

Senator MANCHIN. Yes you are.

Attorney General GARLAND. And we have got——

Senator MANCHIN. With a lot more to do. We have got to stop the flow of the drugs coming in.

Attorney General GARLAND. Absolutely. And I think that one of the things we have to do with respect to the precursors, to identify, and then sanction the manufacturers in China, and then——

Senator MANCHIN. Real quickly. Is there anything we can do with the China suppliers, and also the producers down in Mexico, and take it upon ourselves to go after Mexican cartels, if the Mexican Government won't do it?

Attorney General GARLAND. Well, I am going to leave that question to the diplomats in the Defense Department.

Senator MANCHIN. Okay.

Attorney General GARLAND. As far as we are concerned, the DEA is working with them, trying to encourage them to work more, together, with respect to tackling the cartels. This is whole-of-government effort.

Senator MANCHIN. Yes.

Attorney General GARLAND. We just sent the Deputy Attorney General——

Senator MANCHIN. I got you.

Attorney General Garland [continuing]: The Deputy of the Homeland Security, the Deputy National Security Advisor; all just went down, again, to Mexico to meet with the President——

Senator MANCHIN. Sure.

Attorney General Garland [continuing]: And their Security Ministers, to try to encourage them more on these joint operations.

Senator MANCHIN. My final question, sir, is concerning Ukraine. And I know you just made a visit there. I have called that the most just war that we have ever been in, in my lifetime, because we are there for the right reason, trying to defend the freedoms and democracies that these countries desire, when they have these unwanted attacks, and this is absolute horrific attack by Putin.

Can you discuss the Department's work to hold a Russian accountable for the war crimes committed? Can you also, provide an update of the Department's KleptoCapture work to seize illicit drug—illicit Russian assets for the benefit of the Ukrainian people? And finally, they have made—I understand Ukraine has made tremendous progress in tackling their corruption within its society, which has been systemic. Can you discuss some of the progress that has been made? So first, I guess you could start with, if you can, the Russian war crimes?

Attorney General GARLAND. Yes. I will get you the numbers separately.

Senator MANCHIN. Sure.

Attorney General GARLAND. So as to not to take the time. But the purpose of this visit of mine was to meet with President Zelenskyy, and with the Prosecutor General, as well as the prosecutor generals of all the surrounding countries, all of whom are participating in War Crimes investigations.

The Prosecutor General has some 40,000 war crimes already registered. The Justice Department is providing forensic help on the ground in Ukraine, to evaluate the crime scenes. We are about to put a prosecutor embedded with the Prosecutor General in Kiev. We have stood up a—IT for them using some of what we learned in our various big cases—digital case investigations here, because everybody in Ukraine has an iPhone, and there is millions and millions of digital images of these war crimes as they were occurring.

So we are putting that all together. We are supporting efforts in The Hague for a Tribunal that will be capable of trying the war criminals. And I have assigned Eli Rosenbaum, who is the Head of our Nazi Hunting entity in the Justice Department to lead what we call, our War Crimes Accountability Task Force. So that is on that side.

On the KleptoCapture, again, here I met again with a number of the Justice Ministers when I was in Ukraine, it is my second visit. And here we are an enormous agreement, among the EU countries, to locate, freeze and seize the assets of Russian oligarchs who are facilitating this unlawful and unprovoked attack.

We have been quite successful in the amount of money that we have seized, and I have already certified a transfer of some of that money to Ukraine for rebuilding, which is the first time we have ever been able to do that kind of forfeiture, on the corruption front, I have spoken heart-to-heart with the Prosecutor General, along with our Ambassador. We have gotten—made clear to them that our own willingness to continue to provide funds depends on them being sure that the funds go to what they should be going to, and that, to not be used with respect to corruption. This is also a condition for ultimate admission to the EU.

They are seized with this. They are very concerned to be sure that they eliminate that issue. And as you probably know about, maybe a month before I went to Ukraine, they arrested quite a number of high-level Ukrainian officials on that guard.

Senator MANCHIN. Yes.

Attorney General GARLAND. We will get you more information on the specifics of for example—

Senator MANCHIN. Thank you, sir.

I am so sorry, Madam Chair.

Senator SHAHEEN. Thank you, Senator Manchin. The second vote has been called for anyone who wants to go vote; I am going to go vote. I am going to turn the gavel over to Senator Peters.

And Senator Britt, you are next.

Senator BRITT. Thank you, Madam Chair.

Thank you, Mr. General, for being in front of us today. I appreciate the topics that have been brought up from drug cartels, to Mexico, and the DEA, to the fentanyl poisoning, communities all across this Nation, to drug use and addiction. I stand ready to be a productive part of those conversations, and work to move our Nation far forward keeping our communities safe and strong.

Mr. General, I want to ask you about some questions when you testified in front of the Senate Judiciary Committee a couple of weeks ago. I am a big believer. And I have heard this all over the State of Alabama as I have traveled; people want justice to be blind. They believe that is a foundational building block of our Nation, and until we restore that trust and confidence, you know, people are worried about the direction our Nation will go.

So you testified several weeks ago before the Senate Judiciary Committee, and fielded a number of questions from Committee Members regarding DOJ's failure to prosecute any individuals who were involved in the illegal protest outside the homes of multiple Supreme Court Justices in the aftermath of the leaked Dobbs opinion.

As you are well aware, 18 U.S.C. 1507 makes it a crime to picket or parade near a residence occupied by a judge. It says, "With the intent of influencing any judge, juror, witness, or court officer in the discharge of his duty."

In answering the questions from multiple Members of the Committee you repeatedly asserted that DOJ's failure to bring any charges under Section 1507 was due to the fact that the U.S. Marshals, who were protecting the homes of the justices, failed to make any arrest under that statute.

You said, quote, "The Marshals have been advised, and they know, and the Marshals on the ground, they have full authority to arrest people under any Federal statute, including that Federal statute"; end quote. That was in direct reference to Section 1507.

You went on to say the Attorney General does not decide whether to arrest: The Marshals on the scene they do make the decision of whether to arrest. After your appearance before the Judiciary Committee we obtained copies of the slide deck that was used to train and prepare the Marshals for their protective detail at the homes of the justices. Those training materials show that the Marshals, likely, didn't make any arrest under Section 1507 for a pretty simple reason. They were actively discouraged from doing so.

As you can see on the slide behind me, the Marshals were explicitly told to avoid, unless absolutely necessary, any criminal enforcement action involving the protester.

The slides went on to say, they explicitly state: That making arrest and initiating prosecutions was not the goal of the Marshals' presence at the homes of the justices. And the "not" was actually italicized and underlined.

The next slide directs the Marshals not to engage in protest-related enforcement actions, beyond those that were strictly and immediately necessary and tailored to ensure the physical security of the justices.

If you will see in the next slide, here, it discourages the Marshals from making arrest under any Section 1507 by asserting that there may be a First Amendment right to harass the families of the judges, and by concluding that any arrest of protesters are a last resort to prevent physical harm of the justices.

Mr. Attorney General, yes or no, were you at any point before your testimony in front of the Judiciary Committee, aware of these training materials, or the fact that the Marshals had been heavily discouraged from making arrests under Section 1505?

Attorney General GARLAND. This is the first time I have seen the slide deck, and frankly from here, I can't make it out, for which I apologize for my eyesight, but I can't make it out. What I said before was correct, their first and principal job is to protect the lives and property of the—of the Members of the Court. And as I said at the time, I am the first Attorney General who has ever ordered the Marshals to protect the residences of the justices and protect them 24/7. That is their principal responsibility, but that doesn't mean that other—that they are in any way precluded from bringing other kinds of arrests.

Senator BRITT. So thank you so much, Mr. Attorney General. I do have another question for you in a few moments. But when you say they were given the full authority to arrest people violating Section 1507, I would ask. Will you take a look at these slides, these materials, dig into them? It is clear that these Marshals were given directives that limited, that narrowed the scope. Of course we all want the physical safety, and the physical safety of our Supreme Court Justice is paramount, and we thank you for sending those Marshals there.

1507 though actually is more all-encompassing than that narrowly tabled objective—narrowly tailored objective. And it says: Picketing or parading near a building or housing, if you are doing it with the intent to interfere with, obstruct, or impede the administration of justice, or influencing any judge in the discharge of his duty, it is clear, when you look at these slides, that the Marshals were not given those directives.

I would like for you to take a look at that. And if you agree with that statement, I would like for you to amend your testimony to the Judiciary Committee.

Attorney General GARLAND. There is nothing for me to amend, because as I said, I have never seen those slides before.

Senator BRITT. I know I need to yield my time. It is clear the Marshals were given a different directive, and I would ask you to look into that, please.

Attorney General GARLAND. I will.

Senator BRITT. Thank you.

Senator PETERS. Thank you, Senator Britt.

Attorney General Garland, good to see you here today; and thank you for your service to our country. As you know, many communities across the country, including my State of Michigan, are facing both a law enforcement recruitment challenge, and in some cases; a trust crisis as well.

The Strong Communities Act Legislation, which I led, aims to help facilitate improved relationships between law enforcement, and the communities that they are entrusted to serve. The legislation would allow grants under the Department of Justice's Community-oriented policing, services, grant program to be used for officers and recruits to attend law enforcement training programs, so long as officers and recruits agree to work for the law enforcement agencies in their communities for a set period of time.

And by recruiting from within these communities, these recruits will know the people they are working to protect; the bill with thus help build stronger relationships between local law enforcement and the neighborhoods that they serve.

They would also incentivize people to serve in law enforcement in the communities which they call home, each and every day. The legislation has been endorsed by both civil rights and law enforcement groups, including the NAACP, and the Fraternal Order of Police.

So my question for you, Attorney General Garland, is: Could you speak to the importance of community policing and how recruiting from within communities themselves can help build trust between officers and communities? And perhaps more generally, could you address the importance of adequate funding for the COPS Office and the grant program that it administers?

Attorney General GARLAND. Well, let me start even more specifically, we are supporters of your Strong Communities Act. We think it is a very good idea, and allow our COPS grants to go for this purpose, so that is very specific. And slightly broader on the appropriation side, we have—in the budget as a request for a new Gun Crime Prevention Strategic Fund of \$884 million for fiscal year 2024 of \$4.4 billion over 5 years.

This would be grants for State and local law enforcement to address locally driven needs, but it would include hiring, recruitment, retention, training, and wellness. I don't know if it is specifically focused on what you are interested in, specifically interested in, which is hiring from the communities, but we think that is a very good idea.

We think that an important element of our fight against violent crime is a relationship between the communities and the police. We need Federal Government to be all playing together, we need the Federal Government to be in good partnership with the State and local law enforcement, and then we need State and local law enforcement and Federal Government to be close to their communities. That is the way in which we get trust. That is way in which we get witnesses. That is the way in which we get tips with respect to violent crime.

Senator PETERS. Well, thank you. You know, the Department of Justice has said that the greatest terrorism threat to Americans is from domestic terrorism, and specifically White supremacists and anti-government extremists. Congress required DHS and the FBI in the fiscal year 2020 NDAA to provide us so with information about all forms of domestic terrorism, as well as how they are defining and resourcing this significant threat. But despite the requirement in the NDAA under Federal Law, these agencies have failed to provide all of this information.

In fact, a recent GAO Report found that the FBI was not aware that the DHS was producing domestic terrorism data, which was one of several reasons that data, in the past two reports, was simply incomplete.

So Attorney General Garland, my question for you, sir, is: Could you tell us specifically how your Department is resourcing this threat of domestic terrorism? And can you elaborate on your confidence that the Department is adequately prepared for this threat? And I hope to get your commitment that we will get this data as required by law, but also perhaps generally, about resources for domestic terrorism.

Attorney General GARLAND. Well, just to start on the latter part, I wasn't aware of the GAO study. And my understanding was that the FBI and DHS published a joint strategic intelligence assessment and data on domestic terrorism, in May of 2021, for fiscal year 2019; and an updated report in October 2022—2022, for fiscal year 2020 and fiscal year 2021. There is no doubt that the Department had failed in the past to keep this up to date, but I think—I think we are——

Senator PETERS. Continue, please.

Attorney General GARLAND. I think, I think we are up to date now, but if there is information lacking——

Senator PETERS. Well, that is the question. And we will follow up with your office.

Attorney General GARLAND. Yes.

Senator PETERS. It wasn't that a report was produced, it was that it did not adequately cover the topic.

Attorney General GARLAND. All right. So on that it would be helpful if you——

Senator PETERS. We will do that. I would hope to get your commitment that we could work with your office——

Attorney General GARLAND. Absolutely.

Senator PETERS [continuing]. To work with the FBI to make sure that the information that was requested all—in its entirety is provided.

Attorney General GARLAND. Yes, absolutely. And on the counterterrorism front, we are asking for more than \$1.6 billion which is an increase 10.6 percent for our counterterrorism efforts. This extends to the National Security Division, the FBI, and the ATF, and it covers both foreign terrorism—foreign-based terrorism in the United States, and domestic terrorism.

Senator PETERS. Great. Thank you. Madam Chair.

Senator SHAHEEN. Thank you, Senator Peters.

And Senator Hagerty, you were not here when the Attorney General and I both, and Senator Moran, all expressed our condolences to the families affected——

Senator HAGERTY. I certainly heard the——

Senator SHAHEEN [continuing]. And the people of Tennessee.

Senator HAGERTY. I certainly heard the comments, Chair. And I very much appreciate that.

And likewise, General Garland, I appreciate the conversation that I had with you yesterday, and in your opening remarks today, and the sympathies that you conveyed.

This is an unspeakable act of evil, and it is a depraved murderer's gruesome actions that have led to the deaths of three 9-year-old children and three adults, in my hometown, in my home State of Nashville Tennessee.

I join my friends, the families there. The community is in mourning for the victims, for their families, for the Covenant Church community, and for the City of Nashville and the State of Tennessee. And I appreciate the outpouring of condolences that have come from every direction.

I would also like to take the opportunity to speak to the bravery and the heroism of the Nashville Police Department.

I know you have been in contact with the Police Chief, General Garland. The Nashville Police and the other First Responders were there almost instantaneously. My wife, in fact, was in traffic as the sirens went by. She pulled over. She could tell that the massive amount of resources were being deployed, and in just minutes these officers stepped into the fray, incurred massive risk, with shots coming at them.

And I specifically want to acknowledge Officer Rex Engelbert, and Officer Michael Collazo, and all their Fellow Officers, who willingly ran toward danger and put their lives at risk to bring the situation to resolution.

It is a very complex set of circumstances. And the families there, not only deserve the full resources of the Department of Justice to find out what happened, but transparency about what happened and why. We have got to do everything we can to present a tragedy like this from—prevent a tragedy like this from happening again.

Nashville Police Chief, John Drake, has said that the killer had a manifesto and other writings that indicated deeply disturbing motives, as well as plans for another attack. This of course is extremely alarming.

My immediate focus is on the families affected. But I also wanted to ask you a few questions, General Garland, that are on the minds of Tennesseans. First, General Garland, you mentioned in your testimony that the FBI and the ATF are involved. But can you walk me through the Department's response and involvement in the investigation at this point?

Attorney General GARLAND. Yes. So basically, the ATF Office just emptied out, everybody in that office ran to the scene. They, and the FBI did as well. The first job of course for ATF is to try and trace the guns from the serial numbers as soon as they could get them, find out where they were purchased, et cetera, and the FBI is now working with the Nashville Police to determine motive.

And that includes all the normal ways that you would think, going through social media, going through what was recovered from the search of the house, of that sort of thing; but they will stick with this as long as it takes.

Senator HAGERTY. Well, thank you. As I said, my immediate focus is the victims and their families, but transparency is important too. And the facts that are being reported by local law enforcement regarding the killer are very disturbing. Law enforcement officials have indicated that the killer may have been motivated by deeply disturbing beliefs.

And you responded, of course, to Senator Kennedy, just a few minutes ago, that the motive is not yet known. But if the evidence suggests that the killer's motives were political, or ideological, I just want to confirm with you that part of your investigation will be to determine whether this constitutes a hate crime, or domestic terrorism.

Attorney General GARLAND. Yes. A motive that is based on the religion or the political ideology of the victims is a hate crime.

Senator HAGERTY. Thank you very much for confirming that, General Garland. I appreciate that. And I also say that this is a terrible tragedy that no community should ever have to endure. And again, I appreciate your continued focus on it, making certain

that all the resources of the DOJ are deployed, and that we leave no one's—no stone unturned here. And thank you, for keeping me up to date on that.

Attorney General GARLAND. You have our promise on that.

Senator HAGERTY. Thank you very much, General.

Senator SHAHEEN. Thank you, Senator Hagerty.

Senator VAN HOLLEN.

Senator VAN HOLLEN. Thank you, Madam Chair.

Welcome Mr. Attorney General. Thank you and your team for your service to our country. I know we are looking at the coming year's budget, fiscal year 2024. But I just want to say a few words about the fiscal year 2023 budget, where this Committee helped provide an increase to DOJ, including the Federal law enforcement U.S. attorneys receiving a 6 percent increase in salaries and expenses funding, to enable the Department to hire new agents, deputy marshals, correction officers, and attorneys, as well as increase and expand existing investigative technical capabilities.

I read that report language from last year, Mr. Attorney General, because we in Maryland are in urgent need of additional help, especially in the U.S. Attorney's Office. We have U.S. Attorney Ereik Barron, who is doing a really good job. But Baltimore City is experiencing a real crisis when it comes to Public Safety and violent crime, everyone is trying to, urgently, address it from the local level to the State level.

And we are appreciative of the steps the Federal Government, you and your Office have taken, but we do need additional help. Senator Cardin and I had a very positive comment—discussion with the Deputy Attorney General, Monaco, just a few weeks ago, and sent a follow-up letter.

But Mr. Attorney General, we desperately need additional resources for the U.S. Attorney's Office in Maryland. I just want your assurance that you will do everything you can to work with us to try to find those resources.

Attorney General GARLAND. Yes. As you know from the conversation with the Deputy Attorney General, we are currently reviewing the allocations from the fiscal year 2023 budget for U.S. Attorneys' Offices. And we will continue to work with you on this question.

Senator VAN HOLLEN. We appreciate that. I remember the previous year, Senator Cardin and I had a similar conversation with the Deputy Attorney General, and she said that because we had not provided enough resources to accommodate it, we weren't able to get that. So that is one of the reasons we join with our colleagues to make sure we upped that amount of resources for the—

Attorney General GARLAND. It is true in the previous year we were completely flat.

Senator VAN HOLLEN. No. It is true. I understand that, and that was the response we got, but in response to getting that answer, we worked very hard to increase the budget for these purposes.

I do want to talk for a moment about the issue of gun violence. And I apologize. I was in another hearing so I don't know to what extent that has been covered. I did hear Senator Hagerty talk about the terrible, terrible shooting in Tennessee.

And I appreciate the President's underscoring the importance of needing Congress to move forward on things like a ban on semi-automatic assault weapons. But my questions are going to be focused on other measures that we—you have taken, and some more that we can take.

First of all, I do want to applaud you and the President for moving forward on executive orders on ghost guns. I have, you know, heard from the Mayor of Baltimore, I have spoken to him many times, more and more the guns that are turning up at crime scenes, are ghost guns. So we are playing catch up when it comes to ghost guns. But appreciate the efforts that you and the administration have taken in that regard.

As well as the more recent executive order in defining more clearly what it means to be a firearms dealer. And look forward to working with you and your team to really enforce both those executive orders, because this is a—the issue of ghost guns is a big problem, and the question of who is an arms—a firearms dealer has also been a big issue, and a contributor to the problem of ghost guns, among other things.

I wanted to ask you about what had been called the Tiahrt Amendments, right, these are restrictions that have been embedded in appropriation bills over years by former Congressman Tiahrt who has, since he retired from Congress, renounced his own work.

But could you just talk for a moment about how those restrictions in law handcuffed the ability of the ATF to more quickly trace guns used in crime, and make it harder for them to do their job enforcing existing laws that are on the books.

Attorney General GARLAND. Well, I am I am hating to admit this. The parts of the Tiahrt Amendments that I do know about are the disclosure of the individual names of FFLs. I am not really sure of how it limits our ability to do tracing. So I will have to get back to you on that.

Senator VAN HOLLEN. I would appreciate that, because we are—this is a pretty commonsense bill I have introduced, it is called the ATF Modernization Act, and what it does is simply make it easier for the ATF to do its job by removing limitations that were put in place and remain embedded in appropriation bills, that simply are designed to make it harder for them to trace guns used in crime, or have the practical effect of doing that. So we look forward to getting your input on that.

Thank you, Madam Chair.

Senator SHAHEEN. Thank you, Senator Van Hollen.

I have a few more questions before we close the hearing. I want to begin with the Crime Victims Fund, because we saw that the VOCA Fix has been helpful in addressing some of the reductions in deposits into the Crime Victims Fund over the last several years. But deposits are still substantially lower than their annual average between fiscal years 2007 and 2017.

So my first question is: Does the Department think there are any larger settlements that are in the pipeline? And secondly, earlier this year the Justice Department announced revisions to the Criminal Division's Corporate Enforcement Policy which provides additional incentives to companies for voluntary self-disclosures. And

among those incentives is a potential reduction, at least 50 percent and up to 75 percent of the company's criminal fine. Is the Department concerned about the potential impact this new policy might have on the Crime Victims Fund?

Attorney General GARLAND. So to take the second question first. I think our view about that is that we are more likely to get money and settlement, and penalties, through this new policy because it will alert us to violations we would not, otherwise, know about.

So of course if we knew about them this would have been a discount, but this is only where we didn't know about them. So we think the consequence is likely to be that we will get more money, and more penalties, people will come in and basically self-surrender. And that would be very helpful.

On the question of the VOCA Fix; at least my understanding is that in fiscal year 2022 we got \$48 million more than in the previous year, an increase in 6 percent of deposits, thanks to the Fix. But this year we are doing even way better than that, so in the first 4 months, an increase of \$408 million over the previous year, which is an increase of 321 percent over the previous year.

So the predictions from our Justice Management Division, are that the amount of money that we have asked to take from the fund, the \$1.2 billion, we will be able to replace that by the end of the year. Of course, that is only an estimate, but that is our current estimate that we should be able to continue to do that.

Senator SHAHEEN. Well, that is very encouraging. And I think we would agree that the VOCA Fix is working. What was not clear to us is the extent to which we have an assessment of how much money that might bring in over the remainder of this year. And so if you have any of those—any of that analysis that you can share with us, we would appreciate that.

Attorney General GARLAND. I will ask our budget people to talk to your team, to get more explanation of how it is we—why is it we think we will get that estimate.

Senator SHAHEEN. Great. That is very helpful. Earlier this month, before the Senate Judiciary Committee, you talked about the 24/7 protection that is provided by the U.S. Marshals Service for the Supreme Court Justices and their families.

Can you share with us the resources that are necessary for this 24/7 protection? And how long you expect that to continue? Do you expect to see it continue indefinitely? And do you think we need to take legislative action to address how we deal with that protection long term?

Attorney General GARLAND. So I will have to get you the exact numbers for that. We are asking for an increase, specifically, for judicial security to hire—to be able to increase by 42 Deputy U.S. Marshals, \$21 million in the—out of all—out of the total that we are asking for, for the Marshals.

Congress authorized, last year, the Supreme Court Police to provide that protection. I don't know whether it has appropriated the money for them to do, and that this is a task we would happily turn over to the Supreme Court Police. So I don't think—I mean, we are hoping this isn't a long-term solution for the justices, because there are a lot of courts around the country as you can imagine, and the Marshals have judicial security responsibilities.

Senator SHAHEEN. Right.

Attorney General GARLAND. To say nothing of their fugitive apprehension responsibilities.

Senator SHAHEEN. Good. So you are not anticipating this to go on long term then.

Attorney General GARLAND. We are hoping that doesn't go on long term. Yes.

Senator SHAHEEN. I also, wanted to ask you about the Immigration Courts' case backlogs, which I think we all agree, we need to find a way to address. I think the ultimate way to do that is with comprehensive immigration reform, but one of the things we are going to need are more immigration judge teams. But I am concerned that while we have increased the number of immigration judges over that same period, we have seen the backlog increased as well. And it suggests that that may not be the answer that we were hoping for.

And I wondered if you could speak to the potential for getting rid of some of the paper records, and digitizing court records, and modernizing case management systems, and why that isn't also part of that request?

Attorney General GARLAND. Yes. So it is. With respect to staffing we are asking for enough money for 965 new staff for the judges, which results in a 150 new immigration judge teams, and then we would be placing them in the most areas of—the highest number of cases. And then we would also have—we have a Backlog Initiative—a Backlog Reduction Initiative for an increase of \$367.1 million for that. And that is the technology that you are talking about.

So we want to provide to expand our virtual hearings' procedures, particularly so that we can have hearings at the border, virtually, at the border, more of this new system we call "Dedicated Dockets", which is a pilot program to resolve the entire matters within 300 days. We have the new Asylum Officer Rule, which puts the first decision by DHS asylum officers at the border, and then reduces the IJ Review, and we expect that to reduce it from 4 years to as little as 6 months.

So you are right, that the backlog has gone up, it has not gone down, and we are trying to face this through the increased hiring, and the Backlog Reduction Initiative, but of course this is on the backend, the frontend there is a number of people coming to the border.

Senator SHAHEEN. Well, I look forward to hearing more about the pilot program at the border, because I think we have got to figure out some way to address this problem long term.

My final question has to do with anomalous health incidents, which I have been working on for a number of years, and I know that there are—we are trying, and I think are doing better in terms of addressing the impact on victims across the Federal Government, but there are a handful of FBI employees and family members who have been affected by AHIs that require treatment for their injuries. And the FBI has indicated to us that they can't implement the Draft Rule which is required to address the benefits, until Main Justice approves the language, and consequently there are people who have been affected, who are still waiting for

some relief. So can I have your commitment that this is something that you will try and get done in the immediate future?

Attorney General GARLAND. Yes, absolutely. It was only March 1 that the FBI put in place the system, and now we have to have regulations that endorse it.

Senator SHAHEEN. Right.

Attorney General GARLAND. But I totally agree, this needs to be sped up. These people should not be suffering without financial assistance.

Senator SHAHEEN. Thank you. Well, I think the FBI has been slow to—

Attorney General GARLAND. Well, I am not pointing fingers anywhere.

Senator SHAHEEN. You were not. I am. But that is fine.

Senator Merkley has arrived. So I don't know, Mr. Attorney General, if you would like a break, or you want to go ahead on this one?

Attorney General GARLAND. I am happy to go forward as it is. If this is getting near a break, just a second certainly all right.

Senator SHAHEEN. Okay. Hopefully this will be the last questioner.

Senator Merkley.

Senator MERKLEY. Thank you, very much, Madam Chair.

And thank you, for your service and for your testimony. I just came from a rally outside for a bill that is supported by Democrats and Republicans of both Houses, to promote a peaceful resolution of the conflict between Tibet and China. It has now been 13 years since China was willing to sit down and hold a discussion.

And in the hearing we held earlier this morning, on the oppression of Tibet, one of the folks who was testifying made a request. A request that is parallel to a request I have been making of the FBI. And his request was specifically for a hotline dedicated to transnational repression, and before, when I have raised this before, essentially the pressure that China and other countries put on both American citizens and residents here, and essentially threatened their families back home, or in otherwise, seek to suppress their freedom of speech on world issues.

But I have raised it before, the FBI said: Well, just, you know, have folks call the tip line at the FBI. It is very clear that that folks are so aware of the extensive ability of the Chinese to track our phones, to crack databases, and so forth, that they are not going to call a tip line of the dedicated just general criminal purposes, to share that they have been—well, blackmailed, if you will, by Chinese Authority.

Somebody walking up and saying: We know who your family is, that lives in such and such, and you know, your sister is at risk, or maybe a family member might disappear if you continue to be an activist on this topic. It was folks today from Tibet, but it could have been a testimony by Uyghur folks, or other folks who are feeling the transnational repression from around the world.

For people to be able to call and kind of share their story, will give us some sense of the broad scope of this growing strategy in the world, because we only see just the tiny tip of it. But people have to have confidence, confidence in the integrity of the capa-

bility, the language capability, the confidentiality, the security of the databases, and so forth.

All of this means—it makes a lot of sense if we are serious about transnational repression, to have a special dedicated team, and a special dedicated portal through which people can approach, and share their stories so we can start to understand the full scope of the problem, and the best ways to push back and protect the freedoms of American residents and American citizens.

So simply, my question is—I realize you may not—this may not have been something that was brought to your attention before so you may not have an opinion on. But will you take the time to explore this question, and if you reach the same conclusion that many of us have reached, that if we are really going to take on transnational repression, we need to have a much better team dedicated to it, and a much better portal to work with people in the United States; if you reach that conclusion, will you help us establish that team?

Attorney General GARLAND. Yes. I will be happy to have our team work with yours. I am not sure about the practicalities of how this portal would work. And I think that is something that would need to be discussed. The FBI and the National Security Division are very concerned about transnational repression, particularly by intimidation by the People's Republic of China.

We have already brought several cases in that respect, we have other investigations going on that way. For whatever it is worth, when I was a judge I personally visited Tibet, and I saw the kind of—the way in which the Tibetan culture is being modified, and repressed there.

So we would be happy to work with you on this. But I want you to be sure of our view, that this kind of repression, particularly coming—and transnational intimidation coming from China, is a very high concern of ours.

Senator MERKLEY. Well, I appreciate that sentiment, and I will just reiterate that from those who are within the communities being affected, they do not feel they have a safe way to communicate with the U.S. Government about this very serious challenge. And if you don't feel safe, you don't communicate. So we only get just a small veneer of the problem.

And I think it is a very big deal, as a country that believes in freedom of expression, freedom of assembly, we have a lot of residents and citizens who do not feel they have freedom of speech and freedom of expression because of this intimidation. And I really appreciate your partnership and your help on this. Thank you.

Thank you, Madam Chair.

Senator SHAHEEN. Thank you, Senator Merkley.

ADDITIONAL COMMITTEE QUESTIONS

Senator SHAHEEN. If there are no further questions this afternoon, Senators may submit additional questions for the record. We request the Department of Justice's responses within 30 days.

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

QUESTIONS SUBMITTED TO HON. MERRICK B. GARLAND

QUESTIONS SUBMITTED BY SENATOR JOE MANCHIN, III

Question 1. West Virginia continues to be ground zero of the drug epidemic. Though 2022 numbers have not yet been released, the CDC reported more than 106,000 Americans dying from drug related overdoses in 2021, making that the deadliest year on record for overdoses. It was estimated that more than 75% of those overdoses likely involved an opioid or a synthetic opioid, such as fentanyl and fentanyl-related substances.

—Can you provide an update to the status of DOJ’s current efforts to curtail the opioid crisis in the U.S—including the Appalachian Regional Prescription Opioid (ARPO) Strike Force?

Answer. The Department is using all available resources to combat drug trafficking, increase access to evidence-based treatment, and prevent drug overdose and poisoning deaths in the United States. We are working closely with law enforcement agencies here and abroad to stop deadly synthetic drugs from flooding into our neighborhoods and to aggressively investigate and prosecute those responsible for manufacturing and trafficking these drugs.

INVESTIGATIVE AND PROSECUTION EFFORTS

The Department has investigated hundreds of fentanyl cases that have led to significant arrests, seizures, and prosecutions, including many with direct links to the Mexican cartels responsible for the majority of the fentanyl in the United States, most notably the Sinaloa and Jalisco New Generation cartels. DEA, for example, has built an entirely new strategic layer with two counter threat teams for the Sinaloa Cartel and the Jalisco Cartel. These counter threat teams map the cartels, analyze their networks, and develop targeting information on the cartel members wherever they operate around the world.

These efforts are producing significant results. In April, the Department announced charges against a subset of members and associates of the Sinaloa Cartel, known as the Chapitos, for their role in the transportation of lethal amounts of fentanyl, cocaine, heroin, and methamphetamine into the United States. The charges were the product of proactive enforcement efforts and the dedication of significant prosecutorial resources. (In September, Sinaloa leader Ovidio Guzman Lopez was also extradited to face charges in the United States.) In May, DEA announced the results of “Operation Last Mile,” a year-long national operation, targeting operatives, associates, and distributors affiliated with the Sinaloa and Jalisco Cartels responsible for the last mile of fentanyl and methamphetamine distribution on streets and social media. Operation Last Mile resulted in the arrests of 3,337 associates of the Sinaloa and Jalisco Cartels in the United States.

Additionally, the Department has taken action against all parties involved in the prescription opioid supply chain, from manufacturers and distributors to national pharmacies, doctors, and pharmacists. Accountability has been a top priority in these efforts. For instance, in December 2022, the Department sued one of the largest prescription drug distributors in the country, alleging that over the course of nearly a decade, the company violated the Controlled Substances Act by failing to report at least hundreds of thousands of suspicious orders of controlled substances to the DEA as required by law. The alleged unlawful conduct includes filling and failing to report numerous orders from pharmacies that the company knew were likely facilitating diversion of prescription opioids. The Department has similarly filed lawsuits against two major chain pharmacies, alleging those companies defied Federal law and has brought civil and criminal actions against a bevy of doctors and local pharmacies.¹

Likewise, due to the alarming increase in overdose fatalities resulting from the consumption of counterfeit pills containing fentanyl, the Department has intensified its efforts to investigate corporate entities that are involved in the production, supply, or vending of fake pills. These include investigations into e-commerce sites and social media platforms that may be allowing traffickers to sell counterfeit pills to teens and young adults, as well as investigations into companies that may be allowing precursor chemicals and equipment used to make illegal synthetic drugs to get into the hands of drug trafficking organizations. In June, the Department announced the indictments of four chemical companies and eight individuals—all based in the PRC—for knowingly providing customers in the United States and

¹ USA v. Walmart, 1:20-cv-01744 (D. Del.); United States ex rel. White et al. v. Rite Aid Corp., et al., No. 1:21-cv-1239 (N.D. Ohio).

Mexico with the precursor chemicals and scientific know-how to manufacture fentanyl. And on October 3, 2023, the Department announced eight indictments charging eight companies and 12 individuals—all based in the PRC—with crimes relating to fentanyl and methamphetamine production, distribution of synthetic opioids known as nitazenes, the non-opioid additive xylazine, and sales resulting from precursor chemicals.

U.S. Attorneys' Offices also work to hold those who sell deadly doses of fentanyl responsible for the deaths that result from their unlawful conduct. These significant cases require substantial resources and have been made more challenging by the Supreme Court's decision in *Burrage v. United States*, 571 U.S. 204 (2014), which can make such cases difficult to prove.

MULTI-AGENCY EFFORTS

The Department's Organized Crime Drug Enforcement Task Forces (OCDETF) coordinated a multi-agency effort led by seven U.S. Attorneys' Offices to combat the fentanyl/opioid epidemic in West Virginia and neighboring states. In Operation 7 Car Draw, an alliance of more than 20 Federal, state, and local OCDETF partners, including substantial intelligence and operational contributions by several High Intensity Drug Trafficking Area (HIDTA) partners, OCDETF created and launched a three-phase, national strategic initiative to focus investigative efforts on illuminating command and control elements of transnational criminal organizations smuggling fentanyl, methamphetamine, and other dangerous synthetic drugs through the mail and along highway transshipment corridors through Michigan, Ohio, West Virginia, Kentucky, and Pennsylvania. As a result of these synchronized efforts, Federal prosecutors developed eight new OCDETF cases against criminal networks targeting dozens of high-level criminals responsible for the trafficking of fentanyl, opioids, and commingled drugs in the Midwest region, including West Virginia.

The Fentanyl OCDETF National Strategic Initiative (FONSI) incentivizes investigative teams to think outside the box, target criminal organizations early in their lifecycle, and identify command and control elements of larger criminal networks responsible for importation and trafficking of opioids. FONSI brings together 14 United States Attorneys' Offices, and lead OCDETF prosecutors coordinate efforts of more than 30 Federal, state, and local law enforcement agency partners, as well as 13 regional and national HIDTA teams across the Southwest and the Pacific OCDETF regions, to investigate and prosecute fentanyl traffickers.

Additionally, the FBI uses a proactive approach to combat fentanyl via the FBI-led Joint Criminal Opioid and Darknet Enforcement Team (JCODE). JCODE began in 2018 as an FBI-led, multi-agency initiative to target criminal activity on the Darknet, particularly the trafficking of fentanyl and other opioids. The JCODE team encompasses the Department and 12 Federal law enforcement agencies working together to advance a strategic approach targeting drug trafficking organizations utilizing the Darknet to facilitate their illicit activities. JCODE announced Operation SpecTor, which the Department deemed to be the "Largest International Operation Against Darknet Trafficking of Fentanyl and Opioids."

At the local level, the FBI's Safe Streets and Gang Program uses its Safe Streets Task Forces to target violent street gangs that are increasingly distributing opioids, such as fentanyl. The FBI continues to support multi-agency task forces such as OCDETF to combat the ongoing opioid epidemic.

The Department has also demonstrated a commitment to educating the communities we serve about the dangers these opioids pose. JCODE publicized Operation ProtecTor, a proactive public outreach campaign to share information highlighting the seriousness of the opioid epidemic and the significant role of the Darknet. Other proactive FBI intelligence efforts include conducting network mapping and producing finished intelligence regarding key facilitators engaged in the production, trafficking, and financing of illicit fentanyl operations affecting the United States.

Finally, the Department's commitment to combatting the opioid crisis is clear from the creation and targeted efforts of the Appalachian Regional Prescription Opioid (ARPO) Strike Force, led by the Criminal Division's Fraud Section. Since its inception in late 2018, ARPO has partnered with Federal and state law enforcement agencies and U.S. Attorneys' Offices throughout Alabama, Kentucky, Ohio, Virginia, Tennessee, and West Virginia to prosecute medical professionals and others involved in the illegal prescription and distribution of opioids. Over the past 4 years, ARPO has charged over 115 defendants collectively responsible for issuing prescriptions for over 115 million controlled substance doses. In addition, in 2022, the Fraud Section launched the New England Prescription Opioid Strike Force to identify and prosecute unlawful prescriptions and diversion of opioids and other controlled sub-

stances in Maine, New Hampshire, and Vermont. These enforcement efforts make clear that the Department will hold accountable medical professionals who have forsaken their medical duty for profit during the opioid crisis.

LEGISLATIVE EFFORTS

The Department is working with Congress on legislative proposals to address the fentanyl crisis. In September 2021, the Administration submitted its Recommendations to Congress on Fentanyl-Related Substances. Under the Administration's proposal, the entire fentanyl-related substance class would be added to Schedule I of the Controlled Substances Act because of the similarity to fentanyl in pharmacology, structure, and potential for abuse. The Administration's proposal also includes a more expeditious off-ramp to deschedule or reschedule specific fentanyl-related substances if the Secretary of Health and Human Services finds that the specific substance does not have a high potential for abuse after a scientific and medical evaluation. The Department has also provided technical assistance on a variety of fentanyl-related bills involving sentencing, social media, international trade, and xylazine, among other topics. We welcome the opportunity to continue working with Congress to discuss these and other legislative proposals to address the fentanyl crisis in this country.

COMMUNITY OUTREACH

In addition to investigating and prosecuting those responsible for this crisis, the Department is committed to supporting programs aimed at addressing the substance misuse crisis that is devastating communities across the nation. Several U.S. Attorneys' Offices have initiated innovative efforts to conduct outreach to their communities to educate youth about the dangers of opioids and to highlight the importance of other lifesaving tools, such as naloxone. For example, the U.S. Attorney in the Southern District of West Virginia has participated in multiple events to encourage individuals to learn how to use naloxone to save the lives of their friends and neighbors.

In September 2021, DEA launched the One Pill Can Kill initiative as a public awareness campaign to highlight the dangers of fentanyl to every household in every community. This campaign is consistent with the Department's obligation to make Americans aware of the deadly threat from counterfeit pills containing lethal doses of illicit fentanyl. DEA has also conducted a series of operational surges as part of the One Pill Can Kill campaign. In an enforcement operation that ran from May to September 2022 and resulted in the seizure of more than 10.2 million fentanyl pills and approximately 980 pounds of fentanyl powder—the equivalent of 36 million potentially lethal doses. The effort also resulted in the seizure of 338 weapons, including rifles, shotguns, pistols, and hand grenades.

The Department's OJP supports state, local, and tribal public safety, public health, and behavioral health entities by serving as a critical source of funding, training, technical assistance, and research for prevention and intervention efforts to improve responses to and outcomes for individuals with substance-misuse-related needs at every point along the justice continuum. This support includes, but is not limited to, training law enforcement personnel on de-escalation and crisis intervention training; diverting individuals with substance use conditions away from the justice system, as appropriate; providing substance use treatment and recovery support services for adults and youth during incarceration and effective continuity of care upon their reentry into the community. In Fiscal Year 2022, OJP awarded over \$340 million to address substance use disorders and fight the overdose epidemic.²

—As you may know, fentanyl analogue's temporary order as a Schedule I substance is set to expire at the end of this year. I strongly support fentanyl analogues being permanently scheduled as a Schedule I substance. Can you explain why removing fentanyl analogues from Schedule I status would hamper law enforcement's ability to keep fentanyl-related substances out of our communities?

Answer. The Department strongly supports permanently placing fentanyl-related substances (FRS) as a class into Schedule I of the Controlled Substances Act. This proposal was included in the Administration's Recommendations on Fentanyl-Related Substances (FRS) submitted to Congress in September 2021. This would provide law enforcement with the tools they need to respond to the trafficking and illicit manufacturing of synthetic opioids, while protecting civil rights and reducing barriers to scientific research for all Schedule I substances.

² See <https://www.justice.gov/opa/pr/justice-department-awards-more-340-million-address-substance-use-disorders-and-fight-overdose>.

In particular, the Department believes that permanent class scheduling of FRS is essential to protecting Americans from the proliferation of these deadly synthetic opioids. Before the February 2018 emergency class-wide scheduling of FRS, the DEA had to race continually to schedule fentanyl analogues individually, in an effort to keep pace with cartels and drug traffickers who were making new fentanyl formulations, using different precursor and precursor chemical compositions specifically to avoid controls. During the 22-month period between May 2016 and February 2018, the DEA individually scheduled 16 distinct, newly created fentanyl analogues. Unfortunately, it was not uncommon for the DEA to encounter a new fentanyl analogue within weeks of announcing the scheduling of a previously encountered fentanyl analogue, sometimes associated with a cluster of overdoses. The DEA is continuing its thorough work of individually scheduling fentanyl analogues, as they are encountered. DEA also proposed scheduling nine substances that would fall under the definition of fentanyl-related substances.³

Class-wide scheduling allows law enforcement to respond to the manufacturing, importation, and trafficking of those illicitly manufactured analogues of fentanyl that are not yet individually scheduled before drug traffickers even produce and distribute them. Additionally, this class wide scheduling also limits the incentive for drug chemists to create new and dangerous fentanyl formulations in an effort to evade drug laws.

—What additional authorities do you believe the Department requires to better curtail the smuggling of fentanyl across the Southern Border?

Answer. The Department has been working closely with Mexico and other key global partners to curb illicit drug production and the smuggling of fentanyl into the United States. Pursuant to the U.S./Mexico Bicentennial Framework negotiated during this Administration, the Department is working with our partners in Mexico to investigate and prosecute cartel members responsible for smuggling fentanyl across the Southern Border. On April 14, 2023, the Department announced charges against several leaders of the Sinaloa Cartel for their roles in the transportation of lethal amounts of fentanyl, cocaine, heroin, and methamphetamine into the United States. In addition, Department law enforcement representatives, including those from the Office of FBI Attaché, the DEA, and the Office of the Justice Attaché, collaborate and coordinate with all levels of the Mexican government to facilitate relationships with international partners to address the flow of fentanyl across our border. We welcome the opportunity to work with Congress to discuss additional authorities to enable the Department to further curtail the smuggling of fentanyl into the United States.

Question 2. As you may know, the Federal government is teetering on the edge of financial disaster. We are on the brink of breaching the debt limit, we are accumulating debt at a historic pace, and we are consistently encouraging reckless and wasteful spending driven in large part by a budget system that is broken.

—To accomplish the necessary reductions to our national debt and to reign in reckless spending, we will need an all hands-on deck approach across the Federal government. Can you and your Department commit to working with this Committee on finding ways to get our fiscal house in order?

Answer. The Department takes very seriously the importance of utilizing Federal funding prudently while ensuring that Department employees uphold the rule of law, keep our country safe, and protect civil rights for all. We commit to working with Congress toward achieving this objective.

QUESTIONS SUBMITTED BY SENATOR SUSAN M. COLLINS

Question 1. This past January, the Government Accountability Office estimated there could be at least \$60 billion in pandemic-related fraudulent unemployment insurance payments. That is likely a dramatic underestimate: the Department of Labor Inspector General has estimated the fraud to be at least \$163 billion, while some experts have speculated that unemployment fraud could easily reach \$400 billion.

I strongly support the Department's efforts, through the National Unemployment Insurance Fraud Task Force, to work with U.S. Secret Service, the Labor Department Inspector General, and other law enforcement partners to address this pernicious fraud.

³ See Notice of Proposed Rulemaking is at 88 Fed. Reg. 22391, dated April 13, 2023.

—Attorney General, since you last appeared before this committee, what specific activities have the United States Attorneys, the Criminal Division, and the FBI taken to investigate and prosecute unemployment insurance fraud? What do we have to show for those efforts?

Answer. The Department appreciates your support of our efforts to investigate and prosecute unemployment insurance fraud cases. The Department of Justice (Department) has made significant progress in this important work. Since the start of the COVID-19 pandemic, the Federal Bureau of Investigation (FBI) has seized approximately \$1.4 billion in relief funds that criminals were attempting to steal and, with the ongoing partnership of the Department, charged over 3,000 defendants with crimes in Federal districts across the country. In 2022, the Department announced the establishment of three Strike Force teams created to enhance the Department's existing efforts to combat and prevent COVID-19 related fraud. In August 2023, the Department announced the results of a coordinated, nationwide enforcement action to combat COVID-19 fraud, which by itself included 718 enforcement actions—including Federal criminal charges against 371 defendants—for offenses related to over \$836 million in alleged COVID-19 fraud. Moving into 2024, the Department has indicated the need to expand the Strike Force model to additional judicial districts and has looked to the FBI to support these endeavors. As a result, the FBI will continue to align with the Department's initiative and seek to stop pandemic fraud, recover funds, and charge perpetrators who engaged in illicit actions by leveraging partnerships with Strike Force partners and other local, state, and Federal agencies and organizations.

Additionally, just in the time period spanning the Attorney General's last two appearances before the Committee (between April 26, 2022, and May 24, 2023), United States Attorneys' Offices criminally charged approximately 281 defendants in approximately 211 unemployment insurance-related fraud-related cases with associated losses of more than \$61 million. Since the start of the pandemic through October 15, 2023, United States Attorneys' Offices have criminally charged over 3,224 defendants in 1,710 unemployment insurance-related fraud-related cases with associated loss amounts of approximately \$1.818 billion. Examples of such cases include:

- In August 2023, the coordinated, nationwide enforcement action that was announced involved charges related to pandemic unemployment insurance benefit fraud and fraud against the two largest pandemic Small Business Administration programs: the Paycheck Protection Program and Economic Injury Disaster Loans. Additional matters involved pandemic healthcare billing fraud, fraud against the Emergency Rental Assistance program, and fraud committed against the IRS Employee Retention Credit program, a refundable tax credit for businesses and tax-exempt organizations that had employees and were affected during the COVID-19 pandemic.
- In May 2023, a New Jersey man was sentenced to 6.75 years for his role in fraudulently seeking \$7.5 million in COVID-19 unemployment benefits and \$1.2 million in SBA pandemic relief loans.¹ The defendant used the personally identifiable information of Americans to file for at least 180 fraudulent unemployment insurance claims with California Employment Development Department.
- In April 2023, a Detroit man pleaded guilty to wire fraud and aggravated identity theft for using stolen personally identifiable information to file for over \$1.6 million in COVID-19 unemployment benefits.²
- In February 2023, two Nigerian citizens were indicted in Seattle for using stolen identities to apply for approximately \$25 million in fraudulent COVID-19 unemployment benefits.³ Over \$2.4 million in fraudulent benefits were paid. One defendant was arrested in Germany and the other was arrested in Canada. Extradition proceedings are underway in Germany and Canada. The two defendants allegedly submitted over 1,700 claims for pandemic unemployment benefits in over 25 different states and allegedly filed approximately 2,300 fraudulent income tax returns seeking over \$7.1 million in refunds.

¹ See <https://www.justice.gov/usao-edca/pr/new-jersey-man-sentenced-675-years-prison-schemes-steal-california-unemployment>.

² See <https://www.justice.gov/usao-edmi/pr/detroit-man-pleads-guilty-stealing-16m-unemployment-insurance-benefits>.

³ See <https://www.justice.gov/usao-wdwa/pr/two-nigerian-citizens-indicted-attempting-defraud-united-states-over-25-million>.

—In April 2022, a Nigerian national was sentenced to 4 years’ imprisonment for using stolen identities to attempt to obtain over \$600,000 in fraudulent COVID–19 unemployment insurance benefits from Massachusetts and other states.⁴

—In September 2021, a Massachusetts man pleaded guilty to wire fraud for using stolen identities to file over 85 fraudulent COVID–19 unemployment benefit applications, resulting in a loss of over \$450,000.⁵

The U.S. Attorneys’ Offices have collaborated with numerous investigative agencies and Department components to combat unemployment insurance fraud. For example, the Criminal Division’s Fraud Section, with valuable assistance from the U.S. Attorney’s Office for the Middle District of Georgia, indicted eight individuals for allegedly conspiring to defraud the Department of Labor of tens of millions of dollars in Federal funds.⁶ The eight defendants, and others, allegedly caused the filing of more than 5,000 fraudulent unemployment insurance claims with the Georgia Department of Labor, resulting in at least \$30 million in stolen benefits meant to assist unemployed individuals during the COVID–19 pandemic. The defendants are each charged with conspiracy to commit mail fraud, which carries a maximum penalty of 20 years’ imprisonment. Two of the defendants are also charged with aggravated identity theft, which carries a mandatory two-year prison sentence that must be imposed consecutively with any other sentence. One defendant is also charged with money laundering, which carries a maximum penalty of 20 years’ imprisonment.⁷

—Please provide this Committee with specific, detailed data on investigations, prosecutions, convictions, and recoveries undertaken and secured by the Task Force, or otherwise associated with unemployment insurance fraud.

Answer. In response to the unprecedented scope of unemployment insurance fraud, the Department established the National Unemployment Insurance Fraud Task Force (NUIFTF) within the Organized Crime Drug Enforcement Task Forces (OCDETF) to maximize the synchronizing impacts of multi-agency, prosecutor-led investigations. The NUIFTF is a multi-agency task force with representatives from the FBI, the Department of Labor, the Office of the Inspector General, the Internal Revenue Service, Criminal Investigation Homeland Security Investigations, the Department of Homeland Security, Office of the Inspector General, the U.S. Postal Inspection Service, the U.S. Secret Service, the Social Security Administration, the Federal Deposit Insurance Corporation, Office of the Inspector General, the Pandemic Response Accountability Committee, and other agencies. The NUIFTF does not prosecute pandemic relief fraud cases. Instead, it works to analyze relevant data using the largest repository of Federal criminal case data secured at the OCDETF Fusion Center to identify significant COVID–19 pandemic relief benefit fraud leads for investigation and potential prosecution, assist ongoing pandemic relief investigations, and provide guidance and training to prosecutors and law enforcement partners. To date, the NUIFTF has developed leads with potential losses of hundreds of millions of dollars, referring those leads to the COVID–19 Fraud Enforcement Strike Forces and other U.S. Attorney’s Offices across the country for investigation. The NUIFTF and its members have also worked closely as part of the COVID–19 Fraud Enforcement Task Force to assist and support the forfeiture efforts underway across the country to recover COVID–19 benefits.

QUESTIONS SUBMITTED BY SENATOR LISA MURKOWSKI

Question 1. The 2022 Violence Against Women Act (VAWA) included my Alaska Public Safety Empowerment pilot project, which will empower a limited number of Alaska Tribes, a total of 30, to exercise special criminal jurisdiction over defendants who commit certain covered crimes, as outlined in the law, that occur in Native villages in Alaska. Tribes will have to apply to the Department of Justice to participate. The Attorney General, in consultation with the Secretary of the Interior and affected Indian tribes, is directed to establish a process to designate Indian tribes to participate in the pilot program.

⁴ See <https://www.justice.gov/usao-ma/pr/new-york-man-sentenced-role-fraud-and-money-laundering-schemes>.

⁵ See <https://www.justice.gov/usao-ma/pr/dudley-man-pleads-guilty-theft-and-misuse-covid-19-pandemic-assistance>.

⁶ See <https://www.justice.gov/opa/pr/eight-individuals-charged-alleged-30-million-unemployment-benefits-scheme>.

⁷ See <https://www.justice.gov/opa/pr/eight-individuals-charged-alleged-30-million-unemployment-benefits-scheme>; <https://www.justice.gov/criminal-vns/case/united-states-v-tyshion-nautesehicks-et-al>.

—When does the Department plan to announce the procedure for designating tribes to participate in the Alaska pilot?

Answer. The Department formally announced its implementation plan for the Alaska Pilot Program on Friday, October 20, 2023. The implementation plan was developed after extensive consultation and coordination with Tribes.

In June 2022, the Justice Department convened an intradepartmental Alaska Pilot Program Working Group. Tribal consultations, which included representatives from the Department of Interior, began in July 2022. Based on feedback received during those consultations, the working group formulated a three-track process for the Pilot Program that meets the requirements set forth in VAWA 2022 and provides Tribes with requested support.

Under Track One, all Alaska Tribes are invited to join an Alaska-specific Inter-Tribal Technical Assistance Working Group (ITWG) on special Tribal criminal jurisdiction to receive technical assistance and peer-to-peer support. This Alaska-specific ITWG will be supported by an Office on Violence Against Women technical assistance award to the Alaska Native Justice Center and its partners.

Under Track Two, any Alaska Tribe may opt to become a Preliminary Pilot Program Tribe by completing a questionnaire to assess their readiness to exercise special Tribal criminal jurisdiction and identify any gaps in meeting the statutory requirements for exercising special Tribal criminal jurisdiction. Each Tribe that completes a questionnaire will be assigned a Federal liaison, who will work alongside the Alaska Technical Assistance Provider to assist the Tribe in addressing unmet requirements and further building their criminal justice system capacity.

Under Track Three, an Alaska Tribe may seek Attorney General designation as a Participating Pilot Program Tribe by completing the same questionnaire used for Track Two. Department staff who review the questionnaire will either recommend Attorney General designation or invite the Tribe to participate (or continue to participate) in readiness activities under Track Two.

This framework will permit any Tribe in Alaska to take part in the Pilot Program, without requiring any commitment to ultimately seek Attorney General designation. Importantly, it provides a mechanism for Alaska Tribes to receive Federal guidance and technical assistance to develop their criminal justice capacity.

Question 2. The 2022 VAWA also directs the Attorney General to establish an Alaska Tribal Public Safety Advisory Committee not later than March 15, 2023. The ability for tribes, the State, victim service providers, and law enforcement to coordinate efforts is of great importance to addressing the rural public safety crisis in Alaska.

—Can you share how the President’s budget will support both the Alaska Public Safety Empowerment Pilot as well as the Public Safety Advisory Committee?

Answer. It is worth noting that VAWA 2022 does not provide any funding specifically allocated to support the Alaska Pilot Program. The Fiscal Year (FY) 2024 President’s Budget for the Department of Justice, however, includes support for multiple grant programs that support tribal justice systems, including tribal courts, prosecution, law enforcement, and victim services, and the Department hopes that Alaska Tribes planning to implement Special Tribal Criminal Jurisdiction (STCJ) through the Alaska Pilot Program will access this funding. The FY 2024 President’s Budget for the Office on Violence Against Women (OVW), which totals \$1 billion, includes \$104.7 million in funding that supports programs and initiatives for tribal communities, \$23.7 million more than the FY 2023 Enacted Budget. Of this amount, \$85.2 million comes from statutorily mandated set-asides from other OVW grant programs and \$19.5 million from direct appropriations. Of particular note, the FY 2024 request for OVW includes \$15 million total for both OVW’s Tribal Jurisdiction Grant Program and Tribal Reimbursement Programs. The Tribal Jurisdiction Grant Program funds can be accessed by Alaska Tribes to advance their criminal justice systems and to prepare to seek Attorney General designation under the Alaska Pilot Program. Tribes also are eligible applicants for many of OVW’s discretionary (competitive) grant programs. Additionally, the President’s FY 2024 Budget request for the Office of Justice Programs (OJP) includes \$60 million to support the Tribal Justice System Infrastructure Program, Tribal Court Program, and Tribal Civil and Criminal Legal Assistance, among other initiatives. The President’s FY 2024 Budget request for the Office of Community Oriented Policing Services (COPS) also allots \$6 million to support the Tribal Access Program, which provides tribal access to national criminal databases.

In FY 2023, OVW took steps to make funding available to support the Alaska Pilot Program by issuing an FY 2023 STCJ: Targeted Support for Alaska Native Tribes Special Initiative, which is designed for Alaska Tribes to develop their crimi-

nal justice systems, including in advance of seeking Attorney General designation as participating tribes able to exercise STCJ. This funding, as well as technical assistance supported by OVW, will help Alaska Tribes prepare to meet the statutory requirements for exercising STCJ under the Alaska Pilot Program. Tribes are not committed to seeking designation under the Alaska Pilot Program by accepting the funds but can use the funds to strengthen Tribal justice systems and undertake other activities that would prepare them to seek designation. Under this initiative, OVW has made two five-year awards of \$1.5 million each to Chickaloon Native Village and the Village of Dot Lake.

As further illustration of the Department and OVW's commitment to Alaska and Alaska Tribes, OVW has hired two staff based in Alaska, and members of OVW's Tribal Affairs Division will be in Anchorage in December for capacity-building with Tribes.

—When is the Alaska Public Safety Advisory Committee going to be established?

Answer. The Alaska Public Safety Advisory Committee (APSAC) was established and its inaugural meeting was held on May 25, 2023.

APSAC is an advisory body that focuses on improving the criminal justice systems, crime prevention, and victim services of Indian Tribes and the State of Alaska, as well as increasing coordination and communication among Federal, Tribal, state, and local law enforcement agencies. During the week of April 24, 2023, the APSAC meeting was initially announced to the Alaska Missing or Murdered Indigenous Persons (MMIP) working group members. The members of the Alaska MMIP working group includes Federal, state, municipal, Tribal, and non-governmental partners.

Additionally, more than 800 Tribes and Tribal agencies, law enforcement, victims services, and other interested participants were invited to participate in the APSAC. The U.S. Attorney's Office for the District of Alaska is trying to be as inclusive as possible and expects APSAC membership to evolve over time. The first meeting was held virtually via WebEx, a web-based videoconferencing platform. The purpose of the introductory meeting was to establish a meeting schedule and identify interested participants who will be available to meet regularly to accomplish the goals of the APSAC. The second meeting of the Alaska Tribal Public Safety Advisory Committee was held in October 2023 in Anchorage. The Associate Attorney General attended the October meeting and delivered remarks recognizing the region's public-safety challenges.

Question 3. We are in a grave situation with the Crime Victims Fund (CVF). Organizations in Alaska have repeatedly raised concerns about the possible shortfall of deposits into the CVF, and the negative affect this would have on the services they provide. We have heard reports that deposits into the fund these first few months of the year are promising, but there is still a lot of uncertainty regarding the sustainability of the fund.

—What is the Department doing to educate its attorneys to ensure maximum deposits into the Crime Victims Fund?

Answer. The Department is grateful for Congress's efforts to pass the VOCA Fix to Sustain the Crime Victims Fund Act of 2021 (VOCA Fix). Since FY 2018, the Crime Victims Fund (CVF) balance has declined by 74% percent and the obligation cap has been lowered. As a result, the allocations for all states and territories have decreased. Since enactment, more than \$1 billion has been deposited into the CVF through October 2023 from non-prosecution and deferred prosecution agreements—a direct result of the VOCA Fix and the Department's efforts to increase deposits into the CVF. When the VOCA Fix passed in 2021, courts were still experiencing delays and recovering from the impacts of the pandemic, resulting in a corresponding delay in many prosecutions. As courts resume normal processes, the Department anticipates we will see the full effects of the law.

In September 2022, the Office of the Deputy Attorney General directed every component that prosecutes corporate crime to create or update an existing self-disclosure program. The incentives offered through our voluntary self-disclosure programs are meant to encourage additional reports of misconduct, which can result in additional resolutions that can provide more resources to the CVF.

The Office for Victims of Crime (OVC) is the office within the Department responsible for administering the grant program funded by the CVF. OVC has met with other offices within the Department, including the offices responsible for the largest contributions to the Fund (Antitrust Division, Criminal Division, Executive Office for U.S. Attorneys) to discuss the Victims of Crime Act and the resources and support provided to victims stemming from criminal case fines and penalties. This engagement with U.S. Attorneys facilitates further understanding and awareness of

the CVF. The Department has also met with stakeholders outside the Department. In May, representatives of the Criminal Division and the Executive Office for United States Attorneys met with members of two coalitions of victim advocacy organizations to learn more about how the CVF impacts their critical work in providing victim services.

Additionally, the Department recognizes that keeping the CVF solvent is essential to providing crime victims with compensation and assistance critical for emotional, physical, and financial support in the aftermath of crime. The Department has a robust training curriculum that explains the availability of the CVF as a repository for certain fines and other criminal monetary penalties, including those resulting from Deferred Prosecution Agreements and Non-Prosecution Agreements. In addition to trainings and guidance set forth in the Justice Manual, the Department has published a number of resource materials to assist prosecutors in ensuring that asset recovery is taken into consideration at every stage of a criminal prosecution. Moreover, the Department affirmatively informs prosecutors of any legislative changes that affect the CVF. For example, the Department immediately educated prosecutors on the changes made by the VOCA Fix.

—Trends on deposits into the CVF have not rebounded. Do you think there are structural reasons why the Department is collecting less in fines, fees, and penalties than were anticipated?

Answer. Providing services and support for victims remains a top priority for the Department and OJP. In FY 2024, the President's budget requests an obligation cap of \$1.2 billion for victim programs supported by the Crime Victims Fund (CVF). The proposed reduction in FY 2024 sought to align spending with estimated projections for revenue at the time the Budget was formulated in order to protect the balance of CVF over the long term so that it can continue to serve victims in the years ahead. In recognition of the critical importance of CVF programs as a means to support victims of crime, the proposed funding strategy represents the most effective means to maximize funding for CVF in a sustainable manner.

Additionally, criminal monetary penalties, by their very nature, are difficult to collect. Criminal defendants may be incarcerated or deported, with no assets for making payments on these assessments. The government's ability to collect fines has also been frustrated with some interpretations of 18 U.S.C. §3572 that require the imposition of a payment schedule at sentencing in every case, rather than requiring such imposition only upon a finding that it is in the interest of justice to do so. As a result of this misinterpretation, minimal payment schedules imposed at sentencing cannot be changed later, except by the court and upon a showing of a substantial change in the defendant's economic circumstances.

Lastly, the correlation between CVF deposits and criminal investigations is complex, and smaller or larger deposits into the CVF in a given year are not an indication of the Department's approach to criminal corporate accountability. To the contrary, the Department's dedicated prosecutors and investigators work tirelessly to combat white collar crime committed by individuals and corporations alike. For example, financial penalties from criminal antitrust violations are the CVF's primary funding source. However, criminal antitrust investigations take time, as the life cycle of a major cartel investigation is typically around 5 years. The successful prosecution of antitrust cartels may lead to clusters of settlements in a given year as co-conspirators decide to seek resolution around the same time, resulting in the Antitrust Division collecting large criminal fines and penalties some years and limited fines and penalties in other years.

Question 4. The fentanyl crisis is growing, not slowing down. The number of different kinds of drugs containing fentanyl is increasing. Deaths involving drugs laced with fentanyl continue to rise. A CNN story from this month referred to my state as "one of fentanyl's deadliest frontiers." Between 2020 and 2021, fentanyl deaths in Alaska spiked by 150 percent. According to the Drug Enforcement Agency, most of the fentanyl coming into the U.S. is smuggled over land across the southern border.

—What is the Department doing to address the very serious problem in Alaska?

Answer. The U.S. Drug Enforcement Administration (DEA) launched Operation Overdrive, which is a data-driven initiative using national crime statistics and Centers for Disease Control and Prevention (CDC) data to identify hot spots of drug-related violence. Thirty-four cities participated in Phase I of Operation Overdrive, and Anchorage, Alaska is participating in Phase II. Additionally, in 2021, the Anchorage DEA District Office conducted a successful Operation Engage Campaign in Anchorage, partnering with community leaders and members from diverse backgrounds. Operation Engage provided over 100 drug prevention and education pres-

entations reaching over 10,000 participants. The operation also provided the first-ever DEA Anchorage Citizens Academy and other programs focusing on drug prevention.

As an example of an enforcement action in Alaska on April 11, 2023, a Mexican national was sentenced to 14 years in prison for his leadership role in a drug trafficking conspiracy that stretched from Alaska to at least nine other states. The organization was responsible for sending multiple kilograms of fentanyl, heroin, and methamphetamine to Alaska.¹

Federal prosecutors are also working to hold physicians accountable for their unlawful prescribing practices. In January 2023, an Alaskan physician, who illegally prescribed over two million doses of opioids was sentenced to 34 months in prison. This physician's unlawful conduct contributed to at least five overdose deaths.²

Question 5. Last year, I asked if you would work with the Bureau of Prisons (BOP) to conduct a new feasibility study for a Federal detention center in Alaska and to obtain additional halfway house capacity in the state. There was disagreement in the Department about these needs, but, as you know, the Consolidated Appropriations Act of 2023 requires BOP to conduct a study on the feasibility of establishing a BOP facility in Alaska and the feasibility of expanding Residential Reentry Centers in the state. This study was required to be completed within 180 days of enactment.

—Please update me on the status of the study and the date the Department expects the study to be completed.

Answer. The Federal Bureau of Prisons submitted the report to Congress in August 2023 regarding the feasibility of establishing a BOP facility in Alaska and residential reentry centers (RRC) in Alaska and Hawaii. When assessing a location for a possible prison, BOP must consider whether there is sufficient need in that location and resources to justify the expense and administrative undertaking of running a Federal correctional facility. BOP found that building a BOP facility in Alaska was not operationally feasible given the number of Alaskan residents in BOP custody. Additionally, BOP found that the data does not currently support expanding RRC capacity in Alaska, as the current RRC facility is underutilized.

Question 6. In June 2021, I shared with you concerns from Alaskans about the then-proposed rule purported to clarify when firearms equipped with stabilizing braces are considered a “rifle” or “short-barreled rifle” under the Gun Control Act of 1968 or “rifle” or “firearm” subject to regulation under the National Firearms Act. This rule was finalized in January of this year, and is now in effect. I am continuing to hear concerns from constituents confused about the reach of the rule, the impact on the ability of disabled persons to use stabilizing braces on firearms, and the rationale for the rule. The information provided on ATF’s website has not proved helpful to my constituents.

—Please provide, in layman’s terms, specific examples of stabilizing brace and firearm combinations that are, and are not, implicated by the rule.

Answer. The rule outlines the factors the Bureau of Alcohol, Tobacco, Firearms, and Explosives (ATF) would consider when evaluating firearms equipped with a purported “stabilizing brace” (or other rearward attachment) to determine whether these weapons would be considered a “rifle” or “short-barreled rifle” under the Gun Control Act of 1968, or a “rifle” or “firearm” subject to regulation under the National Firearms Act. The rule’s amended definition of “rifle” clarifies that the term “designed, redesigned, made or remade, and intended to be fired from the shoulder” includes a weapon that is equipped with an accessory, component, or other rearward attachment (e.g., a “stabilizing brace”) that provides surface area that allows the weapon to be fired from the shoulder, provided other factors, as listed in the definition, indicate the weapon is designed and intended to be fired from the shoulder.

The rule does not affect “stabilizing braces” that are objectively designed and intended as a “stabilizing brace” for use by individuals with disabilities, and not for shouldering the weapon as a rifle. Such stabilizing braces are designed solely to conform to the arm and not as a bumpstock.

¹ <https://www.justice.gov/usao-ak/pr/leader-multistate-drug-trafficking-organization-sentenced-14-years-federal-prison>.

² <https://www.justice.gov/usao-ak/pr/wasilla-doctor-sentenced-illegal-prescriptions-resulted-five-deaths>.

ATF provides examples on its website of some of the types of commercially available firearms with attached stabilizing braces that are short-barreled rifles.³ Additionally, ATF's website includes examples of some of the types of common weapon platforms with attached "stabilizing brace" designs that are short-barreled rifles.⁴ An example of this would be the type of common weapon platform with attached stabilizing brace that is a short-barreled rifle—essentially a shortened version of an AR-15 style rifle marketed as a pistol—used in a mass shooting in Boulder, Colorado on March 22, 2021.⁵

QUESTIONS SUBMITTED BY SENATOR SHELLEY MOORE CAPITO

Question 1. The opioid crisis continues to devastate West Virginia, and tragically we continue to have the highest overdose death rates in the nation, exacerbated by fentanyl flooding our state and our country.

Combatting the spread of fentanyl, and dangerous mixed-use drugs like xylazine, must be a priority in order to save lives. I have introduced a bill with Senator Klobuchar—the STOP Act 2.0—which will bolster efforts to prevent fentanyl from being shipped into the United States.

This legislation will in part require the DOJ to collaborate with other Federal agencies to implement an all-hands-on-deck approach to combat fentanyl trafficking, and I hope to work closely with my colleagues to see this passed.

—As Congress works on bipartisan bills to prevent fentanyl from entering our country and our communities, what extra steps will DOJ take independently to fight the scourge of illicit drugs?

Answer. The Department is using all available resources to combat drug trafficking, increase access to evidence-based treatment, and prevent drug overdose and poisoning deaths in the United States. The Department is working closely with law enforcement agencies here and abroad to stop deadly synthetic drugs from flooding into our neighborhoods and to aggressively investigate and prosecute those responsible for manufacturing and trafficking these drugs.

INVESTIGATIVE AND PROSECUTION EFFORTS

The Department has investigated hundreds of fentanyl cases that have led to significant arrests, seizures, and prosecutions, including many with direct links to the Mexican cartels responsible for the majority of the fentanyl in the United States, most notably the Sinaloa and Jalisco New Generation cartels. DEA, for example, has built an entirely new strategic layer with two counter threat teams for the Sinaloa Cartel and the Jalisco Cartel. These counter threat teams map the cartels, analyze their networks, and develop targeting information on the cartel members wherever they operate around the world.

These efforts are producing significant results. On April 14, 2023, the Department announced charges against a subset of members and associates of the Sinaloa Cartel, known as the Chapitos, for their role in the transportation of lethal amounts of fentanyl, cocaine, heroin, and methamphetamine into the United States. The charges were the product of proactive enforcement efforts and the dedication of significant prosecutorial resources. (In September, Sinaloa leader Ovidio Guzman Lopez was also extradited to face charges in the United States.) Moreover, DEA announced the results of "Operation Last Mile," a year-long national operation, targeting operatives, associates, and distributors affiliated with the Sinaloa and Jalisco Cartels responsible for the last mile of fentanyl and methamphetamine distribution on streets and social media. Operation Last Mile resulted in the arrests of 3,337 associates of the Sinaloa and Jalisco Cartels in the United States.

Additionally, the Department has taken action against all parties involved in the prescription opioid supply chain, from manufacturers and distributors to national pharmacies, doctors, and pharmacists. Accountability has been a top priority in these efforts. For instance, in December 2022, the Department sued one of the largest prescription drug distributors in the country, alleging that over the course of nearly a decade, the company violated the Controlled Substances Act by failing to report at least hundreds of thousands of suspicious orders of controlled substances

³ See <https://www.atf.gov/rules-and-regulations/docs/undefined/bracefinalruleguidance-commerciallypdf/download>.

⁴ See <https://www.atf.gov/rules-and-regulations/docs/undefined/bracefinalruleguidance-non-commercial/download>.

⁵ See <https://www.atf.gov/rules-and-regulations/factoring-criteria-firearms-attached-stabilizing-braces>.

to the DEA as required by law. The alleged unlawful conduct includes filling and failing to report numerous orders from pharmacies that the company knew were likely facilitating diversion of prescription opioids. The Department has similarly filed lawsuits against two major chain pharmacies, alleging those companies defied Federal law, and has brought civil and criminal actions against a bevy of doctors and local pharmacies.¹

Likewise, due to the alarming increase in overdose fatalities resulting from the consumption of counterfeit pills containing fentanyl, the Department has intensified its efforts to investigate corporate entities that are involved in the production, supply, or vending of fake pills. These include investigations into e-commerce sites and social media platforms that may be allowing traffickers to sell counterfeit pills to teens and young adults, as well as investigations into companies that may be allowing precursor chemicals and equipment used to make illegal synthetic drugs to get into the hands of drug trafficking organizations.

U.S. Attorneys' Offices also work to hold those who sell deadly doses of fentanyl responsible for the deaths that result from their unlawful conduct. These significant cases require substantial resources and have been made more challenging by the Supreme Court's decision in *Burrage v. United States*, 571 U.S. 204 (2014), which can make such cases difficult to prove.

MULTI-AGENCY EFFORTS

The Department's OCDETF coordinated a multi-agency effort led by seven U.S. Attorneys' Offices to combat the fentanyl/opioid epidemic in West Virginia and neighboring states. In Operation 7 Card Draw, an alliance of more than 20 Federal, state, and local OCDETF partners, including substantial intelligence and operational contributions by several HIDTA partners, OCDETF created and launched a three-phase, national strategic initiative to focus investigative efforts on illuminating command and control elements of transnational criminal organizations smuggling fentanyl, methamphetamine, and other dangerous synthetic drugs through the mail and along highway transshipment corridors through Michigan, Ohio, West Virginia, Kentucky, and Pennsylvania. As a result of these synchronized efforts, Federal prosecutors developed eight new OCDETF cases against criminal networks targeting dozens of high-level criminals responsible for the trafficking of fentanyl, opioids, and comingled drugs in the Midwest region, including West Virginia.

FONSI incentivizes investigative teams to think outside—the box, target criminal organizations early in their lifecycle, and identify command and control elements of larger criminal networks responsible for importation and trafficking of opioids. FONSI brings together 14 United States Attorneys' Offices, and lead OCDETF prosecutors coordinate efforts of more than 30 Federal, state, and local law enforcement agency partners, as well as 13 regional and national HIDTA teams across the Southwest and the Pacific OCDETF regions, to investigate and prosecute fentanyl traffickers.

Additionally, the FBI uses a proactive approach to combat fentanyl via the FBI-led JCODE. JCODE began in 2018 as an FBI-led, multi-agency initiative to target criminal activity on the Darknet, particularly the trafficking of fentanyl and other opioids. The JCODE team encompasses the Department and 12 Federal law enforcement agencies working together to advance a strategic approach targeting drug trafficking organizations utilizing the Darknet to facilitate their illicit activities. JCODE announced Operation SpecTor, which the Department deemed to be the "Largest International Operation Against Darknet Trafficking of Fentanyl and Opioids."

At the local level, the FBI's Safe Streets and Gang Program uses its Safe Streets Task Forces to target violent street gangs that are increasingly distributing opioids, such as fentanyl. The FBI continues to support multi-agency task forces such as OCDETF to combat the ongoing opioid epidemic.

The Department has also demonstrated a commitment to educating the communities we serve about the dangers these opioids pose. JCODE publicized Operation ProtecTor, a proactive public outreach campaign to share information highlighting the seriousness of the opioid epidemic and the significant role of the Darknet. Other proactive FBI intelligence efforts include conducting network mapping and producing finished intelligence regarding key facilitators engaged in the production, trafficking, and financing of illicit fentanyl operations affecting the United States.

Finally, the Department's commitment to combatting the opioid crisis is clear from the creation and targeted efforts of the ARPO Strike Force, led by the Criminal

¹ USA v. Walmart, 1:20-cv-01744 (D. Del.); United States ex rel. White et al. v. Rite Aid Corp., et al., No. 1:21-cv-1239 (N.D. Ohio).

Division's Fraud Section. Since its inception in late 2018, ARPO has partnered with Federal and state law enforcement agencies and U.S. Attorneys' Offices throughout Alabama, Kentucky, Ohio, Virginia, Tennessee, and West Virginia to prosecute medical professionals and others involved in the illegal prescription and distribution of opioids. Over the past four and a half years, ARPO has charged over 115 defendants collectively responsible for issuing prescriptions for over 115 million controlled substance doses. In addition, in 2022, the Fraud Section launched the New England Prescription Opioid Strike Force to identify and prosecute unlawful prescriptions and diversion of opioids and other controlled substances in Maine, New Hampshire, and Vermont. These enforcement efforts make clear that the Department will hold accountable medical professionals who have forsaken their medical duty for profit during the opioid crisis.

LEGISLATIVE EFFORTS

The Department is working with Congress on legislative proposals to address the fentanyl crisis. In September 2021, the Administration submitted its Recommendations to Congress on Fentanyl-Related Substances. Under the Administration's proposal, the entire fentanyl-related substance class would be added to Schedule I of the Controlled Substances Act because of the similarity to fentanyl in pharmacology, structure, and potential for abuse. The Administration's proposal also includes a more expeditious off-ramp to deschedule or reschedule specific fentanyl-related substances if the Secretary of Health and Human Services finds that the specific substance does not have a high potential for abuse after a scientific and medical evaluation. The Department welcomes the opportunity to work with Congress to discuss these and other legislative proposals to address the fentanyl crisis in this country.

COMMUNITY OUTREACH

In addition to investigating and prosecuting those responsible for this crisis, the Department is committed to supporting programs aimed at addressing the substance misuse and overdose crises that is devastating communities across the nation. Several U.S. Attorneys' Offices have initiated innovative efforts to conduct outreach to their communities to educate youth about the dangers of opioids and to highlight the importance of other lifesaving tools, such as naloxone. For example, the U.S. Attorney in the Southern District of West Virginia has participated in multiple events to encourage individuals to learn how to use naloxone to save the lives of their friends and neighbors.

In September 2021, DEA launched the One Pill Can Kill initiative as a public awareness campaign to highlight the dangers of fentanyl to every household in every community. This campaign is consistent with the Department's obligation to make Americans aware of the deadly threat from counterfeit pills containing lethal doses of illicit fentanyl. DEA has also conducted a series of operational surges as part of the One Pill Can Kill campaign. In an enforcement operation ran from May to September 2022 and resulted in the seizure of more than 10.2 million fentanyl pills and approximately 980 pounds of fentanyl powder—the equivalent of 36 million potentially lethal doses. The effort also resulted in the seizure of 338 weapons, including rifles, shotguns, pistols, and hand grenades.

The Department's OJP supports state, local, and tribal public safety, public health, and behavioral health entities by serving as a critical source of funding, training, technical assistance, and research for prevention and intervention efforts to improve responses to and outcomes for individuals with substance use disorders at every point along the justice continuum. This support includes, but is not limited to, training law enforcement personnel on de-escalation and crisis intervention training; diverting individuals with substance use conditions away from the justice system, as appropriate; providing substance use treatment and recovery support services for adults and youth during incarceration and effective continuity of care upon their reentry into the community. In FY 2022, OJP awarded over \$340 million to address substance use disorders and fight the overdose epidemic.²

Question 2. Congress sent a clear bipartisan message recently that out-of-control crime must be stopped when we overturned the DC Council's ill-conceived and dangerous criminal code reform. However, I remain concerned that this administration's soft-on-crime rhetoric and policies will impede any serious ability to make our communities safer.

² <https://www.justice.gov/opa/pr/justice-department-awards-more-340-million-address-substance-use-disorders-and-fight-overdose>.

—How will the department help our smaller police forces, which comprise most police forces in my state of West Virginia, who are often underfunded or understaffed?

Answer. As stated at the hearing, “[t]he Justice Department is using every resource at our disposal to help protect the safety of our communities.”³ The grant funding administered by the Department’s three grant-making components, which reaches communities across America, plays a vital role in advancing this mission and supporting some of the Department’s key priorities, like reducing violent crime and gun violence; preventing overdose deaths; and upholding the rule of law.

Specifically, the Department’s COPS Office strives to meet the needs of all law enforcement agencies across the country, especially those agencies serving small populations. Small and rural agencies are facing increasing rates of crime and disorder—and often have dwindling resources with which to combat them. The COPS Hiring Program (CHP) is created by statute to provide half of the available annual officer hiring funding to agencies serving populations under 150,000. The majority of the hiring grants are awarded to agencies serving even smaller populations. Under CHP, the COPS Office gives priority consideration to jurisdictions in areas with persistent poverty and jurisdictions from rural areas. The total request for the CHP in Fiscal Year 2024 is \$388 million in discretionary funding and more than \$2 billion in mandatory funding under the President’s Safer America Plan for CHP for FY 2024 and nearly \$11 billion over 5 years in total mandatory funding.⁴ The President’s Safer America Plan calls for investments to support 100,000 new officers through the CHP.⁵

Further, OJP’s Bureau of Justice Assistance supports several grant programs designed to meet the needs of small and rural law enforcement agencies. For example, the Rural and Small Department Violent Crime Reduction Program supports small and rural agencies in their efforts to combat violent crime and the Supporting Small, Rural, and Tribal Law Enforcement Agency Body-Worn Camera Policy and Implementation Program provides funding to small, rural, and tribal law enforcement agencies seeking to initiate or expand a body-worn camera program.

In addition to grant programs, other resources are available, including an expansive library of free publications and other tools that provide practical guidance and information on a wide variety of topics related to law enforcement:

- 2020 publication on Recruiting and Retaining Officers in Small and Rural Agencies, which was based on the discussions from a 2019 forum focused on the challenges such agencies face in attracting and keeping officers.
- 2021 publication available for download on Evidence-Based Crime Reduction Strategies for Small, Rural, and Tribal Agencies, which so often have different problems and different needs from the large, urban agencies where most law enforcement research is conducted.
- Publications on officer safety and wellness in smaller and rural communities, as well as two reports summarizing a series of conversations held across the country in late 2019 and early 2020 with rural law enforcement leaders.
- On-line training portal, which hosts no-cost training on a variety of topics of interest to the field.

Question 3. We share concern about staffing challenges at our Federal penitentiaries. These challenges at the local level are impacting state resources where—for example in West Virginia—we have had to use our national guard at Federal facilities.

I recently had a very productive conversation with Director Peters and applaud the efforts to offer signing and retention bonuses, but I remain concerned about how staffing issues can create dangerous situations at places like at Hazelton in West Virginia.

—Can you speak to your thoughts and the Department’s actions on where we can work together in this area?

Answer. Maintaining fully staffed institutions is a key priority for the BOP and the Department. Adequate staffing levels give the BOP flexibility and stability needed to carry out its mission, including increased capacity in First Step Act programs, and are critical to the safety and security of our institutions, wellness of our employ-

³ See Attorney General Merrick B. Garland Delivers Opening Statement Before the Senate Judiciary Committee (March 1, 2023), <https://www.justice.gov/opa/speech/attorney-general-merrick-b-garland-delivers-opening-statement-senate-judiciary-committee>.

⁴ See https://www.justice.gov/d9/2023-03/cops_fy_2024_pb_narrative_-_omb_cleared_-_03.16.23.pdf.

⁵ Id.

ees, and better outcomes for those in our custody. BOP facilities use a variety of recruitment and retention incentives to attract and keep employees. The Department appreciates your continued support of those efforts for BOP to offer competitive compensation to candidates for all kinds of positions. The BOP has engaged in an aggressive marketing campaign that uses strategies that promote BOP awareness, increase candidate engagement, and drive quality individuals to apply for targeted roles nationwide. The BOP saw an increase in the number of new hires during the beginning of 2023 compared to the same period in 2022.

SUBCOMMITTEE RECESS

Senator SHAHEEN. And the Committee stands in recess until Tuesday April 18, when we will hold a hearing with NASA and the National Science Foundation.

Thank you, Attorney General Garland.

Attorney General GARLAND. Thank you.

[Whereupon, at 4:18 p.m., Tuesday, March 28, the subcommittee was recessed, to reconvene subject to the call of the Chair.]

COMMERCE, JUSTICE, SCIENCE, AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 2024

TUESDAY, APRIL 18, 2023

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

The subcommittee met at 2:38 p.m., in room SD-192, Dirksen Senate Office Building, Hon. Jeanne Shaheen (Chair), presiding.

Present: Senators Shaheen, Murray, Reed, Van Hollen, Peters, Moran, Kennedy, and Britt.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AND THE NATIONAL SCIENCE FOUNDATION

OPENING STATEMENT OF SENATOR JEANNE SHAHEEN

BUDGET CUTS AND DECLINING NSF INVESTMENTS

Senator SHAHEEN. Good afternoon. The Subcommittee on Commerce, Justice, Science, and Related Agencies of the Senate Committee on Appropriations will come to order.

It is nice to be part of a subcommittee and I think now the Full Committee that has worked in such a bipartisan manner and I very much appreciate the collaboration with Ranking Member Moran that we have enjoyed and I'm sure we will see that continue throughout this bill process, as well.

I also appreciate the leadership of Chair Murray and Vice Chair Collins in making clear that we are going to go ahead and mark up bills and that we expect things to get to the Floor. So hopefully we will continue to repeat that and that will be true.

With that, I would like to welcome today's witnesses, NASA Administrator Bill Nelson and the National Science Foundation Director Sethuraman Panachanathan, Dr. Panch. I'm getting better.

I also want to welcome Chair Murray. You didn't hear me say how much I appreciate the leadership of you and Senator Collins on the Committee and the return to regular order. So thank you both for being here.

And, Dr. Panch, thank you for joining me in New Hampshire last fall. I know you're coming back and I know that Administrator Nelson has also been to New Hampshire and you're coming back. So I'm looking forward to that.

Whether developing the future of artificial intelligence or nuclear propulsion, the agencies that you both represent are on the cutting

edge of technological innovation and instrumental in training the next generation of scientists, in particular, scientists in the STEM fields, which are so important to our future economic competitiveness in this country.

Now I should begin with pointing out that this has been a very good year for both of your agencies. Building off of the bipartisan CHIPS and Science Act, NSF established the Technology Innovation and Partnerships or the TIP Directorate. This is the first new directorate in 30 years and TIP will leverage NSF's successes and allow the agency to more rapidly advance technological innovation.

And, of course, as for NASA, the images from the James Webb Space Telescope have already reshaped our understanding of the universe and all of those pictures are just getting started.

The Double Asteroid Redirection Test or DART changed the orbit of an asteroid and then, of course, NASA successfully launched Artemis I traveling 1.4 million miles around the moon and back over its 25-day journey. It serves as a major first step to return humans to the moon.

So I know we all can't wait for Artemis II and you just announced the new four-person crew which includes a woman and a person of color. So that's very exciting, as well.

I'm very proud that New Hampshire plays an important part of these successes with our universities, like the University of New Hampshire that has led NASA science missions, including GLIMR and HelioSwarm, and is competing for the NSF Regional Innovation Engines, and Granite State companies like RDF Corporation and Spincraft, which are making major contributions to the NASA Artemis missions.

However, even as we celebrate these major achievements, we can't take our continued leadership for granted. Our global competitors, especially China, are not waiting idly by. They are investing heavily in scientific and technological innovation, and I'd like to remind so many people when they talk about our competitive edge that when we were in a government shutdown several years ago, China was landing on the dark side of the moon. So it is imperative that we keep pace, that we stay focused, and that makes the work of the subcommittee all the more important.

So that's why I'm pleased that in the fiscal year 2023 Omnibus Congress on a bipartisan basis provided more than \$1 billion in an increase for the NSF, that's the largest increase ever for the National Science Foundation, and a 1.3 billion increase for NASA.

President Biden's fiscal year 2024 budget request for NASA and NSF build on this progress. The President's request includes 11.3 billion for NSF, which is an increase of 1.44 billion or 16 percent above the total 2023-enacted level. For NASA, the fiscal year 2024 request is 27.2 billion, an increase of 1.8 billion or percent above the 2023-enacted level. These requests are important as we think about the innovations that we need to achieve in the coming years.

Now I know that there are also some issues with the requests. In particular, I'm concerned with the cost overruns in the NASA Science Directorate that have led to proposed cuts to NASA Heliophysics for the second budget request in a row and, Administrator Nelson, we will get to the bottom of that between you and me.

I'm also concerned that both agencies have proposed insufficient levels of investment to address the highest priorities of recent decadal surveys.

Now, as I said, in conclusion, we can't afford to take our continued leadership for granted. That's why I'm such a strong supporter of NASA and NSF. Your agencies drive us onward through curiosity-driven inquiry and exploration and they ensure that the foundation for the future is built in the United States.

With that, I will turn to my Ranking Member Senator Moran.

U.S. ECONOMIC FUTURE AND NATIONAL SECURITY

STATEMENT OF SENATOR JERRY MORAN

Senator MORAN. Chair, thank you very much, and I appreciate your recognition of the efforts of the Members of this Committee and the subcommittee and hopefully the Full Committee, as well, to work in a bipartisan way.

Certainly it is a pleasure to do that in general and specifically desirable and enjoyable to do that with you, with NASA, and with NSF. I appreciate both of our witnesses who are here today, and I've learned that both of them intend to be in your home State twice and so I would reup my invitation that they can return to Kansas so that we can stay equal in our opportunities with NSF—

Senator SHAHEEN. It's easier to get to New Hampshire.

Senator MORAN. And with that,—

[Laughter.]

Senator MORAN. I haven't been to New Hampshire. I haven't been there. Let me thank both of our witnesses today for what they do on behalf of this country. It's a demanding job they each have. A lot of this has to do with our economic future and our national security and this is really important in these challenging times.

I'm going to forego the rest of my opening statement because—

Senator SHAHEEN. Oh, darn.

Senator MORAN [continuing]. The Intelligence Committee is meeting at the same time today and I'm going to be there. I'm going to stay long enough to hear the witnesses and ask my questions, but I want to try to shorten up the time that I occupy.

Having said that, Bill Nelson, I wanted to thank you for the opportunity to visit with the Artemis astronauts by phone. What an exceptional group of people. It gives me great pride to see how NASA has chosen this team and the diversity is welcomed, as well.

I would tell you as someone who has visited the Cosmosphere, you, Bill Nelson, the commander on behalf of the crew indicated to me do you know that you have the best space museum on Planet Earth in Kansas? I've repeated it more than once and I'm repeating it today for the purpose of Kansans knowing that and Americans, as well, as given the stamp of approval by the Artemis astronauts.

I look forward to hearing your testimony.

Senator SHAHEEN. Thank you very much, Senator Moran, and we will include your full statement for the record.

Senator MORAN. Thank you.

Senator KENNEDY. So we can get his full statement to read later?

BIPARTISANSHIP AND CIVILITY

Senator SHAHEEN. Absolutely. I'm sure he would be willing to share it with you right now.

Senator KENNEDY. I would love a copy.

Senator MORAN. While we have talked about bipartisanship, perhaps we should have lessons in civility.

Senator SHAHEEN. Let me begin by asking Administrator Nelson if he would begin and then we'll go to Dr. Panch.

STATEMENT OF BILL NELSON, ADMINISTRATOR, NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

CURRENT PROJECTS AT NASA

Mr. NELSON.: Madam Chair, Madam Big Chair, Senator Moran, Senator Kennedy, I miss you guys, but I can tell you, you have given me not only a very challenging job when you confirmed me, but it is a very exciting job because we're going back to the moon and then we're going to Mars and beyond with humans.

We're already on the surface of Mars with a truck-size rover that is digging these cores and there are 10 of them and titanium tubes about that big that are on the surface. They're putting another 30 in the rover and so when we go back with another lander, if the rover called Perseverance is still working, then it's going to come over to the lander and deposit the 30 tubes. If it is not working, the backup interestingly is the lander has two helicopters.

Now as you know, this rover that's landed had a helicopter just to see if we could fly in the martian atmosphere, one-percent as dense as Earth's atmosphere and, lo and behold, not only has it flown, yesterday it flew its 50th mission, the little helicopter Ingenuity.

As a backup, just to give you some of the excitement that goes on at NASA, as a backup, two helicopters are going to be on the next lander that could then go over and pick up the 10 samples on the surface as a backup bringing them over to the lander, which then has the ascent vehicle which will rendezvous with the European vehicle that then brings it back to Earth and that's just one program.

Madam Chair, you mentioned already so much else that we've done, the telescope, DART, all the science that we're doing. For each one of you, I appreciate you all being here because you have big time space in each of your States.

Madam Full Committee Chair, of course, the Boeing Company located there. Senator Kennedy, the Boeing Company that is putting together the core of this big rocket called the Space Launch System. Senator Britt with all of the space activity that she has in her State, including the Marshall Space Flight Center, which is the center, by the way, that started over half a century ago, all of our successful efforts to get a human being in space, and Senator Moran has just exquisite aeronautics and remember that's the first A in NASA is aeronautics, and, Senator Shaheen, the University of New Hampshire that does so much in Heliophysics, and so I'm going to curtail my remarks because you already said it, Madam Chair, and I'm going to give my friend over here, who's doing a

great job, Panch. He is a true scientist of the first order with first-class science that is coming out of his agency.

I'll stop right there, Madam Chair.

[The statement follows:]

PREPARED STATEMENT OF THE HONORABLE BILL NELSON

Chair Shaheen, Vice Chair Moran, and Members of the Subcommittee, I am pleased to be here to discuss the President's \$27.2 billion request for NASA for Fiscal Year 2024. NASA has set a bold vision for the future, one defined by innovation and exploration throughout the heavens. This request will help prepare NASA to make that vision a reality, through investments in human and robotic exploration throughout our solar system, Earth science, groundbreaking technology, the next generation of air travel, and educating our Nation's future explorers. It's an investment to support good-paying jobs, businesses, and schools that partner with NASA in all 50 states. This request supports almost 150 missions, and I would like to highlight a few for you today.

In November 2022, NASA took the first major step in America's return to the Moon with the Artemis I mission. That historic launch and 25-day mission tested the Space Launch System, Orion spacecraft, and Exploration Ground Systems in preparation for Artemis II in 2024, which will carry humans beyond low-Earth orbit for the first time in more than 50 years. That mission will be followed by Artemis III in 2025, which will return astronauts to the surface of the Moon. The Budget requests more than \$8 billion for the Artemis program, putting the nation on a path to annual crewed missions to the surface of the Moon starting with Artemis IV in 2028.

Through the Artemis campaign, NASA is partnering with the broadest exploration coalition in history, including multiple international and commercial partners. Together, we will continue to develop the technology and systems needed to live and work on and around the Moon in preparation for human missions to Mars. The Budget makes investments in the long-term architecture for Artemis, including enhancements to the Space Launch System, new ground infrastructure, the Gateway lunar space station, space suits, and competition in the Human Landing System program that will enable the first woman and person of color to walk on the Moon.

The missions of tomorrow will be enabled by the technology development of today. With an investment of nearly \$1.4 billion for space technology, the Budget funds development of communications and power systems needed for long-duration stays on the Moon. Investments in new capabilities like advanced propulsion and landing systems will enable humanity's next giant leap to Mars.

The \$4.5 billion request for Space Operations supports continued research on the International Space Station (ISS) with regular crewed missions to this orbiting laboratory through 2030. There, NASA astronauts conduct research on the risks associated with future deep space exploration missions and perform groundbreaking experiments on human health that benefit life on Earth. Increasingly, the ISS is hosting experiments that look back at Earth to help us observe and understand changes to the planet. The Budget positions NASA to continue the space station's legacy in low-Earth orbit after its planned retirement in 2030, with investment in the development of commercial space stations, while also investing in a U.S. capability to safely deorbit ISS at the end of its life. Collectively, these investments will pave the way for sustained American presence in orbit and create scientific and economic opportunities.

In 2022, NASA had the world on the edge of their seats as we revealed the first images from the James Webb Space Telescope. The \$8.3 billion request for science will continue world-leading missions like Webb, Hubble, and Perseverance, as well as enable the next generation of great science with the Nancy Grace Roman Space Telescope, Mars Sample Return, Europa Clipper, Dragonfly, and more. The FY 2024 Request is the highest request for NASA science in history, supporting over 120 NASA science missions and 10,000 U.S. scientists through more than 4,000 openly competed research awards.

Over the past three decades, much of what we have learned about the Earth system has been built on NASA satellite observations and research. The Budget will build on that legacy by funding the next generation of Earth observatories that will give us a 3D-holistic understanding the Earth's systems. The Budget request will make NASA's Earth science data more accessible to Federal, state, and local governments, universities, researchers, and the public through the development of the Earth Information Center and other data initiatives. NASA's direct observations, made on and above Earth's surface, put humanity in the best position to measure

and respond to changes in our environment while confronting challenges that impact all of humanity. Focusing our efforts on the Earth, planetary defense, orbital debris, and the safety, security, and sustainability of space will equip policymakers with the best information possible to protect our planet.

Through ambitious experimental programs, including the X-57 electric aircraft, X-59 low boom supersonic aircraft, and the Sustainable Flight Demonstrator, NASA is poised to revolutionize the future of air travel and keep U.S. industry competitive in the global marketplace. The Aeronautics budget request of almost \$1 billion will put the U.S. aviation industry on a path to meet the ambitious goal of net zero emissions by 2050. We are accelerating research and development of aircraft technologies that are safer, faster, and more fuel efficient.

NASA has always dared to make the impossible possible. To do so, the \$158 million request for the Office of STEM Engagement will build the workforce of tomorrow by broadening student participation, expanding K-12 student engagement, and building partnerships to magnify our reach.

NASA's success is made possible by our world class workforce and enabled by our physical infrastructure. The Budget request contains investments to ensure NASA infrastructure, laboratories and critical facilities are safe, secure, and mission ready. Robust investment in construction, revitalization, and maintenance of facilities is essential to ensure NASA can meet our mission requirements.

The President's Budget request for NASA is an investment in our Nation's future. It is an investment in U.S. innovation and competitiveness, and it is an investment in our next generation of workers. It will prepare America to compete—and succeed—in the 21st century.

Senator SHAHEEN. Well, thank you very much.

I'm pleased to see that neither of you are enthusiastic about the work that you're doing.

[Laughter.]

Senator SHAHEEN. Dr. Panch.

STATEMENT OF SETHURAMAN PANACHANATHAN, DIRECTOR, NATIONAL SCIENCE FOUNDATION

FISCAL YEAR 2024 BUDGET AND NSF PROJECTS

Dr. PANCHANATHAN. Thank you, Madam Chair, and thank you, Madam Chair, for being here, also, and Ranking Member Moran, and Senator Kennedy and Senator Britt for being here with us. It's truly an honor, sir, to be with you as the leader of NASA and doing great things here. As a child enthusiast and continuing enthusiast of what's happening in space, it's truly an honor to see all the great work that NASA is doing and being with you here today.

It's an honor to appear before you all again to discuss the President's fiscal year 2024 budget request for NSF and how our agency's inspiring the talent and unleashing the innovations that will keep the U.S. the global leader in science and engineering for decades to come.

First, I want to thank this Committee for your amazing support of NSF. Chair, you mentioned the historic increases to the NSF. We are absolutely grateful for that. NSF is very grateful.

The fiscal year 2023 Appropriations were the largest one-time increase in NSF's funding and it came at the most critical time. Your continued leadership and support are central to ensuring that we can meet the challenge of what is truly a defining moment in global competition.

For more than 70 years, NSF has been an important component of our Nation's success. By investing in the amazing talent this country has to offer and by attracting the brightest minds from around the world, NSF has been a catalyst for countless scientific

breakthroughs, major advancements in engineering and manufacturing, and so much more.

In doing so, NSF has powered the United States economy, transformed American lives, and helped secure our national defense. In fact, many of the key technology areas we will talk about today are rooted in decades of sustained investments by NSF in exploratory research that has transformed the way we see the world and expanded the frontiers of knowledge.

However, we are currently facing intense global competition like we have never seen before. Our competitors are investing heavily in key technologies, like artificial intelligence, quantum information science, and they seek to out-compete us.

Our ability to achieve scientific breakthroughs and unlock the promise of technology developments will determine our continued global leadership and our success is vital to our economic and national security.

CHIPS AND SCIENCE ACT AS A ROADMAP

With the passage of the CHIPS and Science Act of 2022, Congress put in place a roadmap to meet this challenge and to do so by spurring innovation in communities in every region of our country. That's what makes it exciting.

The law positions the agency to capitalize on the uniquely American research ecosystem that includes academia, private industry, the government, and other partners to quickly translate research into impacts that benefit our Nation.

The historic fiscal year 2024 budget request of 11.3 billion is fully aligned with this vision and invests in the three pillars central to achieving the goals of the CHIPS and Science Act.

First, we must strengthen our commitment to funding the fundamental exploratory-based research that is the heart of NSF's mission. We call this strengthening the established NSF.

Second, we must realize the promise of the Technology Innovation Partnership Directorate, the new directorate or TIP, as we call it, and accelerate the Nation's technology and innovation enterprise to investments and use inspired translational breakthroughs.

Finally, it is exceedingly important that we inspire talent by creating opportunities for every demographic and socioeconomic group in every geographic region of our country.

The fiscal year 2024 request includes 1.2 billion in funding for the TIP Directorate. This investment will strengthen and scale investments in breakthrough technologies, innovation, and translation. This includes 300 million for the fiscal year 2024 for the NSF Regional Innovation Engine Program, and we are really excited by the strong interest and amazing proposals we have received already.

When we first announced this funding opportunity, we received hundreds of concept papers covering every State of our nation. In the coming weeks, we will make the first planning grants and in the fall the first award for full-scale engines. These investments will empower partnerships to catalyze innovation all across our country.

This budget also invests heavily in broadening participation in STEM, an important priority. The request includes over 1.8 billion

to create opportunities everywhere and to increase the participation of underserved groups in STEM.

These activities include programs focused on building research capacity at HBCUs and minority-serving institutions, investing in EPSCoR jurisdictions, and finding new approaches to ensure that everyone has a chance to participate in the innovations of the future.

The budget also invests in critical research infrastructure, including a new MREFC Project, Major Research Equipment Facilities and Construction Project, the Leadership Class Computing Facility at the University of Texas, Austin.

The fiscal year 2024 request invests in major research instrumentation and the mixed-scaled research infrastructure that is crucial to keeping our Nation's research enterprise on the cutting edge.

Finally, NSF's role in workforce training has become increasingly important as the country makes significant investments in technology development, including semi-conductor manufacturing. These investments require strong partnerships between the Federal Government, academia, and private industry.

In the past few months, NSF has announced partnerships with Micron, Intel, IBM, Samsung, and others exactly for this purpose. It has been a pleasure to meet the researchers and students in your home States. I've had the privilege of visiting many of you and I'm going to visit more of you and it's truly a pleasure to see the unbelievable talent and ideas all across our Nation. I'm so energized by that. It is because of them I know our future is bright.

Again, I thank each of you for your amazing support of NSF. The fiscal year 2023 Appropriation was historic and the fiscal year 2024 request builds on those investments to ensure U.S. leadership in science, engineering, and technology into the future.

I look forward to working with you all to achieve the goal. Thank you, Madam Chair, for the opportunity.

[The statement follows:]

PREPARED STATEMENT OF DR. SETHURAMAN PANCHANATHAN, DIRECTOR

INTRODUCTION

Chair Shaheen, Ranking Member Moran, and Members of the Subcommittee, it is a privilege to appear before you today to discuss the National Science Foundation's Fiscal Year (FY) 2024 Budget Request to Congress, and how it builds upon 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), the National Science Foundation (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.

For more than seven decades, NSF has been a critical component in powering the United States economy, transforming American lives, and securing the national defense. Many of the technological advances we are benefiting from today such as Artificial Intelligence, Quantum Information Science, and Biotechnology are rooted in sustained investment over many decades.

However, we currently face intense global competition in the race to develop these key technology areas and to develop the workforce needed to secure the future of innovation. Our success in unlocking the promise of these and other technological developments and scientific breakthroughs will determine our continued global leadership and are central to our economic and national security.

With the passage of the CHIPS and Science Act of 2022, Congress put in place a roadmap for meeting this challenge while also spurring innovation in communities throughout the country. The law codifies NSF's new Directorate for Technology, Innovation and Partnerships (TIP), and positions the agency to capitalize on the uniquely American research ecosystem that includes academia, private industry, the government, and other partners to quickly translate research into impacts that benefit the Nation. NSF is unique in how the agency invests in research across every discipline of science, engineering and technology. Through these investments, NSF plays a major role in inspiring and training the next generation STEM workforce—through K–12 informal STEM education, technical training, support for graduate and PhD students, and experiential learning. NSF's role in workforce training has become increasingly important with the significant investments in semiconductor manufacturing, which will require strong partnerships between the Federal government, academia, and private industry to training the needed workforce.

The President's FY 2024 Budget Request of \$11.3 billion for NSF makes historic investments in these priority areas and these increases are essential to realizing the goals of the CHIPS and Science Act. In FY 2024, NSF will accelerate advancement in key technologies while strengthening support for the exploratory basic research and use-inspired innovations that have been the foundation of NSF investments for 73 years.

NSF'S THREE PILLARS

NSF's vision for the future of science and engineering research, the CHIPS and Science Act of 2022, and the FY 2024 Budget Request all stand on three core pillars. These three pillars are essential to the Nation's continued global leadership in innovation. First, we must strengthen NSF's ability to accelerate discovery and enhance state-of-the-art research capabilities through continued investment in fundamental, exploratory research. Second, we must inspire the Missing Millions by providing Science, Technology, Engineering and Math (STEM) opportunities to every demographic and socioeconomic group in every geographic region of the country. Finally, we must accelerate the Nation's technology and innovation enterprise through NSF's investments in use-inspired, translational breakthroughs by fostering partnerships and nurturing talent so the U.S. can remain a global leader in STEM.

FOUR STRATEGIC THEMES

These three pillars are the foundation for four major themes in the FY 2024 President's Budget Request for NSF—(1) Advance Emerging Industries for National and Economic Security; (2) Build a Resilient Planet; (3) Create Opportunities Everywhere; and (4) Strengthen Research Infrastructure. These themes align with the Administration's priorities of expanding basic research to tackle grand national challenges and empowering new approaches to applied research that spur technology transfer. The themes, expanded upon below, span the broad portfolio of fundamental research that is the heart of NSF's mission. They also stimulate new efforts and connect existing efforts throughout the research portfolio and implement requirements of the CHIPS and Science Act.

Advance Emerging Industries for National and Economic Security

As the U.S. faces intensifying global competition for science and technology leadership, NSF will implement the CHIPS and Science Act to strengthen and scale investments in breakthrough technologies, innovation, and translation by expanding support for basic research, nurturing technology transfer, and empowering new approaches to potential application of research breakthroughs. NSF's investment in Emerging Industries for National and Economic Security will also focus on nurturing diverse talent. Building on NSF's deep relationships with over 2,000 of America's leading research institutions, NSF will harness the innovative spirit that exists in all corners of the country. The FY 2024 Request advances research by creating conditions to expand research from the lab to the market and to society and by targeting investments in new industries and people.

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 of science and engineering. In FY 2024, \$1,185.63 million is requested for the TIP Directorate to ensure that TIP will have the transformative impacts it is designed to achieve. The TIP Directorate, in close collaboration with all of NSF's directorates and offices, advances key technology focus areas to address societal and economic challenges and opportunities; accelerates the translation of research results from the lab to the market and society; and cultivates new education pathways leading to a diverse and skilled future technical workforce comprising researchers, practitioners, technicians, entrepreneurs, and educators. Building on NSF's longstanding leadership in science and engineering research and education, TIP serves as a crosscutting platform that leverages, energizes, and rapidly advances use-inspired research and innovation. Further, TIP opens new possibilities for research, innovation, and education by catalyzing strategic partnerships linking academia; industry, startups and small businesses; Federal, state, local, and tribal governments; nonprofits and philanthropic organizations; civil society; and communities of practice to cultivate 21st century innovation ecosystems that give rise to future, high-wage, good-quality jobs and enhance the Nation's long-term competitiveness.

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. Specific programs include:

- The NSF Regional Innovation Engines (NSF Engines) will catalyze new business and economic growth in diverse regions of America that have not fully participated in the technology boom of the past several decades. \$300 million is requested in FY2024 for the NSF Engines.
- NSF's Experiential Learning in Emerging Industries (ExLENT) program will support inclusive experiential learning opportunities designed to provide cohorts of diverse learners with the crucial skills needed to succeed in the key technology focus areas and prepare them to enter the workforce ready to solve the Nation's most pressing societal, economic, national, and geostrategic challenges. \$50 million is requested for ExLENT in FY 2024.
- The NSF Entrepreneurial Fellows program will provide a diverse cohort of Ph.D.-trained scientists and engineers with resources, including lab space, to mature promising ideas and technologies from the lab to the market and society. The FY2024 Request includes \$10 million for the Entrepreneurial Fellows program.
- The Accelerating Research Translation (ART) program will support institutions of higher education that wish to build the necessary infrastructure to boost their overall institutional capacity to accelerate the pace and scale of translational research. \$45 million is requested in FY 2024 for the ART program.
- NSF's Convergence Accelerator will regionalize its approach to accelerate the translation of use-inspired research by investing in regional cohorts of transdisciplinary, multi-sector teams pursuing technology solutions to location-specific challenges in food and agriculture, disaster response and mitigation, and transportation, to name a few. \$100 million is requested in FY2024 for the Convergence Accelerator.

The FY 2024 Budget Request also proposes robust 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 investments will accelerate breakthroughs in manufacturing materials, technologies, and systems through fundamental, multidisciplinary research that transforms manufacturing capabilities, methods, and practices. The FY 2024 Request includes \$453.86 million for NSF investments that will further advanced manufacturing through advanced energy and industrial efficiency technologies, resilient manufacturing strategies, novel methods in engineering biology, next-generation materials, sustainable processes to support a circular economy, and the power of data science, automation, robotics and machine learning to intelligently design and develop future approaches that are secure, sustainable, and resilient to natural and anthropogenic disasters.
- (2) Advanced Wireless investments will advance knowledge gaps and innovations in areas critical to future generations of communications technologies and networks, such as wireless devices, circuits, protocols, and systems; mobile edge computing; distributed machine learning and inference on mobile

devices; human-machine-network interactions; and dynamic spectrum allocation and sharing, while ensuring innovation and security for all users. In FY 2024, the \$179.17 million requested for this research will provide the backbone that connects users, devices, applications, and services that will continue to enrich America's national and economic security.

- (3) Artificial Intelligence (including machine learning, autonomy, and related advances) investments will bring together numerous fields of scientific inquiry—including computer and information science; cognitive science and psychology; economics and game theory; education research; engineering and control theory; ethics; linguistics; mathematics; and philosophy—to advance the frontiers of trustworthy AI, including advancing perception, learning, reasoning, recommendation, and action in the context of specific fields and economic sectors. In FY 2024, \$796.48 million is requested for NSF investments that will support the development of new foundational AI theory and implementation techniques, as well as novel AI methods that are inspired by use cases in specific application domains and contexts.
- (4) Biotechnology investments will support fundamental research, infrastructure, and education to understand and harness biological processes for societal benefit. In FY 2024, \$470.05 million is requested to propel advances in genomics, bioinformatics and data analytics, structural and computational biology, biophysics, synthetic and engineering biology, tissue and metabolic engineering, medical technology, development of new types of biomaterials, bio-inspired data storage and microelectronics, and biomanufacturing, as well as accelerate the ability to harness biological systems to create goods and services that contribute to agriculture, health, security, manufacturing, and resilience to climate change, including natural and anthropogenic disaster prevention and mitigation.
- (5) Microelectronics and Semiconductors investments will address the microelectronics and semiconductor challenges facing our Nation due to technological and global trends, such as the end of Moore's Law and offshoring of semiconductor fabrication and manufacturing, by supporting work in semiconductor discovery, development, and fabrication, leading to future domestic and related electronics foundries, as well as the design ecosystem of secure, sustainable microelectronic systems and devices based on them. In FY2024, \$209.68 million is requested to enable future advanced computing systems, including quantum computing and networking technologies. Investments will also advance next-generation materials and highly parallel chip designs that will improve the performance of AI algorithms as well as integrate advanced energy efficiencies for low-power and high-performance devices that will drive a mobile and wireless future, and smart sensors that will interface between biosystems and electronics. Additionally, the CHIPS and Science Act provides NSF with \$200 million in appropriated funding over 5 years for microelectronics workforce development activities.
- (6) Quantum Information Science (QIS) investments will pioneer development of quantum computing, communication, sensing, and networking to advance information processing, transmission, and measurement in ways that classical approaches can only do much less efficiently, or not at all. In FY 2024, \$332.67 million is requested to develop proof-of-concept devices, tools, systems, and applications with a demonstrable quantum advantage over their classical counterparts. For example, quantum sensors will enhance resolution and detection capabilities.

Build a Resilient Planet

As the U.S. and the world continue to feel the impacts of a changing climate and the growing need for clean, reliable, sustainable energy, it is critical that we invest in knowledge and innovations that can make us more resilient to these impacts. Without resilience we are at the mercy of heat waves, droughts, floods, wildfires, rising oceans, and other extreme events, as well as the power disruptions, economic instability, food insecurity, and deleterious effects on human health that accompany them. NSF's Build a Resilient Planet initiative takes on these multifaceted challenges. The magnitude of these challenges demands an accelerated and integrated NSF-wide approach to engage scientists and engineers across disciplines through convergent research that addresses societal needs and integrates research and education.

NSF will take action to advance knowledge, empower communities, and generate innovative technological solutions. FY 2024 investments will advance the priorities of the CHIPS and Science Act and focus on action to meet the urgent demands of people, places, and economies.

Clean Energy Technology (CET) and NSF's clean-energy investments in high-risk, high-reward ideas from researchers across the science and engineering spectrum create broad new understanding and innovations that may increase energy efficiency, enhance sustainability, mitigate climate change, or lead to other societal benefits. In FY 2024, \$550.51 million is requested to invest in integrated clean energy research and education. These investments will advance the fundamental science and engineering underlying clean energy technologies and infrastructure to 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.

The U.S. Global Change Research Program (USGCRP) supports research that (1) advances scientific knowledge of the integrated natural and human components of the Earth system and (2) informs decisions by providing the scientific basis to inform and enable timely decisions on adaptation and mitigation. In FY 2024, \$1,047.06 million is requested for NSF to continue to engage with other USGCRP agencies on priorities such as 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; and understanding the impacts of global change on the Arctic region and effects on global climate. 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.

NSF's Climate Equity Fellowships will allow students and researchers to develop a deeper understanding of the disparate impacts of climate change on disadvantaged or underserved communities and equip them to work to mitigate those impacts. \$15.0 million is requested in FY 2024 for the program to train students in climate science, disparities in climate impacts on different communities, engagement with such communities, and climate-related policies, to enable them to lead and advance climate equity.

The FY 2024 Request also includes \$30.0 million to further develop the National Discovery Cloud (NDC) for Climate, a 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. \$25.0 million is also requested for NSF's Office of International Science and Engineering (OISE) Global Centers (GC) program, an international larger-scale collaborative activity to enable interdisciplinary and international teams to address grand societal challenges through use-inspired research with topics related to climate change and clean energy.

Create Opportunities Everywhere

NSF is fully committed to the development of a future-focused science and engineering workforce that draws on the talents of all Americans, in every region of the country. Create Opportunities Everywhere (COE) is a comprehensive approach for attracting, supporting, and advancing the opportunities for groups underrepresented in STEM. This whole-of-NSF strategy incorporates all directorates and offices and surpasses prior efforts by striving to ensure equity in program delivery. It focuses on expanding access and inclusion in STEM along individual, institutional, and geographic lines.

In FY 2024, NSF intends to apply four guiding principles to create and implement opportunities everywhere: (1) address research equity; (2) build capacity; (3) foster collaborations and partnerships; and (4) support the next generation of researchers. For individuals, NSF will focus on groups that are underserved and underrepresented in STEM. For institutions, NSF will be more intentional in engaging Minority Serving Institutions (MSIs) and Emerging Research Institutions (ERIs) in our programming. For U.S. states and territories, NSF will expand support for individuals and institutions in EPSCoR jurisdictions to ensure geographic diversity.

The CHIPS and Science Act authorizes NSF to support diversity at the individual, institutional, and jurisdictional levels. At the individual level, CHIPS and Science authorizes programs that empower individuals through scholarships, fellows, traineeships, and project activities that enrich STEM education at all levels. At the institutional level, awards to minority serving colleges and universities, including community colleges, will lead to greater opportunities for all students and faculty. Finally, at the jurisdictional level, NSF is working toward more geographical diversity across the portfolio, especially to rural and urban institutions that serve diverse students. The FY 2024 Request includes investments to address each of these priorities, including:

- NSF’s Established Program to Stimulate Competitive Research (EPSCoR) enhances the competitiveness of EPSCoR jurisdictions in the disciplinary domains supported by NSF. \$280.68 million is requested for EPSCoR in FY 2024.
- NSF’s Growing Research Access for Nationally Transformative Equity and Diversity (GRANTED) program will improve the Nation’s research support and service capacity at emerging and underserved research institutions. \$50 million is requested for GRANTED in FY 2024.
- The Alliances for Graduate Education and the Professoriate (AGEP) program aims to increase the number of African American, Hispanic American, Native American Indian, Alaska Native, Native Hawaiian and Native Pacific Islander (or AGEP population) faculty in STEM at all types of institutions of higher education. \$15.5 million is requested for AGEP in FY 2024.
- NSF’s Centers of Research Excellence in Science and Technology (CREST) program enhances the research capabilities of minority-serving institutions (MSI) through the establishment of centers that effectively integrate education and research. The FY 2024 Request includes \$41 million for CREST.
- The Eddie Bernice Johnson INCLUDES Initiative is a comprehensive national initiative to enhance U.S. leadership in STEM discoveries and innovations focused on NSF’s commitment to diversity, inclusion, and broadening participation in these fields. \$50.50 million is requested for INCLUDES in the FY 2024 Request.
- NSF’s Hispanic-Serving Institutions Program (HSI) builds capacity at HSIs and enhances the quality of undergraduate STEM education and increases retention and graduation rates of undergraduate students pursuing degrees in STEM fields at HSIs. \$60.5 million is requested for the HIS program in FY 2024.
- NSF’s Historically Black Colleges and Universities Undergraduate Program (HBCU-UP) enhances the quality of undergraduate STEM education and research at HBCUs. The FY 2024 Request includes \$48.50 million for HBCU-UP.
- The Historically Black Colleges and Universities Excellence in Research (HBCU-EiR) program complements HBCU-UP by enabling STEM and STEM education faculty to further develop research capacity at HBCUs. \$37.93 million is requested for the HBCU-EiR program in FY2024.
- NSF’s Louis Stokes Alliances for Minority Participation (LSAMP) program works to increase the number of STEM baccalaureate and graduate degrees awarded to populations historically underrepresented in STEM disciplines. \$70.50 million is requested in FY 2024 for LSAMP.
- The Tribal Colleges and Universities Program (TCUP) provides awards to Tribal Colleges and Universities, Alaska Native-serving institutions, and Native Hawaiian-serving institutions to promote high quality STEM education, research, and outreach. The FY 2024 Request includes \$23.0 million for TCUP.

Strengthen Research Infrastructure

Research infrastructure (RI), from individual instruments to major research facilities, is foundational to the scientific endeavor. RI has evolved significantly over the years, particularly as remote access and cyberinfrastructure have become essential components of almost every tool in use by the research community. The COVID-19 pandemic further emphasized the critical nature of these components and illustrated how they can enable ongoing efforts to expand access to RI to historically underserved groups and communities. Additionally, NSF investments in science and engineering have stimulated discovery and innovation in the design and development of novel infrastructure, giving rise to new and different forms of RI.

RI is a fundamental enabler of science and engineering advancement, of both ideas and people. Needed for all forms of fundamental research—from exploratory to solutions-oriented—RI investments enable advances in areas as varied as measurement of the evolution of carbon in the atmosphere, assessment of the rate at which glaciers are losing ice, analysis of the changes in biomass in forests, studies of the rate at which underrepresented groups are engaged in science and engineering disciplines, modeling of the epidemiology of infectious diseases, investigation of the fundamental structure of particles that make up everything in the universe, studies of biological, chemical, and physical processes at various timescales, and characterization of the contents of our solar system (including potentially hazardous asteroids). Catalyzed by the CHIPS and Science Act and by FY 2023 appropriations, investments in FY 2024 will support modernization of existing research infrastructure and the development of new infrastructure.

NSF invests in RI across this spectrum, including:

- NSF’s Major Research Instrumentation (MRI) program is responsible for catalyzing new knowledge and discoveries by helping STEM professionals acquire

- or develop the instrumentation needed for innovative science and engineering research. \$92.75 million is requested for MRI in FY 2024.
- NSF’s Mid-scale Research Infrastructure (Mid-scale RI) program is a high-priority, agency-wide mechanism that includes upgrades to major facilities as well as stand-alone projects. The goals of the Mid-Scale RI program are to (1) provide access to cutting-edge mid-scale research infrastructure, including instrumentation, (2) enable agile development and implementation of frontier scientific and engineering research infrastructure with a high potential to significantly advance the Nation’s research capabilities, and (3) train early-career scientists and engineers in the development and use of advanced research infrastructure. In FY 2024, \$155.06 million is requested for the Mid-scale RI programs Track 1 and Track 2.
- NSF’s Major Research Equipment and Facilities Construction (MREFC) (\$304.67 million) MREFC supports construction projects that require an investment of more than \$100 million. The FY 2024 Request includes \$105.61 million in funding for three ongoing projects:
 1. The Antarctic Infrastructure Recapitalization program, an enduring program that replaces the Antarctic Infrastructure Modernization for Science or AIMS project. (\$60.0 million)
 2. The two detector upgrades to operate at the High Luminosity-Large Hadron Collider (HL-LHC). (\$38.0 million)
 3. The Vera C. Rubin Observatory (\$7.61 million).
- The FY 2024 Request includes funding for one new MREFC project—the Leadership-Class Computing Facility (LCCF). Led by the Texas Advanced Computing Center (TACC) at the University of Texas at Austin, LCCF is envisioned as a distributed facility that will provide unique computational and data analytics capabilities, as well as critical software and services, for the nation’s S&E research community to enable discoveries that would not be possible otherwise. Furthermore, the project will deploy a comprehensive range of education and outreach activities that will expand and nurture our nation’s future S&E workforce in data and computational science. \$93 million is requested in FY 2024 to begin work on LCCF.
- The FY 2024 Major Facilities Operations and Maintenance (O&M) request of \$1,069.80 million supports regular O&M needed to keep a facility functional, upgrades, significant periodic maintenance, and infrastructure renewal.

RESEARCH SECURITY

The future of U.S. competitiveness requires that we safeguard these investments and take steps to address research security while also cultivating vibrant international partnerships that are critical to successes such as the first-ever imaging of a black hole. NSF plays a leading role in Federal efforts to address research security and is expanding capabilities and competencies to protect the U.S. science and engineering enterprise. In January 2022, the National Science and Technology Council’s Research Security Subcommittee, which is co-chaired by NSF, issued implementation guidance for National Security Presidential Memorandum 33 (NSPM-33) on National Security Strategy for United States Government-Supported Research and Development. In addition, the CHIPS and Science Act contained several helpful research security provisions, which NSF is in the process of implementing. NSF has engaged in robust discussions with the U.S. research community and with like-minded international colleagues to develop common frameworks for understanding and addressing research security and NSF will continue to enhance this work in FY 2024. These activities include:

- Establishing a Research Security and Integrity Information Sharing and Analysis Organization (RSI-ISAO). As required by the CHIPS and Science Act, to provide needed information and tools to the research community. NSF will ramp up the capabilities of this organization to provide additional tools, information, and resources in FY 2024.
- Establish a Research on Research Security funding program in FY 2024 that will include assessment of the characteristics that distinguish research security from research integrity and improving the quantitative understanding of the scale and scope of research security risks. This program will also seek to develop methodologies to assess the potential impact of research security threats, and assess the additional research security risks in an innovation system that includes more use-inspired research.
- NSF has established new analytic capabilities to proactively identify conflicts of commitment, vulnerabilities of pre-publication research, and risks to the merit

review system. NSF will scale up the use of these analytics to analyze all NSF awards and contribute to NSF's Small Business Innovation Research (SBIR) due diligence process in FY 2024.

- Through a partnership with the Federal government interagency community, NSF has funded awards to develop research security training modules for the research community. These modules will be available by the beginning of FY 2024 and NSF will fund the delivery of these modules and their evaluation to help researchers understand and avoid research security risks.

CONCLUSION

At a time of intense international competition, the President's Fiscal Year 2024 Budget Request is an investment in NSF's ability to generate more breakthroughs, foster more innovations that strengthen our economy and national security, and support the individuals who keep the United States a global leader in science, engineering, and technology. The FY 2024 Request reaffirms the Administration's commitment to investing in science and engineering research, creating new partnerships to keep America competitive, and breaking down barriers to participation in STEM. It is an investment in ensuring that those advances in research lead to economic impacts and good jobs, and that the STEM enterprise reflects the tremendous diversity of the Nation.

Thank you for the opportunity to testify before you today. With the continued support of this Committee and Congress, and by building upon the CHIPS and Science Act, NSF stands ready to strengthen our national and economic security and create innovation anywhere and opportunities everywhere.

NASA COST AND SCHEDULE OVERRUNS

Senator SHAHEEN. Thank you both very much for your testimony.

Administrator Nelson, I want to begin with you because last year we discussed the Government Accountability Office analysis of the cost and schedule performance of major NASA projects where GAO found that those projects are experiencing significant cost and schedule overruns.

One of those projects that comes to mind in terms of those concerns is the performance of the Mars Sample Return Mission.

So can you talk about how sure you are that that mission is going to stay within the \$5.3 billion cost that's presented in the Planetary Decadal Survey last year, and also what NASA's doing to contain costs and maintain the current schedule?

Mr. NELSON. Madam Chair, yes, I'm concerned. Space happens to be hard and a good example of that is the James Webb Space Telescope. It took twice as long. It took twice as much money, and, by the way, it never would have made it had it not been for Senator Barbara Mikulski who was the Senator from the State that represented the Goddard Space Flight Center, the Center that managed the program. Look what it's done, and it was such a high-risk mission. Once the French Ariane Rocket put it on a perfect trajectory 344 thin had to work perfectly and they did.

Space is hard. As a matter of fact, President Kennedy said this over 60 years ago at Rice Stadium when he said, "We go to the moon not because it's easy but because it's hard."

When you get into a highly-sophisticated thing, specifically with regard to your question, as the return of samples, it's one thing to land on the moon and we've been landing on the moon for decades—landing on Mars, we've been landing with small landers and progressively larger and more sophisticated landers. It's another thing to get those samples all the way back.

There have been slowdowns in the program. COVID is one thing that one of the investigations that you pointed to that affected JPL,

the Jet Propulsion Laboratory, in California, which is overseeing this mission.

That's one thing but also there are unexpected things that come up, so much so I was just out there and your staff was just out at JPL and they're saying they may need another \$250 million in this upcoming fiscal year, meaning in 2024, and the fact is that the Science budget that the President is proposing to you for fiscal year 2024 is the largest Science budget we've ever had. It's \$8.3 billion.

Senator SHAHEEN. And excuse me for interrupting, Administrator Nelson. My time is going to be up soon and what I'm really asking is what NASA is doing to try and address those costs.

I think we all recognize that it's hard, but given the uncertainties and the fact that it is hard, how are you looking at containing costs and maintaining the current schedule? What kinds of efforts do you have in place to try and do that that may not have been anticipated when you thought everything was going to go as expected?

Mr. NELSON. Specifically with regard to the Mars Sample Return?

Senator SHAHEEN. Yes.

Mr. NELSON. Well, some of those costs are not going to be avoided and we're going to have to make choices and you can get it done but it may not be done right on the time that we were hoping that it would be done.

If you stretch it out over a longer period of time, you can get the problem done. There's no easy solution to this. That's what happened to James Webb, the telescope, and unless we start taking science money from other science programs and/or, in the alternative, unless you in your authority understanding that the President proposes and the Congress disposes reallocate the dollars, I don't see how we could get another \$200–250 million in fiscal year 2024.

Senator SHAHEEN. Well, I do remember, though, with James Webb that we brought the contractor in and asked them to take a look at what they could do to ensure that the project moved better and tried to stay within costs. So I would hope that NASA is also looking at those kinds of responses.

Mr. NELSON. We do that on every program. Now, for example, the rocket going back to the moon, the SLS, and its spacecraft Orion, we've had significant cost extension over time, we inherited a system of some 7 existing contracts today on that rocket. We're going to consolidate those contracts under one joint venture. That joint venture is going to be responsible, and the discussions are going on with the Boeing Company and the other companies involved in this joint venture right now to establish the framework.

Senator SHAHEEN. Well, thank you. My time is up. I think it's something that we can continue to explore.

Senator Moran.

EPSCOR AND BROADENING PARTICIPATION

Senator MORAN. Chair, thank you very much.

Let me begin with you, Dr. Panch. Let me talk about EPSCoR for a moment and broadening the opportunities for Americans wherever they live to participate in NSF programs.

As you know, just 10 States receive more than half of all NSF funding and NSF is evaluating fewer research proposals from EPSCoR States now compared to a decade ago.

How do you plan to broaden the participation in NSF programs across the country, what opportunities is NSF missing by concentrating its spending in a smaller number of States, and what programs like EPSCoR are best suited to alter that circumstance?

Dr. PANCHANATHAN. Thank you, Senator Moran, for the question.

As you know, when I came to NSF one of my priorities has always been to unleash talent and ideas all across our Nation, in every part of the Nation, rural, urban, socioeconomic, demographic diversity of our Nation.

So what have we done since then? I call it Opportunities Everywhere, Innovation Everywhere, as the way in which I framed this.

So as you know, since coming in we have looked at the EPSCoR States and one of the things that we need to understand is that if ideas and talent and democratization are everywhere, why is it then, as you point out, not a share of the investments going to those States?

It turns out that some of the institutions require significant infrastructure support in order to be able to take the great ideas and the great talent that exists in those States and the institutions to be able to be lifted up to transcend the gold standard merit review process of NSF.

So we have launched, Senator, you'll be happy to hear this, as part of the CHIPS and Science Act, we have launched this new program called GRANTED. It's an acronym, Growing Research Access Through Nationally Transformative Equity and Diversity. If NSF is good at something, it's acronyms.

So GRANTED simply is the following. It is a virtual research office which is available to all institutions in EPSCoR States as well as at Emerging Research Institutions to be able to take the great ideas and put them in a form. Like how do we help with proposal writing, how do we help with pre-award, post-award, budgeting, finding partnerships, etcetera, so they will have also the chance to be able to be successful in this process?

I am glad that as part of the CHIPS and Science Act that our aspirational targets, in terms of where we need to get to in terms of EPSCoR States share of funding, that we are on track, not only saying that they will do that but actually putting all the efforts to programs. I've just given you one example of the GRANTED Program, but they're making sure that there are many other programs which draw upon the talent and ideas from EPSCoR States and non-EPSCoR States and emerging institutions.

I'm confident that we will meet those metrics and exceed those, too. That is the goal.

SUCCESS AND EVALUATION OF GRANTED

Senator MORAN. I appreciate your answer, of course, and it would be too early, I think, for GRANTED to be evaluated as to its success or effectiveness, but you have something in place to demonstrate improvement, I assume, that will tell us whether or not it's working and making a difference.

Dr. PANCHANATHAN. Absolutely. I mean, I'm only telling you about the sustained way of building this to not only work in the next year but in the next 5 years, because if you look at the CHIPs and Science Act, it is a 20 percent total that we have outlined for fiscal year 2029.

So what we are doing here is we are building the program so we have sustained progress year over year, but there are also other programs that we are measuring progress through. We expect that we will ensure that EPSCoR States have more than their fair share of the investments. There is actually specific programming we are doing in addition to these kinds of capacity-building activities.

AGRICULTURE RESEARCH AND INNOVATION IN EPSCOR STATES

Senator MORAN. Well, both of you have pointed out the science and aeronautics aspect of my State. We also produce a lot of agricultural commodities and food for not only the country but the world.

I talked to a farmer today. In the last 223 days on his farm he's received one-tenth of one inch of moisture. We are in a serious and severe drought of long proportions.

I know of the presence of NASA in Kansas in regard to opportunities to try to help agriculture succeed in difficult times, particularly related to hydrology and water, and I would ask the NASA Administrator to describe for me and others what can be done from a NASA perspective and you, Director, from an NSF perspective, how can you help drive research and innovation needed in places like Kansas to be secure and sustain and adapt to these rapidly-approaching realities that are terribly challenging.

Administrator Nelson.

Mr. NELSON. What can be done in part has already been done and what will be done. What is already done, as I have shared with you and some of your agricultural community, our assets overhead are so sophisticated that we can tell in this farmer's cornfield what is the moisture content. We can tell if a crop is diseased and we can tell that from space.

Needless to say, we can tell that about a forest and also the moisture content which has something to do with fighting fires down the line, but what we are going to do and in the process of doing, we just put up a mission called SWOT, or the Surface Water and Ocean Topography Mission. It will allow us, in the drought-ravaged West, for the very first time, to know what the elevation of all of that freshwater is.

If a State has hundreds of reservoirs without having to go out and measure every one of them within an instant, because of the measurement from space, we can tell you what is the elevation of that water. The rivers, the streams, the lakes likewise.

Now what will be done is we're putting up a series of four great observatories. It is going to give a precision of what is happening to the earth in 3-D form, everything that is happening to the earth and climate regarding the land, the water, and that's both fresh and ocean, the ice, and the atmosphere.

You have this kind of information that we've never had before. Then you can make judgments not only about the farmer, what he ought to plant or how much he should prepare to water, but also

what we do about our changing climate and the policies that you all enact with regard to that and so that's what we've done and what we will do with your help.

Madam Chair, if I may, with regard to your former question, what I want to do, we've done a series of technical and specific things to get at this problem of program growth.

We elevated the Chief Acquisition Officer (CAO) role to the Deputy Administrator, Colonel Pam Melroy. We've done specific things to follow up on the reports of the Decadal and the IG reports and the Government Accountability Office. We've done a number of specific things and I'd like to submit that for the record for you.

Dr. PANCHANATHAN. Senator Moran, do you have any further questions?

Senator MORAN. I don't know whether you want Dr. Panch to answer. My time has clearly expired.

Senator SHAHEEN. Why don't you—if you can abbreviate that would be great.

NSF CENTERS AND INSTITUTE PARTNERSHIP WITH USDA

Dr. PANCHANATHAN. Senator Moran, there are many programs of NSF focused on precisely working on agriculture as a team. We have launched four AI institutes in partnership with the U.S. Department of Agriculture fully funded by USDA.

In order to understand the point that you brought out, you know, being very precise about moisture, fertilizer usage, and a whole host of things in terms of understanding how to build a smart agriculture future for our Nation.

So that's one thing that I want to mention. Likewise, an engineering research center focused on agriculture, science, and technology center focused on agriculture which is much more actionable activities, and I think that might be more relevant to immediately what you raised.

NSF investments have also mapped the weed genome. So we're working on drought-resistant crops now. So we're also working on those things as we're looking at what might be the ways in which we can do more effective, efficient agriculture and so we can focus on the outcomes that we can perceive through those activities, like AI and other technologies.

Senator MORAN. Thank you.

Senator SHAHEEN. Thank you, Senator Moran.

Senator Murray.

CONGRESSIONAL BUDGET CUTS IMPACT ON NSF

Senator MURRAY. Well, thank you very much, Chair Shaheen, Ranking Member Moran, and let me just say at the top as we continue full steam ahead in our bipartisan work to return to regular order for the first time in many years and pass funding bills in a responsible, timely way, these hearings are really an important opportunity for us to assess what we need to keep our country competitive on the world stage and to keep folks back home safe and sound, and they're also an important reminder that defense is just one part of the equation.

If we maintain our competitive edge, we have to stay at the forefront of scientific discovery and NASA and the National Science

Foundation both have long storied histories of helping our country do that. After all, the list of times that our Nation has made its mark on history, the list of ways that it has established itself as the world leader is much more than a list of military achievements. It is a story of inquiry, invention, innovation, exploration, and discovery of new frontiers.

You know, our country has seen time and again how those investments really pay off. They do strengthen our defense. They strengthen our economy. They strengthen our global leadership.

You know, innovation and inquiry, I don't have to tell either of you, isn't just an abstract ideal. It makes our lives better. It makes our Nation safer in really tangible ways.

Cleaner energy, faster, more sustainable manufacturing methods, better understanding of new technology like artificial intelligence, or preparing us for rare but serious risks, like asteroids or solar flare, and those investments also keep America competitive in ways that are harder to measure but are very important that we don't overlook.

You know, the moon landing didn't just affirm our leadership in space and science. It inspired a new generation of kids to study STEM, as Bill Nelson has told me many times, and it helps us push the bounds of what is possible.

So, you know, just look at the latest photos from the James Webb Telescope. It is lighting the imagination of our kids right now and so at the end of the day, these investments that we make in this Appropriations Committee really is an investment in our country's future.



COSMIC CLIFFS

NGC 3324, CARINA NEBULA • JAMES WEBB SPACE TELESCOPE • RELEASED JULY 12, 2022



COSMIC CLIFFS

NASA's Webb Reveals Cosmic Cliffs, Glittering Landscape of Star Birth

This landscape of "mountains" and "valleys" speckled with glittering stars is actually the edge of a nearby, young, star-forming region called NGC 3324 in the Carina Nebula. Captured in infrared light by NASA's new James Webb Space Telescope, this image reveals for the first time previously invisible areas of star birth.

Called the Cosmic Cliffs, Webb's seemingly three-dimensional picture looks like craggy mountains on a moonlit evening. In reality, it is the edge of the giant, gaseous cavity within NGC 3324, and the tallest "peaks" in this image are about 7 light-years high. The cavernous area has been carved from the nebula by the intense ultraviolet radiation and stellar winds from extremely massive, hot, young stars located in the center of the bubble, above the area shown in this image.

The blistering, ultraviolet radiation from the young stars is sculpting the nebula's wall by slowly eroding it away. Dramatic pillars tower above the glowing wall of gas, resisting this radiation. The "steam" that appears to rise from the celestial "mountains" is actually hot, ionized gas and hot dust streaming away from the nebula due to the relentless radiation.

Webb reveals emerging stellar nurseries and individual stars that are completely hidden in visible-light pictures. Because of Webb's sensitivity to infrared

light, it can peer through cosmic dust to see these objects. Protostellar jets, which emerge clearly in this image, shoot out from some of these young stars. The youngest sources appear as red dots in the dark, dusty region of the cloud. Objects in the earliest, rapid phases of star formation are difficult to capture, but Webb's extreme sensitivity, spatial resolution, and imaging capability can chronicle these elusive events.

These observations of NGC 3324 will shed light on the process of star formation. Star birth propagates over time, triggered by the expansion of the eroding cavity. As the bright, ionized rim moves into the nebula, it slowly pushes into the gas and dust. If the rim encounters any unstable material, the increased pressure will trigger the material to collapse and form new stars.

Conversely, this type of disturbance may also prevent star formation as the star-making material is eroded away. This is a very delicate balance between sparking star formation and stopping it. Webb will address some of the great, open questions of modern astrophysics: What determines the number of stars that form in a certain region? Why do stars form with a certain mass?

Webb will also reveal the impact of star formation on the evolution of gigantic clouds of gas and dust. While the effect of massive stars—with their violent winds and high energy—is often apparent, less is known about the influence of the more numerous low-mass stars. As they form, these smaller stars create narrow, opposing jets seen here, which can inject a lot of momentum and energy into the

clouds. This reduces the fraction of nebular material that seeds new stars.

Up to this point, scientists have had very little data about the influence of the multitude of young and more energetic low-mass stars. With Webb, they will be able to obtain a full census of their number and impact throughout the nebula.

Located roughly 7,600 light-years away, NGC 3324 was imaged by Webb's Near-Infrared Camera (NIRCam) and Mid-Infrared Instrument (MIRI).

NIRCam—with its crisp resolution and unparalleled sensitivity—unveils hundreds of previously hidden stars, and even numerous background galaxies.

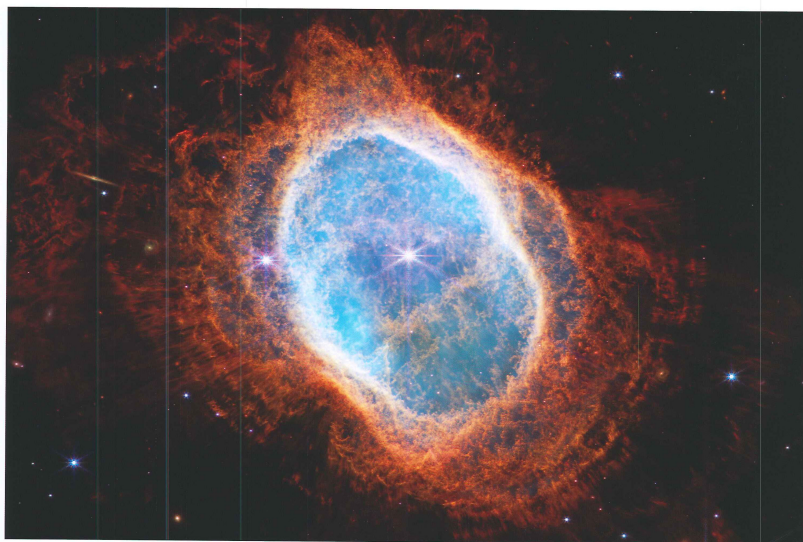
In MIRI's view, young stars and their dusty, planet-forming disks shine brightly in the mid-infrared, appearing pink and red. MIRI reveals structures that are embedded in the dust and uncovers the stellar sources of massive jets and outflows. With MIRI, the hot dust, hydrocarbons, and other chemical compounds on the surface of the ridges glow, giving the appearance of jagged rocks.

NGC 3324 was first catalogued by James Dunlop in 1826. Visible from the Southern Hemisphere, it is located at the northwest corner of the Carina Nebula (NGC 3372), which resides in the constellation Carina. The Carina Nebula is home to the Keyhole Nebula and the active, unstable supergiant star called Eta Carinae.

Image Credit:
NASA, ESA, CSA, and STScI



<https://go.nasa.gov/3PHoSJW>
www.nasa.gov



SOUTHERN RING NEBULA

PLANETARY NEBULA NGC 3132 • JAMES WEBB SPACE TELESCOPE • RELEASED JULY 12, 2022



SOUTHERN RING NEBULA

NASA's Webb Captures Dying Star's Final 'Performance' in Fine Detail

Some stars save the best for last.

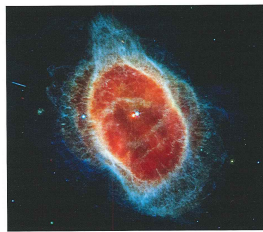
The dimmer star at the center of this scene has been sending out rings of gas and dust for thousands of years in all directions, and NASA's James Webb Space Telescope has revealed for the first time that this star is cloaked in dust.

Two cameras aboard Webb captured the latest image of this planetary nebula, cataloged as NGC 3132, and known informally as the Southern Ring Nebula. It is approximately 2,500 light-years away.

Webb will allow astronomers to dig into many more specifics about planetary nebulae like this one—clouds of gas and dust expelled by dying stars. Understanding which molecules are present, and where they lie throughout the shells of gas and dust will help researchers refine their knowledge of these objects.

This observation shows the Southern Ring Nebula almost face-on, but if we could rotate it to view it edge-on, its three-dimensional shape would more clearly look like two bowls placed together at the bottom, opening away from one another with a large hole at the center.

Two stars, which are locked in a tight orbit, shape the local landscape. Webb's infrared images feature new details in this complex system. The stars—and their layers of light—are prominent in the image from Webb's Near-Infrared Camera (NIRCam) on the front, while the image from Webb's Mid-Infrared Instrument (MIRI) below shows for the first time that the second star is surrounded by dust. The brighter star is in an earlier stage of its stellar evolution and will probably eject its own planetary nebula in the future.



In the meantime, the brighter star influences the nebula's appearance. As the pair continues to orbit one another, they "stir the pot" of gas and dust, causing asymmetrical patterns.

Each shell represents an episode where the fainter star lost some of its mass. The widest shells of gas

toward the outer areas of the image were ejected earlier. Those closest to the star are the most recent. Tracing these ejections allows researchers to look into the history of the system.

Observations taken with NIRCam also reveal extremely fine rays of light around the planetary nebula. Starlight from the central stars streams out where there are holes in the gas and dust—like sunlight through gaps in a cloud.

Since planetary nebulae exist for tens of thousands of years, observing the nebula is like watching a movie in exceptionally slow motion. Each shell the star puffed off gives researchers the ability to precisely measure the gas and dust that are present within it.

As the star ejects shells of material, dust and molecules form within them—changing the landscape even as the star continues to expel material. This dust will eventually enrich the areas around it, expanding into what's known as the interstellar medium. And since it's very long-lived, the dust may end up traveling through space for billions of years and become incorporated into a new star or planet.

In thousands of years, these delicate layers of gas and dust will dissipate into surrounding space.

Image Credits:
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FIRST DEEP FIELD

GALAXY CLUSTER SMACS 0723 • JAMES WEBB SPACE TELESCOPE • RELEASED JULY 12, 2022



FIRST DEEP FIELD

NASA's Webb Delivers Deepest Infrared Image of Universe Yet

NASA's James Webb Space Telescope has delivered the deepest and sharpest infrared image of the distant universe so far. Webb's First Deep Field is galaxy cluster SMACS 0723, and it is teeming with thousands of galaxies—including the faintest objects ever observed in the infrared.

Webb's image is approximately the size of a grain of sand held at arm's length, a tiny sliver of the vast universe. The combined mass of this galaxy cluster acts as a gravitational lens, magnifying more distant galaxies, including some seen when the universe was less than a billion years old. This deep field, taken by Webb's Near-Infrared Camera (NIRCam), is a composite made from images at different wavelengths, totaling 12.5 hours—achieving depths at infrared wavelengths beyond the Hubble Space Telescope's deepest fields, which took weeks. And this is only the beginning. Researchers will continue to use Webb to take longer exposures, revealing more of our vast universe.

This image shows the galaxy cluster SMACS 0723 as it appeared 4.6 billion years ago, with many more galaxies in front of and behind the cluster. Much more about this cluster will be revealed as researchers begin digging into Webb's data. This field was

also imaged by Webb's Mid-Infrared Instrument (MIRI), which observes mid-infrared light.

Webb's NIRCam has brought distant galaxies into sharp focus—they have tiny, faint structures that have never been seen before, including star clusters and diffuse features.

Light from these galaxies took billions of years to reach us. We are looking back in time to within a billion years after the big bang when viewing the youngest galaxies in this field. The light was stretched by the expansion of the universe to infrared wavelengths that Webb was designed to observe. Researchers will soon begin to learn more about the galaxies' masses, ages, histories, and compositions.

Other features include the prominent arcs in this field. The powerful gravitational field of a galaxy cluster can bend the light rays from more distant galaxies behind it, just as a magnifying glass bends and warps images. Stars are also captured with prominent diffraction spikes, as they appear brighter at shorter wavelengths.

Webb's MIRI image offers a kaleidoscope of colors and highlights where the dust is—a major ingredient for star formation, and ultimately life itself. Blue galaxies contain stars, but very little dust. The red objects in this field are enshrouded in thick layers of dust. Green galaxies are populated with hydrocarbons and other chemical compounds.

Researchers will be able to use data like these to understand how galaxies form, grow, and merge with each other, and in some cases why they stop forming stars altogether.

In addition to taking images, two of Webb's instruments also obtained spectra—data that reveal objects' physical and chemical properties that will help researchers identify many more details about distant galaxies in this field. Webb's Near-Infrared Spectrograph (NIRSpec) microshutter array observed 48 individual galaxies at the same time—a new technology used for the first time in space—returning a full suite of details about each. The data revealed light from one galaxy that traveled for 13.1 billion years before Webb's mirrors captured it. NIRSpec data also demonstrate how detailed galaxy spectra will be with Webb observations.

Finally, Webb's Near-Infrared Imager and Slitless Spectrograph (NIRISS) used Wide-Field Slitless Spectroscopy to capture spectra of all the objects in the entire field of view at once. Among the results, it proves that one of the galaxies has a mirror image.

SMACS 0723 can be viewed near the constellation Volans in the southern sky.

Image Credit:
NASA, ESA, CSA, and STScI

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STEPHAN'S QUINTET

HICKSON COMPACT GROUP 92 • JAMES WEBB SPACE TELESCOPE • RELEASED JULY 12, 2022



STEPHAN'S QUINTET

NASA's Webb Sheds Light on Galaxy Evolution, Black Holes

Stephan's Quintet, a visual grouping of five galaxies, is best known for being prominently featured in the holiday classic film, "It's a Wonderful Life." Today, NASA's James Webb Space Telescope reveals Stephan's Quintet in a new light. This enormous mosaic is Webb's largest image to date, covering about one-fifth of the Moon's diameter. It contains over 150 million pixels and is constructed from almost 1,000 separate image files. The information from Webb provides new insights into how galactic interactions may have driven galaxy evolution in the early universe.

With its powerful, infrared vision and extremely high spatial resolution, Webb shows never-before-seen details in this galaxy group. Sparkling clusters of millions of young stars and starburst regions of fresh star birth grace the image. Sweeping tails of gas, dust and stars are being pulled from several of the galaxies due to gravitational interactions. Most dramatically, Webb captures huge shock waves as one of the galaxies, NGC 7318B, smashes through the cluster.

Together, the five galaxies of Stephan's Quintet are also known as the Hickson Compact Group 92 (HCG 92). Although called a "quintet," only four of the galaxies are truly close together and caught up in a cosmic dance. The fifth and bottommost galaxy, called NGC 7320, is well in the foreground com-

pared with the other four. NGC 7320 resides 40 million light-years from Earth, while the other four galaxies (NGC 7317, NGC 7318A, NGC 7318B, and NGC 7319) are about 290 million light-years away. This is still fairly close in cosmic terms, compared with more distant galaxies billions of light-years away. Studying such relatively nearby galaxies like these helps scientists better understand structures seen in a much more distant universe.

This proximity provides astronomers a ringside seat for witnessing the merging and interactions between galaxies that are so crucial to all of galaxy evolution. Rarely do scientists see in so much detail how interacting galaxies trigger star formation in each other, and how the gas in these galaxies is being disturbed. Stephan's Quintet is a fantastic "laboratory" for studying these processes fundamental to all galaxies.

Tight groups like this may have been more common in the early universe when their superheated, infalling material may have fueled very energetic black holes called quasars. Even today, the leftmost galaxy in the group—NGC 7319—harbors an active galactic nucleus, a supermassive black hole 24 million times the mass of the Sun. It is actively pulling in material and puts out light energy equivalent to 40 billion Suns.

Webb studied the active galactic nucleus in great detail with the Near-Infrared Spectrograph (NIRSpec) and Mid-Infrared Instrument (MIRI). These instruments' integral field units (IFUs)—which are a combination of a camera and spectrograph—provided the Webb team with a "data cube," or collection of images of the galactic core's spectral features.

Much like medical magnetic resonance imaging (MRI), the IFUs allow scientists to "slice and dice" the information into many images for detailed study. Webb pierced through the shroud of dust surrounding the nucleus to reveal hot gas near the active black hole and measure the velocity of bright outflows. The telescope saw these outflows driven by the black hole in a level of detail never seen before.

In NGC 7320, the bottommost and closest galaxy in the visual grouping, Webb was able to resolve individual stars and even the galaxy's bright core.

As a bonus, Webb revealed a vast sea of thousands of distant background galaxies reminiscent of Hubble's Deep Fields.

Combined with the most detailed infrared image ever of Stephan's Quintet from MIRI and the Near-Infrared Camera (NIRCam), the data from Webb will provide a bounty of valuable, new information. For example, it will help scientists understand the rate at which supermassive black holes feed and grow. Webb also sees star-forming regions much more directly, and it is able to examine emission from the dust—a level of detail impossible to obtain until now.

Located in the constellation Pegasus, Stephan's Quintet was discovered by the French astronomer Édouard Stephan in 1877.

Image Credit:
NASA, ESA, CSA, and STScI



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THE CARTWHEEL GALAXY

ESO 350-40 • JAMES WEBB SPACE TELESCOPE • RELEASED AUGUST 2, 2022



THE CARTWHEEL GALAXY

Webb Captures Stellar Gymnastics in The Cartwheel Galaxy

NASA's James Webb Space Telescope has peered into the chaos of the Cartwheel Galaxy, revealing new details about star formation and the galaxy's central black hole. Webb's powerful infrared gaze produced this detailed image of the Cartwheel and two smaller companion galaxies against a backdrop of many other galaxies. This image provides a new view of how the Cartwheel Galaxy has changed over billions of years.

The Cartwheel Galaxy, located about 500 million light-years away in the Sculptor constellation, is a rare sight. Its appearance, much like that of the wheel of a wagon, is the result of an intense event—a high-speed collision between a large spiral galaxy and a smaller galaxy not visible in this image. Collisions of galactic proportions cause a cascade of different, smaller events between the galaxies involved; the Cartwheel is no exception.

The collision most notably affected the galaxy's shape and structure. The Cartwheel Galaxy sports two rings—a bright inner ring and a surrounding, colorful ring. These two rings expand outwards

from the center of the collision, like ripples in a pond after a stone is tossed into it. Because of these distinctive features, astronomers call this a "ring galaxy," a structure less common than spiral galaxies like our Milky Way.

The bright core contains a tremendous amount of hot dust with the brightest areas being the home to gigantic young star clusters. On the other hand, the outer ring, which has expanded for about 440 million years, is dominated by star formation and supernovas. As this ring expands, it plows into surrounding gas and triggers star formation.

Other telescopes, including the Hubble Space Telescope, have previously examined the Cartwheel. But the dramatic galaxy has been shrouded in mystery—perhaps literally, given the amount of dust that obscures the view. Webb, with its ability to detect infrared light, now uncovers new insights into the nature of the Cartwheel.

The Near-Infrared Camera (NIRCam), Webb's primary imager, looks in the near-infrared range from 0.6 to 5 microns, seeing crucial wavelengths of light that can reveal even more stars than observed in visible light. This is because young stars, many of which are forming in the outer ring, are less obscured by the presence of dust when observed in infrared light. In this image, NIRCam data are colored blue, orange, and yellow. The galaxy displays many individual blue dots, which are individual

stars or pockets of star formation. NIRCam also reveals the difference between the smooth distribution or shape of the older star populations and dense dust in the core compared to the clumpy shapes associated with the younger star populations outside of it.

Learning finer details about the dust that inhabits the galaxy, however, requires Webb's Mid-Infrared Instrument (MIRI). MIRI data are colored red in this composite image. It reveals regions within the Cartwheel Galaxy rich in hydrocarbons and other chemical compounds, as well as silicate dust, like much of the dust on Earth. These regions form a series of spiraling spokes that essentially form the galaxy's skeleton. These spokes are evident in previous Hubble observations released in 2018, but they become much more prominent in this Webb image.

Webb's observations underscore that the Cartwheel is in a very transitory stage. The galaxy, which was presumably a normal spiral galaxy like the Milky Way before its collision, will continue to transform. While Webb gives us a snapshot of the current state of the Cartwheel, it also provides insight into what happened to this galaxy in the past and how it will evolve in the future.

Image Credit:
NASA, ESA, CSA, and STScI

<https://go.nasa.gov/3RBx2a9>
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So I'm really glad that you're holding this hearing and look forward to working with both of you to have a strong bipartisan bill at the end of the day.

With that, Director Panch, you know, while short on specifics, House Republicans have been calling for cuts to non-defense discretionary programs to fiscal year 2022 levels, taking us back there.

Can you talk specifically about how that would in fact impact NSF programs, including basic research and STEM workforce development, if Congress were to go back to those levels?

Dr. PANCHANATHAN. Thank you, Senator Murray, and thank you for your comments. I appreciate what you said because this is a moment, it's a very, very important moment in our Nation's history because this is a moment, as I said, of intense global competition and therefore we cannot take any steps back. We have to move forward.

Global competition is severe and it is serious and it is real. So if we were to go back to fiscal year 2022 levels, it will have tremendous amount of impacts. You talked about AI in your remarks. I can tell you the AI Institute we're launching, we'll have to cut back on AI Institute? We'll have to cut back on the quantum investments that we are making. We're going to make a new quantum investment to take the ideas from the work that is happening from basic research into transitional outcomes. That will not be possible. It's called the National Quantum Virtual Laboratory. We will not be able to move forward with that.

In terms of the Regional Innovation Engine Program that we just launched, there has been tremendous interest all across our Nation

in terms of presenting the basic innovation ideas that are going to be possible from everywhere and so these Regional Innovation Engines are going to make possible the jobs of the future and new industries of the future, new entrepreneurial ventures of the future. We will cut back on the Regional Innovation Engines Program and that will not be a good outcome because we have essentially raised the excitement of the entire Nation feeling like we are ready now. We're ready to play a role in lifting up this Nation and contributing to it as well as benefiting from it for the jobs of the future and the industries of the future.

So I hope that we will be able to continue the progress and leap forward rather than taking any steps back and I look forward to the support of Congress on this funding.

Senator MURRAY. Thank you.

DELIVERY OF CHIPS AND SCIENCE ACT WITH BUDGET CUTS

Can you comment specifically on how that level of funding would impact NSF's ability to deliver on the ambitions of the bipartisan CHIPS and Science Act?

Dr. PANCHANATHAN. So it will have tremendous ramification. Let me give you another example which might probably be useful.

Now the Nation needs to train 280,000 new workers in semi-conductors and microelectronics over the next 5 years to keep pace with the rest of the world. So a reduction would preclude NSF from being able to reach an estimated 10,000 individuals in fiscal year 2024 and this really threatens our long-term U.S. competitiveness in semi-conductors and other key technologies.

Just pointing to one example, the workforce, I talked about the examples in AI, quantum, biotechnology, and we will not be able to launch the bio-foundries that I think we need to have in many parts of our Nation to be able to support more innovative activities and therefore more jobs and the basic research work that is ready to be translated. We don't want to miss the moment of translating this and giving this away to our competitors to build on those translational activities and building the industries of the future.

The industries of the future belong in our Nation, the jobs belong here, and I think we should do everything to make sure that we do not slow and impede our progress.

NASA PARTNERSHIPS IN THE PACIFIC NORTHWEST

Senator MURRAY. Thank you very much for that.

Administrator Nelson, Washington State, as you know, has seen an incredible growth of space-related companies and suppliers and researchers and innovators and those companies have really been able to capitalize on the talented workforce graduating from our universities and use the infrastructure in place to become a hub for space exploration technology.

How do you see NASA expanding and partnering with companies and universities in the Pacific Northwest?

Mr. NELSON. The big difference in our Space Program as we go back to the moon now from a half century ago is we go back not only in a public/private partnership but also in an international partnership.

Thus, for example, the first crew going to the moon, three Americans and one Canadian. In this case, when we land on the moon, NASA will go into a lunar orbit, a brand-new kind of orbit that we are characterizing right now with a spacecraft in that orbit.

The crew will transfer into a SpaceX lander and eventually another lander as a result of the second competition which is going on at this point. We want to have two landers. That is illustrative of the public/private partnership that we have going on, but it is throughout the entire Agency. It's in low earth orbit.

For example, when we shut down the Space Shuttle, you all helped Kay Bailey Hutchinson and I pass the NASA bill of 2010 that set us on this course of the dual track, government track, but also a commercial track, and look what's come out of it.

We now regularly deliver astronauts, NASA astronauts to the International Space Station and cargo with private corporations. Now because it's human life involved, we are all over that, double checking, triple checking everything, but it is illustrative of this new public/private partnership as we go into the future that is quite different from the past.

Senator MURRAY. Thank you. Thank you very much, Madam Chair.

Senator SHAHEEN. Thank you, Senator Murray.

Senator Kennedy.

Senator KENNEDY. Thank you, Madam Chair. Mr. Administrator, welcome. Nice to see you again.

Mr. NELSON. Thank you, Senator.

STAFFING THE MISCHOUD ASSEMBLY FACILITY

Senator KENNEDY. I want to talk to you for a second about something that I know you know a lot about, the Michoud Assembly Facility, and thank you for visiting, Bill. We really appreciate you coming out there. I think you came out late in 2021.

As you know, this is an 800-acre facility in New Orleans East. It employs about 4,000 people. It's 20 public and private entities and, among other things, Michoud Assembly Facility is the formal name, Michoud makes the rocket that will take the Orion spacecraft to the moon and to Mars.

We had a rough few years there when we were hit by two hurricanes and a flood and our roof was practically demolished and NASA has supported, and I'm grateful for that, the money to get the roof repaired, and we're making progress. I was out there a few months ago.

But, Mr. Administrator, here's what else we need help with. The administrative buildings were built in 1943, 1943. We're spending a million dollars a year just trying to repair them and now that we got the roof back, you can't run a facility this large and this sophisticated without smart people administering all the programs and we just need some help there. Can you give us some help?

Mr. NELSON. Senator, thank you for asking that question.

Senator KENNEDY. You're welcome.

Mr. NELSON. I can plead to you we need the help.

Senator KENNEDY. Okay.

Mr. NELSON. You probably got a half a billion dollars worth of infrastructure that you need at Michoud.

Senator KENNEDY. Yes.

Mr. NELSON. Throughout the Agency's 10 centers, plus facilities, we've got \$5 billion of infrastructure needs. It took me every skill that I might possess to get a \$100 million for Virginia and Maryland for a bridge to replace the existing bridge to the Wallops Island Launch Facility that was going to fall in the water and was going to render that launch center obsolete and thank goodness that you all passed an emergency appropriation.

Senator KENNEDY. Did we get the bridge done?

Mr. NELSON. Finally.

Senator KENNEDY. Okay. Now can we turn to the administration building at Michoud Assembly Facility?

Mr. NELSON. Senator, if you will appropriate it, I'll come——

Senator KENNEDY. We'll appropriate.

Mr. NELSON. And I will——

Senator KENNEDY. We will appropriate it but I just want to make sure, Mr. Administrator, that once we appropriate it, it's a priority for you.

Mr. NELSON. It absolutely is, along with the \$5 billion total for infrastructure needs, and let me just say how key Michoud is because it's located next to water and waterways——

Senator KENNEDY. Yes.

Mr. NELSON [continuing]. The contract under Boeing puts together these big cores of this largest rocket, puts it on a barge, engines, as well, which eventually come from up in Senator Britt's constituency, and they come down the Tennessee Tom Waterway and they come to New Orleans, and they're assembled there before they go to Mississippi to the Stennis and they test these engines and then they assemble all that together and then on a barge it goes to the Kennedy Space Center.

Senator KENNEDY. Yes.

Mr. NELSON. It's critically located.

Senator KENNEDY. Do you mind if I interrupt you because I'm going to run out of time?

Mr. NELSON. Yes.

Senator KENNEDY. I have another 30 seconds to talk to the Director here.

THE PURPOSE OF EPSCOR

Senator KENNEDY. Mr. Director, in 15 seconds, tell me the purpose of EPSCoR.

Dr. PANCHANATHAN. The purpose of EPSCoR is to ensure that we make the talent and ideas in all those regions in our country that have not been given the chance to express in——

Senator KENNEDY. Let me put it another way. We passed EPSCoR 44 years ago. The problem was that all this money that we're giving you, your agency, was being spent in 10 States. Congress said we've got smart people all over America. Start spending some of the money in the other States. Forty-four years later, you're still spending the money in 10 States. You're still doing it, not 4 months, not 4.4 years, 44 years, and I appreciate you creating a new program, GRANTED or GRUNTED or whatever you called it. Okay? When are you going to start doing what EPSCoR is supposed to do?

Dr. PANCHANATHAN. So, Senator, I can answer this. I come from a small city myself. So I understand the opportunities.

Senator KENNEDY. Yes. But I want you to answer my question.

Dr. PANCHANATHAN. I'm going to answer it.

Senator KENNEDY. Okay. Don't—answer my question because the Chair's been very indulgent here. Answer my question. When are you going to start doing what the statute says you're supposed to do?

Dr. PANCHANATHAN. Senator, it's already started. In fact, it's activating now, making sure that we are able to deliver on the EPSCoR promises that we have made and the CHIPs and Science Act has even set targets, which I believe will be exceeded, not even met.

So I am deeply committed, the agency is deeply committed to ensuring and there is metrics associated with that now. So you'll see progress. So this—

Senator KENNEDY. Well, we have the same progress in 44 years.

Dr. PANCHANATHAN. I'm talking about now, Senator, moving forward. I am committed as the Director now, I'm committed to delivering on the progress.

Senator KENNEDY. Okay. I thank you, Madam Chair, for the indulgence.

Senator SHAHEEN. Thank you, Senator Kennedy.

Senator Peters.

PRIORITIZING THE PROSWIFT ACT

Senator PETERS. Thank you, Madam Chair.

Administrator Nelson, it's certainly wonderful to see you here today. Welcome back to the Senate.

Administrator Nelson, in 2020 the President signed into law legislation that I authored to strengthen the Nation's ability to predict severe space weather events and mitigate the harmful impacts on earth. It was called The PROSWIFT Act.

As you know, severe space weather events, such as a solar flare or a coronal mass ejection, has the potential to deeply disrupt the power grid, communications, GPS satellites, potentially catastrophic.

Space weather events have also implications for our space situational awareness and space traffic management which are crucial to protecting all of the assets we currently have in low earth orbit.

My legislation takes steps to address these threats but now it's got to be implemented. NASA will play a crucial role in ensuring the success of this legislation and protecting the U.S. and the world from these space weather events.

So my question for you, sir, is do you agree with me on the importance of understanding space weather events and how is NASA currently prioritizing the implementation of the PROSWIFT Act and space weather research broadly?

Mr. NELSON. Senator Peters, not only do I agree with you about the importance of understanding space weather, as a matter of fact, we started back in the time when Al Gore was Vice President on a mission called Triana and because of politics, it was cut for almost a decade and we resuscitated it with additional instruments with the help of the Air Force into a mission called DSCOVR and

it has given us early warning on space weather. In other words, the solar explosions of the sun that start sending radiation to earth.

This mission that we're talking about, GDC, is a very important one. In the largest science budget ever, you can't fit 10 pounds of potatoes in a five-pound sack. There's a mission that the Chair is very concerned with called HelioSWARM Mission that is all about understanding Heliophysics of which GDC is also about.

Senator PETERS. Mm-hmm.

Mr. NELSON. Something had to be slowed to support priorities within the overall Science budget. The feeling was that we should preserve the University of New Hampshire project not because it is a Principal Investigator-led mission. Separately we chose to slow the Geospace Dynamics Constellation, or GDC mission, to move ahead with other priorities within the science portfolio, but it will come later unless you all want to give us a lot more money for science in fiscal year 2024.

Senator PETERS. The key thing is it will come. What sort of timeline?

Mr. NELSON. I'll have to get back to you on the actual timing.

Senator PETERS. I'd appreciate that.

Mr. NELSON. I don't have that memorized.

SUPPORT FOR AI WORKFORCE

Senator PETERS. I appreciate that. Thank you.

Dr. Panch, I certainly applaud the President's budget and the NSF's intention to fund almost \$800 million in research related to artificial intelligence under the newly-created Directorate for Technology Innovation and Partnerships.

I certainly believe and I think you do, as well, that AI holds just incredible promise for economic opportunity, human advancement, but we have to find responsible ways to support and leverage these activities.

Last year, last Congress, I passed the AI Scholarship for Service Act and the AI Training Act promoting AI education as well as professional development for folks in this rapidly-developing field.

My question for you, sir, is can you discuss the importance of investing in AI research and education, but more specifically what is the criteria that NSF uses when deciding which AI applicants receive funding?

As the Administrator said, you can't put 10 pounds in a five-pound bag. What's the criteria for selecting which ones you invest in?

Dr. PANCHANATHAN. Senator, thank you for your question and I, too, am thankful for the investment that's being proposed for NSF and particularly in the area of AI, and the investments that we have already been making in fiscal year 2023.

So the figure that we use is, of course, the best ideas as the commitment that we need to make in order to source the best ideas to be invested in.

As you know, AI of today as you see it is because of sustained investments of NSF over the last five decades of sourcing the best ideas, investing in the best ideas, and making sure that they see the light at the end of the day.

So we're really happy about that.

NSF, as you may know, is the largest non-defense funder of AI research. So the second thing, and even more important for me if I were to describe, Senator Peters, about what NSF does, NSF is about people, people, and people. That is, we glean the talent. The ideas, yes, at the end of the day, the ideas come from people and those are the people that go and take the jobs, create the jobs, and those are the people that as skilled technical workforce contribute to the industries of the future, industries of today.

So it's about the people and those are the people who become the entrepreneurs. So, therefore, on the work we funded for, best ideas, commitment to training the talent at all levels, not just only research, Ph.D., and postdocs, as important as they are, but graduate students, undergraduate students, community college students, skilled technical workforce, and also inspiring talented K to 12, so that they might then pursue those career opportunities as they think about the future and so in fact we introduced as part of the TIP Directorate that you referenced that we launched recently there's a program called ExLENT.

It's about experiential learning on these technologies of the future, important technologies of the future. So this is a program again investing in how might we connect industry and academia and have the internships in inspire the talent so they can be ready for the jobs of today and tomorrow.

AI COLLABORATIONS

So these are the multifaceted ways in which we are looking at AI and what it can do for the future. You alluded to something which I want to sort of expand on. When we're doing this, we want to make sure that AI is not just about the technology. We're also bringing in the application inspirations. We have invested many AI institutes, 25 of them so far, each \$20 million, all across our country. We're about to announce another six of them in a few weeks.

So all of these are focused on AI for agriculture, AI for weather, AI for learning, as well as the core AI principles that are being fostered but in partnership, in partnership with companies like Google, Amazon, Intel, Accenture, and a whole host of companies and working with other agencies, Department of Transportation, Department of Homeland Security, you know, and a whole host of all these agencies also who have aspirations in terms of using AI for advancing their impact and ideas into the future.

So we're working on a comprehensive set of investments around AI to make sure that every talent and idea that can be inspired and that should be inspired for our Nation's future in this very important area is inspired. So we're bringing social, behavioral, economic scientists into the equation.

NSF, therefore, is looking at it as a cross-directorate fusion about AI because we know that AI is going to penetrate every aspect of our society. So instead of being an afterthought, why not look at the issues of privacy, security, safety, and responsible AI, explainable AI? You think of all of the things that we need to do with AI, why not do that, you know, as an a priori thinking by bringing in social, behavioral, economic scientists and other disciplines for inspirations to address this in a monopolistic manner.

I hope I've given you a complete picture of how we are looking at AI because it's an exceedingly important technology that I think all of us are going to be touched by and increasingly touched by in the future.

Senator PETERS. Thank you very much. Appreciate it. Thank you, Madam Chair.

Senator SHAHEEN. Thank you, Senator Peters.
Senator Britt.

2024 BUDGET AND THE ARTEMIS MISSIONS

Senator BRITT. Thank you, Madam Chair.

Administrator, Director, thank you for the enthusiasm that you have both shown for the important work that is done in both the agency and the NSF. I want to thank you for being here today.

Administrator Nelson, I want to start by telling you how much I appreciate the kind words that you said about Marshall Space Flight Center. I could not agree with you more. They have created a legacy of excellence. The men and women there have put in the work to literally take us to new heights and we are all better for it.

I also want to congratulate you, the NASA workforce, particularly Marshall Space Flight Center, and the hundreds of suppliers and contractors for the successful launch of the Space Launch System last year.

Tens of thousands of very talented and smart people throughout the country and in my home State of Alabama were responsible for a flawless SLS launch and I am deeply proud of what they have accomplished and I am committed to making sure that we keep this momentum going.

I was pleased to see the recent announcement of the Artemis II crew and we are, of course, eager to get back to the moon on Artemis III.

But the reality is we can't stop there. We have to take advantage of the progress that we've made and the workforce that has been built over the years. We need to be preparing now for a more sustained cadence of launches and Artemis IV, Artemis V, and beyond.

The key to maintaining our high-tech workforce and to grow our capability in deep space will be the exploration upper stage and the next generation of SLS, the Block 1B Program.

Congress has on a bipartisan basis strongly supported the continued development of the EUS and the Block 1B Program. It will be critical to getting more payload and capability to lunar orbit.

Administrator Nelson, does the President's budget request for fiscal year 2024 provide enough resources to ensure that we remain on time for the Artemis Missions II, III, and IV?

Mr. NELSON. Yes, ma'am, with the proviso that if we get the second competition for the second lander and it comes in within the constraints of what the President has proposed, then we can move on to Artemis V and VI and so forth because we'll have a second option on a lander.

With regard to Artemis IV, as you and I have discussed, part of the holdup there is the Mobile Launcher 2 that again for part of the frustrations that we have with contractors is delayed and it's

got to be a much taller mobile launch platform for a larger rocket, a heavier rocket,——

Senator BRITT. Right.

Mr. NELSON [continuing]. It has to be redone. There are also cost and schedule risks with Block 1B development.

I'll tell you one of the things that will never make is, picking up on Senator Patty Murray's question, is if the Congress comes in with some across-the-board sequestered cut or if the Congress reverted to the 2022 budget with the exception of defense——

Senator BRITT. Yes.

HABITAT FOR THE ARTEMIS MISSIONS

Mr. NELSON [continuing]. Veterans, NASA would be devastated.

Senator BRITT. And, Administrator Nelson, I appreciate it. I only have a minute left. So I'll say I'm glad you're optimistic because it was my understanding that we were several hundred million dollars short to continue the SLS Block 1B development, including the EUS and associated systems.

So my next question has two parts. As NASA continues to plan and prepare for the Artemis missions (1) how will NASA identify the type of habitat required and (2) what role do you see Marshall Space Flight Center having in the habitat mission?

Mr. NELSON. Well, let me define habitat. First of all, there's going to be a rover that we saw our first sample of it in Japan recently where the astronauts can don their spacesuits and in a habitable module they can roam around the surface, but if you mean by habitat that we actually build something and we are experimenting with that using the lunar soil, the regolith, I'm mixing it with a magic potion and creating a concrete landing pad and a concrete structure, yes, we're going to do that and your specific question, is Marshall going to be a part of that? Well, we're formulating that now, but Marshall——

Senator BRITT. I hope so.

Mr. NELSON [continuing]. Has a lot of that kind of expertise.

Senator BRITT. Absolutely, we have the expertise and the workforce and are very well suited to help us as we continue this mission.

Mr. NELSON. Yes, ma'am.

Senator BRITT. Thank you so much, Mr. Administrator.

Senator SHAHEEN. Thank you, Senator Britt.

Senator Reed.

Senator REED. Thank you very much, Madam Chair.

First, I want to welcome and send my best to Bill Nelson who I had the privilege of serving with for many years on the Armed Services Committee, and thank you, Mr. Administrator. You're doing a great job.

I think the only recommendation would be more investment in Rhode Island would be very beneficial to the Space Program. So please don't feel constrained by any other limits but thank you very much.

Pardon.

Senator SHAHEEN. Oceans, space.

Senator REED. Well, we're pretty spacey up there.

[Laughter.]

INCREASING EPSCoR FUNDING

Senator REED. But I'll direct my questions to Director Panchanathan.

First of all, I look forward to seeing you next week up in Rhode Island, so thank you very much, and thank you for your work on the CHIPS Act and the Science Act. They're particularly good, and in that bill we boosted the EPSCoR Program at the National Science Foundation. We're increasing it from, I believe, 15 percent to 20 percent of the funding, and I think EPSCoR, and you said it several times, is a great program because it tries to target the scientific research across the country and not just in the hubs in which typically money goes.

This effort in expanding EPSCoR was a result of work with Senator Wicker, my colleague, and Senator Cortez Masto. Let me thank them, too.

Can you tell us your plan, your commitment to increase the EPSCoR funding as required by CHIPS and what sort of ideas you have?

Dr. PANCHANATHAN. Thank you very much, Senator Reed. I, too, am looking forward to visiting Rhode Island. I know something about Rhode Island having in my previous job helped build the Innovation Campus in Rhode Island with the University of Rhode Island and so I'm looking forward to the visit.

To answer your question, as I was mentioning earlier, you know, you're absolutely correct that the talent and ideas are in all States, everywhere, and it's our responsibility as a Nation to bring out all of the talent and ideas and so the EPSCoR Program precisely addresses that particular objective.

So what we are doing at NSF is several things. It's not only through the EPSCoR Program that we are trying to make sure that we're providing the opportunities, it's a focused program, but we're making sure that with all of the activities of NSF, EPSCoR States opportunities are maximized. And the GRANTED Program is helping to ensure this when we write proposals to all the programs, it can be research centers, it can be AI institutes, it can be the quantum centers.

So all of this should be there and EPSCoR States have a chance of succeeding very, very well. So that's how you make sure that you not only meet the targets you mentioned but especially we have set up from 15–20 percent but even exceed those targets. My hope is because at the end of the day, my plan, you said, not just hope it's a plan, at the end of the day you want to make sure that that is the only way that you're going to get all of the talent and ideas to work for our country and that's the only way we're going to out-compete our competitors. Because if we leave behind this talent and ideas in some parts of the country, we will not get there and, yes, we need to energize the places where good work is happening, but we need to, you know, energize even more the work that is not happening right now because the focus is required and that's what we're working hard to do at NSF. And I give you my commitment that this is something that I am very focused on, very interested in, and I look forward to the outcomes.

NARRAGANSETT DAWN ARRIVAL

Senator REED. Thank you very much. Let me just mention two other Rhode Island-related programs. One is ICERM, which is hosted at Brown University, and you're aware of it. It's 1,500 scientists and students a year come to their programs of research and it also has a great outreach program that's making a real difference in schools in Rhode Island, especially girls, excuse me, young women, and underrepresented minorities, and I want to mention that program, and it could be a model that you might suggest to others throughout the United States.

And, finally, we expect the arrival of the Narragansett Dawn, our oceanographic ship, at the University of Rhode Island.

Do you have any idea when it's going to arrive?

Dr. PANCHANATHAN. Thank you very much, Senator, on that question.

The RCRV's are really, you know, shining examples of how do we make sure that we are doing the ocean exploration, you know, and being in the vanguard of innovation in scientific discovery. So I had the good fortune, in fact, of being in one of those research vessels just last week.

So to answer your question on that one, COVID and the hurricane in Louisiana has delayed things, but we're on track right now. So we're going to have this delivered this time next year, close to this time next year is what we're targeting for the Narragansett Dawn delivery.

Senator REED. It was the Secretary of Commerce commissioned the ship and is the sponsor of the ship, I think she might be up there, too. Thank you.

Dr. PANCHANATHAN. Thank you very much. I really appreciate your help and support.

Senator SHAHEEN. Thank you, Senator Reed.

Senator VAN HOLLEN.

Senator VAN HOLLEN. Thank you, Madam Chair.

It's great to see both of you. Mr. Administrator, my friend Bill, I'll be back to questioning you in a minute. I'm going to start with the doctor, Dr. Panchanathan. Great to see you again.

Dr. PANCHANATHAN. You, too.

Senator VAN HOLLEN. And I appreciated the chance to talk to you by phone about 3 weeks, a month ago——

Dr. PANCHANATHAN. Yes.

NSF INVESTMENTS INTO HBCU'S

Senator VAN HOLLEN [continuing]. About implementing certain provisions that I worked with and with others on as part of the CHIPS and Science Act, and thank you for your implementation there.

So I just want to go over those two major provisions again. One was something I worked with Senator Blunt on who's retired, as you know, but it was to make sure that the United States is able on an ongoing basis to identify cutting edge technologies so that we never get caught behind again as we did on 5G and to provide a strategy, workforce and other elements, to support achieving our goals in those cutting edge technologies.

The other provision was one that I worked with Senator Tillis on to make sure that NSF invests in the great possibilities and potential of HBCUs when it comes to scientific research and R&D.

So I just want your assurance today that you are moving forward on the issues we discussed during that conversation and look forward to seeing them to fruition.

Dr. PANCHANATHAN. Senator, it was truly a pleasure talking to you the other day and you did bring up the National SEAL Act of 2021 which the CHIPS and Science Act has now become the 10387(h). We're working with the National Academy of Sciences through their studies to make sure that they're always keeping us aware in terms of looking at not only the technologies of today and tomorrow but technologies of the future.

You have my commitment to do the work to make sure that we take all the inputs through the various strategic discussions that we have, through our listening sessions that we have with industry leaders and others, but also through the National Academies studies that we are always ensuring that they're looking at the technologies of the future and investing in the technologies of the future.

On the other one, your HBCU RISE Act, which became as part of CHIPS and Science, that you referred, which is the 10524 (d)4, regarding capacity-building at HBCUs, I can tell you that, you know, as part of the GRANTED Program I have met with the chancellors and presidents of the HBCUs and the HBCUs and the Research 2 category of HBCUs that you referred to, Senator, we are deeply committed to making sure that there are targeted programs.

We have several programs, including the HBCU Excellence in Research Program as one example of a program, HBCU research experience around the graduates. These are programs in which we are committed to making sure that the objective that you have laid out and outlined in our conversation of today are not only met but exceeded.

NASA BUDGET REQUEST DEFICIENCIES

Senator VAN HOLLEN. I appreciate that and look forward to working with you on continued implementation.

So, Mr. Administrator, thank you for your focus on many of the important space assets we have in the State of Maryland, starting with the Goddard Space Flight Center, and congratulations on the appointment of the new director, Makenzie Lystrup. I look forward to having a call with her a little bit later this week.

Thank you for your efforts on Johns Hopkins Applied Physics Lab as well as the Space Telescope Science Institute in Baltimore, and, of course, Wallops. I know you've been to Wallops Flight Facility, and it was good to work with you on getting the funding in the last appropriations bill for that very important bridge. So thank you for all of that.

That's the good news. Now I do want to address a couple provisions in the budget request that in my view have a serious deficiency.

One is in the area of Heliophysics and I think maybe the Chair raised this issue, a cut of \$55 million overall. In my view that cut

will make it much harder to reach the decadal objectives. So look forward to working with the Chair and committee colleagues on restoring that funding.

The other area is Planetary Science. The Dragonfly Mission is proposed to take a cut of 20 percent. Even though cutting 20 percent, you kept the same launch date in the budget and everything I know from the experts is that doesn't compute. You can't cut by 20 percent and still remain on target and I am troubled by the fact that it looks like monies were taken by the Mars Sample Return.

In other words, you see an increase there, even though if you look at the recent reports on both these programs, when it comes to the Dragonfly Mission, the independent review provided a positive preliminary design review whereas I think you're aware that was not the case when it came to the Mars Sample Return.

So we look forward to working with you to address the deficiency in the Dragonfly Mission budget.

The others in the Earth Science area where the Administration's budget proposes to zero out the Earth Observing Systems Series Satellites, Terra, Aqua, and Aura, which are still productive. They're still generating very important research.

So I'm going to be looking forward to working with you, I hope, and our colleagues on the committee to keep those systems going so long as they're generating useful information.

I would also suggest, Mr. Administrator, that we have a follow-on plan, unless the decision is that the data—we don't want to collect this kind of data in the future, we need to keep it going while it's good and have a backup—a future strategy to collect it going forward.

Would you be willing to work with us to make sure that we address the shortcomings in the budget?

Mr. NELSON. Of course, and as I have said because this subject has come up several times, this budget represents the largest science budget ever, \$8.3 billion.

Now how do you get 10 pounds of potatoes in a five-pound sack? Something has to be delayed to preserve priorities and so you have to make choices.

With regard to Dragonfly, it is going to fly in about 2027 and we think by the end of this year we will have a good fix on how that's going and its funding.

All of these things we need to work with you and as I have said earlier with the Chair, we can propose a budget and this is the President proposes but you dispose.

INCREASE TO MARS SAMPLE RETURN FUNDING

Senator VAN HOLLEN. I appreciate that and maybe the Chair raised this, but my understanding is that in addition to cost overruns, significant cost overruns involved with the Mars Sample Return, that an independent report also found flaws in the preliminary design aspect of that project.

So I guess there's a question as to why to increase at this point in time funding for a program that has not stacked up well compared to some of the other programs, like Dragonfly, and so that's what we want to explore with you, not that we shouldn't proceed eventually on both, but there is this timing question that you raise.

So I appreciate your response and we look forward to working with you.

Mr. NELSON. Well, may I address that issue of design?

Senator VAN HOLLEN. Yes.

Mr. NELSON. Senator Van Hollen, we are very much an international approach to our science as well as the human space program. You're dog-gone right. There was a change to the design because originally the lander was going to carry a European Rover but a series of issues meant we had to redesign the mission because this is a critically highly sophisticated maneuver to bring back at least 10, if not 30, samples in titanium tubes this big from the surface of Mars so we can determine was there life in that dry lake bed at the mouth of the river that dumped into that lake bed on Mars and so in scrambling to come up, it's come up with a whole new concept.

We send the lander and the lander, and if Perseverance, which has 30 of the tubes, is still working by the time the lander's there, Perseverance will deliver the 30 tubes to the lander. Otherwise, we're going to send two helicopters with the lander.

This is all gee whiz stuff and the helicopters are going to go and pick up the 10 tubes that we have already deposited on the surface of Mars and then if that isn't enough, once they deposit it at the lander, which has the ascent vehicle, that goes up into Martian orbit to rendezvous with the already being constructed European Space Agency return vehicle carrying the NASA system which ultimately produces the canister or the device that can withstand the heat of re-entry with either 30 or 10 of these sample tubes.

As you can see, there's been a lot of scrambling to catch up because it was a design that evaporated in mid-air.

GEDI MISSION

Senator VAN HOLLEN. I appreciate that. I just don't want to see the changes needed to be made to compensate for those problems being taken out of other very important priorities.

So let me end on another positive thank you note which was the GEDI Mission. Thank you for making sure that we could extend that mission and working with Congressman Hoyer and myself to make sure that we could do that. Thank you for that. I know you're balancing a lot of things and we look forward to working with you, the Committee, I know the Chair does, on all these priorities.

Thank you.

Mr. NELSON. That's a science mission on the Space Station that had to be moved in order for another science mission and once that's done then moved back and that's how we saved that GEDI Mission.

Senator VAN HOLLEN. Yes. I appreciate your making sure that—

Mr. NELSON. Thank you for finally—I've never worked so hard on anything in my life as that little bridge going to Wallops.

Senator VAN HOLLEN. Thank you. I know you raised it. Thank you.

Mr. NELSON. Mark and Ben, thank you all for helping out.

Senator VAN HOLLEN. Thank you. Thank you for all you're doing.

NAVIGATING THE NEW ARCTIC

Senator SHAHEEN. Well, thank you, Senator Van Hollen.

We may have one other Senator on the way and in the meantime, I have just one more question for each of you.

Dr. Panch, in 2016 NSF unveiled what they called Big Ideas that they were going to be looking at investing in the future. One of those Big Ideas was Navigating the New Arctic.

I think it's an important program. Certainly as we look at the impacts of climate change, figuring out what's happening in the Arctic is critical. New Hampshire is working in a number of areas around some of those issues, including infrastructure that's affected by rising sea levels and flooding during high tides, something that affects all of the States represented here by Senators that have coast lines.

Now last year you committed to me that NSF would not forget the effects of a changing Arctic and the North Atlantic, but as NSF moves away from that Big Ideas proposal, how will you continue to integrate that work in the Arctic into the programs of NSF?

Dr. PANCHANATHAN. Thank you, Senator Shaheen, for asking that question.

You know, when the Big Ideas were constructed, right, it was to make sure that we had a specific focus on themes that we felt were important for a decade, but what happens is that you then make it systemic. If you think of these ideas as incubating the focus area, then they have to become systemic as part of the functions of the agency.

So we are not by any means walking away from Navigating the New Arctic focus area. What we're doing is we're embedding it into the thinking of the programs that are already at NSF and emphasizing that piece.

So I just want to make sure that we don't give the wrong impression that somehow that some Big Idea is coming to an end and shining the light on that in a particular way means that we have walked away from it.

Quite the contrary, except we are making it a very, very important priority. The Arctic is an important priority for NSF in so many ways, and so I just want to tell you that it is not ending a program but systematizing it as part of the thinking of NSF and continuing the investments through the regular programs of NSF.

Senator SHAHEEN. Well, thank you. I'm pleased to hear that because, as we know, the Arctic is becoming an even more critical area of competition between the United States and our great power competitors. So our continued work in the Arctic is going to be even more important.

Dr. PANCHANATHAN. Yes.

RUSSIA AND THE INTERNATIONAL SPACE STATION

Senator SHAHEEN. Administrator Nelson, I want to return to something else that we discussed at the hearing last year and that has gained increased relevance as we see what's happening in Europe with the war in Ukraine and that is Russia's involvement in the International Space Station.

Last year when I asked you this question, I think you were very confident that Russia would continue to be a positive player in the International Space Station. Since then, we have seen a deterioration in Russia's participation in the international community.

So can you talk about how confident you are that Russia will continue to be a player in the International Space Station and what we're thinking about if they decide to suddenly withdraw from their participation?

Mr. NELSON. Madam Chair, it's one of the great ironies of our time that President Putin can be so aggressive and so inhumane in what he is directing that is happening in Ukraine and at the same time there is a very professional, competent relationship between the U.S. and our other international partners and the Russians with regards to space.

Not only between the cosmonauts and the astronauts onboard the International Space Station, not only on the fact that we launch integrated crews with an American astronaut launching on a Russian Soyuz and a Russian cosmonaut launching on the U.S. SpaceX Dragon Falcon 9 rocket. Not only that, but also the fact that there is a mission control of Americans and Russians in Moscow as well as Houston and it is all working.

Now why is it working? Well, there's precedent for this. Even during the Cold War of the Soviet Union an American spacecraft and a Soviet spacecraft, the American spacecraft rendezvoused and docked and the crews lived together in space and that set the tone for the Civilian Space Program between otherwise two enemies, two political and geopolitical enemies and that cooperation, peaceful, in the Civilian Space Program as distinguished from military or intelligence, has unbelievably continued to today, even so much so that when the Russians put up the first space station called Mir, they had our American astronauts flying up and joining and had eventually the space shuttle come and dock with Mir.

Then we designed and built together the International Space Station which, by the way, is as big as a football stadium from one goal post to the other, and that cooperation continues. We have to operate it together.

An example that you just couldn't believe had happened. A few years ago when the Russians did an ASAT test and it caused so much thousands, tens of thousands of pieces of debris, it threatened the Space Station upon which were Russian cosmonauts. I think that was probably one hand not knowing what the other hand was doing but we had to move the Space Station to get out of the way of some of that debris that was caused by a Russian anti-satellite test.

Madam Chair, you have pointed out that one of the great anomalies and hopefully one that continues because if we can continue peacefully working together in space, maybe that's a template for the future.

Senator SHAHEEN. Well, thank you very much.

Bill, I agree with you. I think it's a very important relationship and hopefully we will see it continue and Vladimir Putin will continue to participate in ways that are very positive not just to the United States but to Russia and to the rest of the world. So thank you. Thank you both for your testimony.

ADDITIONAL COMMITTEE QUESTIONS

Senator SHAHEEN. If there are no further questions this afternoon, Senators have until April 25 to submit any additional questions for the subcommittee's official hearing record. We would request on any of those questions that NASA and NSF respond within 30 days.

[The following questions were not asked at the hearing, but were submitted to the National Aeronautics and Space Administration and the National Science Foundation for response subsequent to the hearing.]

QUESTIONS SUBMITTED TO ADMINISTRATOR BILL NELSON

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

QUESTIONS SUBMITTED BY SENATOR DIANNE FEINSTEIN

Question 1. Administrator Nelson, I understand that NASA has developed a robust plan to return samples from Mars, which is the top priority of the planetary science community.

Previous missions such as the Perseverance rover have collected samples and stored them within the rover and on the Martian surface in anticipation of the necessary technological development to bring them back to Earth. I am also keenly aware that China, having performed the only other successful Mars surface landing just over 2 years ago, has announced its own sample retrieval mission.

—Administrator Nelson, how confident are you that the President's Budget Request for this mission will not result in delays to the timeline? Would ensuring robust support for the Mars Sample Return program in the upcoming Fiscal Year help avoid cost overruns or other inflationary increases in the total mission budget?

Answer. The Mars Sample Return (MSR) Program is still in formulation—meaning that NASA is in the process of completing the Preliminary Design. As the architecture progresses toward completion of Preliminary Design, the cost and schedule estimates associated with the design are being developed in accordance with NASA's Space Flight Program and Project Management Requirements, as well as with the recommendations of SMD's Large Mission Study. The Agency aims to set its baseline cost and schedule commitment for MSR later this year as part of the confirmation review process. The President's FY 2024 budget request of \$949.3 million for MSR seeks to ensure the project continues to make progress toward confirmation and supports the earliest feasible launch date.

Given the scope, complexity and groundbreaking nature of this high-profile mission, the Agency has sought two independent reviews—one prior to entering Phase A and a second prior to confirmation. In addition to NASA's internal formulation process that provides for multiple independent lifecycle reviews of project designs and performance, NASA established these Independent Review Boards (IRBs) to separately evaluate the technical, cost, and schedule plans prior to Agency Program confirmation. As a result, MSR will be the most reviewed early mission concept, with the intent of ensuring the design has been thoroughly reviewed, increasing confidence in the associated cost and schedule estimates to inform the Agency's confirmation decision.

Question 2. Administrator Nelson, I remain concerned that NASA withdrew the Stratospheric Observatory for Infrared Astronomy (SOFIA) from the 2022 Astrophysics Senior Review and ultimately canceled the program last year. The rationale provided by NASA to date—that the 2020 Decadal Survey recommended its cancellation—omits key details. NASA had already proposed to cancel the program when the Decadal Survey was being developed; it was not a proposal that originated with the nonFederal science community. Perhaps more importantly, SOFIA was not afforded the opportunity to defend its progress and productivity, since NASA leadership removed SOFIA from the Senior Review process. In fact, NASA's own Astrophysics Advisory Committee, which is senior to the Senior Review Committee, recommended that the mission be extended through at least Fiscal Year 2023 to complete all scheduled flights (Cycle 9) as well as a final round of proposals. Instead, NASA canceled the project with only 80 percent of the Cycle 9 flights completed and

never selected proposals for a final round. Even if termination of SOFIA was appropriate and warranted, the termination process did not follow the normal course.

—Administrator Nelson, what is NASA doing to provide alternative support pathways to the researchers whose SOFIA mission proposals were accepted but never flown due to SOFIA's termination in September 2022? Please describe what resources are required to ensure that all data gathered by SOFIA are adequately processed, stored, and made easily accessible to the scientific community.

Answer. The SOFIA termination process followed the normal course with 18 additional flights added at the end of the mission to allow NASA to achieve higher than expected completion rate. Legacy programs were prioritized for their high return on investment (ROI), and these had most, if not all, of their data taken. PIs were allowed to prioritize their targets, so SOFIA did much better on completing individual targets within a program through continuous replanning.

Cycle 9 PIs are funded with grants in FY 2023 and FY 2024 to allow the reduction and analysis of their data. The Project also provided extra archival funding (May 2, 2022, archival call), to which anyone could propose.

JWST data that partially overlaps the wavelength region covered by SOFIA, and other competed programs for science across the far-IR wavelength regions that were observed by SOFIA, provide numerous science opportunities for these researchers. Examples of these opportunities include balloons and suborbital flights in the Astrophysics Research and Analysis Program (APRA), its Pioneers Program, and its Explorers Program. NASA also provides opportunities to develop technology for far-IR astrophysics with its APRA and Strategic Astrophysics Technology programs (SAT). For example, the Galactic/Extra-Galactic ULDB Spectroscopic Terahertz Observatory (GUSTO) is a NASA Explorer Mission of Opportunity mission led by Principal Investigator Dr. Christopher Walker of the University of Arizona. The project goal is to develop a Terahertz observatory and balloon-borne platform for conducting a spectroscopic survey of the Milky Way and Large Magellanic Cloud to determine the composition energetics and dynamics of the Interstellar Medium (ISM). GUSTO will provide the first complete study of the life cycle of the interstellar medium, the gas and dust from which all stars and planets are formed. This mission is currently scheduled to be launched from Antarctica in late calendar year 2023. In addition, the Astrophysics Probe Announcement of Opportunity (AO) is responsive to the Decadal Survey in that this AO, the first \$1.0B class Astrophysics competed mission, explicitly calls for proposals for infrared missions and X-ray missions.

SOFIA science data and relevant housekeeping data have been transferred to NASA's Infrared Science Archive (IRSA) and will be publicly available by September 30, 2023, along with documentation that will allow scientists to use it. NASA is also funding the reprocessing of science data from Cycles 5–9, which were deemed to be the most scientifically valuable by the SOFIA Users Group and NASA's Astrophysics Advisory Committee (APAC). The work will be completed, and the reprocessed data will be delivered to IRSA by September 30, 2023. In the future, if someone in our scientific community wishes to reprocess any or all of the SOFIA data and need funding, they may propose to the NASA's Astrophysics Data Analysis Program.

Question 3. Administrator Nelson, I understand that NASA has jurisdiction over rocket engine tests and rockets on the launch pad, whereas other entities have jurisdiction over a rocket in flight. Some stakeholders in my state of California have noted a mismatch in the Federal safety regulations pertaining to one particular fuel mixture—liquid methane and liquid oxygen—with NASA's regulations approximately four times more restrictive than those used by the Space Force.

—Administrator Nelson, has NASA coordinated with the Space Force and the Federal Aviation Administration to reach a common understanding of the risk associated with a liquid methane-liquid oxygen fuel?

—Have you made any tangible strides toward a unified government approach to regulation in this area?

Answer. The following responses have been coordinated with the LOX Methane Assessment (LMA) team, established by the NASA Engineering and Safety Center (NESC), and comprised of NASA, the U.S. Space Force, and the Federal Aviation Administration, to collect empirical data and develop simulation and engineering model capabilities necessary to properly assess the explosive hazard of the LOC/Methane propellant combination.

Response to the statement accompanying the question above requires two clarifications. Generally, the LMA team has noted confusion—in conversations with stakeholders and commercial providers—between (i) policy authority for the various

government agencies; and, (ii) ground safety (siting) standards vs flight safety standards.

1. Policy Authority: The Space Force has differing authority for launch pad (ground) and flight safety. For ground safety (i.e., explosive siting), the Department of Defense (DoD) Explosives Safety Board (DDESB) is the policy authority within the DoD. The DDESB does not have regulatory authority within the DoD for flight safety; flight safety authority lies with USSF/Space Launch Deltas (SLDs). For NASA launches from a NASA launch range, NASA maintains authority for both ground and flight safety activities. For NASA launches from a DoD launch range, NASA defers responsibility to the DoD Range Commander. Similarly, if DoD is launching from a NASA launch range, NASA retains responsibility for ground and flight safety. For FAA-licensed launches on NASA property, NASA maintains responsibility for its assets and workforce and coordinates accordingly with the FAA.
2. NASA regulations vs Space Force regulations: With respect to the statement accompanying the question above regarding a perceived “mismatch . . . with NASA regulations appearing to be approximately four times more restrictive than those used by the Space Force,” some clarification is needed. The use of TNT equivalence varies depending on the safety concern—it is situation dependent. The explosion scenario for fueling a rocket is different than if the fully or partially fueled rocket were to crash into the ground during flight. The LMA team believes the statement confuses ground safety (siting) and flight safety standards.

Ground safety typically employs a containment approach, which necessitates quantifying the maximum credible event, whereas flight safety will employ a risk basis and requires a mean and uncertainty. For ground safety (i.e., explosive siting), the DDESB is the policy authority within the DoD, and has accepted 100% TNT equivalence pending ongoing test programs. NASA, for explosive siting, is common with the DDESB approach. NASA and Space Force are both using the 100% TNT equivalence for ground siting.

—Administrator Nelson, has NASA coordinated with the Space Force and the Federal Aviation Administration to reach a common understanding of the risk associated with a liquid methane-liquid oxygen fuel?

Yes. The NASA Engineering and Safety Center (NESC) is coordinating a multi-Agency team (NASA, U.S. Space Force (USSF), and Federal Aviation Administration (FAA)), known as the Lox Methane Assessment (LMA) effort, to both collect empirical data and to develop simulation and engineering model capabilities necessary to properly assess the explosive hazard of this propellant combination. This data will be used to inform independent technical hazard analysis and quantification in support of institutional authorities having jurisdiction making risk-informed decisions appropriate for launch facility siting, range safety, crew safety, and to support space nuclear system enabled-payload launch authorization. The LMA is coordinating efforts on LNG/LOX testing, data sharing, and analysis. NASA has been supplying key support with SME's, instrumentation, and analysis capabilities.

—Have you made any tangible strides toward a unified government approach to regulation in this area?

Although it is not within NASA's authority to direct external USG safety standards and regulations, as noted above, the NASA Engineering and Safety Center (NESC) has formed the LOX/Methane Assessment (LMA) team, composed of NASA, USSF, and FAA, with the overarching goal to generate the knowledge required to reduce the uncertainty and make better decisions related to liquid methane and liquid oxygen propellants. LMA has begun conducting a multi-phase test program that will provide tangible data and knowledge to help government entities such as DDESB, USSF, NASA, and FAA so that regulators can make informed decisions and the LMA will continue to develop new knowledge as the test program proceeds.

LMA is also an active participant in the Commons Standards Working Group (CSWG). The CSWG is a U.S. Government-only forum, and membership primarily consists of representatives from the U.S. Air Force, FAA, and NASA organizations responsible for the development and implementation of space launch and reentry safety policy, requirements, procedures, and practices. The goal of the CSWG is to promote the use of common safety standards and recommended practices across the launch enterprise overseen by the USG. The LMA team will continue to share the empirical data and developed simulations and engineering models from the test program with our interagency counterparts, as well as commercial launch providers as appropriate, so they can make informed decisions to properly assess the explosive hazard of this propellant combination.

Question 4. Administrator Nelson, I understand that NASA has pushed back the timeline for the Venus Emissivity, Radio Science, InSAR, Topography, and Spectroscopy (VERITAS) mission, dropping the Fiscal Year 2024 request to just \$1.5 million from the projected \$56.7 million last year. In November 2022, NASA announced that it was delaying the project by at least 3 years to offset a workload imbalance at the Jet Propulsion Laboratory (JPL). But the Fiscal Year 2024 outlook projects a budget request of just \$1.5 million for VERITAS through 2028, far more than just a three year delay.

—Administrator Nelson, why does NASA propose to extend the hold on the VERITAS project through 2028? If JPL made the necessary changes identified by the independent review board in 2022, what level of appropriations would be necessary to meet the target launch date for VERITAS of 2029?

Answer. VERITAS was delayed in response to the Psyche Independent Review Board (IRB) finding that JPL (the lead institution for VERITAS) lacked sufficient experienced staff to support its portfolio of missions. That independent review was commissioned to examine project and institutional issues that led to the Psyche mission missing its planned 2022 launch opportunity. Based on that review's outcomes, NASA deemed it prudent to rebalance work at JPL to ensure that sufficient workforce is available to support high-priority missions further in their development and formulation, including Europa Clipper, Mars Sample Return, and Psyche.

Since VERITAS was still in early formulation, its delay offered the least disruption to NASA's portfolio. A launch date of 2031 was set at that time, which represents a delay of approximately 3 years and allows JPL adequate time to rectify the issues raised by the Psyche IRB.

Based on a prior estimate, the required funding in addition to the FY 2024 President's Budget Request for VERITAS to achieve launch readiness by November 2029 would be \$32.15 million. Additional funding would be needed in FY 2025 and beyond. It is important to note that the decision to delay VERITAS was not solely based on cost; workforce concerns at JPL identified in the Psyche IRB report were a large part of the decision. Direction to fund VERITAS to support a 2029 launch would have significant impacts to the remainder of the portfolio and would put other JPL-led missions further in their development at risk, including Europa Clipper with a planned launch in 2024, NEO Surveyor, and Mars Sample Return.

Question 5. Administrator Nelson, as you know, California is a hub for the aerospace industry, with more NASA employees than any other state and a thriving private industry. I have heard concerns that NASA employees' pay is not keeping pace with the aerospace industry overall. As a result, many Federal employees are leaving NASA for higher paying jobs in the private sector.

—Administrator Nelson, how does the Administration plan to recruit and retain an expert workforce in this highly competitive sector? What resources or authorities are needed to meet NASA's requirements for recruitment and retention?

Answer. People are NASA's most precious resource in enabling our incredible mission. For most of its history, NASA has attracted and retained a stable, successful workforce with high job satisfaction. As a best place to work in government, NASA has a higher level of workforce retention than most government agencies; NASA's overall attrition rate remains approximately 5–6 percent per year.

To ensure NASA continues to provide global leadership in space science, human exploration, aerospace innovation, and technology development, the Agency has taken steps to foster and boost agility in our world-class workforce. We have focused on expanding usage of time-limited appointments. Civil servants on time-limited appointments can be part of our pipeline to permanent roles as retirements occur or they can end their appointment when the project or program is completed. Time-limited appointments can be used in conjunction with our NASA-unique Direct Hire Authority to quickly recruit and hire new and critical skills. NASA has also been granted additional direct hire authority by OPM critical to the success of our Artemis and related missions. This is beyond the government-wide DHA for Cyber and certain STEM occupations. In addition, NASA has recently worked with OPM to update the government-wide time-limited appointment definition to "up to 10 years" (rather than four) for STEM.

NASA in California:

With roughly 7,500 employees at NASA Ames Research Center, NASA Armstrong Research Center, and the Jet Propulsion Laboratory, NASA is primed for a plethora of collaboration opportunities with industry and academic partners in the California markets. Partnerships/collaboration, mentoring, and learning/development opportu-

ilities are key elements to an enduring workforce, as well as, to NASA successfully meeting its mission goals, to remaining a leader in research, and for developing in emerging areas.

Many of the challenges the Federal workforce faces are heightened in California due to its high cost of living and low pay compared to industry. Retention for early career employees, where pay inequities are often felt the most and competition for these professionals, is difficult in the region, especially for Ames, which is centrally located in the Silicon Valley. Ames projects and missions require top-tier experts in data, information, and computing. However, these positions remain some of the most difficult for Ames to successfully hire and retain because commercial industry often offers higher salaries for comparable positions.

While challenging, NASA does successfully obtain top talent for missions and work carried out at our California Centers. Successes in this environment can be attributed to:

- The use of compensation incentives, such as recruitment and relocation bonuses and enhanced leave, are heavily used to secure top talent.
- Utilization of the NASA Excepted (NEX) hiring authority at the highest rate across NASA Centers to gain top-tier talent at a pay rate that the GS pay scale doesn't offer.
- Heavy utilization of term/time-limited hiring appointments to leverage flexible workforce.
- Being at the forefront of NASA's Future of Work posturing, embracing telework and hybrid in-person and online team structures.

Such hiring flexibilities are critical to past and current successes in acquiring necessary skills, particularly in geographic areas with higher than national average cost of living, a large number of tech companies and large STEM workforces. California is subject to all three of these conditions that lead to increased competition for talent.

We continue to seek workforce flexibilities for hiring, development and other modern personnel practices. For example, we are seeking legislation that would allow NASA to engage in talent exchange programs with the private sector. This proposed legislation was submitted to the 118th Congress on April 3, 2023, to amend the National Aeronautics and Space Act Agreement of 1958, as amended.

QUESTIONS SUBMITTED BY SENATOR CHRIS VAN HOLLEN

Question 1. Dragonfly. The groundbreaking Dragonfly mission received a glowing review at its recently completed preliminary decision review. It is scheduled for a confirmation review sometime this summer. The number proposed in the budget this year, \$327 million, almost surely would result in the mission slipping to a launch late 2028 or 2029, and cost hundreds of millions more because of another NASA-imposed launch delay.

If Congress can find funds in FY 2024 to sustain the mission on a trajectory for a 2027 launch date, would you be willing to instruct the Dragonfly confirmation review panel to designate that date subject to a successful completion of the appropriations process this year?

Answer. In order to meet a 2027 launch, NASA would have to spend \$179.3M above the FY 2024 budget request of \$327.7M in FY 2024 for long-lead parts procurement, continued design of the rotorcraft by the APL team, and the procurement of the launch vehicle.

NASA is currently evaluating options for Dragonfly, as well as potential impacts to the rest of the Planetary Science portfolio if funding is redirected from other needs to Dragonfly. The probability of successfully meeting both cost and schedule will be carefully considered at the confirmation review to establish the Agency Baseline Commitment for the mission.

Question 2. Astronomy after James Webb. The results from the James Webb Space Telescope have been spectacular, exceeding everyone's expectations scientifically and capturing the imagination of the world about the importance of science. Given this success and the long lead times it takes to develop, build, and eventually launch a mission of this scale, I am concerned by the lack of investment in next generation astronomy projects, despite the release of the National Academy Decadal Survey last year.

Given the phenomenal results from Webb and the global attention and breakthrough science it has achieved, why doesn't the FY 2024 budget reflect investments in next generation astronomy projects?

Answer. NASA has requested \$407.3 million in FY 2024 for the Nancy Grace Roman Space Telescope (Roman) that will investigate long-standing astronomical mysteries, such as the force behind the universe's accelerating expansion, and search for distant planets beyond our solar system.

Roman will unravel the secrets of dark energy and dark matter, search for and image exoplanets, and explore many topics in infrared astrophysics. This newest NASA observatory addresses the top priority large mission of the 2010 Decadal Survey in Astronomy and Astrophysics. Roman carries two instruments. The Wide Field Instrument will accomplish the mission's primary science observations over large areas of the sky. The Coronagraph Instrument technology demonstration instrument matures components and systems for imaging and spectroscopy of individual nearby exoplanets. NASA has scheduled Roman's launch for May 2027 so that Roman mission's operations overlap with those of the James Webb Space Telescope to provide synergistic science capabilities. Roman ushers in a new era of big data for astrophysics, producing an archive averaging over 10 terabytes of data per day of operations during its first 5 years of operations.

Beyond Roman, the 2020 Decadal Survey in Astronomy and Astrophysics recommended an ambitious and inspiring program for NASA Astrophysics. NASA intends to follow the guidance of the Decadal Survey and has already made excellent progress on two of three major recommendations. NASA has begun the planning process for a mission that will survey nearby stars for Earth-like planets and characterize them for evidence of life. The mission, called the Habitable Worlds Observatory, requires technology that will allow high contrast imaging with a >6-meter space telescope to contrast levels as high as 10 billion.

NASA believes that this mission, following the scientific success of the Webb and Roman telescopes, will maintain U.S. leadership in scientific discovery and key large space optics, AI and quantum technologies which have dual-use capabilities valued by other Federal agencies. The FY 2024 budget request provides modest funding for precursor scientific studies, via the initiation of a scientific and technical working group that will conduct trade studies to prioritize the Habitable Worlds Observatory's scientific objectives and investigate their impact on the telescope's architecture.

QUESTIONS SUBMITTED BY SENATOR GARY PETERS

Question 1. Administrator Nelson, please elaborate on your response to my question at the hearing regarding the importance of understanding space weather events and how NASA is prioritizing implementation of my PROSWIFT Act and space weather research. Can you speak to the timeline you referenced during the hearing?

Answer. Making use of NASA's unique capabilities, the Agency's Heliophysics Division established the new NASA Space Weather Program, a national resource to unify space weather research and drive our understanding of space weather risks, impacts, and mechanisms into new realms. The NASA Space Weather Program has undertaken numerous activities to directly respond to, and fulfill, the directive of the PROSWIFT Act. These include driving advances in space weather research via the Research Opportunities in Space and Earth Science (ROSES) annual Space Weather Research to Operations/Operations to Research (R2O2R) research solicitations, including the ROSES 2023 focused topic of Data Assimilation for Neutral Density Forecasting, as well as an Open Call. NASA will soon be announcing our selected Space Weather Centers of Excellence, which will provide significant long-term investment in research and infrastructure development to address major challenges in space weather in an integrated multidisciplinary fashion. Also forthcoming is the Space Weather Grand Challenge, which will identify the next low-latency data stream to enable a significant advancement in space weather forecasting.

Additionally, several space weather flight initiatives are in work, including the HERMES instrument package to be placed on the Lunar Gateway, the ESA-led Vigil mission's instrument solicitation for which NASA released the Announcement of Opportunity in May, as well as the Space Weather Pipeline instrument solicitation for which NASA recently released a Request for Information to the commercial industry.

NASA is also committed to engagement with the broader space weather community. The NASA Space Weather Program established the Space Weather Council, a subgroup under the Heliophysics Advisory Committee (HPAC), to obtain feedback from academic, commercial, and user sectors in order to better serve in its role for the Nation. The NASA Space Weather Program also continues to strengthen its interagency partnerships, including participation in the new Space Weather Oper-

ations, Research, and Mitigation (SWORM) Interagency Working Group established under the National Science and Technology Council, which recently released a Space Weather R2O and O2R Framework document. This led to a four-Agency Memorandum of Agreement, which will be signed in July 2023 to provide a structure through which NASA, the National Science Foundation (NSF), the National Oceanic and Atmospheric Administration (NOAA), and U.S. Air Force can coordinate R2O and O2R activities. NASA is also collaborating with NOAA on the Space Weather Advisory Group and the Space Weather Roundtable at the National Academy of Sciences.

QUESTIONS SUBMITTED BY SENATOR LISA MURKOWSKI

Question 1. The FY 2024 NASA budget again requests flat funding for the Established Program to Stimulate Competitive Research (EPSCoR). Unless Congress acts, the NASA EPSCoR program will be funded at the same level as NASA requested in FY 2022. Through various Executive Orders and actions the Biden Administration has made it a priority to increase Federal support to underserved communities. However, NASA's primary program to support enhancing the research capacity of underserved communities appears to be an afterthought.

Could you please explain why?

Answer. NASA makes vital investments in Science, Technology, Engineering, and Mathematics (STEM) engagement, in direct alignment with NASA's 2022 Strategic Plan and Goal 4.3 to "build the next generation of explorers," as well as the Administration's priority of building a future diverse STEM workforce.

NASA prioritizes support to underserved communities through K-12, graduate and undergraduate, and informal education in all our projects across the program. Additionally, NASA works closely with indigenous people and in rural communities. We leverage existing relationships and research efforts to increase our reach. This year, NASA EPSCoR has collaborated with NSF, leveraging \$6.6M of NASA funding for research that is targeted to minority serving institutions faculty within the 28 EPSCoR jurisdictions. The FY 2024 request includes \$5 million to expand partnerships to expand the reach and impact of NASA STEM programming, including in underrepresented communities.

Question 2. NASA has made a move away from Center specific contracts to bundled agency wide contracts as part of the "MAP" effort. While the goal was to increase efficiency and reduce cost, we have heard in some instances this has resulted in higher costs and less service on contracts that have already transitioned. Will this effort be continued moving forward?

Answer. NASA continues maturing its Enterprise Service Delivery Model, which focuses on 25 Product Service Lines (PSL) for Institutional and Program/Project support commodities and services (e.g., Construction, Information Technology, Administration, Custodial, Engineering Support), with the goal of leveraging strategic sourcing and category management principles (<https://www.gsa.gov/buy-through-us/category-management>). The PSL delivery model consists of Enterprise (service Agency), Regional (service certain Centers), and Local contracts (service local only). The specific PSL contract delivery model selected is based on the commonality of each PSL. For example, Financial Support Services contracts are regionalized, whereas Facility Operations and Maintenance contracts are localized.

The PSL model optimizes interdependencies, reduces redundancies, and leverages workforce skills and capacity, while ensuring flexibility in meeting NASA's evolving mission.

Additional benefits consist of:

- Leverage buying power/economies of scale;
- Achieve savings/cost avoidances;
- Increase use of Category Management contract vehicles;
- Maximize Small Business Utilization;
- Similar user experience (internal & external);
- Strengthen partnerships within the NASA acquisition lifecycle process;
- Utilize tools and techniques to operate virtually and to streamline processes;
- Sharing of NASA capabilities and best practices across regions;
- Maximize workforce capacity, capability and build bench strength;
- Enables enterprise management of the Product Service Lines (e.g., spend, service levels);
- Eliminates unnecessary contract redundancies; and,
- Improves industry access to opportunities.

There are potential cost impacts associated with transitioning from multiple decentralized contracts to regional or enterprise contract vehicles (e.g., effort to consolidate services and workforce). In addition, NASA transition coincided with unrelated labor and commodity cost increases experienced throughout the U.S. economy in recent years, directly contributing to higher costs for NASA contract support. As evidence, the COVID pandemic impacted the way NASA works and from where, yielding increased labor costs and leading to unprecedented global supply chain issues. This has generated commodity cost increases as supply has not been able to keep up with demand. Further, the United States has recently experienced inflation, which also increases commodity costs and further increases labor costs. The U.S. unemployment rate is also at a historical low, driving labor cost increases.

Evidence indicates a potential for higher cost impacts if the Agency had chosen to re-compete Center-specific contracts versus pursuing the enterprise contract strategy. The Agency has benefited from cost avoidances as a result of the significant reduction in source evaluation boards (e.g., procurement, financial, legal, and technical communities) and streamlined contract administration requirements, which has allowed the Agency's limited FTE resources to respond to other Agency high priority initiatives.

In summary, given the economic factors experienced over the last several years, higher contract costs would have been incurred regardless of whether the Agency had chosen to re-compete Center-specific contracts versus moving to an enterprise or bundled contract strategy.

Consolidated contracts are a tool that aligns with the evolving structure of NASA that provide comprehensive, and in many cases, enhanced services to the Agency with greater financial transparency and efficiency. For the various reasons outlined above, NASA will continue to move away from Center-specific contracts to bundled Agency-wide contracts where it makes sense to do so.

Question 3. I Understand small business workshare goals have increased, but small business has much less control of the work in that situation and a harder time bringing efficiencies and innovations to the contract. Small Business Set Aside contracts have been very effective at providing cost effective solutions to NASA needs. With the above move to agency wide Full & Open contracts, how does NASA maintain workshare for Small Business?

Answer. NASA's Office of Small Business Programs' primary mission is to increase the utilization of small businesses in support of the Agency's mission. The Office continues to make significant strides in not only maintaining, but increasing, the workshare for small business. Contrary to the statement included as part of the above question, "with the above move to agency wide Full & Open contracts," NASA has implemented an enterprise approach to procure many of the Agency's recurring requirements under NASA's Strategic Sourcing Initiative (SSI), referred to as Product Service Lines (PSLs) approach. NASA's SSI is a policy established that requiring offices and contracting officers make use of existing NASA contracts that are available for use by other Centers to satisfy requirements for supplies and services, which allows NASA to obtain favorable terms and pricing. One of the goals of the SSI is to "Support the fulfillment of NASA's socio-economic acquisition goals through strategic sourcing. NASA will continue to ensure the utilization of small businesses and fulfillment of socioeconomic programs by matching small business capabilities to NASA requirements." The SSI fully supports utilization of small businesses. To facilitate the increase in dollars to small business, specific PSLs have been set-aside for small business, such as, the Agency's Protective Services, Custodial Services, Grounds Maintenance, Logistics Services, Communication Services, and Administrative Services.

Using SSI and with an increased focused by NASA to promote and increase the integration of small businesses into the industrial base of contractors that support NASA's future space exploration, scientific discovery, and aeronautics research, NASA has increased dollars to this community. From FY 2018 through FY 2022, NASA increased the dollars obligated to small businesses by 27.8 percent, from \$2.8B to \$3.6B, which equates to increase in small business dollars of approximately \$800M. When NASA has been unable to set-aside requirements to small business and solicits NASA requirements under Full and Open Competition, NASA emphasizes and includes aggressive, but achievable, small business subcontracting goals. This focused utilization of small businesses subcontracting has resulted in an increase in NASA's prime contractors awarding subcontracts to small businesses. From FY 2018 through FY 2022, NASA's prime contractors increased the dollars subcontracted to small businesses by 15.1 percent, from \$3.0B to \$3.5B, which equates to an increase in small business dollars of approximately \$500M.

NASA fully supports the utilization of small businesses and fulfillment of socio-economic program goals and is dedicated and committed to the small business community, ensuring a fair and equitable workshare to small businesses.

Question 4. This is a critical time for Human Spaceflight and for robotic exploration. Given the budgetary tensions over the debt limit and the next budget, how is NASA preparing for possible sequestration cuts to the budget?

Answer. Reductions to NASA's FY 2024 budget request would have critical impacts on the Agency's ability to innovate and preserve U.S. leadership in space.

After the success of the Artemis I mission, NASA is at a critical juncture for human spaceflight. Any cuts to the budget would negatively impact NASA's ability to carry out Administration priorities associated with Moon and Mars exploration.

With the Artemis I mission, NASA accomplished successful flight demonstration of a crew capable vehicle traveling to the Moon and returning safely to earth. Significant efforts are underway to build on that success with the Artemis II, Artemis III, and Artemis IV missions, all planned to occur within the next 5 years. Artemis II will accomplish the first crewed mission to the Moon since Apollo 17, 51 years ago, and demonstrate deep-space crew launch/return capability of the SLS/Orion system. Artemis III will return American astronauts to the surface of the Moon. During the Artemis Campaign, NASA will land the first woman and first person of color on the Moon and restart lunar sample return in support of Decadal Science objectives.

Artemis IV will initiate the sustained lunar operation model, following Gateway's delivery to lunar orbit, by initial Gateway expansion with IHAB (built through an international partnership with ESA) delivered by SLS Block 1B and crewed Orion, and demonstration of sustained HLS docking with Gateway for crew exchange and continued exploration of the lunar surface.

Reductions to NASA's FY 2024 budget request would force tough choices that would likely result in substantial delays to the Artemis IV launch and potentially force the Agency to terminate or not award contracts for new and ongoing systems production and development to support work on Artemis V and beyond. This could include not issuing planned awards for the Lunar Terrain Vehicle that would support mobile Lunar exploration and some portion of the SLS and Orion production contracts for Artemis V and beyond. These actions would result in contractor layoffs. NASA could also be forced to halt or delay any Mars development efforts.

Reductions to the Science Mission Directorate FY 2024 budget request would have significant impacts across the portfolio including delay or cancellation of multiple missions currently in formulation, potentially including Mars Sample Return, Dragonfly, Landsat Next, and the Earth System Observatory. These budget reductions could also require the cancellation of the Commercially Enabled Rapid Space Science (CERISS) initiative and could require reduced funding for missions in extended operations, potentially leading to earlier than planned decommissioning. Budget reductions would also impact NASA's ability to issue new competitive opportunities across SMD divisions impacting science communities across the country and their progress on critical research.

These budget reductions would impact the lifecycle costs of missions and will further increase risk for missions in operation. NASA will continue to work through the annual budget and appropriations cycle to secure funding that supports critical advancements and our ability to make progress on missions, retain workforce and look toward the future.

Question 5. In FY 2023, Congress provided \$8 million for NASA to establish a public-private partnership with space-based remote sensing companies in order to ultimately demonstrate a wildfire early detection capability. Has NASA begun that public-private partnership and specifically the concept studies that will inform demonstration activities in FY 2024? Can you provide the Subcommittee with an update on when we can expect NASA to move forward with the \$8 million that was appropriated and how it will be structured to quickly move from these concept studies to demonstration of this needed capability?

Answer. In August 2023, NASA will issue a Request for Proposals to the commercial space sector to partner on concept studies with NASA to determine optimal early detection capabilities, architectures, and the leveraging of current and future observations. NASA expects the selection of at least two studies. These studies, including demonstration with existing commercial and government assets proposed by industry, will be completed by the end of FY 2024.

In addition, the Earth Science Division's Earth Science Technology Office (ESTO) made modifications to an existing solicitation, "Technology Development for Support of Wildland Fire Science, Management, and Disaster Mitigation ("FireSense Tech-

nology”),” to reflect the Congressional guidance. The program was first solicited in June 2022, to seek new, innovative Earth system observation capabilities to predict and manage wildland fires and their impacts with NASA-related capabilities. The updated language specified the initiation of concept studies, in collaboration with commercial space-based remote sensing providers, to develop and demonstrate low-cost and scalable infrared sensing and other technologies that monitor areas of the United States that are susceptible to wildland fires, support reduction of wildfire risk, and provide early warning to first responders.

In May 2023, NASA selected two proposals under the FireSense Technology Program, with additional selections expected later this year. The two projects will develop new tools for monitoring extreme fire events and forecasting wildfire spread.

- The Bay Area Environmental Research Institute, Inc. (BAERI), a nonprofit small business, in collaboration with stakeholder government agencies, will develop and verify a space-based distributed observing system that will enhance the Weather Research and Forecasting Fire Spread Model (WRF–SFIRE) and other existing USGS fire danger products. BAERI will use commercial remote sensing data to make improved soil moisture measurements and to generate Burnt Area Maps (BAMs). These data products will significantly augment current fire prediction and provide new frameworks for wildfire observation and management.
- The Pyro-atmosphere InfraRed Sounder (PIRS) will be developed by the Jet Propulsion Laboratory (JPL) in collaboration with commercial entities and government stakeholder agencies to demonstrate low-cost and scalable infrared sensing. The team aims to provide 3-dimensional information about the state of the atmosphere during the pre- and active-fire stages of wildland fires. This airborne instrument would measure temperature and humidity with high spatial resolution, providing insights into how fires start and spread as well informing fire management response. PIRS advances should achieve major size reductions and lower costs for instrument development and flight operations.

Five additional proposals were selected in July 2023.

1. K. Hilburn, Colorado State University, Technology Development to Integrate Innovative Observation Capabilities into Coupled Wildfire Models for Improved Active Fire Forecasting
2. J. Thompson, Baylor University, UAS thermal infrared spectroscopy will improve real time evaluation of hazards and environmental impacts of wildfires
3. F. Afghah, Clemson University, AI-enabled Drone Swarms for Fire Detection, Mapping, and Modeling
4. Singh, Planet Labs, Wildfire Thermal Detection Instrument Development.
5. D. Morton, GSFC, The Airborne Compact Fire Imager (CFI) for measurements across the entire fire lifecycle

Question 6. The U.S. Federal government and State of Alaska have jointly invested over \$120M of capital improvements at the Pacific Spaceport Complex—Alaska (PSCA). As only one of two U.S.-based spaceports that can launch into high-inclination and polar orbits, PSCA is a national asset to provide critical resiliency for U.S. access to space launching from U.S. soil. This FAA-licensed commercial spaceport is a low-cost operation, capable of launching solid- and liquid-fueled rockets and has supported numerous government orbital, suborbital, and test missions since 1998. However, instead of utilizing a viable U.S.-based spaceport for polar missions, NASA has been funding launches in New Zealand. What commitments can you provide me that NASA will prioritize launches from U.S.-based spaceports and schedule polar orbit missions?

Answer. For the past 30 years, NASA has purchased launch services from commercial industry with contractual requirements designed to fulfill the goals of the missions. In doing so, NASA remains agnostic as to launch site, allowing commercial industry to choose where to establish their launch sites based on their business models and inclinations that can support those models.

With respect to the recent launches from New Zealand, these were for the TROPICS mission, which required a low inclination 30-degree orbital insertion (as opposed to a polar mission) in order to frequently observe the areas in which tropical cyclones develop. NASA LSP selected the launch provider, Rocket Lab USA, which is a domestic provider that has their headquarters in Long Beach, California. Rocket Lab operates launch facilities at Wallops Island, VA, and Mahia, New Zealand. They chose to launch from their Mahia facility to meet TROPICS’ orbital insertion requirements.

QUESTIONS SUBMITTED BY SENATOR JERRY MORAN

Question 1. NASA's FY24 request for the Human Landing System (HLS) includes the Sustaining Lunar Development (SLD) competition which provides critical dissimilar redundancy for Artemis with a second crewed lander. When does NASA plan to award the second lander through Sustaining Lunar Development and is the agency on schedule to meet that date?

Answer. On May 19, 2023, NASA announced the selection of Blue Origin to develop its Blue Moon lander for the Artemis V mission. Under the Appendix P contract award, Blue Origin will develop its human landing system to meet NASA's requirements for sustainable lunar exploration.

QUESTIONS SUBMITTED BY SENATOR KATIE BRITT

Question 1. Earlier this year (reported on January 24, 2023), NASA signed an agreement with the Department of Defense (DoD), Defense Advanced Research Projects Agency (DARPA), to jointly study Nuclear Thermal Propulsion (NTP) for space applications—the joint name for this program is DRACO. It's my understanding NASA's funding contribution as part of this agreement is approximately \$90M. However, the President's Budget Request for Fiscal Year 2024 only allocates \$15.8M for NTP research.

How does NASA anticipate making up the short fall between the requested budget for NTP research and the funding levels agreed to provide in the agreement signed earlier this year with DoD?

Answer. The FY 2024 requested budget allows for progress to be made toward a nuclear thermal rocket engine demonstration in space via the NASA–DARPA joint DRACO program partnership. As NASA was in the process of finalizing the details of the agreement with DARPA, many specific details as well as exact costs were unknown at the time the budget was developed and submitted. NASA included a clause of 'subject to availability of funds' in the Interagency Agreement with DARPA to reflect the uncertainties.

Question 2. NASA's FY24 request states that in FY24 "NASA will begin to leverage commercial suborbital crew systems to fly NASA personnel to perform microgravity research and other testing and qualification for spaceflight hardware, as well as conduct astronaut training." This committee has been supportive of the Suborbital Crew Program, could you please provide an update on status and next steps for the program?

Answer. The Suborbital Crew (SubC) activity will investigate the potential for NASA personnel to take advantage of commercial suborbital vehicles to meet the Agency's microgravity research needs. At this point, NASA is focusing on the potential of crewed suborbital vehicles for scientific research and technology development. Suborbital vehicles can provide longer periods of microgravity for experiments than either drop towers or parabolic aircraft flights. While the Agency does not plan to flight-certify the suborbital systems it uses the way it certified orbital Commercial Crew Program vehicles, it is working to ensure it has a thorough understanding of the safety cultures of suborbital launch providers. Our current effort consists of conducting "deep dives" with vendors—including Blue Origin and Virgin Galactic—on their systems.

NASA currently provides funding for outside researchers to fly on suborbital vehicles through its Flight Opportunities program. Using commercial systems to conduct its research will also continue NASA's effort to enable a robust space economy.

Question 3. The near-Earth asteroid Apophis will fly within 20,000 miles of Earth in 2029. The FY24 request reflects that NASA's current plan is to extend the OSIRIS-Rex mission to observe this asteroid. Does this critical opportunity to develop planetary defense capabilities warrant a dedicated mission that could be developed before 2029? Has the Planetary Defense Office considered conducting pre-phase A studies of Apophis rendezvous mission concepts?

Answer. The Planetary Science Division is studying several concepts for potential missions to maximize the data return from this encounter, including partnerships with U.S. interagency and international partners. Any potential contributions to a mission would need to be balanced against other needs within the Planetary Science portfolio, which is currently funding the development of several large missions.

QUESTIONS SUBMITTED BY SENATOR DEB FISCHER

Question 1. Many universities work with NASA through the Space Grant Program and EPSCoR. There have been concerns that NASA directs a significant percentage of funds for STEM programs towards administration expenses within the agency. What percentage of EPSCoR and space grants go to administrative overhead and what percentage goes to research?

Answer. NASA has worked diligently to reduce STEM Engagement overhead costs. We have been working to reduce the percent of the budget on these costs, now below 7 percent.

In FY 2022 within our \$26M EPSCoR budget, NASA 90 separate awards totaling \$22M across 5 primary categories of opportunities. The balance of the budget supports project management and oversight, contract support required to execute these solicitations, and costs required to meet Federal performance and evaluation costs. Similarly, NASA's Space Grant budget of \$57M included \$54.5M to support 52 consortia along with other grants in support of STEM Engagement. The balance of the budget supported project management and oversight, contract support required to execute these solicitations, as well as costs required to meet Federal performance and evaluation costs.

QUESTIONS SUBMITTED TO DR. SETHURAMAN PANCHANATHAN

NATIONAL SCIENCE FOUNDATION

QUESTIONS SUBMITTED BY SENATOR DIANNE FEINSTEIN

Question 1. Director Panchanathan, the Thirty Meter Telescope and the Giant Magellan Telescope projects were the top priority in the recent Decadal Survey and have enormous potential to unlock new scientific discoveries. It is my understanding that, following the Decadal Survey's recommendation that National Science Foundation (NSF) fund both telescopes, the projects submitted their construction review plans to NSF. I was therefore surprised to see no mention of advanced development or planning funding for either projects in the budget request.

Director Panchanathan, how is NSF planning for these major investments? What resources are needed to enable the construction process to continue unimpeded and prevent the timeline for these projects from slipping?

Answer. NSF's strategy to ensure that potential major investments, such as the Thirty Meter Telescope (TMT) and the Giant Magellan Telescope (GMT) projects, are delivered on schedule and without cost overruns is to follow a standard planning process. This process involves thoroughly understanding the project plans and their associated risks through a series of internal and external reviews. The associated milestones, as described in the NSF Research Infrastructure Guide, must be met by both project teams and NSF before construction can be approved. In addition, proposed costs, including eventual ongoing operations and maintenance expenses, are thoroughly vetted to make sure they will support completion and operations of the projects within agreed upon timescales and funding envelopes.

In November 2022, NSF formally moved both TMT and GMT into the Major Facility Design Stage, and in January 2023, NSF completed the Preliminary Design Reviews for both projects, which focused on their technical readiness to enter the Final Design phase. NSF has also begun detailed cost analyses of the plans presented by the GMT and TMT projects to understand the resources they have requested and to ensure that any future obligation of taxpayer dollars is based on well-supported cost plans. NSF is working with the project teams to advance several elements of these processes to minimize potential delays. A majority of the \$30.0 million designated for investment in the Decadal Survey on Astronomy and Astrophysics (Astro2020) in the FY 2023 budget is being directed toward the U.S. ELT program (TMT, GMT, and NSF's NOIRLab efforts), and pending appropriations, further funding is anticipated in the FY 2024 budget to continue supporting the design efforts for these projects.

Question 2. Director Panchanathan, Senator Baldwin and I sent a letter with 16 other Senators in February regarding improving the NSF's surveys to assess the LGBTQ+ population in STEM careers. This data is critical to fully respond to the directives in the CHIPS and Science Act to ensure that scientific talent in every sector of the United States is cultivated and supported. I was pleased to see that the NSF is moving ahead with pilot studies for 20 variations of questions to assess the

LGBTQ+ population in STEM careers. Director Panchanathan, does the Fiscal Year 2024 Budget Request provide sufficient funds to accomplish this pilot study and analyze the results in a timely fashion? Will you commit to working with appropriate academic experts and the LGBTQ+ STEM community to ensure that this pilot study has the best chance of success?

Answer. As part of its responsibility to provide objective data on the S&E enterprise, the National Science Foundation—through the National Center for Science and Engineering Statistics (NCSES)—is exploring the inclusion of Sexual Orientation and Gender Identity (SOGI) questions on its education and workforce surveys. Working with the Office of Management and Budget (OMB) and other Federal agencies, NCSES is taking a measured approach to adding SOGI questions to appropriately balance the Foundation’s mission and programmatic goals while ensuring data quality, reducing respondent burden, protecting confidentiality, and meeting data user need. As a principal statistical agency, NCSES follows OMB’s Statistical Policy Directive #2: Standards and Guidelines for Statistical Surveys to assemble reasonable evidence that questions asked on NCSES surveys demonstrate quality and utility. NCSES is also using OMB’s recent report “Recommendations on the Best Practices for the Collection of Sexual Orientation and Gender Identity Data on Federal Statistical Surveys”: <https://www.whitehouse.gov/wp-content/uploads/2023/01/SOGI-Best-Practices.pdf> to guide the development of SOGI measures. Other important principles that guide OMB’s approval of collecting SOGI measures include:

1. minimization (i.e., collecting the minimum level of detail necessary to meet planned uses),
2. inclusivity and sensitivity (i.e., using appropriate and respectful language),
3. respecting respondent privacy,
4. consistency (i.e., in data collections),
5. data governance that ensures compliance with confidentiality requirements, and
6. the statutory authority to collect SOGI data.

As part of the FY 2023 enacted budget and FY 2024 Budget Request to Congress, NCSES is currently supporting a wide array of research projects to explore SOGI data collection efforts and data use for future surveys and products. In alignment with their responsibilities as a principal statistical agency, NCSES plans to continue releasing information about its research plans and results in a manner that is equitable across all users, policy neutral, transparent and understandable to the public, and timely to the needs of data users.

In addition to the work being conducted by NCSES, NSF recently selected a Senior Advisor in the Office of the Chief Diversity and Inclusion Officer. The Senior Advisor has expertise in research regarding SOGI data and will help advance efforts with NSF’s SOGI pilots and data action plans.

Question 3. Director Panchanathan, my home state of California has long been one of the epicenters of basic science research in the United States, owing in part to a long history of support from the state government for our universities. Not only does California have more colleges and universities than any other state, the per-capita support for these colleges from the state government is among the highest of any state. I share the desire of my colleagues to ensure that the Established Program to Stimulate Competitive Research (EPSCoR) provides robust support for universities across our nation, but this increased funding must not come at the expense of established, robust research programs.

Director Panchanathan, what funding amount would NSF need in order to meet its statutory requirements to support EPSCoR states while ensuring that non-EPSCoR states do not receive a corresponding cut?

Answer. EPSCoR provides strategic programs and opportunities that stimulate sustainable improvements to EPSCoR jurisdictions’ R&D capacity and capability. EPSCoR aims to stimulate research that enhances jurisdictional competitiveness in NSF disciplinary and multidisciplinary research programs, especially those that drive economic growth. Requested FY 2024 funding increases will support advancement of interjurisdictional research and development capacity across different institution types. These interjurisdictional capacity building activities include collaborations between EPSCoR and non-EPSCoR jurisdictions. Due to the specific authorization for EPSCoR, however, in such partnerships, no EPSCoR program funding may be directed to non-EPSCoR jurisdictions.

An increasing budget as described in the FY 2024 President’s Budget is essential to enable NSF to achieve the EPSCoR-related funding targets outlined in the CHIPS and Science Act while maintaining funding for outstanding research in non-EPSCoR jurisdictions. Specifically, CHIPS and Science directs NSF “to the max-

imum extent practicable” to gradually increase the share of funding awarded to EPSCoR jurisdictions and eventually reach 20 percent in FY 2029. In scenarios where NSF’s appropriation is flat or decreases, if NSF attempts to achieve the CHIPS and Science Act’s funding targets for EPSCoR jurisdictions, it is likely funding to non- EPSCoR jurisdictions will be adversely impacted.

QUESTIONS SUBMITTED BY SENATOR CHRISTOPHER A. COONS

Question 1. The Sustainable Chemistry Research and Development Act (the Act), which was enacted on January 1, 2021 as part of the National Defense Authorization Act, 2021 (Public Law 116—283), requires the creation of a coordinated national program to support sustainable chemistry activities across the Federal government. The Act creates a national multi-agency effort coordinated by the Office of Science and Technology Policy to accelerate research, development, and innovation in sustainable chemistry and requires an evaluation of sustainable chemistry activities across the Federal government. It aims to bolster those efforts through coordinated research and development programs, technology transfer, commercialization, education, and training. The National Science Foundation plays an important role in the Federal government’s work on sustainable chemistry and is an integral part of the multi-agency effort on sustainable chemistry created by the Act.

How is the National Science Foundation fostering collaboration and interdisciplinary research in sustainable chemistry, and what role can the Centers for Chemical Innovation (CCI) play in this regard?

Answer. NSF has long recognized the importance of sustainable chemistry in addressing many societal challenges and has invested in fundamental research on Sustainable Chemistry through core disciplinary programs as well as centers, institutions, and metaprograms, such as Critical Aspects of Sustainability (CAS).

The Centers for Chemical Innovation Program (CCI) at NSF creates collaborative and interdisciplinary environments supporting high risk/high impact research. CCI encourages its centers to build strong partnership cross disciplines and with industrial as well as international partners. Many CCI centers, if not all, have industrial collaborators and an external advisory board with industrial members providing input. Technology transfer, commercialization, and workforce training have been critical part of CCI goals.

Chemical research to promote and advance Sustainability has been one of the high priority topic areas highlighted in the program’s funding call (solicitation) since 2021. Six of seven CCI centers with activities related to the topic; three recently initiated CCIs are highlighted below that are strongly aligned with sustainable chemistry goals:

- The Center for Synthetic Organic Electrochemistry (started in 2020) is developing entirely new and more sustainable chemical reactions. One early accomplishment (DOI: 10.1126/science.aav5606) used insights from lithium-ion battery materials to design a safer and scalable electrocatalytic alternative to well-established dissolving metal reductions.
- The Center for the Chemistry Molecularly Optimized Networks (started in 2021) is exploring the relationships between the structure of a polymer and its properties. Their work provides insights into how polymer networks like rubbers and foams fracture (or don’t) and how thoughtful design of polymer networks can lead to recyclable composite materials.
- The Center for Computer-Assisted Synthesis is enabling the approaches of machine learning and data science to inform chemical synthesis, leading to more efficient reaction optimization.

In addition, the Center for Sustainable Polymer (started in 2014) is developing a comprehensive strategy to discover innovative routes to plastics derived from renewable feedstock chemicals such as sugars, plant oils, and other naturally sourced starting materials. It is a leading force in sustainable polymers and has established strong collaborations with industrial partners (BASF, Eureka Recycling, etc.). The Center for Sustainable Nanotechnology (started in 2015) and a new CCI to be announced in August 2023 are the other two CCI centers contributing to the topic area.

NSF recognizes that solutions to sustainable chemistry challenges require foundational, use- inspired, and translational research, as well as creative interdisciplinary approaches. NSF strongly encourages partnerships between academic investigators and industrial experts as well as with state, local, and tribal governments to focus efforts and resources on questions relevant to innovation and current

societal needs. To this end, NSF sponsored a workshop late last year with leaders of 19 major chemical companies indicating significant interest in partnering to fund projects around Sustainable Chemistry. Companies like P&G, BASF, Evonik, and Dow are now taking the lead in this developing partnership.

In the future, NSF will continue to fund collaborative and interdisciplinary research projects at both core and center levels that address fundamental science and engineering questions to advance foundational knowledge important to Sustainable Chemistry.

Question 2. The National Science Foundation also received several additional resources and authorities in the 117th Congress through the Infrastructure Investment and Jobs Act, the CHIPS and Science Act, and the Inflation Reduction Act. How do these new resources and authorities impact the National Science Foundation's abilities to carry out activities to advance sustainable chemistry?

Answer. In response to Congressional requests, during FY 2022 NSF announced the establishment of the Critical Aspects of Sustainability (CAS): Innovation Solutions to Sustainable Chemistry Program (CAS-SC) via Dear Colleague Letter (DCL): <https://www.nsf.gov/pubs/2022/nsf22111/nsf22111.jsp>. To date, the CAS-SC DCL has garnered nineteen proposals with nine meritorious awards made so far in FY 2023, totaling \$4.0 million. In FY 2023, an additional \$35.3 million from the NSF core research budget has been invested in new projects that are responsive to the goals of Sustainable Chemistry.

The Chips and Science Act (Sec. 10350) authorized NSF to establish a program to support research related to sustainable chemistry practices. No additional funds were appropriated. NSF and Sustainable Chemistry were not authorized, nor referenced, in the Inflation Reduction Act. The continued support and interest from Congress will enable NSF to keep the momentum going and invest in research activities that aim at addressing the scientific and societal challenges facing sustainable chemistry and improving the sustainability of resources for future generations.

QUESTIONS SUBMITTED BY CHRIS VAN HOLLEN

Question 1. Quantum Information Science. Maryland is a global leader in quantum information science. As you know, quantum science is critical to our nation's economic competitiveness and national security, as scientists expand beyond physics to build powerful computers and develop secure communications networks.

How does NSF plan to support the growth of quantum information science under the new Technology, Innovation, and Partnerships Directorate?

Answer. For decades, NSF investments have been informed by a combination of top-down priorities (from Administrations and Congress), bottom-up inputs (from the research community that NSF serves, including through NSF-funded conferences/workshops), and data-driven analytics that serve to identify emerging areas as well as gaps in NSF's proposal and award portfolios. As outlined in the FY 2024 President's Budget Request for NSF, building upon more than three decades of exploratory discovery, NSF investment in quantum information science (QIS) will help propel states like Maryland and the Nation as a whole forward as a leading developer of quantum technology. The investments in the FY 2024 President's Budget Request are a key component of the National Quantum Initiative (NQI) and address the Administration's focus on helping build emerging industries.

Importantly, NSF's QIS investments build upon the agency's longstanding and continuing foundational investments in QIS as well as more recent, interdisciplinary investments in centers and small teams and targeted workforce development efforts. Moreover, increasingly, a systematic approach to maturing foundational quantum discoveries into use-inspired technological innovation is critical to transform the field of QIS and rapidly accelerate broader impacts to society.

Pursuant to the CHIPS and Science Act of 2022, NSF established the Directorate for Technology, Innovation and Partnerships (TIP) to specifically accelerate the development of key technology areas, including QIS, as well as their impact on the Nation's long-term economic competitiveness. In alignment with this vision, TIP is closely collaborating with other NSF directorates to accelerate technology development and translation across the full complement of 10 key technology areas identified in Sec. 10387 of the legislation. A key focus is on maturing technology by integrating end-users and potential customers from a full complement of science and engineering fields and economic sectors into cycles of research, development, and demonstration, resulting in co-design and co-creation of novel solutions that can be accelerated to the market and society.

As an example, TIP is collaborating with the NSF Directorate for Mathematical and Physical Sciences (MPS), which leads the agency's QIS investments, as well as the Directorates for Biological Sciences (BIO), Computer and Information Science and Engineering (CISE), STEM Education (EDU), and Engineering (ENG) on the development of a new initiative called the National Quantum Virtual Laboratory (NQVL). The NQVL will support a highly accessible shared research infrastructure framework that draws on the full spectrum of expertise throughout the Nation to rapidly translate QISE ideas formulated in the laboratory through prototyping, validation, at-scale testing, and eventual full-scale deployment. Beyond fostering use-inspired and translational QIS research, the NQVL will democratize access to the varied resources and environments necessary to conduct such cutting-edge research, lower barriers to entry throughout the QIS research enterprise and promote broadened participation of talent anywhere and everywhere.

QUESTIONS SUBMITTED BY SENATOR GARY C. PETERS

Question 2. The CHIPS and Science Act included provisions that set aside certain levels of NSF funding for states eligible to participate in the Established Program to Stimulate Competitive Research, or EPSCoR. As this provision was negotiated last year, I was concerned that setting aside an arbitrary number could make it harder for Universities in rural areas to compete for NSF funds in states that also have high performing R-1 institutions, like Michigan.

The institutions that serve metro Detroit, Flint, rural lower Michigan, and the Upper Peninsula all have different strengths—robust education, workforce development, and regional innovation—I think it's important for NSF to support all these sorts of institutions, regardless of which state they are in. Director Panchanathan, how are you ensuring that you are implementing the CHIPS and Science Act in such a way to ensure that all schools in states like Michigan are competing for funding for meritorious projects on a level playing field with the rest of the country?

Answer. The CHIPS and Science Act in addition to reauthorizing NSF also encouraged NSF to fully engage the Nation's STEM talent by using a range of activities. The Growing Research Access for Nationally Transformative Equity and Diversity (GRANTED) initiative introduced in NSF's FY 2023 Budget Request to Congress is one example of such an activity. GRANTED will support emerging research institutions (ERIs), including Minority-Serving Institutions (MSIs), and aims to mitigate the barriers to competitiveness within the Nation's research enterprise¹ at underserved institutions, regardless of geographic location. GRANTED mechanisms focus on delivering knowledge and services to train investigators at all levels, including early career investigators (assistant professors, postdocs, graduate students, undergraduates) in research and program idea development, grant writing and proposal development, grant/award management, research team development and cultivation, and collaboration and partnership development. GRANTED supported activities are vital for leveling the STEM playing field.

For the U.S. to compete globally in STEM, we need to engage talent from everywhere around the Nation and increase STEM access and opportunities. To achieve this vision, NSF's Creating Opportunities Everywhere (COE) investment theme was developed. COE is a comprehensive approach for inspiring, attracting, supporting, and advancing groups underrepresented in STEM. NSF's strategy for COE will (1) address research equity, (2) build capacity, (3) foster collaborations and partnerships, and (4) support the next generation of researchers. Additionally, COE will expand access and inclusion in STEM along individual, institutional, and geographic lines.

Question 2. Do you think that the number and size of research institutions, and thus, the number of research proposals coming in from EPSCoR jurisdictions is the underlying problem when we talk of the need to grow research capacity (and funding) in EPSCoR jurisdictions, and if so, what are some ways we can address that issue without disadvantaging researchers in states like Michigan that are home to larger research institutions?

Answer. Within the Nation's STEM enterprise, numerous factors may serve as barriers and challenges to competitiveness or growing the research capacity of an individual, institution, or even a jurisdiction. Through NSF's Creating Opportunities

¹The GRANTED program broadly defines research enterprise to include human capital, practices and processes related to research development, research administration, technology transfer and commercialization, corporate relation/public-private partnerships, research integrity, compliance and security, research policy, student research training, and research leadership.

Everywhere (COE) theme, NSF is taking a whole-of-NSF strategy that incorporates all directorates and offices and surpasses prior investments by ensuring equity in program delivery and investing beyond NSF's broadening participation (BP) portfolio, while building on the concept of the "Missing Millions".

NSF has taken a variety of approaches to broaden participation across its many programs. While broadening participation is included in the NSF review criteria, some program announcements and solicitations go beyond the standard criteria which includes broader impacts. They range from encouraging language to specific requirements. Investments range from capacity building, research centers, partnerships, and alliances to the use of co-funding or supplements to existing awards in the core research programs. At the same time, as NSF's appropriations increase, we invest in strengthening the existing NSF and continue to provide a wide range of opportunities for institutions throughout the U.S. to propose bold ideas for innovative research and workforce development, from single-investigator research to collaborative, cross-cutting centers pioneering new fields.

The National Science Board (NSB) conceptualized the Missing Millions as the difference between the demographics of the research community and the demographics of the nation and charged NSF with increasing opportunities that may lead to mitigating disparities that often contribute to talent gaps. In seeking to reach the Missing Millions, NSF must leverage a multi-faceted approach to reach individuals within both well-resourced and under-resourced institutions, without regard for geographic location.

To ensure equity in access, preparation, experiences, and program delivery, NSF has established an Agency Priority Goal designed to improve representation and ensure success in the science and engineering (S&E) enterprise by actions that will increase the number and proportion of proposals received with principal investigators from groups underrepresented in STEM and from underserved institutions, which include MSIs and ERIs.

Question 3. In Michigan, like in much of the country, we are confronting a qualified teacher shortage that has only been exacerbated by the pandemic. This shortage tends to be more acute for STEM teachers, and has most impacted school districts in rural districts and urban communities with higher proportions of students of color. I am particularly concerned about the impact a shortage of qualified STEM educators can have on the future of research, development, and innovation in my home state and across the country. The Robert E. Noyce Scholarship Program at N-S-F is a critical tool in helping to strengthen the STEM teacher pipeline by supporting undergraduate STEM students in their education in exchange for their service as STEM educators in high-need schools.

Director Panchanathan, can you speak to the importance of this program and what more can be done to support the Noyce program and others like it that seek to strengthen out STEM education system, including by inspiring, training, and retaining qualified STEM educators? Are there any steps Congress can take to strengthen or aid in the administration of this program?

Answer. Overview of the significance of Noyce

- The Robert Noyce Teacher Scholarship Program (Noyce) responds to the critical need for highly effective K–12 STEM teachers and teacher leaders who persist as classroom teachers. It is the only scholarship and fellowship program at NSF for future and current STEM school teachers.
- The program supports grants that recruit, train, retain, support, and develop qualified STEM teachers for high need schools.
- Noyce awards work with STEM pre-service and in-service teachers.
- Noyce research awards advances research in both STEM teacher effectiveness and retention in high-need LEAs.
- Celebrating 20 Years of the NSF Robert Noyce Teacher Scholarship Program (extended version)—YouTube.

QUESTIONS SUBMITTED BY SENATOR LISA MURKOWSKI

Question 1. I commend NSF for requesting additional funding for the Established Program to Stimulate Competitive Research (EPSCoR) in the FY 24 budget request. However, I am concerned about how NSF is managing EPSCoR co-funding. There seems to be no transparency on how NSF decides which proposals will ultimately receive EPSCoR co-funding. There also seems to be some significant disparities in co-funding awards among EPSCoR jurisdictions. For example, from FY 2020 to FY 2022 Idaho was awarded nearly \$20 million in EPSCoR co-funding. However, over

the same period, Alaska was only awarded \$1.59 million. Why is there such a discrepancy in EPSCoR co-funding? What steps can NSF take to better inform researchers about co-funding opportunities?

Answer. EPSCoR co-funding supports awards in response to meritorious proposals from individual investigators, collaborative groups, and center-scale teams based in EPSCoR-eligible jurisdictions. These proposals are submitted across all of the Foundation's research and education programs, including crosscutting initiatives, where they undergo merit review and are selected for award based on NSF's intellectual merit and broader impact criteria. EPSCoR prioritizes co-funding for awards that advance its programmatic goals, including those supporting new investigators. EPSCoR co-funding ensures support for projects that might not be funded without the combined, leveraged resources of EPSCoR and the managing programs.

The discrepancy in EPSCoR Co-funding between Idaho and Alaska, is largely attributable to NSF awarding a Mid-scale Research Infrastructure Track -1 award to Idaho (#2131837), which comprises over \$15.7 million of the EPSCoR Co-funding to Idaho. The Mid-scale RI program was launched by NSF in FY 2019. In response to Congressional appropriation report language, NSF has leveraged both Mid-scale RI-1 and EPSCoR Co-funding to support at least two Mid-scale RI projects. (Mid-scale RI-1 awards range between \$4.0 million and \$20.0 million, and Mid-scale RI-2 awards range between \$20 million and \$100.0 million). The Mid-scale RI awards made as part of the 2021 cohort is the result of NSF prominently encouraging Mid-scale RI proposals from EPSCoR jurisdictions as part of the agency's outreach efforts.

NSF and EPSCoR will continue to support the innovative research ideas proposed by individuals and institutions from across the nation. NSF support of Alaska totaled \$52.22 million in FY 2022, with a proposal funding rate of 39.1 percent, which exceeds the overall NSF funding rate of 28.0 percent. In addition, Alaska's funding rate has trended upward since 2013's 27 percent funding rate. NSF EPSCoR has provided \$102.27 million to Alaska since it became eligible for EPSCoR in 2000, and of this total \$18.52 million has been provided through Co-funding resources.

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. For example, in FY 2023 NSF launched the 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.

QUESTIONS SUBMITTED BY SENATOR JERRY MORAN

Question 1. Is there a clearly defined boundary between NSF-funded and NIH-funded research? Where is the line drawn between research jurisdictions?

Answer. In terms of our fundamental research portfolio, NSF primarily funds research on foundational science topics with a connection to biomedicine and/or bio-engineering, whereas NIH funds the health-related application, including clinical trials. For example, NSF might fund research to understand the role of neuron plasticity in mitigating brain injury, while NIH might fund the development of molecular therapies to enhance neuron plasticity after a traumatic brain injury. Similarly, NSF might fund research to develop software capable of making connections between large data sets, while NIH might fund the creation of a specific tool or program for use in combining data from small clinical trials to increase the statistical significance of findings.

Importantly, NSF does not fund research on mechanisms of disease in humans or the development of animal models for human conditions or the treatment thereof. Per NSF's Proposal and Award Policies and Procedures Guide (PAPPG, 23-1):

"Biological research on mechanisms of disease in humans, including on the etiology, diagnosis, or treatment of disease or disorder, is normally not supported. Biological research to develop animal models of such conditions, or the development or testing of procedures for their treatment, also are not normally eligible for support. However, research with etiology, diagnosis- or

treatment-related goals that advances knowledge in engineering, mathematical, physical, computer, or information sciences is eligible for support. Bioengineering and assistive information technology research to aid persons with disabilities also are eligible.”

With regards to NSF’s translational research portfolio, consider the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs. As stated within the SBIR/STTR programs’ Frequently Asked Questions, “NSF SBIR/STTR funding may not be used to support clinical trials, the clinical validation of information technologies or medical devices, or studies performed primarily for regulatory purposes. Limited studies with human subjects may be acceptable to the extent that they are performed in support of feasibility, proof-of-concept studies, or early-stage technologies.” Other NSF translational research programs may take a similar approach.

More specific guidance on representative projects of NSF SBIR/STTR support of biomedical and health-related technologies may be found on our portfolio page. Please be aware that NSF SBIR/STTR technology topics and subtopics are neither restrictive nor exhaustive but give a general sense of the types of proposals that are funded.

Question 2. Does NSF leadership consider the Biophotonics Program (CBET) as a priority in the future?

Answer. The goal of the NSF Biophotonics program is to explore the research frontiers in photonics principles, engineering, and technology that can solve critical problems in fields of medicine, biology and biotechnology. Fundamental engineering research in photonics is required to lay the foundations for novel, low-cost, and minimally invasive medical diagnostics, and therapies. Advances are needed in nanophotonics, optogenetics, contrast and targeting agents, ultra- thin probes, wide field imaging, and rapid biomarker screening.

The Biophotonics program continues to invest in cutting-edge research at the frontiers of photonics engineering, biotechnology, and medicine for the benefit of the nation. In recent years, the program has supported many exciting projects, such as the development of new microscopy strategies to explore the origins of congenital heart diseases² and new photonic technologies for highly sensitive detection of disease biomarkers.³

Advances in biomedical imaging supported by the NSF Biophotonics program have led to unexpected new findings in other fields. Biologists and engineers at Duke University and the University of Southern California leveraged advances in photoacoustic imaging of blood flow in the brain⁴ to uncover how glassfrogs sequester their blood to become transparent.⁵ Knowledge about this fundamental process may have broader applications in understanding blood clotting.

Question 3. What percentage of NSF-funded SBIR and STTR grants are open for medicinal research?

Answer. NSF welcomes proposals to its SBIR/STTR program from across all fields of science, engineering, and technology, and funds projects in a given space roughly in proportion to the interest from the community. That is, NSF does not specify any hard limits. In recent years, taking a broad definition of “medical and related technologies,” about one-quarter of NSF’s SBIR/STTR portfolio intersects with or benefits this space. Having said that, NSF SBIR/STTR program directors are constantly in touch with colleagues at other agencies, including NIH, to ensure situational awareness about our agencies’ respective portfolios and prevent duplicative effort.

QUESTIONS SUBMITTED BY SENATOR DEB FISCHER

Question 1. The semiconductor industry relies on fluorinated chemicals, specifically PFAS, for chip manufacturing. There is an immediate need for research into an alternative solution for these chemicals. NSF currently can fund research on PFAS through its Environmental Engineering program. Is this a research area NSF plans to focus more funding toward in the fiscal year 2024?

² 2225990—Fourier Light-Field Interrogation of Congenital Heart Disease in vivo—Shu Jia.

³ 2232681—Engineering Quantum Dots and Photonic Metamaterials for Ultrasensitive and Multiplexed Digital Resolution Biomolecule Detection.

⁴ 2144788—CAREER: Mapping deep brain functions with super-resolution photoacoustic imaging—Junjie Yao.

⁵ new.nsf.gov/news/glassfrogs-hide-red-blood-cells-their-livers.

Answer. NSF recognizes that per- and polyfluoroalkyl substances (PFAS), which are used in multiple ways in chip manufacturing, present a challenge for the semiconductor industry.

The NSF Environmental Engineering program supports research to reduce, remediate, and mitigate the impacts of environmental pollutants, including PFAS. NSF's ERASE-PFAS funding opportunity, with co-funding from the Environmental Engineering program and DuPont de Nemours, supports research to remediate PFAS in the environment. Thirteen ERASE-PFAS awards were made in FY 2021⁶, nine awards were made in FY 2022, and additional awards will be made in FY 2023. ERASE-PFAS projects are investigating environmental remediation technologies including chemical catalysis, photolysis and photocatalysis, biological treatment, physical treatment, and combinations of chemical-physical-biological processes. Additional research activities have been supported by other divisions and directorates within NSF as well, including active awards in understanding PFAS fate by the Atmospheric Chemistry program in GEO and the study of molecular pathway of PFAS in the environment by the Environmental Chemical Science program in MPS.

NSF invests in fundamental research on sustainable manufacturing and materials through several other programs. For example, the NSF Future Manufacturing program supports a thrust on eco manufacturing. Research in this thrust area will enable holistic manufacturing processes that encompass the entire manufacturing lifecycle and account for energy consumption, health and environmental impact, and cost effectiveness. The NSF Future of Semiconductors (FuSe) program has a track in FY 2023 on new materials for energy-efficient, enhanced-performance and sustainable semiconductor-based systems. The NSF Critical Aspects of Sustainability (CAS) metaprogram supported multiple projects on measuring PFAS in the environment and developing alternatives for PFAS remediation.

In addition, the NSF Convergence Accelerator program has a track on Sustainable Materials for Global Challenges (Track I). Relevant to this QFR, in 2022, the NSF Convergence Accelerator funded a collaboration led by the IBM Corp.'s Almaden Research Center with the University of Pittsburgh, Cornell University, OntoChem and NuMat Technologies, and with additional guidance from the Semiconductor Industry Association's PFAS Consortium and the National Institute of Environmental Health Science's Division of the National Toxicology Program. The project, called "PFASTIR: PFAS Toolkit for Innovating Replacements," aims to accelerate the design of environmentally sustainable chemicals, materials and processes intended to replace, capture, and/or destroy PFAS chemicals and materials.⁷

In the future, NSF will continue to fund investigator-initiated research projects submitted to multiple programs that address fundamental science and engineering questions to advance foundational knowledge and use-inspired solutions important to the management of PFAS in the environment and the development of PFAS alternatives.

Finally, NSF's translational research programs, including the Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) programs, invest in startups and small businesses that are also working in this space. For example, SBIR Phase I awardee Aqua Science, LLC, is developing a novel immunoassay for the detection of two of the most abundant PFAS in soil and water. The goal is to improve PFAS detection sensitivity, while alternative solutions to PFAS are designed, engineered, and adopted.

Similarly, TriboTEX (NSF-1456394), a Washington-based startup funded by NSF, is developing ceramic nanosheets that will form a thin, low-friction, film coating to improve lubrication in machinery. These self-generating coatings could potentially create an alternative to PFAS.

NSF is also participating in the JEEP Strategy Team on PFAS. The strategy team released its Report to Congress on March 14, 2023⁸. This report includes a section on the research needs for safer and environmentally friendlier PFAS alternatives, which includes a description of the use of PFAS within the semiconductor industry and the technical limitations of current alternatives.

In addition, NSF funds research relevant to PFAS through other programs. For example, with funding from our ECLIPSE program, researchers at North Carolina State University, Clarkson University, and Texas A&M University will explore the utility of low temperature plasmas for removal of PFAS from water.

⁶NSF invests in engineering research to remove PFAS from the environment.

⁷"PFASTIR: PFAS Toolkit for Innovating Replacements" abstract.

⁸Per- and Polyfluoroalkyl Substances (PFAS) Report. Joint Subcommittee on Environment, Innovation and Public Health PFAS Strategy Team of the National Science and Technology Council. March 2023. WH Press Release.

SUBCOMMITTEE RECESS

Senator SHAHEEN. The subcommittee stands in recess until Wednesday, May 26, at 2:30 p.m. when we will hold a hearing on the budget request of the Department of Commerce.

Thank you all very much.

[Whereupon, at 4:13 p.m., Wednesday, April 18, the subcommittee was recessed, to reconvene subject to the call of the Chair.]

COMMERCE, JUSTICE, SCIENCE, AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 2024

WEDNESDAY, APRIL 26, 2023

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

The subcommittee met at 2:40 p.m., in room SD-192, Dirksen Senate Office Building, Hon. Jeanne Shaheen (chair), presiding.

Present: Senators Shaheen, Murray, Reed, Coons, Schatz, Manchin, Van Hollen, Peters, Moran, Murkowski, Collins, Hagerty, Britt, and Fischer.

U.S. 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.

Chair Murray and Vice Chair Collins are working hard to return the committee to regular order. And I think, as Ranking Member Moran would agree, we both support and appreciate those efforts and look forward to actually writing our bill together. And we expect the Chair and Vice Chair of the Full Committee to join the hearing at some point before it is over.

I am really pleased to welcome to today's hearing Secretary Gina Raimondo, who is the Secretary, of the Department of Commerce.

We are here to review the President's fiscal year 2024 budget request for the Department. At its core the Department of Commerce mission is to help American workers and businesses thrive. The Department relies on a talented workforce spread across all 50 States, every U.S. territory, and over 100 countries around the world.

I want to thank the more than 40,000 Department employees for their tireless work on behalf of our country.

To maintain the Department's diverse capabilities, this subcommittee must ensure that the Department and its people have the resources they need to succeed. To that end, the fiscal year 2023 Omnibus Spending Bill included \$11.2 billion for the Department of Commerce. The President's fiscal year 2024 budget request for the Department is \$12.4 billion, a 10 percent increase compared to the fiscal year 2023 enacted level.

This proposal builds on the Department's ongoing work to help American workers and businesses compete. To do so this budget

proposes increasing funding for the National Institute of Standards and Technology, by nearly \$360 million. This investment would boost cutting-edge research and advanced manufacturing, while also addressing critical research facility needs all to support well-paying American jobs, and improve U.S. competitiveness.

The budget also proposes a \$455 million increase for the National Oceanic and Atmospheric Administration. With this investment NOAA will advance the next generation of climate and weather satellites which our Nation relies on, to generate accurate forecasts that protect lives and property in New Hampshire, and around the country.

Building on the fiscal year 2023 Omnibus investment in the Foreign Commercial Service, the fiscal year 2024 request proposes further enhancing our Foreign Commercial Service presence in Asia, the Middle East, Africa, and the Western Hemisphere. This investment will help guide small- and medium-sized businesses to identify growth opportunities abroad. These are all worthwhile investments that I am really pleased to see included in this request.

Over the last 2 years, Congress has given the Department extensive responsibilities that extend beyond the annual appropriations process. In particular, through the Infrastructure Investment and Jobs Act, Congress directed the Department to ensure that every American is connected to high-speed Internet, and through the CHIPS and Science Act, Congress gave the Department the responsibility of bringing semiconductor manufacturing back to the United States.

With respect to broadband, the Department is targeting June 30 to distribute \$42.45 billion in Broadband Equity, Access, and Deployment, or BEAD Program, funding to States, the territories, Washington, D.C., and Puerto Rico. This funding will support broadband infrastructure deployment with the goal of connecting all Americans to the high-speed Internet.

And with respect to chips, just a few months ago the Department released a Notice of Funding Opportunities for the \$39 billion Semiconductor Manufacturing Incentive program. The Department plans to release similar notices for the combined \$13 billion in R&D and workforce development funding later this year.

The stakes for these programs are high. If successful, broadband programs will finally allow all Americans to fully participate in today's society. And if successful the CHIPS Program will unleash the next generation of American innovation, protect our national security, and preserve our global economic competitiveness. I know I speak for all the Members of the subcommittee when I say that we want these programs to succeed, and we want to be helpful.

We very much look forward to hearing updates from you, Madam Secretary, about these initiatives. As we all know there is plenty to discuss today, so we very much look forward to your testimony.

And I know that Senator Moran may have a statement when he joins us, but we will go ahead and ask you to begin.

STATEMENT OF HON. GINA M. RAIMONDO, SECRETARY DEPARTMENT OF COMMERCE

Secretary RAIMONDO. Great. Thank you. Good afternoon, everybody; wonderful to be here. Chair Shaheen, and other Members of

the Committee, I want to thank you for this opportunity to talk to you about, and have a discussion about President Biden's fiscal year 2024 budget request for the Department of Commerce.

And thank you for thanking the hard-working folks on the team, because they certainly deserve it.

Thanks to your work and the President's leadership major investments have come to the Department of Commerce, from the Bipartisan Infrastructure Law, and the CHIPS and Science Act. And we are hard at work implementing those, and I expect we will talk about that today.

As you said, our goal is to make sure that America is positioned to compete, and that we will be able to continue our leadership into the 21st century. The reality is, global competition is fierce, and getting more fierce, and so we can't take our foot off the gas.

So today, I am asking you to support the investments we are asking for in the fiscal year 2024 budget so that we can keep the momentum going. We continue to make those investments so that America can continue to be strong and compete. The budget requests \$12.3 billion in discretionary funding, and \$4 billion in mandatory funding for the Department.

In the time permitting, just allow me please to highlight just a few of our priorities: First, relates to manufacturing, which I know is a priority for many of you. We need to expand and improve manufacturing capacity and strength in the United States, and all the innovation that flows from it. As a result, this budget calls for \$1.6 billion to support the work of NIST, including \$277 million for the manufacturing extension partnership.

These MEP centers, and I know many of you are big supporters, have always been vital, more vital than ever, and we are looking to expand them, and expand coordination with the private sector, and try to narrow the gaps in our supply chain.

The budget also provides \$98 million to expand NIST's role in Manufacturing USA, including \$60 million in new competitive awards, to enable existing Manufacturing USA institutes to promote domestic production of institute developed technologies. Further, it proposes \$713 million for ITA, International Trade Administration, including \$26 million to establish Supply Chain activities in the Department of Commerce.

We are reactive now with respect to supply chains. We need to get ahead of it, we need to invest so we can have proactive monitoring of supply chains, and prevent future bottlenecks that we have lived through over these past couple of years. The budget also invests in programs to enable all Americans to have an opportunity to participate in the 21st century economy.

As Senator Shaheen just said, the pandemic was just the latest in a series of economic shocks that have battered communities; certain communities hit even harder, reduced wages, and in some cases eliminated local industries. That being said, throughout America, we have existing assets, that with the right partnerships and investments, can be leveraged and we can revitalize the economies of these communities.

To that end, this budget invests \$4 billion in mandatory funds, and \$50 million in discretionary funds to further fund the regional technology and innovation hubs which will foster geographic diver-

sity and innovation, and create high quality jobs in underserved, or previously overlooked communities.

It includes \$200 million for the Recompete Pilot Program to provide grants to the most distressed communities. So these are communities that have persistently high unemployment rates, and just need a focus and investment so that they can have a chance to thrive.

Very importantly, this budget includes \$100 million for the Good Jobs Challenge, to fund employer-led workforce training systems and partnerships. I don't know about you, but I can't have a conversation with anyone in business today without being told about a labor shortage, lack of ability to hire, lack of ability to find trained workers.

The Commerce Department used some of our ARP money to launch the Good Jobs Challenge. We were 12 times oversubscribed. So we are asking for another \$100 million to do sector-based, applied, commerce-driven, labor and training initiatives. I can't emphasize it enough.

We are also asking for \$110 million in the Minority Business Development Agency, including \$20 million for rural business centers.

So in closing, obviously I have only scratched the surface. I look forward to the discussion. But the President's budget is asking for smart, targeted investments that bolster our economic security, and our national security, will make our supply chains more resilient, promote American manufacturing and innovation, and help more workers and businesses compete and win in the 21st century.

So thank you.

[The statement follows:]

PREPARED STATEMENT OF SECRETARY GINA M. RAIMONDO

Chair Shaheen, Senator Moran, and members of the Subcommittee, thank you for this opportunity to discuss President Biden's Fiscal Year (FY) 2024 Budget Request for the U.S. Department of Commerce.

The Commerce Department is hard at work. Thanks to major investments like the Bipartisan Infrastructure Law and the CHIPS and Science Act, and your support through the appropriations process, the Commerce Department is making substantial progress on some of our nation's most pressing economic and national security priorities, including those related to our supply chains, manufacturing, innovation, and workforce. But global competition remains fierce, and we can't take our foot off the gas. I'm here today to ask you to build on those investments in Fiscal Year 2024 so we can keep the momentum going and continue to deliver on behalf of the American people. I am grateful for your support as we look forward to accomplishing even more in FY 2024.

The President's Budget requests \$12.3 billion in discretionary funding and \$4 billion in mandatory funding for the Department of Commerce. The investments proposed in this budget will enable the Department to continue fulfilling its mission to create the conditions for economic growth and opportunity for all communities.

Today, I will focus on seven key areas of investment within the Department of Commerce.

First, the President's Budget makes strategic investments in innovation, manufacturing, and supply chains.

Without manufacturing strength in the United States, and the innovation that flows from it, we are at a clear disadvantage in the race to invent and commercialize future generations of technology. The FY 2024 Budget invests in programs that enable resilient supply chains to ensure our economic prosperity and national security.

The Budget calls for \$1.6 billion to support the work of the National Institute of Standards and Technology, or NIST, including \$277 million for the Manufacturing Extension Program, or MEP. Today, 51 MEP centers work with manufacturers across the country to help them develop new products and customers, expand and

diversify markets, adopt new technology, and enhance value within supply chains. The additional investment we propose in MEP for FY 2024 will enable MEP centers to expand coordination with private sector manufacturers to narrow gaps in supply chains and adopt critical technologies to make U.S. manufacturers more resilient to global market disruptions.

The Budget also includes \$98 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. The Department of Commerce will add an additional institute this year using FY 2023 regular appropriations and up to three additional semiconductor focused institutes leveraging CHIPS and Science Act funding. With the funding requested in FY 2024, the Department of Commerce will finance \$60 million in new competitive awards to enable existing Institutes to promote domestic production of institute-developed technologies.

The Budget also proposes \$713 million for the International Trade Administration (ITA) including a \$26 million increase to make ITA's supply chain resilience efforts more proactive. Of this, \$21 million is to establish a supply chain resiliency office within the International Trade Administration to identify and assess economic and national security risks to supply chains; develop strategies to mitigate risks; and implement those strategies. The remaining \$5 million is an increase for SelectUSA that will further allow that program to attract foreign direct investment that will strengthen supply chain resilience.

Second, the Budget protects U.S. technologies, capital, and expertise.

As the United States continues to degrade Russia's military and defense industrial base through export controls and address the national security threats posed by the People's Republic of China (PRC), the Budget includes funding for the Bureau of Industry and Security (BIS) and ITA to continue activities that advance U.S. national security, foreign policy, and economic interests. The Budget includes \$6 million (\$3 million at BIS and \$3 million at ITA) to continue supporting Committee on Foreign Investment in the United States (CFIUS) examinations. The Administration is also considering establishing a program to address national security risks associated with outbound investments to prevent U.S. capital and expertise from financing advances in the critical sectors of countries of concern that undermine U.S. national security. Such a program must be meticulously calibrated to ensure it does not place an undue burden on U.S. investors or businesses. The Budget includes \$5 million to enable ITA to assist the Department of the Treasury in scoping and implementing such a program.

Third, the Budget enables us to partner with our allies to advance our shared values and shape the strategic environment in which the PRC operates.

The Budget also includes \$420 million for ITA's Global Markets program to ensure that U.S. businesses and commercial interests have a robust advocate and first line of engagement on foreign trade and market access barriers. This includes an additional \$17 million for Global Markets to counter economic coercion and unfair trade practices by the PRC and enhance U.S. export competitiveness in strategic regions of vital economic and national security concern. The Budget also includes \$3 million to reaffirm U.S. economic engagement in the Indo-Pacific region by tackling mutual challenges, promoting long-term inclusive growth and stability, and advancing shared values through the Indo-Pacific Economic Framework for Prosperity (IPEF), and \$2 million to expand the standards attaché program in ITA.

Fourth, the Budget invests in programs that enable all Americans to have an opportunity to participate in the 21st century economy.

For too many Americans, the pandemic was just one in a series of economic shocks that have battered their communities, reduced wages, and eliminated entire local industries. Yet, all U.S. regions have existing assets that, with the right partnerships and investments, can be built upon to ensure that these regions can thrive in the modern, global economy. The Budget requests \$4 billion in mandatory funding and \$804 million in discretionary funding for the Economic Development Administration (EDA) to promote innovation and competitiveness and prepare American regions for growth and success in the worldwide economy. This includes \$4 billion in mandatory funds and \$50 million in discretionary funds for the Regional Technology and Innovation Hub Program to foster geographic diversity in innovation and create quality jobs in underserved and vulnerable communities. The Department also requests \$200 million for the Recompete Pilot Program to provide grants to distressed communities and connect workers to good jobs that support long-term comprehensive economic development by reducing high prime-age employment gaps. Additionally, it includes \$100 million for the Good Jobs Challenge to fund employer-led workforce training systems and partnerships to train and place American work-

ers into high-quality jobs and support regional economies. The Budget also invests \$110 million in the Minority Business Development Agency, including \$20 million in rural business centers, to bolster services provided to minority-owned enterprises and help narrow racial wealth gaps across the country.

Fifth, the Budget expands climate science, adaptation, and resilience.

Addressing the climate crisis must be a top priority for the nation, and we must use every tool at our disposal to help address this crisis and related economic impacts. The Budget leverages all the Department's bureaus, and our dedicated workforce, to ensure communities across the nation have the data, tools, and resources they need to prepare for the impacts of climate change while building a better, more resilient, America.

The Budget includes \$6.8 billion for the National Oceanic and Atmospheric Administration (NOAA), \$451 million or 7% more than the enacted level. Within this request, the Administration proposes \$2.1 billion for the nation's weather and climate satellites, \$370 million more than the 2023 enacted level, to keep the nation's weather and climate satellites in operation and on schedule for future deployment. The Department also proposes to fund the National Weather Service at \$1.3 billion and includes \$231 million for NOAA's climate research programs to support the ongoing work of the National Climate Assessment and continue high-priority, long-term observing, monitoring, researching, and modeling activities. The Budget also invests in expanding offshore energy while conserving and protecting high-priority natural resources by providing NOAA \$60 million to expand offshore wind permitting activities, a \$39 million increase above the FY 2023 enacted level. This additional funding will allow NOAA to use the best available science to help deploy 30 gigawatts of offshore energy by 2030, while protecting biodiversity and promoting sustainable ocean co-use.

Sixth, the Budget provides the data leaders in communities, industry, and government need to drive U.S. competitiveness, innovation, and job growth.

The Budget provides the Census Bureau with \$1.6 billion to enable it to continue its transformation from a 20th century survey-centric bureau to a 21st century data-centric organization that provides more timely and relevant data products to our stakeholders. The Budget also includes \$21 million in two new programs at the National Telecommunication Information Administration (NTIA) to improve the efficient use of spectrum by improving spectrum sharing.

Seventh, and finally, the Budget invests in the fundamental infrastructure that makes science possible and the grant oversight that protects the American taxpayer.

The Budget invests nearly \$500 million in fundamental research infrastructure across the Department. Sixty-three percent of NIST research facilities are in poor or critical condition. NIST's world-class scientists cannot continue to do the research to ensure tomorrow's competitiveness in yesterday's crumbling facilities. Therefore, the Budget includes \$262 million for NIST Safety, Capacity, Maintenance, and Major Repairs, more than double the FY 2023 enacted level. The Budget also includes \$146 million for NOAA to begin to address deferred maintenance and other construction requirements and \$75 million for the continued recapitalization of NOAA's aging marine fleet. Finally, the Budget includes \$8 million for facilities maintenance at NTIA's Table Mountain Field Site and Radio Quiet Zone, the only Radio Quiet Zone available for research and development.

The Department must maintain sufficient oversight of the grants it makes. While grantees can draw down on broadband grants provided under the Infrastructure Investment and Jobs Act and economic development grants provided under the American Rescue Plan until the late 2020s or early 2030s respectively, the Department will begin to run out of funding to oversee certain programs in FY 2024. The Budget includes \$35 million for EDA and NTIA to continue appropriate oversight of those grants.

While the Commerce Department is a diverse agency that covers everything from patents to the weather, the common thread among the investments I have just outlined is that they are all vital to fulfilling our mission of creating the conditions for economic growth and opportunity for all communities.

With these smart, targeted investments we will bolster our economic and national security, make our supply chains more resilient, promote American manufacturing and innovation, and help more workers and businesses compete and win in the 21st century global economy.

Thank you for inviting me to appear today. I look forward to working with you, and I am happy to answer your questions.

Senator SHAHEEN. Thank you very much, Madam Secretary. And I am going to start where you left off at the end of your testimony talking about the labor shortage, because there is no doubt that that is one of the biggest concerns that I hear from every business I visit in New Hampshire. And one of the challenges I think is one that we talked about last year when you were here, and that is our visa programs.

And while I recognize that is not under your purview, again, I would urge you to work within the administration to address what continues to be a shortage of legal immigration in this country that has not gotten better during the current administration. So again, we rely on many of those visa workers in New Hampshire for our farming, for the outdoor industry, tourism, and we just can't get enough people.

Secretary RAIMONDO. I appreciate that. We have talked about it. I just spoke with the President's Chief of Staff a week ago, and I spoke, as recently as last night, with Secretary Blinken. We are committed to it, we know it is a problem, and I think the White House is planning to have an increased effort to really focus on it with the urgency that it requires.

Senator SHAHEEN. Thank you. I appreciate that. The NTIA announced a target date of June 30, 2023, to announce State allocations for the BEAD broadband funding provided for the Infrastructure and Jobs Act. The allocations are going to be based on the most up-to-date version of the FCC's National Broadband Map. Now, there are a lot of concerns about the quality of FCC's maps, including in New Hampshire where we have real reservations about what the FCC is putting out.

So given those concerns, how do you make the case that distributing the BEAD funds earlier rather than later is the best way forward? And why not wait for the maps to improve before allocating the funding?

Secretary RAIMONDO. Yes. So it is, obviously, an excellent question, and one that we have given considerable thought to. There is a balance, because every day that we don't put the money out the door is a day that people don't have access to the Internet. And there is, you and I, we have all visited people in rural areas who are suffering every day because they don't have the Internet.

So we feel a sense of urgency. Between the time the bill passed, to June 30, is more than 8 months, we are working very closely with the FCC, the FCC has the most granular data they ever have. It is household data not just census tract data, and we, I myself, my whole team, have reached out to States and industry to say: Challenge the maps, challenge the maps, tell us what you think is wrong.

I would invite that to you, Senator. Like, I will follow up with you, your Governor, if you have issues let us know. But I don't think we can delay, because if we delay it is that, you know, people don't have the Internet.

Senator SHAHEEN. So if we do have concerns about the maps that are being used, will there be a process whereby—you said to let you know—but will there be an a process where we can come back to

the Department and say, you know, on Route 125, in Epping in New Hampshire—

Secretary RAIMONDO. Yes.

Senator SHAHEEN [continuing]. The map is wrong? And how do we correct that?

Secretary RAIMONDO. So you could do that right now, and anytime, which is to say—and I am glad you brought that up—the FCC is running the process, the FCC is in charge of the maps, they are accepting challenges, you could go to them anytime, before June 30, file a challenge and say: XYZ address is wrong.

And by the way, Senator Moran isn't here, but his staff did that in Kansas, and allowed us to find—and Senator Wyden did too—thousands of people who the maps said were covered and weren't. So the FCC challenge process open now, I will follow up with you, but yes, we need to do that.

Senator SHAHEEN. Thank you. Last year Congress provided an initial appropriation of \$500 million for the Regional Tech Hubs Program that was authorized in the CHIPS and Science Act. That is designed to jump start the United States innovation capacity. And as Commerce implements that round, first round of competition and makes those initial awards, I am concerned that the awards are made so that there is some equitable geographic distribution.

So how is Commerce thinking about that? When EDA evaluates where to locate these tech hubs, are they looking also at EPSCoR States, for example, as a way to ensure that there is some geographic distribution to the tech hubs?

Secretary RAIMONDO. Yes. So I know what it is like to be from a small State that can be overlooked, so I am keenly focused on making sure that doesn't happen. About, I think it is 30 percent of the money will go to EPSCoR States, the money isn't for, Silicon Valley, New York City, et cetera. The money is for other regions around the country that have excellent research universities and can contribute to technology that secures our national defense.

My hope and hunch is that we are going to be oversubscribed. And, I hope you all will apply, because I think your States have great technology, and innovation, and that is what we are trying to do. We are trying to get outside of the five or six cities in America that have a lot of the money, and tap into the talent, entrepreneurs, and research in these other places.

Senator SHAHEEN. Well, thank you. I think the number of senators who are here shows the interest that exists out there for what the Department is doing. And we are delighted that Senator Collins, who is Vice Chair of the Appropriations Committee, is here.

Senator Collins.

Senator COLLINS. Thank you very much.

First, let me welcome you, Secretary Raimondo. It is good to see you. I want to follow up on the broadband issues said Senator Shaheen raise. As you well remember the three of us were in charge of negotiating the broadband provisions of the Infrastructure Bill, and I remember many late nights in which we did that. And I appreciate very much the efforts that you are making through NTIA

to issue the notice of funding opportunity for \$42.5 billion for the BEAD Program.

And there are some aspects of that notice that track the legislation that we wrote, but there are others that deviate from Congressional intent. For example, the law states that: Any provider that can reliably provide 100 download 20—upload megabytes per second is qualified to participate. And we wanted the program to be technology neutral, because what works in one part of Maine may not work in a part of New Hampshire.

But the notice explicitly states that fiber is the only technology that can meet the definition of a priority project. In addition, States are required to consider climate change when awarding grants, despite there being no statutory basis for that requirement.

Could you please update us on how you are addressing technical neutrality as well as labor requirements, climate mandates, and others that are not expressly authorized in the law? It is not as if we didn't have discussions in the group of negotiators about those issues.

Secretary RAIMONDO. Yes. So nice to see you also, and it is good to be here. I do remember vividly negotiating with both of you. And I assure you that there are no requirements in this Notice of Funding Opportunities at odds with statutory intent.

We are open to all technologies. We know that fiber is, the most reliable and kind of future proof. Having said that, I was just in Portland, Oregon, with one of your colleagues, and I am just using that as an example, we also know that some rural areas there, fixed wireless will be what has to—will be the technology.

So in no way are we saying it has to be fiber. We know some places will be fixed wireless. We want to make sure there is competition, to make sure prices are kept low, and that people get, the best service that they can, that is appropriate for that area.

In terms of other mandates, there are no other mandates. There is no labor requirements, there is no climate requirements, et cetera, the other things you said. Essentially, what we are saying is we are asking for workforce plans, because right now there is a half a million open construction jobs in America. We think that this broadband implementation is going to create about another 100,000 construction jobs.

So we want to know what are these companies doing to find and hire people to get the job done. We are asking for transparency in the vendor process. I think you sent me a letter saying that, we are preferencing government-owned networks. That is not true. I will say that on the record, we are not preferencing government-owned networks.

What we are saying is, show us transparency in the procurement process, because if you pick a large ISP over something else, we just want to know why. So there is no rate regulation, as I promised you then, and I will reiterate now. And I assure you, yes, I want to hold everyone accountable. Okay.

Big ISPs shouldn't get a leg up, government-owned shouldn't get a leg up, we are in this for the consumer, we will hold them accountable, but we have imposed no additional requirements inconsistent with the statute.

Senator COLLINS. Thank you. As I read it, it sounds like fiber is given a preference, so I am glad to hear you say that it will be technology neutral.

Let me switch to a different issue, and believe it or not, it is not going to be right whales this year.

Secretary RAIMONDO. I was waiting for the right whale session.

Senator COLLINS. Instead, it is going to be groundfish quotas.

Secretary RAIMONDO. The groundfish.

Senator COLLINS. And I realize this may be a new issue that I am putting on your radar. Last week I was notified that the start of the Northeast Spring Bottom Trawl Survey will be delayed for the third time, because NOAA's survey vessel, the Henry B Bigelow, is not functioning properly. And I have a feeling this affects others of my colleagues.

So we still don't know when this vessel will be functional, but according to NOAA's staff it can only be used for this survey through May 26, but it may not be fixed in time.

Secretary RAIMONDO. Okay.

Senator COLLINS. So that means, according to NOAA, that NOAA will have to decrease the survey coverage, and that only 70 percent of the planned coverage area in Southern New England, Georges Bank, and the Bank of Maine will be surveyed.

So I recently met with a group of Maine fishermen who shared their great frustration about incomplete surveys, because if you don't have accurate surveys you can't determine the quota. If you don't know how many fish are out there, you can't decide, accurately, what the quota is, and the fishermen are on the water every day, they have the best information about the state of the stock, and they are not involved in the surveys.

So I would ask you, if your vessel is going to be out of commission, and as I said, this is the third time this has happened, I would ask you to consider collaborating with the fishermen who work in the Gulf of Maine, and in these other areas, on better data collection methods. They are willing to help, and they do know where the fish are, that is where they go.

Secretary RAIMONDO. Yes.

Senator COLLINS. And so I hope you will consider that, because otherwise, we are going to end up with quotas that don't reflect the state of the stock.

Secretary RAIMONDO. Yes. So I will look into this. I have taken notes. You are exactly right about the surveys, how vital they are. We had a lot of problems in COVID staying on top of the surveys on time, we are mostly caught up. I regret that we are not caught up in Maine; so can I—let me look into it and get back to you.

Senator COLLINS. Thank you. Thank you.

Secretary RAIMONDO. If we are allowed to collaborate, in the way you suggest, with the fishermen, I think it is a smart idea. But let me get into the details.

Senator COLLINS. Great. Thank you.

Senator SHAHEEN. Thank you.

We are delighted that the Chair of the Appropriations Committee is here, Senator Murray.

Senator MURRAY. And the Vice Chair too.

Senator SHAHEEN. And yes, I already announced the Vice Chair.

Senator MURRAY. Thank you very much. And thank you to Chair Shaheen, and our Ranking Member Moran. Because really as we move, continue moving ahead in our bipartisan work, to return to regular order for the first time in years, and pass these funding bills in a responsible timely way, these hearings that we are doing are really critical to get our country and our communities the resources we need to build an economy that gives our workers and small business opportunities to grow and thrive, and to keep our families safe and on solid financial footing, and keep our economy competitive on the world stage.

Because when we compete with our adversaries, it is not just a matter of who spends the most on defense, it is a matter of who has the strongest supply chains, who supports workers, and growing businesses most, who makes sure our communities have the high-speed Internet they need to do just about anything in the 21st century, and who is on The cutting edge of technology, advanced manufacturing, green energy, quantum computing, and more. Not to mention who has the strongest trade relationships with our allies.

In Washington State the strength of our economy is really directly tied to our Nation's ability to ship and sell everything from our seafood, to our apples, and foods, and food and produce all over the world.

And the Department of Commerce is absolutely crucial to all of that. The Department helps us understand weather patterns and disasters that threaten our communities, and our agricultural production, and fisheries on the front line of the climate crisis. It works to strengthen our trade partnerships, and provide more markets for American goods.

It is closing the digital divide, and connecting our Rural and underserved communities to each other, to the Nation, and the rest of the world. This is something I have pushed very hard to fund, and we have to continue to make progress on that.

The Department is also using resources we provided in the CHIPS and Science Act to bring manufacturing jobs in things like quantum computing and chip manufacturing to States like mine, because we have got to make sure the jobs of the future are here in America, and not shipped overseas.

And the Inflation Reduction Act is actually ushering in a boom in green manufacturing for batteries, and electrical vehicles, and more. We know China is making investments in many of these same industries, and trying to get the upper hand. So if we want to not just compete, but to lead the world, we cannot let our investments fall behind or fall victim to partisan potshots.

So I am really glad today to have this opportunity to discuss with Secretary Raimondo how her Department's work helps strengthen our economy here at home, and our position on the world stage. And I look forward to working with all of our colleagues, on both sides of the aisle, to make the investments that we need here.

So Madam Secretary, thank you for being here. Let me start with an issue important to my State, and that is salmon. Salmon are really foundational to Washington State's economy, and cultural heritage. Salmon recovery remains an issue of really critical importance. We have built on this, worked through the appropria-

tions process, and I am very proud of the supplemental investments we were able to secure in the Bipartisan Infrastructure Law, and in the Inflation Reduction Act to really support those efforts.

NOAA plays an integral role in this work, from the Pacific Coastal Salmon Recovery Fund, to implementation of the Pacific Salmon Treaty, to the Mitchell Act Hatcheries permitting stock assessments, and has really proposed a suite of actions to help recover these endangered runs.

Can you talk to us about how NOAA uses this year's budget to further aid salmon recovery, and meet the urgency of this moment?

Secretary RAIMONDO. Yes. Thank you, Senator. And it is good to see you. And thank you for your support. As you know, we are very, very focused on this, and I have had the opportunity to talk to you.

Through the Bipartisan Infrastructure Law we have already sent out \$100 million in funding to support Pacific Salmon Habitat Restoration in Washington, so of the bill, \$100 million for habitat restoration in your State. The budget that we have before you includes a request for just over \$150 million for Pacific salmon in NOAA Fisheries. That is, a significant amount of money. I would ask for your support for that in this budget.

In the past month, I have, myself, sat down with a number of the leaders in the tribes, in the Pacific Northwest, Nisqually, and Lummi tribes, I am hearing about it. I have been out with Senator Cantwell to your State. And so we will continue to work, hand-in-glove, with your State, your tribes, you, and the community to conduct the research we need, the monitoring we need, the data we need, but also Investments to sustain the habitat and the hatchery.

Senator MURRAY. Well, thank you for that. And I am going to ask you another question, that is really becoming an increasing problem in the Pacific Northwest, actually, I think along the whole West Coast. And that is the issue of European green crab. This is a globally damaging invasive species; it has become established in many temperate coastal zones worldwide, including the Pacific Northwest.

This is a major predator of our clams, our mussels, our oysters; it damages the eelgrass that is essential habitat for Dungeness crab and Pacific salmon. Our State, and local, and Tribal governments have invested their resources to combat this invasive species. And I was pleased to see some funding from the Climate Ready Coast Program go to help eliminations efforts.

But the Federal Government has to start playing a part in this here. How can NOAA help with efforts to mitigate the impacts of coastal aquatic invasive species, like the European green crab?

Secretary RAIMONDO. I will say this Committee really keeps me on my toes, between the groundfish, the right whales, the salmon, and now the European green crab.

Senator MURRAY. Yes. I went out and saw it a few weeks ago, and I was just stunned at the invasiveness of this in my State.

Secretary RAIMONDO. That is amazing. Well, due to you and your leadership, it has risen in our priority of focus for NOAA. And as I understand it, we are working closely with the new management and—with your State and Fish and Wildlife—also Fish and Wildlife Service, to outline new strategies for detection, monitoring and,

importantly, control. So I expect to be able to have more updates for you. But thank you for focusing us on it.

Senator MURRAY. Great. Let us stay in touch on that, it is really incredibly damaging. I have another question on the Digital Equity Act on Broadband. I will submit it for the record. So thank you very much, Madam Chair.

Secretary RAIMONDO. Thank you.

Senator SHAHEEN. Thank you thank you very much, Chair Murray, and Vice Chair Collins.

And Senator Moran has arrived, and the vote has been called. So Senator Moran, I am going to turn the gavel over to you, to make your statement and questions.

Senator MORAN. I would yield to somebody who hasn't voted, if that is helpful.

Senator SHAHEEN. Senator Fischer then.

Senator FISCHER. Thank you, Madam Chair; and nice to see you Ranking Member Moran.

Secretary Raimondo, thank you for being here today. Your testimony noted the Department of Commerce's work to support trusted supply chains. You also commented last week about the Department's Public Wireless Supply Chain Innovation Fund, highlighting the promising efforts to advance Open RAN technology for secure wireless network growth.

But you noted that it is a long project, it will take a decade or more. As you know, there is a funding shortfall in the FCC's program to rip out and replace high-risk Chinese Network equipment. I remain very concerned about the immediate national security risk that this presents for our communications infrastructure.

In the short term, do you agree that the Rip and Replace fund in the shortfall is an emergency that we need to address now.

Secretary RAIMONDO. I do. I think Rip and Replace is essential for security, as you say, yes.

Senator FISCHER. Thank you. I also wanted to touch on the Department's probe evaluating the effect of Huawei Network equipment near military installations. News reports previously indicated that this probe began in 2021. Can you tell me anything about the investigation in this setting?

Secretary RAIMONDO. I cannot, but I would be happy to follow up with you.

Senator FISCHER. Thank you. I would like to talk about the export licensing process that is led by the Department of Commerce's Bureau of Industry and Security. The fiscal year 2024 budget request asked for increased funding to support export administration, however, I have heard concerns from ammunition and firearm industry that their products have been subject to extra stringent, 100 percent end user checks, even if a customer had recently been vetted by the Department. This slowed the approval of their export licenses, and in the process it hurt their manufacturing businesses.

Madam Secretary, if a company has sold the same product to the same customer for many years, and that customer has been vetted many times before; why is the government spending time and money checking them yet again?

Secretary RAIMONDO. So I don't know the exact company and such you are referring to. And once again, I would be happy to fol-

low up with you. But I would say two things: One, things change, right? I mean, our job is to protect the American people. I don't know who they are selling to. I don't know the circumstances. But I do know that we live in a fiercely competitive world, and whether it is China, or Russia, or Iran, things change and so we have a job to continuously evaluate.

Also when it comes to firearms, we have to make certain that they are not going to get into the wrong hands. I will tell you we apply—we are fair, we endeavor to be fair. There is no judgment that is not based on the facts. And so I am happy to get the details and look into it for you.

Senator FISCHER. Okay. We will get you those details, and I look forward to hearing some reasoning there, because what was presented to me, I found very concerning.

Secretary RAIMONDO. Okay.

Senator FISCHER. So I would like to check that with you. Would you be able to provide some data about the processing times for different export licenses, categories, and the staff resources that were dedicated to specific categories of products?

Secretary RAIMONDO. Of course.

Senator FISCHER. Okay. And does the firearm and ammunition industry receive a heightened level of security when their export licenses are being reviewed, compared to other industries?

Secretary RAIMONDO. Here is what I would say, as I said before, firearms are deadly weapons. We have to take caution, appropriately, to make sure that they are not getting into the wrong hands. So if we apply the appropriate level of scrutiny to keep people safe, and make sure they are used not by any of our adversaries. So to the extent we apply extra scrutiny; that is why.

Senator FISCHER. Okay. There has been mention of the BEAD Program before, if I—I will submit a comment for the record. I am getting close to my time here. So thank you very much.

Senator MORAN. Senator Fischer, thank you.

Senator Manchin.

Senator MANCHIN. Thank you, Senator.

And thank you, Secretary, for being with us today. A couple of things, is broadband is a big thing in rural West Virginia, it is Rural America as, you know, and just a little bit, if you can tell me about the Middle Mile Funding, that is the one that is causing us a lot of problems. And also the extra cost as it goes in the mountainous terrain, you know, our cost is much higher—

Secretary RAIMONDO. Yes.

Senator MANCHIN [continuing]. For us to reach our citizens, than it is in the flatter terrain. So about Middle Mile, and how are we able to get that deployed?

Secretary RAIMONDO. So we are working so hard to get the Middle Mile money out by the end of June. That would be my goal. And I know how important it is for you. As for the extra cost, you are exactly right and there, as you know, there is a high cost kind of carved out additional money, that probably due to your efforts in the bill, we are working with the FCC to Define exactly what qualifies, and how much money a State like West Virginia, or frankly, Alaska might get due to that.

But we are highly conscious of the fact that it is going to cost more money in a rural place, and that is what the money is for.

Senator MANCHIN. But my other concern is, basically, are small providers being squeezed out by the larger guys? When they come in the larger guys, I think is something you have to be aware of.

Secretary RAIMONDO. Yes.

Senator MANCHIN. They will squeeze them hard and say: Oh, yes, we are going to do that. The local people, and the smaller providers are getting to us quicker, can do a better job quicker. I am sure, I don't know, in Alaska and all the other rural areas, they know the terrain and they can get there better and quicker than the big boys coming in and say: Oh, we will take care of all this.

Secretary RAIMONDO. Yes.

Senator MANCHIN. So if we have to protect that.

Secretary RAIMONDO. You have talked to me about that before. We will work with, as you say, "The little guys". I mean, we will work with whoever we think can get the job done efficiently, effectively, and as cheaply as possible for consumers.

Senator MANCHIN. Please, we will work with you on that. We need your help. Several years ago a Chinese firm bought British Steel out of insolvency.

Secretary RAIMONDO. Mm-hmm.

Senator MANCHIN. Since that time, steel producers in the U.S. have, repeatedly, expressed concern regarding the subsidies it might be receiving. And it is the order, that UK steel producers are required by the U.S.-UK Tariff Agreement was carried out. And I encourage you to remain vigilant. What actions is the Department taking to minimize the effects of the transshipment and dumping practice utilized by the Chinese Government through different, basically—

Secretary RAIMONDO. Yes.

Senator MANCHIN [continuing]. Ghost, if you will, ghost companies.

Secretary RAIMONDO. So listen, I am as concerned as you are. I was involved in negotiating that settlement with the U.K. The President said it is important to mend fences with our allies. And I did—we did that appropriately. But the company you speak of is owned—has Chinese ownership.

Senator MANCHIN. Absolutely.

Secretary RAIMONDO. So as part of the deal we negotiated, and I insisted that they are audited by us, by an independent party. We need full access to their books. And we are on it, vigilantly, to make sure that there is no, Chinese subsidy that is linked to that.

Senator MANCHIN. Well, I have a company called West Virginia Steel, I will be happy to give you all the information they have—

Secretary RAIMONDO. Yes.

Senator MANCHIN [continuing]. And the unfair competition they are receiving from them. It is just awful.

Secretary RAIMONDO. I would like to have it. I would like to have it.

Senator MANCHIN. But I will get it to you.

Secretary RAIMONDO. Get it to us; because we want to be on it.

Senator MANCHIN. And with that, I am holding to, because Senator Schatz told me to be quick and brief, and I am holding to it. Thank you, Madam Secretary.

Secretary RAIMONDO. Good to see you.

Senator MORAN. I will go to—Senator Murkowski, you have voted, do you want too—

Senator MURKOWSKI. I have voted.

Senator MORAN. Do you want to ask a question? So I will go to Senator Hagerty.

Have you voted, Senator Hagerty?

Senator HAGERTY. I have—

[Laughter.]

Senator MORAN. All right. In the bipartisan—the bipartisan spirit of this subcommittee, the Senator from Hawaii.

Senator SCHATZ. There we go. Thank you Vice Chairman. And I appreciate your forbearance. I will be as quick as I as I can.

Secretary, thank you for being here. Hawaii's Longline Fishery single-handedly makes Honolulu one of the biggest—one of the top 10 producing fishing ports. These fisheries are the largest food producer in the State, and the fleet of 145 active vessels is primarily composed of small businesses. This fleet ensures that the United States is a participant in international fisheries management for the Western and Central Pacific, and gives our Nation another way to have influence and presence in the Indo-Pacific region.

But the Longline Fishery is facing a number of issues that add up to trouble, quota negotiations that the Western and Central Pacific Fisheries Management Council, observer coverage for the fleet, and the lack of science and data on false killer whales. Do I have your commitment to work these issues?

Secretary RAIMONDO. Absolutely. Yes.

Senator SCHATZ. Thank you. Thank you. That is all. I just want our staffs to get together, and you know, I have been involved in fisheries management now for as long—for half of my lifetime. And so I know these are complicated, and you have to learn a whole community, and a whole ecology, and a whole economy, region by region. But we want your engagement here.

It is a sustainable fishery. I am not always in agreement with them on policy, but I think they have some very strong points here, and I am a little worried for the health of the fishery, and I would like to engage with you.

Secretary RAIMONDO. Yes. So I am, by no means, an expert on longline fishing, but I do know how important it is to Hawaii, and I have learned more about how important it is to your economy, to your culture, et cetera, so I guarantee you, we will get more engaged.

Senator SCHATZ. Thank you very much. I want to talk to you about the Tribal broadband ongoing funding. According to the FCC only 79 percent of the four million Americans living on Tribal lands have access to broadband, compared to 96 percent of the rest of the population. That means that there are roughly 850,000 Americans living on Tribal lands without broadband access.

The FCC's own estimates have shown that it can cost about \$5,000 to connect rural unserved homes; that suggests it will cost around \$4 billion to connect everybody. Congress has provided \$3

billion in funding. Do we need more resources, or are we at the point where we now have to just match the resources with the need?

Secretary RAIMONDO. The latter, and here is why. There is the Tribal money that you referenced, which is not enough to meet all the Tribal needs. However, in the BEAD funding some of that will—

Senator SCHATZ. Tribes are eligible?

Secretary RAIMONDO [continuing]. Some of that will go to the Tribes. I do believe we have enough funding if you look at the whole package of the \$50 billion. The challenge, and we are doing our best, and I would welcome your feedback, is like working with the tribes to figure out exactly what the needs are, what kind of technology will make it happen, et cetera. But I don't believe that it is a resource issue.

Senator SCHATZ. I think you are right. But I think we don't quite know that yet.

Secretary RAIMONDO. Yes.

Senator SCHATZ. So let us both keep an open mind, especially as we deploy the non-tribal money, and especially since some of the States are going to be in control of it. So there could be difficulty in getting it exactly where it is needed. And so let us just track that.

Finally, there is a National AI Advisory Committee, and you know, we have established it but it doesn't have dedicated funding and dedicated staff. And I am wondering if you can speak to the need to staff up in this area.

Secretary RAIMONDO. Yes.

Senator SCHATZ. Obviously, everybody is very acutely aware of the opportunity and the challenges related to AI, and I think the government has to build some capacity to process the policy questions in front of us. And at a minimum, a little bit of money, and a little bit of staff, seems to be a good place to start.

Secretary RAIMONDO. I couldn't agree more. I would actually love to talk to you about this, when we have more than a minute and ten seconds. Because I actually met yesterday with that Advisory Board, they were in town, they produced their draft report, they will have their final report to you, I think, in about a month or so. They are doing incredible work, but the challenges coming down the pike with respect to AI, and generative AI, huge opportunity, incredibly exciting.

But the privacy issues, the deep fake issues, the dilution issues, civil rights issues, are massive, and we have to get on it with urgency. And so, of course, I would support additional engagement and staff.

Senator MANCHIN. Thank you very much.

Senator SHAHEEN. Thank you, Senator Schatz.

Senator Moran.

Senator MORAN. Chair, thank you.

Secretary, thank you for being with us. Thank you for your time that we have spent together.

Secretary RAIMONDO. Mm-hmm.

Senator MORAN. The implementation of the CHIPS and Science Act is a significant, perhaps, national security and economic game

changer for our country. You have very serious responsibilities that Senator Shaheen, and I, and others on this subcommittee want to make certain that you have the tools to do so. But I don't think it is an overstatement to say that the future of our Nation, in significant part, rests upon the success of this program, CHIPS and Science.

And so in addition to offering our help, I wish you well, I appreciate your leadership in this regard.

I want to talk a moment about tech hubs. The Regional Technology and Innovation Hub, Tech Hub Program, is designed to do just what I described. And it is involving the development of clusters of business, academic institutions and industry to accelerate innovation and technology deployment throughout our country.

My question is, how will the applications be ranked or compared with regards to proposals that develop new capacity, new capacity within the region, versus proposals that are designed to capitalize on a community's existing expertise, to develop Global Leadership in a distinct economic area?

Secretary RAIMONDO. Yes. So nice to see you; it was great to be with you in Kansas.

Senator MORAN. Thank you.

Secretary RAIMONDO. I would say the tech hubs, there has to be some existing like bolus of activity. There has to be something. The money isn't to begin from whole cloth. Without saying that I am going to guarantee that there is going to be a tech hub in Kansas, I would say based upon what I saw there, that is the kind of thing we are looking for, which is to say there is something there already.

There is expertise in the technology, there is a research university, there is a workforce, and you are on the cusp of, like, world class research in an area relative to national defense, and we want to invest in that to stimulate that, or advance that.

Senator MORAN. I appreciate that answer very much. In the CHIPS Program, what role do you see small- and medium-sized chip semiconductor—excuse me, I misspoke, medium-sized semiconductor businesses in their participation, the CHIP Program. How do they stand to help us increase our resiliency within the domestic semiconductor industry?

Secretary RAIMONDO. Highly, we need them. We need them. I can report to you that we asked for statements of interest just, I guess, a couple months ago. We weren't sure what we would receive. We already have over 200 statements of interest from companies of all sizes, and only about half of them are fabs, foundry companies. There are big and small in the supply chain, et cetera.

So I would say, often it is the little companies that have the most innovation, or have a niche product. So I would say, apply. And we want to work with you.

Senator MORAN. Again, thank you. Let me see if you have any concerns. The release guidance states that it expects that most chip direct funding awards will range between 5 and 15 percent of the total project expenditures.

Does that limitation on direct funding, does that negatively impact the opportunity for those small and medium-sized companies?

Secretary RAIMONDO. No. That is a range. The truth of it is that is a range, and that is not a rule, and we need to be flexible to get the job done.

Senator MORAN. I think that is it for my questions at the moment. I may have a second round, if we have one. Thank you very much.

Secretary RAIMONDO. Thank you.

Senator SHAHEEN. Thank you, Senator Moran.

Senator VAN HOLLEN.

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

Madam Secretary, it is great to see.

Secretary RAIMONDO. Hello.

Senator VAN HOLLEN. Let me start by thanking you and your team at NOAA for your efforts to disperse the grants to help States and localities deal with flooding, and other climate-related costs. And as I said in our exchange, that we had a very good discussion with the folks at NOAA with respect to the Maryland programs.

I would like to turn to a couple issues regarding export controls, but before I do that. I just want to thank you and your team. You have been the key players when it comes to spurring a new generation of innovation in the United States. Implementing the CHIPS and Science Act, and we are already seeing it make a huge difference around the country, and I would argue, a good signal around the world.

Secretary RAIMONDO. Thank you.

Senator VAN HOLLEN. So as we as we make sure that we are at the cutting edge here at home, we also need to make sure that we are, I think, constraining the export of our most sensitive technologies that could be used by competitors or adversaries for military purposes.

If you could give us an update, first of all, on the impact of the export controls on Russia, I think we hear often about the banking sanctions, but just as important and maybe more important over time, has been the grinding effect of export controls. But also talk to the efforts of the administration to apply those export controls, in concert with our European allies, the EU, and our other Democratic partners in East Asia, South Korea, Japan, others, with respect to very high-end chips, including the recent agreement between the United States, the Netherlands, and Japan.

If you could, talk about those and let us know if you have the resources that you need at the Department to make sure that we can really implement these policies.

Secretary RAIMONDO. Yes. Thank you. Thank you for the question; nice to see you; thank you for the kind words. I was, just prior to this, with President Biden in a bilateral with President Yoon from South Korea, and we talked about exactly what you said. Working together, and unleashing private capital into the chip industry, and which has already started to happen in very significant ways. So anyway, we are working hard at it.

With respect to Russia, we moved with alacrity to put together a coalition of 39 governments, and it is holding firm. I can tell you that it is holding firm. We are working daily with those other countries, and in our own system here, on enforcement. The team actually has just launched a Strike Force with the Department of Jus-

tice. We are obsessed with enforcement. It is really hard. Russia has decades of practice building networks all around the world to get around sanctions and export controls.

The short answer to your question though, is we are having a very significant impact. We have, I think more than 500 companies that we have put on the Entity List, we have stopped hundreds of shipments, and hundreds of millions of dollars of equipment going into Russia. And we see it, they are struggling to get spare parts, they are struggling to get semiconductors.

We know that they continue to work with other countries to take the electronic supply—the electronic control panels off of dishwashers, and the like, to put into their equipment. So it is a vigilance that we have to continue with, that we are having a very significant effect.

With respect to export controls, more broadly, the budget before you requests a significant increase for BIS for exactly this.

Senator Fischer was talking about China before. The threats are real. Since I have been Secretary, not very long, we have put hundreds of new Chinese companies on the list. About a quarter of the Chinese companies on the Entity List were put there in my tenure, and we have to continue. So we need the resources in order to be able to protect America, and to protect our technology.

Senator VAN HOLLEN. Well, thank you Madam Secretary. I know that you are—that you were vigilant about this, and I look forward to working with my colleagues on the resource front.

Just in your closing minutes here, NIST of course plays a vital role in your efforts to implement the Bill, the CHIPS and Science Bill. We are proud to have them headquartered in Maryland. There are lots of facility requirements, a lot of aging facilities, and I know you have got monies here in your budget, \$262 million. I guess my question, very quickly, yes or no, is whether you think that will be sufficient to bring those facilities up to standards, or whether it is just to start?

Secretary RAIMONDO. I think it is just a start, a significant start. I have visited there myself, and I know you have, you can see it. And by the way it is the loss of productivity, safety and productivity, that is our crown jewels to compete, and it is not up to where it needs to be.

Senator VAN HOLLEN. Thank you. Thank you Madam Chair.

Senator SHAHEEN. Thank you, Senator Van Hollen.

Senator Hagerty.

Senator HAGERTY. Thank you, Chair Shaheen. I appreciate you calling this hearing.

It is good to see you Secretary. Secretary, I would like to come back to the topic that you were just discussing with Senator Van Hollen, and that has to do with China, and your efforts there.

Just yesterday, I along with eight other senators, two on this committee, Senator Britt, and Senator Rubio, sent you a letter urging the Department of Commerce to take action against China's cloud service providers. They are supporting China's military, security, and intelligence services, and also they are collaborating with entities that are aiding Russia's invasion of Ukraine.

And Madam Chair, I would like to submit this letter for the record, if I may?

Senator SHAHEEN. Without objection.

Senator HAGERTY. Thank you. The examples that we provide in the letter show that China's Military-Civil Fusion Strategy is alive and well. Given China's laws that compel every Chinese citizen and Chinese company to assist in national security or intelligence work, it should be common sense to deny U.S. exports to these countries. I think you know the Chinese National Security Law.

Yet, companies like Alibaba Cloud, that are not on the Entity List, still have access to U.S. technology and exports, and even have operations here in the United States; we have an opportunity to do better here, and I think we must.

My first question, Secretary, is do you believe that China-based cloud service providers, like Huawei Cloud and Alibaba Cloud, pose a threat to U.S. national security?

Secretary RAIMONDO. I believe that they could, yes.

Senator HAGERTY. And I agree with you. Given the far reach of China's national security related laws, and their Military-Civil Fusion Strategy, do you agree that the PRC cloud service providers that operate in the United States pose a threat to our national and our economic security?

Secretary RAIMONDO. As I said, they could. Let me say, I am in broad agreement with you. I received your letter yesterday, I have only read it, I haven't had time to look into these companies. But I think my record in this regard is crystal clear, right. The evidence is clear, I have put over 200 Chinese companies on the Entity List in my tenure, and we are actively, constantly investigating additional threats, and if and as we think companies need to go on to the list, I will not hesitate.

Senator HAGERTY. I am going to strongly encourage you to take a hard look at the letter. Thank you for viewing it.

Secretary RAIMONDO. We will.

Senator HAGERTY. These are companies that also should be included, and they pose, in my view, very significant risks.

Secretary RAIMONDO. I hear you loud and clear.

Senator HAGERTY. And eight of my colleagues agree with that. As we just discussed, the PRC has created an entire system, through its domestic laws, its industrial policies, and its development strategies that make it next to impossible for U.S. businesses to know their customer, and for the Commerce Department to effectively vet problematic end users in China.

According to a 2022 Congressional Research Service Report on export controls and China, U.S. exports to China amounted to \$124.6 billion in 2020; of that \$124.6 billion, an estimated 18 percent of it, that is \$22.6 billion, involved dual-use technologies that are on the Commerce Control List, and those are subject to controls.

But the Bureau of Industry and Security required licenses for just 2.1 percent of these Commerce Control List Technology Exports. In other words, the vast majority of technology exports under the Commerce Control List, roughly 98 percent of them, or \$22 billion worth of exports, went to China without licenses.

This is concerning to me given the circumstances, and so I want to come back to a piece of legislation, the Export Control Reform Act of 2018, that gives Congressional Committees of Jurisdiction

authority to request export licensing data from the Commerce Department.

As Ranking Member of the Banking Subcommittee on National Security and International Trade and Finance, I plan to make use of this authority to ensure effective oversight of our exports to China, and to ensure that dual-use technologies aren't sent to China and utilized in some means for their military modernization activities.

And Secretary, I think I know where you will be on this, but I want to assure that you will fully cooperate with this Committee, that we are in today, and with the Banking Committee's National Security Committee that I also serve on, to provide export licensing data in a transparent, and a totally—in a timely manner when it is lawfully requested by me, serving on this Committee.

Secretary RAIMONDO. Absolutely. I mean, of course.

Senator HAGERTY. I look forward to working with you on this. Thank you. Thank you.

Senator SHAHEEN. Thank you, Senator Hagerty.

Senator Coons.

Senator COONS. Thank you, Chair Shaheen.

Thank you Secretary Raimondo, it is always a delight to be with you. I think you, literally, have the best job in government; a Department that includes NOAA, NIST, and the Patent and Trademark Office, and the Manufacturing Extension Partnership, what a garden of policy delights you get to frolic in, each and every day. I thought I would try and get a good smile out of you about this.

And your budget request would continue to invest very broadly across a wide range of things that each of us see value in, in our States—I will speak for myself—that I see value in in my State: Strengthening manufacturing, protecting inventions and innovation, making our country stronger by making it more secure.

So let me ask three quick questions, if I could, about different topics. First, implementing the CHIPS and Science Act, I think the terrific men and women of the Department are doing a great job in implementing. You recently said that over \$100 billion in new investments in American manufacturing facilities has just been announced in the last year. Your opening testimony highlighted the importance of NIST's Manufacturing USA Program. I could not agree more. As you know, there happens to be one headquartered at the University of Delaware which brings together 200 public-private and academic partners from most of the States of our country.

There is \$60 million in your proposal for building test beds at Manufacturing USA facilities, which will be critical to realizing the promise of training the manufacturing workforce of the future, and demonstrating new technologies. What do you think are the best ways that we can advance manufacturing, ensure that the Department of Commerce-led Manufacturing USA, institutes flourish? And what role do you think that \$60 million plays in facilitating that? That is my first question.

Secretary RAIMONDO. Okay. So first of all, thank you for your strong support of Manufacturing USA. As you say, there is one that—under Commerce and it happens to be in Delaware. What you just spoke of with the test beds, speaks to a larger focus of

ours, which is around workforce development and workforce training.

We have a huge issue in this country which is that we don't have the trained workers to do the manufacturing. Senator Reed and I have talked about this in the past with the industrial base. Due to the fact that manufacturing has atrophied over years in this country, all of the tool and die experts, machinists, chemists, et cetera, are aging, aren't around.

So we need to train them, and on these test beds, we plan to really lean into a lot more, worker training applied, so that we have, the skilled workforce to do that.

The other thing we are going to do, I mentioned in my opening comments with Senator Shaheen we have got to focus on getting more of our supply chain in the U.S., which means manufacturing, including small. And so a lot of that means helping the smaller manufacturers to be more digitally equipped in use of technology, and so we are working with them to do that, so they can be cutting edge.

Senator COONS. Our States, New Hampshire, Rhode Island, and Delaware were among the earliest in our country to have manufacturing, we have small distributed high-skilled, high capability manufacturers often integrated with the defense industry, and so I hope that the NIST and the Manufacturing USA institutes that are part of the DOD and DOE networks will continue on the trajectory you mentioned.

One other question; I recognize I am going to run out of time. I chaired an IP subcommittee hearing last week on the competitive threats to our economic leadership, and I highlighted China's abusive practices with respect to standard essential patents, SEPs, which are critical for advances, things like 5G. I have real concerns about the European Commission's new SEP regulations, which I understand are set to publish today.

Secretary RAIMONDO. Mm-hmm.

Senator COONS. And if it goes in a certain direction that resolution will just validate China's abusive royalty setting practices and harm our patent owners. There may be room to engage with the European Commission to discuss the unintended, let us hope, consequences of their regulation.

I just wondered what your position is on this regulation, and whether you will work with me to communicate the potential harm to our global competitiveness if this is adopted by our European partners.

Secretary RAIMONDO. Yes, we share your concerns. I think we very much share your concerns. And I will follow up with you. I had a team in Brussels last week expressing our concerns, and I will be in Sweden in a few weeks for the US-EU Trade and Technology Council. I will put this in our discussions. So we should get together before that.

Senator COONS. Please, thank you. Thank you, Madam Chair.

Senator SHAHEEN. Thank you. Senator Murkowski.

Senator MURKOWSKI. Thank you, Madam Chairwoman.

Secretary, good to see you.

Secretary RAIMONDO. Hi.

Senator MURKOWSKI. Thank you for all that you are doing. Nice to talk about fish with so many of my colleagues here, so this is great. You have a focus there at NOAA with regards to climate resilient fisheries, and believe me, we are a State that is looking at the impacts of climate, what is happening with our fisheries, great concern and angst, and really crisis for many.

I was at a Regional Advisory Council for a Fisheries Board, and I was told by one of the elders there: If we don't fish, we don't eat. Because there is no readily, affordable, available grocery store. The fish is there sustenance. So it is important to us.

And so one of the tools that we have here at the Federal level, is the funding that comes with the fisheries surveys, I have talked about them a lot. I think it is probably one of the most important tools that we have in terms of understanding what is going on with our fisheries.

So you are, or NOAA, is requesting base funding of \$208 million for fisheries data surveys, and assessment. This is an increase of \$5 million from last year. Everyone is coming to me and saying: We need more. We need to know that we are doing enough. Do you think this is adequate; given what we are facing, and I know we are facing it in other parts of the country as well?

Secretary RAIMONDO. I do. We do. I know, and we have talked about, especially during COVID, we had a lot of challenges in Alaska with the surveys, right. I believe we are out of the woods with respect to that, and our fish surveys are on track to be completed in fiscal year 2023, on time; so I understand how important it is, and we do think it is enough.

Senator MURKOWSKI. We also are looking at different ways that we are doing surveys, and of course the vessel-based surveys are very important. We have got, there are certainly plans out there for additional data collection through uncrewed vehicles, buoys, but I think there is recognition that there is not non-absolute substitute for the vessel-based surveys.

So what I am hoping to be assured from you is that the vessel-based fisheries surveys will continue as needed, and increased as needed. And then an added question to that is: Do you have the vessels that you need in order to do that?

Secretary RAIMONDO. Yes. I think the answer is yes.

Senator MURKOWSKI. Okay.

Secretary RAIMONDO. So let me fully look into it and come back.

Senator MURKOWSKI. Can you confirm that?

Secretary RAIMONDO. Yes.

Senator MURKOWSKI. Because, again, making sure that we have got that is absolutely key. Many have also talked to you about Broadband Equity and the BEAD Program. You were mentioning to Senator Manchin the rural needs, and of course, we are about as rural as you are going to find in America, that our State is anticipating the BEAD allocations at the end of June.

We are also very cognizant that the high cost set aside, again, is going to be super important to us. So we are trying to understand exactly what that means. The State of Alaska has requested some information about the definition. They haven't gotten much substantive response; they were told that there would be no public comment on the proposed formula. So I don't know whether you

can give me some input in terms of how the formula—how the formula is actually developed, the weighting of it, the sources for it, whether or not there are additional considerations.

For instance, in Alaska you have got limited construction seasons that drive up your costs, you have got shipping and freight costs that don't compare to anybody else, which add to your construction costs. So are things like this factored into this high cost definition?

Secretary RAIMONDO. Let me say a couple things, yes. Also the high cost set aside was precisely intended for places like Alaska.

Senator MURKOWSKI. Good.

Secretary RAIMONDO. That is the purpose of it, and we are working right now with the FCC to finalize the definition of what, high cost will be and how the allocation will work. We will have that done soon, and be able to advise you of that, obviously, well in advance of the June 30 deadline of when the allocation will be sent out.

Senator MURKOWSKI. But that won't necessarily be input from the States, it will be you telling the rural States this is—

Secretary RAIMONDO. Yes.

Senator MURKOWSKI [continuing]. This is how we have defined it?

Secretary RAIMONDO. Yes. So that is what I was going to get to.

Senator MURKOWSKI. Okay.

Secretary RAIMONDO. So we are working with the FCC now on that exact definition to be consistent with what is in the legislation, the entire purpose is for—like, Alaska is the poster child of why this exists. And I will—we want the feedback of the officials in the State of Alaska. So as a result of this we will seek, proactively seek their feedback, and then they will be, told what their high cost allocation will be, on top of, the BEAD allocation which is coming out, pursuant to formula, on June 30.

Senator MURKOWSKI. Okay. You know, they have asked me to just, again, make sure that there is some way that they are—

Secretary RAIMONDO. Yes. I understand.

Senator MURKOWSKI [continuing]. Given that level of transparency, I guess, in terms of how that definition is arrived at. But thank you for the assurance that you have had exactly rural States, like Alaska, in mind when you are crafting this.

Secretary RAIMONDO. Absolutely. But we will follow up with that.

Senator MURKOWSKI. Good. Thank you. I appreciate it.

Thank you, Madam Chair.

Senator SHAHEEN. Thank you. Senator Reed.

Senator REED. Oh. Thank you very much Madam Chair.

First let me begin, Madam Secretary, by commending you for your extraordinary leadership in so many areas. One in particular we are grateful for, that is the Atlantic Marine Operations Center relocation to Newport, Rhode Island. Not only the facility but the vessels will, I think, add to a concentration of sophisticated oceanographic activity with the Narragansett Bay Campus at URI, with Woods Hole in Massachusetts. So it could not have been done without you, and I thank you very much.

Let me return to an issue of tech hubs in EPSCoR, which Chairwoman Shaheen brought up. Under the statute one-third of the designated tech hubs must be from an EPSCoR State. But the

question that I will raise is, unless I think some of these smaller States have support through strategy implementation awards, that they might get a token recognition, et cetera, but they won't get something that is comparable to what they can bring to the table in terms of their talent, and everything else, simply because they won't have that.

Will EDA be looking to make sure that that there is a fair chance through assistance and advice, that all of the selected tech hubs can be competitive?

Secretary RAIMONDO. Yes. So let me just take a second to talk about this, because again, not just because we are both from Rhode Island, but as a governor of a small State with a lot of potential, I understand this. It was always hard for us to get the technical resources together to put in application that would compete with even Massachusetts, or certainly California, et cetera.

So the way we are planning to do it is exactly that. There will be an open application, we will have designations and then who—and then there will be planning grants. So we will provide a certain amount of money, so that places like New Hampshire, like Rhode Island, et cetera, will have technical assistance from us, but also money, to hire whatever consultants, or such, and then enable them to put their best foot forward.

I will say, I think I said this to Senator Shaheen, I think we are going to be oversubscribed. This is meant to be a pilot program, so what I am trying to do is use this to identify really all the fantastic opportunities and then help a few to bubble up to the top, but then, I hope there is future funding.

Senator REED. And a related question, Madam Secretary, is that I can assume from your response that EDA will be providing practical assistance in the application process—

Secretary RAIMONDO. Yes.

Senator REED [continuing]. To all these tech hubs, because many times, and again your experience as the governor of a small State, is that they have the talent but just don't have the expertise to fill out the forms, and do all the—

Secretary RAIMONDO. Yes.

Senator REED [continuing]. The stuff that has to be done.

Secretary RAIMONDO. Very true. And yes, we will do that.

Senator REED. Thank you. One of the other areas I wanted to highlight is with respect to EDA. It has been a very powerful organization. There are numerous projects that I can point to at Quonset Point, Rhode Island, for example, that were EDA funded, that provided sort of a catalyst for other investments, et cetera, and now that is just a really remarkable business Center.

But the question is: Does EDA have enough resources to do all the things they will be tasked, and to continue to do what they have been doing, and really helping out?

Secretary RAIMONDO. I would say, no. I mean, we are grateful for the support, to be clear, but as I mentioned, good jobs challenge. Just one example, it is a sector-based job training initiative, where you put the businesses first, and they commit to hire.

We had 12 times the demand for the supply, right. We put a \$0.5 million out there. We had almost \$7 billion. The same thing for the Build Back Better Regional Challenge, we were overrun. Candidly,

Rhode Island had a fantastic application that didn't get funded. We just didn't have enough money.

So I think what you are seeing now, and the President believes deeply in this, we want place-based economic development, investments in communities, maybe former manufacturing communities. And if we had more I have no doubt we could put it to good use and put Americans to work.

Senator REED. And that would be in the form, not only the programmatic grants, but the support for EDA, in general.

Secretary RAIMONDO. That is exactly right.

Senator REED. Thank you very much.

Thank you Madam Chair.

Senator SHAHEEN. Thank you, Senator Reed.

Senator Britt.

Senator BRITT. Thank you Madam Chair.

Madam Secretary, it is wonderful to see you today.

Secretary RAIMONDO. It is good to see you.

Senator BRITT. Thank you so much for being here, and for testifying in front of this Committee. Your Department has a wide variety of missions that are important to Alabama. One mission that Alabama, especially, appreciates and would like to see improvement on is weather forecasting and severe weather tracking.

Severe weather events, specifically tornadoes, upend and unfortunately take lives in our State every year. One way to address this critical issue would be through better radar coverage, specifically in West Alabama. In conversations with your NOAA staff about how we could get better coverage in that area, they have noted that radar is important but only one piece of a larger weather forecasting ecosystem.

I agree with your staff on this point, I understand the importance of satellites, models, and surface weather data collection, as it builds a rich data environment for weather prediction and preparedness. That is why I am fighting for us to fund an expansion of South Alabama Mesonet, and that is why I am concerned that the Department's budget request proposal cuts this program.

This is hard. And you look at this, and it is only one program designed to help Alabamians to understand, to plan, and to prepare for severe weather, and we want to make sure that it is funded adequately.

For example, the Department's proposed budget also cuts the Cooperative Institute for Research, and Operations in Hydrology, which is based at the University of Alabama and works with institutes from Hawaii, to Vermont, to Canada, to research and develop state-of-the-art science, weather, and water analysis, forecast and guidance as well as the delivery of those services.

Additionally, the budget proposes cutting the VORTEX Program which aims to reduce the loss of life and economic damage caused by tornadoes.

Madam Secretary, I understand you care deeply about these communities that benefit and expect to benefit from these programs. So despite the proposed budget cuts I was hopeful that we could both agree that these programs are important for the Department of Commerce to continue implementing, so that Americans are warned as early as possible of impending severe weather.

Secretary RAIMONDO. Yes. So let me say a couple things. First of all, I share the concern. I really do. In fact, just the other day I was on the phone with a member of my team who lives in Arkansas, and her house was destroyed by a tornado. She had to crouch down in the bathtub, and I was just calling to check in on her.

So I want to work with you on it. We are totally, totally committed to accurate data, and high quality forecasts. There is money in the budget for new weather satellites, and I want to work with you on that. You mentioned the VORTEX Program. We are requesting, I think, \$7 million more—\$7 million more to support research for tornado warning and forecast information in the southeast.

So the budget is asking for more money for southeast tornado work. The cut, the reason I got comfortable with the cut to the VORTEX, is because we got additional money last year, and so we feel with that increase it was okay—we would have adequate resources even with a cut this year.

Last week, at my House hearing Congressman Aderholt brought this up.

Senator BRITT. He did.

Secretary RAIMONDO. And as a result of that I have already had my Deputy Secretary, sit down with the Head of the Weather Service to start working on this, and the challenge is the lower—lower quality, lower ferocity storms and tornadoes.

Senator BRITT. Right.

Secretary RAIMONDO. And so we have to work together on that.

Senator BRITT. Yes. And I am so grateful to your response last week to Congressman Aderholt. I know this is also particularly important to Congresswoman Sewell. And so I am hopeful that you will continue to work with us in a bipartisan, bicameral way, to make sure that we have the resources we need.

To your earlier point, about speaking to the young woman that you work with in Arkansas. I have a very similar situation. So this is personal for me.

April 27, 2011, so tomorrow will be 12 years, that an E4 tornado hit Tuscaloosa. And a dear friend of mine, two of my sisters, my husband, and my children, by the grace of God are somehow here today. Had it not been for an incredible meteorologist, and really good radar, and then warning us in the way that they did, we would not be here.

I know firsthand that minutes matter, but so do seconds. And James Spann in Alabama, he is a legend. We have great meteorologists all across our State, but we often say: When he takes off his jacket, and you see the suspenders, you know it is go time. And he was able to tell us exactly where it was coming. We knew. And I had a 1- and a 2-year-old, I couldn't hold both my babies, and we were able to get to safety, but only in seconds' time. So making sure that we—

Secretary RAIMONDO. Yes.

Senator BRITT [continuing]. Have the proper radar, and making sure that we are able to warn people and give them that opportunity. I thank God every day that I am here. I thank God that my children are able to be here and live the American dream. And so I appreciate your commitment to this issue. It is personal to me.

And I am really looking forward to working with you on it. So thank you.

Secretary RAIMONDO. I really, I appreciate you sharing that with me. As Senator Shaheen knows, I am more familiar with hurricanes in our part of the world. And I promise you, we will work with more vigilance on this.

Senator BRITT. Thank you so much. And I also, on March 1, 2007, a tornado hit my high school.

Secretary RAIMONDO. Oh.

Senator BRITT. And the community in which I lived, my mother was there, my sister had just been checked out, my cousins were there, so obviously these storms, and knowing how important it is to be warned in the proper amount of time——

Secretary RAIMONDO. Right.

Senator BRITT [continuing]. Is something we deal with, unfortunately, quite a bit in our State. So I appreciate your commitment, and I really look forward to working with you to make sure that we can keep as many people safe as possible.

Secretary RAIMONDO. Thank you very much.

Senator BRITT. Thank you.

Secretary RAIMONDO. Thank you.

Senator SHAHEEN. Well, thank you very much, Senator Britt. And let me just say I can identify with that having been in a tornado when we lived in Mississippi, and was just there the end of March when that outbreak hit Mississippi, and it hit about 10 miles from where we were visiting. So I understand exactly what you are saying, and appreciate all of the work that the Department is doing in that area.

Madam Secretary, I know we have only a little bit more time but I have a few other questions that I would like to ask in a second round. On the CHIPS implementation, one of the things that I have heard from a number of representatives of our allies, is concern about how that gets implemented, and how to—how do we encourage our allies to see that as an opportunity rather than a threat.

Secretary RAIMONDO. Mm-hmm.

Senator SHAHEEN. They are particularly concerned about the Made in America provisions in it. And so can you talk a little bit about what you are hearing? And what we can do to help address some of those concerns; because clearly we are a lot stronger against our adversaries if we are all working together?

Secretary RAIMONDO. Yes. So obviously you are right, we need to work with our allies, and also there is some concern. I sent a team, recently, to Japan and to Korea to work with them, and I will be going to Europe in a few weeks, carrying the message of: We need to work together.

I can report to you that as a result of our increased reaching out to them we are starting to have much better results. In fact, I said before, you know, the Korean Delegation is in town today. We have had extensive conversations with them, with Samsung, with their companies, how to work together; similarly with Europe.

Look, it is something we have to work on, but here is the reality, if we and all invest: Korea has the K-Chips, EU has the EU-Act, Spain, et cetera; if we all invest in the same area, and have a glut

of one kind of chips, and not enough of another, if we compete against each other, I think what everyone is starting to realize, we all lose.

Senator SHAHEEN. Right.

Secretary RAIMONDO. So I actually feel quite a bit more optimistic, as I sit here with you today, than even 3 months ago, because we have been doing a huge amount of engagement. The White House, my office, et cetera, I think we are making headway.

Senator SHAHEEN. Well, thank you. I really appreciate that. And I would encourage you to advise, Members of this Committee, and others who are traveling overseas—

Secretary RAIMONDO. Yes.

Senator SHAHEEN [continuing]. About the progress that you are making, because we have—we sit in a lot of those meetings, we have an opportunity to talk to people, and it is a way for us to help spread that message, and see how we can support the work that is going on.

Secretary RAIMONDO. Great idea.

Senator SHAHEEN. NOAA is currently undergoing a national facility's strategic plan to assess the agency's full facility needs, and the future footprint. I would like to work with you, going forward, to ensure that the agencies can continue to make progress. And in particular, I would like to work with you on a NOAA Center of Excellence in New Hampshire as called for in the Northeast Regional Plan, potentially, in conjunction with the new Hydrographic Mapping Center of Excellence that Congress funded in fiscal year 2023.

So will you commit to me that you are willing to do that?

Secretary RAIMONDO. Yes.

Senator SHAHEEN. And we can work on that going forward?

Secretary RAIMONDO. Yes.

Senator SHAHEEN. Finally, several years ago the move of the Office of Space Commerce from DOD to the Department of Commerce was quite a contentious issue. There was a lot of debate around that. Can you tell the Committee what progress has been made in moving that? And how you see the future of that office in the Department of Commerce?

Secretary RAIMONDO. Yes. I think we are making quite good progress. We have elevated it within NOAA, reporting, right up to Dr. Spinrad. We, we have a new director, Rich DalBello, who is quite excellent. We have filled—we have hired a great number of people. And so I would say very good progress, where, some of the appropriation we are asking for is for the news tracking system, which we believe will be up and running next year.

And as the congestion in space increases, quite significantly, that tracking system will be all the more important. So if you or your team wants a more detailed briefing, I am happy to do that. But I would say in the past 18 months, I feel quite good about all our progress.

Senator SHAHEEN. Great. I think we would very much like to get a briefing.

Secretary RAIMONDO. Yes. We will do it.

Senator SHAHEEN. And finally, one of the challenges that we hear from the fishing industry in New Hampshire is how we train the next generation of the fishing industry. There is a great organi-

zation the New England, Young Fisherman's Alliance that has worked in New Hampshire to connect young fishermen with those who are more experienced, but can you talk about what NOAA can do to help remove some of the financial barriers that prevent young people from succeeding in fishing?

Secretary RAIMONDO. Yes. It is such a good question. So as you say there is that initiative, NOAA anticipates awarding \$1- to \$2 million of the Federal money for probably four or five awards, which will develop workshops and services to help fishermen find career paths, get into the career path, figure out how to make a living. The proposals were due to us, February 15, we have all the proposals, and I expect we will be making the grants later this year.

Senator SHAHEEN. Good. Do you know if any of those are going to New England?

Secretary RAIMONDO. I don't. But I will find out.

Senator SHAHEEN. Okay. Thank you.

Senator PETERS.

Senator PETERS. Thank you, Madam Chair.

Secretary Raimondo, great to see you; and just want to add my thanks to you for your leadership in carrying out the CHIPS and Science Act which, without question, is a critical investment in our competitiveness and national security. But as I have spoken to you about before, a core part of the legislation is onshoring the U.S. supply chain for mature semiconductor chips to lower prices for consumers, create jobs, and ensure that we are prepared for future disruptions that we certainly saw during the COVID-19.

There is no better example, in my mind, for the need for this than the automobile supply chain. You know, during the pandemic and afterwards American Auto Companies saw supply chains that cut off. When you were in Michigan we talked about this.

Secretary RAIMONDO. Yes.

Senator PETERS. You saw cars lined up in parking lots all ready to be delivered to customers except they were missing a chip or two, and therefore couldn't be delivered, and that ended up with higher prices, used car markets went up, a really significant disruption from mature chips. Not the highly advanced ones, but the mature ones.

And that is why I authored and fought for a provision in the CHIPS and Science Act that sets aside \$2 billion to bring back the supply chain for automotive grade mature chips that we also use in our military systems as well as medical devices as you well know. So I am glad that—to see your Department has made that one of your strategic priorities as well.

But with that in mind, I have just a couple questions for you. First off, Madam Secretary, can you share what steps you are taking to ensure that the CHIPS Act incentives are not exclusively claimed by leading-edge chip manufacturers, while mature nodes that we need in automobiles and other everyday products stay offshore?

Secretary RAIMONDO. Yes. So thank you for your question. Thank you for your advocacy on this. The CEO of Ford told us that last year employees of Ford, I think it may be in one of their facilities

in Michigan, or in the Midwest, only worked a full week twice in the year because of lack of chips.

Senator PETERS. Mm-hmm, right.

Secretary RAIMONDO. So they couldn't even, for example, put the windshield wipers together.

Senator PETERS. Right.

Secretary RAIMONDO. So it is unbelievable. As you say, there is a \$2-billion set aside for Legacy. We have put out a strategy paper, which is public, we have to get it to you, suggesting that we think that there will be multiples of \$2 billion invested in mature and legacy, \$8-plus billion into that area.

We have put out our funding application. We have received over 200 statements of interest, many from legacy providers. We are in constant contact with medical device companies, car companies, et cetera. So we will stay in touch with you, everything I have said, will be public and available to you, but I think I can confidently say it will be much more than \$2 billion, and we are looking at it very carefully.

Senator PETERS. Well, that is encouraging, that sounds great, and I look forward to continuing to work with you. And I would also like to discuss a long-standing priority of mine. The Great Lakes Center of Expertise for Oil Spill Preparedness and Response, it is located in the part—in part at NOAA, at the Great Lakes Environmental Research Laboratory in Ann Arbor.

The Great Lakes is more than just an economic engine, and an ecological treasure, it is basically in the DNA of Michiganders. And an oil spill in the Great Lakes would, without question, be absolutely catastrophic, for Michigan, for the economy, and 40 million people who rely on the Great Lakes for drinking water.

So we need to be doing everything we can to protect them for future generations. That is why I led legislation establishing the center, which was signed into law in 2018, and have secured funding to establish it. Now, the center will play a vital role in these efforts by examining the impacts of oil spills in freshwater environments, which is something we don't really fully understand. We are a whole lot better at cleaning up oil in salt water, but there are microorganisms that exist in salt water that don't exist in fresh water, a whole host of challenges associated with freshwater clean-up.

So my question for you, Madam Secretary, is can I get your commitment to work with me, to continue to secure funding for this important work that NOAA is doing in the Great Lakes? And to protect not just the Great Lakes but all freshwater ecosystems as oil gets transported, whether it is by ship, or a pipeline, or train, or truck, all presents a potential threat to freshwater systems?

Secretary RAIMONDO. Yes. We have, as you know, an excellent partnership with the Coast Guard, in this respect, we want to continue to work with the Coast Guard, and yes, continue to advocate for more funding.

Senator PETERS. Great. Thank you very much.

Thank you, Madam Chair.

Senator SHAHEEN. Thank you, Senator Peters.

Senator Moran.

Senator MORAN. Chair, thank you very much for all your accommodations.

Secretary, thank you for yours, and I don't think I will be long. Last year, you and I spoke about a Pilot Accession Program for NOAA. Congress had appropriated funds in the last 2 fiscal years. We have been working with NOAA on this issue to ensure that NOAA has the proper authorization to make that vision a reality. We have been working to try to get pilots to NOAA, including hurricane hunter pilots.

And I just wanted to reconfirm that you continue to support legislation that would authorize NOAA to designate one or more of these centers to facilitate the development and recruitment of aviators for NOAA.

Secretary RAIMONDO. Yes. Yes, we need it. And last year I think we are able to train eight or ten, we are on path to do ten this year, and want to do ten or more each year to come, pilots; so yes.

Senator MORAN. Thank you for that answer. At 4:30 the Commerce Committee is having a classified briefing with the—I assume folks from the Department of Commerce. The topic of that classified briefing is: Foreign adversaries' exploitation of America's data from social media platforms, data brokers, and other companies.

The Department of Commerce has become front and center in the efforts to secure our privacy. I think I have been working on privacy legislation for seemingly—it is hard to say a decade, it is not that long, but a long time. But I think it has become something more than just personal privacy, which is hugely important.

Secretary RAIMONDO. Mm-hmm.

Senator MORAN. It has now become national security, and I wanted to give you the chance to indicate how you see the role of the Department. I also am a sponsor and wanted to just—I don't know your answer if you have one to this question—but I thought I would be—it would be interesting to me to know what you are thinking.

I am a cosponsor of a Bill that is led by Senator Warner and Senator Thune called the RESTRICT Act. It is legislation that addresses the ongoing threat posed by technology from foreign adversaries attempting to empower your Department to review, prevent, and mitigate information, communications, and technology transactions that pose an undue risk to our national security.

I ask for your informal thoughts on that legislation, if you know it specifically, or that concept in legislation, including what your thoughts are under about the underlying threats that we face? And legislation, does this legislation provide sufficient authorities for the Department to mitigate? If you don't know the legislation, then what do you need would be helpful?

Secretary RAIMONDO. Yes. So, so much there to cover. Thank you for the efforts for the privacy law, we really need a privacy law in this country. And so anything I can do to be of help in making that happen and on a bipartisan basis count me in.

I am somewhat familiar with the RESTRICT Act, and I think it is an excellent approach. Currently, the Department of Commerce is acting pursuant to an Executive Order to secure our communications and technology networks, and we are, right now, in the proc-

ess of hiring a team to do monitoring, investigation, and enforcement.

It would be better if that were codified into law, and so I will support work, in a bipartisan way, work with you, work with Senator Warner, Senator Thune, to make that happen. I think it is a top priority, and we need to move with urgency.

There is a lot of focus on, one particular company, or a few particular companies that may infringe on America's privacy, steal our data, purvey false information; it is more than one company, and it is a constant pervasive threat. And we need the permanent tools, properly funded, with expertise investigation, and enforcement ability, enabled permanently by Statute, not an Executive Order, at the Department of Commerce. So I think it is necessary, and I will work with you on it.

Senator MORAN. Secretary, your competence may involve the fact that so many responsibilities are coming to the Department of Commerce these days. So best wishes, thank you for——

Secretary RAIMONDO. Best wishes, thank you.

Senator SHAHEEN. Thank you, Senator Moran. I said I didn't have any more questions, but I just have a final brief one. And that is, you said you are going to be meeting with the Trade and Technology Council next week, do you think we should——

Secretary RAIMONDO. It is in a few weeks, to give the date, yes.

Senator SHAHEEN. Do you think we should codify the Trade and Technology Council? Would that be helpful?

Secretary RAIMONDO. I need to think about that.

Senator SHAHEEN. Should there be some funding provided? Would you, please?

Secretary RAIMONDO. Possibly. I need to give think for a minute on that. I will tell you, we are making great progress. The focus of our next meeting will be around semiconductors, semiconductor collaboration. We have talked a lot about export controls. It is exactly what you said. We need a formal mechanism to coordinate with our allies on issues of technology. So let me——

Senator SHAHEEN. Sure.

Secretary RAIMONDO [continuing]. Think more properly and come back to you.

Senator SHAHEEN. I would appreciate your thinking about that. Well, thank you very much.

ADDITIONAL COMMITTEE QUESTIONS

Senator SHAHEEN. If there are no further questions this afternoon, Senators have until Wednesday, May 3, to submit additional questions for the official hearing record. We would ask that the Department respond to those questions within 30 days.

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

QUESTIONS SUBMITTED TO SECRETARY GINA M. RAIMONDO

QUESTION SUBMITTED BY SENATOR DIANNE FEINSTEIN

Question 1. The recent re-discovery of DDT and industrial waste ocean dump sites near Los Angeles highlights the need to use newly developed capabilities and technology to characterize and understand the environmental and human health impacts of historical toxic ocean disposal dumping. Additional funds are needed to ex-

plore and characterize dump sites, to include the scope and condition of dump sites, the processes that transport and alter the dumped chemicals, the biological pathways that lead to human exposure, and assessment of certain microbial communities to better understand their role in mitigation and remediation. While I appreciate NOAA's involvement in some of the recent efforts to characterize these dumpsites, there is still much work to be done and I was disappointed again that no funds for this issue were proposed in the President's budget request. Additionally, in her remarks at the recent budget hearing, Secretary Raimondo highlighted NOAA's work to permit offshore wind the California coast, which could result in cables on the sea floor across toxic dumps if we don't have them fully mapped.

Aside from congressionally directed spending, what programmatic funding is available for NOAA to address this issue? In offshore wind permitting, will NOAA take these dumpsite locations into account to prevent further spreading of these toxic contaminants in the ocean?

Answer. NOAA uses base appropriations to coordinate with Scripps College on dump site activities supported by the Community Project Funding (CPF) (FY 2022 and FY 2023). NOAA expects to use approximately \$40,000 of its National Ocean Service Office of Response and Restoration base funds to continue to support this work in FY 2024. NOAA's work is to understand the nature of the Scripps dump site studies and largely to support environmental compliance for the CPF grant. NOAA also uses funds provided by the Environmental Protection Agency (EPA) to participate in the EPA-led Federal/State interagency workgroup that is evaluating risks and data needs at the dump site(s). NOAA provides technical support to the workgroup. For example, NOAA has helped design future sampling plans to better understand barrel distribution at dumpsite #2, and adjacent areas, and the nature and degree of contamination in deep sea sediments and biota. NOAA expects to use approximately \$10,000 of EPA funding in FY 2024.

NOAA Fisheries' role in offshore wind energy projects is to consult with action agencies (which in this case would likely be the Bureau of Ocean Energy Management (BOEM) and U.S. Army Corps of Engineers) on their Federal actions, including siting/leasing and permitting. We are funded for these consultations through the 'Marine Mammals, Sea Turtles, and Other Species' and the 'Fisheries Management Programs and Services' funding lines. Action agencies are required to consult with NOAA Fisheries on their Federal offshore wind actions under the Endangered Species Act (ESA) and the essential fish habitat (EFH) provisions of the Magnuson-Stevens Fishery Conservation and Management Act. For wind developments thus far, NOAA has adopted the Final Environmental Impact Statement under NEPA drafted by BOEM for its own permitting actions. The ESA biological assessment and EFH assessment that the action agencies must provide to NOAA should include analyses of all potential impacts of the proposed project. We note that the known DDT dumpsites are all situated in the Southern California Bight. The current offshore wind energy lease areas are situated offshore of Central and Northern California. Currently there are no offshore wind energy development areas in the vicinity of the known DDT dumpsites.

Question 2. One way that we can combat ocean acidification is to invest in protecting and repopulating kelp forests, which can absorb carbon at twice the rate of land-based forests. In April 2023, my California colleagues and I wrote you a letter in support of designating the proposed "Chumash Heritage National Marine Sanctuary", which would protect sacred sites of the Chumash people, major animal migratory routes, and kelp habitat. As we note in the letter, we appreciate the nomination moving forward in 2021, but it has been more than a year since the public scoping process concluded. This sanctuary designation aligns with many of the priorities of the Biden Administration and it is crucial the agency continue the designation process as quickly as possible.

What is the process and timeline for this sanctuary designation to move forward?

Answer. The sanctuary designation process for the proposed Chumash Heritage National Marine Sanctuary is moving forward. NOAA published the proposed rule, draft environmental impact statement, and draft management plan on August 24, 2023 and is accepting comments on these draft designation documents through Oct. 25, 2023. After the comment period, NOAA will analyze and address comments as it makes a determination on the sanctuary's boundaries, regulations, and management plan. Final action on designation is expected with a final rule in approximately mid-2024. The final rule will take effect after a review period of 45 days of continuous session of Congress.

Question 3. I am concerned by the National Marine Fisheries Service efforts regarding exempted fishing permits for pelagic longlines, including sixty mile longlines, in the West Coast Exclusive Economic Zone, which are prohibited under the Pacific Highly Migratory Species Fishery Management Plan and California state law.

As large-mesh drift gillnets are phased out to significantly reduce bycatch, adding pelagic longlines would increase bycatch risks for endangered marine mammals and sea turtles and pelagic fish and sharks, and expanded use of this gear type should be avoided. This is especially concerning in light of previous language directing NMFS to consult on alternative fishing methods to increase economic viability while minimizing bycatch.

Additionally, Section 206(c) of the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1826(c)) was amended to require NMFS to prioritize the phase out of large-scale driftnet fishing in the exclusive economic zone and promote the development and adoption of alternative fishing methods and gear types that minimize the incidental catch of living marine resources. This does not include consideration of pelagic longlines. The Pacific Council analyses indicate a deep-set buoy gear fishery could ultimately support a 500-vessel fleet, a level of participation in the fishery not seen in decades. Please provide a status update and timeline for a fully authorized and permitted deep set buoy gear fishery off the US West Coast and a plan for how deep-set buoy gear can be expanded and scaled to increase domestic swordfish landings and achieve optimum yield in the fishery. Marine Fisheries Service is now going through the authorization process for Deep-Set Buoy Gear.

What is the data NMFS is relying on to support moving forward with exempted fishing permits for pelagic longlines—another gear type that has high bycatch rates, especially related to endangered marine species?

Answer. Following regulations at 50 CFR §600.745, NOAA Fisheries takes the Council's recommendations into account in determining whether exempted fishing permits (EFP) applications warrant further consideration, specifying regulatory "exemptions" and terms and conditions, and reviewing the proposed activities for consistency with applicable Federal laws. The EFP applications are commonly characterized by gear type labels (e.g., longline, modified longline, linked DSBG, night-set buoy gear, mid-water snap gear, extended linked buoy gear). However, NOAA Fisheries must evaluate these fishing practices at a finer resolution than gear-type labels to effectively determine how best to characterize both the regulatory exemptions and permit conditions, as well as how to analyze impacts of the proposed activities. For example, all of the above referenced examples of EFP gear types could meet the broad definition of longline gear in regulations at 50 CFR §660.702. Therefore, rather than focus on gear labels like "pelagic longline or buoy gear," NOAA Fisheries uses detailed information in the applications and corresponding Council records as well as in agency records and scientific studies on mitigation options to categorize elements of alternative fishing practices (including materials, fishing areas, vessel sizes, target depths, mitigation strategies, etc.) to determine best-fit proxy data by which to evaluate potential impacts of EFP issuance.

Unlike for Deep-Set Buoy Gear, there is no initial research dataset that is representative of the activities proposed in the pending EFP applications the Council has recommended NMFS approve. Therefore, NOAA Fisheries will rely on existing datasets from fisheries targeting highly migratory species within Federal waters off the U.S. West Coast and on the high seas in the vicinity of the U.S. West Coast. Specifically, we are evaluating observer data from the Hawaii shallow-set and deep-set longline fisheries east of 140° W, the U.S. West Coast drift gillnet and deep-set longline fisheries, and data from EFP trials with hooks set along horizontal mainlines.

Question 4. Warming and acidifying oceans are particularly problematic for California and a disaster for Pacific fisheries, including Dungeness crab fishery. NOAA recently issued a study that shows ocean temperatures are warming on the coast of California faster than the global average. I appreciate NOAA's research efforts in this area to date, and its coordination efforts between agencies such as EPA, DOE and the National Science Foundation. However, due to rapidly declining ocean health, impacts of ocean acidification and warming ocean temperatures on fisheries, weather patterns, and critical habitat, NOAA needs to dedicate significant resources to researching and addressing this challenge.

Please describe the agency's research and coordination efforts and potential actions to remediate excess carbon dioxide levels in the oceans.

Answer. NOAA has initiated both coordination and research on remediation of carbon dioxide levels in the oceans with both annual appropriated funds and supplemental funding. As directed by the Federal Ocean Acidification Research and Monitoring (FOARAM) Act of 2009, NOAA created and maintains an Ocean Acidification Program (OAP). In FY23 OAP was appropriated \$17M and used those funds to coordinate OA-related research and monitoring across NOAA and directly support OA research efforts in NOAA laboratories. Work funded by OAP addressed key gaps in both monitoring and modeling of OA, allowing for better understanding of current and future acidification dynamics. Another key area of focus is understanding the impacts of OA to species, habitats, and ecosystems; NOAA made advancements in both research on impacts to species and biological modeling. NOAA communicates the results of this research to the fisheries management councils, which then in turn consider that research during their decision-making process. Investments were also made to understand the potential impacts of OA to coastal communities, conduct outreach and education with those communities, and research potential adaptation measures that can be enacted.

In FY23, NOAA also invested \$14.4 million from the Inflation Reduction Act to support climate mitigation through marine carbon dioxide removal (mCDR), funding ten different multi-year projects. Additionally, NOAA has coordinated with other Federal agencies and non-profit organizations through the National Oceanographic Partnership Program (NOPP) to invest an additional \$10 million in funding to support seven more mCDR research projects. This funding is being provided by NOAA's Ocean Acidification Program, NOPP, and Global Ocean Monitoring and Observing Program, Department of Energy's Office Fossil Energy and Carbon Management and Water Power Technologies Office, Office of Naval Research, National Science Foundation, and the ClimateWorks Foundation. In total, this mCDR funding will support projects with partners from 47 institutions and will include lab experiments, modeling, and field trials to understand the impacts and effectiveness of various mCDR strategies.

These new projects expand NOAA's involvement in carbon dioxide removal (CDR) research. NOAA also has a newly released CDR Strategy which outlines NOAA's potential research contributions in four key areas to understand the feasibility and impacts of CDR techniques: (1) observing and technology development, (2) modeling, scaling, and projections of carbon dioxide removal pathways, (3) environmental impacts, and (4) decision support. NOAA, as a global leader in Earth system science and environmental stewardship, is well positioned to pursue its CDR strategy should it be supported to do so.

QUESTIONS SUBMITTED BY SENATOR JOE MANCHIN, III

Question 1. I'm a co-sponsor of bipartisan legislation called the RESTRICT Act that would codify and improve a set of rules created under the Trump Administration and expanded upon by the Biden Administration to allow the Secretary of Commerce to review foreign technology products and mitigate any risks they pose to the United States. As Chairman of the Senate Armed Services Subcommittee on Cybersecurity, I will continue working with my colleagues on both sides of the aisle to get critical legislation like this across the finish line.

Do you believe that TikTok poses a threat to our national security?

Answer. See response to Question B.

Does the Department of Commerce have the ability to ban apps that might pose a national security threat under its existing authorities?

Answer. The Administration takes seriously the national security risks related to certain technology products and services from China and other countries of concern. Information and Communications Technology and Services (ICTS) that are designed, developed, manufactured, or supplied by persons owned by, controlled by, or subject to the jurisdiction or direction of foreign adversary countries, including connected software applications, can threaten the national security, foreign policy, and economy of the United States. The Administration will strategically use its tools to address the national security risks presented by these threats—including the national security risks associated with TikTok. The Department's ICTS program received its first substantial funding in December 2022. The program is ramping up hiring, to prevent undue or unacceptable risks to national security.

To put ICTS-related measures on the strongest possible footing, the Administration has consistently called for legislation that would codify in statute the ICTS au-

thorities outlined in Executive Orders 13873 and 14034. Such legislation would strengthen and reinforce the Federal government's ability to combat current and evolving threats, to safeguard the security and integrity of our ICTS supply chain, and to protect the American people and their data.

In that regard, the Department welcomes the opportunity to work with Congress on legislation that would address ICTS threats in a comprehensive way and protect our national security.

Question 2. Chemicals are a critical piece of any supply chain, including the fabrication of semiconductors. West Virginia has long been a leader in the chemical industry, and one of our manufacturers makes the resin necessary for the creation of a semiconductor. It's the only site in the U.S. where this resin is made. Put simply, if you're not sourcing from West Virginia, then you're probably sourcing from China. Unfortunately, in the recent guidance released by the Treasury Department for 48D under the CHIPS and Science Act, they excluded chemical manufacturers.

Do you agree that it is important to source chemicals that are critical to the semiconductor supply chain in the U.S.?

Answer. Maintaining and increasing access to chemicals in the United States is crucial. The CHIPS Program Office has released two funding opportunities applicable to semiconductor materials and manufacturing equipment. These opportunities are open to materials suppliers such as chemicals, gases, raw and intermediate materials, and other consumables used in either the front- or back-end fabrication of semiconductors. The Department of Commerce will continue to evaluate which chemical production is critical to onshore for national and economic resiliency.

Will you commit to working with me to ensure these historic investments secure our supply chains to the fullest extent possible?

Answer. Advancing U.S. economic and national security is the principal objective of the CHIPS Incentives Program. The Department recognizes that the semiconductor industry and its supply chain are critical to the resilience of the U.S. economy.

Question 2. Last year, NOAA released the North Atlantic Right Whale Vessel Strike Reduction Rule to protect right whales from boat strikes. While the intent of this rule is admirable, I have some significant concerns with the proposed rule and the effects it would have on our coastal economies and boater safety. I'm primarily concerned about the increased area included in the speed zones and the number of boats that will have to comply with this rule under new boat length requirements. This is going to have significant implications for recreation up and down the Atlantic Coast.

What is the timeline for NOAA to release a final rule for the proposed North Atlantic Right Whale Vessel Strike Reduction Rule?

Answer. NMFS anticipates taking final action on the proposed rule within the next several months.

Is the Department concerned about the economic ramifications on local small businesses, manufacturers, and public access to public waterways of the proposal?

Answer. The Department takes potential economic impacts from of the proposed North Atlantic right whale vessel strike reduction rule very seriously. Moderating impacts on vessel operations, including attention to commercial and recreational interests, was built into the agency's deliberations on rulemaking. Wherever possible and practicable, the agency sought ways to maximize lethal vessel strike protections for tight whales while minimizing burdens on vessel operations. For example, the proposed mandatory Dynamic Speed Zone program is one way NMFS sought to reduce the impacts on mariners in areas or periods when lethal strike risk is generally lower.

NMFS received numerous valuable and informative public comments, including input and suggestions regarding economic impacts, which we have carefully reviewed and considered when deciding whether and how to make changes. The agency greatly appreciates the time and effort the public took to provide input on the proposed rule and believes our vessel strike risk reduction program, including non-regulatory aspects, will be improved as a result. NMFS appreciates that some mariners oppose the spatial and temporal extent of the proposed speed restrictions. The best available data demonstrates that lethal strike events occur along the entire U.S. East Coast, at various times of year, involving a range of vessel sizes and types, and demographic groups. Given the unsustainable level of lethal vessel strikes of right whales in U.S. waters and the whales' already dire status, the solu-

tion must meet the scale of the problem in order to adequately address it. NMFS explicitly evaluated potential economic impacts for the proposed rule. In July 2022, NMFS published the Draft Regulatory Impact Review and Initial Regulatory Flexibility Analysis for its proposed “Amendments to the North Atlantic Right Whale Vessel Strike Reduction Rule.” This draft report evaluated the costs and benefits of the proposed amendments to the current speed rule to better protect North Atlantic right whales from lethal collisions with vessels in U.S. waters. As we work toward final action, NMFS is revising and finalizing the Regulatory Impact Review and Regulatory Flexibility Analysis based on public comment and new information, including any changes to the rule. Any final action will be accompanied by those impact analyses.

No component of the proposed vessel speed rule restricts access to public waterways, or where and when a vessel may freely transit. The rule’s core regulatory mechanism is the restriction of vessel transit speed to reduce lethal vessel strikes with right whales. Like the existing regulations, the proposed rule also includes safety deviation provisions that would allow for an exemption to speed restrictions under certain circumstances, including for emergency situations that present a threat to the health, safety, or life of a person.

What steps is NOAA taking to improve its stakeholder engagement strategy on marine mammal interactions and related issues, to ensure the best available information is taken into account?

Answer. NMFS works closely with many different partners and stakeholders on a variety of marine mammal interaction issues. For example, NMFS convenes and works with stakeholder-based marine mammal take reduction teams to develop recommendations for reducing marine mammal interactions with commercial fisheries. We encourage stakeholders to submit public comments during the comment period on regulatory actions, so that we may consider all relevant information.

Furthermore, NMFS’ 2022–2025 Strategic Plan outlines steps to expand stakeholder engagement on key issues through virtual and in-person meetings with agency leadership and through improvements to the NMFS website.

Given the recent NDAA proposal in December 2022 to authorize a real-time monitoring program for whales, will you commit to pausing this rule as you work with industry stakeholders to develop the appropriate technology that protects both whales and access?

Answer. Endangered North Atlantic right whales are approaching extinction. The latest preliminary estimate indicates there are fewer than 350 individuals remaining and fewer than 70 breeding females. The species has been experiencing an Unusual Mortality Event since 2017, which is ongoing and driven by vessel strikes and entanglement in fishing gear. The changes put forth in the proposed vessel speed rule are essential to stabilize the ongoing right whale population decline and prevent the species’ extinction. That said, we remain open to incorporating additional tools in the future as they become available and are working to identify technologies that could be used or modified to detect and avoid whales, as well as new technologies capable of detecting whales and enhancing vessel avoidance capabilities to reduce strikes. To accelerate this work, we are dedicating \$82 million of IRA funding over the next 4 years for right whale conservation, \$20 million of which is specifically to reduce vessel strikes by improving detection and avoidance technology.

Detecting whale presence is essential but only part of the equation for reducing the risk of lethal vessel strikes. Since 2008, NMFS has declared voluntary Dynamic Management Areas/Slow Zones where whales are recently detected but there was low cooperation from mariners in slowing down. The agency seeks to harness technologies that will help better monitor whales but also work with vessel operators to maximize the value of that information to reduce strike events.

Why has NOAA not focused on improving compliance with existing rules before proposing a new set of rules that are expected to be even more difficult to enforce? What is the anticipated risk reduction specific to vessel strikes if compliance with the existing rules was doubled?

Answer. Mariner compliance with any vessel speed rule is critical to effectiveness. NMFS conducted an in-depth assessment of vessel compliance with the current speed rule and found a high coastwide compliance rate of just over 81% for the 2018–2019 season in the mandatory Seasonal Management Areas, though the actual compliance rate may be higher as some vessels may have appropriately employed the safety deviation provision and exceeded the 10-knot limit in compliance with the regulations. However, cooperation with NMFS’ voluntary slow zone and dynamic management area speed reduction requests is much lower, at around 40–50%. The

proposed rule attempts to increase compliance with the voluntary slow zone and dynamic management area speed reductions by making the measures mandatory in many places, which will allow us to employ our standard tools to increase compliance.

Question 4. It has come to my attention that the Commerce Department may be considering making R&D funding available for chip design through the CHIPS and Science Act under the Notice of Funding Opportunity (NOFO) anticipated this fall.

Do you anticipate fabless companies being eligible for funding under the third CHIPS solicitation? If so, what kinds of projects would you like to see the CHIPS Program Office (CPO) prioritize?

Answer. The CHIPS Program Office is developing future funding opportunities to help achieve our economic and national security objectives and in accordance with the statute to incentivize investment in facilities and equipment in the United States.

Question 5. West Virginia has many rural communities and a challenging topography that makes broadband access economically prohibitive from an infrastructure and consumer perspective. Too often, we see Federal dollars deployed to projects that preserve existing legacy networks without the intended result.

How is the Department working to bring creative thinking to cost-effectively deliver broadband infrastructure to the communities that are hardest to get to?

Answer. Rural areas will be some of the most challenging areas to serve due to both cost and factors like weather and terrain. NTIA has engaged frequently at the state and local level with a wide variety of stakeholders, including the state broadband offices, to understand unique challenges and complexities in regions across the country. Through NTIA's Federal Program Officers, the Department is delivering custom-tailored technical assistance to each state and territory across the country.

What can the Department do to ensure that our broadband networks are not tied to any one last mile technology, but can support the best solution, whether it be Fiber to Home (FTTH), Fixed Wireless (both licensed and lightly licensed), and mobility (via CBRs)?

Answer. There is no "one-size-fits-all" approach to broadband deployment given each Eligible Entity's unique challenges, and NTIA will ensure that the Eligible Entities have flexibility in identifying the technical solutions that meet the needs of their communities. In many cases, the best solution will be building out high-speed Internet using fiber networks. The Notice of Funding Opportunity (NOFO) recognizes the unique characteristics of fiber to "ensure that the network built by the project can easily scale speeds over time to . . . meet the evolving connectivity needs of households and businesses" and "support the deployment of 5G, successor wireless technologies, and other advanced services."

The NOFO, however, creates room for all strategies and we expect Eligible Entities will use a mix of technologies to connect their unserved and underserved locations. The NOFO allows applicants to propose to provide service over any form of reliable broadband service, including terrestrial fixed wireless over licensed spectrum in certain circumstances. It also permits funding of satellite and unlicensed wireless service for the locations that each state identifies as the most expensive to serve.

Question 6. In a November 2019 report on the effort of imports of titanium sponge on national security, the Department found that titanium is essential to the manufacturing and maintenance of U.S. defense systems as well as our civilian infrastructure sectors, however, the last domestic producer of titanium sponge shut down its operations in 2020.

Has the Titanium Sponge Working Group (TSWG) made a report to the President?

Answer. Yes. The TSWG report was finalized in 2022. The full report, including appendices, is available online here: <https://bis.doc.gov/232>.

What measures has the TSWG recommended to ensure that the U.S. has access to secure sources of titanium?

Answer. The TSWG's recommendations include proposals for: (1) Adding titanium materials to the National Defense Stockpile; (2) Exploring the feasibility, benefits, and consequences of restructuring titanium-related product tariffs; (3) Promoting and funding recycling programs, innovation, and technological advancements in the

titanium metal and aerospace industries; (4) Monitoring the availability of idle domestic titanium sponge capacity for use in the event of a sustained disruption to imports; and (5) Maintaining strong relationships with Japan and other allies with titanium sponge capacity.

Implementing these recommendations will promote economic competitiveness, protect the national security, and will ensure access to titanium sponge in the United States in the event of an emergency.

What steps has the Executive Branch implemented to ensure there is adequate titanium available in an emergency to support the national defense and critical civilian industries?

Answer. The Executive Branch is working to address this issue. For instance, the National Defense Stockpile Market Impact Committee (MIC), which is comprised of representatives from the Departments of Commerce, State, Agriculture, Defense, Energy, Homeland Security, Interior, and Treasury, has proposed the annual acquisition of 1,500 Metric Tons of Titanium be added to the National Defense Stockpile for FY22–25.

QUESTIONS SUBMITTED BY SENATOR CHRIS VAN HOLLEN

Question 1. Generative AI tools are advancing rapidly, bringing immense opportunity as well as significant risks: the potential for biased outputs, misinformation, and exploiting security vulnerabilities as well as risks we have yet to identify. Earlier this year, NIST published an AI Risk Management Framework. With its expertise in measurement and evaluation, NIST is well-positioned to develop technical tools to identify and mitigate these risks. However, the FY 2024 budget request proposes only \$5 million above FY 2023 levels for AI-related programs at NIST. Meanwhile, China is increasing investments and building regulatory tools to govern AI services.

How does NIST intend to build robust assessment methods to ensure the safety of contemporary AI systems without meaningful funding increases?

Answer. NIST's critical work on trustworthy AI is a priority for President Biden's administration and for the Department. NIST is pursuing several ambitious lines of effort in fundamental research as well as development of essential guidance and standards. Much of that we have achieved, and will continue to achieve, by maximizing the impact of our limited resources. The additional \$5 million request you mention is for our AI work, which will be expanded in the coming months. NIST and DOC are continuing to evaluate resource needs and will present a request through the 2025 Budget.

Question 2. The Chesapeake Bay is an economic engine for the region, and the seafood industry contributes nearly \$600 million to the state's economy each year. Unfortunately, our commercial fisheries are facing marked declines due to invasive species including blue catfish, flathead catfish, and snakeheads.

That's why earlier this month, my colleagues and I in the Maryland Congressional delegation sent a letter urging you to make a disaster determination to begin addressing damage to the local seafood industry. According to NOAA's Fishery Disaster Determinations, Maryland's request is currently pending.

Can I have your commitment to work with the State of Maryland to conduct a comprehensive review and prevent further damage to our fishing industry?

Answer. The National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NMFS) is committed to working with the State of Maryland to conduct the evaluation needed for the Secretary's fishery resource disaster determination process. Currently, the NMFS Greater Atlantic Regional Office is coordinating with the Maryland Department of Natural Resources to ensure NMFS has the necessary data to evaluate the Governor's request as required under the Magnuson-Stevens Fishery Conservation and Management Act (MSA) Section 312(a). Once all the necessary data has been received, NMFS will work expeditiously to complete its review, after which the Secretary will make her determination.

QUESTIONS SUBMITTED BY SENATOR SUSAN M. COLLINS

Question 1. FY 2023 NARW funding: Congress provided substantial funding for right whale-related monitoring and research through the 2023 annual funding bill. Notably, \$26 million was directed to the Atlantic States Marine Fisheries Commission for right whale research, monitoring, enforcement, and conservation; and \$3 million was provided to NOAA Fisheries for right whale monitoring in the Gulf of Maine. The Maine Department of Marine Resources and its industry partners are ready to begin conducting the research and monitoring necessary to help ensure Maine's lobster fishery can continue to coexist with right whales. It is imperative that these funds are released as soon as possible so the Maine Department of Marine Resources can get to work. Time is of the essence, and an integral piece of Maine's economy is at stake.

Will you commit to expediting the release of this funding, to ensure these funds have an impact on the upcoming lobster season?

Answer. We are committed to working with the relevant states and the Atlantic States Marine Fisheries Commission (ASMFC) to effectively execute the funds provided by Congress for right whale research, monitoring, enforcement, and conservation, as well as funds Congress provided to NMFS for right whale monitoring in the Gulf of Maine. We are actively working with the states to develop spend plans and coordinate monitoring efforts, while concurrently completing the necessary administrative processes so that we can provide funding to the ASMFC as soon as possible. The Maine Department of Marine Resources has submitted their spend plan for the use of their portion of the funds. We are completing our technical and administrative reviews and expect funds will be available through the ASMFC in November.

Question 2. Tariffs on Softwood Lumber: It has been more than 7 years since the Softwood Lumber Agreement with Canada expired. During this time, the U.S. and Canada have been involved in a trade dispute, with the U.S. placing duties on Canadian softwood lumber imports. At a time when our country is already facing significant inflationary pressures, these duties are contributing to cost increases for small businesses and consumers.

Since we spoke about this issue last February, what steps has the Commerce Department taken to resume negotiations with Canada on a new softwood lumber agreement?

Answer. The United States is open to resolving our differences with Canada over softwood lumber. They can only be resolved through meaningful negotiations, including with lumber producers on both sides of the border and other interested stakeholders. Commerce defers to the U.S. Trade Representative for questions on any potential softwood lumber negotiations between the United States and Canada.

Despite numerous disputes over decades and in multiple fora, Canada continues to provide unfair and anti-competitive subsidies to its softwood lumber industry. Softwood lumber duties have been imposed by the United States to remedy the injurious impact of Canadian lumber subsidies as well as the unfair dumping of softwood lumber on the U.S. market. Until Canada addresses these practices, Commerce will continue to enforce U.S. law and support U.S. workers and businesses so that they can compete on a level playing field.

In addition to enforcing the rules of international trade and in response to the President's E.O. 14017 on America's Supply Chains, Commerce continues to monitor supply chain constraints and lumber market dynamics and use a whole-of-government approach to deal with current constraints and demands, including working with industry stakeholders to address near-term supply/demand mismatches; identify solutions that could help alleviate bottlenecks and supply constraints; and compile supply and demand disruption data that can be shared with the private sector to improve awareness of near-term risks and vulnerabilities.

Question 3. Maine Lobster Fishery Classification: The Marine Mammal Protection Act requires NOAA Fisheries to place all U.S. commercial fisheries into one of three categories based on the level of incidental mortality and serious injury of marine mammals in each fishery. Over the past several years, NOAA Fisheries has been lumping Maine's state water lobster fishery with the Federal water fishery and classifying them together as Category I. The result is that Maine's lobster industry is subjected to the most significant North Atlantic Right Whale risk reduction measures. Meanwhile, NOAA has classified the Massachusetts state lobster fishery separate from the Federal fishery and has designated it a Category II fishery, even though there are hundreds more documented right whales in Massachusetts waters.

Despite repeated requests from Maine's Department of Marine Resources, NOAA has declined to change Maine's state waters categorization, and instead includes Maine's lobster fishery in the broader fishery designation within the Gulf of Maine.

Why is NOAA treating Maine differently than Massachusetts?

Answer. Massachusetts has implemented extensive seasonal time-area closures to reduce the co-occurrence of the fishery with North Atlantic right whales. Massachusetts also requires more weak lines and gear marks than the Federal regulations and adjacent states require. That is, fishermen fishing in Massachusetts state waters are subjected to the most stringent North Atlantic right whale risk reduction measures which distinguishes them as a Category II fishery (those risk reduction requirements remain despite the change in fishery classification). The regulatory measures implemented in Maine state waters to reduce entanglement risk of for North Atlantic right whales do not differ significantly from other areas where the fishery operates in the Northeast; therefore, there is no difference in risk from the Maine state lobster fishery compared to the broader Category I Northeast/Mid-Atlantic lobster trap/pot fishery.

Has NOAA staff reviewed the comments submitted by Maine stakeholders on this issue?

Answer. NOAA staff reviewed and responded to the comments submitted by Maine stakeholders, and responses to their comments were published in the annual List of Fisheries final rules.

Would you be willing to direct NOAA to consider re-categorizing Maine's state water fishery given the absence of whale sightings and documented entanglements in Maine's state waters?

Answer. As noted above in response to Question A, current North Atlantic right whale risk reduction measures and monitoring efforts in the Gulf of Maine do not significantly differ from those in other areas where the fishery operates in the Northeast; therefore, there is no difference in risk from the Maine fishery in state waters compared to the broader Northeast lobster trap/pot fishery as defined on the MMPA List of Fisheries. Further, most right whale mortalities are not observed. When observed, it is frequently not possible to determine the origin of prior North Atlantic right whale entanglement cases because no gear was collected or directly observed, or the retrieved gear was not marked. Therefore, the lack of attributed North Atlantic right whale entanglement in particular areas does not necessarily mean entanglement did not occur there. As we continue to gather more data on whale occurrence and entanglements, NOAA will also continue to evaluate whether splitting out the Maine state waters trap/pot fishery from the broader Category I Northeast/Mid-Atlantic American lobster trap/pot fishery is appropriate.

QUESTIONS SUBMITTED BY SENATOR LISA MURKOWSKI

Question 1. National Marine Sanctuary Nomination Process

NOAA seems to employ loose and subjective criteria for listing a proposed site on its inventory of potential marine sanctuaries, listing sites without defined boundaries and in the face of widespread opposition. I am concerned with how NOAA is exercising its discretion in adding and removing (or not removing) proposed sites to this inventory. I am also concerned that even listing a nomination as a potential marine sanctuary injects significant uncertainty into sustainable resource management systems, which can have chilling effects on planning and investment.

Does NOAA recognize these chilling effects and, if so, how are they incorporated into the decision about whether to add a nomination to the inventory?

Answer. NOAA implemented the Sanctuary Nomination Process (SNP) in 2014 in response to widespread interest from the public in a process by which communities could suggest places that NOAA should consider designating as national marine sanctuaries. Under the process, NOAA's acceptance of a nomination, into the inventory of successful nominations, signifies only that the community nomination has sufficiently met NOAA's national significance criteria and management considerations.

Acceptance of a nomination does not signal NOAA's intent to move forward with a designation. The designation process is a separate process that, by law, is highly deliberative and invites participation from the public and stakeholders in crafting and considering multiple alternatives, including a no-action alternative. Therefore,

because of the substantial opportunities for public input that would be available if NOAA initiated a designation process, NOAA did not design the SNP to include broader public input into initial decisions on whether any specific entity's nomination should be added to the inventory.

NOAA's decision on whether to move forward with a designation process is ultimately based on a number of variables that influence NOAA's priorities. These variables may shift over time and include the current threats to nationally significant marine resources, the potential benefits of sanctuary protections and programming in a given area, the level of resources and partnerships available to successfully manage an area as a sanctuary, and NOAA's capacity to manage the System overall.

NOAA is currently focusing its sanctuary policymaking on the sanctuary designation processes and management plan reviews that are already in progress.

Question 2. Coordination between NOAA and USDA

For some time now, the Alaska seafood industry has been asking for better coordination between Department of Commerce and Department of Agriculture—especially between NOAA and USDA—to promote U.S. seafood.

What is the Department of Commerce doing to better coordinate with USDA in this regard?

Answer. NOAA Fisheries recently released its first National Seafood Strategy, in which coordination with other Federal agencies, partners, stakeholders and tribes is a critical element. Further, we coordinate with USDA on several fronts.

NOAA Fisheries' Seafood Inspection Program (SIP) provides technical assistance to USDA's Food Nutrition Service seafood purchases for Federal nutrition assistance programs. USDA requires that seafood processors and processing facilities used to fulfill USDA contracts be NOAA Seafood Inspection Approved Establishments. The Seafood Inspection Program inspects (regulatory compliance), grades (when applicable), and certifies (for Federal Purchase Program Specification FPPS when applicable) the seafood USDA purchases. SIP also serves as the subject matter expert for USDA by reviewing the specifications of seafood products that seafood vendors propose for sale to the Federal government. NOAA also provides USDA with information from NOAA's survey of U.S. seafood processors to help with outreach to seafood vendors. USDA has increased its purchases of seafood in recent years and has indicated it will further increase purchases in FY24.

NOAA Fisheries is a member of the Subcommittee on Aquaculture (SCA), serves as the Federal interagency coordinating group under the National Science and Technology Council in the Executive Office of the President. The SCA serves as the Federal interagency coordinating group to increase the overall effectiveness and productivity of Federal research, regulation and technology transfer and assistance programs. NOAA and USDA collaborate on a wide variety of aquaculture research, science, and regulatory activities through this committee.

NOAA's Northeast Fisheries Science Center and USDA Agricultural Research Service (ARS) are developing a unique collaboration to improve the genetic selection and breeding of oysters for the northeast shellfish aquaculture industry. The team proposes to create 100 families of oysters annually that will be deployed at various sites around New England to measure performance traits and disease resistance. Contemporary USDA ARS genetic technologies, within which they have recently invested \$1.8 million, will be employed to accelerate breeding of oysters resilient to current conditions and climate changes anticipated in the coming decades. This initiative will enhance both science center infrastructure and an existing public/private partnership with direct positive outcomes for the aquaculture industry.

In addition, NOAA Fisheries collaborates with USDA and an academic partner on the first survey of U.S. fishers who engage in direct marketing, and staff of both agencies regularly meet informally to better understand their respective programs.

Question 3. Regional Tech Hubs

The recent EDA fact sheet lays out a two-phase competition to designate at least 20 Tech Hubs (which will receive planning grants), quickly followed later this summer with a competition for at least five, large-scale implementation grant awards. The statutes authorizing the Tech Hubs program requires that the agency encourage "proposals from consortia that significantly benefits an area or region whose economy significantly relies on or has recently relied on coal, oil, or natural gas production or development.

How does EDA plan to engage regions with significant coal, oil, or natural gas production or development, and how does EDA plan to evaluate those regions for the five, large-scale implementation grant awards?

Answer. The Tech Hubs authorizing statute requires EDA to “encourag[e] proposals from eligible consortia that would significantly benefit an area or region whose economy significantly relies on or has recently relied on coal, oil, or natural gas production or development,” see 15 U.S.C. § 3722a(d)(2)(D), which EDA included in its Phase 1 Notice of Funding Opportunity (NOFO). EDA is currently evaluating the designation proposals that consortia submitted pursuant to that NOFO. EDA is still determining its Phase 2 evaluation framework and will implement that framework in line with the statute, including by considering “[h]ow the . . . consortium will . . . enhance the economic, environmental, and energy security of the United States by promoting domestic development, manufacture, and deployment of innovative clean technologies and advanced manufacturing practices” § 3722a(h)(13)(A).

QUESTIONS SUBMITTED BY SENATOR SHELLEY MOORE CAPITO

Question 1. In the National Spectrum Strategy, NTIA’s request for comment defines “spectrum pipeline” as “a process for identifying spectrum bands . . . that should be studied for repurposing.” a) Is simply identifying bands for further study enough when we are in a race with China for global 5G leadership?

Answer. see below

If it takes the Commerce Department years just to identify bands for further study, how long will it actually take to identify bands that will be repurposed for commercial use, and to make those bands available for commercial use?

Answer. The National Telecommunications and Information Administration (NTIA) has a dual imperative built into its statutory role. NTIA is both the manager of Federal spectrum resources, and the President’s primary advisor on these issues. Given these dual roles, NTIA’s obligation is to work with the agencies to ensure that we have the spectrum needed for our economic security and growth while protecting national security and critical Federal missions and capabilities. To meet this obligation, it is absolutely essential that bands be studied before decisions are made about repurposing.

The National Spectrum Strategy, which was released on November 13, 2023, identifies almost 2,800 megahertz of spectrum across five spectrum bands to study within 2 years for potential repurposing. NTIA hopes to identify additional spectrum bands for study in the longer term to meet future requirements for both non-Federal and Federal users. The National Spectrum Strategy was developed to increase spectrum access, which will help ensure continued U.S. leadership in emerging technologies, advance connectivity, and competition, create jobs, and produce improvements to overall quality of life. The Administration is in the process of coordinating the development and publication of an Implementation Plan to carry out the National Spectrum Strategy.

Technology also can allow for more intensive use of this finite resource: by accessing bands we have never used before; by making more efficient use of current spectrum bands; and by developing exciting new sharing technologies.

Additionally, demonstrating the viability of new, open-architecture approaches to wireless networks will help to ensure that the future of 5G and next-gen wireless technology is built by the U.S. and its global allies and partners—not vendors from nations that threaten our national security. NTIA administers the \$1.5 billion Public Wireless Supply Chain Innovation Fund—authorized by the FY 2021 National Defense Authorization Act and funded by the CHIPS and Science Act of 2022—to drive wireless innovation, foster competition, and strengthen supply chain resilience.

Question 2. NTIA recently sought comment on creating a spectrum pipeline. While the goal of identifying at least 1500 megahertz of spectrum for potential repurposing is laudable, do you agree that it is critical that the majority of such spectrum needs to be so-called mid- band spectrum?

Answer. Yes. In fact, more than 1,600 megahertz of the 2,786 megahertz of spectrum identified for study in the National Spectrum Strategy is midband spectrum. The need for additional mid-band spectrum was emphasized repeatedly in the public comments received by NTIA on the National Spectrum Strategy. These commenters argued that the propagation characteristics of mid-band spectrum are critical to the emergence of 5G and will similarly underpin 6G and other important advanced wireless technologies.

Question 3. Under the IJA, Congress directed NTIA to give priority to eligible broadband providers that have a demonstrated record of and plans to be, in compli-

ance with Federal labor and employment laws. What type of discrimination against American workers could the NOFO potentially create?

Answer. A key component of the Broadband Equity, Access, and Deployment (BEAD) program's success must be workforce development. As contemplated in the Notice of Funding Opportunity (NOFO), states must have programs that will promote equitable training, development, and deployment of a qualified workforce. The NOFO provides that subgrantees must comply with all U.S. labor and employment laws and regulations. It also lists certain criteria states must consider when selecting subgrantees, including the use of fair labor practices, fair wage practices, project labor agreements, and proper classification of workers. This is not a list of requirements, but a list of considerations we urge states to think through as they consider how their state's workforce will build out high-speed Internet infrastructure.

Question 4. On March 15, 2023, I sent a letter (attached) with Senator Manchin and Congresswoman Miller on behalf of the Coalition for Fair Trade in Hardwood Plywood whose manufacturing has been disrupted in recent years due to unfair import practices. It is our understanding that China has been circumventing duties by completing minor assembly in Vietnam. Following a determination that the hardwood plywood industry was materially injured due to unfair subsidies, the Department has since considered revisiting their determination for previously uncooperative Vietnamese companies. As of May 3, 2023, I have not received a response to this letter.

Can you please provide me an update on where the Department is on its determination?

Answer. Commerce published the final determination of the hardwood plywood circumvention case on July 20, 2023, in the Federal Register. Commerce determined that imports of hardwood plywood from China were circumventing duties by completing minor processing in Vietnam.

When can my office expect a response to our letter dated March 15, 2023?

Answer. Commerce responded to the letter from Senator Capito, Senator Manchin and Representative Miller on July 10, 2023, explaining our final determination in the hardwood plywood circumvention inquiries. The letter's response was placed on the record of the circumvention review and was sent by ITA's Office of Legislative and Intergovernmental Affairs to Tara McGee, Tax and Trade Policy Advisor, on July 11, 2023.

Question 5. Prior to 2022, businesses could deduct 30% of its earnings before interest, tax, depreciation, and amortization (EBITDA). A new limitation that went into effect would limit the deduction to only EBIT. This change is an added cost to businesses already suffering from a sustained high-interest environment in the U.S. and could harm global competition. This restriction will harm a wide range of industries largely including American manufacturers. A recent study [1] found that failing to reverse the shift to EBIT will cost the U.S. economy 467,000 jobs, \$23.4 billion in lost wages, and \$43.8 billion in Gross Domestic Product (GDP).

With your and the Administration's stated priority to strengthen U.S. manufacturing, do you think that failing to reinstate depreciation and amortization for capital-intensive companies will result in harm to U.S. manufacturing?

Answer. As we consider how to make the United States more attractive to investment and how to revitalize our supply chains and industrial base, we need to consider all tools at our disposition. The Office of Tax Policy in the Department of the Treasury opines on proposed legislation and provides economic and legal policy analysis for domestic and international tax policy decisions.

The United States is now the only country who is a member of the Organization for Economic Cooperation and Development (OECD) who uses an EBIT-based limitation. Do you think that unalignment with other OECD countries on this issue will be a detriment to U.S. global competitiveness in manufacturing?

Answer. As we consider how to make the United States more attractive to investment and how to revitalize our supply chains and industrial base, we need to consider all tools at our disposition. The Office of Tax Policy in the Department of the Treasury opines on proposed legislation and provides economic and legal policy analysis for domestic and international tax policy decisions.

QUESTIONS SUBMITTED BY SENATOR JOHN KENNEDY

Question 1. Since 2020, Louisiana has experienced seven named hurricanes or tropical storms, including a quiet 2022 season that luckily produced zero named hurricanes or tropical storms. This is the most activity any state has received by a long shot. Hurricane Ida, which made landfall near Port Fourchon, LA in August 2021, killed 96 people and caused an estimated \$75 billion in damage. Hurricane Ida had sustained winds of 150 mph, tying the record of Hurricane Laura, which made landfall near Lake Charles, LA just 1 year prior.

Secretary Raimondo, current projections indicate that the 2023 hurricane season will be near the historical average with 11–15 named storms. Four to eight of those named storms are expected to reach hurricane strength, with one to three of those hurricanes achieving major hurricane status. A major hurricane is one that has maximum sustained winds of 111 mph. Currently, AccuWeather predicts that two to four hurricanes will make a direct impact on the United States. NOAA reports that they need four hurricane hunters, and Congress provided sufficient funding to begin the procurement of two C-130s to replace the two aging P-3s that are about to be retired. Yet, this administration has apparently chosen to only acquire one C-130 and did not request any funding for aircraft recapitalization—which will leave a gap in hurricane hunters. Your budget claims “the resourced provided to NOAA complement investments in climate resilience provided by the Bipartisan Infrastructure Law and the Inflation Reduction Act.” The only investment in hurricane forecasting in these bills is \$100 million for a long overdue acquisition of a single C-130 hurricane hunter aircraft.

How do you justify to my state, which in 2020 alone sustained over \$20 billion in hurricane damage, that this is a sufficient investment?

Answer. The value of NOAA's Hurricane Hunters and the missions they conduct cannot be underscored enough. These aircraft and the NOAA Corps Officers who pilot them are integral to NOAA's mission and to the protection of lives and property. NOAA's aircraft recapitalization plan and investments are working to ensure continuity of service and expansion of the fleet. NOAA is working as quickly as possible toward the FY 2030 date to prevent a gap in the hurricane hunter aircraft mission. With the funds received from the 2023 Disaster Supplemental Appropriations, NOAA developed a contract to begin procurement of two planes with the option for two additional planes. NOAA is committed to working with congress to ensure NOAA has the aircraft needed to meet mission requirements.

Question 2. Preface for Question 2: Louisiana and the Federal government have invested \$14.5 billion in the Hurricane Storm Damage Risk Reduction System (HSDRRS) to protect New Orleans, LA since Hurricane Katrina struck my great state in 2005. It is my understanding that NOAA is cutting resources for unmanned systems that can be deployed prior to a hurricane in order to provide critical data about air-sea interactions for hurricane forecasts.

Why is NOAA proposing to cut resources that help track and predict hurricane pathing while we are investing billions in infrastructure to help protect us from future impacts?

Answer. NOAA is committed to understanding and predicting changes in climate, weather, oceans and coast and sharing that knowledge and information to protect life and property. Hurricanes are one of the most damaging and destructive weather events in the U.S., and NOAA researchers work to gather data to improve hurricane tracking and predictions that increase national preparedness for hurricanes. NOAA is actively working to research, develop, evaluate, and operationalize the use of uncrewed systems (UxS) to collect critical information related to hurricanes. These efforts occur across the agency and with other Federal, academic, and private sector partners.

The FY 2024 President's Budget reduces Congressionally directed funding, including for Uncrewed Marine Systems (UMS) services provided by private industry. In FY 2024 NOAA intends to focus on operationalizing UxS that are closest to providing a NOAA product or service. While the hurricane UMS show promise, they are still a research tool, and the potential impact of their data is still being evaluated. In FY 2024 and beyond, NOAA will utilize and assess the value of UxS, including uncrewed surface vehicles, small air-launched Uncrewed Aerial Systems, and underwater gliders, to gather unique hurricane data. The remaining funds within the Office of Marine and Aviation Operations' Autonomous Uncrewed Technology Operations budget line will enable NOAA to advance operational readiness of a full spectrum of UxS mission concepts.

The FY 2024 request also includes a \$3M increase in funding for the Uncrewed Systems budget line in the Office of Oceanic and Atmospheric Research. This funding will advance research and evaluation for operational readiness of UxS mission concepts, including those related to hurricane monitoring. If funded at the FY24 President's Budget levels, the UxS Research Transition Office could fund additional R&D projects that use UxS to improve our understanding and forecasting of hurricane track and intensity.

Question 3. Preface for Questions 3 & 4: In 2014, the National Marine Fisheries Service (NMFS) selected 500 Gulf of Mexico Shrimp Permit owners (approximately 1/3 of the entire fleet) to participate in the Cellular Electronic Logbook (cELB) Program using a random sampling method. In December 2020, the 3G network used for transferring the fishing data was phased out. To supplement the data collection, the shrimping industry provided funding to develop a pilot program using P-Sea WindPlot, an alternative and already existing technology. Industry stakeholders suggested that the existing navigational software on shrimp boats could be used to obtain the same data as recorded by the cELB Program.

The FY23 omnibus appropriations bill direct \$850,000 to NMFS, in consultation with the Gulf of Mexico Fishery Management Council and shrimp industry stakeholders, to continue the development and implementation of the logbook program.

Given that the shrimp industry and the Council have invested over \$1 million to develop a new scientific data collection system, based on the widely used P-Sea WindPlot navigation system already present on boats, in the wake of 3G going offline, can you commit to using the new technology rather than more expensive alternatives that many smaller shrimp boats cannot afford?

Answer. While the 3G network is no longer transmitting, the remaining 3G units that are on vessels are still recording data as the Agency and Gulf of Mexico Fishery Management Council (Gulf Council) develop a new program.

LGL Ecological Research Associates provided the results of a pilot study funded by the Gulf Council to evaluate using the P-Sea WindPlot program for vessel position data collection and automatic transmission on shrimp vessels. This was presented at the Gulf Council's October 2022 meeting. Numerous problems were identified regarding the potential use of P-Sea WindPlot and transmission of position information, notably that it required accessing vessel captains' personal computers. As such, P-Sea WindPlot is not a viable option for transmitting location data, and the Gulf Council requested that LGL partner with the Southeast Fisheries Science Center to provide testing of as many other options as possible to collect and transmit vessel position data. Testing of vessel position devices is ongoing and results will be presented to the Gulf Council October 23–26, 2023

Question 4. Preface for Questions 3 & 4: In 2014, the National Marine Fisheries Service (NMFS) selected 500 Gulf of Mexico Shrimp Permit owners (approximately 1/3 of the entire fleet) to participate in the Cellular Electronic Logbook (cELB) Program using a random sampling method.

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The FY23 omnibus appropriations bill direct \$850,000 to NMFS, in consultation with the Gulf of Mexico Fishery Management Council and shrimp industry stakeholders, to continue the development and implementation of the logbook program.

What is the status of NFMS's development and implementation of the newly approved electronic logbook program?

Answer. A three-part approach is being taken to develop and implement a modernized electronic location recording program to monitor trawling effort in the Gulf of Mexico shrimp fishery by 2025. These steps would inform the possible development of a Gulf Council's Framework Amendment which, if implemented, would replace the previous 3G cELB system. Funding to implement these three approaches comes from \$850,000 allocated in the FY23 Omnibus to continue the development of a new electronic logbook (ELB) program.

Step 1 (ongoing) will Phase-out of the 3G cELB system during 2023–2024. Additional cELB hardware are being provided to support the manual retrieval of data from vessels until the 3G program is phased out in 2025.

Step 2 (ongoing) is side-by-side testing of type-approved cVMS units and cELB currently in use. Testing is currently underway and will be completed by the end

of 2023, after which the Gulf Council may proceed with developing a Framework Amendment based on the best information available at that time. Funding available would support installation of cVMS devices and monthly fees during the testing period.

Step 3 is the Install or Early Adopter phase. Using remaining funds from the FY23 Omnibus allocation, the Gulf States Marine Fisheries Commission will initiate a contract to support reimbursement, installation and deployment of units that collect position data for estimating shrimp trawling effort on approximately 50–100 vessels. This action is independent of and will commence prior to any rulemaking but will provide valuable information to inform the Gulf Council's Framework Amendment. The contract would support reimbursement for installation of the devices and monthly fees for 2 years. This reimbursement is separate from and independent of the existing NMFS type-approved VMS reimbursement process. Funds for Step 3 have also been transferred to Gulf States Marine Fisheries Commission for contracting but we have not begun installing units through an early adopters program.

While the overall timeline and content for the Framework Amendment and eventual rulemaking is uncertain, full implementation of a new electronic logbook program will have costs beyond the currently funded testing and early adopted program.

QUESTIONS SUBMITTED BY SENATOR BILL HAGERTY

Question 1. Regarding bringing back U.S. manufacturing of key technologies like semiconductors, delays— or even just the risk or uncertainty of delays—that result from U.S. environmental review processes are one of the biggest obstacles to American industry.

You addressed this issue recently at a Purdue University event, saying, regarding CHIPS Act projects: “Governors who call me and say, [. . .] what would you do if you were me? I would say fast track permitting for these facilities. Figure out a way to make the permitting transparent and speedy.”

Does the Biden Administration support similar fast-tracking of semiconductor permitting and environmental review at the Federal level?

Answer. The Biden Administration understands that NEPA and other Federal permitting processes can cause delays, and that we must take steps to improve and modernize them without losing sight of the important values they serve. The Administration is therefore undertaking an all-of- government effort to accelerate Federal permitting while ensuring strong environmental protections and robust community engagement.

—In July 2023, the White House Council on Environmental Quality (CEQ) released a proposed rule that would implement and build upon new permitting efficiencies directed by Congress under the Fiscal Responsibility Act of 2023. CEQ's Bipartisan Permitting Reform Implementation Rule would modernize and accelerate environmental reviews under the NEPA, including through page limits and deadlines for environmental review documents, and new avenues to establish and use categorical exclusions.

—The Administration is also proud to have worked with Congress to successfully reauthorize FAST-41 and the Federal Permitting Improvement Steering Council (FPISC), which is critically important to improving coordination and accountability for high-priority projects. FAST-41 now allows new categories of projects—including semiconductors—to be included on the Federal Permitting Dashboard so that the private sector and the public can track progress.

—Last year, the President released the Biden-Harris Permitting Action Plan, which sets forth a strategy for ensuring that Federal environmental reviews and permitting processes are effective, efficient, and transparent; guided by the best available science to promote positive environmental and community outcomes; and shaped by early and meaningful public engagement—without unnecessary bureaucratic delay.

—NIST is working closely with both CEQ and FPISC to facilitate an efficient and effective environmental review process for the CHIPS for America initiative. For example, NIST intends to use the flexibilities provided by the recent amendments to NEPA in the Fiscal Responsibility Act of 2023 to adopt Categorical Exclusions established by the Department of Energy.

Question 2. Last summer, Senator King, Senator Portman, and I led legislation (Public Law 117–173) making the semiconductor sector eligible to take advantage of the FAST–41 Federal permitting efficiency program. Regarding enactment of this law, on August 18, 2022, Christine Harada, Executive Director of the Permitting Council, which administers FAST–41, stated: “The addition of these critical technology sectors will help spur production of semiconductor factories, advanced technologies, and research facilities across the country which will, in turn, open new doors for breakthroughs in emerging fields like quantum computing and artificial intelligence.”

As CHIPS Act projects now move into development, does the Administration plan to maximize the use of this legislation to speed up environmental review and permitting of U.S. semiconductor projects?

Answer. The Administration is proud to have worked with Congress to successfully reauthorize FAST–41 and the Federal Permitting Improvement Steering Council (FPISC), which is critically important to improving coordination and accountability for high-priority projects. NIST is working closely with FPISC on implementation of the Biden-Harris Permitting Action Plan to strengthen and accelerate Federal permitting and environmental reviews. The Action Plan leverages the permitting provisions provided in the Infrastructure Investment and Jobs Act (also referred to as the Bipartisan Infrastructure Law) and the CHIPS and Science Act, funding provided in the Inflation Reduction Act, and regular agency appropriations as well as interagency coordination and collaboration efforts. While it is up to project proponents (or applicants) to initiate the FAST–41 process, the Department of Commerce, including NIST, is in regular communication with FPISC and stands ready to work with FPISC. The Department regularly works with other Federal agencies to ensure that the Federal permitting process is timely, efficient, and transparent, through interagency working groups and frequent engagement with the White House and relevant supporting agencies.

Question 3. Given your emphasis on the need for states to fast-track permitting and the critical importance of accelerating U.S. semiconductor development, does the Department support eliminating or reducing the NEPA review process in order to ensure that it doesn’t delay CHIPS Act projects for substantial periods of time, especially given that these projects wouldn’t have been subject to NEPA absent the CHIPS Act grants?

Answer. The Department and NIST are committed to working with applicants to ensure efficient, effective, and predictable environmental reviews that result in informed and environmentally responsible decisions. In addition to ensuring that dedicated resources are available to complete the National Environmental Policy Act (NEPA) reviews in an expeditious manner, the Department is working to implement the permitting efficiencies contained in the White House Council on Environmental Quality’s (CEQ) proposed rule implementing the Fiscal Responsibility Act of 2023. CEQ’s Bipartisan Permitting Reform Implementation Rule would modernize and accelerate environmental reviews under NEPA by clarifying the roles of lead and co-operating agencies, setting deadlines and page limits, and adding other provisions to ensure timely and unified environmental reviews. Consistent with the Fiscal Responsibility Act, the proposed rule also makes it easier for Federal agencies to adopt another agency’s categorical exclusion, thus streamlining review for projects with no significant environmental effects.

The proposed rule also improves efficiency and certainty for projects and stakeholders by offering new tools to accelerate and improve environmental review, including consideration of a project’s mitigation measures in the environmental review process, additional mechanisms for agencies to establish categorical exclusions, and adoption of programmatic environmental reviews to expedite review for certain categories of projects.

QUESTIONS SUBMITTED BY SENATOR KATIE BRITT

Question 1. How does the Bureau of Industry and Security evaluate PRC military firms and what is the timeline to add these to the entity list? How would the Department characterize it’s current system?

Answer. BIS seeks to use the full complement of its authorities to address the PRC’s military modernization and other efforts. This includes imposing, maintaining, enforcing and, when appropriate, revising export controls on items subject to the Commerce Department’s jurisdiction, as well as the imposition of end-use and

end-user-based controls on specific entities that have, are, or are at risk of becoming, involved in activities contrary to U.S. national security and foreign policy interests. The Entity List is one of several lists BIS uses to notify the public of end-user-based controls. With respect to export controls on items destined to the PRC, BIS maintains comprehensive controls. They include imposing license requirements for all military and spacecraft items under our jurisdiction; all multilaterally-controlled dual-use items; a large number of dual-use items with extensive commercial applications if the item is intended, entirely or in part, for a military end use or military end user in the PRC; and all items under our jurisdiction if the item is exported knowing it will be used in certain WMD programs or if it is intended, entirely or in part, for military-intelligence end uses or end users in the PRC. In addition, BIS controls prohibit certain U.S. person activities that would support WMD-related activities or military-intelligence end uses or end users in the PRC absent authorization.

BIS controls are tailored to impose export license requirements based on the sensitivity of the item to be exported, the country of destination, the parties to the transaction, and the end use of the item. Some license requirements apply worldwide, including to our allies. Other license requirements apply more narrowly to a select group of countries, parties, or end uses.

All items subject to control for national security reasons require a license to the PRC and are scrutinized for the potential of diversion, particularly for items subject to Commerce's jurisdiction that have the greatest likely military utility. Effective October 29, 2020, BIS amended § 742.4(b)(7) of the EAR, which outlines change to the licensing policy for items controlled for national security reasons when destined to the PRC.

The revised policy directs transactions to be assessed based on their potential for diversion to military end uses or end users and for the export, reexport, or transfer of items that would, "make a material contribution to the 'development,' 'production,' maintenance, repair, or operation of weapons systems, subsystems, and assemblies." See 85 Fed. Reg. 68448 (Oct. 29, 2020).

BIS develops and applies licensing policies that will apply to the export of items, destinations, parties, or end uses involved in the application. Approval of an export license application is a conclusion by BIS and its interagency partners that the transaction is consistent with both the stated licensing policy and our national security and foreign policy objectives.

BIS will continue to evaluate the threat environment, technological advancements in a variety of industries and sectors, and other factors and will update controls as appropriate to protect U.S. national security and foreign policy interests, as evidenced by the controls announced on October 7, 2022, that seek to address concerns posed by the PRC's efforts to develop high performance computing capacity to train AI and related data and communications technologies that can be employed for military modernization and human rights abuses. Our restrictions related to advanced semiconductor manufacturing equipment, high performance chips and related items, and other measures outlined in those rules restrict the PRC's ability to obtain the tools and capabilities they desire for these activities and represent an expansion of our controls based on the present threat environment.

Nearly all BIS actions, including licensing decisions and Entity List designations, are taken in collaboration with our interagency partners—the Departments of Defense, State, and Energy, based on the clear and publicly available policies established through the interagency process and outlined in the EAR, including as they pertain to specific restrictions on entities on the Entity List.

Placing foreign companies on the Entity List allows the U.S. government to control their access to U.S. technology, including commercial products. The Entity List is not an embargo—it is a regulatory tool to assess export transactions involving parties that have been added to the Entity List for various reasons. The policy for reviewing license applications for each party is public and determined by the Departments of Commerce, Defense, State, and Energy based on national security and foreign policy considerations.

BIS continues engaging in a top-to-bottom assessment of our export control policies related to the PRC and calibrating them based on the evolving dynamics of the threat environment. BIS has made a number of changes in the past year to respond to national security concerns presented by the PRC, including the imposition of new controls on advanced computing integrated circuits and related items, semiconductor manufacturing equipment and related items, software and components for the production of advanced semiconductors, and others. BIS has also updated its policies related to the use of the Unverified List (UWL), which includes parties for which we cannot verify their bona fides (i.e., legitimacy and reliability relating to the end use and end user of items subject to the Export Administration Regulations, or

EAR) and has vigorously used the Entity List to restrict the ability of a variety of PRC entities from obtaining items subject to the EAR for advancing the PRC's military modernization and human rights violations.

Question 2. What factors does the Department consider and how are the factors weighted when approving Buy America waiver requests across the Department's broadband programs?

Answer. This Administration is fully committed to Build America, Buy America. NTIA has published waivers for some of the Department's broadband programs already, including the Tribal Broadband Connectivity Program and the Middle Mile Grant Program, which were tailored to align with their specific scopes and timelines. Under the Infrastructure Investment and Jobs Act (IIJA) Section 70914(b), the Department has the authority to waive the application of the Buy America Preference when (1) the application of that preference would be inconsistent with the public interest, (2) the materials and products subject to that preference are not produced in the United States at a sufficient and reasonably available quantity or satisfactory quality, or (3) the inclusion of domestically produced materials and products subject to that preference would increase the cost of the overall project by more than 25 percent. On August 22, 2023, the Department proposed and sought comment on a limited and targeted waiver of Build America, Buy America provisions for the BEAD Program that follows this approach to enforcing rules that protect and create American jobs. The policies recommended in this draft waiver will ensure that close to 90% of BEAD funding spent on equipment will be spent on equipment manufactured in the United States. The proposed waiver is the result of months of careful analysis of market conditions and sustained outreach to industry and stakeholders. In addition to the program-level waivers, any funding recipient can request a project-specific waiver consistent with IIJA Section 70914(b) at any time.

Question 3. Does NOAA currently have plans for improving hurricane intensification forecasts, specifically in the Gulf of Mexico?

Answer. Yes. This hurricane season, NOAA implemented the new Hurricane Analysis and Forecast System (HAFS; press release). HAFS is a high-resolution, multi-scale forecast model and data assimilation package providing analyses and forecasts of tropical cyclones (TCs) out to 7 days, including prediction of rapid intensification. Due to the Gulf of Mexico's commercial activity and geography, with highly populated coastlines including vulnerable communities, prediction of TC rapid intensification is essential for protecting lives and property. HAFS, the first regional coupled model to go into operations under the Unified Forecast System , was developed through a community-based collaborative effort.

An objective of the NOAA Hurricane Forecast Improvement Program (HFIP) is, by 2027, to reduce model track and intensity forecast errors by half compared to forecast errors in 2017. HAFS is one of the key strategies in HFIP to progress and operationalize an advanced numerical prediction-based hurricane model. Over the next 4 years, HAFS will undergo several major planned upgrades, ultimately leading to further increased accuracy in model guidance, forecasts, and warnings. These key upgrades, which will have particular impact on the National Hurricane Center (NHC)'s TC intensity forecasts in the Gulf of Mexico, include:

- Improved coupling with ocean and wave models, as well as coupled data assimilation, to better capture the complex currents and ocean surface and subsurface temperature profile unique to the Gulf of Mexico, which will have a substantial impact on characterizing the energy available to TCs and the evolution of their intensity.
- Capability for multiple, high-resolution storm-centric moving nests in a single model forecast, enabling the model to better capture storm-to-storm interaction either within the Gulf of Mexico, or across the Atlantic basin.
- Capability to run an ensemble of HAFS, where the mean of the ensemble forecast, including intensity, has shown improvement over the single “deterministic” HAFS forecast. Additionally, the ensemble capability improves quantification of the uncertainty in track and intensity forecasts and the probability of hazardous TC impacts. Social, behavioral, and economic sciences are also being incorporated into new TC and related hazard forecast products, to improve messaging of risks and potential impacts, as well as preparation and response.
- Improvements to modeling of physical processes that lead to convection, resulting in improved forecasts of storm size and intensity.

—Assimilation of more observations from reconnaissance aircraft, unmanned systems such as drones and gliders, buoys and oil platforms, and satellite platforms. Improving the initial ocean and atmospheric state will lead to improved intensity and storm surge forecasts.

Question 4. The Department coordinates with the FCC and USDA in broadband deployment. Can you provide an overview of the steps you take to coordinate on these efforts?

Answer. On June 25, 2021, the Federal Communications Commission (FCC), the U.S. Department of Agriculture (USDA), and NTIA signed an Interagency Agreement to coordinate and share information on the distribution of funds for broadband deployment, as directed by the Broadband Interagency Coordination Act (BICA). On May 11, 2022, these agencies, and the Department of the Treasury (Treasury) signed a new Memorandum of Understanding (MOU) to formalize Treasury's participation in interagency consultations. The agencies meet biweekly and share data collected from programs administered by the FCC, the USDA's Rural Utilities Service, NTIA, and Treasury's Coronavirus Capital Projects Fund and State and Local Fiscal Recovery Fund.

This process allows for the coordination of activities, preventing the duplication of funding and ensuring that Federal funds are spent in an efficient and effective manner.

Beginning in the spring of 2022, NTIA undertook a systematic effort to better understand other agencies' award processes and to align on a desired high-level approach to deduplication with USDA, Treasury, and the FCC. In July, NTIA shared the preliminary results of that analysis with these agencies and proposed the following process:

- i. Any "awarding" agency (the agency considering making a funding decision) first conducts, or directs its recipients to conduct, an analysis to determine whether potential areas of Federal broadband funding duplication exist.
- ii. If the awarding agency identifies a potentially duplicative project, it notifies the relevant agencies, providing notice sufficient to allow resolution of the potential duplication prior to the issuance of an award.
- iii. The awarding agency meets with the other relevant agency or agencies to discuss areas of duplication and resolve any actual duplication identified.
- iv. Duplication issues that cannot be resolved at the staff level are escalated to respective agency leadership for further discussion.
- v. Resolution of any duplication identified is confirmed before awarding.

Over the next several months, NTIA worked with USDA, Treasury, and the FCC to establish a common set of expectations and identify common tools for overlap analysis prior to making an award. Each agency continues to retain the final decision and authority to issue awards based on its own program requirements and statutory obligations.

Question 5. The Department has received considerable funds to aid in broadband deployment. What results do you expect to see in the next year, 2 years, and 5 years?

Answer. The Internet for All mission is to connect everyone in America to affordable, reliable, high-speed Internet service. This is a multiyear project. While it will take years to achieve this goal, NTIA is proud of what it has already accomplished to further this objective. In June of 2023, NTIA announced each Eligible Entity's BEAD Allocation, starting a 180-day period for Eligible Entities to submit their Initial Proposals for use of the allocated funds. Eligible Entities will have 1 year after NTIA's approval of their Initial Proposal to conduct a subgrantee selection process and submit their Final Proposals to NTIA. As established in Section 60102(h)(4)(C) of IIJA, subgrantees that receive BEAD Program funds for network deployment after NTIA approves an Eligible Entity's Final Proposal must deploy the planned broadband network and begin providing services to each customer that desires broadband service within the project area not later than 4 years after the date on which the subgrantee receives the subgrant from the Eligible Entity, extendable to 5 years under certain circumstances. We expect that non-deployment projects will be awarded and executed on a comparable timeline. NTIA has already made considerable progress in implementing other Internet for All programs. In the BEAD program, each Eligible Entity applied for and received up to \$5 million in initial planning funds and are in the process of submitting a Five-Year Action Plan that establishes the State or Territory's broadband goals and priorities and serves as a comprehensive needs assessment that will inform the State or Territory's Initial Proposal which is due to NTIA no later than December 27th of this calendar year.

Under the Tribal Broadband Connectivity Program, NTIA has already awarded \$1.79 billion to 198 Tribal entities since the program began in 2021, and recently announced the availability of nearly \$1 billion in additional funding to expand Internet access and adoption on Tribal Lands. Under the Enabling Middle Mile Broadband Infrastructure Program, NTIA has awarded nearly \$980 million for middle mile Internet infrastructure. Projects funded by this program will invest in infrastructure that carries large amounts of data over long distances, increases capacity to local networks, boosts network resiliency, lowers the cost of bringing high-speed Internet service to unconnected households, and helps connect unserved regions to the Internet backbone.

What benchmarks, metrics, or key performance indicators are being employed to judge success and how does the Department expect to perform against them?

Answer. NTIA is committed to closing the digital divide, and the Internet for All programs are designed to meet that goal of universal connectivity. For example, the BEAD Program's Notice of Funding Opportunity (NOFO) requires Eligible Entities to "award funding in a manner that ensures the deployment of service to all unserved locations within the Eligible Entity's jurisdiction."¹

NTIA has established robust financial and program progress reporting mandates that are aligned to the programmatic objectives and intended outputs and outcomes of each discrete program. These initiatives will ensure reporting that tracks, monitors, and collects data on project performance and results. For example, the BEAD NOFO imposes regular reporting obligations on states and territories, which must report within 90 days of receiving any funds, again within 1 year of receiving funds, and then semi-annually. These reports will cover a host of metrics, many of which will be set forth in more detail in future guidance. BEAD Program subgrantees also are subject to extensive reporting on a semiannual basis (or more frequently, at the state or territory's discretion). The Middle Mile Grant Program NOFO sets forth detailed biannual reporting requirements for grant recipients. The Digital Equity Planning Grant NOFO likewise establishes detailed reporting obligations for participants (states, territories, and Tribal entities), including the provision of financial and performance reports. Notably, these various reporting obligations will work in concert with ongoing auditing requirements to ensure robust oversight of each program.

QUESTIONS SUBMITTED BY SENATOR DEB FISCHER

Question 1. As part of the Department of Commerce, NTIA has a crucial role managing billions of dollars in broadband infrastructure funding. I appreciate that this is no small task. I understand the Department has requested an increased budget for staffing the agency's broadband programs as well.

Recently, I joined a letter to NTIA voicing concerns about the rules it proposed for the BEAD broadband deployment program. I remain worried that the many of the eligibility and deployment obligations in the agency's proposed rules serve indirect objectives—beyond the law's intent to make sure broadband reaches unserved areas.

In terms of the budget request, specifically—will these additional BEAD program conditions also create a need for more staffing at NTIA to oversee program implementation?

Answer. No, NTIA does not need additional staffing or other resources for its administration of the BEAD program.

However, NTIA's grant administration budget request identifies the need for additional resources to support existing staffing to administer its other broadband grant programs, including the Broadband Infrastructure Program (BIP), the Connecting Minority Communities (CMC) Pilot Program, the Tribal Broadband Connectivity Program (TBCP), the Enabling Middle Mile Grant Program, and the grant programs in the Digital Equity Act in IIJA.

For NTIA's competitive grant programs, including TBCP, Middle Mile, and portions of the Digital Equity Act programs, 2% administrative funds are generally insufficient to administer the grant program through the entire lifecycle, from pre-award and application review through awarded project implementation monitoring,

¹National Telecommunication and Information Administration; Notice of Funding Opportunity; Broadband Equity, Access, and Deployment Program at 41, available <https://broadbandusa.ntia.doc.gov/sites/default/files/2022-05/BEAD%20NOFO.pdf> (herein "NOFO").

including oversight to avoid waste, fraud, and abuse, and programmatic support for successful project implementation. Further, the Digital Equity Act programs require additional administrative resources as NTIA must develop and implement over ten Notices of Funding Opportunity/grant competitions (because funding is made available each year in FY22 to FY26 for each of the Capacity and Competitive programs), and subsequent post award monitoring activities for each tranche of awards. For the TBCP program, additional resources are required to administer this program in light of the underlying statutory language, which instructs NTIA to provide robust technical assistance for and curing of applications submitted by Tribal applicants, as well as technical assistance to support awarded project implementation. In the first TBCP NOFO and application window, NTIA found that its applicants needed significantly more technical assistance support and curing than originally anticipated. NTIA requires additional funding to ensure the Tribal applicants are supported and successful in applying for and implementing their awarded projects; to allow NTIA to effectively support post award monitoring; and to safeguard against waste, fraud, and abuse.

Relatedly, as a result of budget rescissions required by the Fiscal Responsibility Act, Public Law No. 118–5, NTIA no longer has any remaining administrative funding for the BIP and CMC programs, both of which are critical to connecting everyone in the United States to affordable, reliable, high-speed Internet service.

Question 2. I'm hearing from more and more broadband providers—including those needing to rip and replace Chinese network gear—that are struggling with supply chain delays. These delays can set back network buildout in a major way. With recent investments in broadband deployment, we will only see these delays grow. Delays mean the agency's costs for managing these programs will increase, as well.

I strongly support secure domestic networks. I also value the Department's work to encourage a strategy for trusted suppliers around the world.

When it comes to the BEAD broadband program at NTIA, I worry that the agency has not recognized how broadband providers will need to use components from other partner countries, when there simply is no American-made product available.

Do you believe there is a middle ground allowing providers to acquire network equipment that cannot be sourced domestically, or in a timely manner?

Answer. This Administration is fully committed to Build America, Buy America. On August 22, 2023, the Department proposed and sought comment on a limited waiver of Build America, Buy America provisions for the BEAD Program.

The proposed waiver is the result of months of careful analysis of market conditions and sustained outreach to industry and stakeholders and represents a concerted effort to find the appropriate middle ground. For example, as discussed in the proposed waiver, DOC's research demonstrated that the electronics used in broadband networks are almost uniformly manufactured in Southeast Asia, and almost all of the semiconductors used in those electronics are currently manufactured outside the United States and represent a significant percentage of the value of these products. DOC further found, however, that there are some classes and categories of electronics that are currently manufactured outside of the United States, but for which there is an economic case for onshoring final assembly. DOC therefore proposed to waive the Buy America Preference for all electronics in BEAD Program projects, with the exception of four categories. For those four categories of electronics, DOC proposed to waive the 55 percent cost of components test and to provide specific guidance regarding the manufacturing processes that must occur in the United States for the waiver to be applicable.

The Department launched a 30-day comment period (15 days longer than required by statute) on August 22nd to give relevant stakeholders an opportunity to share feedback. DOC will review that record and make such updates as are appropriate before publishing a final Build America, Buy America (BABA) waiver for the BEAD Program.

Did NTIA conduct a cost-benefit analysis when it decided against creating a consistent waiver for this issue, as it has created in the past?

Answer. NTIA considered the costs and benefits of implementing the Buy America Preference for the BEAD Program. In the first half of 2023, NTIA held nearly 250 meetings with almost 50 different companies and associations to get a ground floor, data-backed view of current and future supply chains. Key criteria that the NTIA analyzed as part of this review included the network spend contribution and the speed to onshore final assembly. This analysis led us to create a narrow and targeted BABA waiver draft that will drive domestic manufacturing investment, create good-paying manufacturing jobs in every corner of the country, and ensure that we

have a resilient supply chain. The Department launched a 30-day comment period (15 days longer than required by statute) on August 22nd to give relevant stakeholders an opportunity to share feedback. DOC will review that record and make such updates as are appropriate before publishing a final Build America, Buy America waiver for the BEAD Program.

Question 3. The Department of Commerce's Bureau of Industry and Security leads the export licensing process. As I stated during the hearing, I've heard concerns from the ammo and firearm industry that their products have been subject to extra stringent end-user checks, which has slowed the approval of some export licenses and in the process hurt manufacturing businesses.

During the hearing, when I asked if the firearm industry receives a heightened level of security when their export licenses are being reviewed compared to other industries, you responded that BIS applies extra scrutiny to keep people safe and make sure [firearms] aren't used by our adversaries. What is BIS's policy when it comes to firearms and ammunition licenses?

Answer. The Departments of State and Commerce published final rules on January 23, 2020, effective March 9, 2020, that revised the U.S. Munitions List (USML) Categories I (firearms, close assault weapons, and combat shotguns), II (guns and armament), and III (ammunition/ordnance) and transferred items that no longer warranted export control on the USML under the International Traffic in Arms Regulations (ITAR) administered by the State Department to the Commerce Control List (CCL).

Following these changes, the Department of Commerce's Bureau of Industry and Security (BIS) regulates exports of non-fully automatic firearms up to .50 caliber (12.7mm) inclusive, which includes semi-automatic, bolt-action, lever-action, pump-action, single-shot and double rifles, pistols, and revolver type firearms, ammunition, and related items, which are subject to a worldwide license requirement by BIS for export from the United States. BIS imposed additional restrictions on these items when they transferred to Commerce jurisdiction, such as restricting the use of license exceptions and imposing restrictive license review policies on certain end users, such as narcotics traffickers. Also, for those licenses approved, the amount that may be exported is also limited by the applicable import license/certificate restrictions of the importing country.

License applications for firearms exports under Commerce jurisdiction are reviewed by Commerce, Defense, and State to address, among other things, human rights, and impacts to regional stability with the potential exports. Assessments by BIS Licensing Officers, as well as the other agencies that review these license applications, are updated on a continuous basis to respond to changes in specific countries, as well as additional information that is received on the bona fides of the parties identified in license applications, including, from the Watch List administered by the Department of State's Directorate of Defense Trade Controls, diplomatic and other reporting. Thus, the same agencies that reviewed license applications for these items when they were on the USML continue to do so today, with the addition of the Commerce Department.

In addition to these front-end restrictions, BIS has Export Enforcement agents—Federal law enforcement officers—whose mission is to ensure that firearms exports are not diverted to activities that violate U.S. law or would otherwise be contrary to our national security or foreign policy interests. And BIS makes arrests and works with our Justice Department partners to seek indictments when appropriate. The addition of BIS enforcement resources builds upon those previously available when these items were on the USML and subject to the ITAR.

BIS continually assesses its licensing policies, but always reviews export license applications consistent with U.S. national security and foreign policy interests.

Does BIS Office of Export Enforcement (OEE) perform an “end user” check for each and every export license application, i.e. 100% end user check 100% of the time? If yes, please identify all other products for which BIS OEE similarly performs an end user check for each and every export license application.

Answer. All parties to license applications are screened against BIS's enforcement “watch list,” which comprises parties of enforcement concern. All firearms license applications are also vetted against the Watch List administered by the Department of State's Directorate of Defense Trade Controls. Where a match occurs, Export Enforcement manually reviews those licenses. In addition, Export Enforcement uses methodologies and analytics to target other license applications. For these, it can prepare a Bona Fides Information Report (BFIR), an all-source review on the reliability and legitimacy of the party, on any transaction party or select such transactions for a pre-license check, conducted before a decision is made on the license

application, or post-shipment verifications, to be conducted after the license application is approved and an export occurs. Also, any licensing officer at Commerce, Defense, Energy, or State can request Export Enforcement to prepare a BFIR or conduct an end-use check on a license.

What is the OEE process for end user checks when the same end user has been checked and cleared within recent timeframes (such as within the last 30 or 60 days)?

Answer. Every end-use is considered on its own merits. The decision to conduct an end-use check is based on a number of factors, including the results and timing of previous end-use checks. However, there is no restriction on BIS conducting a follow-up end-use check at any time, consistent with national security and foreign policy interests.

Are there certain countries that receive more vetting than others? And if so, what impact does this have on the timing of the application process?

Answer. BIS reviews export license applications involving firearms and related parts, components, and ammunition consistent with U.S. arms embargo policies, as articulated in the International Traffic in Arms Regulations (ITAR) (22 CFR 126.1). Accordingly, BIS applies a policy of denial to firearms license applications for certain countries, such as to China, Russia, and State Sponsors of Terrorism. Concerns about protection of human rights and internal and regional peace and stability may also require stricter scrutiny of firearms license applications to certain countries. Additionally, BIS targets license applications when they have an enforcement concern as noted above in the answer to B. The review of licenses by enforcement officials, including preparation of BFIRs, is built-in to the standard BIS processing timeline under the Export Administration Regulations.

Did anyone at the White House, e.g. National Security Council (NSC) or the Domestic Policy Council, suggest, direct, instruct, or order BIS to provide increased scrutiny over firearm and ammunition export controls? If yes, please identify when, how (oral or written) and by whom (name and title) it was communicated to BIS.

How much of the Office of Export Enforcement's budget is dedicated to firearm and ammunition end user checks?

Does BIS have an internal goal on response time? What is the current average turnaround time?

Answer. As with all license applications subject to Commerce jurisdiction, the license review process for firearms is governed by Executive Order 12981, which outlines the license review process including certain timelines for processing of applications, interagency review and dispute resolution process, and other matters related to the administration of export controls. License applications involving the proposed export of firearms are reviewed consistent with the license review policies articulated in the Export Administration Regulations, including those specific to firearms and those relating to end-use and end-user controls or embargoes and other special country controls.

BIS does not receive separate funding or budgetary line items to conduct end-use checks specifically on firearms and ammunition.

Export Enforcement aims to complete end-use checks in an expedient manner, with the goal of completing pre-license checks in 14 days and post-shipment verifications in 60 days in countries where a BIS Export Control Officer (ECO) is stationed. For checks in countries where BIS does not have an ECO stationed, the turnaround time for end-use checks varies depending on personnel availability (i.e., including whether it is being conducted by an ECO, enforcement agents deploying from the United States as part of the Sentinel program in countries outside of an ECO's area of operational responsibility, or by a Commerce or other authorized U.S. government official stationed at a U.S. Embassy or consulate), ease of travel to the location, and the cooperation of the party to be visited and the host government, among other factors.

SUBCOMMITTEE RECESS

Senator SHAHEEN. And hearing no further discussion, the subcommittee stands in recess until Wednesday, May 10, when we will hold a hearing on the budget requests of the Federal Bureau of Investigation, and the Drug Enforcement Administration

Again, thank you very much, Madam Secretary.

[Whereupon, at 4:20 p.m., Wednesday, 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 2024

WEDNESDAY, MAY 10, 2023

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, Murray, Reed, Van Hollen, Peters, Moran, Murkowski, Collins, Capito, Kennedy, Hagerty, and Britt.

FEDERAL BUREAU OF INVESTIGATION

OPENING STATEMENT OF SENATOR JEANNE SHAHEEN

Senator SHAHEEN. The Appropriations Subcommittee on Commerce, Justice, Science, and Related Agencies, will come to order.

Senator Moran, who is the Ranking Member, will join us shortly. He is on the phone.

There is also a vote going on right now, two votes, and so we expect Members of the subcommittee to come in and out. But we wanted to go ahead and begin because we know that Director Wray has a hard stop at 4:30 p.m., so we want to make sure that we can get in as much of the hearing as possible.

So good afternoon, everyone; welcome to today's hearing to review the President's fiscal year 2024 Funding Requests for the Federal Bureau of Investigation, and the Drug Enforcement Administration.

Our witnesses today are FBI Director, Christopher Wray; and DEA Administrator, Anne Milgram. It is very nice to have you both here again. Thank you for joining us.

I want to begin by saying how deeply saddened I am that once again we have our hearing with the FBI in the aftermath of yet another mass shooting. Nearly a year ago, we met just after the horrific shooting at Robb Elementary School, in Uvalde Texas. Today, we meet after a gunman opened fire, over the weekend, in a shopping mall in a Dallas, Texas, suburb, killing eight people.

I offer my condolences, and I am sure I speak for everyone on this subcommittee, to all those who have lost loved ones. But what I know we really want are policies that help keep Americans safe.

I personally stand ready to work across the aisle to build on the Bipartisan Safer Communities Act, and to do everything I can, working with the Department of Justice, to better serve and pro-

tect, because we all know the American people deserve that. We count on the more than 37,000 employees of the FBI to protect our country from violent criminals, terrorists, and others who mean us great harm, and we charge the more than 9,000 employees of the DEA with combating the most devastating drug crisis in our Nation's history.

I want to thank all of those employees for their dedication and service to this country. But we need to do more to help them do their jobs, and to prevent needless American deaths, whether they are buying guns, fentanyl poisoning, or other drugs. The FBI's budget request of \$11.3 billion includes additional resources for combating domestic terrorism and violent crimes.

I want to hear from you, Director Wray, where the FBI has lacked the resources to address rising threats of violence against vulnerable Americans, by criminals, and criminal organizations, and how this request will help fill those gaps.

We also have a different kind of violence being waged against Americans with illicit drugs, like fentanyl, that are flowing into this country. The introduction of fentanyl to the substance use disorder crisis has had a deadly and devastating impact in my home State of New Hampshire, but throughout the United States. We have a generation of grandparents who are raising their grandchildren, and for some it is because parents were separated from kids due to their addiction, but tragically for others it is because parents did not survive their addiction.

Now, with the rise of social media we are seeing another younger generation become more vulnerable than ever to marketing of this these drugs, and to the increased accessibility that that means. Everything must be done to stop the next generation from succumbing to this epidemic, as well as new threats on the horizon. This includes the spread of Xylazine, which is Narcan resistant, meaning that it is even more deadly. And it is a growing problem, again, in New Hampshire, in New England, and across this country.

Administrator Milgram, I want to hear from you if the DEA's requested increase of \$98 million is sufficient for the DEA's work both inside and outside the U.S., and to combat the Mexican cartels and their Chinese suppliers, as well as other threats that you know are coming.

I was pleased to hear last week's announcements on the major results of Operation SpecTor and Operation Last Mile, which targeted the Sinaloa and Jalisco Cartels responsible for fentanyl and opioid trafficking. But these criminal organizations are sophisticated; they weaponize the tools of social media, chemistry, violence, intimidation, bribery, trade, and money laundering, all to trick people into taking deadly drugs.

What do both the DEA and FBI need to take on these transnational criminal organizations? Not just sufficient funding, but are there other tools given to you, for example, Section 702 of the Foreign Intelligence Surveillance Act, which is set to expire at the end of this year, and how important is that?

Director Wray and Administrator Milgram, I look forward to your testimony and our discussion today. And I think we will go ahead and ask you to begin your testimony.

And when Ranking Member Moran comes in he will submit his opening remarks.

So I will ask you to begin, Director Wray.

STATEMENT OF HON. CHRISTOPHER A. WRAY, DIRECTOR, FEDERAL BUREAU OF INVESTIGATION

Mr. WRAY. Thank you, and good afternoon, Chair Shaheen, and Members of the Subcommittee. There is no question that today's threats are more sophisticated, and move more quickly than ever before. And to stay ahead of them we have requested important enhancements to our budget that will help us tackle the wide range of threats that we face. And I look forward to discussing those with you this afternoon.

Let me start with cyber. Today's cyber threats are more pervasive, hit a wider variety of victims, and carry the potential for greater damage, than ever before. You take China, a key part of the Chinese government's multi-pronged strategy to lie, cheat, and steal their way to surpassing us as the global superpower, is cyber.

The scale of the Chinese cyber threat is unparalleled; they have got a bigger hacking program than that of every other major nation combined. And they have stolen more of Americans personal and corporate data than every nation, big or small, combined.

To give you a sense of what we are up against, if every single one of the FBI's cyber agents and intelligence analysts focused exclusively on the China threat, nothing but China, Chinese hackers would still outnumber FBI cyber personnel by at least 50 to 1.

And of course, China is hardly the only challenge in cyberspace, not even close. We are, as we speak, investigating over a hundred different ransomware variants, each of them with scores of victims, as well as a host of other novel threats posed by both cyber criminals, and nation-state actors alike; in addition to China, countries like Russia, Iran, and North Korea. And it is getting more and more challenging to discern where nation-state threat activity ends, and cyber-criminal threat activity begins.

Recently, we have seen cyber-attacks targeting the critical infrastructure and services that ordinary Americans rely on every day. I am talking about places like hospitals, schools, 911 call centers, and the FBI has investigations into destructive attacks like these all over the country in communities both large and small, which is why, in this year's budget request, you will see our need for 192 more cyber positions, and a little over \$63 million.

We will put those critical resources towards ensuring that the FBI remains the world's premier cyber investigative agency, by taking the fight to our adversaries through joint sequenced operations, and rapid information sharing with the private sector, by building out our model cyber squads, each tackling multiple threats in more field offices, placing investigators, analysts, and other key professionals close to the victims that need us, and by providing our workforce with critical, cutting-edge training.

Our opponents in this space are relentless, and we need your help to ensure that we have got the resources to keep responding in kind.

Switching gears, almost every week I am speaking with chiefs and sheriffs from all over this country to discuss the threats that

we are fighting together. And I can tell you that in those conversations, invariably, the number one issue is always the same, violent crime.

Last year, working with our State and local partners through our hundreds of FBI-led violent crime task forces, we arrested more than 20,000 violent criminals. That is an average of 55 bad guys per day, every day, taken off the streets. As part of our fiscal year 2024 budget we are requesting an increase to build on our efforts to combat the rising violent crime that affects so many communities all across this country; and a big part of that will also go towards our investigations of crimes against children, and human trafficking.

Every year the FBI and our partners identify and locate thousands of victims of child exploitation, and human trafficking, and the enhancement that we have requested will allow us to add even more personnel to that vital effort.

And finally, I have described the threat of gangs and cartels moving fentanyl, and other deadly substances across the border, and into communities all over the country, as a threat of epidemic proportion, and I am not the kind of guy that uses words like “epidemic” lightly.

We are now pursuing investigations against transnational organized criminal groups in all 56 FBI field offices, and have more than 300—it is close to 400 now—active investigations into cartel leadership specifically. On top of that we are leveraging international partnerships through our legal attache offices to enhance investigations, and gather and share intelligence, and we are actively participating in six OCDETF Strike Forces along the border.

And although we, at the FBI, are not the Agency tasked with the physical security of our borders, we are committed to doing our part to work with our partners to tackle these very real and very serious threats.

As part of that effort we have asked for \$53 million, in part, to keep pace with the seven-fold increase in DNA samples from individuals crossing the border that we are testing on behalf of DHS. Over the past couple of years we have provided critical DNA testing support to 223 investigations, including more than 100 sexual assaults, and a dozen homicides, all based on matches from DNA samples collected at the border by Customs and Border Protection.

And we expect that volume to increase as border crossings increase. And we need your support to continue to process these samples which, so often, provide the missing piece of the puzzle to solve serious violent crimes that might, otherwise, go unsolved, if we are not able to process those border crossing DNA samples.

So in that summary, I have really barely scratched the surface. The breadth and depth of the threats the American people look to us to protect them from is staggering. And I am proud to be here today representing the 38,000 men and women of the FBI who work tirelessly and selflessly to meet that challenge every single day.

And I want to thank you for your support of our men and women in helping us carry out that mission. And I am happy to answer any questions that you may have.

[The statement follows:]

PREPARED STATEMENT OF CHRISTOPHER A. WRAY, DIRECTOR, FEDERAL BUREAU OF INVESTIGATION

PREPARED STATEMENT OF CHRISTOPHER A. WRAY, DIRECTOR,
FEDERAL BUREAU OF INVESTIGATION

Good afternoon, Chairwoman Shaheen, Ranking Member Moran, and Members of the Subcommittee. Thank you for inviting me to appear before you today. I do so on behalf of the men and women of the Federal Bureau of Investigation (“FBI”), who tackle some of the most complex national security and criminal 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 FBI’s FY 2024 budget request, and then follow with a short discussion of key threats and challenges that we face, both as a nation and as an organization.

FY 2024 BUDGET OVERVIEW

The FY 2024 budget request proposes a total of \$11.4 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 \$11.3 billion for Salaries and Expenses, which will support 37,312 positions (13,662 Special Agents, 3,215 Intelligence Analysts, and 20,435 professional staff), and \$61.9 million for Construction. The request includes nine program enhancements under Salaries and Expenses totaling \$196.0 million. These enhancements are proposed to meet critical requirements and close gaps in operational capabilities, including \$63.4 million to enhance cyber investigative capabilities, \$13.0 million to address escalating counterterrorism threats, \$4.5 million to mitigate threats from foreign intelligence services, \$27.2 million to enhance the FBI’s cybersecurity posture and protect internal networks, \$14.9 million to combat violent crime, \$53.1 million to address the increase in DNA collection and processing, \$3.1 million to sustain secure communications platforms, \$2.8 million to support infrastructure needs related to the use of Body Worn Cameras, and \$14.1 million to begin to address executive order requirements for zero emission vehicles.

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 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

Protecting the American people from terrorism—both international and domestic—remains the FBI's number one priority. The threat from terrorism is as persistent and complex as ever. The threats from international terrorism (IT), domestic terrorism (DT), and state-sponsored terrorism all remain at elevated levels, necessitating the need for continued investment and vigilance.

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 social or 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. Lone actors present a particular challenge to law enforcement and intelligence agencies. These actors are difficult to identify, investigate, and disrupt before they take violent action, especially because of the insular nature of their radicalization and mobilization to violence and limited discussions with others regarding their plans.

The top domestic terrorism threat we face continues to be from DVEs we categorize as Racially or Ethnically Motivated Violent Extremists ("RMVEs") and Anti-Government or Anti-Authority Violent Extremists ("AGAAVEs"). In May 2022, a RMVE in the United States conducted an attack in Buffalo, NY that resulted in the deaths of 10 innocent individuals. The number of FBI domestic terrorism investigations has more than doubled since the spring of 2020, and as of the end of fiscal year 2022, the FBI was conducting approximately 2,700 investigations within the domestic terrorism program. In addition to the cases conducted within the domestic terrorism program, the FBI was also conducting approximately 4,000 investigations within its international terrorism program in fiscal year 2022.

The FBI uses all tools available at its disposal to combat domestic terrorism. These efforts represent a critical part of the National Strategy for Countering Domestic Terrorism, which was released in June 2021, and which sets forth a comprehensive, whole of government approach to address the many facets of the domestic terrorism threat.

The FBI assesses HVEs are the greatest, most immediate international terrorism threat to the homeland. HVEs are people located and radicalized to violence primarily in the United States, who are not receiving individualized direction from FTOs but are inspired by FTOs, including the self-proclaimed Islamic State of Iraq and ash-Sham ("ISIS") and al-Qa'ida and their affiliates, 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 potential violent attacks. Recently, an HVE attacked three New York Police Department Officers using an edged weapon in New York City on New Year's Eve 2022.

The FBI remains concerned about the Taliban takeover of Afghanistan and the intent of FTOs, such as ISIS and al-Qa'ida and their affiliates, 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. ISIS and its supporters continue 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's successful use of social media and messaging applications to attract individuals 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. 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. Hizballah has sent operatives to build terrorist infrastructures worldwide. The arrests of individuals in the United States allegedly linked to Hizballah's main overseas terrorist arm, and their intelligence collection and procurement efforts, demonstrate Hizballah's interest in long-term contingency planning activities here in the Homeland. Hizballah Secretary-General Hassan Nasrallah also has threatened retaliation for the death of IRGC-QF Commander Qassem Soleimani. The willingness to seek retaliation exemplified in 2022, when the Department charged an Iranian national and member of the IRGC, working on behalf of the Qods Force, with a plot to murder a former national security advisor.

The terrorism threat continues to evolve, but the FBI resolve to counter that threat remains constant. 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 FY 2024 Request includes an additional 43 positions (including 20 Special Agents and 23 professional staff) and \$13.0 million to counter the increasing acts of domestic terrorism across the United States.

Additionally, countering the proliferation of weapons of mass destruction materials, technologies, and expertise, preventing their use by any actor, and securing nuclear and radioactive materials of concern also are top national security priority missions for the FBI. The FBI considers preventing, mitigating, investigating, and responding to WMD terrorism a "no-fail" mission because a WMD attack could result in substantial injuries, illness, or loss of lives, with significant social, economic, political and other national security consequences. The FBI employs a full range of capabilities, in collaboration with its Federal, state, local, tribal, territorial, and other partners, and synchronizes its efforts to leverage resources efficiently and to integrate complementary efforts in countering WMD terrorism.

Cyber

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. Cyber-criminal syndicates and nation-states continue to innovate and use unique techniques 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, extort us, 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—the People's Republic of China ("PRC"), the Democratic People's Republic of Korea ("DPRK"), 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-related intrusions, conducted by the Russian SVR. We have seen the PRC working to obtain controlled dual-use technology and developing an arsenal of advanced cyber capabilities that could be used against other countries in the event of a real-world conflict. 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 that separates 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, such as 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, educational institutions, and other critical infrastructure for theft or ransomware, causing massive disruption to our daily lives. Such incidents affecting medical centers in particular 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.

We have also seen the rise of an ecosystem of services dedicated to supporting cybercrime in exchange for cryptocurrency. The effect is that what were once unsophisticated criminals now have the tools to engage in destructive behavior—for example, deploying ransomware to paralyze entire hospitals, police departments, and businesses—and the means to better conceal their tracks. It is not that individual malicious cyber actors have become much more sophisticated, but they can more easily rent sophisticated capabilities.

We must make it harder and more painful for malicious cyber actors and criminals to carry on their malicious activities. The FBI, using its role as the lead Federal agency for threat response, with its 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 or otherwise disrupt such perpetrators' activities.

An example of this approach is the coordinated international operation announced in April 2023 against Genesis Market, a criminal online marketplace offering access to data stolen from over 1.5 million compromised computers around the world containing over 80 million account access credentials. Genesis Market was also a prolific initial access broker (IAB) in the cyber crime world, providing criminals a user-friendly database to search for stolen credentials so they could easily infiltrate a victim's computer. As part of this operation, law enforcement seized 11 domain names used to support Genesis Market's infrastructure pursuant to a warrant authorized by the US District Court for the Eastern District of Wisconsin. A total of 22 international agencies and 44 FBI field offices provided assistance to the FBI Milwaukee Field Office investigating the case. And on April 5, the US Department of the Treasury announced sanctions against Genesis Market.

In January 2023, the DOJ and FBI heralded the success of an FBI investigation against Hive ransomware. This impactful action spotlighted an operation that truly characterized how the FBI can assist during ransomware attacks and why timely reporting is key. Through unique access to decryption keys, the FBI was able to prevent \$130 million in ransoms being paid to cyber criminals. This access allowed us to really gauge the amount of reporting to law enforcement from a single ransomware variant, which is rather dire: approximately 20–25% of Hive victims reported to some law enforcement entity. There are many more actions we can take and there's much more intelligence to be gleaned, but we need to know about it. We can put these actors out of business, but it requires everyone's help.

In total, we took over 1,000 actions against cyber adversaries in 2022, to include arrests, criminal charges, convictions, dismantlements, and disruptions, and enabled many more actions through our dedicated partnerships with the private sector, foreign partners, and with Federal, state, and local entities. We also provided thousands of individualized threat warnings and disseminated 70 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.

With our partners in the interagency, we have been putting a lot of energy and resources into all 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 an incident; how we protect information that the private sector shares with us, including their identities. 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 our partners—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, Cyclops Blink, the Colonial 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 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 FY 2024 Request includes an additional 192 positions (including 31 Special Agents, 8 Intelligence Analysts, and 153 Professional Staff) and \$63.4 million to enhance cyber information-sharing abilities and increase cyber tools and capacities. The Request also includes 4 positions and \$27.2 million to help protect internal FBI networks.

Foreign Intelligence Threats

We see nations such as China, Russia, and Iran becoming more aggressive and more capable in their nefarious activity than ever before. These nations seek to undermine our core democratic, economic, and scientific institutions. They employ a growing range of tactics to advance their interests and to harm the United States. Defending American institutions and values against these threats is a national security imperative and a priority for the FBI.

With that, the greatest long-term threat to our nation's ideas, innovation, and economic security is the foreign intelligence and economic espionage threat from China. It's a threat to our economic security—and by extension—to our national security. The Chinese government aspires to reshape the international rules-based system to its benefit, with little regard for the democratic ideals that underpin it. The pursuit of these goals is often with little regard for international norms and laws.

When it comes to economic espionage, the PRC uses every means at its disposal against us, blending cyber, human intelligence, diplomacy, corporate transactions, and pressure on U.S. companies operating in China, to achieve its strategic goals to steal our companies' innovations. These efforts are consistent with China's expressed goal to become a national power, modernizing its military and creating innovative-driven economic growth.

To pursue this goal, China uses not only human intelligence officers, co-optees, and corrupt corporate insiders, but also sophisticated cyber intrusions, pressure on U.S. companies in China, shell-game corporate transactions, and joint-venture "partnerships" that are anything but a true partnership. There's also nothing traditional about the scale of their theft—it's unprecedented in the history of the FBI. American workers and companies are facing a greater, more complex danger than they've ever dealt with before. Stolen innovation means stolen jobs, stolen opportunities for American workers, stolen national power, and stolen leadership in the industries.

As the lead U.S. counterintelligence agency, the FBI is responsible for detecting and lawfully countering the actions of foreign intelligence services and organizations as they seek to adversely affect U.S. national interests. The FBI recognized the need to coordinate similar efforts across all agencies, and therefore established the National Counterintelligence Task Force ("NCITF") in 2019 to create a whole-of-government approach to counterintelligence. The FBI established the national-level task force, or NCITF, in the National Capital Region to coordinate, facilitate, and focus these multi-agency counterintelligence operations, and to programmatically support local Counterintelligence Task Force ("CITF") operations. Combining the authorities and operational capabilities of the U.S. Intelligence Community; Federal, state, and local law enforcement; and local CITFs in each FBI field office, the NCITF coordinates and leads whole-of-government efforts to defeat hostile intelligence activities targeting the United States.

The Department of Defense has been a key partner in the NCITF since its founding. While the FBI has had long-term collaborative relationships with DoD entities such as the Air Force Office of Special Investigations, Naval Criminal Investigative

Service, and Army Counterintelligence, the NCITF has allowed us to enhance our collaboration with each other for greater impact. We plan to emphasize this whole-of-government approach moving forward as a powerful formula to mitigate the modern counterintelligence threat.

In recent years, we have seen a rise in efforts by authoritarian regimes to interfere with freedom of expression and punish dissidents abroad. These acts of repression cross national borders, often reaching into the United States. It's important to note countries like China, Russia, and Iran stalk, intimidate, and harass certain people in the U.S. This is called transnational repression. It's illegal, and the FBI is investigating it.

Transnational repression can occur in different forms, including assaults and attempted kidnapping. Governments use transnational repression tactics to silence the voices of their citizens, U.S. residents, or non-citizens connected to the home country. This sort of repressive behavior is antithetical to our values as Americans. People from all over the world are drawn to the United States by the promise of living in a free and open society—one that adheres to the rule of law. To ensure that this promise remains a reality, we must continue to use all of our tools to block authoritarian regimes that seek to extend their tactics of repression beyond their shores.

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 comprises 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 malign influence in our elections. This better enables us to frame the threat, to identify connections across programs, to aggressively 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.

After previous 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 foreign malign influence focused solely on the threat posed by Russia. Utilizing lessons learned, the FITF widened its aperture to confront malign foreign operations of the PRC, 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 foreign malign influence threats to elections.

In addition, the domestic counterintelligence environment is more complex than ever. This nation faces a persistent and pervasive national security threat from foreign adversaries, particularly Russia and China, conducting sophisticated intelligence operations using coercion, subversion, malign influence, disinformation, cyber and economic espionage, traditional spying and non-traditional human intelligence collection. Together, they pose a continuous threat to U.S. national security and its economy by targeting strategic technologies, industries, sectors, and critical

infrastructures. Historically, these asymmetric national security 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 FY 2024 Request includes an additional 30 positions (all Professional Staff) and \$4.5 million to help combat the threats posed by foreign, and potentially hostile, intelligence services and other foreign government actors.

CRIMINAL THREATS

The U.S. faces many criminal threats, including financial and healthcare fraud, transnational and regional organized criminal enterprises, crimes against children and human trafficking, and public corruption. Criminal organizations—domestic and international—and individual criminal activity represent a significant threat to security and safety in communities across the nation.

A critical tool in protecting the Nation from those who wish to do us harm is the National Instant Criminal Background Check System, or NICS. The goal of NICS is to ensure that guns don't fall into the wrong hands, and ensure the timely transfer of firearms to eligible gun buyers. Mandated by the Brady Handgun Violence Prevention Act of 1993 and launched by the FBI on November 30, 1998, NICS is used by Federal Firearms Licensees (FFLs) to determine whether a prospective buyer is eligible to buy firearms. NICS receives information from tens of thousands of FFLs and checks to ensure that applicants do not have a criminal record and aren't otherwise prohibited and therefore ineligible to purchase a firearm. In the first complete month of operation in 1998, a total of 892,840 firearm background checks were processed; in 2022, approximately 2.6 million checks were processed per month, for a total of 31.6 million processed in 2022.

While most checks are completed within minutes by electronic searches of the NICS database, a small number of checks require examiners to review records and resolve missing or incomplete information before an application can be approved or rejected. Ensuring the timely processing of these inquiries is important to ensure law abiding citizens can exercise their right to purchase a firearm and to protect communities from prohibited and therefore ineligible individuals attempting to acquire a firearm. To ensure the FBI maintains this capability, the FY 2024 Request includes an additional 27 positions (including 1 Special Agent and 26 Professional Staff) and \$8.4 million.

In 2022, Congress demonstrated its united faith in the role NICS plays in our country's public safety and a desire to make it even stronger with passage of the Bipartisan Safer Communities Act. This legislation added dating relationships as a disqualifying consideration for misdemeanor crimes of domestic violence prohibitions; enhanced checks on persons under the age of 21 by requiring additional outreach to state and local agencies where the person resides to inquire about the existence of any possibly disqualifying juvenile records; allows certain FFLs to receive information from the NCIC gun file necessary to verify if a firearm had been reported stolen before buying it second hand; and allows FFLs to access NICS for the purposes of voluntary background checks on current and prospective employees to help combat illegal firearms trafficking. The FBI has implemented all aspects of the BSCA with the exception of the two latter parts as they require the promulgation of regulations. Those proposed regulatory changes are in process and are a priority to complete. Since the passage of the BSCA, the FBI has conducted over 86,400 expanded background checks on persons under the age of 21. The vast majority are proceeded quickly. However, a total of 750 checks have been denied under the new process. As a result of the expanded outreach enabling NICS to issue denials based solely on information it obtains, NICS issued 151 denials.

Violent Crime

Violent crimes and gang activities exact a high toll on individuals and communities. Many of today's gangs are sophisticated and are well organized. They 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.

FBI joint task forces—Violent Crime Safe Streets, Violent Gang Safe Streets, and Safe Trails—focus on identifying and targeting major groups operating as criminal enterprises. Much of the FBI criminal intelligence is derived from our state, local, and tribal law enforcement partners, who know their communities inside and out. Joint task forces benefit from FBI surveillance assets, and our sources track these gangs to identify emerging trends. Through these multi-subject and multi-jurisdictional investigations, the FBI concentrates its efforts on high-level groups engaged in patterns of racketeering. This investigative model enables us to target senior gang leadership and to develop enterprise-based prosecutions.

By way of example, the FBI has dedicated tremendous resources to combat the threat of violence posed by MS-13. The atypical nature of this gang has required a multi-pronged approach—we work through our task forces here in the U.S. while simultaneously gathering intelligence and aiding our international law enforcement partners. We do this through the FBI's Transnational Anti-Gang Task Forces (TAGs). Established in El Salvador in 2007 through the FBI's National Gang Task Force, Legal Attaché San Salvador, and the United States Department of State, each TAG is a fully operational unit responsible for the investigation of MS-13 operating in the northern triangle of Central America and threatening the United States. This program combines the expertise, resources, and jurisdiction of participating agencies involved in investigating and countering transnational criminal gang activity in the United States and Central America. There are now TAGs in El Salvador, Guatemala, and Honduras. Through these combined efforts, the FBI has achieved substantial success in countering the MS-13 threat across the United States and Central America.

We are committed to working with our Federal, state, local, and tribal partners in a coordinated effort to reduce violent crime in the United States.

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 also involved in trafficking counterfeit prescription drugs containing deadly fentanyl, targeting stock market fraud and manipulation, cyber-facilitated bank fraud and embezzlement, illicit drug trafficking, identity theft, human trafficking, money laundering, alien smuggling, public corruption, weapons trafficking, 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.

As part of our efforts to combat the TOC threat, the FBI is focused on the cartels trafficking dangerous narcotics, like fentanyl, across our border. The FBI has over 380 cases linked to cartel leadership and actively participates in 6 OCDETF Strike Forces along the border, investigating major drug trafficking, money laundering, and other high priority transnational organized crime networks. On top of that, we are pursuing healthcare fraud investigations against medical professionals and pill mills through our prescription drug initiative, investigating the gangs and criminal groups responsible for distributing dangerous substances like fentanyl through our Safe Streets Task Forces, and disrupting and dismantling DarkNet marketplaces for prescription opioids and drugs like fentanyl through our Joint Criminal Opioid Darknet Enforcement team.

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 the Darknet to engage in illegal activity while exploiting emerging technology to traffic illicit drugs and contraband across international borders and into the U.S.

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 proliferation of sites online on the Darknet. For example, currently, there are at least 30 child sexual abuse material (CSAM) sites operating openly and notoriously on the Darknet, including the Tor network. Some of these CSAM 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 combats this pernicious crime problem through investigations such as Operation Cross Country. Over a two-week period in 2022, the FBI, along with other Federal, state, and local partners, executed approximately 400 operations. These operations identified and located 84 minor victims of child sex trafficking and child sexual exploitation offenses and located 37 actively missing children. Furthermore, the FBI and its partners located 141 adult victims of human trafficking, and identified or arrested 85 suspects with child sexual exploitation and human trafficking offenses.

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 Team, Victim Services, over 80 Child Exploitation and Human Trafficking Task Forces, over 50 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. Through improved communications, the FBI also has the ability to quickly collaborate with partners throughout the world, which plays an integral role in crime prevention.

The Child Abduction Rapid Deployment Team is a rapid response team comprised of experienced investigators strategically located across the country to quickly respond to child abductions. Investigators are able to provide a full array of investigative and technical resources during the most critical time period following the abduction of a child, such as the collection and analysis of DNA, impression, and trace evidence, and the processing of digital forensic evidence.

In addition to programs combating child exploitation, the FBI also focuses efforts to stop human trafficking. The FBI works collaboratively with law enforcement partners to combat all forms of human trafficking through Human Trafficking Task Forces nationwide.

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, including foreign nationals and victims of all ages, by subjecting them to forced labor or sex trafficking. 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 and survivors 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 FY 2024 Request includes an additional 17 positions (14 Special Agents and 3 professional staff) and \$6.4 million to expand the Crimes Against Children and Human Trafficking programs.

KEY CROSS-CUTTING CAPABILITIES AND CAPACITIES

Operational Technologies

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 FBI Laboratory is one of the largest and most comprehensive forensic laboratories in the world. Operating out of a state-of-the-art facility in Quantico, Virginia, laboratory personnel travel the world on assignment, using science and technology to protect the nation and support law enforcement, intelligence, military, and forensic science partners. The Lab's many services include providing expert testimony,

mapping crime scenes, and conducting forensic exams of physical and hazardous evidence. Lab personnel possess expertise in many areas of forensics supporting law enforcement and intelligence purposes, including explosives, trace evidence, documents, chemistry, cryptography, DNA, facial reconstruction, fingerprints, firearms, digital forensics and weapons of mass destruction (WMD).

One example of the Lab's key services and programs is the Combined DNA Index System (CODIS), software the FBI develops and administers, which allows 200 law enforcement laboratories throughout the United States to compare over 20 million DNA profiles. In the last 20 years, CODIS has aided over 600,000 investigations, while maintaining its sterling reputation and the confidence of the American public. The latest version of the system, however, is 10 years old, and requires transition to a more stable, reliable, efficient and secured platform.

In addition, statutory requirements and recent regulatory changes have significantly expanded the DNA processing requirements of the FBI. For instance, enacted in 2005, the DNA Fingerprint Act (in 34 U.S.C. § 40702(a)(1)(A) and (B)) authorized the Attorney General (AG) to collect DNA samples from individuals who are arrested, facing charges, or convicted, and from non-U.S. persons detained under U.S. authority. The law mandates Federal DNA collection agencies submit their arrestee collections to the FBI Laboratory for analysis and entry into CODIS. In April 2020, the Department of Justice (DOJ) amended the DNA Fingerprint Act's implementing rule that now precludes the Department of Homeland Security (DHS) from waiving DNA collections on over 700,000 individuals per year. As a result, during the past 12 months, the FBI has received an average of 92,000 DNA samples per month (over 10 times the historical sample volume). When Title 42 ends, the FBI anticipates an additional 50,000 samples per month due to increased DHS detentions. This will eventually bring the total monthly samples received to approximately 120,000 (1,440,000 samples per year). This substantial increase has created massive budget and personnel shortfalls for the FBI. While the FBI has worked with DHS components to automate and streamline workflows, a backlog of approximately 650,000 samples has developed, increasing the likelihood of arrestees and non-U.S. detainees being released before identification through investigative leads.

Investment in additional DNA expansion capabilities and technology is critical to maintaining and enhancing the FBI's ability to address emerging threats and help mission critical information reach partners and investigators in an expeditious manner. The FY 2024 Request includes an additional 7 positions and \$53.1 million to assist the FBI in processing DNA samples in a timely manner and leverage technology to modernize the aging CODIS system.

In addition to forensic advancements, the FBI must also invest in technologies to help its workforce. This includes reliable, secure access to classified information and systems in a remote environment. This technology—the Enterprise Remote Access System (ERAS)—provides FBI users the ability to access the FBI's Secret Enclave securely and remotely. This is particularly important in field offices where Special Agents may be several hours from the nearest FBI Field Office (FO) or Resident Agency (RA). This remote access significantly improves the timely completion of investigative activities, dissemination of intelligence, and sustainment of necessary business operations.

Another technology in which the FBI must make investments is in the body worn camera (BWC) arena. BWCs are critical tools that enhance law enforcement transparency and accountability, and thereby assist in building and maintaining public trust. In the past decade, BWC use has become commonplace in large law enforcement organizations throughout the U.S. According to a study by DOJ's Office of Justice Programs (OJP), as of 2016, about 80% of non-Federal law enforcement agencies with at least 500 full-time officers had acquired BWCs. Additionally, other Federal entities have implemented BWC programs, including select agencies within the Department of the Interior (DOI) and Customs and Border Patrol (CBP).

In 2020, DOJ announced the Department would permit state, local, territorial, and tribal task force officers to use BWCs on Federal task forces across the nation. In 2021, DOJ's BWC working group expressed the need to phase implementation of a BWC program for DOJ Federal Agents. As a result, in FY 2022, the FBI launched a pilot program in five field offices; the FBI plans to expand this pilot to additional field offices across the country in FY 2023, as well as in FY 2024 should funding become available. The FBI has always been committed to transparency and accountability. BWC technology would enable the FBI to further this commitment to the public.

Also, to begin to address executive order requirements and meet standards for sustainable, resilient vehicle fleet electrification, the FBI proposes to begin deployment of zero emission vehicles—including battery electric, plug-in electric hybrid,

and hydrogen fuel cell vehicles—along with applicable charging stations in select Field Offices across the nation.

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. The FY 2024 Request includes an additional \$3.1 million for secure communications, \$14.1 million for zero emissions vehicles, and \$2.8 million for body worn cameras.

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.

Chairwoman 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. Well, thank you very much.

Ranking Member Moran has joined us. And he has, very graciously, suggested that we go ahead with your testimony, Administrator Milgram, before he gives his opening remarks.

Senator MORAN. I will get a chance to speak at some point.

STATEMENT OF HON. ANNE MILGRAM, ADMINISTRATOR, U.S. DRUG ENFORCEMENT ADMINISTRATION

Ms. MILGRAM. Thank you so much, Chair Shaheen, Ranking Member Moran, and Members of the Committee.

Americans today are experiencing the most devastating drug crisis in our Nation's history. It is like nothing we have seen before. This is because one drug, fentanyl, has transformed the criminal landscape. Fentanyl, is cheap to make, easy to disguise, and deadly to those who take it. Just two milligrams, the equivalent of a few grains of salt can kill a person.

It is the leading cause of death for Americans between the ages of 18 and 45, today. More than terrorism, more than car accidents, more than cancer, and more than COVID, and it is killing Americans from all walks of life, in every State and community in this country, nearly 200 Americans each day.

The drug cartel is responsible for bringing fentanyl into this country are transnational, and extremely violent criminal enterprises. They rely on a global supply chain to manufacture and traffic fentanyl, and they rely on a global illicit financial network to pocket billions of dollars from those drug sales.

At DEA we have undertaken a transformation of our own to meet this moment. We have transformed our vision. We are now laser focused on the criminal organizations responsible for flooding fentanyl into our communities, the Sinaloa Cartel and the Jalisco Cartel.

We have transformed our plan; we have built an entirely new strategic layer with two counter-threat teams, one for the Sinaloa Cartel, and one for the Jalisco Cartel. These teams are made up of special agents, intel analysts, targeters, data scientists, and chemical and finance experts from across our agency. The team centralized all of DEA's intelligence, they map these cartels, and they analyze the criminal networks that today exist in more than 40 countries around the world.

They are also developing targeting information on the members of those networks wherever they operate around the world. And we have transformed our execution. We are drawing on the talent and intelligence, of the men and women, and our 334 offices worldwide. And we are working as one DEA to defeat the criminal networks.

We have made all these changes in the last 2 years, with urgency, to save lives, stop fentanyl, and to defeat the drug cartels that are responsible for bringing fentanyl into our communities. And we are already starting to see results. On April 14, 2023, DEA announced indictments against the network that is primarily responsible for the massive influx of fentanyl into the United States, the Chapitos network of the Sinaloa Cartel.

The Chapitos pioneered the manufacturing and trafficking of fentanyl into the United States, and they control a global criminal enterprise that has killed hundreds of thousands of Americans. So the DEA proactively targeted the Chapitos network and we followed it across the globe.

From China where the Chapitos partner with Chinese chemical companies and brokers to acquire fentanyl precursors, the ingredients necessary to make fentanyl, to Mexico their home base, where they run secret laboratories and transform those chemicals into fentanyl powder, and fake pills, and then smuggle it into the United States by land, by air, by sea, and by underground tunnel.

And then in the United States where the fentanyl makes its way from stash houses near the southwest border, across our country reaching both coasts, and everywhere in between. The indictments we announced in April charged 28 members of the Chapitos network. Eight members of that network are now in custody, seven of them overseas, and we are requesting their extradition.

But DEA did not stop there. Last week, on May 5, 2023, we announced the results of Operation Last Mile where we tracked down and arrested 3,337 associates of the Sinaloa and Jalisco Cartels here in the United States. Our operation showed how the Chapitos and others in the Sinaloa and Jalisco Cartels partner with violent local street gangs, multi-city distribution networks, and individual drug dealers across our country, to get fentanyl across the last mile of distribution onto our streets, and onto social media.

These networks use social media applications, Facebook, Instagram, TikTok, Snapchat, and encrypted platforms like WhatsApp, Telegram, and Signal, to run their operations and to get fentanyl into the hands of Americans. They hide that fentanyl, they hide it in fake pills that look like oxycodone, Percocet, Adderall, or Xanax. They hide it by mixing it in with cocaine, with heroin, and methamphetamine, all to induce Americans to take fentanyl without knowing it, and to get them hooked.

As part of Operation Last Mile, we seized more than five—more than 6,500 pounds of fentanyl powder, more than 43 million fake pills laced with fentanyl, 91,000 pounds of methamphetamine, 8,400 guns, and over \$100 million. And this is just the beginning.

The 10,000 employees that I have the privilege of working with at DEA, are the most committed and mission-driven people that I have ever worked with in my career. They are laser-focused on one goal, to stop fentanyl, to defeat the cartels, and to save American

lives. Every day the men and women in our 334 offices around the globe risk their lives for this mission.

As Administrator, I have worked hard to empower our teams with the people, technology, and resources they need to confront the current crisis. But we all must do more.

I asked for Congress' continued support so that together we may protect the national security, safety, and health of the American people. Thank you.

[The statement follows:]

PREPARED STATEMENT OF ANNE MILGRAM, ADMINISTRATOR DRUG ENFORCEMENT
ADMINISTRATION, U.S. DEPARTMENT OF JUSTICE

Chair Shaheen, Ranking Member Moran, and distinguished members of the committee:

On behalf of the Department of Justice (Department), and in particular the over 10,000 employees working at the Drug Enforcement Administration (DEA), thank you for inviting me to testify on the DEA's Fiscal Year 2024 Budget request and the mission it is designed to support.

I would like to first express our collective appreciation for the support this subcommittee has shown for DEA over the last 2 years.

Americans today are experiencing the most devastating drug crisis in our nation's history. This is because one drug—fentanyl—has transformed the criminal landscape. Fentanyl is exceptionally cheap to make, exceptionally easy to disguise, and exceptionally deadly to those who take it. It is the leading cause of death for Americans between the ages of 18 to 45, and it kills Americans from all walks of life, in every state and community in this country. The criminal organizations responsible for bringing fentanyl into this country are modern, sophisticated, and extremely violent enterprises that rely on a global supply chain to manufacture, transport, and sell fentanyl, and rely on a global illicit financial network to pocket the billions of dollars in revenue from those sales.

DEA has been hard at work to undertake a transformation of its own to meet this moment. DEA has acted with urgency to set a new vision, target the global criminal networks most responsible for the influx of fentanyl into the United States, raise public awareness about how just one pill can kill, and hire and promote hundreds of people across the agency and across the nation. We have transformed our vision by focusing on fentanyl—the drug killing the most Americans—and the criminal organizations responsible for flooding fentanyl into our communities—the Sinaloa Cartel and the Jalisco New Generation (Jalisco) Cartel. We have transformed our plan by building an entirely new strategic layer—our counterthreat teams for the Sinaloa Cartel and the Jalisco Cartel—that map the cartels, analyze their networks, and develop targeting information on the members of those networks wherever they operate around the globe. We have transformed our execution by providing that targeting information to our 334 offices worldwide, drawing from our global intelligence and law enforcement teams worldwide, and working as One DEA to take the networks down. And we are already starting to see results—as demonstrated earlier this month with the indictment of the Chapitos network of the Sinaloa Cartel.

But we are just beginning. The 10,000 employees that I have the privilege of working with at DEA are the most committed and mission-driven people in Federal law enforcement. They are laser-focused on one goal—to save American lives. As Administrator, I have worked hard to empower our hardworking law enforcement personnel with the technology and tools they need to confront the current crisis. But we must do more. We must continue to transform and modernize DEA and add to its workforce. This transformation is crucial for DEA to confront the current and evolving threat, address the worst drug crisis this country has ever faced, and to achieve its mission to protect the national security, safety, and health of the American people.

This written testimony will describe DEA's accomplishments and requests for FY 2024.

THE DRUG POISONING EPIDEMIC

From August 2021 through August 2022, 107,735 people lost their lives to drug poisonings in the United States. Every day, nearly 300 people die from drug poisonings. Countless more people are poisoned and survive. These drug poisonings are a national crisis.

According to the Centers for Disease Control (CDC), a majority of the drug poisoning deaths in the United States involve synthetic opioids, such as fentanyl, that are being distributed in new forms. Fentanyl is being hidden in and being mixed with other illicit drugs such as cocaine, heroin, and methamphetamine. Drug traffickers are also flooding our communities with fentanyl disguised in the form of fake prescription pills. These fake pills often are made to appear legitimate using pill presses and marketed by drug traffickers to deceive Americans into thinking that they are real, diverted prescription medications. In reality, these fake prescription pills are highly addictive and are potentially deadly. DEA lab testing reveals that 6 out of 10 of these fentanyl-laced fake prescription pills contain a potentially lethal dose.

The availability of fentanyl throughout the United States has reached unprecedented heights. In 2022, DEA seized more than 57 million fake pills and 13,000 pounds of fentanyl powder equating to more than 400 million deadly doses of fentanyl. This is enough fentanyl to supply a potentially lethal dose to every member of the U.S. population. These seizures occurred in every state in the country.

THE DRUG ENFORCEMENT ADMINISTRATION

As the single mission agency tasked with enforcing our nation's drug laws, DEA's top operational priority is to relentlessly pursue and defeat the two Mexican drug cartels—the Sinaloa Cartel and the Jalisco Cartel—that are primarily responsible for driving the drug poisoning epidemic in the United States. DEA is focusing its resources to counter this worldwide threat, and has launched a number of key initiatives that build upon resources and success achieved so far in FY 2023.

DEA operates 23 domestic field divisions with 241 domestic offices and nine forensic labs. Internationally, DEA has nine foreign field divisions with 93 foreign offices. DEA's robust domestic and international presence allows it to map and target the entire Sinaloa Cartel and Jalisco Cartel networks.

In addition, DEA has launched two cross-agency counterthreat teams to execute a network-focused operational strategy to defeat the Sinaloa and Jalisco Cartels. The two teams are mapping, analyzing, and targeting the cartels' entire criminal networks. The teams are composed of special agents, intelligence analysts, targeters, program analysts, data scientists, and digital specialists. This network-focused strategy is critical to defeating the Sinaloa and Jalisco Cartels.

We are already starting to see results from our new strategy. As part of the network-focused strategy, DEA recently charged 28 members and associates of the Sinaloa Cartel, including leaders, suppliers, brokers, smugglers, and money launderers in multiple countries, for operating the global criminal enterprise that manufactures and traffics most of the fentanyl that comes into the United States. This is just the beginning.

DEA is simultaneously focused on American communities. We are targeting the drug trafficking organizations and violent gangs located in the United States that are responsible for the greatest number of drug-related deaths and violence. DEA's Operation Overdrive uses a data-driven, intelligence-led approach to identify and dismantle criminal drug networks operating in areas with the highest rates of violence and drug poisoning deaths. In each of these locations, DEA is working with local and state law enforcement officials to conduct threat assessments identifying the criminal networks and individuals that are causing the most harm. DEA works with state, local, tribal and Federal law enforcement and prosecutorial partners to pursue investigations and prosecutions that will reduce drug related violence and drug poisonings. Phase one of Operation Overdrive took place in 34 locations across the United States, and phase two is currently occurring in 57 locations.

In 2021, DEA launched the "One Pill Can Kill" enforcement effort and public awareness campaign. As part of the first two phases of the enforcement effort, DEA and our law enforcement partners seized more than 20 million fake fentanyl-laced prescription pills. In phase three of the enforcement effort, which was conducted between May and September 2022, DEA seized more than 10 million fake fentanyl-laced prescription pills and approximately 980 pounds of fentanyl powder. This equates to roughly 43 million potentially lethal doses of fentanyl, which could have entered our communities. Additionally, this enforcement effort resulted in 390 investigated cases, including 35 cases with a direct link to one or both of the primary Mexican cartels responsible for the majority of fentanyl in the United States: the Sinaloa Cartel and the Jalisco Cartel.

DEA is also combatting the sale of fentanyl on social media. Drug traffickers are using social media platforms to recruit associates, find customers, and sell fentanyl and other deadly drugs. In particular, drug traffickers use social media to deceptively advertise fake prescription pills—pills that look like Xanax, Percocet, or

Oxycodone but actually contain fentanyl—directly to young people and teenagers. DEA investigated more than 150 cases directly linked to the sale of counterfeit pills containing fentanyl on social media.

DEA also works closely with families who have lost loved ones to drug poisonings. These families are often brave advocates for change, and help ensure that people in their communities are aware of the dangers of fentanyl and fake pills.

DEA is working closely with our local, state, tribal, territorial, Federal, and international counterparts to target every part of the illegal drug supply chain and every level of the drug trafficking organizations that threaten the health and safety of our communities. To succeed, we must use every tool to combat this substantial threat that is being driven by the Sinaloa and Jalisco Cartels, as well as the Chinese sourced precursor chemicals and Chinese money laundering operations that facilitate the cartels' operations.

MEXICAN CARTELS AND DRUG TRAFFICKING

The Sinaloa and Jalisco Cartels pose the greatest criminal drug threat the United States has ever faced. These ruthless, violent, criminal organizations have associates, facilitators, and brokers in all 50 states in the United States, as well as in more than 40 countries around the world.

The Sinaloa Cartel and the Jalisco Cartel and their affiliates control the vast majority of the fentanyl global supply chain, from manufacture to distribution. The cartels are buying precursor chemicals in the People's Republic of China (PRC); transporting the precursor chemicals from the PRC to Mexico; using the precursor chemicals to mass produce fentanyl; using pill presses to process the fentanyl into fake prescription pills; and using cars, trucks, and other routes to transport the drugs from Mexico into the United States for distribution. It costs the cartels as little as 10 cents to produce a fentanyl-laced fake prescription pill that is sold in the United States for as much as \$10 to \$30 per pill. As a result, the cartels make billions of dollars from trafficking fentanyl into the United States.

The business model used by the Sinaloa and Jalisco Cartels is to grow at all costs, no matter how many people die in the process. The cartels are engaging in deliberate, calculated treachery to deceive Americans and drive addiction to achieve higher profits.

The Sinaloa Cartel

The Sinaloa Cartel, based in the Mexican State of Sinaloa, is one of the oldest drug trafficking organizations in Mexico. The Sinaloa Cartel controls drug trafficking activity in various regions in Mexico, particularly along the Pacific Coast. Additionally, it maintains the most expansive international footprint of the Mexican cartels. The Sinaloa Cartel exports and distributes wholesale amounts of fentanyl, methamphetamine, heroin, and cocaine in the United States by maintaining distribution hubs in cities that include Phoenix, Los Angeles, Denver, and Chicago. Illicit drugs distributed by the Sinaloa Cartel are primarily smuggled into the United States through crossing points located along Mexico's border with California, Arizona, New Mexico, and Texas. The Sinaloa Cartel reportedly has a presence in 15 of the 32 Mexican states.

The Jalisco Cartel

The Jalisco Cartel is based in the city of Guadalajara in the Mexican state of Jalisco, and was originally formed as a spin off from the Milenio Cartel, a subordinate to the Sinaloa Cartel. The Jalisco Cartel maintains illicit drug distribution hubs in Los Angeles, Seattle, Charlotte, Chicago, and Atlanta. Internationally, the Jalisco Cartel has a presence and influence through associates, facilitators, and brokers on every continent except Antarctica. The Jalisco Cartel smuggles illicit drugs such as fentanyl, methamphetamine, heroin, and cocaine into the United States by accessing various trafficking corridors along the southwest border that include Tijuana, Mexicali, Ciudad Juarez, Matamoros, and Nuevo Laredo. The Jalisco Cartel's rapid expansion of its drug trafficking activities is characterized by the organization's willingness to engage in violent confrontations with Mexican Government security forces and rival cartels. The Jalisco Cartel reportedly has a presence in 21 of the 32 Mexican states.

PEOPLE'S REPUBLIC OF CHINA AND PRECURSOR CHEMICALS

Chemical companies within the PRC produce and sell the majority of precursor chemicals that are used today by the Sinaloa and Jalisco Cartels to manufacture fentanyl and methamphetamine. These precursor chemicals from companies within the PRC are the foundation of the fentanyl and methamphetamine that are manu-

factured and transported from Mexico into the United States, and are causing the hundreds of thousands of drug-related deaths in our country.

According to the State Department's 2021 International Narcotics Control Strategy Report, there are approximately 160,000 chemical companies in the PRC. Chemical companies within the PRC distribute and sell precursor chemicals that are used in fentanyl and methamphetamine production around the world. Some companies within the PRC, for example, engage in false cargo labeling and ship chemicals to Mexico without tracking the customers purchasing the chemicals.

DEA has been and remains willing to engage the PRC government on fentanyl related substances and fentanyl precursor chemicals. However, due to diplomatic tensions between the United States and the PRC, the PRC government has suspended all counter-narcotics cooperation with the United States. Moreover, since 2019, the PRC government has repeatedly declined diplomatic and congressional requests to stop precursor chemicals from going to Mexico for the production of illicit fentanyl and methamphetamine.

CHINESE MONEY LAUNDERING OPERATIONS AND THE CARTELS

The Sinaloa and Jalisco Cartels utilize U.S. based Chinese Money Laundering Organizations (CMLOs) around the world to facilitate laundering drug proceeds. CMLOs use trade-based money laundering and bulk cash movement to facilitate the exchange of foreign currency. The use of CMLOs by the cartels simplifies the money laundering process and streamlines the purchase of precursor chemicals utilized in manufacturing drugs.

These money laundering schemes are designed to remedy two separate issues: (1) the desire of Mexican cartels to repatriate drug proceeds into the Mexican banking system, and (2) wealthy Chinese nationals who are restricted by the PRC's capital flight laws from transferring large sums of money held in Chinese bank accounts for use abroad. To address these issues, CMLOs acquire U.S. dollars held by Mexican cartels as a means to supply their customers in China.

RECENT ENFORCEMENT ACTION AGAINST THE CHAPITOS SINALOA NETWORK, PRC-BASED CHEMICAL SUPPLIERS, AND MONEY LAUNDERING OPERATIONS

As part of our new network-focused operational strategy, on April 14, 2023, DEA announced indictments against the Chapitos—the leaders of the Sinaloa Cartel—and their criminal network.

The Sinaloa Cartel supplies the majority of the fentanyl trafficked into the United States, which has resulted in the United States' unprecedented fentanyl epidemic. The Chapitos, the sons of the cartel's notorious former leader Joaquin "El Chapo" Guzman, currently lead the most violent faction of the Sinaloa Cartel. El Chapo was once the world's most dangerous and prolific drug trafficker. Now his sons have stepped in to fill their father's void by flooding the United States with deadly fentanyl and leaving a wake of destruction across families and communities throughout the United States.

Following their father's arrest and subsequent extradition and conviction, we allege that the Chapitos expanded their enterprise with sophisticated fentanyl laboratories in Culiacan, Mexico. We allege that the Chapitos now run the largest, most violent, and most prolific fentanyl trafficking operation in the world, resulting in billions of dollars in profit per year. The cartel is highly organized and sophisticated, employing military-grade weapons and vehicles and hundreds of people who protect the cartel and its leadership at all costs. In addition, we allege that the Chapitos use extreme violence and intimidation, including murder, torture, and kidnapping, to ensure dominance and expand their territory.

The Chapitos pioneered the manufacture and trafficking of fentanyl, and are responsible for the massive influx of fentanyl into the United States over the past 8 years. The Chapitos oversee and control every step in their fentanyl trafficking process and will stop at nothing to ensure the expansion of their operations and the flow of fentanyl into the U.S. From procuring fentanyl precursors from illicit sources of supply in China; to distribution in the United States, and, ultimately, reaching the hands of Americans; to the surreptitious repatriation of massive proceeds through money launderers to avoid detection, the cartel has direct involvement—and culpability. Investigations found that even when test subjects died as a result of high-potency fentanyl, the cartel sent the deadly batch to the United States anyway—knowingly poisoning Americans for their own profit.

The indictments announced this month charged 28 members of the Chapitos network. These include suppliers of fentanyl precursor chemicals based in the PRC, a broker based in Guatemala assisting with the transport of those chemicals from the PRC to Mexico, managers of clandestine fentanyl laboratories based in Mexico con-

verting the precursor chemicals into fentanyl pills and powder, weapons traffickers and assassins perpetuating extreme violence in Mexico to protect and expand the fentanyl production operation, smugglers transporting the fentanyl from Mexico into the United States, and illicit financiers laundering the proceeds of fentanyl sales from the United States back to Mexico through bulk cash smuggling, trade-based money laundering, and cryptocurrency.

These indictments reflect the work of 32 DEA offices in the United States and abroad, as well as our law enforcement partners and other DOJ components, such as the U.S. Attorney's Office. As part of the investigation, the DEA conducted operations in ten countries and seized staggering amounts of illicit materials, including 2,557,000 fentanyl-laced pills, 105 kilograms of fentanyl powder, and 37 kilograms of fentanyl precursor chemicals, amounting to 22,747,441 potentially lethal doses of fentanyl.

Seven of the charged defendants were arrested pursuant to the investigation—in Colombia, Greece, Guatemala, and the United States—with the assistance of DEA's law enforcement partners in the United States and abroad. Ovidio Guzman-Lopez was arrested earlier this year by military officials in Mexico.

Simultaneously with the announcement of these indictments, the Department of State has announced up to nearly \$50 million in monetary rewards for information leading to the capture of the defendants who remain at large, and the Department of the Treasury Office of Foreign Assets Control announced sanctions against two chemical companies that operate in the PRC, and five individuals associated with those companies, for supplying precursor chemicals to drug cartels in Mexico for the production of illicit fentanyl intended for U.S. markets.

FY 2024 BUDGET REQUEST—BUILDING UPON FY 2023 INVESTMENTS

DEA's FY 2024 requested and anticipated funding totaling \$3.7 billion¹ provides DEA with the resources needed to build upon the work we have accomplished to defeat the cartels and emerging drug threats. This funding is needed to continue our transformation, build out counterthreat teams in every field division, start a digital operations center that serves as a hub for our data and intelligence tools, and combat increasingly sophisticated threats on social media, the dark web, and cryptocurrency. The President's Budget request includes \$2.7 billion for DEA's Salaries and Expenses Account, an increase of 4 percent over FY 2023. In FY 2024, DEA expects to face an estimated \$72 million in increased costs to maintain current operations. This includes annualizing new positions from FY 2023, including new Special Agent positions, pay raises, and other mandatory expenses. With current and requested funding, DEA is working to hire nearly 1,000 Special Agent positions over the next 2 years to support our critical mission.

Fentanyl is the greatest criminal drug threat that America has faced. Accordingly, our FY 2024 budget request builds upon the resources that are needed to defeat those who are responsible for bringing fentanyl into our country—the Sinaloa Cartel and Jalisco Cartel and their global networks—and to confront the fentanyl crisis in our communities. The men and women of DEA work relentlessly every day to combat the fentanyl threat and save American lives. But the current threat facing our country is unprecedented in its sophistication and speed and requires DEA to approach its work in a fundamentally different way. To enable us to continue to modernize and meet the threats we face in this moment, DEA's FY 2024 request will focus on the following priorities:

Empowering DEA Missions with Data and Information Technology

Across its many domestic and foreign field divisions and laboratories, DEA has a sophisticated data set related to the operations of the drug cartels that are driving the overdose epidemic in the United States. That information must be collected and centralized—and broken out of data silos—so that it can be operationalized. DEA must similarly develop a modernized mission-wide operating system that allows it to share information across offices about the conduct being investigated and the suspects involved. Data-driven intelligence and analyses enable DEA to trace the flow of fentanyl and other deadly drugs across the supply chain and across the globe, from source materials to manufacturing to distribution. With the ability to track and map trafficking networks, DEA will have a more sophisticated means of isolating and eliminating threats while increasing public awareness and safety by strengthening prevention efforts. DEA requests these investments for modernizing case management systems and building a unified data platform to enhance DEA's

¹ Anticipated funding includes Salaries and Expenses (S&E), DCFA, Asset Forfeiture Fund, HIDTA, and reimbursable funds.

capability and capacity for processing, analyzing, and applying intelligence to large volumes of data as it dismantles the most egregious criminal networks.

Enforcement and Counter-Threat Targeting Teams

DEA has also created specialized counterthreat teams to target the criminal networks that pose the greatest threat to Americans. These networks are global in nature—with suppliers, manufacturers, and transporters located in multiple countries and continents and online—and every component in those networks bears responsibility for the fentanyl and other deadly drugs entering the United States.

The targeting teams are mapping these global criminal enterprises and helping build cases that can lead to the dismantling of the entire networks. These targeting teams are key to DEA's efforts to combat the Sinaloa and Jalisco Cartels, precursor chemical suppliers in the PRC, Chinese money laundering organizations, and other emerging threats. The counterthreat teams established in this enhancement will leverage DEA's investigative data to develop targeting packages for timely and coordinated pursuit of criminal network investigations.

Staffing

Recruitment and retention of personnel skilled at investigative techniques is crucial to combatting the threats of today and the emerging threats of tomorrow and sustaining an aggressive drug seizure posture. DEA's 100% staffing goal of our special agent workforce is a top priority. Currently, we are 13% below allocated positions, driven primarily by retirements. Currently, DEA is in the early stages of this rebuild and utilizing funding received in the FY 2023 Omnibus to "reverse the decline in staffing." DEA plans eight special agent classes in FY 2023.

CONCLUSION

DEA greatly appreciates the funding Congress provided in FY 2023. The men and women of the DEA work tirelessly, each day, to defeat transnational drug cartels and save American lives. We will continue to relentlessly pursue these cartels, and in particular target the Sinaloa and Jalisco Cartels, which are the criminal networks most responsible for the fentanyl-related drug poisonings, deaths, and violence in our country. However, DEA must also modernize its data systems and adapt its technology to be better equipped to confront these constantly evolving threats, and to empower our agents with the very best information and tools to confront the current crisis, defeat the threat, and protect the safety, health, and national security of the United States.

Thank you again for the opportunity to appear before the committee today. I look forward to answering your questions.

Senator SHAHEEN. Thank you, both, for your testimony. We now have a critical number of senators here. So let me just point out that we hope to go into a closed session for a classified discussion at 3:45 p.m., so we are going to ask folks if they could try and stay within the 5-minute question period, as you are asking questions.

And again, we need to go back to Senator Moran for his opening statement.

OPENING STATEMENT OF SENATOR JERRY MORAN

Senator MORAN. Chair, thank you very much and I will shorten my statement, significantly. And also just want you to know that I appreciate the efforts to coordinate today's hearing, and the votes, and having a classified briefing.

I would also, as the Chair did, note the massive shooting in Allen, Texas. A painful, sickening reminder that evil still exists in our world.

And Director Wray, I trust the FBI will lead a thorough investigation into this shooting, and your work your team does to help us determine why, and how this could happen, and inform Federal, State, and local law enforcement, how we prevent more mass shootings from happening.

Director Wray, you have appeared before this subcommittee many times, at least annually since I have been a member of it.

Administrator, you are new to this subcommittee, I think it has been 8 years since the DEA Administrator has appeared before this Appropriations Subcommittee, and I welcome you. I think this is a useful addition to our information and knowledge, and I look forward to hearing what you have to say.

Tomorrow, and I heard as I came in, the Director talking about Title 42 with its lift tomorrow, on Thursday; I assume the DEA will face an onslaught of challenges related to its mission of preventing cartels and drug trafficking across the southern border. And I note that the FBI is expecting a crush of DNA samples that will be required, of testing, you have asked for additional dollars to accomplish that mission. I look forward to hearing from both of you on the consequences of Title 42, and what we do in regard to our border.

I will save the rest of my opening statement to—well, I will ask for my opening statement to be it submitted for the record.

Senator SHAHEEN. Without objection.

Senator MORAN. Thank you.

Senator SHAHEEN. Thank you. We will begin the question round now, and again, hoping everyone will stick within the 5 minutes. I will try very hard to do that.

My first question is really for both of you. Director Wray, you referenced in your opening statement the OCDETF Strike Forces, and that stands for Organized Crime Drug Task Forces. Can you talk a little more, both of you actually about the benefits of OCDETF, and what those Strike Forces do is we are trying to combat the substance—misuse crisis in this country?

Mr. WRAY. So I will start. I think—to me, when I think of OCDETF, I really think of, when it is working at its best, there are really two concepts. One is the value of partnership, and the other is the importance of intelligence. The value of partnership both because in this world of limited resources, and a seemingly unlimited threat in this case, the flood of, really, poison into this country, courtesy of the cartels, we have to look for ways to working closely with our partners to maximize impact.

And then the intelligence side, I think again, when OCDETF is working at its best, it is focused on how to prioritize, how to be strategic so that team partnership effort is really focused on what we can do, collectively, to really maximize the impact, because we are up against a very sophisticated set of adversaries.

Senator SHAHEEN. Administrator, as we discussed on our call, I was in Colombia last month and one of the things we heard as we were meeting with folks there is the recognition that we are now seeing cocaine mixed with fentanyl. Can you also speak to that? And how OCDETF is looking, specifically, at fentanyl?

Ms. MILGRAM. Yes, Senator. It is one of the things that we have seen across the United States over the past year, is we have seen what the cartels and their drug distributors across the United States are doing is, in addition to these fake pills that they make to look exactly like real medicines, they are hiding fentanyl in drugs like cocaine, methamphetamine, and heroin, and they are marketing and selling those drugs as though they were simply—as

if they were only cocaine, only meth, only heroin. And we have seen Americans die across the United States from drug poisonings.

We issued a public safety letter last year to our law enforcement partners to alert them to this. We want everyone to understand the risk of fentanyl. It is the deadliest drug we have ever seen, widespread, in the United States. It is 50 times more addictive than heroin, and just a tiny amount can kill someone.

So many Americans do not know that they are taking it, and they are dying.

Senator SHAHEEN. It is really frightening as I hear from constituents in New Hampshire on a regular basis. This is a more parochial question, because we have a new DEA lab going into Manchester, New Hampshire, that is going to be really critical as we look at how we can identify different drugs that we are seeing, and that is important if we are going to prosecute those people responsible. But that project has been delayed longer than I thought it should be.

So can you talk about how we are going to move that project forward, and get it done so we can use it to help get drugs off the street?

Ms. MILGRAM. Yes, Senator. I share your concern on this, because we have nine DEA Labs across the United States today, and we are doing everything to work as quickly as we can, but we have never seen more fentanyl in the United States, we have never seen more methamphetamine. And so we need the ability to have this additional lab to process all the fentanyl, methamphetamine, and other drugs, that are coming into the United States, and across the country.

So our understanding is that that project has been delayed. This is not a permanent solution, but we will be operational this summer, working as one DEA, our Field Division is going to give us space, so we are already starting to hire chemists. And we will work out of our local Field Division to do as much as we possibly can while we are waiting for that space to get built.

Senator SHAHEEN. Well, thank you. I am ready to do anything I can to help move this project along. So we will say it in very close touch.

Director Wray, in the few seconds that I have left, can you talk about the FISA 702 Authority, and why that is so important to our work to track down transnational criminal organizations and drug lords?

Mr. WRAY. So Section 702 is the sort of the critical ingredient for the entire intelligence community to protect Americans from foreign threats overseas that affect our national security. And it is what we rely on to protect Americans from international terrorism, from cyber espionage, from cyber-attacks, from foreign adversaries.

But also, as Director Burns I think has cited in some public testimony of his own, it has been very useful in illuminating with the Mexican drug cartels, in particular, drug networks and global supply chains. Again, if you think about foreign threats, you have got the Mexican drug cartels getting chemicals from China, so you have got two foreign threats, in effect, combined with one.

And the ability to be agile, as these adversaries, much as Administrator Milgram referenced in some of her comments already, the

reliance on technology by these adversaries requires the intelligence community to be able to be agile and nimble, and not to be constantly playing catch-up with the bad guys. And that is where 702 becomes so important. But again, it is focused on foreign adversaries, not Americans, overseas, but its foreign threats overseas that impact us here.

Senator SHAHEEN. Well, thank you. I am sure we will get into it more in the closed session.

I am going to now turn the mic over to Senator Moran, and go vote. And if anybody else has not yet voted on the first vote, the time has run out. Thank you.

Senator Moran.

Senator MORAN. If somebody voted on the first vote that can take over the chair when—I will leave when—after I ask my questions, and vote. Thank you.

Let me start with you, Administrator. Welcome again. Thank you. Thanks for the conversations we have had over a period of time. I wanted to highlight for you that I met with President Lopez Obrador of Mexico on a bipartisan, bicameral, Congressional Delegation to Mexico City last month. I think he and I had a promising discussion about addressing synthetic opioids that are flooding across our southern border.

My request of him is that we would do more to fight guns going to the south. Could he ask China to eliminate the precursor chemicals that are coming from China to Mexico? He indicated he was willing to do that. My understanding, at least from press reports, is that he has made that request, in writing, with China, with the Chinese Government.

Perhaps it is a development that has some benefit. But the fact remains that our two countries have had its challenge—our challenges in cooperation in the drug wars, and I know the DEA remains significantly constrained in its capabilities, or its abilities to operate in a way that you wish they could, within those borders.

Anything that would confirm that China has—will abide by the request of the President from Mexico? And give me an understanding of the state of affairs between drug enforcement, the United States, and the situation in Mexico.

Ms. MILGRAM. Thank you, Senator. And I think it is really important to start the conversation on China, because that is where this problem largely begins today. The vast majority of precursor chemicals that are going to Mexico, and being made into fentanyl powder, as you know, are coming from China. We recently, in the Chapitos' case, part of that indictment charges four Chinese nationals with—and a chemical broker from Guatemala, with sourcing those chemicals to make fentanyl for the Chapitos, the leaders of the Sinaloa Cartel right now.

And importantly, in those charges, in those allegations, we have included information that one of the Chinese nationals said that they knew that those chemicals were going to be used for fentanyl, and also that they were going to hide what those chemicals were in order to ship them out.

So we have called on China to stop the shipment of precursor chemicals to Mexico as well, and we are, right now, for over a year we have not had law enforcement cooperation with China. So we

do have offices in China, we continue to try to work there, because we believe it is vital to attack the entire supply chain. Right now we are doing a network-wide approach that is looking at every piece, so we are targeting the Chinese precursor chemical companies, as part of our work.

Those chemicals now going into Mexico, my deepest concern, Senator, is that there is no limit on the amount of fentanyl or methamphetamine that the cartels can make, beyond those chemicals. So that is the only limit right now, and so we must urgently work at that point.

In terms of Mexico, we are very much looking to continue to work with Mexico, and Mexican law enforcement. They recently arrested Ovidio Guzman, one of the Chapitos, which we thought was an important step forward, and of course last year they arrested RCQ. We do now want them to work with us, together. We have 16 additional Mexican nationals who have not yet been arrested as part of the Chapitos investigation. It is vital to us, we have seven folks in custody, but it is vital to us that we get everyone that is a part of that case extradited, eventually, to the United States to stand justice in a court of law here.

Senator MORAN. Well, I was pleased to see that the Mexican President did what he told me he would do, which was to make that request. I don't know what the Chinese response will be. And you have made that request, I guess you haven't had a response, or nothing has changed since you made that request, I assume.

Ms. MILGRAM. Yes, Senator. We have not had—we have not had a response. But we will continue to do the work we are doing, and to target these, largely unregulated, chemical companies in China.

Senator MORAN. I spent time with DEA agents when I was in Mexico. And I admire and respect their work.

Director Wray, you have spent an enormous amount of your time warning us about policy—us as policymakers about the Republic of China, and its threat to our economy and our national security. I also note that you were successful in closing a China's Ministry of Public Security in New York City. Is that a rare circumstance? Or do these public security facilities continue to operate in the United States, there, or elsewhere?

Mr. WRAY. So we have been successful in our law enforcement actions in getting the facility in New York shut down, and of course we have recently announced some arrests, which include obstruction of justice charges. And frankly, it is outrageous, outrageous that the Chinese Government would think that they could operate a facility like that in the United States without proper coordination. It violates our sovereignty, and it shows a flagrant disregard for well-established processes in the rule of law.

And I wish I could tell you that their disregard for the rule of law was an aberration. I would say it is a pattern. And to me it fits into a pattern that I have been calling out for some time now, which is harassment, stalking, intimidation, surveillance, blackmail of dissidents and critics of the CCP, who live here in the United States.

They don't do it only in the United States, they inflict the same kind of harm on dissidents in other countries as well, but if they

try to use stations like the one in New York to conduct that kind of activity, they are going to keep encountering the FBI.

Senator MORAN. Thank you for your answer.

Senator REED. Thank you Senator Moran. On behalf of Chair Shaheen, I will recognize myself.

I want to commend both of you, and the men and women of your agencies for the extraordinary work they do.

Director Wray, Secretary Yellen has indicated that we will likely default on June 1, unless Congress takes action, and Speaker McCarthy has indicated that he does not intend to take default off the table.

As a member of the Intelligence Committee, has the FBI assessed whether our adversaries, Russia and China, particularly China, will exploit a potential default in order to propagate disinformation, or even other activities, internationally, to strengthen their economic position, and weaken ours?

Mr. WRAY. I guess I would start by saying that consistent in some ways with my answer to Senator Moran, I think there is a pretty clear record now of the Chinese Government, the Chinese Communist Party, taking advantage of any avenue they can to try to gain the upper hand against us. As to the specific question, I think I would—I don't think I have anything to add to what Director Haines testified to, I think before you in the Armed Services Committee. But I would associate myself with her comments.

Senator REED. In her comments was she—fully expects that they would explore it to the best—to the degree possible, the best degree possible for them.

Administrator, thank you for your good work; I have got some questions about fentanyl, and also for the Director. Director, do you think the FBI should be fully engaged in the fight against fentanyl?

Mr. WRAY. I think we should be, and I think we are. I will say we can always use more resources against the fight. I think Administrator Milgram did a very good job of outlining just how massive the problem is. And it requires a team effort, and we work very closely with the DEA, our focus is on really what it is the FBI, through its unique authorities, expertise, and resources, can contribute to the team fight? And I would be happy to talk about what those are.

Senator REED. All right. Now, speaking about resources, again, the House has passed a bill that would likely cut all agencies, except the Defense Department, by about 22 percent. So rather than having more resources you would have significantly less. Is the arithmetic right?

Mr. WRAY. So a cut of that magnitude would be disastrous, not just for the—really hard-working public servants, career law enforcement professionals of the FBI, but more importantly, in many ways, on the American people that they are sworn to protect. It is not uncommon for me to get briefed on single seizures, and from probably every State represented on this subcommittee, single seizures of enough fentanyl to wipe out an entire State, one operation, and one seizure, by one squad, and one field office.

So a cut of that magnitude would mean countless seizures that wouldn't happen, and countless more fentanyl pills affecting neighborhoods all over this country.

Senator REED. It would also inhibit your ability to grow your Cybersecurity Force. Would that be accurate?

Mr. WRAY. Also, we are, as I said in my opening statement, dealing with, in the Chinese cyber program alone, an adversary that essentially outnumbers us 50 to 1. And that is just China. And if you then add on top of that the 100-plus ransomware variants that we are investigating, each one of those, with scores and scores of victims, we need more resources for cyber, which is why our enhancement asks for that, not less.

And a cut would mean scores more attacks on American critical infrastructure, American hospitals, American schools, American 911 call centers, from nation states and cyber criminals alike. So again, it would be the American people who would be hurt the most.

Senator REED. Well, thank you for that very candid answer.

And Administrator, cuts like that would also endanger the progress you have made, which is significant.

Ms. MILGRAM. Yes, Senator. Cuts like that would be devastating for our work. We are already about 600 agents down, and so we are running eight classes this year, that kind of a cut would mean that we couldn't on board any of the more than 400 agents we are scheduled to bring on board, it also would set us back dramatically in the work that we are doing across the world to map the cartels, and to be able to put the right tools and technology into the men and women of DEA's hands.

We have a technology and a data system that is over 20 years old, and it is well past time, that we are updating it. So we are building an entire mission operating system that will allow us to break silos, share information across DEA, and also really manage the agency more effectively. So for many reasons, it would be devastating for our work.

Senator REED. Thank you very much, both of you, and to the men and women at your agencies. Thank you.

Senator SHAHEEN. Thank you, Senator Reed. We are going to go out of order a little bit, because we have the Chair of the Appropriations Committee with us.

And we are delighted she is here, so Senator Murray.

Senator MURRAY. Well, thank you very much. I really appreciate you and Ranking Member Moran, and all the work you are doing with these. Continues as we work to make sure we are assessing our country's needs, and working to live up to our responsibility to craft and pass bills to deliver the funding our community's need in a timely and bipartisan way.

Keeping this momentum going is really important because there are real stakes for our families here, if we let our work fall behind, if cuts loom or chaos reign. None of our global competitors are debating whether they should invest in their future. And we have to remember that keeping our country safe and secure, doesn't just mean a strong military, it means a fair, functioning system of justice and law enforcement protecting our communities and our rights.

We cannot keep our families safe from threats like drug trafficking, including deadly fentanyl, domestic terrorism, cyber-attacks, or White supremacy, and the uptick in hate crimes, and violent attacks, without making sure that our law enforcement agencies have the resources they need to be effective, and keep people safe, which is part of what makes the House Republicans plans so alarming. You just outlined some of the impacts of that.

Reading it, I see that House Republicans voted to essentially fire nearly 30,000 law enforcement personnel, and that is in just year one. Those severe budget caps would mean more cuts to our law enforcement budgets every year for the next decade. So I hope that we can all agree now is not the time to fire, or furlough, or freeze hiring of our drug enforcement officers, our agents, our attorneys, intelligence analysts, cyber experts, all who are working to keep our country, and communities, and families safe.

And to do that we have to make sure that we provide our Federal law enforcement agencies with the tools they need, not blow a massive hole in their budget.

So I appreciate our witnesses being here today and having this opportunity to have this hearing, because I hope, really, that we can all work together to reject those severe cuts, and agree to make reasonable investments in these agencies.

I just have a couple questions. Senator Reed asked you about the 22 percent cut that has been proposed, or voted on in the House. I think we all have to be cognizant of the impacts of that as we move forward.

But let me ask you, Director Wray. Criminal organizations are increasingly using technology for criminal activities, like drug trafficking, and cyber-crime, and violent extremism, as they continue to do more online, the United States has to adapt and anticipate and combat those threats. Does the FBI have the resources it needs to combat cyber-related threats from criminal organizations? And what are the greatest cyber threats that you see facing us today?

Mr. WRAY. So I would mention a few things. So first, I strongly agree that our adversaries, not just Nation States, but sophisticated transnational criminal organizations, are relying more and more on sophisticated technology. There is a lot of ways in which our budget requests ask for more resources to deal with that, but I would highlight one in particular, which is our request for enhancement that focuses on our ability to focus on the dark web, and cryptocurrency.

Because one of the things that we are seeing is the dark web has become, essentially, a rogues' gallery of different kinds of criminal products and services, and the payment mechanism for those deadly products and services is, typically, cryptocurrency. And so one place where I think the need for enhancements are particularly acute, is to help us grow our scale to deal with those issues.

We just had, last week, Operation SpecTor, I think it was. That was the largest ever seizure of fentanyl trafficked on the dark web, and that is coming on the heels, so we need more operations like that to dismantle the dark net marketplaces, and to go after the cryptocurrency that is the—after all, these are profit-motivated adversaries.

And so, we have gotten better in cyber-crime, and on cyber threats at chasing the crypto, and seizing the crypto, but we need to be able to scale that because the threat is metastasizing.

Senator MURRAY. Administrator Milgram, in a recent press release, the DEA stated that in Operation Last Mile which targeted drug trafficking by the Sinaloa and the Jalisco Cartels, more than 1,100 cases involved social media, and encrypted communications platforms. How has the DEA adapted to the use of technology by these criminal drug networks.

Ms. MILGRAM. Senator, it is a really important question, because we are in the process of adapting and transforming to do just this. What we have seen is that the drug cartels, as Director Wray has said, they have evolved since, really, 2014/2015 with the onset of fentanyl. They are nimble, they are deadly, and they are literally putting fentanyl onto our streets and all over social media in a way that we had never seen before.

And so in Operation Last Mile, we talk about social media is solving the Last Mile problem for the cartels. They are getting the drugs into people's hands by any—think about hundreds of millions of Americans have cell phones, and they have social media accounts. And so within a matter of clicks they are marketing, oftentimes, things that are—they are fentanyl, but they are marketed as if they were real prescription medicines, like oxycodone.

And just to tell you one story. One of our operations and investigations from Last Mile, just down the road from here, in Washington, D.C., Diamond Lynch (ph.) was a 20-year-old mom, and she took what she thought was a Percocet pill, it was fentanyl. She died. And she was, at the time, planning her son's first-year-old birthday party. She never saw that day. Our agents working with the—

Senator MURRAY. Did she buy it online?

Ms. MILGRAM. She did not buy it online. The online part comes in a minute. So she purchased it through a dealer that she knew, our agents and the local police worked together to identify that dealer. They then traced it back to the source of supply in Los Angeles that was working with other suppliers on Instagram. We then traced it back directly to the Sinaloa Cartel in Mexico.

And that is the kind of work we are now transforming our agency to be able to do to trace everything and link it back to the cartels, and to identify the entire global supply chain, including that supply chain across the United States, that distribution network that is leading to the deaths of 107,735 Americans between August of 2021 and August of 2022.

Senator MURRAY. Thank you. Thank you for sharing that. And thank you for taking me out of order.

Senator SHAHEEN. Thank you, Senator Murray.

Senator HAGERTY.

Senator HAGERTY. Thank you, Chair Shaheen. And thank you to our guests here today.

Director Wray, I would like to start with you. Senator Grassley and Chairman Comer subpoenaed an FBI document containing an allegation regarding a pay-to-play scheme between then Vice President Biden, and a foreign national, and your response was due, just

a little bit earlier today, so my question is: Has the FBI complied with the subpoena for this document?

Mr. WRAY. I believe we submitted a lengthy letter earlier today.

Senator HAGERTY. A letter, but not the document that was the subject of the subpoena request?

Mr. WRAY. I can't speak to the specific document. We are committed to working, collaboratively, with both committees, but we also have to balance sources, and methods, and ongoing investigations, and we will continue to work through the accommodation process as has happened many of times in the past.

Senator HAGERTY. Was there a plan to submit the document, or will it be never submitted, or has there been a conclusion—

Mr. WRAY. I would refer to the letter which is, I think, quite detailed, and kind of goes through a fair amount of discussion about our proposed approach.

Senator HAGERTY. To addressing the document. I do want to confirm, though, the document does exist, the FD-1023.

Mr. WRAY. I really can't get into the specifics here. I will tell you that we understand completely the importance of Congressional oversight; that is important to me. I also understand, very much, as I think you do, the importance of us protecting sources, and methods, and ongoing investigations. And we are committed to try to work through the process.

Senator HAGERTY. I had a frustrating conversation last year with Attorney General Garland, about something I am still trying to understand here. And that is how the Biden Administration can impartially investigate the Biden family, so I want to come back to that with you, if I could, today, to get at it a little bit deeper.

My first question is, whether you or anybody else at the FBI has communicated with White House employees, or with Attorney General Garland, or with DOJ staff, regarding investigations that pertain to President Biden, or any member of his family?

Mr. WRAY. Well, I certainly have not communicated with the White House about any investigation on that subject. My instructions to our—

Senator HAGERTY. And would that also include Attorney General Garland and the DOJ staff?

Mr. WRAY. Well, I don't know that I can get into any discussions I have with Attorney General Garland. I talk to him, you know, probably every day, one way or another, about all sorts of investigations so that one is a little trickier.

But what I will tell you is, as you know, I am an FBI Director appointed by the previous President, and our agents in our Baltimore Field Office are working with a U.S. attorney from the previous administration, that is the U.S. attorney in Delaware on, I think the investigation you are referring to. And my expectations of our agents on every investigation which I communicate, like a broken record, are that we are to follow the facts wherever they lead, to whomever they lead, no matter who likes it, no matter who it will make happy or unhappy.

Senator HAGERTY. Would that Delaware—so would that Delaware U.S. Attorney be the person then responsible for deciding about unlawful—evidence of unlawful conduct by the President, and about what to do with that evidence?

Mr. WRAY. Well, again I don't want to engage in hypotheticals. But the Delaware U.S. Attorney is leading, I think, the investigation that you are—that has been publicly disclosed, that you are, I think, referring to.

Senator HAGERTY. Let me just come back to what I am trying to understand then. If the FBI has evidence, has uncovered evidence that alleges criminal conduct by the President, and you then, I presume hand this to the DOJ if you uncover this, but I understand the DOJ's policy is they are not going to charge a sitting President while that person is President.

And the DOJ is not going to provide that information to Congress, not going to comply with subpoena for documents, it feels to me like it is a dog chasing its tail, and the question is, if illegal conduct is alleged or uncovered, how does the Congress or the American public ever get that evidence?

Mr. WRAY. Well, the decisions made by DOJ about how to staff prosecutions, at which U.S. Attorneys' offices, which counsel to appoint, all those sorts of things are entrusted by regulation to the Department, to the Attorney General. I can speak to what the FBI's role is, and my expectations of FBI agents, and those are the ones I have communicated—

Senator HAGERTY. To be clear, if evidence were covered by the FBI, you would hand that over to the DOJ, they then make the determination whether it is the Attorney General or the—in this case the Delaware U.S. Attorney, what to do with that evidence? And again their policy is not to charge a sitting President. And we can't get the evidence in Congress; is that correct?

Mr. WRAY. Decisions about who to charge, what to charge, those are decisions made by prosecutors at the Justice Department, including the U.S. Attorney in Delaware, and decisions about the Justice Department's communications about its decisionmaking, are the Justice Department's decisions. I don't want to speak for them on that.

Senator HAGERTY. We are right back at where we started without being able to clarify how we have an impartial investigation here. And I appreciate the opportunity to get some oversight. It is just very frustrating when we can't. Thank you very much.

Senator SHAHEEN. Thank you Senator Hagerty.

Again, we are pleased that the Vice Chair of the Appropriations Committee is also with us today. And so we are going to go ahead and ask her if she would like to give a statement, and take her questions.

Senator COLLINS. Thank you very much. You will all be happy to know that I am not going to do a statement, and will go straight to my questions.

First of all, welcome to both of you. I so appreciate the work that you do. It is vitally important. Director Wray and we also have talked—Administrator, I was trying to think whether you are a Director or, Administrator Milgram.

Last month, employees of a restaurant in Auburn, Maine, were shocked when they opened a box that they expected to contain mugs that they had ordered, and instead they found 14 kilograms of fentanyl. That is an amount that is sufficient to kill the entire population of Maine, five times over. Fortunately, the employees

immediately called the local police, who are now working with Federal partners on what is clearly a major interstate trafficking network. The FBI and the DEA play a key role in working with State and local law enforcement partners, in combating drug smuggling, violent crime, and gangs in local community.

Director Wray, we have had the opportunity to discuss the importance of these relationships during your visit to Maine last year, which I very much appreciated. In particular, I am hoping for continued collaboration and support for the Southern Maine Gang Task Force, and the New England Prescription Opioid Task Force, which was launched last June, to address the illegal opioid prescriptions in Maine, and in New Hampshire.

Director Wray, and Administrator Milgram, as you implement the budget; will you ensure that these programs receive as much support as possible?

Mr. WRAY. Certainly, on my end these are both team efforts that are very important to me. And I know that, as you may recall from my visit, I guess last August we, I think, are working more closely than ever with our State and local partners in Maine. And it meant a lot to me, when one of our long-time State law enforcement partners said he had seen the FBI move from what he called, “promise to presence”. Meaning, instead of just talking about being there for them, we were just there, and we could be counted on.

And that is the kind of thing that I am very grateful for, and that is the goal that I am shooting for with all of our offices.

Senator COLLINS. Administrator.

Ms. MILGRAM. Senator, for us, we are incredibly fortunate to have more than 3,000 Task Force Officers across the United States, and we also have incredible partnerships with State and local law enforcement. So in the example, from the restaurant, that you just gave in Maine, our agents responded and are actively working that investigation right now in partnership with the local police.

The work that we did for Operation Last Mile, those 3,300 arrests, all of those were done in partnerships with local police, police chiefs, police departments, sheriffs. We could not do the work that we are doing across our communities without them. And so we are incredibly supportive of that work, and of anything that brings us together, sharing information, and working with them.

Senator COLLINS. Thank you. I appreciate that.

Administrator, in our 2024 budget hearing with the Attorney General, I express my dismay that while the department is requesting funds to hire hundreds of new attorneys at—in the litigating decisions and anti-trust, in headquarters’ offices, it is proposing to hire only four new DEA special agents. That is incredible to me. And it is particularly puzzling in the context of the drug overdose and poisoning crisis, I bet everybody here, has experienced record highs in the number of people who have lost their lives in our home States. In Maine it is a record 716 people last year, and 80 percent of the deaths were linked to fentanyl.

So last year Congress provided DEA \$40 million above the President’s budget request to support more than 120 additional new agents. Administrator Milgram, did you request more agents than the four that were granted to you?

Ms. MILGRAM. So Senator, if I could start by just thanking you for the additional \$40 million last year. It has been incredibly important for our transformation at DEA, I believe that this year, because we have not yet hired those agents from last year, we would be onboarding 131 agents, 50 diversion investigators, and 35 intelligence analysts. But certainly, we can do more with more. Thank you.

Senator COLLINS. Thank you.

Senator SHAHEEN. Thank you. Senator Peters.

Senator PETERS. Thank you, Madam Chair.

Director Wray, according to a reporting, eight people in Allen, Texas, this past weekend, who were murdered, were murdered by a man who, allegedly, held White supremacist views. You and I have discussed the fact that White supremacists and anti-government extremists really posed the greatest terrorist threat in country, domestic terrorism threat here in the homeland for many years. And as you know, we have talked about this, I am still waiting for a complete accounting from the FBI and the DHS which was mandated by a law that I wrote along with Senator Johnson in the 2019 NDAA, and certainly that information is important, because if you don't really have a full measure of what you are dealing with, it is difficult to know how to properly resource it.

So my question for you, Director Wray, is can you please tell me, specifically, what in the fiscal year 2024 budget request demonstrates that the FBI is prioritizing the investigation and the response to this significant domestic terrorism threat?

Mr. WRAY. So I appreciate the question. And I have found our conversations on this topic to be very productive and helpful. And I know how important this is to you.

In the fiscal year 2024 budget we have requested an enhancement, so again, that is on top of the base funding which is quite significant, devoted to this issue. That is a \$13 million counterterrorism enhancement that would augment our ability to address investigative requirements, provide sophisticated tools necessary to proactively counter the threat, so it would do everything from increasing our investigative capacity, facilitating information sharing, identifying emerging trends, to try to get better ahead of the threat, and to enhance our liaison relationships with law enforcement and the private sector.

As you may recall, back in 2019, and the summer of 2019, I elevated racially motivated, violent extremism to a national threat priority, which is the level of our highest priority threat. And we saw a significant growth in the number of investigations that we were conducting throughout 2020; and then of course, certainly, since then.

And so we would look for the enhancement that I have just described, to build on top of the base that we already have, because we can't really rob Peter to pay Paul. All these other threats we have been talking about, are not subsiding at the same time that we are having to focus on terrorism.

Senator PETERS. So I just want to be clear, Director Wray. That the increase you are talking about is directly related to your efforts against domestic terrorism; is that 100 percent allocated?

Mr. WRAY. Yes. The \$13 million is specifically focused on domestic terrorism?

Senator PETERS. Okay. I just want to be clear. Thank you.

Administrator Milgram, frequently discussion about the movement of fentanyl focuses on the Department of Homeland Security seizures at ports of entry across the border, but as you know, there is critical work that needs to be done to deal with fentanyl much earlier, particularly when it comes to the supply chain, you discussed that in your opening remarks. And so my question is related to how do we deal with precursors, and this long chain that leads to dangerous products coming into our country.

My question is: How does the DEA work, specifically, with the Department of Homeland Security to identify, and investigate the illicit movement of precursors in fentanyl production? And are there additional tools or authorities that you believe are going to be necessary to enhance both the DEA and the DHHS's ability to disrupt this supply chain in a significant way?

Ms. MILGRAM. Thank you for raising this conversation, Senator, because I think it is vital that we be looking at this as a network problem. So traditionally, we have spent a lot of time focused on high-value targets, the leaders, for example, of the cartels, that work is important but it is not nearly enough. We have now mapped, with our counter threat teams, more than 6,000 members, associates, and facilitators of these two cartels, in more than 40 countries worldwide.

And again, these are the two cartels that we have identified as being most responsible for the deadly fentanyl on our streets today. This starts in China with the precursor chemicals, and then it goes to Mexico where the—where those chemicals are being used to make fentanyl.

So we are targeting, specifically, those precursor chemical companies both on the clearnet and on the darknet, and the individuals who are engaged. Now, we do work closely with DHS, they have capacities related to cargo shipment, one of the challenges that we are all facing, though, is that right now, because the chemical industry is so under-regulated, as I mentioned earlier, in the Chapitos network case where we have charged 28 individuals, including four in China, they are hiding what those chemicals are as they are being shipped out.

And so there is no, "know your customer" requirement, there is no requirement that anything be correctly labeled. And so we are working as hard as we can with DHS and others to figure out how we can best infiltrate and adapt to be able to track those shipments, and to stop them even before they get to Mexico.

Senator PETERS. Thank you. Thank you, Madam Chair.

Senator SHAHEEN. Thank you, Senator Peter.

Senator Kennedy.

Senator KENNEDY. Thank you, Madam Chair.

Madam Administrator, the two cartels that are sending fentanyl into the United States; are located in Mexico, aren't they?

Ms. MILGRAM. Yes sir.

Senator KENNEDY. And isn't it a fact that we could stop those cartels in their tracks if President Lopez Obrador would invite

American Military, and/or law enforcement personnel to come into Mexico and work with his Military and law enforcement personnel?

Ms. MILGRAM. Senator, what I would say from my purview as the Head of the DEA—

Senator KENNEDY. But is my statement true or not?

Ms. MILGRAM. What I would say is that we are focused on the two cartels who we believe are doing exactly what you say they are responsible for the fentanyl coming into the United States.

Senator KENNEDY. Let me ask you again. If President Lopez Obrador invited the American Military, and/or American law enforcement officials to come into Mexico to work with the same in Mexico we could stop the cartels; could we not?

Ms. MILGRAM. Senator, I believe this is a whole-of-government effort and has to be including whether it is the military, us, FBI, and others—

Senator KENNEDY. Madam Administrator, I have listened to you here for almost an hour telling us how bad fentanyl is. Thank you for that, but we know.

Ms. MILGRAM. Yes, sir.

Senator KENNEDY. I am going to ask you a third time. If President Lopez Obrador invited American—the American Military, and/or our law enforcement personnel to come into Mexico, and work with the same in Mexico, we could stop the cartels; isn't that a fact?

Ms. MILGRAM. So Senator, I can speak to the law enforcement side of this. And you just mentioned law enforcement. I believe that this is vital for both Mexico and the United States. Mexicans are dying as well, as we showed in the Chapitos case.

Senator KENNEDY. Well, then why don't we stop them?

Ms. MILGRAM. So we—

Senator KENNEDY. Would it help—let me ask you a fourth time. Would it help if President Lopez Obrador—I don't think it is a complicated question, Madam Administrator; you are asking us for more money, every year, more money, and it gets worse, worse, and worse. You know, in the real world, the nitty-gritty of the real world, when you fail you get fired. In government when you fail you get more money, because obviously you need it.

Now let me ask you a fourth time, if President Lopez Obrador—and I would appreciate an answer—if President Lopez Obrador invited the American Military, and/or law enforcement personnel to come into Mexico and work with his, we could stop the cartels, couldn't we?

Ms. MILGRAM. I believe, Senator, that we can stop the cartels.

Senator KENNEDY. Okay. Have you made that suggestion to President Biden?

Ms. MILGRAM. If I could, I believe that we can stop the cartels by—

Senator KENNEDY. Have you made that suggestion to President Biden?

Ms. MILGRAM. Senator, I have been very vocal, in the whole-of-government setting on the importance of fentanyl, and all of us using every single effort and authority that we have—

Senator KENNEDY. Why hasn't President Biden done it? I mean, this is the way the American people, whose sons and daughters are

dying look at it, our economy is \$23 trillion; Mexico's economy is \$1.3 trillion. Ours is 18 times bigger, we buy \$400 billion every year from Mexico, without the people of America, Mexico, figuratively speaking, would be eating cat food out of a can, and living in a tent behind an outback.

So why don't you and the President, embarrassing no one, get on the phone and call President Lopez Obrador, and make him a deal he can't refuse, to allow our military and our law enforcement officials to go into Mexico, and work with his to stop the cartels? Why don't you do that?

Ms. MILGRAM. Senator, what I am doing every single day is working with the incredible men and women of DEA, who are risking their lives across 334 offices worldwide to stop this——

Senator KENNEDY. And I appreciate that, but you are not—you are not doing what would work. Why won't you do what will work?

Ms. MILGRAM. Senator, we are——

Senator KENNEDY. Why don't you call the President this afternoon, and say: Mr. President, let us call, let us call President Lopez Obrador, privately, and make him a deal he can't refuse? Because we both know that President Lopez Obrador has neither the ability, nor the will to stop the cartels. But yet, we go along and pretend that they are our friends, and Mexico is our friend, but he has criminal organizations that are killing our people. And you know how to stop it, and the President does, and you are not doing it.

Ms. MILGRAM. Senator, we are working every day to stop it, and we are making——

Senator KENNEDY. But you are not doing what would stop it.

Ms. MILGRAM. We are transforming, and we are working in countless ways across the globe to do what needs to be done for the American people, and there is nothing that the men and women——

Senator KENNEDY. You know, when it is important to you, you make it happen. When it is not important to you, you make an excuse.

Senator SHAHEEN. Thank you. Senator Britt.

Senator BRITT. Thank you, Madam Chair.

Director and Administrator, thank you both for being here today.

Director Wray, you have publicly stated that the FBI opens two China-related counterintelligence investigations every day, that is a concerning statistic, to say the least. How severe is the threat the United States is facing from the Chinese Communist Party? And to the extent possible, can you characterize the nature of those threats?

Mr. WRAY. So I would say, and I have I have been saying this since early in my tenure as FBI Director, that there is no country, no country, that presents a broader, more severe, more comprehensive threat, to our economic security, our innovation, and our ideas, than the Chinese Government, the Chinese Communist Party.

And that threat is massive in scale, and complicated in the different targets, tools, techniques, and agendas that they have. All of which are ultimately designed to advance the Chinese Government at our expense. And it includes everything from cyber, where they have a bigger hacking program than every other major nation combined, to economic espionage, and intellectual property theft,

from businesses ranging from Fortune 100 companies, to small startups in Silicon Valley, to everything from big cities, to rural.

We have had them stealing seeds in agricultural areas, all the way to malign foreign influence where they are targeting both officials that they are trying to influence, and shape in a more pro-Chinese Government, Chinese Communist Party direction; but also, harassment, stalking, intimidation of dissidents, and critics here in the United States, whether they are Chinese-Americans, or other critics of the regime.

So it is an all-fronts threat, and requires a whole-of-country response, ranging not just across the intelligence community, not just across law enforcement, but working in partnership with the private sector, with universities, and with our foreign partners, because the same thing they are doing to us they are doing to all our friends and allies as well.

And I find that when I talk to our foreign partners this is often one of the first topics they want to raise as well. So I think, ultimately, for us, as a country, the solution is to make sure we keep this as a priority and to work in partnership with all those that I just mentioned.

Senator BRITT. Absolutely, thank you for your candor, and the comprehensive nature of your response. I hope that our leaders across the board will listen to what you just said, and wake up.

Director Wray, I understand you have visited the FBI Redstone in Huntsville on several occasions. We look forward to welcoming additional FBI employees to Huntsville, as construction continues and new facilities are opened. My next question actually has two parts; first, how does FBI Redstone fit into the FBI's broader strategic plan for the future?

And second, will FBI Redstone provide capacity to foster the professional development and training of your workforce to ensure that FBI has the most highly skilled, and innovative, and analytical workforce out there?

Mr. WRAY. So this is a subject I get very excited about.

Senator BRITT. Excellent. Me, too.

Mr. WRAY. I am really excited about the future at Huntsville, we are on track now, to I think have 19 different FBI divisions represented there. It is already up to about 1,800 employees, but I can easily see it getting to about 3,000. In terms of the future, I think I see a couple things. One, I view it as an innovation hub for the FBI, we have talked a lot already in this hearing about technology, and our adversaries use the technology, and our need to use technology to be ahead of them, and that is where I think the R&D efforts really is one way of short-handing it, I think would be really concentrated in Huntsville.

We are going to have a cyber-kinetic range, where our cyber agents can train, an innovation hub. So it is both innovation and advanced training. We will always have Quantico as our basic training, all new agents and analysts, but I expect our sort of graduate-level training to be at Redstone. And we are on track for that too.

The third piece I would mention is, we already have a counter IED Center of Excellence there, with TEDAC, which is where IEDs from all over the world are sent to do forensics on those IEDs,

which then leads to lives saved on the battlefield. So we are looking to grow that as well.

And I have been to visit there, as you said many times, and I am sure I will visit many more, and every time I am struck by the buzz and the hum of the activity, and frankly how excited, and enthusiastic, all of our people and our partners are there.

Senator BRITT. Excellent. Thank you so much. I would be remiss if I didn't encourage you and the FBI to continue leveraging Huntsville's highly skilled workforce, and vast national security industrial base, whether it is network engineering, quantum computing, artificial intelligence, or counter UAS, Huntsville has the experience, and stands ready to support the FBI's mission. Thank you.

Senator SHAHEEN. Thank you, Senator Britt.

Senator Van Hollen, I am sorry I missed—

Senator VAN HOLLEN. That is all right.

Senator SHAHEEN [continuing]. You were out of order on my list, but you are next. And I would point out, we are not going to make our 3:45 deadline, but we are going to do the next two Senators' questions in the Open Session. Then break to go to the SVC for the classified round.

Senator VAN HOLLEN.

Senator VAN HOLLEN. Thank you, Madam Chair. And thank both of you for your service to our country.

Director Wray, I am sure you would agree that the men and women of the FBI deserve a new headquarters, worthy of their sacrifice. You know this has been an ongoing discussion. Let me just say here, and I am not looking for any response, that I think that if you look at this, the history of this we want to make sure that we can consolidate key parts of the agency's mission, and also provide for the appropriate safety. It is my view that the Maryland sites are the ones that both achieve the mission, also provide the new headquarters at a cost that is affordable the taxpayer, and meet the President's mission regarding equitable investments.

But we will have an opportunity in this Committee, and the other subcommittee that oversees the GSA, in time. I just wanted to put that out there on the table.

I want to thank you and your office in Baltimore, special agents in Baltimore. They are a critical part of our Joint Task Force there. I also want to commend the FBI's Joint Terrorism Task Force, and the U.S. Attorney in Maryland. As a result of the FBI's investigation they filed charges against two defendants, who were allegedly conspiring to attack one of the local power grids in Baltimore.

The defendants who were affiliated with a Neo-Nazi organization had planned to carry out these attacks in furtherance of racially or ethnically motivated violent extremist beliefs. The prosecutors allege that the defendants had intended to use firearms to attack five substations that serve the Baltimore area.

It is one example of an interdiction that I believe could have helped avoid a very serious problem. They don't get the attention that I think they deserve when we stop a really bad thing from happening. But I want to—I want to thank you.

And just to follow up on Senator Peters' question. I have seen in your testimony, you say that the greatest terrorism threat to our homeland is posed by lone actors, or small cells who are typically

radicalized online, and look to attack soft targets with easily accessible weapons that describes perfectly what was intended here, in Baltimore.

Do you believe that this budget request before us, before the Appropriations Committee, is sufficient to combat the rising threat of domestic terrorism? In other words, does it provide you, at the FBI, the resources you need to meet that very real threat?

Mr. WRAY. Well, certainly I think the resources that we requested will go a long way towards addressing that issue. I would say any resources the Congress sees fit to send us, to deal with the threat, I can assure you, they can immediately be put to good use. We have seen a growth in domestic violent extremism, and home-grown violent extremism, really over the years, and at the same time, as I have mentioned, I think to Senator Peters we—all these other threats we have been talking about, we can't pull people off of those threats, unless we neglect those.

And so that is why the enhancement that is in the fiscal year 2024 budget becomes so important. It builds on allocations in our base that are also extremely important to help us deal with this threat. In some ways, the lone actor piece of it, part of the reason that is so important is because if you think about, by comparison, to a more developed cell that is plotting attacks over years with complicated weapons, think of 747, think 9/11.

As challenging as that is, and it is incredibly challenging, and it is still out there, to be clear, that there are a lot of dots to connect.

But loan actors, you know, let us say two people, like the case that you mentioned, and I appreciate your recognition of our folks in the Baltimore Field Office and the JTTF there, there are not very many dots to connect, and it is going from flash to bang very quickly. So that makes the—in some ways it makes it that much more challenging for law enforcement, which is why the enhancement is so important.

Senator VAN HOLLEN. Thank you, Mr. Director. A question on the implementation of the Safer Communities Act, and the FBI's role in administering the National Instant Criminal Background Check System; I know that you have been working hard to make the necessary changes to that system to accommodate some of the steps that have been taken. I think we need to go a lot farther when it comes to gun safety laws, but those were some meaningful steps.

One additional area that was raised in a GAO Report some time ago, was the risk created by the requirement that the FBI get rid of those reports after the—at least the background check reports within 24 hours. The FBI pointed out numerous instances before that requirement was put in place where the ability to go back, more than 24 hours, was able to identify people who were—would put the community at risk.

So my question to you is, if you don't know the answer right here: What is the risk? What are the continuing risks of that artificial 24-hour deadline that requires you to get rid of the reports after that period?

Mr. WRAY. Well, as your question references, there is a whole complicated patchwork of record-keeping requirements, both what we are to retain, and what we are not to retain, and for how long,

and so forth. And the policy decisions behind those are ones that I will leave to the policymakers, but I would be happy to follow up with you to provide a sense of the operational impact of some of those—some of those issues, yes.

Senator VAN HOLLEN. I would appreciate that. The operational impact and what you think the risks are, in terms of not being able to track down folks because their records had been destroyed after 24 hours.

Thank you. Thank you, Madam Chair.

Senator SHAHEEN. Thank you, Senator Van Hollen.

Senator Murkowski.

Senator MURKOWSKI. Thank you, Madam Chair.

Director, Administrator, thank you for being here, and for what you do. Fentanyl as you have said here, is killing us, it is poisoning us, it is a frightening crisis, and I think each of us are seeing the impact in our States. You never want to be number one in something like this but—we understand that in Alaska we saw the greatest percentage increase in fentanyl, fentanyl use, fentanyl deaths, we spiked by 150 percent between 2020 and 2021.

We are told that Alaska is one of fentanyl's deadliest frontiers. You know, we are kind of proud of the claim to fame, we are the Last Frontier. Well, unfortunately, for many people it may be truly the last for them, because fentanyl is poisoning them.

Administrator, I know you had an opportunity to meet with a particular advocate in Alaska, Sandy Snodgrass, whose son, Bruce, was poisoned at the age of 22. We all have so many of these stories. I don't think that we are doing near the job that we need to do to explain the lethality of fentanyl to the American people.

You mentioned that you had sent a letter out to all of your agents, we need to do everything that we possibly can do to explain and reinforce that this is nothing to be messed with. We have talked about the fact that it is being incorporated and sold as part of cocaine, or any of the other drugs that are out there, whether they are legitimately prescribed, or otherwise, as a State that has legalized marijuana, I am hearing now that we are seeing fentanyl being incorporated into some of the marijuana. So if you are buying it, not through a licensed vendor in the State, what are you getting? This to me is absolutely frightening.

A question; and I think this can go to both of you. We are in a State where you are not putting this in a truck and bringing it up. It is coming to us through the mail, it is coming to us through the air, and one would think, we have got some intercept points, where we can be doing a better job.

Administrator Milgram, you mentioned that so much is being distributed now through the ease of apps, of social media. What more do we need to be doing? What resources can we be providing, either through DEA, through FBI, to figure out how we can better intercept what we are seeing coming into our States? And particularly some place as remote as Alaska; do you have what you need?

Ms. MILGRAM. Senator, if I could start on public awareness, because I couldn't agree more. I think it is one of the most vital things that all of us can be doing, because the way the cartels are doing this, to make fake pills look exactly like a real drug, they are

tricking intentionally. And so we talk about it as deliberate calculated treachery, or hiding it in other drugs.

And so we want everyone to understand that fentanyl kills, that one pill can kill, and that there are no second chances with fentanyl. And so we have a campaign at DEA, we call it, "One Pill Can Kill". We do not brand it, it is on our website. So anyone can take it, and use it. And we put all of the materials up there, emoji codes for social media, so a parent could know what a drug code might be. We have police departments across—

Senator MURKOWSKI. Do you have it on—if somebody has got their smartphone, does it pop up and say, "One Pill Can Kill"?

Ms. MILGRAM. We would love for it to be in at that point, where if someone goes on a social media app, they would see something like that, because again, we have got colleges taking it, we have got schools using it, we have got police departments, but my view is, the more we can do to make—to help all Americans understand, and convince people to have conversations with their families about this threat, the more progress we can make. Even one life lost is too many.

In terms of what we need, just one quick note on social media, the Deputy Attorney General brought us together recently, myself, the President's Homeland Security Advisor with the social media companies, and she was clear in saying that this is an emergency, and that she is asking the social media companies to change their terms of service; to have a zero tolerance policy for narcotics trafficking, just like they do for child sexual exploitation, or for terrorism, and also to report more to law enforcement.

So we would be delighted also to work with Members of this Committee on some thoughts on social media. In terms of transportation, we are very actively tracking the way that fentanyl is coming into Alaska. And you are right in saying that because it is also so tiny, tiny amounts can be transported easily, by boat by plane. And so we are looking at all these different aspects and really trying to, across the entire country, map all of the supply routes, and target the individuals and the suppliers, as well as the local distributors.

Senator MURKOWSKI. And I know we all know that there is more that can be done. And I look at this issue, I think about the issue that we have in the State when it comes to human trafficking, and the rates of human trafficking that we are seeing, especially amongst our homeless youth and our Alaska Native people.

This remains a concern. And so I think about our situation up North. We have got one field office in Anchorage; we have two satellite offices, one in Fairbanks and in Juneau. We have got this crisis stage, in my view, when it comes to fentanyl. We have got issues related to human trafficking, and I worry that we don't have the resources that we need to make a difference in these, just frightening areas.

Administrator Wray, you can you can choose to comment on that. I know that we are well over our time to go into Closed Session, but.

Mr. WRAY. I would just say, as you know, Senator, I have been up to visit our office there.

Senator MURKOWSKI. Which we appreciated.

Mr. WRAY. And more importantly, even our law enforcement partners up there, twice. And the thing that really strikes me, besides how small the footprint is in some sense, how massive the footprint is in another sense, and then last but not least, how closely the partners work together.

And I say that with the vantage point of somebody who has been to all 56 FBI field offices twice, and the Anchorage Field Office, and the relationships they have built with each other, Federal, State, and local partners, is pretty striking. And I think it is, in some ways, there is nothing that brings people together faster and more closely than a common, really massive challenge.

Senator MURKOWSKI. Yes. They are good, but they are overwhelmed. Thank you, Director.

Senator SHAHEEN. Thank you, Senator Murkowski.

ADDITIONAL COMMITTEE QUESTIONS

Senator SHAHEEN. If there are no further questions, Senators may submit additional questions for the subcommittee's official hearing record. We would request that the FBI and DEA respond to those questions within 30 days.

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

QUESTIONS SUBMITTED TO ADMINISTRATOR ANNE MILGRAM, DRUG ENFORCEMENT ADMINISTRATION

QUESTIONS SUBMITTED BY SENATOR JOE MANCHIN, III

Question 1. West Virginia continues to be ground zero of the drug epidemic. The CDC reported more than 106,000 Americans died from drug related overdoses in 2021, making that the deadliest year on record for overdoses. It is estimated that more than 75% of those overdoses likely involved an opioid or a synthetic opioid, such as fentanyl and fentanyl-related substances. I frequently speak on the Senate floor highlighting these tragic stories, and I have introduced several pieces of bipartisan legislation to address the crisis. I've supported the efforts of all Federal law enforcement officers as they work to catch the largest drug distributors and try to stem the flow of drugs into the state.

Can you discuss DEA efforts to curtail the drug crisis in the U.S—including the Appalachian Regional Prescription Opioid Strike Force?

Answer. The Drug Enforcement Administration (DEA) is working relentlessly every day to combat emerging and evolving drug threats, save American lives, and combat the devastating tide of drug poisonings plaguing our country. We are working closely with law enforcement agencies domestically and abroad to stop deadly synthetic drugs flooding into our neighborhoods and to aggressively investigate those responsible for manufacturing and trafficking these drugs. DEA continues to investigate hundreds of fentanyl cases that have led to significant arrests, seizures, and prosecutions. We are focused on defeating the two Mexican cartels—Sinaloa Cartel and Jalisco New Generation Cartel (CJNG)—that are responsible for the majority of the fentanyl in the United States. To defeat these two cartels, DEA has launched two counterthreat teams for the Sinaloa Cartel and CJNG. These two counterthreat teams are mapping the cartels, analyzing their networks, and developing targeting information on cartel members wherever they operate around the world.

These efforts are producing significant results. On April 14, 2023, the Department announced charges against members and associates of the Sinaloa Cartel, known as the Chapitos, for their role in the transportation of lethal amounts of fentanyl, cocaine, heroin, and methamphetamine into the United States. The charges were the product of proactive enforcement efforts and the dedication of significant prosecutorial resources. Moreover, DEA recently announced the results of "Operation Last Mile," a year-long national operation targeting operatives, associates, and distributors affiliated with both the Sinaloa Cartel and CJNG. Operation Last Mile is responsible for the last mile of fentanyl and methamphetamine distribution on streets

and social media, and resulted in the arrest of 3,337 associates of CJNG and the Sinaloa Cartel in the United States. On June 23, 2023, DOJ announced Operation Killer Chemicals which includes three indictments charging four Peoples Republic of China (PRC) companies and eight PRC nationals working for the companies with conspiring to traffic fentanyl. Two of the PRC nationals have been taken into custody. The indictments allege that the defendants provided their customers with raw materials and the scientific knowledge to manufacture fentanyl. Moreover, the defendants spoke openly of having customers in America and Mexico, and, specifically in Sinaloa, Mexico, the location where the Sinaloa Cartel is based.

The Appalachian Regional Prescription Opioid (ARPO) Strike Force was formed in October 2018 as a joint effort between the Department of Justice (DOJ), Federal Bureau of Investigation (FBI), Health and Human Services—Office of Inspector General (HHS—OIG), DEA, and state and local law enforcement to combat healthcare fraud and the opioid epidemic in parts of the country that have been particularly harmed by addiction. ARPO has partnered with Federal and state law enforcement agencies and U.S. Attorneys' Offices throughout Alabama, Kentucky, Ohio, Virginia, Tennessee, and West Virginia to prosecute medical professionals and others involved in the illegal prescription and distribution of opioids. Over the past 3 years, ARPO has charged more than 110 defendants, collectively responsible for issuing prescriptions for over 115 million controlled substance pills. In fact, in West Virginia, the ARPO Strike Force has initiated at least 12 investigations with one successful prosecution and seven cases pending with the U.S. Attorney's Office. The successful prosecution resulted in two defendants receiving sentences of 78 months and 121 months imprisonment, along with a judgment in the amount of \$1.8 million.

In 2022, DOJ, building upon the success of the October 2018 formation of the ARPO Strike Force, formed the New England Prescription Opioid (NEPO) Strike Force. This joint law enforcement effort was created to identify and investigate healthcare fraud schemes in the New England region, and to effectively and efficiently prosecute individuals involved in the illegal distribution of prescription opioids and other prescribed controlled substances.

Can you discuss the DEA's work to crack down on suspicious opioid orders?

Answer. Over the past several years, DEA has conducted numerous outreach efforts to educate controlled substance manufacturers and distributors on their responsibilities to report suspicious orders, including orders of unusual size or frequency. The Department, in partnership with DEA, has brought several high-profile civil actions against registrants who have shirked this responsibility. In addition, new technology is being utilized by DEA Diversion Investigators to identify suspicious orders that warrant further investigation and action. By reviewing hundreds of thousands of reports, DEA has been able to identify the most egregious registrants and bring administrative, civil, and criminal actions against those who acted in violation of the Controlled Substance Act (CSA). As a result of DEA's efforts, we have seen a reduction in the number of excessive pharmaceutical opioid orders. The majority of current opioid abuse is in the form of "fake pills" (pills that appear to be legitimate pharmaceuticals but actually contain fentanyl or other synthetic opioids) and injectable street heroin/fentanyl.

The SUPPORT Act amended the CSA to require the establishment of a centralized database for collecting reports of suspicious orders.¹ In FY 2020, DEA launched the Suspicious Orders Report System (SORS) Online. The SUPPORT Act requires that upon discovering a suspicious order or series of orders, a registrant must notify the DEA Administrator and the Special Agent in Charge of the Division Office of DEA for the area in which the registrant is located or conducts business.² If a registrant reports a suspicious order to the centralized database established under the SUPPORT Act, the registrant shall be considered to have complied with the requirement to notify DEA's Administrator and the Special Agent in Charge of the Division Office of DEA for the area in which the registrant is located or conducts business.³

DEA tracks the actions its field personnel take on each suspicious order reported to SORS Online. Personnel evaluate each reported suspicious order and determine one of the following categories for each suspicious order: whether the reported information aids an existing investigation, results in a new investigation, or requires no further action. This enables DEA to have a general understanding of the usefulness of the suspicious order reports submitted to SORS Online and to track resulting actions taken by the field.

¹ 21 U.S.C. § 832(b).

² 21 U.S.C. § 832(a)(3).

³ 21 U.S.C. § 832(b)(2).

Following are the SORS statistics for the years following the creation of SORS online:

DEA ACTION	COUNT BY TRANSACTION DATE			
	10/23/2019 – 10/22/2020	10/23/2020 – 10/22/2021	10/23/2021 – 10/22/2022	10/23/2022 – present
EXISTING INVESTIGATION	5,698	6,211	11,996	6,722
INVESTIGATION	9,897	5,847	4,731	2,551
NO FURTHER ACTION	245,152	445,189	554,169	348,985
PENDING	115,052	90,115	241,881	275,512
TOTAL	375,799	547,362	812,777	633,470

Field investigators continue to diligently review each reported suspicious order and take appropriate action. It should be noted that the data from SORS Online is only one data set that investigators use when evaluating a registrant's activity. This data is used to complement all of the other information to which investigators have access.

Per the SUPPORT Act, DEA is sharing information from SORS Online with the States.⁴ In order to maximize the use of SORS Online, DEA developed a portal for the State Attorneys General (SAGs) to obtain suspicious orders identified in their state. Point of contact (POC) information and authorization is required prior to providing portal access. Currently, 46 states have responded to DEA's request for POCs and now have access to the SORS portal. With this access, SAGs can review individual pharmacy and practitioner orders deemed suspicious by suppliers and the reason for the designation.

Question 2. Fentanyl continues to kill Americans all over the country, including in West Virginia, and is easily smuggled across the Southern Border. At the same time, the temporary order for fentanyl-related substances as a Schedule I substance is set to expire at the end of this year. I strongly support fentanyl and fentanyl-related substances being permanently scheduled as Schedule I substances.

Can you explain to the Committee why removing fentanyl from Schedule 1 status would hamper law enforcement's ability to keep fentanyl-related substances out of our communities?

Answer. Fentanyl is the deadliest drug threat that the United States has ever faced. Although licit fentanyl is a Schedule II substance because it has medical uses, there are an abundance of structurally similar substances that have no known medical use. Drug traffickers are continuously manufacturing and trafficking new and novel fentanyl-related substances (FRS) that are poisoning Americans. Cartel associated chemists are continually utilizing different precursor and pre-precursor chemicals, as well as new synthesis techniques and methods, to evade detection and make new highly potent and lethal fentanyl analogues. These FRS are structurally similar to fentanyl in ways that would be expected to have psychoactive effects and toxicity with potentially deadly outcomes. FRS are not permanently controlled in any schedule. Drug traffickers develop FRS to, at least in part, avoid regulatory controls, and thus circumvent detection and prosecution.

Prior to the emergency class-wide scheduling of FRS in 2018, the DEA had to reactively schedule new fentanyl analogues on a case-by-case basis, as they were encountered. The scheduling process involves multiple Federal agencies, to include DEA, the Department of Health and Human Services (HHS), the Food and Drug Administration (FDA), and the National Institutes of Health (NIH). Prior to 2018, DEA and its interagency partners were racing to keep pace with the cartel chemists who were manufacturing and trafficking in new fentanyl-related substances outside the existing laws and regulations. The continual scheduling of new fentanyl-related substances in reaction to innovations by cartel chemists was unworkable.

Accordingly, the permanent class-wide scheduling of fentanyl related substances is DEA's top legislative priority. Class-wide scheduling is scheduled to expire at the end of 2024. Permanent class-wide scheduling would permit DEA to seize new, deadly substances when they are found, and to prosecute people who are engaged in traf-

⁴ 21 U.S.C. § 832(c).

ficking these deadly substances. DEA has currently classified 36 substances as fentanyl-related substances.

If class scheduling of fentanyl-related substances expires, DEA expects savvy clandestine manufacturers and traffickers to respond to the re-emerging gap in U.S. law by again producing novel fentanyl-related substances. This is the normal response of traffickers who wish to avoid prosecution and still profit from peddling poison, and is consistent with previous attempts to circumvent reactive substance-specific control measures.

What additional authorities do you wish the DEA had to better curtail the smuggling of fentanyl across the Southern Border?

Answer. DEA is using our extensive authorities, both at home and abroad, to combat the threat we face from the Sinaloa Cartel and CJNG. Targeting these cartels is our top operational priority. The Department of Homeland Security is directly responsible for border control and the state of the border.

Question 3. The Federal government is teetering on the edge of financial disaster. We have breached the debt limit, we are accumulating debt at an historic pace, and we are encouraging reckless and wasteful spending driven in large part by a broken budget system. I have limited all of my funding requests to 1% increases. The DEA requested a 3.8% increase.

Will the DEA commit to working with the Department of Justice and this Committee on finding ways to get our fiscal house in order, while ensuring that we are meeting our national security needs?

Answer. The proposed 1% increase would have long-term negative effects and would be, in effect, a cut in real terms: DEA's requested 3.8% increase provides the resources to maintain current service levels. Conversely, our main threats—the Sinaloa Cartel and CJNG—do not currently face major budgetary constraints and will insert themselves into any vacuum possible. The bill's 1% cap on budget growth in subsequent years will require us to cut current services in the future because we will not be able to fully adjust for inflation. The DEA will continue to work with the Department of Justice, the Office of Management and Budget and the committee to strategically identify where resources are needed most while maintaining fiscal responsibility.

QUESTIONS SUBMITTED BY SENATOR SHELLEY MOORE CAPITO

Question 1. As DEA ramps up its focus on international interdiction, how will you balance your resources to ensure that we continue to interrupt trafficking chains at the local level?

Answer. DEA is taking a network-based approach to defeat the Sinaloa Cartel and CJNG, the cartels responsible for the vast majority of fentanyl and methamphetamine killing Americans at record rates. This network-based approach includes mapping, analyzing, and targeting entire criminal drug networks, domestically and abroad. Indeed, DEA is committed to dismantling all criminal networks responsible for flooding the United States with deadly drugs.

Simultaneous with the network-based approach to defeat the Sinaloa Cartel and CJNG, DEA's Operation Overdrive uses a data-driven, intelligence-led approach to identify and dismantle drug networks operating in areas throughout the United States with the highest rates of violence and drug-poisoning deaths. In each of these locations, DEA works with state, local, and tribal law enforcement officials to conduct assessments identifying the criminal networks and individuals that are causing the most harm.

Similar to, and at times in partnership with, the Department's Organized Crime Drug Enforcement Task Forces, we work with state, local, and Federal law enforcement and prosecutorial partners to pursue investigations and prosecutions that will reduce drug related violence and drug poisonings. In Phase 1 of Operation Overdrive, we focused on 34 locations across the United States. Phase 2 of Operation Overdrive is currently taking place in 57 locations across the United States. DEA recently announced the results of "Operation Last Mile," a year-long national operation, targeting operatives, associates, and distributors affiliated with the Sinaloa Cartel and CJNG responsible for the last mile of fentanyl and methamphetamine distribution on streets and social media. Operation Last Mile resulted in the arrest of 3,337 associates of the Sinaloa Cartel and CJNG in the United States.

Question 2. What do you see as the greatest impediments to cross-agency information gathering and sharing, if any, and how can we lessen these challenges?

Answer. DEA uses many platforms for cross-agency information sharing including the Special Operations Division (SOD), the El Paso Intelligence Center (EPIC), and the Organized Crime Drug Enforcement Task Forces (OCDETF) Fusion Center. These platforms have all been used effectively in the coordination of information collection, deconfliction, and analysis across agencies.

DEA has experienced challenges establishing memorandums of understanding with other agencies. This includes granting access to DEA sensitive data and obtaining access to other agency data. DEA, in particular the Chief Data Officer, is responsible for recipients' use of data and is held accountable if data is misused.

Also, agencies should establish liaison relationships at SOD and utilize deconfliction systems such as the Deconfliction and Information Coordination Endeavor (DICE). Target and investigative deconfliction is vital to both officer safety and the Transnational Organized Crime (TOC) community's ability to efficiently operationalize intelligence for maximum impact.

All agencies need to foster a culture of collaboration and an understanding of how to safely share TOC intelligence and information across communities without compromising judicial processes. Agencies should train personnel on how material can be safely shared without compromising sources and methods and law enforcement investigations.

The DEA would also encourage the routine production of intelligence products or versions of products by the Intelligence Community that can be more easily shared with law enforcement and private sector partners, to boost their understanding of the TOC threat and generate additional unclassified information. One of DEA's primary methods of sharing intelligence with the TOC interagency community is via the production and dissemination of Intelligence Information Reports (IIRs). The budget increase request would enable DEA to dedicate more resources towards DEA's IIR program.

CONCLUSION OF HEARINGS

Senator SHAHEEN. The subcommittee will recess. And we will reconvene in 10 minutes, in SVC-217, to take any classified testimony.

[Whereupon, at 4:02 p.m., Wednesday, May 10, the subcommittee was recessed, to reconvene subject to the call of the Chair.]

COMMERCE, JUSTICE, SCIENCE, AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 2024

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

NONDEPARTMENTAL WITNESSES

[CLERK'S NOTE.—The subcommittee was unable to hold hearings on nondepartmental witnesses. The statements and letters of those submitting written testimony are as follows:]

PREPARED STATEMENT OF AMERICA ACHIEVES

Summary.—America Achieves respectfully submits this written testimony for the record to encourage Congress to robustly fund tech-based economic development initiatives authorized in the CHIPS and Science Act of 2022, especially the Regional Technology and Innovation Hubs program at Economic Development Administration (EDA) within the Department of Commerce. Specifically, we urge the Committee to support Regional Technology and Innovation Hubs at the full authorized amount of \$2.5 billion for fiscal year (FY) 2024 to realize Congress's vision of growing innovation, jobs, and supply chains in critical technologies across the country.

Statement.—America Achieves is a national nonprofit organization with substantial experience and a demonstrated track record of incubating, scaling, and spinning off nonprofit initiatives and organizations, advising and shaping large-scale philanthropy and public policy, and helping to drive improvements at scale in education and economic development. We submit this testimony to request that Congress provide \$2.5 billion FY 2024 for the Regional Technology and Innovation Hubs (Tech Hubs) program at Economic Development Administration (EDA) within the Department of Commerce (DOC), as authorized by the CHIPS and Science Act of 2022 (CHIPS and Science Act).

In 2021, EDA selected a consortium that included America Achieves along with National League of Cities, the Federation of American Scientists, and the Nowak Metro Finance Lab at Drexel University to provide support to State and local leaders as they built meaningful, inclusive ecosystems as part of EDA's previous regional innovation competition, the Build Back Better Regional Challenge (BBBRC). Since then, America Achieves has continued to support regions across the Nation in building local good jobs economies and designing and implementing regional economic development strategies investments—including most recently with the Tech Hubs Phase 1 program. Through this process, we continued to learn that innovation growth need not be concentrated in a few cities or in certain highly-educated segments of the population—and that regions and residents from all backgrounds are more ready than ever to lead the Nation in industries of the future if given the proper resources to launch, convene, and build from the bottom up. We also learned that competitiveness and leveraging the contributions and talents of underserved communities and populations are inextricably linked. We simply cannot be globally competitive unless all our players are on the playing field, which means leveraging talent and businesses from all types of communities across the country and all segments of our population.

Meaningful support for the Tech Hubs program is essential to building on this momentum and ensuring nationwide assets are fully leveraged as the United States seeks to maintain dominance in several key technologies. In fact, the United States faces intensifying economic and technological disruption. The speed and effective-

ness of our response—not only nationally but also locally—will impact our Nation’s competitiveness and security. Leveraged well, the Tech Hubs program could contribute to an historic opportunity for targeted regions across the United States to help our country remain the best place in the world for successful companies to grow, for innovators to build and scale new and emerging technologies and businesses, and for workers from all backgrounds to attain skills and good jobs to drive and sustain these businesses for the benefit of their families and communities.

We greatly appreciate the \$500 million provided by Congress in the FY 2023 Omnibus appropriations bill to begin the program, but there is not sufficient funding currently to support Tech Hubs at the scale envisioned by Congress. When combined with FY 2023 appropriations initial down-payment, an additional \$2.5 billion in support for FY 2024 would reach the intended authorization level and meaningfully accelerate the implementation of Regional Tech Hubs in communities nationwide to realize the program’s transformative potential that will be necessary to keep the U.S. at the forefront of our shared goals of economic and national security. At this level of funding, EDA will be in position to support the launch of at least 20 Tech Hubs in all six EDA regions at the necessary scale.

The bipartisan CHIPS and Science Act authorized a total of \$10 billion over 5 years for Tech Hubs, of which \$3 billion was authorized for the initial 2 years of the program (the “initial performance period”). This bold and vital effort will position regions, States, and communities to be global hubs for research development, workforce training, entrepreneurship, commercialization, and manufacturing around technology areas. The U.S. is falling behind other nations in developing and scaling critical technologies in areas such as biotech, advanced manufacturing, clean energy, quantum, and next generation communications. As Congress has seen, the U.S. is now scrambling to recover from decades of offshoring the manufacturing and innovation base for semiconductors. It is imperative that the U.S. maintain economic and talent leadership in other key sectors to ensure we have the workforce, infrastructure, and supply chains needed to compete globally into the coming decades, while avoiding the need to spend more in the future to back-fill capabilities as was needed with semiconductors. Further, with most of our Nation’s innovation growth concentrated in a few select metro areas, Tech Hubs have the potential to build a foundation for significant technology-based economic development while democratizing innovation strength across the Nation and supporting domestic job creation.

As mentioned, in addition to the critical need to spark economic growth in these areas, recent Federal investments in place-based innovation have proven that communities across the country are more ready than ever to heed this important call. Examples have included recent commitments by Congress towards place-based policymaking, such as through COVID-recovery investments at EDA with the Build Back Better Regional Challenge (BBBRC) and Good Jobs Challenge competitions, as well as recent support for the National Science Foundation’s (NSF) Regional Innovation Engines. These competitions generated strong interest, receiving over 1,500 applications and concept outlines from coalitions nationwide. Through Tech Hubs, EDA is in position to leverage these and similar investments to ensure sustainable regional growth and technological acceleration. For instance, the combined approach of NSF seeding domestic science and engineering innovation needed for new technology discoveries with the economic development acceleration support offered by EDA through programs like the Tech Hubs and smaller, targeted investments like BBBRC, will ensure comprehensive and sustainable lab-to-market ecosystems. Communities and regions across the Nation have shown the capacity and willingness to build targeted workforce and industry capabilities and are eager for Tech Hubs to serve as the final component to enable broader regions to compete with Boston, Silicon Valley, and global rivals for supremacy in key technology areas.

We appreciate the opportunity to provide testimony to the Committee on behalf of communities and States across the country that are excited for the launch of EDA’s Tech Hubs program. Congressional funding support is now needed at the authorized scale for the program to proactively ensure regions across the country realize the growth, investments, education, and jobs that will be needed to solidify the United States’ longstanding position as the world’s leader in the industries of the future.

[This statement was submitted by Jon Schnur, Chief Executive Officer]

PREPARED STATEMENT OF THE AMERICAN BAR ASSOCIATION

Chair Shaheen & Ranking Member Moran:

My name is Deborah Enix-Ross, and I serve as the President of the American Bar Association (ABA), which is proud to be the world's largest voluntary association of attorneys and legal professionals. Additionally, I am also the Senior Adviser to the International Dispute Resolution Group of Debevoise & Plimpton located in New York City. On behalf of the ABA, thank you for the opportunity to submit this statement to the Senate Appropriations Committee, and especially to the leaders of the subcommittee on Commerce, Justice, Science and Related Agencies (CJS), in support of increased funding for the Legal Services Corporation (LSC) so that LSC can expand civil legal assistance to more low-income Americans.

Since its inception in 1974, LSC has funded legal aid grantees, which provide services that benefit more than 1.8 million low-income Americans in every State and territory throughout the country. Specifically, legal aid grantees offer advice on family law, housing, employment, and other civil legal issues in both Federal and State cases. However, LSC has been under-resourced for decades, and the COVID-19 pandemic made the problem even more acute due to significantly increased demand for the organization's services.

BACKGROUND

The ABA has been a steadfast champion for "Equal Justice Under Law," which remains the foundational principle that underpins the U.S. legal system. In 1920, the ABA established the Standing Committee on Legal Aid and Indigent Defense (SCLAID) with the goal of protecting the legal rights of low-income populations, and SCLAID has continued to advance that mission for over a century.¹ Former United States Supreme Court Justice Lewis F. Powell, who also served as ABA President in 1964, ardently advocated for every American's right to seek justice within our legal system, and his supportive efforts aided the adoption of the Legal Services Corporation Act of 1974,² which was enacted to provide high quality legal assistance to those who would be otherwise unable to afford adequate legal counsel.³

LSC has requested \$1.576 billion for Fiscal Year (FY) 2024: By comparison, LSC received \$560 million for FY 2023, which was a \$71 million increase over FY 2022.

The nationwide need for civil legal aid continues to grow, which was accelerated by the COVID-19 pandemic and its lingering long-term effects on society. Currently, nearly 54 million Americans qualify for legal assistance from LSC-funded programs. Furthermore, eligible constituents span every demographic and live in rural, suburban, and urban areas across the country.

LSC's 2022 study, *Justice Gap: The Unmet Civil Legal Needs of Low-income Americans* (The Justice Gap), found that since 2017 the justice gap widened considerably. Unfortunately, due to a shortfall in annual funding, 92 percent of the civil legal problems of low-income Americans who qualify for civil legal aid receive inadequate or no legal assistance.⁴ This means that hundreds-of-thousands of veterans, senior citizens who become victims of housing foreclosures, as well as the women and children who are desperate to escape domestic violence, cannot secure legal assistance. Therefore, proper funding for LSC should be considered essential to ensure the fair administration of justice and also be viewed as a main pillar upholding the rule of law.

According to LSC, its funding request takes into consideration the fact that "more than 33% of unmet legal needs are directly related to COVID-19 and that the legal needs of low-income people have only been aggravated as a result of the pandemic."⁵ LSC also notes in its fiscal year 2024 Budget Request that "evictions are on the rise—returning to or exceeding historical averages . . . (and) . . . [d]ebt collection and related consumer finance complaints have reached record highs."⁶

As LSC further explained in its budget request:

In 2021, LSC grantees closed a record number of cases involving domestic violence. As families grapple with legal needs related to or exacerbated by the COVID-19 pandemic, we expect the number of people seeking help from LSC grantees to increase in the next several years. Yet, in 2021, even be-

¹ https://www.americanbar.org/groups/legal_aid_indigent_defense/.

² <https://www.congress.gov/bills/93rd-congress/house-bill/7824/text/pl?overview=closed>.

³ <https://www.lsc.gov/about-lsc/what-we-do>.

⁴ <https://www.lsc.gov/press-release/low-income-americans-face-immense-justice-gap-according-new-legal-services-corporation-report>.

⁵ <https://www.lsc.gov/our-impact/publications/budget-requests/fiscal-year-2024-budget-request>.

⁶ *Id.*

fore these anticipated increases, LSC grantees were forced to turn away 49% of people eligible for services seeking help because they lacked resources to provide assistance. Without a significant additional investment in civil legal aid, the justice gap will only continue to grow.”⁷

CORRECTING THE REPRESENTATIONAL IMBALANCE

The United States of America promises every citizen that the rule of law will be applied impartially and equally regardless of circumstance, national origin, gender, skin color, creed, wealth, or other factors. But our civil justice system is simply not designed for those without legal help. The law is a complex web of technical terms and procedures that can be exceedingly difficult for the average person to understand. Assistance from a legal professional has almost become a necessity for even seemingly routine matters, but millions of Americans lack the resources to afford counsel even as they seek to protect their most basic and fundamental rights.

An unfair advantage may arise when one party has the financial means to retain counsel while the other does not, which often occurs during landlord-tenant disputes, employment cases, and healthcare matters. When determining its funding request, LSC considered the increased number of unrepresented litigants in state civil courts resulting from both inadequate funding for legal aid and a large poverty population. The National Center for State Courts (NCSC) released a study in 2015 which found that the representational imbalance among plaintiffs and defendants has dramatically worsened over the last several decades. While plaintiffs represented by attorneys declined only slightly (from 99 percent to 96 percent), attorney representation for defendants fell by more than half (from 97 percent to 46 percent).⁸ Providing LSC with more resources may help to reduce this growing imbalance.

PROTECT THE VULNERABLE & DISADVANTAGED

The ABA’s own legal aid funding data illustrates the wide gulf between those in need of legal help and the resources available to provide such help. The ABA’s Legal Aid Funding Report, utilizing LSC’s findings in *The Justice Gap* and ABA-collected national data on the costs of legal representation, found that low-income households facing a legal problem required, on average, \$3,065 worth of legal services to resolve the issue, while the average amount of legal aid funding from all sources could provide those households with only \$175 worth of such services.⁹

When comparing this legal aid funding data collected by the ABA Resource Center for Access to Justice Initiatives with the Civil Legal Aid Attorney Count collected by the National Center for Access to Justice (NCAJ) in its Justice Index,¹⁰ it is clear why such a resource gulf exists: Inadequate funding translates into inadequate numbers of legal aid lawyers to meet demand. Even in States ranked within the top quintile of legal aid funding nationally, the number of client-eligible, low-income people per legal aid attorney can exceed 3,000, while in the States in the bottom quintile of legal aid funding, that number exceeds 13,000 low-income persons per legal aid attorney.

While the effects of the COVID-19 pandemic have been felt in every community throughout America, the brunt of this disaster has been absorbed by low-income Americans. As the impact of the pandemic continues, low-income communities are enduring spikes in housing insecurity, medical debt, domestic violence, and countless other problems. For example, a study from the Council on Criminal Justice found that domestic violence spiked after the onset of the pandemic.¹¹

The need for robust funding for the Legal Services Corporation has become more urgent than ever to help protect the most vulnerable members of society living in local communities throughout the country, some of which include:

- Domestic Violence Survivors.*—According to the Centers for Disease Control and Prevention (CDC) about twenty-five percent of women have experienced contact sexual violence,¹² and as noted above, domestic violence cases surged during the pandemic. Additionally, the mandatory lockdowns made it even more difficult for victims to seek essential legal services.
- Veterans & Military Families.*—LSC has been and remains committed to supporting America’s veterans, as well as active military personnel and their fami-

⁷ Id.

⁸ https://www.ncsc.org/data/assets/pdf_file/0020/13376/civiljusticereport-2015.pdf.

⁹ <http://ambar.org/ABArray>.

¹⁰ <https://ncaj.org/state-rankings/2020/attorney-access>.

¹¹ <https://counciloncj.org/impact-report-covid-19-and-domestic-violence-trends/>.

¹² <https://www.cdc.gov/violenceprevention/intimatepartnerviolence/fastfact.html>.

lies, which is why LSC formed a national Veterans Task Force that strengthened the ability of civil legal aid organizations to assist the estimated 1.6 million eligible veterans with their legal needs. In 2021, nearly 32,000 veterans and their families received assistance with a range of legal issues. Moreover, LSC has stated that nearly three-quarters of low-income households with veterans or other military personnel reported that they had experienced a civil legal problem within the last year, demonstrating that access to civil legal aid services can be especially important for veterans and their families.

—*Rural Communities.*—LSC created a Rural Justice Task Force to study the challenges of delivering legal services to rural and remote areas. Twenty percent of the Nation’s population live in rural areas, yet only two percent of the country’s attorneys are located near enough to offer critical legal services and counsel. In fact, some Americans living in remote areas do not have any ability to consult a lawyer. To put this in perspective, 10 million Americans living in rural communities qualify for LSC-funded legal services, yet 86 percent of rural households requesting assistance did not receive the aid they needed.

—*Renters & Homeowners.*—States and localities continue to rely on legal aid to assist the millions of people facing eviction. As LSC noted in *The Justice Gap*, the “pandemic contributed to a drastic spike in rent prices across the country, which rose an unprecedented 11.3% in 2021 and put more rental homes out of reach for Americans with limited financial means.” Furthermore, LSC explained that housing-related legal problems for low-income Americans “can be a consequential link in a long chain of civil legal issues” with 39 percent of low-income households experiencing five or more civil legal problems in the prior year.

CONCLUSION

Ideally, the United States should fulfill 100 percent of the civil legal needs for low-income Americans. The ABA recognizes that fiscal constraints and other legislative considerations make achieving that level challenging, and the lawyers of America spend countless hours performing pro bono services every year in an effort to bridge the divide. We thank this subcommittee for its commitment and historical support for increased funding for LSC to help protect the rights of low-income Americans, and we urge Congress to support a significant increase in LSC’s annual funding to help uphold America’s pledge to every citizen that they can access equal justice under the law.

PREPARED STATEMENT OF AMERICAN EDUCATIONAL RESEARCH ASSOCIATION

FISCAL YEAR 2024 APPROPRIATIONS FOR THE NATIONAL SCIENCE FOUNDATION AND U.S. CENSUS BUREAU

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). AERA recommends that the NSF receive at least \$11.9 billion in fiscal year 2024. This recommendation is consistent with that of the Coalition for National Science Funding (CNSF), in which AERA is a long-term active member. Furthermore, our request aligns the Dear Colleague letter led by Senator Markey. AERA also recommends \$2 billion for the Census Bureau, aligned with the recommendation of The Census Project.

AERA is the major national scientific association of approximately 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 in 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 our field, my testimony focuses on the importance of the STEM Education (EDU) Directorate 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.

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, including through passing the CHIPS and Science Act last year, 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, particularly in supporting Centers for Transformative Education Research and Translation. This work is even more critical with recent findings from the National Science Board working group on Explorations in K–12 STEM Education noting the demand from STEM educators for high-quality, evidence-based curriculum.

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 initiatives such as the Eddie Bernice Johnson NSF INCLUDES program 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 2024, 94 percent of appropriated funds directly supported research and STEM education through grants and cooperative agreements in fiscal year 2022, with 79 percent of funding supporting research at colleges and universities. In addition, NSF estimates that nearly 168,000 K–12 students and 49,000 K–12 teachers will benefit from programs that directly engage them in STEM experiences within and outside the classroom in fiscal year 2024.

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 STEM education research across all levels and to promote evidence-based innovations in teaching practices, instructional tools, and programs is essential to advancing STEM education outcomes 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 inform 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 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 re-

search 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. 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 3.2 percent of the budget for Research and Related Activities, yet it provides approximately 63 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 13 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 fiscal year 2024 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 survey data with administrative data in other Federal agencies through the pilot of the National Secure Data Service.

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 fiscal year 2024.

The requested amount of \$2 billion for fiscal year 2024 will provide the agency with needed resources to conduct the Economic Census, modernize the Survey of Income and Program Participation, and improve population estimates. In addition, this amount of funding will provide critical resources for planning for the 2030 Decennial Census, important for implementing design innovations that will help streamline decennial operational infrastructure while ensuring an accurate count. 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 \$11.9 billion for the National Science Foundation and \$2 billion for the Census Bureau in fiscal year 2024 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 AMERICAN GEOPHYSICAL UNION

FISCAL YEAR 2024 APPROPRIATIONS REQUESTS FOR THE NATIONAL AERONAUTICS & SPACE ADMINISTRATION, NATIONAL OCEANIC & ATMOSPHERIC ADMINISTRATION, AND NATIONAL SCIENCE FOUNDATION

The American Geophysical Union (AGU), a non-profit, non-partisan scientific society, appreciates the opportunity to submit testimony regarding the fiscal year (Fiscal Year) 2024 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 global community of half a million in the Earth and space sciences, respectfully requests that the 118th Congress appropriate the following:

- \$9 billion for NASA’s Science Mission Directorate (SMD),
- \$157.8 million for NASA’s Office of STEM Engagement,
- \$7.2 billion for NOAA, and
- \$11.9 billion for NSF.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

AGU requests that Congress appropriate \$9 billion in fiscal year 2024 for NASA’s Science Mission Directorate (a 15.4% increase over fiscal year 2023 levels). This request will allow NASA to remain on track to steadily advance existing and new decadal missions across all divisions, provide unique opportunities for the next generation of STEM professionals, and ensure that the U.S. can continue to be a global Earth and space science powerhouse.

Earth Science Division

AGU requests that Congress appropriate \$2.5 billion for NASA Earth Science (a 15.4% increase over fiscal year 2023 levels). Strong investment in this division will support a robust climate and applications research program, including the continued development of four Earth system observatory missions and Landsat Next, a reimagining of the Landsat mission that will create new user applications, such as water quality assessments, mineral mapping, and soil conservation. Additionally, increased funding will enable NASA to develop new capabilities and tools to predict and manage wildfires and their impacts, such as airborne field campaigns and the continued development of the FireSense Technology program. A robust investment will also allow implementation of NASA’s Open Source Science initiative across the science mission directorate, allowing more cross-divisional discovery and making NASA-produced science more accessible.

Planetary Science Division

AGU requests that Congress appropriate \$3.6 billion for NASA Planetary Science in fiscal year 2024 (a 15.4% increase over fiscal year 2023 levels). Strong investment in this division will allow NASA to pursue several high-profile decadal missions, including the Lunar Discovery and Exploration Program, Europa Clipper, Mars Exploration Program, and planetary defense, without inhibiting the budgets of other science mission areas. Additionally, increased funding will allow Planetary Science to commit to a launch date for the VERITAS mission, the first mission to Venus since 1989; robustly fund research and analysis, key to developing the next generation of space science leaders; as well as to lay the groundwork for implementation of the 2023 decadal survey.

Heliophysics Division

AGU requests that Congress appropriate \$935 million for NASA Heliophysics in fiscal year 2024 (a 16.1% increase over fiscal year 2023 levels). Increased investment in Heliophysics will enable deeper understanding of the space environment, thereby protecting existing terrestrial and space assets and helping to achieve new space exploration ambitions. Specifically, increased investment in Heliophysics will allow NASA to resume development of the DYNAMIC mission and the Geospace Dynamics Constellation (GDC) mission, both of which NASA has paused because of cost

concerns in other science mission areas. GDC will fill critical observational gaps in our understanding of space weather and aid space weather forecasting capabilities performed by NOAA. Additionally, increased funding will support an ambitious 2024 decadal survey, ensure a robust research and analysis program to maximize the return of large missions, and foster a thriving heliophysics community through the support of early career scientists.

Office of STEM Engagement

AGU requests that Congress appropriate \$157.8 million for NASA's Office of STEM Engagement (a 10% increase over fiscal year 2023 levels). Increased funding for the office will allow NASA to increase engagement of K–12 students, broaden participation in NASA at all levels, and increase strategic partnerships to further expand NASA's STEM impact across the United States. Specifically, additional funding will support more unique, evidence-based K–12 learning experiences through the Next Gen STEM program, expand the number of internships offered through Space Grant, and increase MUREP programming at community colleges and for those not pursuing 4-year degrees.

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

AGU requests that Congress appropriate \$7.2 billion for NOAA in fiscal year 2024 (a 16.1% increase over fiscal year 2023 levels). From weather forecasts to fisheries data, to groundbreaking research about the world around us, NOAA's products and services are critical to everyday lives and livelihoods across the Nation. Robust funding is imperative for ensuring NOAA's continued ability to protect American lives and strengthen the U.S. economy.

Last year, the U.S. experienced 18 extreme weather and climate disaster events—each one exceeding \$1 billion in losses—costing a total of \$171.5 billion and more than 470 lives.¹ 2022 also marked the eighth consecutive year in which 10 or more separate billion-dollar disaster events impacted the Nation. NOAA's scientists and funding programs have been at the forefront of understanding the causes and impacts of these extreme events and increasing the lead time for predictions to mitigate impacts on lives and property. NOAA needs strong financial support to be able to bolster climate research, mitigate and prepare for worsening weather conditions, and build national and economic resilience.

NOAA is also critical for America's Blue Economy. The nation's oceans and Great Lakes are home to over 40 percent of the U.S. population and produce \$351 billion in goods and services.² However, these communities and their economies face unique environmental threats, such as coastal storms and tidal flooding. NOAA's data and tools are vital for coastal communities, governments, and businesses to aid them in preparing for, responding to, and recovering from such disasters.

Additionally, NOAA satellites provide weather forecasting, storm tracking, and long-term Earth observations that protect lives and infrastructure. Strong support for the agency will allow NOAA to maintain current launch and development schedules while developing the next generation of geostationary satellites, known as GEO-XO, to further enhance the geostationary satellite missions well into the 2030s and beyond.

NATIONAL SCIENCE FOUNDATION

AGU requests that Congress appropriate \$11.9 billion for NSF in fiscal year 2024 (an approximately 25.3% increase over fiscal year 2023 levels). Ambitious 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.

Increased funding will allow NSF to meet the ambitions of the CHIPS and Science Act—such as achieving the goals of the new Technology, Innovation, and Partnerships Directorate, expanding access to STEM education, creating Regional Innovation Engines, and growing the convergence accelerator initiative—without sacrificing core NSF research and STEM education programs. NSF currently supports almost a quarter of all basic research and 62% of basic environmental research done at U.S. colleges and universities. Increased funding will allow NSF to expand support for STEM programs for K–12 students and teachers as well as undergraduate

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>.

²National Oceanic and Atmospheric Administration (NOAA), Office for Coastal Management. 2022. "NOAA Report on the U.S. Marine Economy." Charleston, SC: NOAA Office for Coastal Management. Available at: <http://coast.noaa.gov/digitalcoast/training/econreport.html>.

and graduate students, which are essential to our ability to attract and retain the STEM workforce of the future.

Increased funding will also allow NSF's Geosciences Directorate to invest in exciting new initiatives such as the National Resilience Research Network, which will work with communities to enhance their resilience and better understand how extreme events will impact their economy and security. Additionally, the ObsX program will create the next generation of tools and platforms needed for the observation of extreme environments such as the deep sea or polar regions, which can aid understanding of the conditions under which life is possible. And finally, increased funding will allow the Office of Polar Programs, the manager of all U.S. activities in the polar regions, to support Arctic field research and operations, which were substantially deferred due to the pandemic, and resume maintenance and planning for Antarctic and Arctic facilities.

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, and Michael Villafranca, Senior Specialist, Science Policy & Government Relations.]

PREPARED STATEMENT OF AMERICAN INSTITUTE OF BIOLOGICAL SCIENCES

FISCAL YEAR 2024 FUNDING FOR THE NATIONAL SCIENCE FOUNDATION

The American Institute of Biological Sciences (AIBS) appreciates the opportunity to provide testimony in support of fiscal year (FY) 2024 appropriations for the National Science Foundation (NSF). We encourage Congress to provide NSF with at least \$11.9 billion in fiscal year 2024.

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. Since 1960, science and engineering employment in the United States has grown more rapidly—at an annual growth rate of 4 percent—compared to the 1 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 a 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 135 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 66 percent of extramural Federal support for non-medical, fundamental biological and environmental research at academic institutions.

STRENGTHENING BIOLOGICAL RESEARCH INFRASTRUCTURE

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 (NASEM), “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. The NASEM report’s recommendations for establishing an action center for biological collections and requiring specimen management plans for research proposals generating new specimens, underscore the importance of biodiversity collections and have been supported by the CHIPS and Science Act.

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 re-

search enterprise. Students learn science by doing science, and NSF programs engage students in the research process.

NSF awards reached 2,000 colleges, universities, and other public and private institutions across the country in FY 2022. 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 2022, nearly 352,000 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 rate of increase of China's R&D, is almost double that of the U.S.

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, creates uncertainty in the research community, and stalls 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 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 \$11.9 billion in fiscal year 2024 is necessary to undo the harmful effects of the slow growth in research funding in recent years that has hurt America's research productivity. 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.

We applaud the passage of the CHIPS and Science Act, and urge Congress to follow through on the promise of this landmark legislation by funding NSF as close as possible to the levels authorized by the law. Increasing investments in translational research through the new Technology, Innovations, and Partnerships Directorate will bolster U.S. global leadership and competitiveness in innovation. We are encouraged by this commitment to our Nation's scientific and technological enterprise and urge that robust investments also be made in basic and fundamental research.

Please continue supporting increased investments in our Nation's scientific capacity by providing NSF with at least \$11.9 billion in fiscal year 2024. This request aligns with the fiscal year 2023 authorization for NSF in the CHIPS and Science Act. 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, Ph.D., Public Policy Director.]

PREPARED STATEMENT OF AMERICAN PSYCHOLOGICAL ASSOCIATION SERVICES, INC.

FISCAL YEAR 2024 APPROPRIATIONS

The American Psychological Association Services, Inc. (APA Services) is the companion organization of the American Psychological Association (APA), which is the Nation's largest scientific and professional nonprofit organization representing the

discipline and profession of psychology, as well as over 146,000 members and affiliates who are clinicians, researchers, educators, consultants, and students in psychological science. APA Services urges Congress to provide the following funding levels for programs within the National Science Foundation (NSF), the Department of Justice (DOJ) and the Census Bureau in FY2024.

NATIONAL SCIENCE FOUNDATION (NSF)

APA Services joins the scientific community urging Congress to provide at least an \$11.9 billion appropriation for the National Science Foundation (NSF) in FY2024. As other nations continue to make dramatic increases in their investments in science, robust funding for NSF in FY2024 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 \$2 billion in high-quality proposals submitted to NSF each year that cannot be funded.

APA Services 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 historically received 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 Services 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 Services 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. 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 academia, and funding opportunities will impact early-career scientists in the immediate and late phases of their careers.

APA Services 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 several years that must continue. An increased focus must also be placed on the role of behavioral and mental health research in efforts to mitigate and adapt to climate change. NSF's broad portfolio of research related to climate science and clean energy includes research into 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. Psychology, and more directly the mental health workforce, will play an essential role in adaptation efforts in the face

of increasingly prevalent impacts of climate change. NSF's efforts to understand the role of mental health in adaptation efforts is another essential part of efforts the Federal Government is taking to avert the most disastrous outcomes.

DEPARTMENT OF JUSTICE (DOJ)

APA Services 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 Services 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 at least \$75 million for the Bureau of Justice Statistics; at least \$60 million for the National Institute of Justice (including at least \$1 million in dedicated funding for gun violence research); \$125 million for the Second Chance Act including \$5 million to support Children of Incarcerated Parents demonstration grants; \$35 million for Justice Reinvestment; \$151 million for Delinquency Prevention Program. To address the impact the COVID-19 pandemic has had on increases in drug misuse, APA Services recommends: \$445 million for the Comprehensive Addiction and Recovery Act related activities including \$95 million for Drug Courts; \$35 million for Veterans Treatment Courts; \$45 million for Residential Substance Abuse Treatment; and \$190 million for the Comprehensive Opioid Abuse Program. APA Services supports \$10 million for Crisis Stabilization and Community Re-entry Grant Program; \$135 million for STOP School Violence Act; \$45 million for Mentally Ill Offender Treatment and Crime Reduction Act; \$3 million for the Missing Americans Alert Program (Kevin and Avonte's Law) and \$50 million for the Justice Mental Health Collaboration Program. Within BOP, APA Services 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. When Congress thinks about VAWA, transgender and gender non-conforming people need to be considered. According to the Human Rights Campaign, at least 38 transgender and gender non-conforming people were killed in 2022, the overwhelming majority of whom were Black and Latinx transgender women. These figures are suspected to be incomplete because too often these cases go unreported—or misreported. The National Center for Transgender Equality reports that the toxic anti-trans rhetoric and efforts to weaponize disinformation about trans people have contributed to a deeply unsafe environment for trans people and their families.

According to the Substance Abuse and Mental Health Services Administration, research has shown that traumatic experiences are associated with both behavioral health and chronic physical health conditions, especially those traumatic events that occur during childhood. Substance use, mental health conditions, and other risky behaviors have been linked with traumatic experiences. Crime victims may experience trauma, and APA Services strongly recommends fully funding the Victims of Crime Act Fund to ensure adequate resources for direct victim services.

APA Services urges the Committee to increase FY2024 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 FY2024 funds made available to the OVW, APA Services specifically requests: \$300 million for Services, Training, Officers Prosecutors (STOP) Grants; \$17.5 million for Education and Training to End Violence Against Women with Disabilities; \$12.7 million for the Enhanced Training and Services to End Violence Against and Abuse of Women in Later Life Program (Abuse in Later Life Program); \$64.9 million for grants to assist Tribal governments in exercising special domestic violence criminal jurisdiction; \$51.5 million for Rural Domestic Violence and Child Abuse Enforcement; \$28 million for the Consolidated Youth Oriented Program; and \$40 million for grants to reduce violent crimes against women on campus. These programs are crucial 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 re-

sponses 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 Services urges the Committee to increase FY2024 funding for the Office of Community Oriented Policing Services (COPS) to support federal, State, and local activities as well as fully funding the programs and initiatives included in the recently enacted Law Enforcement De-Escalation Training Act of 2022. This includes \$20 million for Training on Racial Profiling and De-escalation, and Duty to Intervene Program. APA Services requests at least \$50 million for Community Policing Development/Training and Technical Assistance be funded at least \$50 million and at least \$15 million for the Training to Improve Police-based Responses to the People with Mental Illness program. To address the current crisis in law enforcement suicide and PTSD, APA Services strongly urges the committee to double funding for the Law Enforcement Mental Health and Wellness Program to at least \$20 million.

CENSUS BUREAU

APA Services urges the Committee to provide \$2 billion in funding for the Census Bureau in FY2024, which represents a \$394 million increase above the President's request, and a \$521 million increase from the agency's FY2023 enacted level. The Administration's request supports important initiatives, but it does not include sufficient additional funding to fully support priorities identified by stakeholders. Funding above the Administration's request is necessary not only to implement initiatives outlined in the Census Bureau's proposed FY2024 budget request, but also to support other priorities identified by stakeholders-especially 2030 Census preparations and the ACS.

[This statement was submitted by Katherine B. McGuire, Chief Advocacy Officer]

PREPARED STATEMENT OF THE AMERICAN SOCIETY FOR BIOCHEMISTRY AND MOLECULAR BIOLOGY

The American Society for Biochemistry and Molecular Biology, an international nonprofit scientific and educational organization, represents more than 11,000 students, researchers, educators and industry professionals. Almost all ASBMB members who are active researchers or trainees receive funding from Federal agencies—such as the National Science Foundation and the Department of Energy—to conduct scientific research. It's through this lens that the ASBMB strongly recommends the following:

1. \$8.8 billion for the Office of Science at the Department of Energy to continue bolstering the basic energy sciences and the bioeconomy. Fully funding the Science Laboratories Infrastructure Program at the authorized levels will help repair and modernize the National labs, the backbone of basic sciences.
2. \$12 billion for the National Science Foundation to fulfill the commitments made in the landmark CHIPS and Science Act that will strengthen research and workforce-related activities in the scientific enterprise, including the STEM Opportunities Act, Rural STEM Education Research Act, the MSI STEM Achievement Act and expanded graduate research fellowships.

The importance of robust and sustainable funding for fundamental scientific research cannot be overstated. Fundamental research elucidates the underlying principles and mechanisms of the natural world, laying the foundation for new technologies and societal advancements across sectors, including health, technology, agriculture and energy. Furthermore, investment in fundamental research pays for itself in roughly a decade by stimulating new ideas and innovations for creating new markets that boost the economy in the long-term while also increasing household incomes over time.

The Office of Science within the Department of Energy supports thousands of researchers and trains the next generation of scientists. For example, the Basic Energy Sciences program supports 6,100 PhD scientists and 2,100 students in more than 47 States. In addition, nearly 16,000 scientists use DOE equipment and facilities to conduct their research across a wide range of fields covering the gamut of the U.S. research enterprise. Increasing DOE's budget pushes scientific research forward and invests in solutions to the energy- and climate-related challenges that we face as a nation.

Last year, Congress rallied behind the landmark CHIPS and Science Act to re-energize scientific research and training supported by the NSF, DOE and other Federal science agencies. Appropriating the key investments made through this bill will

ensure the U.S. remains a global leader in innovation. Congress must rally again—this time to appropriate sufficient funding to the NSF to ensure new programs and initiatives supplement, and not supplant, the NSF's core research activities, which fuel U.S. competitiveness.

[This statement was submitted by Sarina Neote, Director of Public Affairs.]

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 2024 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 multidisciplinary endeavor, and our members' federally funded research is fundamental to advances in human health, agriculture, energy, and the environment. For fiscal year 2024, ASM recommends the following:

Provide at least \$11.9 billion for the National Science Foundation in fiscal year 2024 and urges the Office of Science and Technology Policy to implement fiscal year 2022 CJS Appropriations report language on the microbiome and revisit the Interagency Strategic Plan for Microbiome Research.

NSF funding is critical to ensure our scientific workforce is prepared to lead the world in the emerging technologies that are key to our health, safety, and security. ASM was pleased to see the bi-partisan CHIPS and Science Act authorized \$15.7 billion for the NSF in fiscal year 2024 and helps to address various STEM initiatives including Combating Sexual Harassment in Science Act, the Bioeconomy Research and Development Act, the Department of Energy Science for the Future Act and the NSF for the Future Act. The legislation also directs Federal agencies to support research in core areas of interest identified in ASM's policy principles:

- Bioenergy, bioproducts and new energy technologies.
- Research to combat the climate crisis.
- Foundational functional systems biology research.
- Microbiome and microbial communities.
- The development of a national genomic sequencing strategy.

The CHIPS and Science Act also addresses growing workforce gaps in emerging technology areas by expanding its efforts in STEM education and broadening participation programs; and advance many priorities in foundational research and infrastructure programs. NSF is well prepared to take on the enhanced competitiveness mission envisioned in congressional innovation legislation and ramp up its investments in critical science and technology areas.

Prior to the enactment of the CHIPS and Science Act, NSF was unable to fund more than \$2 billion worth of research proposals rated "very good or higher" each fiscal year. It is imperative that the rest of NSF see sustainable growth. New efforts can only be successful when built on a strong foundational research enterprise that supports research, education, and infrastructure to sustain our science and technology ecosystem.

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. The CHIPS and Science Act will build research capacity through grants at institutions that primarily serve students who are underrepresented in science and will ramp up investment in academic institutions in States and territories that receive less Federal research funding.

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. Basic research funded by NSF 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 fiscal year 2024 appropriations bill robustly fund NSF.

Urge the Office of Science and Technology Policy to revisit the Interagency Strategic Plan for Microbiome Research.

ASM is grateful to the House and Senate Appropriations Committees for including requested language in fiscal year 2022 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 request the Committee to obtain an update from the National Science and Technology Council on the implementation of the Interagency Strategic Plan for Microbiome Research, which was developed by the Microbiome Interagency Working Group, and in particular, any proposal for the continuation of the plan at its completion in 2022. The Committee encourages OSTP to prioritize leveraging the National Microbiome Data Collaborative at the Department of Energy to ensure cross-agency collaboration and integration of microbiome datasets.

CONCLUSION

ASM is particularly grateful to Congress for increasing investment in the NSF in recent years. In fiscal year 2024, we urge Congress to revisit OSTP's past commitment to microbiome research and to increase funding for NSF to \$11.9 billion. We thank you for your continued support for microbe-powered innovation.

[This statement was submitted by Allen Segal, Chief Advocacy Officer.]

PREPARED STATEMENT OF THE AMERICAN SOCIETY FOR THE PREVENTION OF CRUELTY TO ANIMALS

On behalf of The American Society for the Prevention of Cruelty to Animals (ASPCA), the first humane organization in North America, and our over 2 million supporters nationwide, we appreciate this opportunity to submit testimony to the Senate Appropriations subcommittee on Commerce, Justice, Science, and Related Agencies. We respectfully request that the subcommittee consider the following concerns when making FY2024 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 preventing 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, many of which have garnered media attention.¹

Shootings involving pets often account for a significant percentage of the total firearms discharges in a particular agency. Data from some municipalities suggest

¹ In September 2022 alone: the head of Novato, CA's SWAT team shot and killed his neighbor's dog, Detroit police shot and killed a woman's dog after entering her owner's backyard while responding to an unrelated carjacking, and Brockton, MA police shot and killed a dog while responding to a parking enforcement call. In July, video footage shows police restraining, tasing, and killing a 15-month-old dog that had been accidentally let out of the house in Lebanon, PA. In the same month, Wagoner County, OK police killed a dog before her owner could reach the door. In May of 2022, Sacramento police officers shot and killed a family dog while serving a search warrant on the property. On April 17 of the same year, 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 fatally shooting a family dog seven times while responding to a barking complaint. On April 11 of 2021, 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 the same year, the Tampa PD shot the dog of the woman who had called them for help. Please note that these are examples and not an exhaustive list.

that 25–75% 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% 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. In 2022, the DOJ 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.

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% 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 effective at 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 by 89% (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

²Bathurst, 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>.

³Griffin, David; “Can Police Stop Killing Dogs?” *Police Magazine*; Oct. 29, 2014; <https://www.policemag.com/341722/can-police-stop-killing-dogs>.

⁴Stefano 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>.

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.

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 significantly 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 FY24 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.

Thank you for considering this request. We look forward to working with you on this important issue.

[This statement was submitted by Katlin Kraska, Director of Federal Legislation, Government Relations.]

PREPARED STATEMENT OF THE 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 \$11.9 billion for the National Science Foundation (NSF) for fiscal year (FY) 2024. 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.

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.

¹⁰ <https://www.sheriffs.org/ledet>.

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 and dramatic increases in yield have made these surpluses possible, even in the face of sustained global population growth. Such increases are due to improvements in crop seeds and agricultural innovations that rely on sustained 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, and for this to continue, critical investments are needed in basic biological sciences, as well as the translational science that brings the fruits of basic science to real-world applications.

Plant biology is at the interface of numerous scientific breakthroughs. The 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 and synthetic biology approaches toward better and more 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 mitigating the climate crisis and maintaining food and energy security, Federal investments in fundamental plant biology research are modest. Nevertheless, scientists have maximized and leveraged this funding to discover many of the basic functions and mechanisms of plants, providing a foundation for vital advances in practical applications in agriculture, health, energy, and the environment.

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 Directorate will accelerate basic and translational research to solve national and societal problems. TIP will support use-inspired research in biotechnology, among other areas, and propel NSF's 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 ASPB strongly supports NSF programs that build research capacity at emerging research institutions.

ASPB encourages strong support for the Directorate of Biological Sciences (BIO) and proportional funding increases across all 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 fundamental and translational 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 most 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.

Without significant increases in 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 our Nation's ability to respond

¹ <https://www.ers.usda.gov/data-products/ag-and-food-statistics-charting-the-essentials/ag-and-food-sectors-and-the-economy/>.

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. Considering the increased investments in agricultural research in China, Brazil, the EU, and other major trade partners, the U.S. cannot afford to cede its premier position in the basic research that underpins advances in our agricultural sector.

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. A significant increase in crop productivity will be needed to match the demand for food expected from global population growth. At the same time, climate change will present new challenges for crops and other plant ecosystems. Addressing these challenges requires that we steadily increase the rate of productivity growth, deploying all available tools and information to that end. These approaches might include, for example, improvement in crop water use efficiency and enhanced crop photosynthesis efficiency and performance, among many others. 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 innovative perspectives, will be needed. However, current training pathways do not appear prepared to ensure the availability of this workforce. The number of Ph.D. degrees awarded in the U.S. in the 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 Ph.D. degrees. In fact, the number of plant science doctoral degrees, both basic and agronomy-related, has remained stagnant during this period.³ Students gravitate towards fields with reliable and robust career and earning opportunities, and the academic plant sciences are bleeding talent because grants are small and unreliable, and salaries are not competitive. Increased funding for the NSF will allow the increased salaries that will retain talent.

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 on plant science training pathways. Developing the workforce that will solve future challenges is urgent.

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 better reflects the demographics of the U.S. population.

ASPB 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

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>.

³National Center for Science and Engineering Statistics, Survey of Earned Doctorates. <https://ncesdata.nsf.gov/builder/sed?type=chart&convert=1>.

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. That requires sustained 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 www.aspb.org.

[This statement was submitted by Crispin Taylor, PhD, Chief Executive Officer.]

PREPARED STATEMENT OF ANIMAL WELFARE INSTITUTE

Thank you for the opportunity to submit testimony on Fiscal Year 2024 funding priorities for the U.S. Department of Commerce (DOC) and the U.S. Department of Justice (DOJ).

U.S. DEPARTMENT OF COMMERCE

North Atlantic Right Whales \$50 million

In 2020, North Atlantic right whales were designated 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.

With only about 340 North Atlantic right whales left as of 2021, and of those fewer than 70 reproductive females, this species could be effectively extinct within our lifetime. 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. Seven right whales have been killed in US waters in the last 5 years, and two more seriously injured by vessel strikes. Three of these whales were calves, and one was a nursing mother. Two other whales are suffering from sublethal injury or illness related to a vessel strike event. The best available science also shows that two-thirds of right whale deaths go undetected, meaning that these observed deaths and injuries are a dramatic undercount.

Studies have shown that mortalities from known entanglements have continued to increase from 21 percent (1970–2002) to 51 percent (2003–2018).¹ 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.² 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 FY23 appropriations omnibus included \$27 million for North Atlantic right whales within the Marine Mammals, Sea Turtles, and Other Species line item. Within this funding, \$8 million was directed to NOAA for the continuation of a pilot program developing and field-testing new fishing gear technologies designed to reduce entanglements. Another \$26 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 \$50 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 an investment in reducing vessel-strike risk in

¹Sharp, 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).

²Pace, R. et al. (2021). Cryptic mortality of North Atlantic right whales. *Conservation Science and Practice*. 3. 10.1111/csp2.346.

high-traffic areas and transitioning to whale-safe fishing gear. We believe the pilot program to refine and field tests innovative fishing gear technologies, such as ropeless gear, should be expanded, including developing geolocation technologies. We 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.³

If we are to save this species, it will require 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 recently declared UME, 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 has only appropriated funds in 2005; all other contributions to the Fund have been through voluntary contributions. In the FY23 House Appropriations CJS Bill and Report, \$2M was allocated to this Fund, while the Senate CJS subcommittee, via report language, encouraged NMFS to request funding. In light of the significant number of active 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) \$13 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

³ Knowlton et al. (2016).

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 warm water 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) 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. In FY22, SIMP received a \$5.2M appropriation, and in FY23, that was increased to \$6.2M. As NOAA works to expand the Seafood Import Monitoring Program to additional at-risk species, additional funding of \$13 million is necessary to ensure full implementation in FY24.

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 annually contributes just over 1 cent to fund the MMC and its work. Between FY15 and FY21, the MMC was flat-funded at \$3.43 million. In FY 2022, funding for the MMC was slightly increased by \$300,000; in FY23, it received \$4.5 million. Unfortunately, due to rising fixed costs, the MMC has absorbed significant essential costs (salaries, rent, etc.), reducing their discretionary funding. In order for the MMC to fully fulfill its obligations, we ask that \$6 million be appropriated for FY24.

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.

In the last decade, Congress has taken significant steps 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 have 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 for its work on animal cruelty crimes is warranted.

[This statement was submitted by Ericca Gandolfo, Policy Advisor, Government Affairs.]

PREPARED STATEMENT OF 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)

REGARDING APPROPRIATIONS FOR NATIONAL SCIENCE FOUNDATION, NATIONAL AERONAUTICS AND SPACE ADMINISTRATION, AND NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

Chair Shaheen, Ranking Member Moran, and Members of the subcommittee:

Thank you for accepting this testimony 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 2024 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 and a recent national public opinion poll showed that museums are among the most trusted sources of information across the political spectrum, second only to friends and family above nonprofit organizations generally, local and national news organizations, government, business, and social media (Museums and Trust, AAM and Wilkening Consulting, 2021).

As trusted place-based institutions, our members serve essential roles in convening their communities, advancing action on issues of local and national concern, and engaging individuals of all ages in science and technology.

REQUESTS FOR FISCAL YEAR 2024 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, 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 STEM Education (EDU), which 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 \$75 million for the Advancing Informal STEM Learning (AISL) program.

NSF also supports STEAM education, informal learning, and the public's engagement with science through its research directorates, and we urge the subcommittee to provide increased funding for the NSF Directorates for Biological Sciences; Geosciences; Mathematical and Physical Sciences; Social, Behavioral and Economic Sciences; and STEM Education 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-including several opportunities to promote public engagement with science.

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 and engagement 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 \$150 million for NASA's Office of STEM Engagement, including at least \$20 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. This program has engaged tens of millions of learner interactions in all 50 States. To continue the program's evolution and strong reach nationwide, we request at least \$48 million for the SciAct Program.

Finally, we applaud the ways that the agency continues to make its data available to the public, allowing museums to engage their audiences with current observations and information.

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, such as wildfires, droughts, hurricanes, tornadoes, and earthquakes. 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 \$38 million for NOAA's Office of Education.

We also underscore the important ways that NOAA promotes public engagement with science through other offices and programs, such as its support for citizen science.

In closing, we continue to thank the subcommittee for all its support for 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 thousands of community-based institutions, these examples can be in or near each Congressional district.

[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 CAST

Chair Shaheen, Ranking Member Moran and members of the subcommittee:

Since 1984, CAST has worked relentlessly to ensure that our Nation is one where learning has no limits for all individuals. We pioneered Universal Design for Learning (UDL), a framework for the intentional and inclusive design of learning and training environments that harness technology, the learning sciences, and instructional practices to remove barriers to learning in all settings: physical, digital, or blended. UDL is now incorporated into key Federal education, career training, and workforce laws.¹ It encourages the design of flexible learning environments that anticipate learner variability and provide alternative routes to success; UDL acknowledges that variability across all learners is the norm rather than the exception. UDL also incorporates a responsive framework to support educators in their professional learning and application of new skills in any teaching environment. CAST is submitting testimony to support Fiscal Year (FY) 2024 investments in the National Science Foundation (NSF).

Our recommendations are in direct alignment with the stated goals of the NSF including the August 2021 goal “to increase the engagement of persons with disabilities in Science, Technology, Engineering, and Mathematics (STEM) fields and STEM education.”² With grants provided by the NSF, the U.S. Departments of Education (ED) and Labor (DOL) as well as the private sector, CAST works to ensure the full power of UDL is utilized to create a level playing field where all learners have equitable opportunities to succeed. To that end, we recommend the subcommittee invest \$1.444 billion in NSF’s STEM Education.

Currently, through public-private partnerships, including funding provided by NSF, CAST is working to increase equity, diversity, inclusion, and access to all school-age youth, young adults and adults in STEM including English Learners, individuals with disabilities, and those who may struggle due to low literacy. We do this by developing accessible STEM educational resources and making them more widely available to teachers and learners; increasing engagement in STEM education/STEM careers; and ensuring STEM teachers have opportunities to be trained and receive a credential in the use of UDL. Increased investments in STEM Education as led by NSF is essential to expanding and developing a diverse and well-educated science and engineering workforce that can assure national competitiveness in a global world and economy.

Examples of successful initiatives led by CAST and funded and/or co-funded by NSF include:

- Take Flight: Using Drones to Get Rural Middle School Girls Interested in STEM Careers.*—NSF has funded Take Flight, a multi-year project to explore and study the use of drones to teach rural middle school girls about STEM and the potential of STEM careers for women. Designed to confront society’s messaging and girls’ own perceptions about what STEM skills are, Take Flight is being conducted in rural New Hampshire and Maine, where access to female role models in STEM careers is limited.
- STEM Pathways for Rural Youth: Developing STEM Identity Through the Outdoors.*—NSF has funded OR Youth, an exploratory project designed to identify the ways outdoor recreation activities and the outdoor economy can be utilized to develop STEM identities and STEM career thinking for rural youth. This project focuses particularly on STEM as a career pathway in “amenity decline regions” where traditional jobs such as mining and timber collection are disappearing. This project builds off of work CAST did to support the adoption of Outdoor Recreation Competencies and the development of an Outdoor Recreation pathway in Career Technical Education, now utilized by the State of New Hampshire.

¹ See: Public Law 110–315, Public Law 113–128, Public Law 114–95, Public Law 115–224, National Education Technology Plan 2021, U.S. Department of Education.

² Dear Colleague Letter: Persons with Disabilities, National Science Foundation (August 5, 2021), at: <https://www.nsf.gov/pubs/2021/nsf21110/nsf21110.jsp?org=EHR>.

- BioFab Explorer: Designing a Dual Enrollment Pathway to Careers in Biofabrication.*—NSF has funded BioFab Explorer to help broaden the participation of underrepresented populations in biofabrication and biomanufacturing by embedding career guidance into Career and Technical Education (CTE) classrooms that provide options for dual enrollment (i.e., taking college-level courses for credit while enrolled in high school). The project leverages the e-folio technology developed with NSF funding (see below, STEMfolio), customizing it for use by students and teachers in this emerging field as a way to document and share competencies with educators and potential employers.
- STEMfolio.*—With funding from NSF and DOL, the Career Exploration and Readiness Environment for Science, Technology, Engineering and Mathematics (CEE-STEM) project developed an e-portfolio called STEMfolio, which supports non-traditional high school students to collect information, reflect and record information regarding STEM careers of interest; chronicle their STEM learning in both classroom and job sites related to those careers; and take actions to connect with STEM postsecondary and employment opportunities. By partnering with YouthBuild USA in the design and piloting of this tool, CAST ensured that STEMfolio can effectively support STEM learning and career pathways for young adults who are members of ethnic minority groups and who are economically disadvantaged—many of whom have dropped out of traditional high school paths and may also be justice-involved or be young parents—helping these young adults see the relevance and achievability of STEM career paths for them. The e-folio software developed for this project is customizable and is being used by education and workforce leaders in a Manufacturing Innovation Institute funded by the Department of Defense as well as in two NSF projects: Rural Youth/Outdoors and BioFab Explorer.
- Stepping Up with OASIS: Opening Access to Science Instruction and Support (OASIS).*—With NSF and ED funding, this initiative empowers science teachers with research-based instructional tools and skills. OASIS grew out of an NSF-funded project (now complete) which created a digital UDL science notebook teachers of students with learning disabilities can use to support students in active science learning: a project that achieved statistically significant effects on students' science performance and their motivation for science learning. The focus of OASIS is to expand access to these tools and resources for more teachers so that more students will successfully engage in science learning and the science inquiry process.
- Multi-Gen STEM Makerspace Project.*—Is a Makerspace initiative that is increasing access to STEM engagement, multi-disciplinary learning, and opportunity by residents of low-income communities. Makerspaces have cropped up in schools, libraries, museums, and other settings, but low-income communities have not had the same access to these resources and their learning opportunities as have more affluent ones. CAST is changing that by partnering with a national affordable housing provider, the NHP Foundation, at an affordable housing complex in Stamford, CT. With NSF funding, CAST has co-designed a makerspace in affordable housing, created makerspace guidelines, workshops and a Multi-Gen Makers Playbook to support affordable housing complexes across the country in hosting their own self-sustaining makerspaces to provide an engaging, accessible route to embed STEM learning in families' lives. The resources created with this investment support caregivers, children, young adults, and neighbors to gather and share their existing knowledge and skills, and also to collaborate authentically to build on those skills, using STEM to meet personally relevant goals, or to pursue a STEM career pathway.
- Advanced Technological Education.*—Making Community College Technician Education More Accessible for Everyone (AccessATE). Through support from NSF, this project supports the ATE community and provides ATE grantees with the tools and knowledge to increase the accessibility and usability of their resources and activities. CAST provides technical assistance on accessibility and UDL to ATE Centers and recipients of ATE research grants. Partners include Internet Scout, the Accessible Education Materials Center, DeafTEC, Human Engineering Research Laboratories and the National Center for Accessible Media. The AccessATE work specifically supports STEM technician education programs at community colleges. As community-based institutions, community colleges are uniquely positioned to provide workforce development and technician training in response to growing industry needs.

These several examples demonstrate why continuing to support NSF's STEM Education portfolio is essential, especially as the agency seeks to continue to increase access to STEM careers by leveraging the UDL framework.

Funding for NSF's STEM Education portfolio is also critical to mitigating the current negative impacts of digital, in-person or hybrid learning and, instead, achieving the inclusive potential of flexible learning environments because the U.S. population of learners is predictably diverse in how they learn. Federal investments made by NSF to support educators, as well as learners of all ages must plan for this diversity. To ensure we are preparing all youth, young adults and any career seeking individual for the careers of both today and tomorrow, each must have access to STEM workforce development as well as career pathways and programs that are designed with the variability of their learning in mind. Continuing to invest in the innovations that incorporate effective implementation of UDL while prioritizing the need to include UDL as part of the infrastructure of STEM education in faculty training and expanding community and individual awareness just makes sense.

CAST appreciates the opportunity to provide recommendations to the subcommittee regarding the fiscal year 2024 appropriations bill and urges you to expand investments in the NSF's STEM Education as recommended. We look forward to working with you as you develop a final appropriations bill that supports the NSF and also recognizes UDL as a vital component to STEM education and career training to increase and sustain a vital workforce.

[This statement was submitted by Lindsay S. Jones, CEO.]

PREPARED STATEMENT OF CLARITAS

We write as demographic industry leaders and leading experts on demographic and census data to call your attention to an opportunity to mitigate the 2020 Census undercounts of rural residents, young children, various racial and ethnic groups, and the States of Arkansas, Florida, Illinois, Mississippi, Tennessee, and Texas.

While we do not underestimate the difficulty you face in funding the Nation's conflicting needs, this is an opportunity to improve at a minor cost fully achievable in the current fiscal landscape: an increase of \$6.3 million for FY 24 for the "Intercensal Estimates" budget line will help rightsize the distribution of \$1.5 Trillion in Federal funding for States and communities.

This is a compelling opportunity which should enjoy broad support. As the Wall Street Journal editorial board noted in 2022 following the release of the Census Bureau's measure of census accuracy, "It's too late to change the reapportionment, but the Administration should take the new data into account in Federal funding formulas."

Currently funding for the estimates is down 20% in real dollars from the 2003 level, and staffing is down by a third—at a time the estimates staff must produce updates to a flawed decennial. A minor investment in the estimates will allow the Census Bureau to produce better intercensal estimates—and provide more accurate measures of American life, from disease prevalence to regional unemployment rates: all the practical everyday things that an accurate census supports.

In the event a continuing resolution becomes necessary for FY 24, we ask that you include language directing the Census Bureau to improve the annual Population Estimates to mitigate undercounts in the 2020 Census.

We also support preparation for a successful 2030 Census, and an increase in the sample size for the American Community Survey. To do so, we endorse the Census Project's recommendation to increase the Census Bureau's FY 24 funding level to \$2 Billion.

Sincerely,
 Rachel Cortes, Chief Demographer, Claritas
 Andrew A. Beveridge, CEO, Social Explorer
 William H. Frey, Senior Fellow, Brookings Metro
 Bill O'Hare, President, O'Hare Data and Demographic Services, LLC
 Christopher Dick, Founder, Demographic Analytics Advisors

PREPARED STATEMENT OF COASTAL FLOOD RESILIENCE PROJECT

We are writing to strongly encourage you to significantly increase funding for scientific research related to the impacts of a warming climate on glaciers and ice sheets in the Arctic and Antarctica to improve projections of future sea level rise.

Better understanding of changes in the cryosphere is essential to improving estimates of the rate of sea level rise in the coming decades. Rising sea levels along the coast of the United States pose a risk to millions of Americans and will inundate homes and other property valued at trillions of dollars with uneven and inequitable

impacts across demographic groups. Ecosystems and critical infrastructure are also at risk. Improved estimates of the rate of sea level rise will help make strategies to reduce the impacts of rising sea level timelier and more cost-effective. Smarter adaptation to rising seas will dramatically reduce risks to human health, property, and the environment and costs to society.

We urge you to take the following steps to address the critical need for expanded funding to support research that will result in the best possible projections of ice loss and rising sea levels to support local, State, and Federal decisionmakers responsible for planning responses to coastal storm flooding and inundation from rising seas.

- Include consideration of funding needs related to ice sheet and glacier research in subcommittee hearings on the FY 2024 budget, including appropriate testimony;
- Based on hearings, identify needed increases for NSF and NASA that provide significant additional funding in FY 2024 (e.g., a 50 percent increase in research funding);
- Include in appropriations legislation language encouraging NSF, NOAA, the Global Change Research Program, and other Federal agencies to provide an ongoing forum for discussion of glacier and ice sheet research needs and priorities, including development of periodic cross-agency research plans; and
- Encourage agencies to design a research program that is scaled to the significant risks that rising sea level poses to the U.S. coast and express a willingness to consider expanded funding in FY 2025 and subsequent years.

IMPACTS OF RISING SEAS

The National Oceanic and Atmospheric Administration (NOAA) recently issued new estimates of future sea level rise concluding that the rate of sea level rise along American coasts is accelerating and is likely to rise as much over the next 30 years (i.e., about 1.3 feet by 2050 in the “Intermediate” scenario) as it has over the last 100 years. Sea level rise averaging as high as 1.7 feet around the coastline is possible over this period and could reach as high as 2.2 feet in some places (e.g., in the Western Gulf of Mexico).

By the year 2100, NOAA projects sea level rise along the American coasts to average about 4 feet (in the “Intermediate” scenario) while an average increase of over 7.2 feet is possible. Sea level rise in some regions will be higher than this average. By 2150, NOAA forecasts average sea level rise of over 7 feet in the “Intermediate” scenario with the possibility of average increases as high as 12.8 feet with increases reaching 14.7 feet in the Western Gulf of Mexico.

NOAA explains in its new report that the rate of sea level rise depends on increases in global air temperature driven by the release of greenhouse gases. Importantly, these projections do not include the possible rapid deterioration of ice sheets in Antarctica and Greenland which would result in higher projected increases occurring sooner than previously expected. This point was emphasized by the latest IPCC report and could account for an additional 3 feet of sea level rise by 2100. Finally, sea level will continue to rise for centuries after 2150.

Rising sea level, in conjunction with more severe and frequent coastal storms, will bring economic, environmental, and social disruption to coastal communities on an unprecedented scale. Specific impacts include coastal erosion and land loss, failed water and sewer systems, saltwater inundation of freshwater resources, and forced infrastructure abandonment. The combination of more severe storms and rising seas is projected to result in potential losses of coastal property running into trillions of dollars.

SEA LEVEL RISE SCIENCE KNOWLEDGE GAPS

Given the serious impacts that rising seas will have on the United States coasts, governments and private parties need to develop strategies to minimize impacts. These strategies require reliable information on the rate and extent of future coastal inundation risks. The Interagency Sea Level Rise Scenarios report explains that today’s projections of sea level rise may be a significant underestimate. The report notes:

“However, these projections include only physical processes in which there is at least medium confidence in the current scientific understanding . . . the largest potential contributions to long-term GMSL [Global Mean Sea Level] rise come from ice-sheet processes in which there is currently low confidence. Projections that include the magnitudes, rates, and thresholds associated with these ice-sheet processes, particularly under

higher emissions futures, could give rise to GMSL rise values well above the likely range. Pathways to such unknown-likelihood, high-impact outcomes—“potential surprises” . . . include:

- earlier-than-projected ice-shelf disintegration in Antarctica,
- abrupt, widespread onset of marine ice-sheet instability and/or marine ice-cliff instability in Antarctica, and
- faster-than-projected changes in surface-mass balance on Greenland, potentially associated with changes in atmospheric circulation, cloud processes, or albedo changes.” (page 21)

The concern that gaps in scientific knowledge are an obstacle to reliable estimates of future sea level rise and thus to effective development of response strategies is shared by a significant number of scientists working in this field. In May of 2022, a group of over thirty scientists published a Statement in *Eos*, the journal of the American Geophysical Union, noting:

“Our ability to accurately and actionably project ice loss and its contributions to sea level rise requires glaciological knowledge and research coordination, as well as effective knowledge dissemination to decisionmakers, that are still unrealized. Current ad hoc efforts to meet these needs are inadequate, delaying the benefits of scientific research for many communities already grappling with increased coastal flooding and other impacts.”

DECLINING FUNDING FOR RESEARCH ON GLACIERS AND ICE SHEETS

Funding for research of glaciers and ice sheets is primarily through the National Science Foundation (NSF) Office of Polar Programs (OPP) with some additional funding from the National Aeronautics and Space Administration (NASA) Sea Level Rise Change Team and several additional programs.

Based on a review of recent funding for research of glaciers and ice sheets, the authors of the *Eos* statement concluded:

“Despite the serious implications of coastal inundation and other ice loss impacts, research on Earth’s glaciers and ice sheets remains a low funding priority in the U.S. scientific enterprise.”

More specifically, authors of the *Eos* statement conclude:

“In the past 5 years, funding for OPP has dipped to less than 6% (<\$500 million) of the total NSF research budget . . . and only one third of the OPP budget goes to research because of the high costs of supporting polar logistics. This limited amount is then spread across all 10 disciplines working in the polar regions. Assuming an equal split across all 10, the maximum annual amount that glaciology could receive is approximately \$10 million . . . Available funding data from NASA are more limited, yet there has been a proportional decrease there as well: Funding for Earth science research, which includes cryosphere studies, dropped from nearly 10% of the total NASA budget in 2017 to 8.5% in 2021.”

The FY 2024 Budget submitted to Congress by the President calls for total funding of OPP of \$556.6 million, a slight 3.7 percent increase from the \$545 estimated for FY 2023 and \$544 approved for 2022. The majority of this FY 2024 funding (i.e., \$454.85) is for the high costs of maintaining infrastructure in polar environments. Unfortunately, funding for the critical research elements of the program (i.e., \$106.8) is down 7.6 percent from the FY 2023 estimated level of \$115.6 and is less valuable after accounting for inflation.

FUTURE FUNDING FOR GLACIER AND ICE SHEET RESEARCH: LEVEL AND PRIORITIES

The *Eos* statement calls for reversing the “low prioritization of funding for glaciology in the United States” and increasing funding “scaled to match the high stakes of rising sea levels”.

Other statements from the cryosphere research community support the need for expanded funding. A recent study concluded:

“The past 2 decades have shown that ice sheets react to climate far more rapidly than previously thought (Rignot and Kanagaratnam, 2006; Joughin et al., 2014). The study of glaciers and ice sheets has moved from a fringe scientific exercise to a central question of major global economic significance. In response to COVID-19, USD 18 billion flowed from the US gov-

ernment to fund vaccine development (Tozzi et al., 2020). Appropriate resourcing is possible. While the emergent threat of sea level rise is less abrupt than that from COVID-19, a similarly serious effort is required to reduce uncertainties in sea level projections.”

Although significant funding for additional research of glaciers and ice sheets is essential, there is interest within this research community to improve coordination among Federal agencies and academic researchers and develop practices that identify high priority research needs and translate identified needs into funded research. The Eos statement notes:

“Given the current funding landscape, we propose holding regular, open discussions to facilitate deeper reflection on the critical research needed. Within these meetings, glaciologists must debate, decide on, and then disseminate near- and long-term research priorities for funding that focus on vital observational, knowledge, and modeling gaps.”

CONCLUSION

Your action to support increased funding for research of glaciers and ice sheets will support more timely and cost-effective action to adapt to the risks posed by rising seas. A more detailed assessment of the need for expanded research to support sea level rise projects is available at:

https://www.cfrp.info/—files/ugd/2450cf__8cc15228eaa14feabcd01526cab376b5.pdf.

The Coastal Flood Resilience Project is a coalition of organizations and individuals working for stronger programs to prepare the United States for more severe coastal storms and rising sea level resulting from a changing climate. Please note that the views expressed in this letter are those of the contributors listed below. Contributors’ affiliations are identified for informational purposes and this identification does not represent endorsement by their organization.

- Andy Aschwanden; University of Alaska Fairbanks
- Ginny Catania; University of Texas at Austin
- Stephen Eisenman; Anthropocene Alliance
- John Englander; Rising Seas Institute
- Harriet Festing; Anthropocene Alliance
- Rich Innes; Senior Policy Director, Association of National Estuary Programs
- Bethany Kraft; Audubon Society
- Dr. Twila Moon; National Snow and Ice Data Center, University of Colorado Boulder
- Jeffrey Peterson; author of *A New Coast: Strategies for Responding to Devastating Storms and Rising Seas*
- Susan Ruffo; United Nations Foundation and former Associate Director for Climate Preparedness and Resilience, White House Council on Environmental Quality
- Mark Rupp; Georgetown Climate Center
- Dr. Shaina Sadai; Union of Concerned Scientists
- Jason Scorse; Middlebury Center for the Blue Economy
- Stefanie Sekich-Quinn; Surfrider Foundation
- Shana Udvardy; Union of Concerned Scientists

PREPARED STATEMENT OF COASTAL STATES ORGANIZATION
(INTEGRATED OCEAN OBSERVING SYSTEM ASSOCIATION,
NATIONAL ESTUARINE RESEARCH RESERVE ASSOCIATION,
NATIONAL MARINE SANCTUARY FOUNDATION & SEA GRANT ASSOCIATION)

IN SUPPORT OF NOAA FY 2024 APPROPRIATIONS TO ENHANCE RESILIENCE AND
ADAPTATION FOR THE NATION’S OCEAN, COASTS, AND GREAT LAKES

Mrs. Chair and Members of the subcommittee, this joint statement is submitted on behalf of the nonprofit organizations listed above who share a deep concern for the resilience of the Nation’s ocean, coasts, and Great Lakes. The members of our organizations work as partners to assist our coastal communities and enhance their resilience by leveraging each other’s contributions and strengths in an effort to ensure we maximize the use of our resources towards synergistic outcomes i.e., a whole that is greater than the sum of the parts.

America's coasts are highly desirable places to live, with growing populations. Over 126 million residents—40% of the population of the United States—live in coastal counties. These counties employ 56 million people, resulting in \$3.4 trillion in wages annually, and produce more than \$8.3 trillion in goods and services. Populations in coastal areas continues to increase, and nearly 40% of coastal residents are vulnerable communities—the elderly, children, and the poor. At this coastal interface, dynamics are constantly in flux, bringing a unique set of challenges. 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.

Weather- and climate-related hazards, and the resulting loss of life and negative impacts to our coastal environments and economies have increased at an alarming rate. Since 1980, the Nation experienced 341 weather and climate disasters where overall damages reached or exceeded \$1 billion for a total exceeding \$2.475 trillion. Just in the last 5 years (2018–2022), there were 81 events that resulted in nearly 1,800 deaths and damages at almost \$600 billion. These weather and climate coastal hazards threaten critical coastal infrastructure, water and food supplies, and lives and livelihoods. NOAA has recorded record high global sea levels and some regions across the country are seeing up to 1,100% increases in high tide flooding. Warming waters are changing ocean circulation and chemistry, rising sea levels, increasing storm intensity, and changing the diversity and abundance of marine species. These impacts weaken the 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.

This interface of coastal change and increasing coastal populations is driving the need to enhance coastal community adaptation, mitigation, and resilience capacity. The members of our organizations, in partnership with NOAA, play leading roles in addressing these continually evolving ocean, coastal, and Great Lakes challenges and helping people where they live.

Coastal resilience is a complex and continuously evolving challenge that requires a collaborative framework of federal, State, and local partners. NOAA's partner programs which are embedded in States and communities—Coastal Zone Management Programs, Sea Grant Programs, National Estuarine Research Reserves, National Marine Sanctuaries and the Integrated Ocean Observing System—work together to provide tailored information, planning resources, protected land and water areas, science, and science translation that provide comprehensive and integrated services to address national priorities effectively at the local, State, and regional level. Each of these partners provides a critical tool in the toolbox needed to support communities in addressing coastal resilience. If any of these tools is missing, or Federal investments do not adequately support each of these tools, efforts to address coastal resilience and adaptation will be hampered and less effective. The immense challenges facing our coastal communities and ecosystems are much too large for any one organization to be able to solve alone. To ensure coastal communities are prepared to address increasing coastal hazards, a robust investment in a networked resilience initiative is necessary.

The Bipartisan Infrastructure Bill (BIL) and Inflation Reduction Act (IRA) make 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. Our annual appropriations request for FY 2024 ensures the full impacts of the BIL and IRA investments are realized. The immediate and long-term success of infrastructure and other community service investments depends on community engagement, planning, analysis of options, implementation, and stewardship of restored areas—activities that were not supported under the BIL or IRA, as implemented, but are part of the sustained programmatic infrastructure provided by NOAA's programs and partners. 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 the programs have significant educational and outreach mandates that complement the development of coastal infrastructure, but were not funded in the BIL or IRA. 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 strongly support 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 2024 appropriations to ensure robust investments in coastal resilience, complementing, building upon, and supporting the implementation of the BIL and IRA:

\$147.325 million for the National Sea Grant College Program and \$18 million for Sea Grant Aquaculture Research.\$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\$47 million for National Estuarine Research Reserve System operations and \$10 million for procurement, acquisition & construction\$80.5 million for the Regional Integrated Ocean Observing Program\$34 million for National Ocean and Coastal Security Fund\$11.2 million for Regional Ocean Partnerships

NATIONAL SEA GRANT COLLEGE PROGRAM

The National Sea Grant College Program Act authorizes awarding of grants and contracts to initiate and support programs at Sea Grant colleges and other institutions for research, education, and advisory services related to conservation and development of marine resources. A joint federal, State, and local investment, Sea Grant provides solutions for issues affecting coastal communities, yielding quantifiable economic, social, and environmental benefits. A unique university-based program within NOAA, Sea Grant awards over 90% of its appropriated funds to coastal States through a competitive process to address issues coastal communities identify as critical. Sea Grant fosters cost-effective partnerships among State universities, State and local governments, NOAA, and coastal communities and businesses, leveraging at least \$3 for every \$1 appropriated. In 2021, an \$88 million Federal investment was leveraged with non-federal funds, resulting in an estimated \$737 million in economic benefits. Sea Grant helped improve hazard resilience in 227 communities; created or sustained 8,369 jobs and 1,619 businesses; enabled 12,471 fishers to adopt safe and sustainable fishing practices; and helped restore or protect over 1 million acres of habitat.

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 and harmful algal blooms. 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 2024 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 and avoid gaps or reduction in services provided to our coastal communities.

COASTAL ZONE MANAGEMENT (CZM) PROGRAMS

The 34 State and Territory CZM Programs, in partnership with the National CZM Program advance 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 increasing weather- and climate- related hazards threaten the lives and livelihoods of coastal communities. While BIL provided for \$207 million for habitat restoration projects under the CZMA, these funds address only a limited scope of coastal resilience. IRA funds had a broader mandate but as implemented also do not address foundational coastal management needs. There remain critical gaps—such as vulnerability assessments, long-term resilience planning, community engagement and risk communication—that are not addressed by BIL and IRA funding but are supported by annual appropriations for Coastal Management Grants. The requested investment in Coastal Management Grants will ensure comprehensive management of the coasts to address all facets of coastal resilience and will enhance the implementation of BIL and IRA funds managed by State and Territory CZM Programs.

NATIONAL ESTUARINE RESEARCH RESERVE SYSTEM (NERRS)

The NERRS is a time-tested, mission-ready network of 30 coastal sites with a proven track record of delivering the information and solutions communities need

to address climate change and other 21st century challenges. Over 50 years, and through many crises, Reserves have become trusted members of their communities, where they are known as living laboratories and go-to sources of essential science, education, training, and monitoring. Reserves support jobs, contribute to the economy, help sustain fisheries, protect natural infrastructure, and create access to nearly 1.4 million acres of coastal lands and waters that provide outdoor experiences that are essential to public health. An increase in NERRS funding will send more dollars to States, add two new Reserves—one in Louisiana (FY24) and one in Wisconsin (FY25)—and advance the designation of a USVI site. Increased funds also will broaden the impact of national programs that deliver in-demand education, local technical assistance, and community-informed science, including the internationally-recognized NERRS System-Wide Management Program, Coastal Training Program, Science Collaborative grant program, and Davidson Graduate Research Fellowship.

NATIONAL MARINE SANCTUARIES PROGRAM AND HABITAT RESTORATION

The National Marine Sanctuary System encompasses over 620,000 square miles of marine and Great Lakes waters protecting ecologically and culturally significant habitats. A growing number of communities are seeking to expand sanctuaries or nominate and designate new ones. Sanctuaries serve as living laboratories for science and education, bolster tourism and recreational industries, engage businesses in stewardship, and support the blue economy. This FY24 request is an investment to conduct scientific research, effectively manage sanctuaries and designate new ones, enforce regulations, and engage the public in stewardship. ONMS did not receive funds in the BIL. Funding will help complete the 4 sites currently in the designation process and allow ONMS to better engage communities throughout nomination and designation processes. Funding will also support the replacement or repair of vessels that are mission-critical to operations, management, and enforcement and improvements to visitors centers, facilities and signage, which anchor tourism, recreation and engagement in communities, strengthening the impact of investments for constructing sanctuary facilities made in the IRA.

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 by tackling complex issues at a regional scale. BIL provided for annual funding for the ROPs consistent with the ROP Act. However, it is important to recognize the need for this funding to be supported through annual appropriations not just supplemental funding.

NATIONAL OCEAN AND COASTAL SECURITY (NOCSA) FUND

The NOCSA Fund provides grants to nonprofit 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 BIL 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.

IN CONCLUSION

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 COLUMBIA RIVER INTER-TRIBAL FISH COMMISSION
FISCAL YEAR 2024 APPROPRIATIONS REGARDING THE NATIONAL OCEANIC'S AND
ATMOSPHERIC ADMINISTRATION'S (NOAA'S) BUDGET

The Columbia River Inter-Tribal Fish Commission (CRITFC) is pleased to share our views on the Department of Commerce's Fiscal Year 2024 budget and has identified the following funding needs:

1. \$70.5 million for Salmon Management Activities of which:
 - \$29 million supports Mitchell Act Programs to implement reforms called for in the "Conservation of Columbia Basin Fish" and the Federal Columbia River Power System Biological Opinion, of which \$6.7 million (or 25% of the enacted amount) is directed to the Tribes to enhance natural stock recovery programs; and
 - \$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. \$5 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 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 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 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, steelhead, lamprey and sturgeon populations and rebuild the fisheries to levels that support Tribal ceremonial, subsistence and economic needs. 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 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, to name just a few. Continued Federal support is needed to accomplish the management objectives embodied in these agreements.

1. SALMON MANAGEMENT ACTIVITIES

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

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.

the Oregon Coast to South East Alaska to the interior Columbia River basin worth millions of dollars.

Mitchell Act facilities operation and maintenance 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. An increase of O+M budgets to \$29 million would help these facilities produce targeted numbers of fish to benefit for Columbia River and West Coast fisheries and also assist these Mitchell Act programs to begin integrating modern fisheries management and incorporating 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 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.

2. PACIFIC COASTAL SALMON RECOVERY PROGRAM

Pacific Coastal Salmon Recovery Program (PCSRF).—The PCSRF program 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 PNW effort to avoid extinction of Columbia Basin salmon species and their habitat. Accomplishments include 417 miles of stream made accessible to salmon; 5,060 acres of riparian area treated; 11,341 acres conserved by acquisition or lease; 4,838 stream miles monitored and evaluated; and 2 million salmon fry/smolt released annually. PCSRF is a vital component in the region's effort to attain full salmon recovery, sustain critical fisheries and a maintain meaningful exercise of the treaty reserved rights by the Columbia River treaty Tribes.

The co-managers have developed an extensive matrix of performance standards which include the use of monitoring protocols to systematically track current and future projects basin-wide. The PCSRF projects are based on the best science, adequate monitoring and addressing 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 base funding level of \$100 million for the PCSRF Fiscal Year 2024 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

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. In response, in December 2018 Congress amended the Marine Mammal Protection Act (MMPA) 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. Previously, sea lion removal required a multistep process, including branding animals and identifying repeat offenders. This new authority will streamline this process and, as a result, will increase the number of trappings and lethal removals. To fully implement the program under the new permit, the States and Tribes are requesting \$5 million in Federal funds. This will supplement funds that the States and Tribes are currently contributing.

4. INTEGRATED OCEAN OBSERVING SYSTEMS (IOOS) PROGRAM

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 \$80.5 million be invested in the regional IOOS network and its partners to address critical issues facing our collective communities, with \$50 million committed to core operations of the Coastal, Ocean, and Great Lakes Observing System Regional Associations, and \$25.5 million to refurbish aging infrastructure and modernize equipment, and \$5 million for competitive grants to develop innovative technologies for ocean monitoring and modeling. 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.—NOAA should aim to create a comprehensive understanding of the Columbia River estuary and the near shore environment and improve the collaboration between 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 in the Columbia River. 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 salmon populations of the Columbia Basin. Our collective efforts protect our treaty-reserved fishing rights and provide healthy, harvestable salmon populations for all citizens to enjoy. We would be pleased to provide any additional information that the subcommittee may find useful.

Contact: Paul Ward, Director of Government Affairs, warp@critfc.org.

[This statement was submitted by Ron Suppah, 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) 2024, COSSA urges the Committee to appropriate:

- At least \$11.9 billion for the National Science Foundation
- \$2 billion for the Census Bureau
- \$60 million for the National Institute of Justice
- \$75 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.

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 affecting all Americans.

NATIONAL SCIENCE FOUNDATION

COSSA joins the broader scientific community in support of at least \$11.9 billion for the National Science Foundation (NSF) in FY 2024. 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.

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. 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 increases.

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 3 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 shedding light on this uniquely human challenge and informing policy solutions at all levels.

CENSUS BUREAU, U.S. DEPARTMENT OF COMMERCE

COSSA requests that the Committee appropriate \$2 billion for the Census Bureau in FY 2024. 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 2024 could help the 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

¹ <https://www.nap.edu/catalog/24790/the-value-of-social-behavioral-and-economic-sciences-to-national-priorities>.

2011) to produce more timely, granular data for a significant number of geographies and sub-populations than currently achievable.

NATIONAL INSTITUTE OF JUSTICE, U.S. DEPARTMENT OF JUSTICE

COSSA requests that the Committee appropriate at least \$60 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.

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 the pressures of decreasing annual appropriations is the inclusion of Congressionally mandated directives for targeted research activities, often without additional funding. Providing more flexibility to NIJ would allow it to better direct resources to topics most in need of study and to pivot when research demands shift. An appropriation at the requested level coupled with increased flexibility is needed to inform DOJ's efforts to balance issues of mass incarceration and racism in the legal system with a continued pursuit of effective strategies to prevent and control crime, support law enforcement, and advocate for victims.

BUREAU OF JUSTICE STATISTICS, U.S. DEPARTMENT OF JUSTICE

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 \$75 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' budget has decreased by 30 percent, not accounting for inflation. Additional funding would allow the agency to modernize its data collection and dissemination systems, hire the necessary experts, and 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.

Consortium of Social Science Associations

American Anthropological Association | American Association for Public Opinion Research | American Economic Association | American Educational Research Association | American Political Science Association | American Psychological Association | American Society of Criminology | American Sociological Association | American Statistical Association | Law and Society Association | Linguistic Society of America | Midwest Political Science Association | National Communication Association | Population Association of America | Society for Personality and Social Psychology | Society for Research in Child Development

[This statement was submitted by 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 U.S.-based service organization for women of Greek heritage and Philhellenes, which is dedicated, in part, to supporting survivors and their families 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 sincerely thank Congress for taking important measures recently to strengthen Federal programs that address domestic violence and that provide the lifesaving services needed for survivors and their families. These measures included the passage of the VOCA Fix to Sustain the Crime Victims Fund Act of 2021, which is beginning to help stabilize the Crime Victims Fund, and the passage of a strong bipartisan-backed VAWA reauthorization through 2027. Now, these programs must be properly funded. To continue funding the essential and lifesaving services to crime victims, Congress must provide a Crime Victims Fund cap for fiscal year 2024 that is set at \$2 billion; and as the President's fiscal year 2024 budget rightfully proposes, without any transfers to programs not authorized under the VOCA statute. We also support-at a minimum-the President's proposed investment request of \$1.02 billion for VAWA programs but recommend \$1.14 billion to truly meet survivors' needs.

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 fiscal year 2019, 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 more than six million 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 that in the past Congress carved 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. Therefore, we recommend to the subcommittee that the Fund be used only for programs authorized under the VOCA statute. We applaud the President's budget for rightfully eliminating transfers. We request their elimination as they harm the Fund's long-term viability and ability to commit to victims.

Finally, we recommend setting the Crime Victims' Fund cap to at least \$2 billion, which is \$800 million more than the President's recommendation, to address the urgent needs of victims of crime. Thanks to the VOCA Fix, deposits to the Fund are beginning to increase after years of shortfalls that led to severe cuts to services funding. Further, 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 recommended 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 4 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 38 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.

³NNEDV Domestic Violence Fact Sheet, accessed <https://nnedv.org/wp-content/uploads/2022/07/DVSA-Fact-Sheet-Updated-71222.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
- Almost 1 in 2 women and more than 2 in 5 men reported experiencing contact sexual violence, physical violence, and/or stalking victimization by an intimate partner at some point in 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
- Approximately 26% of children under the age of 18 are exposed to domestic violence in their lifetime.⁷

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, however, there are many victims who still suffer in silence. A 2022 24-hour survey of 1,642 domestic violence programs across the U.S. found that a staggering 79,335 victims were served in one day. However, 12,692 requests for services (such as emergency shelter, transportation, or legal representation) went unmet because programs lacked the resources to provide them.⁸ An estimated 53 percent of the unmet services were for Housing and Emergency Shelter. The unconscionable gap between need and resources is clear.

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 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 life-saving support to domestic violence victims and their children.

STATISTICS | EFFECTIVENESS AND IMPORTANCE OF VAWA AND VOCA GRANT FUNDING

- Historically, VOCA/VAWA grants have funded more than 37% of Penelope House's budget.

Penelope House's Court Advocacy Program is funded by VOCA and VAWA. Its 2022 stats for clients served were:

- Adult Clients: 7,845
- Children: 6,565

⁴ <https://www.cdc.gov/violenceprevention/pdf/2015data-brief508.pdf>.

⁵ The National Intimate Partner and Sexual Violence Survey | 2016/2017 Report on Intimate Partner Violence, P.5, accessed https://www.cdc.gov/violenceprevention/pdf/nisvs/NISVSReportonIPV_2022.pdf.

⁶ https://www.cdc.gov/violenceprevention/pdf/nisvs_report2010-a.pdf.

⁷ NNEDV Domestic Violence Fact Sheet, accessed <https://nnedv.org/wp-content/uploads/2022/07/DVSA-Fact-Sheet-Updated-71222.pdf>.

⁸ 16th Annual Domestic Violence Counts Report, accessed <https://nnedv.org/wp-content/uploads/2022/03/16th-Annual-Domestic-Violence-Counts-National-Summary-FINAL.pdf>.

- Court Appointments with Clients: 6,710
- Clients Assisted to obtain protection from abuse or no contact orders: 1,206

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 has become increasingly important to Penelope House because its services were expanded to include more counties.)

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 survivor 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 2022 service stats, all of which increased, were:

- Adults sheltered: 258
- Children sheltered: 340
- Total Client Service Hours: 8,622
- Total Nights of shelter provided: 6,055
- Crisis calls: 1,746
- Meals Served: 18,360

Penelope's Place, a five-bedroom shelter, is the only emergency domestic violence shelter in Brockton and one of only 26 in Massachusetts. It is often the first stop for the region's most vulnerable families and the last chance for trauma survivors who have nowhere else to turn.

- In fiscal year 2022 (July 1, 2021 to June 30, 2022), it housed 63 survivors of domestic violence, including children, who were fleeing imminent danger.
- Since fiscal year 2018, the shelter has seen a 31% increase in the number of survivors served.
- In fiscal year 2022, half of the survivors were adults while the other half of the survivors served were children of whom 10% were infants (under 1 year of age) and 33% were children under the age of 10.

VOCA and VAWA funding is equally vital to Penelope's Place. VOCA funding supports a rape crisis center and domestic violence support programs including "SAFEPLAN" court advocacy that aids residents with restraining and harassment orders. According to Penelope Place's president and CEO, "In fact, 75% of people who call a Statewide shelter for DV shelter are turned away every day. That's why VAWA and VOCA funding is so important-the more supports/resources we can provide survivors, the safer they are, and the more people we can serve as we are able to help them move into affordable housing more quickly."

RECOMMENDATION

The Daughters of Penelope 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 2024 set to at least \$2 billion and without any transfers to programs not authorized under the VOCA statute, as rightfully proposed by the President's fiscal year 2024 budget. The CVF 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-at a minimum-the President's proposed investment request of \$1.02 billion for VAWA programs but recommend \$1.14 billion to truly meet survivors' needs. As the missions of domestic violence centers nationwide, such as Penelope House and Penelope's Place, expand into jurisdictions due to the unfortunate increased need to provide services, the viability of VOCA and VAWA grants have become ever more important to meet the survivors' needs.

Thank you for the opportunity to submit our written testimony to the subcommittee.

[This statement was submitted by Georgette Boulegeris, National President.]

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) 2024 appropriation of \$11.9 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 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 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

Global pollinator decline presents an existential threat to our Nation's ecosystem health and food security, but we do not yet understand the near-term consequences of pollinator loss on natural plant diversity. Experimental research funded by the Division of Environmental Biology within NSF BIO found that plant species lose the ability to coexist when they are forced to compete for a limited supply of pollinators, resulting in the loss of rare plant species.³ This is a concerning result that demonstrates how pollinator decline may detrimentally impact plant biodiversity. However, the study also lays a foundation for continued research that could help scientists better anticipate the impacts of pollinator decline and identify potential solutions. Continued support for basic research on the relationships between pollinators and biodiversity will play a crucial role in providing evidence-based guidance for the allocation and implementation of the Nation's resources to address pollinator decline and biodiversity loss.

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>.

³Johnson, C.A., Dutt, P., and Levine, J.M. (2022). Competition for pollinators destabilizes plant coexistence. *Nature* 607: 721–725. <https://www.nature.com/articles/s41586-022-04973-x>.

Tick-borne disease is the leading cause of vector-borne disease in the USA, with more than 500,000 Americans infected with a tick-borne disease annually.⁴ The rate of tick-borne diseases is expected to rise as climate change continues to change our landscapes, creating new supportive environments while forcing animal hosts to migrate into new areas for resources, bringing their associated ticks with them. Historically, the majority of vector control funding has been dedicated to supporting diseases from mosquitoes,⁵ with less than eight percent of local vector control agencies performing tick surveillance.⁶ Therefore, vector control agencies are largely unaware of where tick populations are highest, preventing formal tick control and yielding continued disease transmission. In 2020, NSF awarded a \$5.8 million grant to the University of Idaho to leverage big data to improve the prediction of tick-borne disease patterns and dynamics. With this support, the research team was able to conduct thorough investigations on the integration of tick environment, ecology, human behavior, and socioeconomics using advanced mathematics to identify hotspot areas for targeted tick control activities. Their work has the potential to create a paradigm shift in how we use limited datasets in an intelligent manner to better inform vector control response.

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 amounted to nearly \$7 million in the State of Maine alone.⁷ 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.⁸ This practice also has the potential to reduce the need for pesticides and could prevent unintentional spread of the pest through shipment and trade.

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 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

⁴ https://www.cdc.gov/mmwr/volumes/67/wr/mm6717e1.htm?s_cid=mm6717e1_w.

⁵ <https://academic.oup.com/jme/article/59/2/401/6513809>.

⁶ <https://www.mdpi.com/2414-6366/7/5/73>.

⁷ Yeh, 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/>.

⁸ Kraft, 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>.

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 fiscal year 2024 NSF budget of \$11.9 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 Marianne Alleyne, PhD, President.]

PREPARED STATEMENT OF THE FEDERATION OF AMERICAN SCIENTISTS

The Federation of American Scientists is grateful for the opportunity to submit this testimony in support of funding levels for agencies and programs under the jurisdiction of this subcommittee that are relevant to research in science, technology, engineering, and mathematics (STEM) fields.

NATIONAL SCIENCE FOUNDATION (NSF)

NSF plays a vital role in the science enterprise as the first or second Federal funder of university research in several technology-relevant science and engineering disciplines like computer science, chemistry, and physics. Research in these disciplines undergirds inventive activity by U.S. companies and can help to catalyze entire new fields. For instance, NSF's Nanoscale Science Centers have played a major role in driving research in the domestic nanotechnology sector.¹ Other programs like the Engineering Research Centers serve as connective tissue between basic science and dynamic innovation, and CHIPS and Science further expanded this capacity through creation of the Directorate for Technology, Innovation and Partnerships (TIP). NSF's fiscal year 2024 budget seeks increases for these programs and for a range of critical technology priorities like quantum science, advanced manufacturing, and microelectronics. NSF can likely absorb substantial additional funding in these fields as the agency must routinely leave thousands of high-scoring grant proposals on the table. For instance, in fiscal year 2020 alone, NSF had to leave over 4,000 proposals ranked "Very Good" or better unfunded. These amounted to \$3.9 billion in total unfulfilled award funding.²

FAS endorses the broader science community's position and respectfully requests at least \$11.9 billion for the NSF topline in fiscal year 2024. This should include funding as close as possible to authorized levels for core NSF basic science and for TIP programs like the Convergence Accelerators, the Regional Innovation Engines, the Entrepreneurial Fellows, and I-Corps.

FAS also endorses the Alliance for Learning Innovation request for NSF's Directorate for STEM Education, and respectfully requests at least \$1.95 billion for the directorate. This amount should include \$50 million to support the Centers for Transformative Education Research and Translation as authorized in the Chips and Science Act. This funding will help NSF to address vital challenges facing the U.S. talent pipeline, strengthening our National capacity in STEM education and beyond. We also recommend that the final appropriations language continues to encourage strong collaboration between NSF and the Department of Education to maximise these investments and expedite the discovery and adaptation of evidence-based innovations in education to the benefit of all students, practitioners, and schools.

¹Rogers, J. D., Youtie, J., & Kay, L. (2012b). Program-level assessment of research centers: Contribution of Nanoscale Science and Engineering Centers to US Nanotechnology National Initiative goals. *Research Evaluation*, 21(5), 368–380. <https://doi.org/10.1093/reseval/rvs028>.

²https://www.nsf.gov/nsb/publications/2021/merit_review/FY-2020/nsb202145.pdf.

DEPARTMENT OF COMMERCE

National Institute of Standards and Technology (NIST)

NIST also plays a critical role in the U.S. science and industry ecosystem as a funder of world-class measurement science, physical science research, standard-setting activities, and user facilities. NIST R&D covers several CHIPS and Science technology priorities including cybersecurity, advanced communications, AI, quantum science, advanced manufacturing, and biotechnology. And NIST's wide-ranging system of manufacturing extension centers in all 50 States and Puerto Rico help thousands of U.S. manufacturers grow and innovate every year.

We respectfully request the CHIPS and Science authorized amount of \$1.652 billion for the NIST topline, including \$1.048 billion for Scientific and Technical Research and Services, \$7.56 million for Wildfires and Wildland Urban Interface at NIST, and \$404 million for Industrial Technology Services, which will in part allow NIST to continue supporting a new Manufacturing USA institute and establish testbeds throughout the innovation institute network.

National Oceanic and Atmospheric Administration (NOAA)

We are requesting a total of \$19,000,000 to fully support fire weather initiatives across NOAA, including the Fire Weather Testbed. We urge NOAA to utilise satellite and artificial intelligence assets in its efforts to address wildfires and work with federal, state, Tribal, and local partners to improve information dissemination. We believe that Congress should take action to better leverage existing smoke data for wildland fire management and fill critical data infrastructure gaps. We propose directing NESDIS to integrate satellite data with EPA air monitor data to create a comprehensive, real-time smoke data product. This product should be integrated with the National Emissions Inventory at the EPA and the National Weather Service for issuing smoke alerts. For this initiative, we estimate a cost of \$750,000 per year for hiring five new personnel at the NIFC.

We also recommend that Congress direct NWS to issue smoke alerts based on NESDIS data so that communities can respond effectively to dangerous smoke events. We estimate an annual cost of \$300,000 for hiring two new personnel at NWS for this purpose. Lastly, we appreciate the expansion of the Incident Meteorologist (IMET) workforce in the fiscal year 2023 Omnibus and request sufficient funding to maintain the 15 new IMETs for wildfire response and other extreme events.

Bureau of Economic Analysis

In order for the U.S. to remain competitive in the global economy, it is essential to understand the value and size of the U.S. bioeconomy. However, the Bureau of Economic Analysis (BEA) determined in the report "Developing a National Measure of the Economic Contributions of the Bioeconomy" that it is currently infeasible to measure the U.S. bioeconomy due to a lack of existing data and a lack of consensus on practical measurement definitions. However, the BEA does acknowledge that it is technically feasible to currently measure the U.S. bioeconomy using a broad, comprehensive definition.

Congress should direct the BEA to create a task force charged with creating an initial estimate of the U.S. bioeconomy using a broad, comprehensive definition of the bioeconomy, conducting outreach with subject matter experts to develop a specific, practical measurement definition of the bioeconomy, develop new data resources necessary to measure the bioeconomy, and conduct research in order to support enabling measurement of the bioeconomy. The generation of the data from the BEA task force would enable the creation of a satellite account through congressional appropriation in fiscal year 2025.

We respectfully recommend that the subcommittee provide \$2 million for the Economic & Statistical Analysis program in fiscal year 2024 to support the creation of a task force within the Bureau of Economic Analysis, charged with further developing data resources and definitions necessary so that in fiscal year 2025 a satellite account can be appropriated to measure the U.S. bioeconomy.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA)

Space Technology Mission Directorate

The new space economy will likely surpass \$1 trillion by mid-century, representing a massive opportunity for American workers and businesses. Just as Federal research agencies help drive those critical technologies prioritized in CHIPS and Science Act, NASA also plays a major role driving early-stage science and technology for the space sector. NASA investments support over 300,000 jobs and generated \$71 billion in economic impact in fiscal year 2021.

A key channel for innovation is NASA's Space Technology Mission Directorate (STMD). While it doesn't always get the same attention as other parts of the agency, its value to the emerging space economy and to NASA's mission shouldn't be understated. STMD's Space Technology Research Grants are an important source of support for graduate students, young faculty, and technology research institutions, while STMD's tech transfer program engages with regional ecosystems and underserved communities to ensure NASA-developed technologies provide broad economic benefit. In fiscal year 2024, STMD will provide further opportunities for industry "tipping point" partnerships to accelerate critical technologies, and continue vital work on in-space manufacturing and orbital debris. We respectfully recommend the fiscal year 2024 request level of \$1.392 billion for STMD.

Combating Wildfires

There are significant limitations on the safe use of unmanned and manned aerial assets for situational awareness and firefighting during wildfire incidents. We applaud the \$10 million included in the fiscal year 2023 Omnibus to initiate the ACERO initiative to leverage NASA-developed traffic management capabilities to improve responses to wildfires and other disasters. We request funding of \$8,000,000 for ACERO to continue to improve aerial responses to wildfires. We further request increased funding for NASA to continue and expand concept studies, in collaboration with commercial space-based remote sensing providers, to develop and demonstrate low-cost and scalable infrared sensing technologies and related platforms that passively monitor areas of the United States susceptible to wildland fires and provide early warning to first responders. We appreciate that the fiscal year 2023 Omnibus included \$8 million for Wildfire Detection Technologies concept studies, and we support continued funding for this ongoing work, including transitioning to demonstration. We ask that this funding be provided, as necessary, in addition to NASA's requested funding.

FOCUSED RESEARCH ORGANIZATIONS (FROS)

"Focused research organisations," or FROs, are a promising new model for R&D: they're tightly coordinated, time-limited science and engineering teams organized like a startup to solve well-defined technical challenges that others can't or won't. They occupy a unique space in the R&D ecosystem, tackling problems and producing public goods that fall outside the incentives of traditional institutions. A typical FRO might create a new measurement technique, a novel database, or a breakthrough tool, all to catalyze further scientific progress. As "seal teams" for science, they offer a potentially valuable tool for helping Federal agencies achieve their missions and augment U.S. competitive advantage.

But while some organisations, including the U.K. government, have begun to move toward FROs, the U.S. Federal Government currently lacks a strategy to harness and deploy this promising model. This gap means we're leaving scientific progress on the table. We recommend the Committee include report language directing NSF, NASA, NIST, and NOAA to develop strategies to leverage this new R&D model, to solve challenges, advance agency missions, and catalyze further progress.

CONCLUSION

We believe the varied steps set forth above will pay dividends in the well-being of average Americans: by enhancing U.S. competitiveness, building wildfire resilience, and creating opportunity for workers and businesses alike. We appreciate the opportunity to submit these recommendations and are grateful for the work the subcommittee does on the public's behalf.

If you have any questions, please reach out to Divyansh Kaushik, Associate Director of Emerging Technologies and National Security at dkaushik@fas.org.

PREPARED STATEMENT OF FEDERATION OF AMERICAN SOCIETIES OF EXPERIMENTAL BIOLOGY (FASEB)

FY 2024 APPROPRIATIONS FOR THE NATIONAL SCIENCE FOUNDATION

Founded in 1912, FASEB is a nonprofit which provides a forum for educational meetings, develops publications, and disseminates results of biological research. Now the Nation's largest biomedical coalition, it represents 27 scientific societies and more than 115,000 researchers worldwide. Our mission is to advance health and well-being by promoting research and education in biological and biomedical

sciences through collaborative advocacy and service to our member societies and their members.

FASEB's FY 2024 Recommendation for the National Science Foundation of at least \$15.7 billion.

Federal investments in fundamental research have led to remarkable progress in the biological and biomedical sciences—an increasingly multidisciplinary team-based effort. These collaborative research efforts have enabled investigators to respond to pressing scientific challenges. 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.

A major contributing factor to the success of team science is the mobilization of core facilities and shared research resources (SRRs), including the scientific technology and expertise infrastructure within research organizations. SRRs and cores work across different scientific disciplines and deliver unbiased research data in support of scientific rigor and transparency. They are essential training grounds for the next generation of skills-based scientists from diverse backgrounds.

Despite Congress' bipartisan support for investing in science, Federal funding for research has not kept pace with scientific opportunity, 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 continue to prioritize increasing investments in science, shared resource facilities, including 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, more than 67 million workers in the U.S. are professionals in science, technology, engineering, and math (STEM) fields. STEM economic activity accounted for 40.5 percent of U.S. gross domestic product in 2021.²

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 the newly created Directorate for Technology, Innovation and Partnerships (TIP), 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. However, NSF must have enough funds to enable steady, sustained increases across the entire agency. While the appropriated \$9.9 billion represents a 12 percent increase over the FY 2023 enacted level, it is still lower than the \$10.5 billion in the president's FY 2023 budget request, which means the agency will need to make cuts to priority areas when developing their FY 2023 spend plan. Additionally, without the supplemental appropriation, NSF's FY 2023 funding would have been held flat at \$8.8 billion. NSF will also need increased appropriations to enable the agency to double grant award amounts and increase their duration from three to 4 years as noted by the Appropriations Committee in FY 2022.³

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—

¹ The State of U.S. Science and Engineering 2020 NSF—National Science Foundation.

² People-of-Science-Economic-Impact-Analysis-FINAL_March-2023.pdf (scienceisus.org).

³ untitled (senate.gov).

⁴ NSF's 10 Big Ideas - Special Report | NSF—National Science Foundation.

⁵ NSF Collaborations With Federal Agencies and Others - Partners | NSF—National Science Foundation.

will work across different scientific disciplines and 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. 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.⁷ Three billion of top-rated grants applications are declined.⁸

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 2020.⁹ The publication of research in peer-reviewed literature—the primary mechanism for disseminating new S&E knowledge—grew at an annual average rate of 3 percent for high-income countries such as the U.S. 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 \$15.7 billion for NSF is \$5.8 billion (59% increase) above FY 2023 enacted \$9.9 billion, which includes one-time emergency supplemental funding.¹¹ This will allow NSF to further attract high qualified early-career researchers, fund more high-quality research proposals, and increase NSF's average award size.¹² In addition to supporting the biological sciences, this funding level will support NSF's new TIP Directorate, 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 to address the country's societal, national, and geostrategic challenges. TIP will also grow the domestic workforce in key technology focus areas which include biotech, data storage and management and high-performance computing and expanding participation of researchers at all levels of education to build infrastructure for use-inspired and translational research, support mentoring, identify the drivers of innovation to enable advances, and develop beneficial partnerships with black and Tribal colleges, minority-serving institutions, and non-profits, among other groups.¹³

PREPARED STATEMENT OF FEDERATION OF ASSOCIATIONS IN
BEHAVIORAL AND BRAIN SCIENCES

FISCAL YEAR 2024 APPROPRIATIONS FOR THE NATIONAL SCIENCE FOUNDATION

Chairman Shaheen, Ranking Member Moran, and Members of the subcommittee:

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 (FY) 2024. FABBS represents twenty-nine scientific societies and nearly 60 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—an alliance of about 140 professional organizations, universities, and businesses supporting the goal of increasing national investment in NSF—*FABBS joins the broader scientific community in urging Congress to fund NSF with at least \$11.9 billion in fiscal year 2024.*

With passage of the CHIPS and Science Act this past August, bipartisan majorities in both chambers established that NSF needs major growth to meet our competitiveness and national security challenges. Funding lags behind authorization levels in the current year. For fiscal year 2024 appropriations, it is critical that Congress reach at least the fiscal year 2023 authorized level of \$11.9 billion to help get the Foundation on track for the growth needed to fulfill the law.

⁶Directorate for STEM Education (EDU) | NSF—National Science Foundation.

⁷FY 2020 Agency Financial Report (AFR) - List of Figures and Tables | NSF—National Science Foundation.

⁸H. Rept. 117–73—NATIONAL SCIENCE FOUNDATION FOR THE FUTURE ACT | Congress.gov | Library of Congress.

⁹The State of U.S. Science and Engineering 2022 | NSF—National Science Foundation.

¹⁰The State of U.S. Science and Engineering 2022 | NSF—National Science Foundation.

¹¹CJS FY 23.pdf (senate.gov).

¹²untitled (congress.gov).

¹³untitled (congress.gov).

FABBS is grateful for the 12 percent increase provided to NSF in the fiscal year 2023 omnibus spending legislation (this number reflects the \$335 million in supplemental funding). Nonetheless, NSF needs 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.

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.

Even before the launch of the TIP and other new programs authorized in CHIPS and Science, NSF was unable to fund more than \$2 billion worth of research proposals rated “very good or higher” each fiscal year. It is imperative that the rest of NSF see sustainable growth to continue being in the forefront of research to meet key national challenges. New efforts can only be successful when built on a strong foundational research enterprise that supports research, education, and infrastructure to sustain our science and technology ecosystem. NSF Director Panchanathan has said “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 Economics (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. Thus, our fields are heavily dependent on the NSF to inform advances 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, recruit, 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, 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. NSF'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 innovation 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 detailed 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.

In addition to receiving support from SBE, FABBS members appreciate critical funding from the Directorate for STEM Education (EDU), whose research focuses on increasing America's human capital through effective education in science, technology, engineering and mathematics; Computer and Information Science and Engineering Directorate (CISE), which funds research on topics such as human-technology interaction and cyber-assisted learning; and the Biological Sciences (BIO) Directorate which conducts research on topics such as sleep and circadian rhythms and sex differences in responses to stress. EDU 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.

TECHNOLOGY, INNOVATION, AND PARTNERSHIPS

In March 2022, 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 the lives of all Americans. By building on existing multidisciplinary programs, such as the Convergence Accelerator, TIP will integrate the expertise of all NSF directorates to advance new use-inspired research.

To maximize the benefits of the TIP directorate, NSF needs 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 enable 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 and behavioral sciences—which underlie future national security, economic and technological advances.

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 \$11.9 billion for fiscal year 2024.* 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 2024 and efforts to complete the budget in a timely manner.

Thank you for considering this testimony.

FABBS MEMBER SOCIETIES

Academy of Behavioral Medicine Research	Society for Behavioral Neuroendocrinology
American Educational Research Association	Society for Computation in Psychology
American Psychological Association	Society for Judgement and Decision Making
American Psychosomatic Society	Society for Mathematical Psychology
Association for Applied Psychophysiology and Biofeedback	Society for Research in Adolescence
Association for Behavior Analysis International	Society for Psychophysiological Research
Behavior Genetics Association	Society for the Psychological Study of Social Issues
Cognitive Neuroscience Society	Society for Research in Child Development
Cognitive Science Society	Society for Research in Psychopathology
Flux: The Society for Developmental Cognitive Neuroscience	Society for the Scientific Study of Reading
International Congress of Infant Studies	Society for Text & Discourse
International Society for Developmental Psychobiology	Society of Experimental Social Psychology
National Academy of Neuropsychology	Society of Multivariate Experimental Psychology
The Psychonomic Society	Vision Sciences Society

FABBS AFFILIATES

APA Division 1: The Society for General Psychology	Boston University
APA Division 3: Experimental Psychology	Carnegie Mellon University
APA Division 7: Developmental Psychology	Drexel University
APA Division 28: Psychopharmacology and Substance Abuse	Duke University
American University	East Tennessee State University
Arizona State University	Florida International University
Binghamton University	George Mason University
Boston College	George Washington University
	Georgetown University
	Harvard University
	Indiana University Bloomington
	Johns Hopkins University

Lehigh University	University of Cincinnati
New Mexico State University	University of Delaware
Massachusetts Institute of Technology	University of Illinois at Urbana-Champaign
Michigan State University	University of Iowa
New York University	University of Maryland, College Park
North Carolina State University	University of Michigan
The Ohio State University, Center for Cognitive and Brain Sciences	University of Minnesota
Pennsylvania State University	University of Minnesota, Institute of Child Development
Princeton University	University of North Carolina at Greensboro
Purdue University	University of Oregon
Rice University	University of Pennsylvania
Southern Methodist University	University of Texas at Austin
Syracuse University; Temple University	University of Texas at Dallas
Texas A&M University	University of Virginia
Tulane University	University of Washington
University of Arizona	Virginia Tech
University of California, Berkeley	Wake Forest University
University of California, Irvine	Washington University in St. Louis
University of California, Los Angeles	Western Kentucky University
University of California, Riverside	Yale University
University of California, San Diego	
University of Chicago	

[This statement was submitted by Juliane Baron, Executive Director.]

PREPARED STATEMENT OF FLORIDA AGRICULTURAL AND MECHANICAL UNIVERSITY

FISCAL YEAR 2024 PROGRAMMATIC ALLOCATIONS FOR EDUCATION PROGRAMS UNDER THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION AND NATIONAL SCIENCE FOUNDATION

Chair Murray, Chair Shaheen, Vice Chair Collins, 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) 2024 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 98 undergraduate, graduate, postgraduate, and professional degree programs to nearly 10,000 students. We are proud to be the highest ranked among public Historically Black Colleges and Universities (HBCU) for four consecutive years, according to the 2023 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, engineering, mathematics, agriculture and health. As noted by *Diverse Issues*, FAMU is a top producer of African American undergraduate degrees and doctoral degrees in pharmacy and pharmaceutical sciences and *Bestcolleges.com* recently ranked FAMU first among HBCUs for health science majors.

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 fiscal year 2023 enacted level of \$20.75 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.

Under the EPP/MSI program, NOAA awarded Cooperative Science Centers (CSCs) to four universities. 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.

Last Spring, FAMU hosted Phase II of the Tenth Biennial NOAA EPP/MSI Education and Science Forum with over 460 registrants. 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 federal, public, private, and academic sectors.

Since 2001, NOAA EPP/MSI Cooperative Science Centers institutions have awarded post-secondary degrees to over 2,600 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 robust 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 \$20.75 million for the NOAA EPP/MSI program.

NOAA NATIONAL SEA GRANT COLLEGE PROGRAM

FAMU also strongly supports the subcommittee providing the fiscal year 2024 President's budget request of \$94.849 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, Hawaii, 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. From fiscal year 2018 to fiscal year 2021, the economic impact of the Florida Sea Grant program was \$80.5 million and resulted in 1,473 jobs sustained in 2021–22. The program also supported a variety of research and training relevant to Florida's coastal communities and related industries, including developing a model to predict 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.

The President's budget proposes to 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 \$94.849 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 Pro-

gram (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 fiscal year 2024 budget requests \$1.44 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 robust funding for these critical NOAA and NSF education programs. We thank you for your continued support of Federal post-secondary 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, Ph.D., President]

PREPARED STATEMENT OF FOUNDATION FOR AMERICAN INNOVATION

Chair Shaheen, Ranking Member Moran, and Members of the subcommittee:

Thank you for the opportunity to testify. My name is Dan Lips. I am Head of Policy at the Foundation for American Innovation, a think tank focused on promoting innovation, strengthening governance, and advancing national security. I am writing to respectfully request that you direct the National Science Foundation (NSF) to improve its reporting about the outcomes of its education research and development (R&D) programs.

The mission of NSF's Directorate for STEM Education is "to develop a well informed citizenry and a diverse and capable workforce of scientists, technicians, engineers, mathematicians, and educators." NSF's new Technology Innovation and Partnerships Directorate (TIP) has a mission to create "breakthrough technologies; meets societal and economic needs; leads to new, high-wage jobs; and empowers all Americans to participate in the U.S. research and innovation enterprise." According to the fiscal year 2024 budget request, the STEM Education and TIP Directorates will receive \$1.15 billion and \$450 million respectively.¹ These are significant expenditures on programs that have the potential to improve American students' learning opportunities and national competitiveness.

However, my recent review of NSF-funded STEM education R&D programs found that the foundation did not have transparent reporting about R&D project outcomes or consistently identify best practices or ways that educators and others could learn from or implement research findings. I respectfully request that the subcommittee include language in the report accompanying the fiscal year 2024 funding bill to require NSF to improve transparency by publishing the outcomes, research findings, or any lessons learned from NSF-funded research projects on its website. Moreover, I request that the subcommittee require the Directorate for STEM Education to submit to Congress and publish on its website an annual report detailing all of its funded R&D projects, lessons learned, and best practices for education stakeholders.

BACKGROUND ON CURRENT CHALLENGES IN AMERICAN EDUCATION

Published 40 years ago in 1983, the seminal *A Nation at Risk* report issued a stark warning about the Nation's K-12 education system: "If an unfriendly foreign power had attempted to impose on America the mediocre educational performance that exists today, we might well have viewed it as an act of war."² *A Nation at Risk* served as a wake-up call and catalyst for the National school reform movement. Today, the challenges facing American K-12 education are even greater than they were in 1983.

The 2022 National Assessment of Educational Progress (NAEP), the so-called "Nation's Report Card," found that the average scores of nine-year-old students declined "5 points in reading and 7 points in mathematics compared to 2020," which represented the largest drop in reading in more than 30 years and the first-ever decline

¹National Science Foundation, FY2024 Budget Request to Congress (2023), https://nsf.gov-resources.nsf.gov/2023-03/03_fy2024.pdf?VersionId=jWao6lmIn7IR80REQbEYVBcoczjPHUhf.

²National Commission on Excellence in Education, Department of Education, *A Nation at Risk* (April 1983), p. 6, <https://www.reaganfoundation.org/media/130020/a-nation-at-risk-report.pdf>.

in math.³ More than one in three fourth-grade students scored “below basic” in reading.⁴ The cost of the widespread and prolonged school closures is expected to have long-term costs on a generation of American students and undermine the Nation’s economy.⁵ International comparisons show that U.S. students are far from leading the world in STEM achievement. For example, the White House’s STEM strategy found that as of 2018, “Americans’ basic STEM skills have modestly improved over the past two decades but continue to lag behind many other countries.”⁶

THE MISSED OPPORTUNITY OF FEDERAL EDUCATION R&D

Since the 1950s, the United States government has funded Federal education R&D programs aimed to improve students’ learning opportunities, expand equal opportunity, and strengthen American competitiveness, particularly in STEM education fields. My review of the history of Federal education R&D programs reveals some progress, but also many missed opportunities and challenges in achieving this mission to promote STEM education excellence and improve student learning opportunities across the United States.⁷ In April 2023, Melissa Moritz and I published a research report, *STEM and Computer Science Education Reforming Federal K–12 Education R&D Activities to Strengthen American Competitiveness*, which found that there is significant Federal activity aimed at improving STEM education and national competitiveness. However, consistent with past reviews of these Federal initiatives, it remains unclear whether and to what extent these initiatives are advancing national goals.⁸

Within the National Science Foundation, there are some examples of STEM education projects that were funded by Federal grants that are reportedly having a positive impact. For example, Muzology, a project funded by the Small Business Innovation Research program, has supported the development of technology and music to “support the learning of critical academic skills and concepts,”⁹ including math videos for students in grades 5 through 9.¹⁰ Engineering is Elementary, a program managed by the Museum of Science in Boston, involves “developing lessons to engage students in grades 1–5 in engineering activities integrated with their science lessons.”¹¹ NSF provided nearly \$3 million in grants from 2005 to 2008 to support the program. The program has benefited students, according to NSF-funded research evaluations.¹² The program now offers computer science and engineering courses to elementary and middle school service for purchase on its website,¹³ as

³“NAEP Long-Term Trend Results: Reading and Mathematics,” National Assessment of Educational Progress, Department of Education (2022), <https://www.nationsreportcard.gov/highlights/ttt/2022/>.

⁴“NAEP Report Card: 2022 NAEP Reading Assessment,” National Assessment of Educational Progress, Department of Education (2022), <https://www.nationsreportcard.gov/highlights/reading/2022/>.

⁵For example, Stanford University Professor Erik Hanushek compared American students’ test scores on the 2022 and 2019 mathematics exam and predicted that the learning losses will result in an economic cost of \$28 trillion over the next 100 years, or roughly \$70,000 per student. Brett Roland, “Pandemic Learning Loss Could Cost Students \$70,000 in Lifetime Earnings,” *The Center Square*, January 3, 2023, https://www.thecentersquare.com/national/article_2c856a32-8b78-11ed-b914-6b616b35e202.html.

⁶Committee on STEM Education, National Science and Technology Council, *Charting a Course for Success: America’s Strategy for STEM Education* (December 2018), p. 2, <https://files.eric.ed.gov/fulltext/ED590474.pdf>. For example, the 2019 Trends in International Mathematics and Science Study (TIMSS), which is administered to students around the world, found that American eighth-grade students’ average mathematics scores were above the averages of their peers in 28 foreign education systems and behind those in 10 other countries, including the Russian Federation. Institute of Education Sciences, National Center for Education Statistics, *TIMSS 2019 U.S. Highlights Web Report* (2019), <https://nces.ed.gov/timss/results19/index.asp#math/intlcompare>.

⁷Dan Lips, “The Case for Reforming and Strengthening Federal Education R&D,” *Lincoln Network* (March 23, 2022), <https://lincolnpolicy.org/2022/the-case-for-reforming-and-strengthening-federal-education-rd/>.

⁸Dan Lips and Melissa Moritz, “STEM and Computer Science Education Reforming Federal K–12 Education R&D Activities to Strengthen American Competitiveness,” *Lincoln Network and Federation of American Scientists* (April 4, 2023), https://lincolnpolicy.org/wp-content/uploads/2023/04/Lincoln_STEM-and-Computer-Science-Education.pdf.

⁹“Muzology LLC,” *America’s Seed Fund*, National Science Foundation, accessed February 27, 2023, <https://seedfund.nsf.gov/awardees/history/details/?company=muzology-llc>.

¹⁰Muzology homepage, accessed February 27, 2023, <https://www.muzology.com/>.

¹¹“Engineering is Elementary,” *Small Business Innovation Research program*, National Science Foundation, https://nsf.gov/awardsearch/showAward?AWD_ID=0454526.

¹²“Research,” *Engineering is Elementary*, accessed February 27, 2023, <https://www.eie.org/research>.

¹³Engineering is Elementary homepage, accessed February 27, 2023, <https://www.eie.org/>.

well as professional development and free STEM activities for children and families to use.¹⁴

Nevertheless, NSF's website currently provides limited information about the outcomes of most of its funded R&D projects. While the NSF website includes a database of past grant awards and current grant funding available, the Foundation could provide more insight to Congress and the public by providing an annual review of past and future STEM research projects funded, identifying lessons learned and best practices or tools that education stakeholders may use.

To improve transparency and increase the return on investment of NSF-funded education R&D projects, the subcommittee should include in its report accompanying the fiscal year 2024 funding bill language requiring NSF to publicly report on its websites the outcomes of its education R&D projects, identify what has worked, and promote best practices that can be used by parents, teachers, schools, and other education stakeholders. Moreover, the subcommittee should require the STEM Education and TIP Directorates to submit to Congress and publish on its website an annual report detailing all of its funded R&D projects, lessons learned, and best practices for education stakeholders.

CONCLUSION

The United States faces significant economic, educational, and national security challenges. Effective Federal education R&D has the potential to improve learning opportunities for American students and national competitiveness. But current Federal education R&D activities are not having the positive impact that Congress has intended, in part due to limited transparency. The nation cannot afford not to identify and share best practices that have the potential to help the Nation's students and achieve our National K–12 education goals.

PREPARED STATEMENT OF FOUNDATION FOR AMERICAN INNOVATION

Chair Shaheen, Ranking Member Moran, and Members of the subcommittee:

Thank you for the opportunity to testify. My name is Samuel Hammond, and I am Senior Economist at the Foundation for American Innovation, a nonprofit organization focused on promoting innovation, improving governance, and strengthening national security. I am writing to respectfully request that the subcommittee provide full funding to the Department of Commerce's Bureau of Industry and Security (BIS), which requested \$222.4 million for FY2024, to fulfill its mission of "ensuring an effective export control and treaty compliance system and promoting continued U.S. strategic technology leadership."¹ This mission is expanding, consistent with the United States' current strategy to compete with the People's Republic of China and to deny Beijing access to technologies necessary to power innovations in artificial intelligence and supercomputing.² Moreover, I write to suggest that the subcommittee include report language requiring Commerce and BIS to report to Congress about its current capacity to enforce export control laws and to monitor and deter violations, including policy options for closing any identified gaps.

As background, BIS will receive \$191 million in appropriations during FY2023. The Biden administration has requested \$222.4 million for FY2024, or a 16.4 percent increase, which would fund 587 positions.³ The administration's request offers several reasons for this increased funding, including to manage growing cybersecurity risks and to fulfill its growing regulatory and export control mission.⁴ In 2022, the Biden administration expanded the Export Administration Regulations to "implement necessary controls on advanced computing integrated circuits (ICs, computer commodities that contain such ICs, and certain manufacturing items,)" and "expand[ed] controls on transactions involving items for supercomputer and semiconductor manufacturing end uses."⁵ BIS's FY2024 budget proposal includes a re-

¹⁴ Ibid.

¹ Bureau of Industry and Security, U.S. Department of Education, Fiscal Year 2024 President's Budget Request (2023), <https://www.commerce.gov/sites/default/files/2023-03/BIS-FY2024-Congressional-Budget-Submission.pdf>.

² "Remarks by National Security Advisor Jake Sullivan at the Special Competitive Studies Project Global Emerging Technologies Summit," White House, September 16, 2022.

³ Bureau of Industry and Security, *Fiscal Year 2024 President's Budget Request*.

⁴ Ibid.

⁵ Bureau of Industry and Security, Department of Commerce, "Implementation of Additional Export Controls: Certain Advanced Computing and Semiconductor Manufacturing Items; Super-

quested \$93.5 million to fund 247 positions focused specifically on export enforcement, which reflects a modest increase from the prior fiscal year.

Given the importance of BIS's mission in the United States's national security and economic strategies, fully funding the BIS request and its modest increase is prudent, particularly given Congress and the Biden administration's recent focus on improving American competitiveness. The CHIPS and Science Act of 2022 provided the Commerce Department with more than \$50 billion for the CHIPS for America Fund to promote the American semiconductor sector.⁶ Fully funding the administration's budget request for BIS, which reflects less than one percent of the new fund's expenditures, is reasonable given the Bureau's mandate to protect American technological leadership.

The subcommittee could reallocate funding from other activities within the Commerce Department that are less critical to national security to offset the proposed funding increase for BIS. Moreover, the Committee and Congress could conduct additional oversight to require the Commerce Department to implement currently open watchdog recommendations from the Government Accountability Office and the Inspector General, which should result in cost savings that could be used to increase funding for BIS.⁷

Further, the subcommittee should require the Commerce Department and non-partisan watchdogs to assess its capacity to fulfill its mission, given its ongoing expansion. For example, more than 247 personnel may be required to conduct BIS's enforcement responsibilities. Requiring both the Commerce Department and the Government Accountability Office to assess BIS's mission and current capacity to achieve it would inform future budget requests and congressional appropriations, consistent with the National security strategy. The Office of Inspector General is currently conducting an audit of BIS's "effort to counter China's military-civilian (MCF) strategy," with the goal of "assess[ing] the adequacy of the actions taken by BIS to reduce the risk of China's MCF threats."⁸ The Office of Inspector General review and capacity assessments by the Department and GAO would help Congress determine if additional resources are needed.

In addition, the subcommittee should require the Department of Commerce and BIS to report to Congress on its current capability to deter export control violations, smuggling, or third-party transactions of advanced chips and other technologies and present potential options for closing any identified gaps. The administration's national security strategy of denying the People's Republic of China technology critical to advancing artificial intelligence and supercomputing will not be achieved if U.S. export laws are evaded or third parties smuggle or sell certain chips to China. Research and historical experience show that the outcome of policies to increase or deny market access to foreign firms is highly sensitive to the implementation procedures used. This will be especially true of semiconductors, as China has already begun efforts to skirt export controls through sophisticated third-party and subsidiary arrangements.⁹ A Commerce Department assessment should provide recommendations for improving its ability to enforce export control laws, particularly under conditions of adversarial evasion tactics.

In conclusion, the Bureau of Industry and Security has a critical mission for U.S. national and economic security. Fully funding BIS to fulfill its mission should be a priority within the Commerce Department's budget. Moreover, additional reporting by Commerce and GAO about BIS's current capacity to fulfill its mission and recommendations for potential policy changes to deter export control violations would help Congress and the administration determine if additional resources and authorities are needed.

[This statement was submitted by Samuel Hammond, Senior Economist]

computer and Semiconductor End Use; Entity List Modification," October 13, 2022, <https://public-inspection.federalregister.gov/2022-21658.pdf>.

⁶U.S. Department of Commerce, *A Strategy for the CHIPS for America Fund* (2022), <https://www.nist.gov/system/files/documents/2022/09/13/CHIPS-for-America-Strategy%20%28Sept%206%2C%202022%29.pdf>.

⁷For example, as of April 7, 2023, the Government Accountability Office listed 72 open recommendations for the Department of Commerce, including nine priority recommendations. "Open Recommendations," Government Accountability Office, accessed April 7, 2023, <https://www.gao.gov/reports-testimonies/recommendations-database>.

⁸Arthur L. Scott, Jr., Memorandum to Alan Estevez, "Audit of BIS's Efforts to Counter China's Military-Civilian Fusion Strategy (#2023-440)," October 7, 2022, <https://www.oig.doc.gov/OIGPublications/2022-10-07%20Announcement%20Memo%20BIS%20China%20MCF%20%28SECURED%29.pdf>.

⁹Eleanor Olcott, Qianer Liu, and Demetri Sevastopulo, "Chinese AI Groups Use Cloud Services to Evade U.S. Chip Export Controls," *Financial Times*, March 8, 2023, <https://www.ft.com/content/9706c917-6440-4fa9-b588-b18fbc1503b9>.

PREPARED STATEMENT OF THE FOUNDATION FOR AMERICAN INNOVATION (FORMERLY
LINCOLN NETWORK)

REGARDING FEDERAL COMMUNICATIONS COMMISSION'S AFFORDABLE CONNECTIVITY
PROGRAM

Chair Shaheen, Ranking Member Moran, and Members of the subcommittee:

We are writing on behalf of the Foundation for American Innovation (formerly Lincoln Network), a think tank working to promote market-oriented ideas that strengthen American innovation. We write to encourage the subcommittee to provide appropriations sufficient for a short-term continuation of the Federal Communication Commission's (FCC) Affordable Connectivity Program (ACP). We also write to encourage the subcommittee to include a recommendation in the report accompanying its appropriations bill requesting the Department of Commerce conduct a comprehensive comparative analysis of the various programs aimed at closing the digital divide.

Established by the Infrastructure Jobs and Investment Act (IIJA), the ACP provides a subsidy of up to \$30 per month toward internet service for eligible households and up to \$75 per month for households on certain Tribal lands.¹ The program also provides one-time discounts for households to purchase certain electronic devices.²

The program has enjoyed significant success helping connect low-income Americans to internet services, currently assisting nearly 17 million Americans across the country.³ Internet Service Providers (ISPs) covering more than 80 percent of the U.S. population have committed to offering high-speed plans to eligible households at \$30 per month, making internet service virtually free for the vast majority of low-income Americans.⁴

Unless Congress acts, the ACP is estimated to run out of money early next year. If the program lapses, millions of Americans would immediately lose this benefit, hampering bipartisan efforts to close the adoption gap of the digital divide, particularly in rural communities.⁵

Furthermore, the ACP is just one of numerous Federal Government-run programs seeking to close the digital divide. To ensure that the Federal Government is maximizing the return on investment (ROI) of taxpayer dollars, we also ask that the subcommittee include a recommendation in the report accompanying its appropriations bill requesting that the Department of Commerce conduct a comprehensive comparative analysis of the various programs aimed at closing the digital divide.

The cost of internet service is one of the most important factors that cause millions of households not to adopt broadband.⁶ As our research shows, a variety of other factors contribute to the adoption gap, including low awareness of low- or no-cost internet offerings, lack of clarity about eligibility, confusion about the application process, lack of trust in free or low-cost services, and structural limitations such as unstable housing and language barriers.⁷

These factors help demonstrate why the ACP has been more successful than many past efforts at addressing the adoption gap.⁸ The FCC has awarded grants under the ACP to, and partnered with, a wide range of organizations, including ISPs, to

¹ Infrastructure Investment and Jobs Act, § 60502, Public Law No. 117–58 (2021).

² “Affordable Connectivity Program,” Federal Communications Commission, last updated March 15, 2023, <https://www.fcc.gov/acp>.

³ “Additional ACP Data: Total Enrolled ACP Subscribers by Method of Verification,” Universal Service Administrative Co., last updated March 1, 2023, <https://www.usac.org/about/affordable-connectivity-program/acp-enrollment-and-claims-tracker/additional-acp-data>.

⁴ “FACT SHEET: President Biden and Vice President Harris Reduce High-Speed Internet Costs for Millions of Americans,” White House, May 9, 2022, <https://www.whitehouse.gov/briefing-room/statements-releases/2022/05/09/fact-sheet-president-biden-and-vice-president-harris-reduce-high-speed-internet-costs-for-millions-of-americans/>.

⁵ “Poverty Rates by Metro/Nonmetro Residence, 1959–2019,” Department of Agriculture, 2019, <https://www.ers.usda.gov/webdocs/charts/56286/povertyratesbyresidence2019.png?v=2402.3>.

⁶ Andrew Perrin, “Mobile Technology and Home Broadband 2021,” Pew Research Center, June 3, 2021, <https://www.pewresearch.org/internet/2021/06/03/mobile-technology-and-home-broadband-2021/>.

⁷ Jonathon Hauenschild, “Federal and State Efforts to Close the Digital Divide?,” Lincoln Network, October 27, 2022, <https://lincolnpolicy.org/2022/federal-and-state-efforts-to-close-the-digital-divide/>.

⁸ Tony Romm, “Hacking a Lifeline: How a Federal Effort to Help Low-Income Americans Pay Their Phone Bills Failed Amid the Pandemic,” The Washington Post, February 9, 2021, <https://www.washingtonpost.com/technology/2021/02/09/lifeline-broadband-internet-fcc-coronavirus/>.

serve as trusted community messengers to historically underserved populations, including rural communities and on Tribal lands.⁹

When debating government-funded vouchers, policymakers should consider whether the benefits are worth the burden to taxpayers. Research by University of Maryland economist George Zuo shows that connecting a low-income household to broadband reduces the likelihood of unemployment by over four percent and increases annual income by nearly \$1,400.¹⁰ A separate study from the U.S. Chamber Technology Engagement Center estimates that stronger broadband adoption and digital literacy in rural areas could increase economic activity by as much as \$84 billion in sales and 360,000 new jobs.¹¹

The ACP is the most recent program that aims to close the adoption gap of the digital divide, but it is not the only one. Established by Congress in 1985, the Lifeline program is designed to help low-income households access telecommunications services.¹² It was updated in 2016 to assist consumers in adopting broadband services. Applying to consumers with an income at or below 135 percent of the Federal poverty level (FPL), “Lifeline provides up to a \$9.25 monthly discount on service for eligible low-income subscribers and up to \$34.25 per month for those on Tribal lands.”¹³

Plagued by fraud in its early years, Lifeline has significantly improved since implementing a national verifier through the Universal Service Administrative Company (USAC) but remains far inferior to the ACP in getting low-income Americans connected.¹⁴ The requirements for participation in Lifeline are so onerous that the vast majority of major ISPs do not participate, as illustrated by the USAC’s online dashboard.¹⁵ In contrast, the vast majority of ISPs do participate in the ACP, no doubt in large part because of its simplicity.

Another related benefit of the ACP is that it is both technology and vendor neutral while Lifeline can only be used toward offerings that include voice service and are provided by an eligible telecommunications carrier (ETC), subject to numerous requirements.¹⁶ The diversity of options available under the ACP allows consumers more flexibility to find a service that meets their needs.

While the ACP is superior to Lifeline, instances of fraud prove that the ACP is not perfect.¹⁷ As it examines whether or not to appropriate new funds to the program, Congress should also take the opportunity to look critically at how to improve the ACP.

An obvious area for Congress to reform the ACP is its eligibility requirements, which are set at 200 percent FPL—a mark that is too high. With this threshold, households that do not need ACP vouchers to subscribe to broadband services have done so. Lowering the threshold to at or near the Federal poverty level—for example, mirroring the Lifeline threshold of 135 percent FPL—would put the program on more sound footing and ensure that taxpayer funds are more narrowly targeted to households who truly need assistance.

Congress should also seek to improve ACP transparency. There are many questions about the program that cannot be answered without the right data. Requiring the USAC to publish more detailed information on the program would further help policymakers tweak the ACP to maximize its efficacy.

⁹“Affordable Connectivity Outreach Grant Program,” Federal Communications Commission, last updated April 7, 2023, <https://www.fcc.gov/acp-grants>.

¹⁰George W. Zuo, “Wired and Hired: Employment Effects of Subsidized Broadband Internet for Low-Income Americans,” *American Economic Journal* vol. 13, no. 3, (August 2021), <https://www.aeaweb.org/articles?id=10.1257/pol.20190648>.

¹¹“Unlocking the Digital Potential of Rural America,” U.S. Chamber Technology Engagement Center, March 2019, <https://americaninnovators.com/wp-content/uploads/2022/04/Unlocking-the-Digital-Potential-of-Rural-America.pdf>.

¹²“Federal Lifeline Program: Frequently Asked Questions,” Congressional Research Service, October 19, 2017, https://www.everycrsreport.com/files/20171019_R44487_853992974c427e329415251f459818b09fb671d2.pdf.

¹³“Lifeline Support for Affordable Communications,” Federal Communications Commission, last updated January 5, 2023, <https://www.fcc.gov/lifeline-consumers#:~:text=Lifeline%20also%20supports%20broadband%20Internet,territory%2C%20and%20on%20Tribal%20lands>.

¹⁴Jeffrey Westling, “ACP versus Lifeline: A Comparative Analysis of Broadband Affordability Subsidies,” American Action Forum, April 3, 2023, <https://www.americanactionforum.org/insight/acp-versus-lifeline-a-comparative-analysis-of-broadband-affordability-subsidies/>.

¹⁵“Companies Near Me,” Universal Service Administrative Co., accessed April 13, 2023, <https://cnm.universalservice.org/>.

¹⁶“Lifeline: Rules and Requirements,” Universal Service Administrative Co., <https://www.usac.org/lifeline/rules-and-requirements/>.

¹⁷“FCC Inspector General Issues Advisory Regarding ACP Enrollment Fraud,” Federal Communications Commission, September 8, 2022, <https://www.fcc.gov/document/fcc-inspector-general-issues-advisory-regarding-acp-enrollment-fraud>.

Aside from Federal discount programs, many advocates and policymakers argue that another solution to the adoption gap is dramatically increasing government regulation of broadband, including price regulation.¹⁸ This argument is made despite the wide availability of free broadband service for low-income households, and ample research demonstrating that cost is but one factor preventing people from adopting broadband services.

In an environment where activists and some policymakers are pushing rate regulation, the ACP offers a market-based solution while remaining technology-neutral and avoiding preferences regarding the corporate structure of ISPs.

In conclusion, we encourage the subcommittee to:

1. Provide such sums as may be required to continue the Affordable Connectivity Program through fiscal year 2024.
2. Consider revisions to the program that would reduce the cost to taxpayers, including reducing the eligibility requirements and requiring more transparency.
3. Include a recommendation in the report accompanying the subcommittee's appropriations bill that requests the Department of Commerce undertake a comprehensive comparative analysis of Federal programs intended to help close the digital divide. This report should have a particular focus on comparing the efficacy and ROI of Lifeline and the Affordable Connectivity Program.

[This statement was submitted by Jonathon Hauenschild, M.A., J.D., Policy Counsel and Luke Hogg, Director of Outreach, Foundation for American Innovation.]

PREPARED STATEMENT OF THE GEOLOGICAL SOCIETY OF AMERICA

REGARDING THE NATIONAL SCIENCE FOUNDATION AND THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

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 \$11.9 billion for NSF in Fiscal Year 2024 and provide increases to NASA's Science Mission Directorate, particularly its Earth Science and Planetary Science Divisions. Increases in funding will allow NSF to continue to support its core basic research in addition to growing the programs and initiatives authorized in the landmark bipartisan CHIPS and Science Act of 2022 (H.R. 4346) and allow NASA to maintain of a balanced portfolio of current and new science missions and research. Earth and space science at NSF and NASA play a vital role in American prosperity, security, and competitiveness through locating and characterizing mineral and energy resources that underpin economic growth; researching and monitoring natural hazards that threaten U.S. and international security; informing communities about the impacts of a changing climate; and assessing water quality and availability. Investments in NSF and NASA must also be used to broaden the participation in science of those traditionally underrepresented in STEM fields.

GSA is a scientific society with 19,000 members from academia, government, and industry. 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 2023 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 \$11.9 billion in FY 2024. Increases in funding will allow NSF to continue to support its core basic research in addition to growing the programs and initiatives authorized in the landmark bipartisan CHIPS and Science Act of 2022 (H.R. 4346).

Sustained increases beyond inflation are necessary to regain America's leadership in science and technology, and to enable discoveries that lead to future innovation and industries. NSF consistently receives many more high-quality proposals than it

¹⁸Meredith Whipple, "Public Knowledge Urges Court to Uphold New York's Affordable Broadband Act," Public Knowledge, December 3, 2021, <https://publicknowledge.org/public-knowledge-urges-court-to-uphold-new-yorks-affordable-broadband-act/>.

can fund. For example, the *Merit Review Process Fiscal Year 2020 Digest* noted that “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, mineral, and water resources; and STEM 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.
- Natural hazards are a major cause of fatalities and economic losses. NOAA found that the U.S. disaster costs for 2022 exceeded \$165 billion. An improved scientific understanding of hazards will reduce future losses by informing effective planning, mitigation, and resilience strategies. NSF investment in fundamental Earth science research and facilities underpins innovations in natural hazards monitoring and warning systems.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

GSA appreciates past committee support of NASA science and requests increases to NASA’s Science Mission Directorate, including to its Earth Science and Planetary Science Divisions, in FY 2024 as proposed in the President’s budget request.

Increased funding for Earth Science will allow NASA to maintain of a balanced portfolio of current and new science missions and research. In addition, new investment is 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 tremendously important for natural resource exploration and land use planning, as well as for assessing water resources, natural disaster impacts, and global agriculture productivity. The Landsat satellites have amassed the largest archive of remotely sensed land data in the world. GSA supports interagency efforts to ensure the future viability of Landsat satellites as well as funding for Landsat Next 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 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. High-priority missions such as PACE (Plankton, Aerosol, Cloud, ocean Ecosystem mission), CLARREO (CLimate Absolute Radiance and REfractivity Observatory)

Pathfinder, and NISAR (NASA–ISRO Synthetic Aperture Radar), will provide key data to understand our changing planet and its natural resources. In addition, NASA’s proposal to create an Earth Information Center will make data more accessible to communities most affected by climate change.

Increased funding for Planetary Science will strengthen American leadership in science, technology, and innovation, and inspire the next STEM workforce generation. The U.S. has historically led the way in exploring our solar system, demonstrating how American values of scientific integrity, transparency, and cooperation can be used to tackle challenging and visionary feats like landing humans on the Moon, and exploring the most distant planets in our solar system. Support for the planetary science priorities identified in the recent decadal survey, *Origins, Worlds, and Life: A Decadal Strategy for Planetary Science and Astrobiology 2023–2032*, will further this mission by expanding NASA’s lunar presence and exploration abilities through the Artemis program, and eventually landing humans on Mars. Other high-priority missions like Mars Sample Return, Europa Clipper, and Dragonfly will make unprecedented leaps in NASA’s scientific and engineering capabilities, bringing samples from another planet back to Earth for the first time, and exploring moons in the outer solar system that may harbor extraterrestrial life. Furthermore, planetary exploration has stimulated advances in numerous fields of study and supported the development of new technologies. For example, spacecraft camera design has led to many developments in charge-coupled devices (CCDs), the basis for practically every modern imaging device, whether used in a pocket camera, a smart phone, or security systems. Planetary and Earth exploration are intrinsically linked: scientific and technological advancements from one can be adapted and utilized by the other, while cuts to one can likewise hinder the other.

SUPPORT NEEDED TO ENSURE A DIVERSE COMMUNITY OF FUTURE INNOVATORS

For the United States to remain a global leader, the Nation must provide greater investment in its people, and create a STEM workforce that reaches traditionally underrepresented gender, racial, ethnic, and geographic groups and communities. NSF’s Education and Human Resources Directorate studies and improves the way we teach science, and provides research and fellowship opportunities to students that encourage them to continue in the sciences. Similarly, NASA’s Office of STEM Engagement educational programs that span the K–12 to graduate levels 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.

Funding is needed to ensure that the provisions in the CHIPS and Science Act that increase diversity in the scientific enterprise are implemented. GSA recommends fully supporting the “Eddie Bernice Johnson INCLUDES Initiative,” as well as provisions in the CHIPS and Science Act drawn from the STEM Opportunities Act, Rural STEM Education Act, The Minority Serving Institutions (MSI) STEM Achievement Act, and Combating Sexual Harassment in Science Act.

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.

[This statement was submitted by Kasey White, Director for Geoscience Policy.]

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 \$11.9 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 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, technology, 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

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).

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 \$11.9 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 THE 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 2023 appropriations bill. We appreciate your continued consideration for the following requests in the Fiscal Year 2024 Departments of Commerce, Justice, Science, and Related Agencies budget:

- DOJ Animal Welfare Act enforcement*.—report language; \$1,583,000 for ENRD per President’s Budget request
- NOAA Shark Fin Sales Elimination Act*.—report language
- NOAA North Atlantic Right Whales*.—\$50 million per FY 2023 Consolidated Appropriations Act; at least \$37.3 million for NOAA Fisheries; \$14 million for Atlantic lobster and Jonah crab fishery
- NOAA John H. Prescott Marine Mammal Rescue Assistance Grant Program*.—\$4 million per President’s Budget request
- Marine Mammal Commission*.—\$5.04 million per President’s Budget request

DEPARTMENT OF JUSTICE—ANIMAL WELFARE ACT ENFORCEMENT

The Animal Welfare Act (AWA) requires research facilities and animal exhibitors, breeders, and dealers to meet basic standards of animal care. The law is crucial to protecting over one million animals from inhumane treatment, yet many facilities get away with egregious abuse. Without strong enforcement, facilities such as puppy mills and roadside zoos have no meaningful deterrent to violating the law.

The entire U.S. Department of Agriculture (USDA), which enforces the AWA, has only three Administrative Law Judges. This severely limits how many enforcement actions go through the system. However, foreseeing that USDA would need help, Congress included a provision in the AWA that allows the Department of Justice (DOJ) to bring cases in Federal court.

We therefore urge the inclusion of the report language below, which encourages DOJ to continue strengthening its enforcement of this vital law. Even if DOJ only brings a handful of animal welfare cases annually, it sends an important signal to the regulated community. For example, DOJ sued big cat exhibitor Jeffrey Lowe/Tiger King LLC in 2020 for chronic AWA and Endangered Species Act (ESA) violations. On this basis, the Federal Government seized 68 lions, tigers, and other big cats, and sought civil forfeiture pursuant to the ESA’s forfeiture provision. This high-profile case continues to resonate a message of deterrence to bad actors in the wild animal exhibition industry.

In another instance, DOJ brought the first-ever puppy mill case in Federal district court, in 2021. Daniel Gingerich had amassed almost 100 AWA violations in the six preceding months alone, including evidence of dead and injured dogs. Initially, DOJ requested injunctive relief, and the court ordered the breeder to provide immediate care to the more than 500 dogs found to be in serious danger. Ultimately, a settlement was reached and the surviving dogs were given to the Animal Rescue League of Iowa for adoption. This important case continues to send a strong signal to all federally licensed animal breeders who provide inadequate care.

As such, we urge the inclusion of this report language:

The Committee directs the Department to review and revise its on-boarding education materials and practices for new litigating attorneys to ensure a thorough explanation regarding the prosecution of Animal Welfare Act (AWA) violations, including handling referrals from other Federal agencies or law enforcement entities. The Committee further directs the Department to develop a plan for the distribution of this same information to litigating attorneys currently working within the Department to ensure they too are aware of the Department's responsibilities under the AWA.

The Department is also directed to review its agreements and memoranda of understanding with other key Federal agencies to ensure that AWA violation referrals can be easily reported and swiftly reviewed and ensure that the Department is receiving the necessary information concerning violations from other agencies. The Department shall report to the Committee within 90 days of enactment of this act on its efforts to increase Departmental awareness of AWA litigation and the inter-agency referral process.

Additionally, we strongly support the FY 2024 President's Budget request of \$1,583,000 within DOJ's Environment and Natural Resources Division for AWA enforcement efforts. This funding will add attorneys and support staff to address the growing caseload.

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION—SHARK FIN SALES ELIMINATION ACT IMPLEMENTATION

The Shark Fin Sales Elimination Act (SFSEA) was passed by Congress and signed into law in December 2022. It prohibits the commercial trade of shark fins or products containing shark fins, thereby removing the United States from the international shark fin market. The policy builds on the Shark Finning Prohibition Act of 2000 (Public Law 106-557) and the Shark Conservation Act of 2010 (Public Law 111-348), which ban shark finning and the possession at sea of shark fins not “naturally attached” to the carcass. To meet global demand for shark fin soup, fins from as many as 73 million sharks are traded on the global market annually. This is unsustainable for shark populations, some of which have declined by up to 90% in recent decades. Many of these fins are obtained through shark finning, a brutal act in which sharks' fins are sliced off and the mutilated animals are tossed back into the ocean to die. The United States is not only an end market but also a transit hub for shark fins obtained in countries with weak policies or on the high seas where no nation's laws apply.

Congress demonstrated significant bipartisan support for this policy on multiple occasions. The House passed the SFSEA by a vote of 310–107 in the 116th Congress. In the 117th Congress, both chambers passed the legislation twice: the Senate as part of the U.S. Innovation and Competition Act, following a 23–5 Commerce Committee vote to add the legislation as an amendment during markup, and the House as part of the underlying text of the America COMPETES Act. Then, a modified version of the SFSEA was included in the National Defense Authorization Act for FY 2023, which both chambers passed last December. Now, it is fitting that the Department of Commerce honor Congress's will and act expeditiously to implement the SFSEA.

We therefore urge the inclusion of this report language:

The Shark Fin Sales Elimination Act became law on December 23, 2022, as part of the James M. Inhofe National Defense Authorization Act for Fiscal Year 2023 (Public Law 117-263). The Committee directs NOAA to expeditiously issue its plans and regulations for implementing this important law. NOAA is further directed to provide a report to the Committee no later than 90 days of enactment of this act describing any resource needs required to fully address this issue, coordination with other Federal agencies, State and local law enforcement and key stakeholders, and plans to raise public awareness on how to report violations.

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION—NORTH ATLANTIC RIGHT
WHALE CONSERVATION

We urge you to provide appropriations necessary to sustain and build upon ongoing conservation activities for the critically endangered North Atlantic Right Whale. Accordingly, we request that the Conservation and Mitigation Assistance Grant Program authorized in the Consolidated Appropriations Act, 2023, be fully funded at \$50 million. Further, we recommend no less than \$37.3 million to support NOAA Fisheries' ongoing North Atlantic right whale conservation efforts. In addition, we support \$14 million to facilitate compliance with existing conservation requirements applicable to, and the ongoing transition of, the Atlantic lobster and Jonah crab fishery.

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION—JOHN H. PRESCOTT MARINE
MAMMAL RESCUE ASSISTANCE GRANT PROGRAM

We urge support for the President's Budget request of \$4 million for the John H. Prescott Marine Mammal Rescue Assistance Grant Program. 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% 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

We urge support for the President's Budget request of \$5.04 million for the Marine Mammal Commission. The U.S. taxpayer contributes just over 1 cent per year to fund this agency and its work. This amount would enable the agency to fulfill its obligations under the Marine Mammal Protection Act.

[This statement was submitted by Jocelyn Ziemian, Senior Legislative Specialist, Humane Society Legislative Fund.]

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 "Census Household Panel" program and the bill language and committee report language we are seeking. The program is funded through the Census Bureau's Current Surveys and Programs account, under Current Demographic Statistics.

The subcommittee may recognize the Census Household Panel as an insourced version of the Ask U.S. Panel, a controversial project on which Congressional appropriators required a report in the Fiscal Year (FY) 2023 omnibus funding law.¹ The project's contract, justification and management were also recently criticized by the Commerce Department's Inspector General (IG).

ABOUT THE INSIGHTS ASSOCIATION

IA defends and promotes the indisputable role of insights in driving positive impacts on society and consumers. Our more than 7,200 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.

¹"Ask U.S. Panel Survey.-The Census Bureau is directed to provide a report to the Committees, no later than 90 days following enactment of this act, on the Ask U.S. Panel Survey's methodology, data collection processes, implementation, incurred and projected costs, procurement strategy, and plans to address any recommendations made by the Inspector General." (p. 8) <https://www.appropriations.senate.gov/imo/media/doc/Division%20B%20-%20CJS%20State%20FY23.pdf>.

The IG issued a final report on February 27, 2023² of the office's investigation of the Ask U.S. Panel project, noting that "the Bureau's management and oversight of the cooperative agreement lacked transparency over key financial assistance award processes" and that the Bureau was providing significant taxpayer dollars to a private entity "without validating costs." Most importantly, the IG found that the Census Bureau "did not document research or analysis conducted to determine whether the need for the Ask U.S. Panel could be met by existing commercial platforms or developed internally."

As the IG finished its investigation, the Census Bureau disclosed that it would terminate the "cooperative agreement," the contracting arrangement used to fund a private entity to build the online research panel. In the end, that panel "was not developed." However, even as the Bureau's attempt to build the panel via a private contractor came to an end, the IG discovered that the Census Bureau planned "to incorporate elements of the panel into studies the Bureau has underway" and that a new Bureau "panel would have some similar features to the Ask U.S. Panel but would differ in that it would be (1) built on Census systems, by Census staff, using Census data and (2) available on a cost-reimbursable basis for other Federal Government data collection efforts but would not serve nonprofit researchers."

The insourced panel turns out to be what the Bureau now calls the Census Household Panel, for which it requested \$1.713 million in FY24.³

IA's concerns, similar to those we shared with the subcommittee in FY23, include:

1. Federal agencies can (and already do) purchase such services from the private sector

Hundreds of insights companies and organizations provide research panel services. Further, 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 (a specialized kind of panel which was the original goal of the Ask U.S. Panel project). Whether probability-based or not, insights providers offer these services commercially on the open market; absent justification to Congress of the uniqueness of their needs, the Census Bureau should acquire panel research services with full and open competitions. Private sector options would potentially cost a mere fraction of the Bureau's insourced program.

2. The Panel is a potentially unnecessary financial burden on Federal taxpayers

It is hard to assess the veracity of the Census Bureau's fiscal plan for the Census Household Panel because so little detail has been revealed. Besides just the cost and expertise involved in establishing this presumably duplicative service, the Census Bureau appears to not have considered the immense expertise in data quality, incentive management and delivery, fraud detection, attrition mitigation and management, and privacy and permissions management required to successfully maintain a high-quality research panel.

²"The Census Bureau Can Improve Processes to Promote Transparency of Cooperative Agreements." OIG-23-011-I. [https://www.oig.doc.gov/OIGPublications/\(REDACTED\)/%20OIG-23-011-I%20\(REDACTED\).pdf](https://www.oig.doc.gov/OIGPublications/(REDACTED)/%20OIG-23-011-I%20(REDACTED).pdf).

³"Census Household Panel (\$1,713, 10 FTE/14 Positions) The Census Bureau will enhance staffing to design, build, and maintain an online panel to support the timely and efficient collection of high-quality data for production and research purposes. This will be a probability-based nationally representative survey panel that leverages the Master Address File and population data from the American Community Survey, Current Population Survey, and other survey and non-survey data sources. The Panel will be a resource for supporting research and development work by speeding up and increasing the quality of methodological research associated with surveys. The benefits of a predominantly online longitudinal panel survey compared to a traditional survey is that a panel may provide faster turnaround and lower cost. The panel will be longitudinal, meaning that the same individuals will be surveyed over an extended time frame. A longitudinal panel allows for the examination of changes in household characteristics and analysis of how events impact households differently over time. The panel will consist of a pool of pre-recruited individuals, including historically undercounted populations, and will meet standards for transparent quality reporting of the Federal Statistical Agencies and the Office of Management and Budget. The panel will improve existing data collection and sources with a focus on gaps in coverage, ensuring that survey content is relevant and accessible to all respondents and yields representative outcomes. In this context, the Census Bureau considers the panel an essential tool for advancing data equity. The Census Bureau also intends for the panel to be used to conduct methodological research on privacy and confidentiality concerns across time, to test alternative contact timing and sequence, improve online questionnaires and procedures, reduce respondent burden, and ultimately increase the quality of data collected in censuses and surveys of the public." (Pages 66-67) <https://www.commerce.gov/sites/default/files/2023-03/Census-FY2024-Congressional-Budget-Submission.pdf>.

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”.⁴ 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-76⁵ and other policies specifically requiring competitive sourcing. According to the IG report, the Bureau provided no documentation of any such sourcing analysis.

3. The Census Bureau should prioritize its core Constitutional mission

The Bureau is responsible for many surveys, but none are more important than the decennial headcount and the ongoing American Community Survey (ACS), which are responsibilities authorized by the U.S. Constitution. As we begin the ramp-up to the 2030 Census and the ACS cries out for further investment to maintain its accuracy,⁶ the Bureau should focus its energy and resources on responsibilities authorized in law and in its mission-critical functions.

In response to these concerns, IA has recommended bill language and report language in FY24.

IA recommended FY24 CJS bill language.—“No funds in this bill may be spent in support or development of the Census Household Panel or any similar effort to develop a survey, opinion or market research service that could be competitively-sourced from the private sector.”

IA recommended FY24 CJS report language.—“Census Household Panel. The Committee is concerned about the lack of transparency related to the Census Bureau’s Census Household Panel program, particularly given the lack of congressional authorization, the expanding scope, and the Commerce Department IG’s February 2023 findings (OIG–23–011–1). The Committee is also 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, interagency agreements with other Federal entities, and procurement strategy to allow the Committee to evaluate the panel’s use of Federal resources.”

CONCLUSION

The bill language would require at least a thorough competitive sourcing analysis before the Bureau develops new services, while the report language will provide an opportunity for the Committee to ensure the Census Bureau and its projects remain transparent and used for their intended purposes.

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, so we applaud the Census Bureau’s ongoing service as the leading source of the highest quality and most representative data for America’s people and economy. However, that does not mean that the Census Bureau is the only provider of information. We simply ask that the Bureau focus on its core authorized functions and do them well.

IA remains worried that the Census Bureau still intends to use taxpayer dollars, possibly from multiple agencies and funding sources, to develop a service that already exists in the private market. The Bureau’s attempt to fund a private entity to learn how to build a probability-based online research panel (the Ask U.S. Panel) failed, as we predicted it would, since it is a specialized area of expertise. Rather than wasting even more scarce Federal resources by trying to insource the failed panel, the Census Bureau should save a ton of time and money by simply purchasing the service from one of the multiple existing insights providers instead of building the Census Household Panel program in-house from scratch.

⁴Bureau 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.

⁵<https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/circulars/A76/a076.pdf>.

⁶“America’s Essential Data at Risk: A Vision to Preserve and Enhance the American Community Survey.” The Census Project. March 2022. <https://thecensusproject.org/acs-americas-data-at-risk/>.

Thank you for allowing IA to testify on the Census Household Panel program, an important under-the-radar issue in the FY24 CJS Appropriations legislation.

[This statement was submitted by Howard Fienberg, Senior VP Advocacy.]

PREPARED STATEMENT OF INTEGRATED OCEAN OBSERVING SYSTEM (IOOS)
ASSOCIATION

ADDRESSING: APPROPRIATIONS FOR THE NATIONAL OCEANIC AND ATMOSPHERIC
ADMINISTRATION'S NATIONAL OCEAN SERVICE

Chairwoman Shaheen, Ranking Member Moran, and Members of the subcommittee,

This testimony supports Fiscal Year 2024 appropriations to the National Oceanic and Atmospheric Administration's National Ocean Service to ensure sustained ocean observation to improve the resilience and economic prosperity of the Nation's coastal and Great Lakes communities. It is submitted on behalf of the IOOS Association, a nonprofit organization representing the 11 government-certified Regional Associations of the Integrated Ocean Observing System (IOOS) located around the Nation's coasts and Great Lakes, including U.S. territories in the Caribbean and Pacific. IOOS is the Nation's premier coastal and Great Lakes observing program, providing information that helps protect lives, economies, and our environment.

Forty percent of the population of the United States lives in coastal counties, and the population in coastal areas continues to increase. Additionally, nearly 40% of coastal residents are vulnerable communities—the elderly, children, and the poor. At the same time, the ocean, coasts, and Great Lakes are experiencing dramatic changes from coastal flooding, sea level rise, increasing coastal storm frequency and intensity, erosion, hypoxia, harmful algal blooms, ocean acidification, biodiversity loss, and more. These impacts threaten critical coastal infrastructure and water and food supplies and weaken the ability of marine ecosystems to provide critical ecological services and natural infrastructure for climate resilience. Coastal communities and businesses that rely on marine resources and transportation need information and forecasts about the ocean environment to make decisions that protect lives and ensure safety, security, and economic prosperity.

Sustained, reliable, and accessible quality data are the foundation for understanding and making decisions about our coastal oceans and Great Lakes. The national network of 11 IOOS Regional Associations generates and delivers information that meets the needs of 17 Federal agencies as well as state, municipal, and private industry interests. In tailoring products to meet the needs of a variety of users, including but not limited to local shippers, anglers, emergency and resources managers, public health officials, aquaculture farmers, coastal communities, and recreators, IOOS is foundational for the growing information-based Blue Economy.

The Regional Associations deploy, operate, and maintain more than 300 observing assets and integrate and serve data from Federal and non-federal sources through federally certified regional data centers. IOOS is a single system that supports many needs, making it a cost-effective investment for the American taxpayers. In fact, a recent assessment by the Center for the Blue Economy concluded that the value of the IOOS regional observing system, just to initial users, lies between \$192 million and \$233 million per year, creating an economic value approximately five times greater than the current annual investment in the system. This can be considered both a conservative and incomplete estimate as it did not include two of the 11 IOOS Regional Associations and did not consider the likely much larger values resulting from end uses of the array of information products and services that rely on observing data provided by the IOOS regional observing system. Further, the data and information products and services of IOOS support decision-making and innovation for the more than \$360 billion (GDP) ocean-based economy.

Like any business, the IOOS Regional Associations are feeling the impact of inflation on their ability to provide the services that their users and stakeholders have come to expect. Inflation has increased the cost of doing business (e.g., labor, electricity, parts, and sensors) by more than 13 percent since January 2021. That means, to meet the buying power of FY 2022 enacted levels of \$41 million, which the Regional Associations are currently operating under, they would need almost \$46.5 million. We are thankful for the increased funding enacted in FY 2023 (\$42.5 million), but it still does not keep up with inflation and the costs associated with the many services provided and enabled through the IOOS regions.

Additionally, after more than 20 years of service, much of the IOOS observing infrastructure—e.g., the network of oceanographic moorings, underwater profiling gliders, land-based high-frequency radars, shore stations, and more—is aging and

outdated. Some of the assets are beginning to fail and cannot be serviced by manufacturers. This infrastructure network supports hurricane intensity forecasting and the assets that support a harmful algal bloom observing network, search and rescue, fisheries and aquaculture, and tracking marine mammals. The cost to replace and upgrade aging and failing assets is \$137 million spread across the 11 IOOS regions. The bipartisan Infrastructure Investment and Jobs Act (IIJA) (\$7.3 million from the first-year allocation, with total support over the 5 years anticipated at about \$35 million) will help the Regional Associations to begin to address the most urgent needs, but it will not fund the entire need.

Our priority is to provide robust funding for IOOS and its national network of 11 IOOS Regional Associations to further our understanding of our dynamic and resource-rich coastal areas and to prepare communities for risks associated with floods, extreme weather events, harmful algal blooms, hypoxia, and other hazards. We respectfully request that the Committee provide \$80.5 million for the Regional IOOS line and \$13 million for the IOOS Program Office under the National Oceanic and Atmospheric Administration's (NOAA) National Ocean Service in the Fiscal Year 2024 appropriations legislation.

The \$80.5 million request for the Regional IOOS program includes \$50 million for core support. This funding will provide sustained operational support for the regional systems to support, for example, safe and efficient maritime transportation and commerce, search and rescue, offshore energy development and operations, resource management and protection, environmental prediction (e.g., marine heat waves), and improving understanding and notification of hazards (e.g., hurricanes, flooding). This support will enable the regions to continue building capacity for detection and forecasting of harmful algal blooms, through projects that Congress has supported since FY 2021, toward an operational National Harmful Algal Bloom Observing Network. This request addresses rising costs due to inflation and also supports expanded engagement to diverse stakeholders and communities and strengthens the programmatic infrastructure that allows the 11 IOOS Regional Associations to leverage resources proactively to ensure efficiency, develop additional predictive capacity for users, and co-design useful applications for rapidly growing demands. The additional capacity for services enabled through IIJA and anticipated from IRA require a stable system to gain the most benefit from these important investments.

The Regional IOOS request also includes \$25.5 million in critical investments to modernize the system through technology (e.g., platforms and sensors) upgrades and enhancements to prevent loss of data and services that ensure the Nation has the information needed to detect, prepare, and respond to the changing conditions in our coastal oceans and Great Lakes. The IIJA will fund part, but not all, of the \$137 million needed to repair and modernize the IOOS regional systems. We anticipate about \$35 million from the IIJA over 5 years. Our \$25.5 million request of Congress addresses the unmet need of \$102 million spread over the next 4 years.

Finally, \$5 million of the total IOOS Regional request will support Innovation Competitive Grants. This investment will provide continued support for competitive grant programs for innovations and partnerships, including sensor development, autonomous sampling, and coastal modeling. From investments in Ocean Technology Transition (OTT) grants, IOOS regions have taken new technologies, such as for measuring ocean acidification, nutrients, harmful algal bloom toxins, and other properties, and transformed those into operational observing systems, aiding both the industry partners who produce the underlying technology and the user community who now rely on these better data. Investments in Coastal and Ocean Modeling Testbed (COMT) grants have resulted in numerous examples of developing research models into operational models capable of delivering forecasts and higher spatial definition of variables of interest, such as for water quality management, for fisheries habitat assessment, and climate impacts assessment. Such models include the Chesapeake Bay Environmental Forecast System in the Mid-Atlantic, the West Coast Ocean Forecast System, and the LiveOcean environmental model in the Pacific Northwest.

The \$13 million requested for the IOOS National Program Office in the NOAA NOS Navigation, Observation, and Position budget line will modernize the Data Management and Cyberinfrastructure (DMAC) system to meet user needs and identify system gaps in partnership with the IOOS Regional Associations; develop a biological and marine life observing program; advance the development of coastal modeling products and predictive capabilities and coordinate research-to-operations transitions across NOAA programs; facilitate integration of non-federal efforts with NOAA, including NOAA's uncrewed system initiative; and enhance integration of IOOS across the regional network and the 17 Federal agencies.

We are grateful for the Committee's support of IOOS in the FY 2023 appropriations bill, and again emphasize the importance of funding a network that provides

crucial information about our coasts and waterways to millions of Americans. Preventing gaps in the Nation's sustained observations is key to protecting our coastal communities and unlocking the economic potential of our oceans, coasts, and Great Lakes.

Thank you for the opportunity to provide this statement.

[This statement was submitted by Dr. Gerhard Kuska, Chair.]

PREPARED STATEMENT OF INTERNATIONAL FUND FOR ANIMAL WELFARE

FUNDING PRIORITIES FOR NOAA IN FY24

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 complicated conservation challenges. By engaging in constructive dialogue and finding common ground with maritime industries, IFAW has been able to create conservation solutions that benefit all stakeholders. For example, IFAW has worked with the lobster fishing industry to develop and implement fishing gear modifications that reduce the risk of entanglement to the North Atlantic right whale. IFAW has also worked with the shipping industry to develop technologies that help reduce the risk of ship strikes, another primary cause of death for whales and other marine mammals.

IFAW has also been at the forefront of responding to stranded marine mammals for over 30 years; our Marine Mammal Rescue Team serves as the first line of defense for many distressed marine mammals. This work includes responding to entangled and stranded marine mammals—including whales, dolphins, and seals—and rescuing and releasing them whenever possible. In the circumstances rescue and release is not possible, IFAW also provides necropsy work, which provides critical information that can inform future conservation management decisions.

We are grateful for this opportunity to offer testimony on the FY24 Commerce, Justice, Science, and Related Agencies Appropriations Act. We also appreciate this subcommittee's longstanding championship of marine conservation and research funding. Indeed, through the Consolidated Appropriations Act of 2023 (Public Law 117-328)—but also noting the Inflation Reduction Act (Public Law 117-169), and the James M. Inhofe National Defense Authorization Act for Fiscal Year 2023 (Public Law 117-263)—marine mammals received a boost in both newly authorized programs and funding. This attention is in response to the unprecedented challenges our ocean life is facing. The last several decades have seen a surge in new and increasing threats to many marine species off our coasts. Habitat loss and degradation, bycatch, vessel strikes, gear entanglement, ocean noise, marine contaminants, and the overarching and extraordinary challenges posed by climate change have all led to several ongoing Unusual Mortality Events (UMEs) and rapidly declining marine mammal species.

While IFAW recognizes and is highly appreciative of the support this subcommittee and the U.S. Senate have given to these critical issues, our experts, scientists, and colleagues are clear that more is needed if we are to save the critically endangered North Atlantic right whale—which is native to America's waters from Florida to Maine—and other highly imperiled marine mammals from these threats and eventual extinction.

For FY24, IFAW requests the following direction from the subcommittee within the National Oceanic and Atmospheric Administration's (NOAA) conservation programs.

North Atlantic Right Whale: \$101 million

With only about 340 North Atlantic right whales left as of 2021, and of those fewer than 70 reproductive females, the future of the right whale is in severe jeopardy. Without additional robust investments in efforts to reduce right whale deaths and serious injuries dramatically, this species is at imminent risk of extinction.

Conservation and Mitigation Assistance Grant Program: \$50 million

The Consolidated Appropriations Act of 2023 authorized a new grant program through 2032 to provide competitive grant funding for projects designed to reduce the lethal and sub-lethal effects of human activities on North Atlantic right whales. In authorizing the program, Congress advised that a large majority—\$40 million—of this authorized funding should go toward innovative gear deployment and technology. This cannot be overstated: in order to prevent extinction for the North Atlantic right whale, on-demand fishing technologies must be made to be commercially

achievable in the New England lobster and Jonah crab fisheries. We request the program be fully funding at \$50 million in FY24.

North Atlantic Right Whale Conservation: \$37 million

In the months since the enactment of the Consolidated Appropriations Act, 2023, the state of the right whale population has become even more precarious. There have been a series of observed mortalities and injuries, including four confirmed cases of sublethal injury in 2023 from entanglement in fishing gear and two confirmed deaths. We therefore urge the subcommittee to provide robust funding to NOAA Fisheries for right whale conservation work. We request \$37 million under *Marine Mammals, Sea Turtles, and Other Species*. Within this amount, IFAW urges the subcommittee to prioritize: (1) the ongoing NOAA Fisheries pilot program for innovative fishing technologies; (2) Improving enforcement of both current and future vessel speed restrictions and (3) Disentanglement, stranding response, and necropsy activities.

Vessel strikes are one of the major threats to right whale recovery. The best available science shows that speeds of 10 knots or lower reduce the risk of mortality by 80–90%. NOAA Fisheries has proposed new vessel speed regulations to that end. For FY24, we urge the subcommittee to ensure NOAA Fisheries has adequate resources to not only implement and enforce this pending rulemaking, but to improve enforcement of the existing ship speed rule.

Additionally, stranding response and necropsy work for marine mammals has traditionally received very little funding, and yet the work is critical to informing effective conservation and management decisions. We urge the subcommittee to direct sufficient funding towards supporting North Atlantic right whale necropsy readiness and the North Atlantic right whale necropsy database, including the expansion of capacity to include sample archive and tracking.

North Atlantic Right Whale and Fishermen Assistance: \$14 million

IFAW supports the subcommittee's efforts to mitigate impacts to American fishermen and prioritize a path of coexistence: where both sustainable fishing and right whales can thrive. For FY24, IFAW requests the subcommittee provide \$14 million under *Marine Mammals, Sea Turtles, and Other Species* to facilitate the fishery with its transition to use of on-demand fishing systems in the near future and in anticipation of future regulations. Thoughtful investments now will ease the burden and hardship to our iconic and important fisheries in the future.

Marine Mammal Protection Act and Endangered Species Act Support: \$19.5 million

In addition to providing vital resources to the North Atlantic right whale, IFAW also urges the subcommittee to direct adequate resources to several vital programs that are critical to meet the conservation, protection, and recovery mandates under the Marine Mammal Protection Act (MMPA) and the Endangered Species Act (ESA). This includes programs newly authorized-but not funded-under the James M. Inhofe National Defense Authorization Act.

John H. Prescott Marine Mammal Rescue Assistance Grant Program: \$10 million

The Prescott Program provides the capacity needed to respond to sick, injured, or deceased marine mammals. Not only is this an animal welfare imperative, but this work provides important data about threats to marine mammals, their environments, and marine ecosystem health. Knowledge is power, and this program provides the best path for informing future conservation management decisions. Additionally, this one program is the sole source of Federal funding for the National Marine Mammal Stranding Network of over 90 member organizations across 23 States. NOAA relies on this network to meet its statutory duties under the 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 collecting data on marine mammal health, observing trends of wild populations, and effectively responding to UMEs to better inform the collective management and conservation of marine mammal species. Without the support and efforts of stranding networks, NOAA's understanding of marine mammal health trends would be fatally flawed, putting NOAA at risk of violating 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. With this in mind, IFAW requests at least \$10 million under the Marine Mammal Health and Stranding Response Program for funding the Prescott Program in FY24.

Marine Mammal Unusual Mortality Event Contingency Fund: \$4.5 million

This fund, directed by NOAA Fisheries, fills a need for response to unexpected mass strandings of marine mammals, something we're encountering more and more often. Alarming, there are five active UMEs right now: Atlantic Florida manatee, Northeast pinniped, West Coast gray whale, North Atlantic right whale, and the Atlantic humpback whale.

A UME is defined as a stranding that is unexpected, involves a significant die-off of the population, and demands immediate response. Although the Prescott Program reserves a small portion of funding for emergency response, the UME Contingency Fund is solely dedicated to assisting stranding network partners who respond to UMEs by reimbursing members for the treatment and care of live animals. It also supports research, through necropsies and tissue samples, to investigate the causes of UMEs that contribute to marine mammal health data, and which can inform future management decisions.

As critical as this program is for responding to emergency situations, learning from them, and using that information to improve conservation decision-making, to date this Fund has only received a one-time appropriation of \$800,000 in 2005 and minimal funding through private donations since then. The cost of a single stranding event involving a large whale can be \$50,000 or more, making it difficult for responders to meet not only our country's legal obligation to these species, but also a moral animal welfare obligation by expanding detection and mitigation of anthropogenic threats to these federally protected animals. Imagine how our scientific understanding of marine mammals and the threats facing them could improve with increased Federal investment! IFAW therefore urges the subcommittee to allocate \$4.5 million for the UME Contingency Fund in FY24.

Real-Time Monitoring and Mitigation for Large Whales Program: \$5 million

This program was recently authorized through the James M. Inhofe National Defense Authorization Act of 2023 (Section 11303). Existing and emerging technologies can be harnessed to provide managers and ocean users with near real-time detection and location data of endangered whales. Coupled with well-designed mitigation protocols, near real-time monitoring can provide alerts that trigger measures to reduce the risk of whale-vessel collisions, entanglement in fishing gear, and even the timing of construction activities that can harm or disrupt marine mammals. In particular, this program is essential to ensure the effective use of Dynamic Management Areas for North Atlantic right whales under NOAA's Vessel Speed Limit rule. Near real-time monitoring and mitigation can provide the flexibility that ocean users and agencies need to protect large whales in the face of a rapidly changing ocean. Given the importance of this program to not only the critically endangered North Atlantic right whale, but other highly imperiled large whale species, IFAW respectfully requests the subcommittee allocate \$5 million in FY24 to jumpstart this program.

CONCLUSION

Thank you again for this opportunity to share our top funding priorities in the FY24 Commerce, Science, Justice, and Related Agencies Appropriations bill. There are many threats currently facing our oceans and marine wildlife, with more challenges on the horizon. At IFAW, we are proud of our ability to engage experts, scientists, advocates, colleagues, and industry leaders to pinpoint where the greatest needs are, which are outlined above. Our oceans and marine mammals are more than our National heritage; they are essential aspects of the healthy ecosystems on which all living beings rely. We greatly appreciate all you have done to protect and conserve this legacy, and we stand at the ready to answer any questions or provide more detailed information as you and your staff develop the FY24 CJS bill. Thank you.

[This statement was submitted by Danielle Kessler, Director, U.S. Office.]

PREPARED STATEMENT OF JAMESTOWN S'KLALLAM TRIBE

FOR DEPARTMENTS OF JUSTICE AND COMMERCE

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 2024 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 Fish-

eries 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 2023 request of the Pacific Salmon Commission)

1. Provide \$110 million for the Pacific Coastal Salmon Recovery Fund (NOAA/NMFS)
2. Provide \$18.3 million for the Pacific Salmon Treaty, including the additional \$5.5 million for the 2008 Chinook Salmon Agreement (NOAA/NMFS)
3. Provide \$25.9 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. \$25.9 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 The Honorable 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 2024 CJS appropriations bill.

Our oceans and coasts are vital to our Nation's economy and security, as well as to the health and quality of life of its citizens. Oceans are the engines of our planet's weather and climate systems, and they provide important sources of protein. Our national economy also relies greatly on our oceans, including for tourism, fisheries, oil and gas, minerals, shipping, and transportation. Our oceans offer excellent potential for development of renewable energy, offshore aquaculture, and other economic opportunities of the future. Coastal counties are some of our Nation's most populous, and they generate more than one-third of our Gross Domestic Product.

Unfortunately, the continued ability of our oceans to provide these many benefits into the future is at risk. 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 again urge you to ensure that all have sufficient resources to take

the necessary actions. We 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 to \$11.3 billion for the National Science Foundation and a 12.7 percent increase to nearly \$2.5 billion for NASA's Earth Science Division. However, we ask your committee to critically examine funding for these front-line agencies in FY 2024 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.

Given the critical role that our oceans and coasts play in our efforts both to mitigate the worst impacts of a rapidly changing climate and to realize emission reductions, we urge you to resist cutting these programs which are investments in our safety and security and our future.

Further we ask you to utilize your oversight to assure that additional funding streams from the Bipartisan Infrastructure Law and the Inflation Reduction Act flowing through NOAA, NASA, and NSF as well as related programs at the Department of Interior, the Army Corps of Engineers, and more, are working in concert to maximize the impact of these programs. It is essential to expend these unprecedented public funds wisely and efficiently and show demonstrable results in combating ocean and coastal climate impacts.

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 off-shore 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.

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.

Likewise, we support the FY 2024 proposed increase in NSF's overall budget to \$11.3 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 \$2.5 billion for Earth-observing satellites and related research will enhance NASA's ability 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 2024. 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). 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.

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.

Commercial and Recreational Fisheries contributed \$253 billion in sales to the Nation's economy in 2020. 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 FY 2024, 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.

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 FY 2024 budget request. We will continue to track progress on key ocean and coastal programs and accounts in FY 2024 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 Gagosian | 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

PREPARED STATEMENT OF THE LEADERSHIP CONFERENCE ON CIVIL AND HUMAN RIGHTS

FISCAL YEAR 2024 APPROPRIATIONS FOR THE CENSUS BUREAU

Chair Shaheen, Ranking Member Moran, and Members of the subcommittee:

On behalf of The Leadership Conference on Civil and Human Rights, a coalition of more than 230 national organizations committed to promoting and protecting the civil and human rights of all persons in the United States, we urge you to include no less than \$2 billion for the Census Bureau in the Fiscal Year (FY) 2024 Commerce, Justice, Science, and Related Agencies appropriations bill. Funding in the early years of the census cycle lays the foundation for the count at the end of the decade and in turn affects the data used for years to come. Now is the time to prioritize adequate funding for the Census Bureau and its programs.

The Leadership Conference considers a fair and accurate census one of the most significant civil rights issues facing the country today. Accurate census data are integral to moving our democracy forward. The data ensure fair and proportionate voting representation and guide Federal funding for key programs, including education, health care, and rural broadband access. Furthermore, census data are necessary to implement, monitor, and enforce anti-discrimination and civil rights laws across a wide range of Federal agencies. Through the decennial census, the American Community Survey (ACS), Population Estimates Program, and many other surveys and programs, the Census Bureau provides the most expansive data regarding our Nation's demographic, socio-economic, and housing characteristics. Adequate funding for the Census Bureau is a necessary and prudent investment in the effective governance of our Nation and the preservation of our democratic ideals.

Insufficient funding for the Census Bureau will have far-reaching impacts. Inadequate funding will affect the agency's ability to produce and publish accurate data that inform policymaking, influence economic productivity and expansion by guiding

wise business investments, and help guide the fair distribution of resources to all communities. Adequate funding would help the Census Bureau improve the enumeration of historically undercounted and misrepresented communities, address complex issues in collecting data, and integrate data processing and data collection to enhance data quality in real time.

Even as the Census Bureau continues to release data from the 2020 Census, delayed in large part due to the coronavirus pandemic, the 2030 Census planning cycle is already well underway. Funding at this stage is vital to support critical research and testing geared towards achieving an inclusive, accurate, and cost-effective 2030 Census. As the Census Bureau works to modernize and elevate the efficiency and accuracy of the decennial count, at this point in the census cycle, insufficient funding would undermine the progress that has been made by the bureau and hinder future progress. This is especially true as the bureau ramps up to begin developing IT systems and the operational infrastructure for the 2030 Census.

We highlight, for particular consideration, funding for the following key Census Bureau activities.

AMERICAN COMMUNITY SURVEY (ACS)

As an ongoing part of the census, the ACS provides invaluable, high-quality data annually on social and economic characteristics for every community in the country. Inadequate funding for the ACS could jeopardize the accuracy of these data by forcing the Census Bureau to reduce the sample size for the survey. This would adversely affect the availability of data for small localities (such as towns), rural and remote areas, small population groups, American Indian reservations and Alaska Native villages, and Group Quarters facilities generally. All census-guided Federal spending relies on the ACS to some degree; accurate ACS data depend on an accurate decennial census, which serves as a control and ensures a representative sample for the ACS. Yet, funding for the ACS has remained relatively stagnant for years. The ACS needs a boost in funding to implement long-needed updates to the survey, address steadily declining response rates, and make other methodological and operational improvements to ensure that the survey is accurately capturing the economic and demographic diversity of American households.

PREPARING FOR THE 2030 CENSUS

As noted above, investment in early planning for the decennial census will not only improve accuracy but also modernize census operations in a way that will save money over the entirety of the census lifecycle. Timely, focused research and testing now will ensure that the Census Bureau can leverage emerging statistical methods, technology, and communication platforms, helping to contain overall census costs by boosting self-response rates and supplementing direct counting methods with high quality administrative records when appropriate.

POPULATION ESTIMATES PROGRAM

The population estimates produced by the Census Bureau set the denominators for the bureau's demographic surveys, especially the ACS, which directly influences the distribution of Federal funds. Most Federal assistance to States and localities—for schools, highway and road improvement, hospitals, health care, and other vital programs—is based on the annual population estimates; the previous decennial census provides the “base” for updated population numbers. And yet, the Census Bureau's Population Estimates Program has less funding than it did 20 years ago in 2003. In the report accompanying the House fiscal year 2023 Commerce, Justice, Science appropriations bill, the House Appropriations Committee directed the Census Bureau to strengthen the Population Estimates Program to mitigate the consequences of operational disruptions during the 2020 Census that resulted in differential undercounts of racial and ethnic populations, renters, rural households, and young children. A well-funded estimates program would allow for consistent improvements across all States and more outreach to States and localities that could share high quality data to bolster the accuracy of the numbers, but that lack the resources to engage consistently and effectively with the Census Bureau. Congress must ensure that these estimates are as accurate as possible to ensure prudent policy decisions and fair allocation of taxpayer dollars.

We urge the subcommittee to provide the Census Bureau with no less than \$2 billion in fiscal year 2024 to enrich the quality and accuracy of all census data sets, enhance the American Community Survey, continue the preparations needed for the 2030 Census, and support the Population Estimates Program. Thank you for your consideration of our views as we work together to support a fair and accurate census.

PREPARED STATEMENT OF MENTOR

SUPPORT OF: PART G YOUTH MENTORING PROGRAM, OFFICE OF JUVENILE JUSTICE
AND DELINQUENCY PROGRAMS

On behalf of MENTOR, our network of Affiliates, and youth mentoring programs across the country, I thank Chairman Shaheen and Ranking Member Moran for the opportunity to provide testimony in support of a critical Federal investment in America's young people. I write this on behalf of the thousands of mentoring programs and millions of volunteer adult mentors that serve our communities each day, as well as the millions of young people in the United States still waiting to find the supportive relationships they need to thrive—including an average of 63 per program on wait lists. My testimony will focus on the Part G Youth Mentoring Program managed by the Office of Juvenile Justice and Delinquency Prevention (OJJDP) at the Department of Justice (DOJ). MENTOR and our youth-serving partners are calling on your committee to continue the strong bipartisan support of the Youth Mentoring Program with an investment of at least \$130 million in Fiscal Year 2024. This investment will make it possible for more mentoring organizations to use evidence-based practices to better meet the mentoring needs of our Nation's most vulnerable and disadvantaged youth.

MENTOR is the unifying national champion for expanding quality youth mentoring relationships and connecting volunteers to mentoring opportunities in their local communities. At a time when 1 in 3 young people are growing up without a mentor—a data point that has grown in recent years among our country's youngest generation—MENTOR seeks to close this “mentoring gap” and ensure that all young people have the support they need to succeed, everywhere they are. We seek to leverage resources and provide the tools and expertise that local programs—whether in schools, nonprofits, faith-based institutions, or the private sector—require to provide high-quality mentoring for young people who need it most, build greater awareness of the value of mentors, and positively inform public policy in order to bring opportunity to young people in need.

Quality mentoring through structured programs or through relationships that form naturally with teachers, coaches, faith leaders, and other caring adults can have a profound positive impact on educational success, healthy development, and overall wellbeing. It is an innovative, evidence-based practice that is one of the few prevention and intervention tactics with the potential to support young people of all demographics and backgrounds in all aspects of their lives. We believe that this critical time in our Nation's history requires an approach that considers the inextricable linkage between a young person's academic achievement, mental, social, and physical health. For us to meet this moment, Federal investment into evidence-based programs that support positive youth development is required.

THE BENEFITS OF QUALITY YOUTH MENTORING

Youth mentoring is a simple, yet powerful concept: a caring adult provides guidance, support, and encouragement to help a young person achieve success in life. Research confirms that quality evidence-based mentoring relationships have positive effects on young people in a variety of personal, academic, and professional situations:

- Reducing Unsafe or Risky Behaviors.*—Mentors serve as positive role models to help young people make healthy decisions and avoid high-risk behaviors. For example, young people who meet regularly with their mentors are less likely than their peers to use illegal drugs and alcohol. Mentoring can also be integrated into multi-component violence prevention and intervention efforts, reduce aggressive behaviors such as fighting and bullying and provide comprehensive support to youth at risk for committing violence or victimization. Recent research funded by OJJDP even found that mentoring programs potentially provide a benefit of three times the public expenditure for every day in jail that program participants avoid. Mentors help provide guidance to productive activities that support growth and development in a young person, such as sports and extracurricular activities.
- Workforce Development.*—Mentoring helps develop the talent pipeline for our economy. Mentors prepare young people for the workforce through career exposure, skill-building, social-emotional support, and goal setting. Mentoring can also lead to higher retention rates, wage increases, and professional development. Through their mentors, young people are introduced to resources and organizations they may not be familiar with, introducing them to new networks as well as methods to find jobs and internships. Mentors in workplace settings

are particularly impactful for marginalized young people, such as youth with disabilities, youth of color, and youth identifying as female, who are often underrepresented in certain industries, such as science, technology, engineering, and math (STEM).

—*Educational Achievement.*—Many students find meaningful relationships during the school day. In fact, analyses of one prominent national data set from Applied Developmental Science suggest that teachers and other school personnel, such as counselors, coaches, or front office and cafeteria staff, are among the most cited sources of mentors. Further, students who are chronically absent are more likely to drop out of school and have behavioral issues. Mentoring can increase school engagement and improve scholastic efficacy and school-related misconduct.

—*Social-Emotional Development and Mental Health.*—Mentoring provides young people with a sense of belonging and promotes positive social attitudes and relationships. In fact, research has shown that the strongest benefit from mentoring is a reduction in depressive symptoms. It can also help reduce mental health stigma and increase treatment entry and adherence. Ultimately, mentoring provides pro-social activities, increased positive relationships, life skills training, and access to networks—helping lead young people to productive futures.

Mentoring programs can effectively and safely provide these benefits when they are fully trained on the most up-to-date mentoring evidence-based practice and training. In 2015, through funds from the Part G Youth Mentoring Program, The National Mentoring Resource Center (NMRC) was created to improve the quality and effectiveness of mentoring. MENTOR and its Affiliates provide tools, program and training materials, and no-cost, evidence-based technical assistance to mentoring programs, school districts, workplaces, and faith-based institutions across the Nation through the NMRC. This important resource has bolstered the ability of mentoring programs to serve young people from vulnerable populations, including young people at-risk of entering the juvenile justice system, youth in foster care, and victims of commercial sex trafficking.

CLOSING THE MENTORING GAP

While mentoring is an effective evidence-based intervention and prevention strategy for young people facing risk, mentoring organizations across the Nation still face barriers in providing high-quality mentoring services. Thousands of young people remain on waitlists at organizations because of limited resources and funding for programs. Inflationary costs and workforce shortages have prevented a full recovery from the COVID-19 pandemic. Many programs also lack the training and technical assistance that could bolster their mentoring programs to better support young people. These issues combined have provided many obstacles for mentoring programs. But with the support of both private and public funds, many mentoring organizations have been able to increase their capacity to meet their community's relational needs.

One of the ways that mentoring programs have succeeded in expanding quality services is through support from the Youth Mentoring Program. The program, which touches every State, focuses on prevention and interventions for youth facing risk and helps to close the mentoring gap. These funds provide direct support for young people, who could otherwise become involved in negative behaviors and activities causing harm to themselves, their communities, and which take an economic toll.

In a 2016 study conducted by MENTOR, it was found that 75 percent of programs have a budget of under \$100,000. Costs for groups of young people with adverse childhood experiences (ACEs), such as those who have encountered traumatic events, teen parents, or victims of commercial sexual exploitation require more resources and expertise, which increases the program's cost per youth in order to fully address their unique needs. Mentoring programs work far beyond their financial capacity to serve young people, but with additional resources, their reach expands exponentially, and the quality of their services can strengthen through improved training. Mentoring programs utilize Federal support in part to better serve the large number of young people who could benefit most from evidence-based mentoring.

The Youth Mentoring Program continues to be the only Federal grant exclusively dedicated to providing funds for evidence-based mentoring. Youth Mentoring Program funds have been awarded to national, multi-State and collaborative mentoring projects and programs who serve suburban, rural and urban populations. The flexibility of the grant has allowed organizations to use these funds to specifically tailor programs to their community's unique needs. This provides local control and specialized concentration on results that work best for each young person and their community. These funds also invest in research to learn what is most effective, bridging

research to practice, and driving quality and impact through hands-on community-based capacity building. They are simply invaluable in the ways that they support youth development, educational achievement, and safe communities.

MENTOR's request of \$130 million for the Youth Mentoring Program—supported by well over 400 direct service programs from every State in the country—will allow more young people to access to the important social, professional, and academic opportunities we all hope to provide for America's youth. The Youth Mentoring Program demonstrates a sound and effective investment in evidence-based programs that work. Strong mentoring programs weave together our communities, foster greater understanding, enrich the lives of both mentors and mentees, and efficiently leverage volunteers to drive impact backed by quality programs and practice.

Thank you again for this opportunity to provide testimony on this critical Federal resource supporting young people and for this subcommittee's long-standing, bipartisan support for the Part G Youth Mentoring Program.

[This statement was submitted by Abbie Evans, VP, Government Relations and Strategic Partnerships.]

PREPARED STATEMENT OF NATIONAL ASSOCIATION OF ASSISTANT U.S. ATTORNEYS

FY24 DEPARTMENT OF JUSTICE FUNDING

Dear Chair Shaheen, Ranking Member Moran, and subcommittee Members:

On behalf of the National Association of Assistant United States Attorneys (NAAUSA), representing the interests of over 6,000 Assistant U.S. Attorneys working in the 94 U.S. Attorney Offices, I write to express concerns about the Department of Justice's ability to recruit and retain the personnel necessary to prosecute Federal criminal and civil violations and uphold the fair administration of justice. We write the subcommittee on Commerce, Justice, Science and Related Agencies Appropriations relating to FY2024 appropriations for the Department of Justice to highlight ongoing workforce challenges and offer solutions.

For over thirty years, Assistant U.S. Attorneys (AUSAs) have asked their employer—the Department of Justice—for one thing: to be paid the same as other lawyers within DOJ who have the same experience, the same years out of law school, and the same years of service. Indeed, it was AUSAs frustrated by pay inequities who founded NAAUSA. Today, AUSAs are paid significantly less than other DOJ attorneys with the same experience and responsibilities, often as much as \$40,000 per year. This pay gap is profoundly unfair, widely known, and deeply destructive to morale. Many AUSAs forego much higher-paying legal jobs in the private sector to serve in our Federal criminal justice system and support our Nation's homeland security needs.

As law enforcement professionals, AUSAs are vital to maintaining the rule of law in our Nation. And the administration of justice suffers when AUSAs cannot afford to remain in their roles. For example, AUSAs play a lead role in First Step Act implementation. Unfortunately, as the workload of AUSAs has increased with expansions in compassionate release and other First Step Act provisions, the cadre of experienced AUSAs has been depleted. AUSAs are being asked to do more with less compensation and less resources. The current pay structure relies far too heavily on the goodwill of AUSAs and has often turned U.S. Attorneys' Offices into training grounds for large defense firms who will pay AUSAs far more than the Department of Justice is willing. This hinders U.S. Attorney Offices' ability to fully implement the law as Congress intended and on the timelines that Congress has required.

That AUSAs around the country are systematically paid far less than their colleagues—many of whom work shoulder-to-shoulder on the same cases, and sometimes in the same cities and even in the same offices—is indefensible. NAAUSA calls upon Congress to investigate and rectify this inequity.

This pay disparity has existed since the 1980s and occurs, in part, because AUSAs are paid on a different pay scale than other DOJ attorneys, and most other Federal Government employees. AUSAs are paid on the Administratively Determined (AD) pay scale. Nearly all other DOJ attorneys and employees are paid under the General Schedule (GS) or are members of the Senior Executive Service (SES). The AD scale has historically resulted in less pay.

This split pay system has allowed significant pay disparities to develop and grow between attorneys who have the same experience and, in turn, drives chronic, costly, and disruptive retention problems in U.S. Attorneys' Offices across the country. More than that, though, it is unfair and undermines our government's role as a model employer focused on equity across the workforce.

In the Partnership for Public Service's Best Places to Work in the Federal Government, U.S. Attorneys' Offices reported above median and upper quartile scores in nearly every category since 2007. AUSAs are dedicated and generally happy public servants. Yet, pay satisfaction has fallen into the lowest quartile of scores in 12 of the last 13 survey years—bolstering the argument that concerns around pay are the primary barrier to retaining qualified AUSAs. In 2022, U.S. Attorneys' Offices ranked 363 of 428 in agency subcomponents regarding attitudes toward pay.

Even the most committed AUSA lacks an incentive to remain in their office when they cannot adequately provide for their family or afford the high student loan payments many new attorneys face. While some AUSAs do join Main Justice or other parts of the Civil Service seeking improved compensation, often AUSAs are lured to the private defense bar and are immediately litigating against the government. The private defense bar sees AUSAs' experience as valuable and is willing to compensate AUSAs for their training at taxpayers' expense.

NAAUSA calls on Congress to end this cycle by investing in our Nation's career Federal prosecutors by ensuring pay equity between AUSAs and DOJ attorneys. Fairly compensating Federal prosecutors so that they are paid the same as their attorney colleagues across DOJ who do the same or similar work on behalf of our citizens, would strengthen the rule of law, support national security, and is the right thing to do.

Congress has consistently allocated additional funds toward U.S. Attorneys' Offices to cover the salaries and expenses of Assistant U.S. Attorneys (AUSAs). However, this money has been overwhelmingly spent on hiring and onboarding additional AUSAs rather than toward appropriately compensating the current cadre of AUSAs. This causes the pay inequity to persist following the initial hire and results in waste. U.S. Attorneys overemphasize hiring and fail to prioritize retention of experienced litigators who are critical to executing the Department's mission.

To ensure Congressional appropriations are appropriately focused on the most efficient administration of justice, NAAUSA asks Congress to include the following report language in its FY24 CJS Appropriations bill.

DOJ Attorney Pay Comparability Study

The Department shall within 90 days conduct a pay comparability study between attorneys working on the General Schedule and the Administratively Determined pay scales. The Department shall issue the results of the pay comparability study to a public website.

The pay comparability study must:

- 1. examine whether attorneys with similar education, experience, and years of service are compensated differently on the GS and AD scales,*
- 2. identify the cost required to rectify the inequity, and*
- 3. analyze key human capital metrics, such as retention and satisfaction, to determine if compensation issues affect workforce capacity necessary to achieve the Department's mission.*

Our nation faces increasingly evolved forms of Federal criminal activity, such as domestic terrorism, cybercrime, and international drug smuggling networks. It is imperative we have a knowledgeable, experienced class of litigators working in U.S. Attorney Offices as AUSAs able to prosecute these criminals.

The current system invests in hiring and training new AUSAs but fails to incentivize experienced litigators to remain as Federal prosecutors. This leaves the government, after having invested time and training in new employees, without some of the most skilled prosecutors for the job. The Department of Justice should want to retain experienced, skilled litigators to defend our Nation against criminal activity, and that requires proper compensation of AUSAs for duties equivalent to many other DOJ attorneys.

NAAUSA has engaged the Attorney General's Advisory Committee (AGAC) on this topic over the years. We were heartened by some steps in recent years by the AGAC and the Department to address this issue, including in 2016 administratively elevating the minimum entry-level AUSA pay to compare to a GS-11. However, more than a single adjustment is needed to address the systemic pay inequity AUSAs face, including a need for the Department to share all the data and evidence upon which it is comparing attorney compensation under the GS and AD systems.

During the prior administration, the Department admitted to NAAUSA that the compensation disparity between AUSAs and Justice lawyers is real and could be closed with an investment of a mere \$42 million per year. NAAUSA calls on Congress to cause the Department to promptly update its AUSA compensation study and provide details on its plans to close the gap.

Workforce churn, staff attrition with loss of expertise, and decreased morale have real costs for taxpayers, and undermine the capacity of U.S. Attorney Offices to accomplish their missions. The importance of AUSAs to DOJ's mission was amply demonstrated during the COVID pandemic when AUSAs were deemed essential and responded to thousands of compassionate release motions while zealously pursuing an ever-increasing load of criminal and civil cases. We must ensure the Department of Justice properly manages and compensates these important members of the Federal law enforcement community.

Thank you for considering the perspective of NAAUSA. Please do not hesitate to reach out to our Washington representative Natalia Castro (ncastro@shawbransford.com) regarding this matter.

Respectfully,
Steven Wasserman
NAAUSA President

PREPARED STATEMENT OF NATIONAL ASSOCIATION OF DRUG COURT PROFESSIONALS

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 more than 4,000 treatment court programs around the country, 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 level funding of \$95 million for the Drug Court Discretionary Grant Program and \$35 million for the Veterans Treatment Court Grant Program at the Department of Justice for fiscal year 2024.

My name is Pricilla Matos and I am a loving daughter, certified recovery support specialist, program manager at a recovery center, and the lead peer specialist for a treatment court program. I am also a proud graduate of the Hillsborough South Adult Drug Treatment Court program in New Hampshire and will celebrate 6 years in recovery this summer.

Prior to entering drug court in 2017, my life looked very different. I started using drugs at the age of 13. My addiction quickly escalated, and I found myself using whatever drugs were around and available to me. By the time I reached my twenties, addiction had taken over my life. I began selling drugs to feed my addiction. In 2015, I received my first charges for selling, and soon after, received my second charge for selling. By the time I entered drug court, I had nine felonies.

Drug court would end up saving my life, but in the beginning, it was not easy. I had never attended a treatment program before, and it was all new to me. The structure and accountability the court required, combined with treatment, were overwhelming, and I resisted the program. For a while, I was going through the motions to get it over with. I soon learned the drug court team was well trained to respond to this behavior. They made it clear they would never give up on me, but that I needed to engage or there would be sanctions. Soon, I started seeing the positive effects of drug court, and began to get things back in my life that mattered. I started enjoying life's little pleasures-like bird watching. My relationship with myself, and others, started to improve. Most importantly, my relationship with my mom started improving. She became my biggest cheerleader and drove me to my treatment and court appointments.

The drug court team encouraged me to get involved with the local recovery center, Revive. I began volunteering, and after I graduated from drug court in 2017, I joined the AmeriCorps Recovery Corps. I am the program manager at Revive Recovery Center and working toward my certification in recovery support worker (CRSW). I am also the lead peer recovery support specialist with the same drug court team that saved my life. I am grateful to the drug court program for helping me find my purpose. I enjoy helping others and giving them a path through some of the same struggles that I went through to find recovery. My relationships continue to give me hope, and in turn, to share that hope with others. Who would have thought that I would be such an active participant in my community, and that I would find hope and joy in relationships again? I even have weekly discussions with my former probation officer about our mutual love of bird watching!

I am just one example of how funding treatment courts, like drug courts and veterans treatment courts, not only helps individuals, but uplifts a whole community. Drug courts offer a ripple effect of hope. Support from the Department of Justice has helped start and expand thousands of courts over the years, while ensuring they follow evidence-based standards that ensure fidelity to the proper model. The largest and most comprehensive independent multisite study to date found that drug

courts reduce crime by up to 58% and save, on average, up to \$6,000 per participant. Additional benefits were found to include increases in employment, education, family functioning, and financial stability.

Drug courts and veterans treatment courts are vitally important as our Nation continues to battle the addiction crisis and its impact on communities like mine around the country. Investment in these programs helps State and local leaders increase their capacity to address the crisis from a public safety and public health standpoint. This funding will help thousands of individuals break the cycle of crime and addiction and begin a life in recovery.

I strongly urge this committee to recommend \$95 million for the Drug Court Discretionary Grant Program and \$35 million for the Veterans Treatment Court Grant Program at the Department of Justice for fiscal year 2024, so these programs can continue to help people break cycles of addiction, find long-term recovery, and, like me, become healthy members of their communities.

PREPARED STATEMENT OF NATIONAL COURT APPOINTED SPECIAL ADVOCATE (CASA)/
GUARDIAN AD LITEM (GAL) ASSOCIATION FOR CHILDREN

Chairman Murray, Chair Shaheen, Vice Chairman Collins, 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 2024 budget including funding for 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 same as the FY 2023 enacted level, 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 traumatized children who have been victimized by their 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 remains all too prevalent in our country and the negative impact 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 939 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 child victims of abuse and neglect.

As the needs of children who have experienced 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 use disorder 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 advocacy 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 use disorder 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 needs.

FY 2024 funding of \$15 million will be targeted to fortifying resources and training for CASA/GAL programs and their staff and volunteers 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 and local programs that will enhance support of quality 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 use disorder, child sex trafficking, children of incarcerated parents, young people aging out of the foster care system and addressing racial disproportionality in child welfare and increasing diversity, equity and inclusion in our member staff, volunteers and governing bodies.

According to the most recent government data available, the number of substantiated child abuse and neglect cases was 588,000 in 2021. 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 needs of children, those children face a complex court process and child welfare system that is often overwhelmed, under resourced and challenging to navigate. Our ability as a national network to serve every child who has experienced 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 use

disorder, 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, the FY 2023 enacted level, for the Court Appointed Special Advocates Program in FY 2024 to address the overwhelming need for dedicated advocacy on behalf of children who have experienced abuse and neglect. Thank you for your consideration.

[This statement was submitted by Tara L. Perry, Chief Executive Officer.]

PREPARED STATEMENT OF NATIONAL ESTUARINE RESEARCH RESERVE ASSOCIATION

Madam Chair and Members of the subcommittee, my name is Jace Tunnell. I am the director of the Mission-Aransas National Estuarine Research Reserve, which is administered by the University of Texas at Austin Marine Science Institute. I submit this testimony in my capacity as president of the National Estuarine Research Reserve Association (NERRA). NERRA is a nonprofit organization, dedicated to advancing the understanding and protection of our Nation's estuaries and coasts by supporting the work of the National Estuarine Research Reserve System (NERRS).

On behalf of the special places Reserves protect and the communities we support, thank you. Farsighted legislation in the Coastal Zone Management Act (CZMA) designated the NERRS in 1972. In the subsequent 51 years of congressional investment, we have become a powerful network of 30 protected sites, encompassing nearly 1.4 million acres of coastal lands and waters. Our Reserves are living laboratories where scientists, communities, educators, and state partners come together to understand, protect, and enhance the societal and economic benefits of coastal and estuarine resources.

We protect places, but people are the heart of our System. State and local support were essential to the designation of every Reserve, and today, more than 36,000 people support the work of the NERRS in 24 States and Puerto Rico. Communities throughout the U.S. Coastal Zone recognize Reserves as "go to" places for high quality environmental data; locally-relevant science guided by community needs; training and technical assistance for decision makers and businesses; science education for teachers and students of all ages; and innovative approaches to managing the natural infrastructure that safeguards people and property.

Reserves also provide great economic benefit. According to a 2020 study by NOAA's Office for Coastal Management, Reserves enhance local and State economies through job creation and revenue contributions. For example, in 2019, Florida's Reserves increased local revenues by \$45M through investments in staff salaries, facilities maintenance, operations, and partnerships. Nationwide, Reserves sustain more than 10,000 jobs, provide training to more than 13,400 people, and assist approximately 2,500 communities and 570 businesses.

Reserves also steward places that provide many valuable benefits to industries, communities, and States. Coastal wetlands, like those Reserves protect, are natural allies in efforts to mitigate the impacts of climate change, providing \$23 billion in storm protection and absorbing 8.1 million tons of carbon dioxide each year. Lands and waters protected by the NERRS also support the Nation's multi-billion-dollar shellfish and seafood industry, recreational fishing, and other coastal and ocean industries valued at tens of billions of dollars. In addition, every Reserve leverages their annual Federal grant to bring additional funds to their communities. On average \$22 million of Federal and State matching funds are leveraged annually by the Reserves.

A marked success of the NERRS is evidenced by State and community demand to designate new Reserves. In FY 2024, the Atchafalaya Reserve in Louisiana will be designated and a site in Wisconsin's Bay of Green Bay will be designated in FY2025. Additionally, the US Virgin Islands is in the designation process, and the Governors of the States of Michigan and Florida have requested NOAA to designate new Reserves in their States.

The Bipartisan Infrastructure Law (BIL) funding for the NERRS recognizes the importance of coastal natural infrastructure in community adaptation and resilience. NERRA thanks Congress for making a significant, one-time investment of \$77 million through the BIL for NERRS restoration and acquisition of lands. This will position Reserves to make impressive strides in their work to advance ocean, coastal, and Great Lakes resilience.

Yet, funds received through the BIL are not a substitute for sufficient operating funding for NERRS operations. While infrastructure funds will support priority restoration and acquisition projects throughout the Reserve System, the success of these efforts depends on operations budgets that facilitate the healthy functioning of each Reserve and its programs.

The NERRS is a time-tested, mission ready, state-federal partnership that focuses the expertise and resources of the National Oceanic and Atmospheric Administration (NOAA) on the needs of coastal communities and States. Through the NERRS, we all work together to deliver science-based programs to help communities prepare for extreme storms, rising seas, and changing lake levels; sustain habitats essential to our fisheries; keep waters clean; and protect people and places on America's coasts. NERRA requests a robust operations budget that will support the growth of this highly valued program and ensure it has the capacity to put BIL funding to the highest possible use for coastal communities:

NERRS Operations, Research, and Facilities (ORF): \$47 million

(With report language to ensure each Reserve receives a minimum of one million dollars)

NERRS Procurement, Acquisition, and Construction (PAC): \$10 million

NOAA Coastal Zone Management and Services: support robust budget

Since Congress created the NERRS through the CZMA more than fifty years ago, Reserves have exceeded expectations. Today, they serve the Nation and coastal communities with the essential science and services they need to manage the impacts of climate change. Demand is high for Reserves and their programs-and it's growing, as new Reserves are pursued in different coastal areas. At the same time, existing sites are responding to increasing local needs for coastal access, land protection, trusted science, education, and training services.

NERRA's request for the FY 2024 NERRS Operations, Research, and Facilities (ORF) and NERRS Procurement Acquisition, and Construction (PAC) budgets will support this local and national growth and build Reserve capacity to work with our NOAA partners to maintain and enhance the following:

- Nationally significant monitoring programs that integrate community needs and provide standardized observations of how coastal conditions are changing over time;
- Collaborative science programs that deliver knowledge and tools where and when they're needed most to address local, State, and national priorities;
- Scientific training, technical assistance, and tools to help thousands of coastal decision makers enhance community resilience;
- Science, technology, engineering and mathematics-focused education programs that deliver field training, curricula, local data, and other resources to more than 54,000 students and 4,300 teachers each year;
- The NERRS/NOAA Margaret A. Davidson Graduate Research Fellowship Program, which provides science focused on near-term, community needs related to nationally significant issues, as well as training for the next generation coastal science and management workforce;
- Public access for hunting, fishing, boating, hiking, wildlife watching, and passive recreation on more than one million acres of land and water.

NERRA's \$47 million request for an FY 2024 NERRS ORF budget is a \$12.8 million increase over the FY 2022 program baseline. This increase will support the NERRS in the following ways:

1. Increase direct funding to Reserve sites for operations. The requested NERRS ORF budget would send \$1 million (minimum) to each Reserve. This will empower Reserves to meet rising inflation and increased community needs, address the impacts of climate change, improve equity for underserved people, and build the resilience of natural infrastructure. Each dollar spent on Reserve operations enhances the state economy and leverages more dollars.
2. Increase investment in national programs with local and national impact, as recommended by the congressionally-initiated NERRS Blue Ribbon Panel. (See bullets list above.)

3. Support expansion of the National System from 30 sites to 34 or 35. FY 2024 funding will facilitate designation of the Atchafalaya Reserve in Louisiana and the Bay of Green Bay Reserve in Wisconsin in FY 2024 and FY 2025, respectively. Funding also will support the designation process for the U.S. Virgin Islands site, as well as the proposed new Reserves in Michigan and Florida.

NERRA's requested report language for FY 2024 NERRS ORF funding.

Specifically, NERRA requests that the FY2024 appropriations bill contain the following report language to ensure funding goes out the door to States and communities on the frontline of coastal management: In support of the NERRS's Blue Ribbon Panel's recommendations, a minimum of \$1M shall go to each Reserve, provided it can meet Federal match requirements. Those that can't meet match requirements for \$1M will receive the maximum amount allowable for the match they can provide.

NERRA's \$10 million request for an FY 2024 NERRS PAC budget is a \$1.5 million increase over the FY 2023 program baseline.

NERRS PAC funding advances conservation through the strategic acquisition of priority lands, and the construction and upgrades of essential facilities. PAC funds enhance the climate resilience of Reserve infrastructure with sustainable, energy efficient materials and designs that reduce the risks associated with storms, rising waters, and flooding. These improvements serve as models for communities seeking to mitigate carbon emissions and reduce the impacts of climate change through more resilient design. PAC funds also are critical to ensure that Reserve research, education, and outreach programs continue to meet community needs. Reserves compete for PAC funding, and the need for construction funds that generate jobs is more than \$36 million. Moreover, Reserves have identified \$166.5 million in future needs for restoration, construction, and essential facilities upgrades that would create approximately 2,390 local jobs.

NERRA supports a strong budget for NOAA Coastal Zone Management and Services.

NOAA's Office for Coastal Management (OCM) provides national leadership to guide, coordinate, and leverage the work of State and Territory Coastal Zone Management programs, the NERRS, the Digital Coast Partnership, and the Coral Reef Program for maximum impact. It also provides science, data, and tools that benefit communities, as well as leadership and support for training and mentoring the next generation of coastal management scientists and professionals.

In conclusion, and with appreciation . . .

NERRA is deeply grateful for the support this subcommittee has demonstrated for the NERRS. Our FY 2024 request of \$47 million for NERRS ORF and \$10 million for NERRS PAC will enhance NERRS ability to work with States and communities to address climate change and other natural resource challenges, while supporting the economic viability of coastal businesses and industries. Thank you for the opportunity to present these remarks. On behalf of NERRA, I would be happy to answer questions or provide additional information.

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 2024 funding that impacts the National Fish and Wildlife Foundation (NFWF). We respectfully request your approval of robust funding of the National Oceanic and Atmospheric Administration's (NOAA) budget and 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 and resilience.

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 of Federal resources. We appreciate the subcommittee's past support 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. In addition, NFWF also leads significant monitoring and evaluation efforts that measure the enhanced resilience of the restored coastal systems which helps improve our understanding of which activities provide the greatest and most cost-effective reductions in storm risk and storm damage.

Through the NCRF in 2022, NFWF, NOAA and other partners awarded approximately \$144 million in competitive grants to support planning, design and implementation of nature-based resilience projects. The 96 grants announced will generate more than \$97.3 million in matching contributions for a total conservation impact of nearly \$241million. 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, 2022 partners included the Department of Defense, TransRe, Shell USA, Inc., Oxy, and Bezos Earth Fund. 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. For example, in calendar year 2022, NFWF received 455 proposals seeking more than \$770 million in funding, with approximately \$144 million in available resources to meet this need. Demand increased nearly 5 times from the prior year when NFWF received 269 proposals seeking \$178 million. 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.

FISHERIES ELECTRONIC MONITORING AND REPORTING

Since 2010, NFWF has invested significantly in fisheries around the U.S. to implement 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 2022, the Electronic Monitoring and Reporting (EMR) grant program has awarded more than \$28.9 million across 95 projects that modernize U.S. fisheries data collection and has generated an additional conservation impact of \$41.8 million through 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 more effectively address fisheries management challenges. EMR isn't one size fits all and NFWF projects represent a cross section of the advancements being made around the U.S. in fisheries management to address the unique of regions and fisheries.

CORAL REEF CONSERVATION

Since 2000, NFWF has partnered with NOAA, U.S. Fish and Wildlife Service (FWS), and the U.S. Department of Agriculture, National Resources Conservation Service (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 as quickly as possible to mitigate damaging events like Stoney Coral Tissue Loss Disease.

Since the creation of NFWF's coral program in 2000, the program has awarded \$23 million across 415 projects, leveraging more than \$31 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 to encourage adoption of best 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, FWS, U.S. Navy, SeaWorld Entertainment and BNSF Railway on the Killer Whale Research and Conservation Program (KWRCP) to aid in the recovery of the Southern Resident killer whale population in the Pacific Northwest. The program prioritizes the highest impact activities recommended in the recovery plan as more funding is sought to deliver additional actions beyond traditional management and conservation measures.

In the first 8 years, KWRCP has awarded 55 grants totaling \$6.5 million, drawing an additional \$11.1 million in grantee match for a total conservation investment of more than \$17.6 million. These awards have fostered collaborative efforts in the following areas: increase prey availability through restoration of important salmon runs; improve water quality and reduce disturbance in critical habitat; fill research gaps in health, demographics and stressors; and increasing habitat quality. All these 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.

PAPAHĀNAUMOKUĀKEA RESEARCH AND CONSERVATION

NFWF's and NOAA's partnership of 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 in the Pacific Ocean. Past agency funding only allowed for a single voyage per year to the Monument to address multiple needs and locations, making it difficult to conduct 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 funders and funding around a critical management strategy, theme or pervasive threat. One example is the expanded effort to reduce a direct threat to the habitats and wildlife in the Monument from marine debris. The partnership has launched a 5-year effort to remove 500 tons of marine debris in the monument and increase capacity and efficiency in the program and reduce the need for annual removal to sustainable maintenance levels. Throughout all investments, the program seeks to maximize conservation impact, management capacity and cultural and outreach opportunities.

MARINE DEBRIS

NFWF and NOAA have developed and implemented strategies to combat the problem of Marine Debris. Starting over two decades ago, NFWF administered a Marine Debris Program to assist NOAA's new program in understanding 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 pervasive and 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 again in 2021 to administer supplemental funding for hurricane damage that occurred in 2020–2021 seasons. 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 the resulting marine debris. 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. We anticipate continuing this partnership as needed based on the success of these initial investments.

NFWF BACKGROUND

NFWF was established by Congress in 1984 to leverage Federal funds with private investments to conserve our Nation's fish, wildlife and their habitats. 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 its creation, NFWF and its grantees have invested \$8.1 billion in to more than 21,600 projects while partnering with more than 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 2022 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>.

NFWF is audited annually by an independent accounting firm and for our most recent audit for FY 2022, NFWF received an unqualified report with no material weaknesses and no deficiencies. This is the FOURTEENTH consecutive year of unqualified audits. In addition, NFWF has continually qualified as a low-risk auditee under OMB guidelines.

In FY 2022, through discretionary cooperative agreements, NFWF partnered with 19 Federal and State agencies or departments and 65 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 various U.S. Department of Justice (DOJ) programs.

LEGAL SERVICES CORPORATION

We strongly urge the committee to allocate at least \$1.576 billion for LSC for FY2024, as requested by the agency itself. An appropriation at this level is both urgently necessary and overdue. Unlike other Federal programs that have received consistent funding increases in recent years, LSC's budget has not even kept up with inflation as modest increases in some years have been almost matched in amount by large cuts in others. In percentage terms, annual discretionary spending has increased around five times more than the LSC budget has since 1995.¹

LSC is the single largest source of funding for civil legal aid in the United States, and underfunding the agency has had serious consequences for families, communities, and workforces across the country. Civil legal aid helps ensure that the outcome of a person's legal problem does not depend on whether they can afford to hire a lawyer. The most common types of issues with which LSC's grantee organizations provide assistance relate to housing, for example helping a family to avoid eviction or foreclosure, and family law, which can include obtaining protective orders for adults and children who are experiencing domestic violence. Legal services organizations also assist victims of scams and consumer fraud, protect elderly people from physical and financial abuse, assist veterans in accessing benefits earned through service, and provide many other services that protect the security and stability of Americans families.

¹Discretionary outlays in FY1995 totaled \$545 billion and \$1.7 trillion in FY2023, and LSC's appropriation level in FY1995 was \$415 million and \$560 million in FY2023. (See: United States Office of Management and Budget, *Budget of the United States Government Fiscal Year 1998: Historical Tables*, p109, <https://www.govinfo.gov/content/pkg/BUDGET-1998-TAB/pdf/BUDGET-1998-TAB.pdf>; Congressional Budget Office, *The Budget and Economic Outlook: 2023 to 2033*, 2023, p."c"; <https://www.cbo.gov/publication/58946>; Public Law 103-317; and Public Law 117-328).

The question of whether access to legal help makes a difference in outcomes in these cases has long been settled,² as has the question of whether spending on civil legal aid is a responsible investment. Analysis from numerous States has shown that the investment in civil legal aid pays for itself many times over. For example, the activities of a program in Kentucky provided economic benefits valued at more than twice the initial cost. In Florida, the return generated was over seven times the cost, and in Alabama the investment was returned almost nine times over.³

The return on investment is not limited only to dollars saved or generated. Our communities and economies benefit directly from the positive outcomes that result from expanding access to legal help, including improved public safety. For example, when legal aid helps a person avoid homelessness, that person is 11 times less likely to be arrested in the future,⁴ and providing civil representation to young people with criminal records considerably lowers the rate at which they are rearrested.⁵ Legal aid also supports the development of our country's workforces by helping workers to remove barriers to obtaining education and employment.

Despite this, LSC's grantee organizations do not have the resources they need to fully address the majority of legal problems brought to them by eligible clients. In 2021, 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 to whom they could provide some level of service.⁶ Moreover, that data was collected during a period of time when pandemic response programs, which are now mostly expired, had artificially and temporarily lowered demand for services. It was also collected before a sharp rise in inflation that has further increased financial hardship for low and middle-income families. The Household Pulse Survey for March 2023 found that 33 percent of people are using credit cards or loans to meet spending needs, a higher proportion than 12 months ago, and that 24 percent were forced to use savings or sell possessions to do so.⁷ This is likely to lead directly to an increase in consumer debt related cases but more significantly, demonstrates widespread financial insecurity that will be a primary contributor to many other legal problems.

This access to justice crisis is experienced most acutely by people living in rural areas, who are disproportionately lower income and who face a higher number of civil legal problems on average than people who live in cities.⁸ Crucially however, the availability of legal services is also far lower. More than a third of counties or county equivalents in the U.S. have fewer than one lawyer per 1,000 residents; New York City has close to 15.⁹ LSC grantees in urban areas also have serious resource constraints, but there is a better chance that an alternative organization or private pro bono support would be available to help someone seeking assistance in a city. LSC maintains a national infrastructure that is designed to ensure that access to legal assistance is available to people in every ZIP code, without which thousands of rural Americans facing serious legal problems would have nowhere to turn for help.

²For example, a 2010 meta-analysis found that a positive case outcome was between 1.19 and 13.79 times more likely when a person had legal assistance: Rebecca L. Sandefur, *The Impact of Counsel: An Analysis of Empirical Evidence* Seattle Journal for Social Justice, Volume 9, Issue 1, Fall/Winter, 2010. <https://digitalcommons.law.seattleu.edu/cgi/viewcontent.cgi?article=1076&context=sjsj>.

³Lisa Moore and Megan Phyper, *Return on Investment in Civil Justice Services and Programs Selected Annotated Bibliography of Existing Research*, Canadian Forum for Civil Justice, August 2019, pp. 10–26, at <https://cfjc-fcjc.org/wp-content/uploads/Return-on-Investment-in-Civil-Justice-Services-and-Programs-Selected-Annotated-Bibliography-of-Existing-Research-Lisa-Moore-and-Megan-Phyper.pdf>.

⁴Madeline Bailey, Erica Crew & Madz Reeve, *No Access To Justice: Breaking The Cycle Of Homelessness And Jail*, Vera Institute of Justice, 2020, <https://www.vera.org/downloads/publications/no-access-to-justice.pdf>.

⁵Laura K. Abel and Susan Vignola, *Economic and Other Benefits Associated with the Provision of Civil Legal Aid*, *Seattle Journal for Social Justice*, Volume 9, Issue 1, Fall/Winter 2010 Article 5, November 2010, p.146 <https://digitalcommons.law.seattleu.edu/cgi/viewcontent.cgi?article=1078&context=sjsj>.

⁶Legal Services Corporation, *The Justice Gap: The Unmet Civil Legal Needs of Low-income Americans*. Prepared by Mary Slosar, Slosar Research, LLC, 2022, p.71, <https://lsc-live.app.box.com/s/xl2v2uraitobbzrhwtjlgioemp3myz1>.

⁷Household Pulse Survey, Week 55, Table 2. *Methods Used to Meet Spending Needs in the Last 7 Days, by Select Characteristics*, U.S. Census Bureau, https://www2.census.gov/programs-surveys/demo/tables/hhp/2023/wk55/spending2_week55.xlsx.

⁸Legal Services Corporation, *The Justice Gap: The Unmet Civil Legal Needs of Low-income Americans*. Prepared by Mary Slosar, Slosar Research, LLC, 2022, p.23.

⁹American Bar Association, *Profile of the Legal Profession*, 2020, p.2 <https://www.americanbar.org/content/dam/aba/administrative/news/2020/07/potlp2020.pdf>.

U.S. DEPARTMENT OF JUSTICE PROGRAMS

Tribal Civil and Criminal Legal Assistance, Training and Technical Assistance

We recommend that the committee expand funding for the Tribal Civil and Criminal Legal Assistance, Training and Technical Assistance grant program (TCCLA). In recent years, funding for TCCLA has been maintained at around \$1 to 2 million, but the need has grown considerably. Native American people experience far higher rates of poverty than other groups,¹⁰ while legal services organizations serving those people are also required to handle many problems that are unique to Tribes, such as issues relating to the Indian Child Welfare Act or navigating Tribal sovereignty. Additionally, Indian legal services programs require an enhanced level of support because they often also handle criminal legal assistance work.

An increase in funding would enhance the work of done on behalf of Native Americans by Indian Legal Services programs. A consortium of such 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 programs provide the only public defender services available. TCCLA has helped many of these programs deliver direct civil and criminal legal assistance, including in particular, representation of children as guardians *ad litem*. It has also enabled these programs to help further develop legal infrastructure in their jurisdictions, such as by supporting revisions to Tribal codes, policies, and procedures, and to build partnerships with other stakeholders, such as Tribal domestic violence and crime victims' advocates, prosecutors, and other community services to increase the effectiveness of their programs and to build awareness about the availability of services.

Whether the committee elects to include a line item for TCCLA under assistance for Indian Tribes, within the State and Local Law Enforcement Assistance account, or to provide funding within a Tribal set-aside percentage of Office of Justice Programs accounts, it is important that both the bill and report language recognize the urgent need to expand access to justice for Indian Tribes by allocating an increased level of funding for civil and criminal legal assistance under the Indian Tribal Justice Technical and Legal Assistance Act.

Violence Against Women Act (VAWA) and Victims of Crime Act (VOCA) 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 \$95 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.

While the long-term sustainability of the Crime Victims Fund is a serious concern, we urge Congress not to lower the spending cap this year. If that occurs, we expect it to cause widespread layoffs of those attorneys and staff within legal services organizations whose roles are focused on supporting survivors. This would lead to an immediate and severe reduction in the number of advocates available to provide the services that are often determinative in a whether a person is able to escape abuse, such as obtaining a life-saving protective order, emergency shelter, or assistance with financial support that secures and protects their short and long-term independence.

Public Defender Improvement Program

The Federal Government has a key part to play in ensuring the quality of public defense in state, Tribal, and local jurisdictions. The Bureau of Justice Assistance within DOJ has requested \$12 million for FY2024 for a public defender improvement program. We urge the committee to fully fund this program. DOJ's previous efforts to assist state, Tribal, and local defenders have yielded positive results, including fairer and more cost-effective criminal court systems in a number of jurisdictions. The Innovative Solutions in Public Defense Initiative (originally named Smart Defense Initiative) leveraged data and research through defender-researcher partnerships to help systems uphold the right to counsel, and the Sixth Amendment Initiative focused on helping public defenders and other system stakeholders protect constitutional fair trial rights through strategic planning, implementation of stra-

¹⁰PovertyUSA.org, *Maps and Data*, United States Conference of Catholic Bishops, 2019, <https://www.povertyusa.org/data>.

tegic plans, and innovative partnerships between defenders and other 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.¹¹ We urge the committee to fund BJA's request for a public defender improvement program so that more systems can benefit from innovations and best practices in public defense.

John R. Justice Student Loan Repayment Assistance Program

Student loan debt is a primary cause of the recruitment and retention crisis at public defender and prosecutor offices. A law degree is a requirement for these critical jobs, but the average law school student borrows over \$118,000 and 74.1% of law school students graduate in debt.¹² This cost, combined with relatively low compensation, prohibits many law school graduates from entering these roles and forces others to move to the private sector in search of basic financial security. This commonly occurs just as they gain the level of experience they need to handle full case loads. Court systems quickly become clogged when less experienced lawyers are required to handle more cases, just as the quality of justice that their clients receive may be diminished, both of which can lead to unfair outcomes like wrongful convictions and unnecessary incarceration. The John R. Justice Student Loan Repayment Assistance Program (JRJ) helps to relieve the pressure of student loan debt for public defenders and prosecutors. While this program has been extremely beneficial for those defenders and prosecutors who have been able to participate, the effectiveness of it has been limited by extremely low funding levels in recent years. We urge the committee to provide \$25 million, the amount originally authorized for JRJ, in FY2024.

[This statement was submitted by Radhika Singh, Vice President, Civil Legal Services & Strategic Policy Initiatives.]

PREPARED STATEMENT OF NATIONAL MARINE SANCTUARY FOUNDATION

FY 2024 NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION APPROPRIATIONS

Chair 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) 2024.

On behalf of the National Marine Sanctuary Foundation, I thank the subcommittee for the \$7 million increase in Sanctuaries and Marine Protected Areas (ORF) funding and \$0.5 million increase in Marine Sanctuaries Construction (PAC) funding for FY 2023, and report language directing NOAA to prioritize conservation, education, mapping, and research efforts across the agency in 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 \$95.625 million for National Marine Sanctuaries in FY 2024.
2. Direct NOAA to prioritize programs in the National Marine Sanctuary System.
3. Cap NOAA and National Ocean Service corporate fees to no more than 5 percent of the annual appropriations.

¹¹National Legal Aid & Defender Association, *Innovative Solutions in Public Defense: Alameda County*, 2019, <https://www.nlada.org/sites/default/files/pictures/2019-09-17%20nlada-alameda.pdf>; Danielle Soto and Mark Lipkin, *Representation at Arraignment: The Impact of "Smart Defense" on Due Process and Justice in Alameda County*, Impact Justice 3 (2018), <https://impactjustice.org/wp-content/uploads/Smart-Defense-Report-2019.pdf>.

¹²Melanie Hanson, *Average Law School Debt*, Education Data Initiative, Nov. 7, 2022, <https://educationdata.org/average-law-school-debt>.

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. Sanctuaries are home to millions of species, preserve more than 300 shipwrecks and our Nation's maritime heritage, and promote public access for exploration and world-class outdoor recreation and enjoyment. Sanctuary visitor centers, vessels, and facilities are key assets for communities; stimulate public-private partnerships on emerging technologies, cutting edge science, and hands-on education, and attract millions of visitors each year.

The conservation and sustainable use 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 \$361.4 billion of U.S. GDP in 2020. Tourism and recreation accounted for the most significant portion of the gross output, and marine living resources accounted for \$26.9 billion. Both sectors depend on a healthy ocean. Sanctuaries 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. Scientists are increasing our understanding of the climate drivers, conditions, trends, and predictions affecting our ocean through research conducted in sanctuaries.

For Sanctuaries and Marine Protected Areas ORF account, we urge Congress to provide at least \$87.125 million. This is the minimum level of funding necessary to advance conservation and restoration in U.S. waters, conduct scientific research, effectively manage sanctuaries, enforce regulations, and engage the public in stewardship. The requested increase is an investment in the growing number of communities seeking to expand sanctuaries or nominate and designate new ones and to increase funds for science, management, and public outreach at existing sanctuaries. There are four sites currently in the designation process as national marine sanctuaries, four sites on the nomination inventory awaiting action, and one site being considered for initiating designation. These sites all have strong community-based support. Engaging communities as stewards of these protected waters makes sanctuaries unique and provides a participatory approach to conservation. With additional resources, ONMS can better engage communities throughout the sanctuary nomination and designation processes.

ONMS manages more ocean and Great Lakes area than the entire National Park Service on a significantly lower budget. Based on FY 2021 funding, ONMS spends on average \$0.14/acre to support management, scientific research, and education in marine sanctuaries and two marine monuments. For comparison, the National Park Service spends an average of \$29.76/acre for units in the National Park System, the NOAA Office of Coastal Management spends an average of \$28.08/acre for estuaries in the National Estuarine Research Reserve System, and the Fish and Wildlife Service spends an average of \$25.01/acre for refuges in the National Wildlife Refuge System. ONMS's budget is acutely under-resourced compared to its mission and in comparison to other natural resource management agencies.

For Marine Sanctuaries Construction (PAC) account, we urge Congress to provide at least \$8.5 million. This funding will support replacement or repair of vessels that are mission critical to operations, management, and enforcement and provide investments that create jobs through shipbuilding. ONMS maintains a fleet of small boats that is critical to their mission. These small boats allow managers and partners to assess, monitor, research, and protect marine sanctuaries. These efforts include responding to entangled whales, conducting scientific missions, maintaining mooring buoys, testing new technologies and tools, and enforcing regulations. Increasing demands on an aging fleet lead to higher operating costs and near- and long-term challenges to maintaining safe, efficient, and effective operations. To continue on-the-water science and conservation programs, 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 support ADA compliance, enhancing equitable access to nature. These activities anchor tourism, recreation, and public engagement in communities.

We are currently celebrating the 50th anniversary of the National Marine Sanctuaries Act. This is an opportunity to celebrate and strengthen marine and Great Lakes conservation. We need to invest in America's waters and the communities and businesses that depend upon them. We urge you to invest in America's community-based national marine sanctuaries by supporting the Office of National Marine Sanctuaries at no less than \$95.5 million in FY 2024. Your support sends a powerful message about the benefits of a healthy ocean and Great Lakes and underscores the continuing ecological and historical value of America's underwater national treasures.

PRIORITIZING NATIONAL MARINE SANCTUARIES

National marine sanctuaries 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 recognizing the importance of sanctuaries and including report language in the FY 2023 Consolidated Appropriations Act "the Committee directs NOAA to prioritize conservation, education, mapping, and research efforts across the agency in the National Marine Sanctuary system". We greatly appreciate this and request the subcommittee again include this report language for FY 2024. In addition to the report language above, we respectfully request support for sanctuaries in the accounts below:

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 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 collections; 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.

- Within OAR's climate research, \$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.
- \$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 FY 2022, ONMS paid over \$8 million in administrative overhead 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 the subcommittee to cap costs and require NOAA to budget for 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 importantly, it ensures NOAA has the necessary and deserved budget for administration and management without impacting program and mission delivery.

Thank you for this opportunity to provide written 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 2024 appropriations process.

[This statement was submitted by Ms. Shannon Colbert, Vice President of External Affairs.]

PREPARED STATEMENT OF NATIONAL SECURITY COUNSELORS

Chair Murray, Vice Chair Collins, and members of the Commerce, Justice, Science, and Related Agencies Appropriations subcommittee, thank you for the opportunity to submit this written testimony.

The tiny Department of Justice ("DOJ") Office of Legal Counsel ("OLC") is probably the most powerful legal office in the entire Executive Branch, with the possible exception of the White House Counsel's Office, and it exercises that power in almost total secrecy.¹ It is the force behind Special Counsel Robert Mueller's decision not to recommend the indictment of President Trump, Acting Director of National Intelligence ("DNI") Joseph Maguire's initial refusal to release the Ukraine Whistle-blower's complaint to Congress, and the Central Intelligence Agency's torture of enemy combatants shortly after 9/11, among myriad other legal decisions which are often never adjudicated in a court of law.

The reason for OLC's outsized power is relatively straightforward: many agencies treat OLC opinions as binding. As in, if OLC makes a pronouncement that a certain action, practice, or policy is legal (or illegal), many agency officials throughout the Executive Branch maintain that they are bound by that decision, whether they agree with it or not. For instance, Mr. Mueller publicly stated that his office was "bound" by "long-standing department policy" holding that "a president cannot be charged with a Federal crime while he is in office" and that indicting Trump was

¹ Kel McClanahan, How one secretive Justice Department office can sway the whole government, Wash. Post (Sept. 26, 2019), available at <https://www.washingtonpost.com/outlook/2019/09/26/how-one-secretive-justice-department-office-can-sway-whole-government/>.

“therefore not an option we could consider.”² The policy Mueller “was bound by” was an OLC opinion,³ first written in 1973 about Watergate.

Likewise, the Intelligence Community Inspector General informed Congress that he could not provide the Ukraine Whistleblower’s complaint directly to the appropriate committees because he is “bound by the determination reached as a result of the acting DNI’s consultations with” OLC, even though he “respectfully disagree[s] with that determination, particularly DOJ’s conclusion.”⁴ Mr. Maguire, for his part, described this belief succinctly and unequivocally: “As you know, for those of us in the Executive Branch, Office of Legal Counsel opinions are binding on all of us.”⁵

It is unclear, however, how many agencies adhere to this interpretation of OLC opinions. While senior officials such as Messrs. Mueller, Maguire, and Atkinson are claiming that OLC opinions are binding on Executive Branch agencies, OLC itself is arguing exactly the opposite whenever anyone attempts to obtain copies of such “binding” opinions through discovery or the Freedom of Information Act (“FOIA”). In those cases, OLC consistently asserts under oath that it only “serv[es] an advisory role as legal counsel to the executive branch ... in a special relationship of trust with the Attorney General,” and that the relationship between OLC and any other part of the Executive Branch is the same as the relationship between any attorney and any client.⁶ If you accept this argument, the most formal and detailed OLC opinion becomes simple “advice” that the purported client can follow or ignore at their leisure. OLC makes this claim because, under FOIA, binding agency decisions are not exempt from disclosure, while predecisional deliberations and advice from attorneys to clients are exempt. This is how it maintains its secrecy.

This dualism is best exemplified by a line from an internal OLC memo: “OLC’s core function, pursuant to the Attorney General’s delegation, is to provide controlling advice to executive branch officials on questions of law that are centrally important to the functioning of the Federal Government.”⁷ The problem is, “controlling advice” is an oxymoron, since advice is something the recipient is free to disregard, which is the opposite of controlling. The two competing interpretations given by Executive Branch lawyers, depending on the context, are completely irreconcilable: An opinion cannot both be binding on the Executive Branch and also legal advice from an attorney to a client.

There are many ways to fix this problem, but they all fall to Congress to act, since DOJ has no interest in resolving an uncertainty which only redounds to its benefit. Congress could legislate that OLC opinions are binding, which would mean that no privilege would apply to their release (although they could be withheld for other reasons, such as classification or law enforcement considerations). Congress could legislate that OLC opinions are not binding, which would free up agencies to ignore them and perhaps ensure that bad opinions are weeded out. Congress could mandate that OLC opinions must be released to lawmakers so they can evaluate whether they agree with OLC’s interpretation of the law. Congress could add a caveat to FOIA that a court must presume that an agency which acted in accordance with an OLC opinion fully accepted the reasoning of the opinion, thereby triggering an exception to any claim of privilege.

However, before Congress can even consider any avenues for reform, it must first understand the scope of the problem, and that is why this is an appropriations matter. I have personally dealt with several senior Executive Branch officials who take the position that OLC opinions are not binding, and I have also dealt with senior officials who treat an OLC opinion as the gospel truth. What Congress and the public needs is a comprehensive, definitive accounting of how OLC opinions are viewed across the Executive Branch. A simple survey, sent to every General Counsel at every agency or agency component: “Are OLC opinions binding on your agency/office?” A survey which will force agencies to state a position on the record, and which

² Special Counsel Robert S. Mueller III Makes Statement on Investigation into Russian Interference in the 2016 Presidential Election (May 29, 2019), at <https://www.justice.gov/opa/speech/special-counsel-robert-s-mueller-iii-makes-statement-investigation-russian-interference>.

³ A Sitting President’s Amenability to Indictment and Criminal Prosecution, 24 Op. O.L.C. 222 (2000), at <https://www.justice.gov/file/19351/download>.

⁴ Letter from Atkinson to Schiff of 9/17/19, available at <https://www.scribd.com/document/426585487/Sept-17-letter-from-Intel-Inspector-General-to-House-Intelligence-on-whistleblower-complaint>.

⁵ Testimony of Acting DNI Joseph Maguire (Sept. 26, 2019), available at <https://www.c-span.org/video/?464509-1/acting-director-national-intelligence-maguire-testifies-whistleblower-complaint>.

⁶ See *N.Y. Times Co. v. DOJ*, 915 F. Supp. 2d 508, 544 (S.D.N.Y. 2013).

⁷ Best Practices for OLC Legal Advice and Written Opinions (July 16, 2010), available at <https://www.justice.gov/olc/pdf/olc-legal-advice-opinions.pdf>.

will provide hard data which can be relied upon in future Congressional deliberations.

To that end, I recommend that this subcommittee include report language directing an appropriate agency to perform this survey and compile a report accounting for the results for Congress and the public. The Government Accountability Office would be best suited for this work, but it could also be reasonably assigned to the DOJ Inspector General or even OLC itself, as long as the report language makes clear that the final report will include only the responses and no editorializing or characterizations. This simple research project will yield informational dividends far beyond its cost in funds and manpower, and it will finally clear up a decades-old deliberate obfuscation of the truth. Only then can Congress make an informed decision about which interpretation it endorses and legislate accordingly.

[This statement was submitted by Kel McClanahan, Executive Director.]

PREPARED STATEMENT OF NATIONAL SCIENCE COLLECTIONS ALLIANCE

The Natural Science Collections Alliance appreciates the opportunity to provide testimony in support of fiscal year (FY) 2024 appropriations for the National Science Foundation (NSF). We encourage Congress to provide the NSF with at least \$11.9 billion in FY 2024.

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 and productivity. Current research involving natural science collections also contributes to the development of new cyberinfrastructure, data visualization tools, and improved data management practices. This work also ensures critical input into policy development and implementation by several U.S. government agencies. 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, many of which have now been digitized with continued funding from NSF and the resulting data stored in easily accessible online databases that contribute heavily to research.

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.

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. Additional 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 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,” outlined 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. The report’s recommendations for establishing an action center for biological collections and requiring specimen management plans for research proposals generating new specimens underscore the importance of biodiversity specimen collections and have been supported by the CHIPS and Science Act. Such a center will provide leadership, support, and coordination for federal, non-federal, and private collections and encourage transformative research to address persistent grand-challenge questions in human health, bioeconomy, climate change, and pharmaceutical discovery.

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 NSF is the only agency that supports research in all fields of science, it is ideally suited to 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 nature. Biological collections, their extended data, and the experts who build and study them are globally important for understanding where viruses such as SARS-CoV-2 exist and when they cross from their current hosts to humans.

The United Nation’s Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services has warned that about one 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 this loss.

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, Geosciences, and Social, Behavioral and Economic Sciences support re-

search and student training opportunities in natural history collections. NSF is also an important supporter of national 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 135 million specimens are now online, with millions more awaiting digitization. Many of these specimen records also include high quality images of the specimens that facilitate high quality, detailed analyses. 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, reptiles, 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. 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.

We applaud the passage of the CHIPS and Science Act, which recognizes biological collections as a research priority for NSF. The proposed investments in use-inspired research through the Technology, Innovations, and Partnerships Directorate 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 are encouraged by this commitment to our Nation's scientific and technological enterprise and urge that robust investments also be made in basic and foundational research. Congress must follow through on the promise of CHIPS and Science by funding NSF as close as possible to the authorized levels.

Please support funding of at least \$11.9 billion for NSF in FY 2024. This aligns with the FY 2023 authorization for NSF in the CHIPS and Science Act. Thank you for your thoughtful consideration of this request.

[This statement was submitted by Gil Nelson, PhD, President.]

PREPARED STATEMENT OF THE NATURE CONSERVANCY

Chair Shaheen, Ranking Member Moran and members of the subcommittee, thank you for the opportunity to comment on the fiscal year 2024 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 to pass the bipartisan Infrastructure Investment and Jobs Act (IIJA) and Inflation Reduction Act (IRA). Those bills' investments complement but do not supplant the need for ongoing

program funding through the appropriations process. The subcommittee acknowledged that when it rejected proposed funding cuts and provided moderate but necessary program increases for NOAA in the FY23 omnibus spending bill. We ask you to advance a robust appropriations package that will ensure long-term success for critical programs.

Investment in ocean, coastal, and Great Lakes restoration and management can be part of the country's economic growth. Each year, ocean and coastal economies contribute \$304 billion to the Nation's GDP and support 3.3 million jobs. NOAA's funding helps catalyze local and regional action to reduce risk and save money based on tangible economic and societal benefits of natural resources. However, the demand for NOAA's assistance exceeds available funding. The requested funding below represents 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 FY23 enacted funding of \$34 million. In a budget characterized as necessary to build a climate-ready nation, the administration has again proposed to terminate this critical grant program. Throughout its budget request, NOAA emphasizes the need to make its climate products and services more available to the communities that need them. To terminate the very grants that enable communities to reduce their climate risks is profoundly inconsistent with that need. While IIJA 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. The most recent round of competitive grants received \$744 million worth of proposals for only \$144 million in available IIJA and FY23 omnibus funding.

The National Coastal Resilience Fund provides the resources and tools to build the country's coastal resilience. This helps avoid costly Federal disaster assistance later while also sustaining healthy fisheries, maintaining robust tourism opportunities, providing for increased shipping demands, and supporting other coastal industries. Continued planning and technical assistance funding 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 urges the subcommittee to reject the proposed termination again and maintain funding levels.

Coastal Zone Management and Services.—TNC supports funding of no less than the FY23 enacted level of \$51.22 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 the authorized level of \$4 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 underrepresented communities. This funding 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 FY23 enacted level of \$81.5 million for coastal zone management grants and reject the administration's proposed funding cut. 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 IIJA provided additional but temporary funding to support State and territorial coastal zone management projects to enhance coastal resilience and restoration. Continued funding for core grants is necessary to address the full suite of activities in the approved coastal programs and not reduce this critical state capacity.

National Estuarine Research Reserve System (NERRS).—TNC supports funding of no less than the FY23 enacted level of \$32.5 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. It is important to maintain core funding and not dilute efforts across the system while also supporting the launch of the new Connecticut NERR and ongoing designation processes in Louisiana and Wisconsin.

Coral Reef Conservation Program.—TNC supports no less than \$35.2 million, a modest increase over FY23 enacted levels to support the new requirements in the Restoring Resilient Reefs Act enacted at the end of 2022. This will help NOAA, States, territories, as well as 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 no less than the FY23 enacted level of \$68 million. We appreciate that Congress provided an increase to the program in FY23 and urges the subcommittee to continue the funding necessary to support not only the current sanctuaries but also the community-led nominations for new sanctuaries that are being considered for designation through inclusive public processes. 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 annually. Through a transparent, inclusive approach, the marine sanctuaries provide for the conservation of marine resources while balancing multiple uses and diverse stakeholder needs.

NATIONAL MARINE FISHERIES SERVICE (NMFS)

Fisheries and Ecosystem Science Programs and Services.—TNC supports no less than \$171.5 million, a modest increase above the FY23 enacted level. Science is the foundation of successful fisheries management and there are unfunded opportunities in each NMFS region, especially related to modernization of fisheries data. This effort 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 and the subcommittee should include report language that would require the agency to:

Develop a strategic plan detailing actions the agency will take to expand the adoption of electronic technologies in U.S. fisheries and improve data governance, storage, and management systems and policies. NMFS is directed to solicit stakeholder input during strategy development and shall provide the Committee with the final plan and estimated costs for full plan implementation. Within 180 days after the enactment of this act, NMFS shall provide the Committee with an update on this effort.

This requested funding level also includes the proposed \$10 million for enhanced science and assessments as part of the cross-program Climate, Ecosystems, and Fisheries Initiative. Previous appropriations have encouraged this work but have not provided the necessary funding. We appreciate the subcommittee's support to enhance the ability to conduct offshore wind assessments to understand and mitigate potential impacts in support of these vital renewable energy developments. It is important to continue to fund enhanced research capacity to help fill gaps in stock productivity, fisheries adaptations, future projection and risk assessment improvements, and translate these efforts into management strategies to support decision-makers.

Fisheries Data Collections, Surveys and Assessments.—TNC supports no less than \$215.413 million, a modest increase from the FY23 enacted level. 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. We appreciate the supportive explanatory statement language Congress provided in FY23 and ask that you provide the necessary funding to implement. This proposed funding level would also continue the support Congress provided for additional assessments to guide the development of critical offshore wind efforts.

Habitat Conservation and Restoration.—TNC supports no less than \$57 million in continued funding. 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. While habitat restoration activities did receive a temporary supplemental increase through the IJA, demand for this funding far exceeds even this increased amount. The most recent round of competitive grants received \$1.1 billion worth of proposals for only \$85 million in available IJA funding. These supplemental funds cover projects, but 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, which are expected to increase given the supplemental projects funded across Federal programs that impact fish habitat. NOAA must have sufficient capacity to provide technical assistance to the fishery management councils and to work with Federal agencies to avoid, minimize, and mitigate impacts on these important fishery habitats.

Fisheries Management Programs and Services.—TNC supports no less than \$141.2 million, a modest increase from FY23 enacted levels. 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 and enhance consultation capacity to assess the effects of planned renewable offshore energy activities.

Observers and Training.—TNC supports no less than the FY23 enacted level of \$58.383 million, including continuing to fully fund industry and agency costs for 100% 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 if, and only if, funding is available to support it. Because of ongoing support from Congress, fishermen can now meet the at-sea monitoring requirement with electronic monitoring systems or observers. Continued funding should provide sufficient resources to aid in the near-term transition to increased monitoring.

Pacific Coastal Salmon Recovery Fund (PCSRF).—TNC supports the FY23 enacted 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.

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, Water Policy Team Lead.]

PREPARED STATEMENT OF NEW ENGLAND INNOCENCE PROJECT AND THE NATIONAL INNOCENCE NETWORK

Thank you, Chair Shaheen, Ranking Member Moran, and members of the subcommittee. 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 that work 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 FY23. Thank you also for allowing me to submit written testimony for the record as you consider appropriations requests for FY24. 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:

- \$15 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)
- \$15 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.

Innocence and forensic science programs increase the fairness and accuracy of the criminal legal system; highlight racial disparities and inequities; provide the strongest possible forensic science tools to legal system stakeholders; and generate greater public safety nationwide.

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 2008 and 2021, the total number of exonerations increased by 148%. 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 exoneree. More than 29,000 life years have been lost to wrongful incarceration. The National Registry of Exonerations currently lists more than 3,300 exonerations since 1989. More than 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 reveal these disparities so we can improve the accuracy, equity, and integrity of the criminal legal system.

The New England Innocence Project (NEIP), headquartered in and serving Massachusetts, is the only innocence organization serving Vermont, Maine, Rhode Island, and New Hampshire. Federal DOJ innocence grant funds have helped expand its reach into States that have had insufficient resources to meet their needs. In fact, as a direct result of a grant supported by FY21 funding, NEIP has begun litigating its first case in New Hampshire, a State that has not experienced 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, a reentry support project 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 significant work and thousands of hours and dollars to adequately investigate and litigate. During this time period in which innocent people are languishing behind bars, they are losing precious time with their families and communities that can never be recovered, and also costing the state tens of thousands of dollars per year for each person who is wrongfully convicted and incarcerated.

Freeing innocent individuals and preventing wrongful convictions also highlights the ways that the criminal legal system fails to provide 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.

The value of Federal innocence programs and forensic science research is not only for exonerated people, but for all stakeholders in the criminal legal system. Significant funding cuts and caps to non-defense discretionary programs ultimately would increase costs, compromise public safety, and undo efforts to improve system accuracy, equity, and accountability to all stakeholders. Deep cuts to innocence and forensic science programs would significantly reduce the identification, remediation, and prevention of wrongful convictions.

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 3,300 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.

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 FY23 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 individuals long for just an individual local 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 \$15 million for the Wrongful Conviction Review Program in FY24. (Please note that the Wrongful Conviction Review grant program is a part of the Capital Litigation Improvement Program.)

Also, please include in the FY24 report for the Commerce, Justice, Science, and Related Agencies Appropriations bill the final FY23 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 almost 70 wrongfully convicted persons in 16 States. The person who actually committed the crime was identified in at least 20% of those cases. The success of this program has been both generating individual exonerations while supporting broader system review and reforms when problems arise.

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 commit many additional violent offenses, most 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 \$15 million to continue the work of the Bloodsworth Post-Conviction DNA Testing Program in FY24.

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 the identification, correction, and prevention of wrongful convictions. If you have questions or need 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 NORTH ATLANTIC RIGHT WHALE CONSERVATION

REGARDING FISCAL YEAR 2024 APPROPRIATIONS FOR THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION RELATED TO NORTH ATLANTIC RIGHT WHALE CONSERVATION

Dear Chair Shaheen, Ranking Member Moran, and members of the subcommittee:

On behalf of our millions of members and supporters nationwide, we urge you to provide appropriations for fiscal year 2024 (FY24) that are necessary to sustain and build upon ongoing conservation activities for the critically endangered North Atlantic right whale. Accordingly, we request that the Conservation and Mitigation Assistance Grant Program (Grant Program) authorized in the Consolidated Appropriations Act, 2023 be fully funded at \$50 million in fiscal year 2024. Further, we recommend no less than \$37.3 million to support NOAA Fisheries' ongoing North Atlantic right whale conservation efforts. In addition, we support \$14 million to facilitate compliance with existing conservation requirements applicable to, and the ongoing transition of, the Atlantic lobster and Jonah crab fishery. These priorities for funding are itemized in further detail below.

With only about 340 North Atlantic right whales left as of 2021, and of those fewer than 70 reproductive females, the future of the right whale is in jeopardy. Without additional robust investments in efforts to reduce right whale deaths and serious injuries dramatically, the best scientific information available makes clear that the species is at real risk of extinction. Continued Congressional funding can renew hope for the survival of this species.

CONSERVATION AND MITIGATION ASSISTANCE GRANT PROGRAM

As you know, the Consolidated Appropriations Act, 2023 authorized a grant program for fiscal years 2023 (FY23) through 2032 to provide competitive financial assistance, on an annual basis, for projects designed to reduce the lethal and sub-lethal effects of human activities on North Atlantic right whales. In authorizing the program, Congress advised that a large majority—\$40 million—of this authorized funding should go toward innovative gear deployment and technology. Notwithstanding these authorization levels, fiscal year 2023 appropriations provided \$20

million for the Grant Program. It is essential that on-demand fishing technologies be made commercially achievable in the New England lobster and Jonah crab fishery as soon as possible, and so we urge the Committees to appropriate funding for this grant program at levels consistent with the underlying authorization. To the extent appropriations are unable to meet amounts authorized for the Grant Program, we strongly encourage the Committees to continue to ensure that a significant majority of the overall grants go toward the maturity of on-demand fishing technologies. Such appropriations should not be made to expire and should remain available to account for variations inherent in the research and development process of such technologies.

APPLICABLE FUNDING FOR NOAA FISHERIES

In the months since the enactment of the Consolidated Appropriations Act, 2023, the state of the North Atlantic right whale population has become even more precarious. There have been a series of observed mortalities and injuries, including four confirmed cases of sublethal injury in 2023 from entanglement in fishing gear. There have also been two confirmed deaths, one vessel strike and one death of a newly-born calf. Most recently, a 20-year-old male was struck by a vessel near Virginia Beach, where hundreds of boats were found to be speeding in designated slow zones in the weeks before the collision. Mere days prior, an aerial survey sighted an entangled 8-year old female south of Massachusetts. Entanglement response teams were not able to reach the whale before sunset, and the whale has not been spotted since. These estimates from NOAA Fisheries represent a minimum of this year's take since research indicates that a large portion of deaths and injuries go unobserved.

In consideration of this, it is critical that NOAA Fisheries continue to have robust funding for its various North Atlantic right whale conservation activities, which is why we support at least \$37 million for fiscal year 2024 under Marine Mammals, Sea Turtles, and Other Species, as well as \$300,000 to conduct a Continuous Plankton Survey under Fisheries Data Collections, Surveys, and Assessments. For the Committees' convenience we have developed as an annex to this letter a detailed spend plan for these lines of funding.

Of particular need for funding is the full commercialization of on-demand fishing technologies. There are several threshold areas of innovation, development, research, and testing that need to be addressed to achieve this goal. These include resolving gear conflict among fixed-gear fishermen and between fixed-gear and mobile fishermen in high density fishing locations through the development and adoption of on-demand devices that rely on acoustic-based location marking to locate gear on the seafloor. A second important area that demands NOAA Fisheries' attention is ensuring on-demand gear is interoperable- that is, able to communicate with systems from different manufacturers. This would allow each fishing and enforcement vessel to be outfitted with one single transducer and receiver capable of detecting and reporting the location of every on-demand device on the seafloor, regardless of the manufacturer. Currently, manufacturers are developing proprietary systems that are designed to detect only their own on-demand systems. Third, NOAA Fisheries must continue to invest in a universal cloud database that can store and disseminate real-time locations of deployed on-demand fishing gear to approaching and passing fishing vessels and for enforcement purposes. Finally, NOAA Fisheries must ramp up and increase the scale of on-demand fishing experiments. As with the resources provided through the Grant Program, NOAA must prioritize the continued development of on-demand fishing technologies when allocating applicable North Atlantic right whale conservation funding.

FISHERY-SPECIFIC ASSISTANCE

We acknowledge the Committees' efforts to mitigate impacts to the lobster and Jonah crab fishery on its path toward coexistence with the North Atlantic right whale, much of which has been focused on implementation of and compliance with the final 2021 rule to modify the Atlantic Large Whale Take Reduction Plan (ALWTRP) (FR-210827-0171). Moving forward, we would encourage the Committees to broaden their focus to assisting the fishery with its transition to use of on-demand fishing systems, in anticipation of future regulatory structures and requirements that will move away from traditional fishing methods. Thoughtful investments in this space now will pay dividends for the future of this important fishery.

VESSEL STRIKE ASSISTANCE

Vessel strikes are also one of the major threats to the recovery of the North Atlantic right whales. The best scientific information available indicates speeds of 10 knots or below reduce the risk of struck North Atlantic whales dying by approximately 80 to 90%, a legal necessity. Accordingly, NOAA Fisheries has proposed new vessel speed regulations in 2022 to minimize lethal collisions between vessels and right whales. The Committees prioritized the risk of vessel strikes to marine mammals in the past by urging NOAA Fisheries to continue to develop risk reduction measures in report language in the fiscal year 2023 Appropriations package. This fiscal year, we recommend that the Committees ensure NOAA Fisheries has the resources to implement and enforce this pending rulemaking adequately and expeditiously. Reducing the risk of vessel strikes through a robust vessel speed rule is key for the survival of the species.

CONCLUSION

We appreciate the opportunity to share our views on this important and challenging issue. Moving forward, we hope the Committees will allow science-based conservation of the North Atlantic right whale to take its course. As part of this, robust and full funding of innovation and management needs to mitigate interactions between the North Atlantic right whale and important human activities is crucial to ensuring both of our species can coexist and thrive. Thank you for your attention to this issue.

ANNEX: PROPOSED FY24 NARW SPEND PLAN

Within Marine Mammals, Sea Turtles, and Other Species

\$13,000,000 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: continued monitoring of anthropogenic impacts to right whales to evaluate the efficacy of existing and new regulations; regulatory and management support to both reduce vessel-strike risk in high-traffic areas; and, fostering a transition to commercial fishing gear known to reduce entanglement risk with a strong focus on fishermen education and outreach.

\$9,000,000 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.

\$5,000,000 for a near-real time monitoring and mitigation program to protect North Atlantic right whales in areas not protected by other measures. These data could be used to inform distribution models to further the understanding of broad scale movements of right whales. In 2022, Congress enacted a new program designed to leverage technologies to detect North Atlantic right whales (and other imperiled species) in real-time, and to use those detections to inform sector-specific mitigation protocols that can save the species from harmful interactions, such as a vessel collision.

\$5,000,000 for enforcement activities of current and future vessel speed restrictions and of offshore lobster fisheries in Massachusetts and Maine, related to personnel and vessel needs, monitoring, gear removal, and surveys.

\$3,000,000 for surveys and monitoring, including underwater acoustic gliders, of North Atlantic right whales in Atlantic coastal waters.

\$2,000,000 for disentanglement, stranding response, and necropsy activities. Some funding within this amount should be directed toward support for North Atlantic right whale necropsy readiness and the North Atlantic right whale necropsy database, including the expansion of capacity to include sample archive and tracking.

5% 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.

On Behalf of

Animal Legal Defense Fund | Animal Welfare Institute | Animal Wellness Action |
 Association of Zoos and Aquariums | Audubon Society of Rhode Island
 Born Free USA | Buffalo Field Campaign
 Center for a Humane Economy | Center for Biological Diversity | Cetacean Society
 International | Conservation Law Foundation
 Defenders of Wildlife
 Earthjustice | Endangered Habitats League | Endangered Species Coalition | Environ-
 ment America | Environment Georgia | Environment New Jersey | Environmental
 Education Fund | Environmental Investigation Agency
 FOUR PAWS USA, Friends of the Earth U.S.
 Howling for Wolves, Humane Action Pittsburgh
 Inland Ocean Coalition | International Fund for Animal Welfare | International
 Marine Mammal Project of Earth Island Institute
 Marine Conservation Institute | Mystic Aquarium
 Natural Resources Defense Council | New England Aquarium | New Hampshire
 Audubon | North Central Washington Audubon Society | NY4WHALES
 Ocean Alliance | The Ocean Project | Oceana | Oceanic Preservation Society
 The Pew Charitable Trusts | Predator Defense
 Resource Renewal Institute
 Sierra Club | Southern Environmental Law Center
 Turtle Island Restoration Network and
 World Wildlife Fund

 PREPARED STATEMENT OF NORTHWEST INDIAN FISHERIES COMMISSION

Chairwoman Shaheen, Ranking Member 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 2024 (FY24) 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 FY24 APPROPRIATIONS REQUESTS

- \$70.0 million 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 Government 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 FY23 enacted level 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. As of October 2022, 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 11,800 miles 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), which is a \$1.0 million increase over the FY23 enacted level of \$6.0 million. We also respectfully request continued report language to ensure a portion of this funding is passed through to the Tribes and can be used to implement approved HGMPs. We recommend that the overarching Pacific Salmon subactivity be funded at \$91.0 million to accommodate this request, ensure maintenance of existing programs, and agency requests. This recommendation for the Pacific Salmon subactivity is \$19.0 million above FY23 enacted level of \$72.0 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 federal, State and Tribal governments 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 FY24 request of \$43.5 million for the Pacific Salmon Treaty line within Salmon Management Activities, which is an increase of \$2.5 million over the FY23 enacted level of \$41.0 million.

The FY24 request would support implementation of the National commitments in the renegotiated Pacific Salmon Treaty (PST) Annex Chapters. Funding will also decrease the litigation risk to Federal Biological Opinions that provide coverage for our fisheries under the Endangered Species Act (a lawsuit regarding the National Marine Fisheries Service Biological Opinion for Southeast Alaska has been filed in Federal court).

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 \$3.0 million over the FY23 enacted level of \$23.5 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 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.

PREPARED STATEMENT OF PACIFIC SALMON COMMISSION

FY 2024 BUDGET FOR THE NATIONAL MARINE FISHERIES SERVICE

Ms. Chairwoman, 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 2024 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.

Recent increases in funding were greatly appreciated, however current funding still 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 2024. 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 \$5,650,000 for habitat restoration for Puget Sound critical stocks, \$750,000 for Southeast Alaska Chinook Salmon Fishery Mitigation, and \$3,946,000 to increase prey availability for Southern Resident Killer Whales. The recommended funding includes \$6,370,000 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 is funded at \$475,000 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 re-

ductions or, in some cases, have been eliminated. The increases for the last four 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 want 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.

[This statement was submitted by W. Ron Allen, Chair.]

PREPARED STATEMENT OF POPULATION ASSOCIATION OF AMERICA/ASSOCIATION OF
POPULATION CENTERS

REGARDING THE FISCAL YEAR 2024 APPROPRIATIONS FOR THE CENSUS BUREAU,
NATIONAL SCIENCE FOUNDATION AND BUREAU OF JUSTICE STATISTICS

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 2024, we urge the subcommittee to recommend the following funding levels for these agencies: Census Bureau, \$2 billion; NSF, \$11.9 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 urge the subcommittee to support increased funding for the Census Bureau in FY 2024 above the Administration's request as recommended by The Census Project. In FY 2024, 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 2024, 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 (and reissued in 2023) 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 \$408.9 million, which is \$160.1 million over the function's FY 2023 funding level, to support 2030 Census preparations. As we are already a third of the way into the 2030 Census cycle, stakeholders are unified in their support for ensuring the Census Bureau has robust funding early in the decade to support preparations for the next decennial. Funding shortfalls during the last decade forced the Bureau to scale back strategic field tests—a decision that may have contributed to the less accurate counts of racial and ethnic populations, rural areas, and young children in the 2020 Census. Investing in the 2030 Census now will allow the Bureau to sustain essential capabilities and schedules and reduce the risk of requiring unplanned, additional funding in the peak planning years later in the decade. While the President's request proposes an increase to support 2030 preparations, our organizations urge the subcommittee to scrutinize the Bureau's recommendation to determine if the funding level is sufficient to fully support activities that the agency must invest in now to ensure the future success and cost-efficiency of the 2030 Census.
- Population Estimates.*—The annual series of Population Estimates produced by the Census Bureau set the denominators for the Bureau's key demographic surveys, especially the ACS and the Current Population Survey, affecting Federal funds distribution and key economic and health indicators. However, the Census Bureau's Population Estimates Program, which produces the estimates, has 33% fewer staff and 20% less funding in constant dollars than in 2004. This is untenable given the significant operational disruption in the 2020 Census and resulting differential undercounts of racial and ethnic population subgroups, renters, rural areas, and young children. The Population Estimates are a major opportunity to mitigate the consequences of those differential undercounts. A more robust Estimates improvement program at the Census Bureau would make consistent changes across all States, with greater outreach to States and localities that have high-quality data to share but lack the capacity and resources to engage in the Bureau's adversarial Population Estimates Challenge Program. Greater accuracy also requires a more flexible and collaborative approach to the previous Population Estimates appeals process, allowing local and

Tribal governments to submit a wider range of high-quality data to improve local counts than was allowed after the 2010 Census. State, city, county and Tribal officials, as well as demographers, statisticians, and researchers support an expanded (and renamed) Population Estimates Improvement Program.

Although the President's FY 2024 budget request recommends increasing funding for the Population Estimates Program (\$6.2 million above the FY 2023 level), the level falls short of what stakeholders have identified as the necessary level of support. The Bureau needs \$6.3 million in additional funding in FY 2024 for additional staff to modernize the Population Estimates Program, building on the new "blended base" approach that retains accurate census counts augmented by high-quality official data from States, cities, counties, towns, Tribal governments, and other localities to help improve the accuracy of their annual estimates, and 5 translate the Base Evaluation Review Team's research findings into more accurate Population Estimates. This long-overdue increase in Population Estimates Program funding represents a modest investment to ensure trillions of taxpayer dollars over the decade are spent fairly.

In sum, PAA and APC join other census stakeholders in urging the subcommittee to provide the Census Bureau with \$2 billion in FY 2024 to support 2030 Census preparations; enhance the ACS; strengthen the Population Estimates program; 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 Nation's 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 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), urge the subcommittee to provide NSF with \$11.9 billion in FY 2024. This amount, which is approximately \$2.4 billion above the agency's FY 2023 enacted level, aligns with the authorization level mandated in the CHIPS and Science Act of 2022 (Public Law 117-167).

The overall funding level we are recommending 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 2024 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 Friends of Justice 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 2024.

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 REGIONAL INFORMATION SHARING SYSTEMS (RISS)
PROGRAM

A PROVEN RESOURCE FOR LAW ENFORCEMENT

For 50 years, law enforcement and public safety agencies have turned to the Regional Information Sharing Systems (RISS) Program for trusted, quality, and evidence-based services and resources. Some agencies, especially small, rural, and Tribal agencies, cannot obtain the types of support provided by RISS anywhere else. RISS helps protect officers and citizens, shares information across jurisdictions at every level of government, and assists in resolving criminal cases. RISS is a proven resource for law enforcement. It must be not only sustained but expanded so RISS can continue to meet the ever-changing needs of law enforcement and help safeguard our communities against emerging threats. It is respectfully requested RISS be funded in FY2024 at \$55 million.

RISS is composed of six regional centers and the RISS Technology Support Center (RTSC). RISS is locally managed by policy board members consisting of police chiefs, sheriffs, commissioners, and other law enforcement leaders in each RISS Center's multistate region. An executive director operates each RISS Center. The RISS Centers work regionally and nationwide to respond to each region's unique criminal problems while working together on a nationwide basis to strengthen and advance criminal justice priorities. The RTSC maintains, operates, and enhances the RISS secure infrastructure and applications.

RISS receives hundreds of shared success stories from agencies and officers showcasing how RISS services and resources help law enforcement efforts in the field. To read example successes from each State, visit www.riss.net/Impact.

RISS supports law enforcement in investigating all types of crime, including violent and gun crimes, hate crimes, domestic terrorism, human trafficking, drug trafficking, and other regional and emerging priorities. RISS accomplishes this goal by focusing its efforts on three priorities: Investigative Case Support, Secure Information and Intelligence Sharing, and Officer Safety and Deconfliction.

INVESTIGATIVE CASE SUPPORT

RISS provides professional, accurate, relevant, and effective products and services to combat crime, help resolve criminal investigations, and successfully prosecute offenders. Below are highlights of results and productivity in FY2022:

- Developed 21,511 analytical products, such as cell tower mapping, link charts, 2D and 3D crime scene diagrams, telephone-toll analysis, and financial analysis.
- Loaned 2,826 pieces of specialized investigative equipment, such as cameras, recorders, and other devices, to agencies, including small and rural agencies.
- Sponsored or cosponsored 1,475 training opportunities and helped train 72,084 individuals.
- Responded to 63,177 requests for research and technical assistance, which helped identify suspect addresses, monikers, criminal associates, and other investigative information.
- Provided opportunities to share information with more than 9,840 law enforcement agencies and more than 129,100 authorized law enforcement personnel.
- Provided one-on-one support through the RISS field services staff and field-based solutions.
- Provided financial support for investigative efforts.

Each year, agencies and officers report they were able to seize millions of dollars and remove dangerous contraband from the streets using RISS services and resources. In FY2022, law enforcement agencies reported that by using RISS services, their officers arrested 2,095 offenders and seized more than \$163 million in narcotics, property, and currency. Agencies using RISS services also reported they were able to locate 1,662 individuals, prosecute 398 cases, and resolve 1,526 cases. In addition, there were more than 4.8 million inquiries to RISS resources with more than 1.4 million hits.

SECURE INFORMATION AND INTELLIGENCE SHARING

RISS has enabled an unprecedented level of collaboration among law enforcement and the criminal justice community while ensuring that privacy and civil liberties are protected. The RISS information sharing services help connect officers across jurisdictions, solve crimes, promote officer safety, and aid in successful case resolution. RISS makes security a top priority, adheres to nationally recognized standards, and constantly and diligently ensures that its assets are protected. RISS facilitates and fosters communications among thousands of local, State, federal, and Tribal law enforcement and public safety entities.

The RISS Secure Cloud (RISSNET) connects systems, provides bidirectional information sharing, and offers a single search of connected systems. RISSNET provides access to hundreds of resources and millions of records. Many of these systems are owned and operated by RISS partners who use RISSNET to securely share information with a broader and vetted law enforcement community. RISS has also developed and maintains resources accessible via RISSNET, including the following:

- RISS Criminal Intelligence Database (RISSIntel)*.—a modern, user-inspired, and flexible system that provides a real-time online federated search of more than 60 systems containing millions of records.
- RISSLeads Investigative Website*.—generates investigative leads, enables secure collaboration, and facilitates multijurisdictional information sharing.
- RISS Property and Recovery Tracking System (RISSProp)*.—houses pawn, secondhand, and other shop transactions and helps agencies identify and return stolen property and connect other cases.
- RISS Master Telephone Index (RISS MTI)*.—compares and matches telephone numbers in law enforcement investigations.
- RISS Money Counter Network (RISS MCN)*.—stores currency serial numbers and compares them to currency submitted by officers in previous cases via a secure RISS-designed application.
- RISS Drug Pricing Reference Guide*.—enables officers to search for comparable prices on narcotics; serves as a price guide when assessing the value of seizures and contraband; and identifies supply, demand, and popularity trends within the drug market.

OFFICER SAFETY AND DECONFLICTION

Officer safety and deconfliction are cornerstone priorities for the RISS Program. Event deconfliction protects law enforcement officers and citizens, supports operational integrity, strengthens information sharing, reduces risk and liability, helps prevent friendly fire, and enhances investigative efforts. Officers involved in high-risk operations can enhance their personal safety and the safety of those around them by using an event deconfliction system. Event deconfliction also helps safeguard community members, builds community confidence, and connects officers who can leverage each other's information and successfully apprehend criminals.

The RISS Officer Safety Event Deconfliction System (RISSafe) maintains data on planned law enforcement investigative events submitted for inclusion with the goal of identifying and alerting affected agencies or officers of potential conflicts. RISSafe is used in conjunction with mapping software to verify data on event locations when an event is entered into the system. When certain elements are matched between two or more events, a conflict results. Immediate notification is then made to the affected agencies or personnel regarding the identified conflict. Since RISSafe's inception, more than 2.6 million operations have been entered into RISSafe, resulting in more than 553,900 identified conflicts. Without identifying these conflicts, officers may have interfered with another agency's or officer's investigation, links between cases may have been lost, or officers or citizens may have been unintentionally hurt or killed. RISSafe is accessible on a 24/7/365 basis and is available at no cost to all law enforcement agencies. Currently, 30 RISSafe Watch Centers are operational, 24 of which are operated by organizations other than RISS.

MAKING PROGRESS

Below are highlights of specific and unique RISS accomplishments in FY2022 that continued moving RISS forward in its three focus areas.

- Continued to advance the RISSIntel features and functionality and connected additional partner systems.
- Expanded the number of available RISSNET resources to more than 240, most of which are owned by partner entities that use RISSNET to expand their information sharing reach to a broader vetted law enforcement audience.

- Through the critical resources available via RISSNET, more than 72.2 million records are available to authorized users.
- Continued to advance standards-based approaches, cross-collaboration, and smart strategies to leverage proven solutions.
- RISSProp contains more than 26 million records. RISSProp continued to help officers solve burglaries, home invasion robberies, and other crimes while identifying and recovering stolen items. RISSProp has helped officers recover more than \$13.8 million in property since its inception.
- RISS MTI continued to help officers find communication links between suspects that may not have been identified.
- RISS MCN continued to help officers deconflict and manage information about money used in criminal activities. More than 450 agencies in 44 States are now using RISS MCN.
- The RISS Drug Pricing Reference Guide continued to help officers assess the value of seizures and contraband and identify trends in the drug market.
- Continued to develop School Action Response Plans, which contain data, photographs, and floor plans critical for officers to navigate an active shooter or other situation effectively.
- RISSafe continued to help law enforcement protect officers and citizens, support operational integrity, strengthen information sharing, reduce risk and liability, prevent friendly fire, and enhance investigative efforts.
- Supported Federal efforts and nationwide partnerships to expand information sharing and available resources to law enforcement.
- Began transitioning the RISS Collaboration Websites, the RISSLeads Investigative Website, and the RISS Officer Safety Website to a new platform that will provide authorized users advanced information sharing capabilities and enhanced collaboration abilities.

RISS FY2024 NEEDS AND PROPOSED ACTIVITIES

Funding will support the six regional RISS Centers, including current operations and the Nationwide technology component, as well as the following areas:

- Expand access to RISSafe, increase the number of users nationwide, and develop educational materials.
- Enhance the RISS Officer Safety Website and develop additional training videos, publications, and other materials.
- Onboard and connect additional systems to RISSIntel, increase usage of RISSIntel, and continue to educate partners on its features and functionality.
- Expand and further strengthen authentication and security protocols.
- Expand RISSProp throughout the RISS Center regions and support current and new partnerships.
- Increase the number of agencies utilizing RISS MCN, offer training, and develop educational materials.
- Expand the development and distribution of School Action Response Plans and expand the Organized Retail Crime program.
- Replace and obtain new specialized investigative equipment.
- Develop, promote, and deliver trainings and other educational resources.
- Invest in software, applications, and other resources to support analytical services, including audio/video enhancements and digital forensics.
- Provide additional investigative support for violent and gun crimes, extremist activities, human trafficking, hate crimes, illegal drugs, cybercrimes, and other emerging crimes.
- Increase support for the threats-to-life endeavor and facilitate fusion center involvement.

Our law enforcement and public safety professionals face challenges every day. RISS helps by providing critical investigative services, resources, information and intelligence, officer safety, training, and more. RISS equals results. Our nation should continue to invest in and support RISS. It would be counterproductive to require local and State RISS members to self-fund match requirements or reduce the Bureau of Justice Assistance discretionary funding. RISS cannot make up the decrease in funding that a match would cause, for it has no revenue source of its own. RISS is grateful for the opportunity to provide this testimony at your request and appreciates your ongoing support. For additional information, visit www.riss.net.

[This statement was submitted by Kent Shaw, Chair, RISS National Policy Group.]

PREPARED STATEMENT OF RESEARCH!AMERICA

On behalf of Research!America, thank you for the opportunity to submit testimony on Commerce, Justice, Science, and Related Agencies appropriations for Fiscal Year 2024 (FY24). Research!America is a non-profit, non-partisan advocacy alliance. Our more than 300 organizational members advocate for faster medical and public health progress that serves the best interests of our Nation and the well-being of all.

The focus of this testimony is the National Science Foundation (NSF), a key Federal research agency supporting science and engineering in all 50 States and U.S. territories. To advance the bipartisan objectives captured in the 2022 CHIPS & Science Act and meet other strategic priorities, we request that the subcommittee allocate \$11.9 billion for the NSF in FY24, an increase of \$2.01 billion over FY23.

THE NATIONAL SCIENCE FOUNDATION

Established by the National Science Foundation Act in 1950, the NSF is a critical agency for U.S. science and technology capacity and leadership. The statutory mission of the NSF is “to promote the progress of science; to advance the National health, prosperity, and welfare; and to secure the National defense; and for other purposes.” In pursuit of this mission, its investments constitute nearly 25% of Federal support to American colleges and universities for noncommercial, foundational research. On average, per year, the NSF funds over 12,000 competitive awards for research, education, and training at over 2000 colleges, universities, and other institutions. This funding also supports approximately 318,000 researchers, entrepreneurs, students, and teachers across our Nation. NSF investment supports cutting-edge innovation, collaborative and creative partnerships, critical infrastructure, and premier education and training.

Over its 70-year history, the NSF and its investments in science and technology have led to discoveries and innovations that have dramatically and permanently altered national and global public health, communication, manufacturing, and more. NSF-funded basic science projects established the groundwork for innovations we often take for granted today, including, but not limited to commercial internet, Google, smartphones, 3D printing, weather radar, and magnetic resonance imaging (MRI). For discoveries like these, and numerous others, over 250 Nobel Prizes have been awarded to NSF-funded scientists, engineers, and educators. Notably, NSF-funded investigators Jennifer Doudna and Emmanuelle Charpentier received the Nobel Prize in Chemistry in 2020 for their pioneering work in gene editing and the subsequent discovery of CRISPR. CRISPR technology has rapidly become a powerful tool for scientists across the globe and is being incorporated into groundbreaking therapeutics for severe and life-threatening diseases like sickle-cell anemia and Huntington's.

The recent passage of the CHIPS and Science Act of 2022 demonstrates strong national support for “curiosity-driven, exploratory research and use-inspired, translational research” that centers the U.S. on the global stage as a leader in science and technology. The legislation formally codifies into law Technology, Innovation, and Partnerships (TIP), a crosscutting platform that fosters partnerships between the NSF and other government agencies, industry, nonprofits, civil society, and communities of practice. This unprecedented collaborative effort will accelerate technological breakthroughs and enhance U.S. competitiveness, expand the economy, expedite translation from bench to bedside, and create high-wage skilled jobs. The CHIPS and Science Act will also strengthen STEM K–12 education programs and workforce training, as well as research and semiconductor infrastructure and advanced computing facilities, to secure the U.S. as an unparalleled S&T leader in the future. Yet, these programs will only be possible through the appropriation of robust funding to the NSF, at least \$81 billion over 5 years as authorized under CHIPS and Science Act.

We believe it is vastly in the Nation's best interests to increase NSF's budget by at least \$2.01 billion in FY24. Thank you for considering our testimony, and for your efforts, and those of your respective staff members, on behalf of us all.

Sincerely,

Eleanor (Ellie) Dehoney
Senior Vice President of Policy and Advocacy
Research!America

PREPARED STATEMENT OF SEA GRANT ASSOCIATION

REGARDING FUNDING FOR THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
MAY 2023

The Sea Grant Association (SGA) recommends Congress appropriate \$147.325 million in FY 2024 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.

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 Sea Grant program led to a 5-year reauthorization, the National Sea Grant College Program Amendments Act of 2020 (Public Law 116-221). The legislation identifies 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.

The SGA recommendation of \$147.325 million for Sea Grant is based on the authorized amount for FY 2024 (\$107.325 million) and an additional \$35 million to support State-based work in coastal resilience and \$5 million to support State-based efforts in incorporating diversity, equity, inclusion, justice, and accessibility (DEIJA) principles into their programs. The \$18 million for Sea Grant Aquaculture Research would expand Sea Grant's support for local aquaculture farmers who produce sustainable seafood, reducing U.S. reliance on imports and providing a safe and nutritious source of protein.

Sea Grant Benefits in 2021

Economy: Sea Grant helped generate an estimated \$736.6 million in economic benefits and created or supported 8,369 jobs and 1,619 businesses.

Community: Sea Grant helped 227 communities improve hazard resilience and 12,471 fishers adopt safe and sustainable fishing practices while also restoring or protecting an estimated 1.1 million acres of habitat.

Students: Sea Grant reached 374,483 K-12 students.

By leveraging more than \$3 for every \$1 appropriated by Congress, Sea Grant provides a remarkable return on the public's investment.

The SGA thanks the committee for their steadfast, continuous support of the Sea Grant College Program and the Sea Grant Aquaculture Research Program each fiscal year. The funding increases in FY 2022 and 2023 to the Sea Grant College Program enabled each State program to receive \$125,000 earlier this year to demonstrate deliverables in resilience. We look forward to being able to share with the committee specifically how this money allows Sea Grant to enhance community resilience, including our work to build capacity and enable research, engagement, decision support, and implementation to support local State-based research, training, technical assistance, and coordination.

During these challenging fiscal times, the SGA understands the intense pressure Congress is under to ensure scarce taxpayer dollars have real, measurable impacts. Sea Grant provides a remarkable return on the public's investment, leveraging more than \$3 for every \$1 appropriated by Congress. Additionally, more than 90% of appropriated funds are competitively awarded.

JUSTIFICATION FOR THE FY 2024 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): \$147.325 million

Sea Grant Resilient Coasts Initiative.—Sea Grant has supported the resilience efforts of coastal communities since it was founded in 1966. It is imperative that coastal communities—which host more than 40 percent of the United States' population—have the resources to prepare for, mitigate the effects of, and recover from extreme weather events, as well as the many other challenges these communities face, including coastal inundation and erosion, oil and chemical spills, and harmful algal blooms. Currently, Sea Grant is not able to meet increasing community requests for support at existing funding levels, lacking sufficient human capacity and resources to meet the growing need for technical information, assistance, facilitation, and engagement. With increased funding, Sea Grant will better serve the diverse groups it supports. SGA is requesting funds for:

- Capacity building to support recruitment of additional resilience extension, communication, or education staff in each State Sea Grant program and to support a national Sea Grant resilience coordinator.
- Research, engagement, decision support, implementation to be directly allocated to state Sea Grant programs to support research, training, technical assistance, and coordination to help address community resilience needs at State and local levels.

Diversity, Equity, Inclusion, Justice, and Accessibility (DEIJA).—Sea Grant supports local communities—those who do the work of Sea Grant as well as those who benefit from its work—and has long-standing and trusted relationships with local, Tribal, and Indigenous communities that depend on the coastal and marine environment for livelihood and sustenance and whose cultures are deeply tied to it. 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. SGA is requesting funds to advance innovative initiatives to further connect to, learn with, and empower underserved and underrepresented communities by:

- Supporting research, training, mentorship, and fellowship opportunities supporting underserved and underrepresented communities.
- Ensuring that its workforce is representative of the diversity of people whom the program serves by hosting trainings to provide its workforce with knowledge, skills, and tools to create inclusive and welcoming environments.

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 grew to \$17 billion in 2020. Sea Grant's \$13 million investment in FY 2020 resulted in over \$80 million in economic impact, creating or sustaining over 1,000 aquaculture-related jobs and over 400 aquaculture-related businesses.

Sea Grant's work around aquaculture includes support and assistance to those across the food supply 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 and restoration, user conflicts within coastal communities and working waterfronts, animal welfare, and food security. Through research and ex-

tension 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 while also working to support post-harvest production and supply chain needs. 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 2024 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

- Sea Grant programs in Georgia, Florida, Mississippi/Alabama, California, Washington and Hawai'i collaborated with NOAA's National Ocean Service, Mississippi State University, EcoAdapt, and the Jacques Cousteau National Estuarine Research Reserve on the Application Guide for the 2022 Sea Level Rise Technical Report. This first-of-its kind effort will help individuals and organizations wade through various local considerations to arrive at the best approach to plan for sea level rise for their community. In this way, they can advance coastal resilience on their own terms and adopt planning and adaptation initiatives that make the most sense for their situation.¹
- Texas Sea Grant and FlatsWorthy assembled a focus group of fishing guides with established, long-term relationships with a particular coastal area to document observations of environmental changes. This allowed Texas Sea Grant to gain a deeper understanding of processes affecting the coast from the perspectives of local stewards. Observed issues included loss of coastal habitat; fewer fish species in particular areas; increased sightings of sea turtles and feral hogs; and increased human activity.²
- The Watershed Process and Estuary Sustainability (WPES) Research Group at the University of Maine, with support from Maine Sea Grant, hosted a free, virtual workshop to train participants to use the "Estuary Builder GIS tool" for delineating, analyzing, and categorizing coastal Maine embayments and their contributing watersheds.³
- Alaska Sea Grant is collaborating with the Alaska Ocean Observing System (AOOS) to provide regional real-time information for maritime conditions through the AOOS data portal. Real-time observations are key to decision-making, and each dashboard provides consolidated access to maritime conditions and forecasts.⁴
- Ohio teachers wanting to get students excited about Lake Erie science can find guidance from Ohio Sea Grant's Stone Lab Virtual Field Trips. Available for free, Virtual Field Trip teaching modules include everything middle and high school teachers need for a successful lesson, from student worksheets to digital materials like videos and slide shows. The fully immersive experiences help teachers improve content and pedagogical knowledge and build their confidence in the topics.⁵

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. Thank you again for your time and for your

¹H. Meltzer, "Sea Grant-supported application guide for the 2022 Sea Level Rise Technical Report now available," 2022, available at: <https://seagrant.noaa.gov/News/Article/ArtMID/1660/ArticleID/2904/Sea-Grant-supported-application-guide-for-the-2022-Sea-Level-Rise-Technical-Report-now-available>.

²A. Sabine and C. Parker, "New Routes for Environmental Stewardship," available at: <https://stories.texasseagrant.org/new-routes-for-environmental-stewardship/index.html>.

³"Watershed Process and Estuary Sustainability Research Group," 2023, available at: <https://umaine.edu/watershedresearch/estuarybuilder/>.

⁴L. Lubin, "Real time information on maritime conditions," 2023, available at: <https://alaskaseagrant.org/2023/03/real-time-information-maritime-conditions/>.

⁵J. Slattery Wall, "Lessons Learned: Virtual Field Trips Aid Ohio Teachers With Immersive Experiences," 2023, available at: <https://ohioseagrant.osu.edu/news/2023/20bfl/lessons-learned-virtual-field-trips-aid-ohio-teachers-with>.

consideration of this request. SGA would be happy to answer any questions or provide any additional information.

[This statement was submitted by Dr. Darren Lerner, Director, University of Hawai'i Sea Grant College Program and President]

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) 2024 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. In order to fully realize the transformative aim of the CHIPS and Science Act, SIAM request full implementation of the science provisions of the legislation. SIAM also requests your support for the STEM Education (EDU) 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. House of Representatives.

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 2024 and beyond. In particular, we join with the research and higher education community and request that you provide NSF with at least \$11.9 billion in funding for FY 2023. This is approximately \$600 million over the President's budget request for FY 2024 that calls for \$11.31 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 \$4 billion worth of research proposals rated "very good or higher" due to budget constraints. At least \$11.9 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 57 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 expand its mission towards transforming innovation ecosystems with the new Directorate for Technology, Innovation, and Partnerships (TIP) and encourages Congress to give NSF the resources it needs, in line with the amounts authorized in the CHIPS and Science Act, to fully carry out programs such as Regional Innovation Engines and enabling support for NSF priorities in climate, clean energy, emerging industries, and broadening participation. Even before the launch of the new TIP directorate and other new programs authorized in CHIPS and Science, NSF was unable to fund more than \$4 billion worth of research proposals rated “very good or higher” each fiscal year. It is imperative that the rest of NSF see sustainable growth, such as programs 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. New efforts can only be successful when built on a strong foundational research enterprise that supports research, education, and infrastructure to sustain our science and technology ecosystem. NSF is a critical supporter of the SIAM community, providing 57 percent of all Federal support for basic academic research in the mathematical sciences.

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 national security 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 (QuBBB).

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 transformatinal science and engineering.

SUPPORTING THE PIPELINE OF MATHEMATICIANS AND SCIENTISTS

SIAM is encouraged by the FY 2023 increases for NSF's STEM Education (EDU) directorate; however, critical gaps remain in addressing fundamental challenges for mathematics and STEM education across educational levels. SIAM supports EDU 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 2024.

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 FY 2024 appropriations process.

[This statement was submitted by Sven Leyffer, *President*, Alejandro Aceves, *Vice President for Science Policy*, and Suzanne L. Weekes, *Executive Director*.]

 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 Senate Appropriations subcommittee on Commerce, Justice, and Science, and Related Agencies for the official record. In this testimony, SIOP urges the subcommittee to consider four requests: Provide the requested amount of \$11.9 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) 2024 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; provide robust support for graduate education programs, including industry career exploration, as outlined in the *CHIPS and Science Act of 2022*; and support 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 collabo-

rate, 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 findings developed through this Federal investment enhance business practices, policymaking, and collaboration. The evidence base derived from basic research in the science of organizations is also 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. For instance, SBE rapidly responded to the challenges posed by the COVID-19 pandemic. This included significant support for the field of I-O psychology as the nature of work 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 deal with the lasting effects and changes from the pandemic 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 new Artificial Intelligence (AI) investment is being made across NSF, DOE, and other agencies and the rate of technological change continues to accelerate, I-O psychologists are already seeking to understand how technologies like AI 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.

SIOP applauds NSF and Congress for their increased investments in the TIP Directorate and encourages TIP to continue focusing on use-inspired research that will position the NSF to drive innovation in industries and technologies of the future. In order to continue to 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. The *Consolidated Appropriations Act, 2023* clearly demonstrates Congress' belief that workforce development is a key component of the mission of the TIP Directorate. SIOP can offer expertise to address challenges of rapidly scaling a workforce in emerging technology areas such as AI, particularly as it relates to hiring, selection, training, and retention. SIOP requests that Congress encourage 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 2024 NSF budget of \$11.9 billion. SIOP requests continued and 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 TIP Directorate continue to use their increased funding to support innovative research, 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, particularly in the consideration of new models and approaches for funding cross-disciplinary science and/or large-scale research projects. As the TIP Directorate continues to see increases in funding and activity, SIOP believes it is essential 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. NSF has funded several team science studies through SBE and program officers across directorates have expressed interest in leveraging SciTS to improve multi-disciplinary awards. While NSF has taken some steps forward to address the importance of SciTS in some multi-disciplinary awards, we feel that the inclusion of appropriations report language that specifically mentions the

importance of SciTS would build on this existing momentum and further catalyze meaningful action.

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

Graduate Student Education.—SIOP requests that Congress encourage NSF to robustly support graduate education support programs, particularly as they relate to mentoring, innovative career exploration, and work-based learning opportunities. SIOP's professional membership spans academia and industry. Additional funding and opportunities for graduate students to explore career paths in industry and participate in work-based learning experiences are critically important to grow the Nation's scientific workforce and industrial base.

As acknowledged by its inclusion in the *CHIPS and Science Act of 2022* (CHIPS+), NSF encourages a stronger STEM workforce among Americans if we are going to outpace our global competitors and tap into the full potential of American ingenuity. To this end, it is critical that NSF receive funding increases in order to fully implement the authorized programs supporting graduate STEM education in Section 10313 of CHIPS+. The programs authorized through CHIPS+ will allow NSF to provide much needed additional support for STEM graduate students and broaden the pipeline of who receives a graduate degree in STEM. CHIPS+ authorized programs in mentorship, research, professional development, and support for innovative career exploration and work-based learning opportunities that are essential to ensuring our STEM graduate students persist through graduation and enter the American STEM workforce.

REQUESTED REPORT LANGUAGE

Graduate Education.—The Committee recognizes the important role advanced degree holders play in our innovation ecosystem and urges NSF to robustly support the graduate education programs authorized by Section 10313 of the CHIPS and Science Act (Public Law 117–167). In making awards through current and new programming, NSF should prioritize inclusion of career explorations opportunities for graduate students supported by the program.

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 and local law enforcement agencies through information and grant resources. COPS grant programs target important policing needs, such as the Hiring Program (CHP), which has grown substantially in recent years and will provide \$224.5 million for law enforcement agencies in FY 2023. Hundreds of law enforcement agencies have benefited from CHP, but little is known about recipients and the unique issues they face in key areas like recruitment and retention. Collectively, COPS 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, the COPS Office can better tailor technical assistance programming to meet the needs of law enforcement agencies.

COPS has made progress toward addressing evidence-based solutions, signing a Memorandum of Understanding (MOU) with SIOP in September 2022. The MOU is the first COPS has signed with a scientific society to increase the knowledge and application of I–O in law enforcement and to help cultivate more safe and effective law enforcement workplaces. Congress should encourage COPS to build on this momentum to support the development of studies to help COPS awardees better understand what works and how to more effectively leverage Federal funding to support their communities. This should include funding for COPS to support an evaluation study of its largest program, CHP.

The volunteer evaluation study of CHP recipients would help COPS better understand common recruitment, hiring, and retention practices and leverage the findings to target future Federal assistance. Through the MOU, 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.

¹ <https://www.nap.edu/catalog/19007/enhancing-the-effectiveness-of-team-science>.

REQUESTED REPORT LANGUAGE

Workforce Study.—The Committee recognizes the importance of the COPS Hiring Program, but is concerned that 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.

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.

[This statement was submitted by Dr. Mo Wang, *President* and Tracy L. Vanneman, *Executive Director*.]

PREPARED STATEMENT OF SOCIETY FOR NEUROSCIENCE

IN SUPPORT OF FY24 APPROPRIATIONS FOR THE NATIONAL SCIENCE FOUNDATION

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 \$11.9 billion, an increase of approximately \$2.4 billion, in funding for NSF in FY24. For researchers across the Nation, the ability to make life-changing advancements in the field of neuroscience is contingent upon sufficient Federal funding.

One area of my lab's research at the Department of Anatomy and Neurobiology at the University of California-Irvine focuses on the biological processes that help repair the central nervous system, particularly the spinal cord. My lab discovered that modifying a critical cell growth pathway can revert neurons in adult brains to a youthful state, facilitating regeneration of the spinal cord after injury. Our research is now applying this principle to neurodegenerative disorders like Alzheimer's Disease by testing whether rejuvenated neurons will resist neurodegeneration. Basic research, like my own, provides understanding about the brain at a deep level, which paves the way for the development of novel therapeutics that will prevent and treat debilitating medical disorders. Continued progress depends on sustained Federal funding at a level that at a minimum, keeps pace with inflation.

SfN believes strongly in the research continuum—a pipeline, in which basic science leads to clinical innovations, which leads to translational uses impacting the public's health and reducing long-term medical costs. Basic science is the foundation upon which all health advances are built. For example, our RNA vaccines, which likely saved millions of lives, were made possible by decades of research by chemists and chemical engineers on lipid nanoparticles. To cure diseases, we need to understand them through fundamental discovery-based research. 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 not only critical for enabling groundbreaking discoveries; it is essential for building our workforce of researchers at the bench. For the United States to remain the world leader in biomedical research, Congress must continue to fund the training pipeline of the scientific workforce. Young trainees today are the ones who will make the key discoveries of the future. The deeper our grasp of basic science, the more successful those focused on clinical and translational research will be. Neuroscientists use a wide range of experimental, animal, and human 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 affecting 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. Industry typically does not fund research on this important first step given the long-term path of basic science and pressure for shorter-term return on investments. Congressional investment in basic science is irreplaceable in the pipeline for development of drugs, devices, and other treatments for brain related diseases and disorders.

The BRAIN initiative is an example of NSF's success by developing remarkable technologies for the entire research community enabling discoveries across neuroscience and related scientific disciplines that would have previously been unimaginable. By including funding in the 21st Century Cures Act, Congress helped maintain the momentum of this endeavor. However, it's important to emphasize that using those funds to supplant regular appropriations would defeat their purpose. There is no substitute for robust, sustained, and predictable funding for NSF and SfN appreciates Congress' ongoing investment in the BRAIN Initiative. A recent exciting advancement in NSF-funded neuroscience research includes the following:

Researchers develop training module to counteract the negative effects of stress on adolescents

The mental health crisis affects more and more American adolescents each year. Using funding from two NSF grants, researchers at the University of Texas created an online training module that can teach students stress management and how to build resilience. The findings of their study will lead to low-cost interventions for adolescents affected by stress. When applying these interventions, they found it led to improved academics as well as increased self-esteem in thousands of adolescent students. These interventions are cost-effective to implement on a regional or national scale to aid adolescents in overcoming a variety of stressors.

Funding in Regular Order

SfN joins the biomedical research community in supporting an increase in NSF funding to at least \$11.9 billion, a \$2.4 billion increase over FY23. This proposed increase is necessary to provide certainty to the field of science, allow for the exploration of new scientific opportunity, train the next generation of scientists, and foster increased economic growth and further improvements in the public's health. Potential cuts to discretionary investments would have a devastating impact on NSF-funded research and would hurt the country's ability to maintain its international competitiveness in this space. Equally important is ensuring that funding is enacted 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 will be realized or operating a lab at a diminished capacity until appropriations are final. These delays can be devastating for trainees seeking to begin their careers. All the positive benefits research provides in this country are negatively impacted by these real time considerations. SfN strongly supports the appropriation of NSF funding in a timely manner, to avoid delays in approving new research grants or 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 Oswald Steward, PhD, President.]

PREPARED STATEMENT OF WESTERN GOVERNORS' ASSOCIATION

FISCAL YEAR 2024 APPROPRIATIONS

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, including the U.S. Department of Commerce, National Aeronautics and Space Administration (NASA), and National Science Foundation (NSF). 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.

A clean and reliable water supply is crucial for communities, industries, habitats, farms, and western communities to maintain and improve their quality of life. The scarce nature of water in much of the West makes related programs particularly important to Western Governors. Western States rely on basic information on the status, trends, and projections of water resource availability to make sound water management decisions. Water users throughout the West and decision makers at all levels of government need the ability to assess drought conditions and respond effectively. Lacking the ability to implement drought mitigation measures when needed can lead to increased wildfires, impaired ecosystems, degraded agricultural production, and threatened municipal and industrial water supplies.

For these reasons, Western Governors support strong and dedicated funding for the National Integrated Drought Information System (NIDIS) program under the National Oceanic and Atmospheric Administration (NOAA), which performs a valuable role in western water management and drought response. Western Governors also support Federal programs dedicated to the improvement of data on snowpack, streamflow, soil moisture and forecasting, including the NASA National Land Imaging (Landsat) Program. The Governors support Federal efforts to coordinate water data gathering and information programs across multiple agencies. Western Governors also recognize the need for improved predictive capabilities for extreme weather variability and urge the Federal Government to place a priority on improving the sub-seasonal and seasonal precipitation forecasting capabilities that could support water management decision-making.

Many western communities, especially rural and 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 look forward to implementing the historic level of broadband funding in the Infrastructure Investment and Jobs Act (Public Law 117–58), particularly the funds allocated to the Broadband Equity, Access, and Deployment (BEAD) Program administered by the National Telecommunications and Information Administration (NTIA). However, Western Governors are concerned with the process and timeline for making BEAD allocation determinations and urge Congress and NTIA to work with States to ensure they receive adequate and appropriate amounts of funding.

Deployment of broadband infrastructure to underserved and unserved communities requires an accurate picture of nationwide broadband availability. The Governors support continued investment in mapping efforts, as accurate mapping is essential to providing States with the correct levels of BEAD funding and guaranteeing that no community or household is left behind. WGA also encourages the coordination of data collection strategies among NTIA, 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 (Evidence-Based Policymaking, GAO–20–119), however, “evidence-building activities are frag-

mented within . . . agencies and occur at multiple levels and entities within and across the agencies” and “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 by 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.

Along with Federal data coordination with States, data security is also a priority of Western Governors. Western Governors were therefore pleased to see an increase in funding for the NSF’s CyberCorps: Scholarships for Service program in the Consolidated Appropriations Act, 2023 (Public Law 117–328). This program provides scholarships in the cybersecurity field for students agreeing to work for the government in cybersecurity professions upon graduation. In addition to the funding itself, the Consolidated Appropriations Act, 2023 encourages NSF to use the additional funding to increase the number of scholarships awarded at participating institutions and to increase the number of institutions that receive grants to participate in the program. Western Governors support this increase in funding, scholarships, and participating institutions and encourages the subcommittee to continue that all-around increase for FY2024.

The Economic Development Administration (EDA) plays a critical role in rural economic development. 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. Furthermore, outcome metrics based solely on the absolute number of jobs created do not reflect the important economic benefits of such investments in sparsely populated rural communities, 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 maximizing the effect of State and Federal resources and ensuring that assistance reaches the communities that need it most. Western Governors appreciate the subcommittee directing EDA to consider geographic equity in FY2023 appropriations so that these communities, which struggle to access Federal resources, are represented among those selected for funding.

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 Jack Waldorf, Executive Director.]

PREPARED STATEMENT OF WILDLIFE CONSERVATION SOCIETY

REGARDING FUNDING FOR THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
(NOAA)

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 FY24 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 approximately 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 FY24 Commerce, Justice, Science and Related Agencies appropriations bill to increase investments in the National Marine Sanctuaries Program, secure level funding for North Atlantic right whale conservation and fisheries data collections, expand 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 50 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 percent of the world's lands and oceans by 2030 (30x30). U.S. 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. WCS supports the Federal Government's efforts to improve inter-agency coordination. 30x30 provides an important opportunity for community-led conservation and provides 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 invest in robust public and stakeholder engagement processes to advance the designation of 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. In June 2022, NOAA initiated the public-facing, stakeholder driven designation process for Hudson Canyon. A bipartisan group of Members of Congress, hundreds of local stakeholders and over forty thousand individuals expressed their support for the designation during the public comment period in 2022. With increased resources from Congress, WCS looks forward to NOAA establishing a pre-designation Sanctuary Advisory Council and proactively gathering public and stakeholder input as the agency prepares a draft environmental impact statement 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, \$37 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.

The North Atlantic right whale faces ongoing threats from human activities. Critical habitat for right whales frequently overlaps with commercial fishing grounds and areas of high vessel traffic, leaving the whales vulnerable to vessel collisions and fishing gear entanglements, the two leading causes of injury and death to the species. Whales that survive these hazards are often subject to chronic stress and reproductive failure, as evidenced by declining birth rates in recent years. Females normally give birth every three to five years; in the past decade, however, calving intervals have stretched to approximately eight to ten years. Since the start of the 2023 calving season, researchers have identified 11 calves, making this the fifth year in a row with confirmed calves. However, due to human-caused threats, the species' mortality rate still exceeds the birth rate by a ratio of three to two, and recent population estimates suggest that there are now fewer than 340 North Atlantic right whales remaining. This is the lowest population assessment in decades, and illustrates the ongoing urgency of providing adequate conservation and management funding for this species.

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 in 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. WCS recommends that \$12 million out of \$37 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 FY24 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 FY24 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.]

PREPARED STATEMENT OF YOUTH ADVOCATE PROGRAMS, INC.

Chair Shaheen, Ranking Member Moran, 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 Advocate Programs, Inc. I am pleased to submit testimony on behalf of a coalition of juvenile justice organizations, led by Youth First Justice Collaborative and involving Youth Advocate Programs, Inc. 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, prevent delinquency, and promote safe communities, and I want to thank the subcommittee for its past support of Federal juvenile justice programs. To continue to advance these critical goals, we seek \$50 million for a new initiative in the Department of Justice's (DOJ) Office of Juvenile Justice and Delinquency Prevention (OJJDP) to provide grants to State, localities, and Tribal jurisdictions to protect youth and promote public safety.

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 these facilities and redirect the money to community-based interventions that have been shown to work better, such as intensive mentoring, family therapy, mental health services, parenting education, and substance use treatment. Kansas identified and redirected funding to these more effective community-based interventions. YAP was one of the first programs brought to Kansas to address the need for community-based and in-home interventions. Federal resources are needed now to galvanize and support Kansas' statewide effort to finish planning and implementing improvements to Kansas' juvenile justice system that will result in a better outcome for young people, increased system accountability, and safer communities.

¹ <https://www.doc.ks.gov/juvenile-services/Workgroup/Presentations/Lipsey>.

Youth Correctional Leaders for Justice, a national coalition of juvenile justice system administrators, as well as juvenile court judges from a range of jurisdictions, are calling to leverage and expand access to community-based interventions because evidence and experience show that carceral facilities are both ineffective and dangerous for youth. Persistent staff shortages at youth facilities have made it difficult to properly care for incarcerated youth, especially in large, less populated facilities. A DOJ Bureau of Justice Statistics study found more sexual abuse in facilities operating at less than 50% capacity, as well as at larger facilities and those with higher levels of staff vacancies. As authorized by Section 261 of the JJDP, Federal funding would be used to support grants that help States and localities address this pressing concern of youth safety and system accountability.

Grants also would provide States and localities with opportunities to improve system outcomes and equity through more effective community-based interventions. Incarcerated children and youth are 39% less likely to graduate from high school; face greater obstacles to employment and earn lower incomes throughout their lifetimes; and are more likely to enter the adult criminal legal system.

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 Advocate Programs, Inc 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 interventions delivered in the community significantly reduce recidivism. YAP completed a 2-year project in 15 jurisdictions across the Nation where it invested private foundation funds in local juvenile justice systems to support expanded access to effective community-based interventions. 80% of the highest risk youth served were diverted from youth prisons, and at the end of the project jurisdictions decided to sustain these programs with their own funds because they found the community-based interventions 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.

Other States have reduced their reliance on youth incarceration and expanded access to more effective community-based interventions, rendering significant cost savings. According to one 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. In 2016, Kansas made the decision to shift resources from failed youth incarceration facilities to more effective community-based interventions, and this shift saved the state millions of dollars, allowing it to invest its savings into more effective community-based interventions. Georgia also instituted a similar plan in 2012 and achieved savings of approximately \$85 million.

More effective community-based interventions, 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 incarceration 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%. States have demonstrated that closing failed youth facilities and diverting kids to more effective community-based interventions both saves money and increases public safety.

Americans nationwide support Federal funding to incentivize States to close failed youth facilities to capture resources to reinvest in more effective and cost-efficient community-based interventions. In a 2021 Youth First Justice Collaborative Initiative poll, 78 percent of adults endorsed the proposal to provide Federal funds to sup-

port State planning and consultation with stakeholders to close youth facilities and invest savings to expand access to community-based interventions.

It is essential that Congress not reduce Federal juvenile justice funding at this critical time because it would reduce oversight and accountability for juvenile justice systems nationwide. DOJ's Office of Juvenile Justice and Delinquency Prevention (OJJDP) grants support States in planning, operating, and evaluating their juvenile justice systems; help prevent at-risk youth from entering the juvenile justice system whenever possible; and ensure safety, appropriate treatment, and success for youth who are justice system-involved. Significantly reducing the capacity of the system at this time would reverse bipartisan outcomes and achievements, roll back cost savings, and jeopardize improvements in youth and community safety.

For these reasons, I urge Congress in fiscal year 2024 to fully fund the new \$50 million initiative at OJJDP because it would improve youth and system outcomes while protecting youth, promoting public safety, increasing equity, and reducing long-term costs.

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.

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